Balliemeanoch Pumped Storage Hydro

Environmental Impact Assessment Report
Volume 5: Appendices
Appendix 14.1: Transport Assessment Report

ILI (Borders PSH) Ltd

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Quality information

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Revision History

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1. Introduction

1.1 Background

1.1.1 AECOM has been commissioned by the Applicant to prepare a Transport Impact Assessment (TA) to accompany an Environmental Impact Assessment Report (EIAR) Chapter (*Chapter 14: Access, Traffic and Transport) (Volume 2: Main Report)* for a Pumped Storage Hydro (PSH) scheme (the Development) near Balliemeanoch Farm Steading, Argyll and Bute.

1.1.2 For a description of the Development and the Site, see EIAR Volume 2 (*Chapter 2: Project and Site Description*).

1.2 Objective

1.2.1 The objective of this TA is to examine and report on potential transport impacts resulting from the pre-construction and construction phase of the Development and to provide additional detail and technical information to support the conclusions reached in the EIAR Traffic and Transport Chapter (*Chapter 14: Access, Traffic and Transport) (Volume 2: Main Report*).

1.3 Site Location

1.3.1 The Development is located at central national grid reference NN 03615 17578 approximately 4.4 km to the south of the village of Portsonachan and 9 km northwest of Inveraray in Argyll and Bute with the red line boundary shown on *Figure 1.1 Location Plan (EIA Volume 3: Figures*).

1.4 Scoping

1.4.1 AECOM has scoped the parameters of the assessment with Argyll and Bute Council and Transport Scotland. The Scoping Opinion can be found within *Appendix 4.2 Scoping Opinion (Volume 5 Appendices)* with additional consultation found within *Appendix 4.3 Consultation Tracker (Volume 5 Appendices*). A summary of the consultation is shown in *Table 1-1 Summary of Scoping*, below. The transport specific scoping correspondence is also included in *Annex A Scoping Correspondence*, at the end of this TA.

Table 1-1. Summary of Scoping

Consultee	Key Issue	Summary of Response	Action Taken
Argyll and Bute Council	Cumulative Impacts	Proposals which would impact the roads network should take account of the cumulative impacts on the network having regards to the fact that many energy related infrastructure projects are proposed in the area.	An assessment of the cumulative impacts of nearby development has been undertaken.
	Excess Rock / Waste Material	A “duty to cooperate” utilising best endeavours between the two S36 hydro proposal developers should be required to ensure waste from Cruachan which could be utilised at the Development is not transport away from the local area.	Council position duly noted.
	B840 Realignment	Preliminary route alignment drawings issued to Argyll and Bute Council.	Council reviewing and considering B840 realignment drawings.
Transport Scotland	Traffic Data Collection	Transport Scotland required that base traffic in the vicinity of the A85(T)/ A819 junction should be used.	ATC traffic surveys have been undertaken on the A85 both immediately east and west of the A85 / A819 junction and have been included within the assessment.
	Proposed jetty on the A83	Transport Scotland required that any proposed changes to the trunk road network must be discussed and approved (via technical approval process by the appropriate area manager). They required that 1:500 scale plans of any new or modified access from the trunk road should be submitted along with visibility splay plans.	Plans of access and traffic management for A83 at jetty produced.

Consultee	Key Issue	Summary of Response	Action Taken
		An abnormal Loads Assessment and swept path analysis is required.	Swept path analysis for abnormal loads from the proposed jetty on the A83 undertaken. Abnormal load route bypasses Inveraray via Upper Avenue to reach A819.
Argyll Estate	Inveraray Bypass	More information requested on the types of vehicles using the bypass, time of day, over what duration and how traffic will be managed. Request information on upgrades required to the roads and impact on trees and bridges.	Information provided to Argyll Estate on number and type of vehicles and how long the route will be used.

1.5 Transport Statement Structure

1.5.1 This TS is structured as follows.

- Section 2: Transport Policy and Guidance - Reviews relevant national, regional, and local transport planning policies and guidance.
- Section 3: Transport Baseline - Reviews existing transport networks and their characteristics in the vicinity of the site, including traffic flows and recorded accident injuries.
- Section 4: The Development – Provides a description of the Development and the construction phases associated with it.
- Section 5: Construction Traffic – Contains a detailed breakdown of how construction traffic numbers were calculated to undertake the assessment in *Chapter 14: Access, Traffic and Transport (Volume 2: Main Report*).
- Section 6: Sensitivity of Receptors – Details the assessment undertaken to inform the sensitivity of receptors used in *Chapter 14: Access, Traffic and Transport (Volume 2: Main Report*).
- Section 7: Fear and Intimidation – Details the calculations undertaken in line with IEMA Guidelines 2023 to determine the likely Fear and Intimidation impacts contained within *Chapter 14: Access, Traffic and Transport (Volume 2: Main Report*).
- Section 8: Swept Path Analysis – Shows swept path analysis of the proposed bypass routes for AIL movements on Upper Avenue and HGV movements on the proposed Inveraray Bypass route.
- Section 9: Cumulative Development – Provides the background for the cumulative development assessment undertaken in *Chapter 14: Access, Traffic and Transport (Volume 2: Main Report*).
- Section 10: Traffic Impacts – Presents the anticipated traffic impacts of the construction of the Development, including temporary increases in traffic on Study Area roads and forecast injury accidents.
- Section 11: Framework Construction Traffic Management Plan – Provides a framework for a future detailed Construction Traffic Management Plan to be enforced during the construction phase of the Development. A detailed CTMP will be the responsibility of the construction contractor once appointed.
- Section 12: Framework Staff Travel Plan – Provides a framework for a future detailed Full Travel Plan to be enforced during the construction phase of the Development.
- Section 13: Summary and Conclusions

2. Transport Policy and Guidance

2.1 Introduction

2.1.1 In accordance with development planning process, the Development is required to comply with various national, regional, and local planning policies. This chapter therefore incorporates a brief overview of the relevant policy documents and highlights how the Development satisfies these policies. In addition to this, relevant aspects of specific transport guidance are also detailed.

2.2 Policy Compliance

2.2.1 The Development is required to comply with national, regional, and local transport planning policies, and follow relevant guidance as required. This chapter provides an overview of relevant policy and guidance and summarises how the Development will satisfy these.

2.3 National Policies

National Transport Strategy NTS2 (2020)

2.3.1 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.

2.3.2 Four priorities support the vision.

- Reduce inequality.
- Take climate action.
- Help deliver inclusive economic growth.
- Improve health and wellbeing.

Climate Change Plan Update (2020)

2.3.3 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.

2.3.4 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

2.3.5 The National Planning Framework 4 (NPF4) was adopted by the Scottish Ministers on 13 February 2023, following approval by the Scottish Parliament in January. This replaces National Planning Framework 3 (NPF3) 2014, Scottish Planning Policy (SPP) 2014 and Regional Plans and is now part of the statutory Development Plan for Argyll and Bute, along with the Local Development Plan.

2.3.6 The NPF4 sets out overarching spatial principles to support the planning and delivery of the three key National Planning Policy areas:

- Sustainable Places.
- Liveable Places.
- Productive Places.

2.3.7 NPF4 published in 2023 identifies 'National Spatial Strategy' and states that development proposals of all forms of renewable, low carbon and zero emissions technologies will be supported including pumped storage hydro. Under Policy 11 (Energy), development proposals for renewable energy projects must 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)

2.3.8 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 development sites.

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

2.3.9 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.

2.3.10 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.*"

2.4 Regional Policies

2.4.1 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 Development, located within Argyll and Bute, is within the Highland Transport Partnership region (HITrans).

HITrans Regional Transport Strategy Refresh (2018)

2.4.2 HITrans produced a Draft Updated Regional Transport Strategy in May 2017. This remains subject to approval by Scottish Ministers and therefore the RTS produced in 2008 is the currently adopted RTS for the region.

2.4.3 HITrans' RTS 2008 provides a regional policy context for the Development. It sets out a vision to "enhance the region's viability." To deliver the vision, the strategy notes that the critical issue of connectivity needs to be addressed and thus "improving interconnectivity of the whole region to strategic services and destinations" is included as a delivery objective. The planning objectives for the strategy are to:

Enable the region to compete and to support growth.

Enable the people of the region to participate in everyday life.

Improve the safety and security of travel.

Manage the impacts of travel on the region's environmental assets; and

Improve the health of the region's people.

2.5 Local Policies

Argyll and Bute Local Development Plan 2

2.5.1 Argyll and Bute Council (ABC) adopted their new Local Development Plan (LDP2) in February 2024. The key proposed policies of relevance to this chapter include:

- Policy 30 – The Sustainable Growth of Renewables,
- Policy 35 – Design of New and Existing, Public Roads and Private Access Regimes,
- Policy 37 – Development Utilising an Existing Private Access or Existing Private Road,
- Policy 38 – Construction Standards for Public Roads, and
- Policy 39 – Construction Standards for Private Access.

3. Transport Baseline

3.1 Introduction

3.1.1 This chapter summarises transport networks and baseline traffic within the Study Area for the site.

3.2 Study Area Roads

3.2.1 Study Area roads are identified in *Figure 14.1 Study Area Roads (EIAR Volume 3 Figures*):

- A819 between Inveraray and Dalmally. It is a single carriageway which is largely rural in character.
- A83 between Rest and Be Thankful and Lochgilphead. This is a single-carriageway section of trunk road carrying two-way traffic. It is primarily rural in character and passes through the settlement of Inveraray.
- A85 between Taynuilt and Dalmally, east of the A85 / A819 junction. This is a single-carriageway section of trunk road carrying two-way traffic. It is primarily rural in character.
- B840 is a single-track road with passing places between the A819 and Ford, routing adjacent to the banks of Loch Awe.

3.2.2 Additionally, there are upgrades proposed to multiple existing access tracks to facilitate the Development. These include:

- An upgraded access track from the A819 will facilitate movements of construction traffic between the A819 and the Site.
- A section of unclassified access track between the A83 and A819, north of Inveraray Castle will be upgraded and allow construction traffic to bypass the town of Inveraray.
- A section of unclassified road (Upper Avenue) between the A83 west of Inveraray and the A819. This track will be upgraded to support construction traffic movements between the proposed jetty on the A83 and the A819, bypassing the town of Inveraray. It is anticipated that this route will principally be used byabnormal load traffic.

3.3 A819

Description

3.3.1 The A819 is a two-way, single carriageway road which routes north to south between the A85 in the north and the A83 in the south. It connects to the A85 west of Dalmally, in proximity of Kilchurn Castle, via a priority junction and connects to the A83 in Inveraray, also via a priority junction. The road has a national speed limit of 60mph for the majority of its route, with a small section immediately north of Inveraray with a 40mph speed limit and a 30mph speed limit within the town of Inveraray. The route is primarily rural in nature, providing access to a very small number of residential properties on its route.

Pedestrians

3.3.2 The A819 has no pedestrian infrastructure on its route outside of the urban environment of Inveraray. Within Inveraray the A819 has footways on the west side of the carriageway between the A83 / A819 junction and Inveraray Shinty Club.

Cyclists

3.3.3 This is no dedicated cycle infrastructure on the A819.

Public Transport

3.3.4 As a primarily rural road, there are no bus stops located on the A819.

3.4 A83

Description

3.4.1 The A83 is a two-way, single carriageway road which routes east and west between the A82 in the east and terminates at Campbeltown in the west. The A83 routes via the Rest and Be Thankful, Inveraray and Lochgilphead and is the access road for the proposed jetty, west of Inveraray. The road has a national speed limit of 60mph out with urban areas and a 30mph speed limit within towns on its route, including Inveraray. The route is primarily rural in nature but is known as a popular scenic route for tourists to access recreational areas in Argyll and Bute.

Pedestrians

3.4.2 The A83 has no pedestrian infrastructure on the vast majority of its route, being primarily rural in nature. There are however footways on both sides of the carriageway as it routes through Inveraray and has footways in other towns along its route.

Cyclists

3.4.3 This is no dedicated cycle infrastructure on the A83.

Public Transport

3.4.4 On the A83, bus services are accessible within the town of Inveraray. The town is served by the 926 Intercity service to Campbeltown from Glasgow which operates 7 days per week, with four services daily on weekdays, increasing to six daily services on weekends.

3.4.5 Local services are available in the form of the 428 and 486 services. The 428 service operates between Inveraray and Ardrishaig with two services operating each way during the AM and PM, 4 total daily services each way. The 428 service does not operate on weekends. The 486 service operates 6 days per week (no Sunday services) between Dunoon and Inveraray, providing a connection to the Ferry Terminal in Dunoon. On weekdays there are 5 daily services in each direction, reduced to two daily services each way on Saturdays.

3.5 A85

Description

3.5.1 The A85 is a two-way, single carriageway road which routes east and west between the A82 in the east and terminates at Oban in the west. The A83 routes via Dalmally, Taynuilt and Connel and provides a connection to the ferry terminal at Oban. The road has a national speed limit of 60mph out with urban areas and a 30mph speed limit within towns on its route. The route is primarily rural in nature but forms a key construction route for other nearby development such as a Cruachan 2 project.

Pedestrians

3.5.2 The A85 has no pedestrian infrastructure on the vast majority of its route, being primarily rural in nature. There are however footways on both sides of the carriageway as it routes through urban areas including Taynuilt.

Cyclists

3.5.3 This is no dedicated cycle infrastructure on the A85.

Public Transport

3.5.4 On the A85, bus services are accessible within the town of Dalmally, Taynuilt and Oban. The route is served by the 975 and 976 Intercity services between Oban and Glasgow which operates 7 days per week, with four services daily.

3.5.5 Local services are available in the form of the 403 and 415 services. The 403 service operates between Oban and Dalmally with two services operating each way during the AM and PM, 4 total daily services each way. The 403 service does not operate on weekends. The 415 service operates 6 days per week (no Sunday services) between Oban and Dalavich, providing a connection to the Ferry Terminal in Oban. Every day there are two daily services in each direction.

3.6 B840

Description

3.6.1 The B840 is a single-track road with passing places which routes north to south between the A819 in the north and the A816 in the south, near Ford. It connects to the A818 at Cladich via a priority junction and connects to the A816 also via a priority junction. The road has a national speed limit of 60mph out with small villages on the route. The route is primarily rural in nature, providing access to a very small number of residential properties on its route.

Pedestrians

3.6.2 The A819 has no pedestrian infrastructure on its route.

Cyclists

3.6.3 This is no dedicated cycle infrastructure on the A819.

Public Transport

3.6.4 As a primarily rural road, there are no bus stops located on the A819.

3.7 Baseline Traffic Data

3.7.1 Traffic surveys were undertaken throughout the Study Area in the form of eight Junction Turning Counts (JTC) and fifteen Automatic Traffic Counters (ATC). EIA Volume 3 Figure 14.3 shows the locations of the traffic surveys. Automatic traffic counters were in place for 7 days between Tuesday 6th June 2023 and Monday 12th June 2023, collecting data for 24 hours each day. JTC were in place on the 8th June 2023 and were recording between 07:00 – 10:00 and 16:00 – 19:00. The full outputs of the traffic surveys are included in *Annex B Traffic Survey Data*, at the end of this Appendix**,** and are summarised below.

3.7.2 JTCs were undertaken at the following locations:

- JTC1 – A83 / A819 junction in Inveraray
- JTC2 – A83 / Upper Ave junction south of Inveraray
- JTC3 – Aray Bridge signalised bridge crossing
- JTC4 – A819 / Residential property access junction
- JTC5 – A819 / Access Track junction
- JTC6 – A819 / Access Track junction
- JTC7 – A819 / B840 junction
- JTC8 – A85 / A819 junction

3.7.3 Network flow diagrams showing the results of the junction turning count surveys are included in *Annex C Network Flow Diagrams*, at the end of this Appendix.

3.7.4 ATCs were undertaken at the following locations:

- ATC1 – On A83, south of Inveraray
- ATC2 – On A83, approximately 150m south of Inveraray Parish Church
- ATC3 - On A819, approximately 75m north of the Inveraray Castle Car Park
- ATC4 – On A83, approximately 100m south of Aray Bridge
- ATC5 – On A83, approximately 350m south of Garron Bridge
- ATC6 – On A819, approximately 150m south of the residential property access
- ATC7 – On A819, approximately 150m north of access track
- ATC8 – On A819, approximately 100m north of access track
- ATC9 – On B840, approximately 100m west of A819 / B840 junction
- ATC10 – On A85, approximately 150m east of the A85 / A819 junction
- ATC11 – On A85, approximately 150m west of the A85 / A819 junction
- ATC12 – On A815, approximately 100m north of the A815 / A886 junction

- ATC13 – On B840, approximately 300m east of Ford
- ATC14 – On A83, approximately 300m north of the A83 / B828 junction
- ATC15 – On A85, approximately 200m east of A85 / B845 junction

3.7.5 A summary of the results of the ATC surveys are included in Table 3-1 below.

Table 3-1. ATC Result Summary

ATC	Average Weekday Traffic Flow (24 Hour) 2023 Survey			Average Vehicle Speed (mph)	85th Percentile Vehicle Speed (mph)
	Light	HGV	Total`		
ATC1 – On A83, south of Inveraray	3,232	219	3,451	46	52
ATC2 - On A83, approximately 150m south of Inveraray Parish Church	3,926	222	4,148	25	30
ATC3 - On A819, approximately 75m north of the Inveraray Castle Car Park	1,771	85	1,856	40	47
ATC4 – On A83, approximately 100m south of Aray Bridge	3,934	227	4,161	34	39
ATC5 – On A83, approximately 350m south of Garron Bridge	3,854	210	4,064	49	56
ATC6 – On A819, approximately 150m south of the residential property access	1,602	84	1,686	55	64
ATC7 – On A819, approximately 150m north of access track	1,589	91	1,680	52	60
ATC8 – On A819, approximately 100m north of access track	1,524	89	1,613	49	57
ATC9 – On B840, approximately 100m west of A819 / B840 junction	345	6	351	24	28
ATC10 – On A85, approximately 150m east of the A85 / A819 junction	3,590	179	3,769	43	51
ATC11 – On A85, approximately 150m west of the A85 / A819 junction	4,121	181	4,302	47	54
ATC12 – On A815, approximately 100m north of the A815 / A886 junction	2,278	124	2,402	39	44
ATC13 – On B840, approximately 300m east of Ford	179	2	181	25	32
ATC14 – On A83, approximately 300m north of the A83 / B828 junction	4,216	312	4,528	41	49
ATC15 – On A85, approximately 200m east of A85 / B845 junction	4,761	183	4,944	33	38

Source: 2023 Traffic Surveys

3.8 Study Area Discrete Road Links

3.8.1 The 2023 traffic count data for Study Area roads has been used to identify discreet road links for assessment purposes. These have been development using professional, engineering judgement with appropriate start and end points identified for each link. The start and end points usually come in the form of a junction or another appropriate landmark on the Study Area road. The road links identified as well as the ATC counter

associated with those links is shown in *Table 3-2* below and the extents of each road link is shown in *Annex D Road Links,* at the end of this Appendix.

Table 3-2. Road Links

Road Links	Extent	ATC
A85 Taynuilt	A85 / B845 Junction to Kilchurn Bridge	ATC15
A85 West	Kilchurn Bridge to A85 / A819 Junction	ATC11
A85 East	A85 / A819 Junction to Dalmally	ATC10
B840 Cladich	A819 / B840 Junction to Balliemeanoch	ATC9
A819 Dalmally	A85 / A819 Junction to Site Access Junction	ATC8
Site Access Track	Site Access Junction to Site	N/A
A819 Site Access	Site Access Junction to Potential Site Egress Junction	ATC7
A819 Inveraray	Potential Site Egress Junction to A819 / Upper Avenue Junction	ATC6
A819 Inveraray Town Centre	A819 / Upper Avenue Junction to A83 / A819 Junction	ATC3
Inveraray Bypass	A819 / Inveraray Bypass Junction to A83 / Inveraray Bypass Junction	N/A
A83 Aray Bridge	A83 / A819 Junction to A83 / Inveraray Bypass Junction	ATC4
A83 Garron Bridge	A83 / Inveraray Bypass Junction to Dunderave Castle	ATC5
A83 Rest and Be Thankful	Dunderave Castle to A83 / A815 Junction	ATC14
A815 Strachur	A83 / A815 Junction to A815 / A886 Junction	ATC12
Upper Avenue AIL Route	A83 / Upper Avenue Junction to A819 / Upper Avenue Junction	N/A
A83 Inveraray Town Centre	A83 / A819 Junction to Westernmost Inveraray Property	ATC2
A83 Lochgilphead	Westernmost Inveraray Property to A83 / Argyll Caravan Park Junction	ATC1
B840 Ford	Balliemeanoch to Ford	ATC13

3.9 Traffic Growth Forecast

3.9.1 To provide an appropriate baseline against which to compare forecast construction traffic flows, it has been necessary to apply a growth factor to the 2023 baseline data to arrive at anticipated baseline flows during the peak construction year of 2027. To obtain this, the Trip End Model Presentation Program (TEMPro) version 8.1 has been used. The software uses National Trip End Model (NTEM) data to forecast the percentage increase in traffic flows between two years, in this case 2023 and 2027. Analysis of NTEM data can be made by:

- Geographical area
- Transport mode
- Travel time of day
- Purpose of journey
- Years of interest
- Type of trip

3.9.2 For the Development, the following details have been applied to obtain the growth factor:

- Dataset version – 80
- Dataset scenario – Regional
- Result type – Trip ends by time period
- Base year – 2023
- Future year – 2027
- Trip Purpose Group – All purposes

- Time Period – Weekday AM peak period
- Trip End Type – Origin / Destination
- Area Description – Argyll and Bute
- Mode – Car Driver

3.9.3 The resulting output from the TEMpro calculations was that a growth factor of 1.0326 should be applied to 2023 data to achieve a baseline traffic flow level for 2027. This is effectively similar to an NRTF 'low' growth scenario which was agreed to be used in the assessment during scoping with Transport Scotland.

3.10 Injury Accident Records

3.10.1 The Crashmap online database (www.crashmap.co.uk) provides historical injury accident records for the most recent five-year period (2018-2022). The location and severity of all accidents on Study Area roads is included within *Annex E Road Accident History*, and is summarised in *Table 3-3* below.

Table 3-3. Baseline Accident History on Study Area Roads

Road Link	Baseline Injury Accidents (2018 – 2022)		
	Slight	Serious	Fatal
A85 Taynuilt	7	8	1
A85 West	0	0	0
A85 East	0	0	0
B840 Cladich	0	0	0
A819 Dalmally	1	5	0
Site Access Track	0	0	0
A819 Site Access	0	3	0
A819 Inveraray	1	1	0
A819 Inveraray Town Centre	0	0	0
Inveraray Bypass	0	0	0
A83 Aray Bridge	1	2	0
A83 Garron Bridge	3	3	0
A83 Rest and Be Thankful	8	8	0
A815 Strachur	3	3	2
Upper Avenue AIL Route	0	0	0
A83 Inveraray Town Centre	0	0	0
A83 Lochgilphead	0	0	0
B840 Ford	0	0	0

Source: Crashmap Database

3.10.2 Most links within the Study Area would be considered to have a negligible history of injury accidents with no noticeable accident clusters in the last 5 years. The A85 Taynuilt, and A819 Dalmally and A83 Rest and be Thankful all have slightly higher rates of accidents than the other links. There was a total of 20 'serious' accidents on these links over the 5-year period. It is considered that the only notable accident cluster on the Study Area roads is at the A83 / A815 junction which recorded 2 'slight' accidents, 4 'serious' accidents and 1 'fatal' accident over the 5-year period.

3.11 Core Paths

3.11.1 Within the Study Area, there are two core paths of note. Path C203(a) and C203(d) form part of the same path which utilises a small section of Upper Avenue. The core path routes from where Upper Avenue connects to the A83 to the bend in Upper Avenue where it changes course to the north east.

3.11.2 Path C201 routes from the town centre of Inveraray to the north east, past Inveraray Castle. This core path crosses the track which is proposed to be used as a construction route to bypass Inveraray just north of Inveraray Castle.

4. The Development

4.1 Construction Programme and Phasing

4.1.1 The construction programme and associated forecast vehicle movements are included in *Annex F Construction Traffic Programme*. Traffic generating activities during the construction stage of the Development are summarised in *Table 4-1* below.

Table 4-1. Construction Activities

Activity	Timescale	Description of Transport Activities
Enabling Works	6 Months	Site set-up will include delivery of plant to improve existing site accesses.
General Mobilisation	12 Months	Delivery of plant and materials to set up construction compound, conduct site investigations, open borrow pits and commence pontoon works.
Headpond	23 Months	Delivery of plant and materials for removal of topsoil, creation of embankments and spillway construction.
Tailpond	17 Months	Delivery of plant and materials to excavate rock, create inlet/ outlet structure and construct B840 diversion.
Tunnelling Works	4 Months	Delivery of plant and materials to undertake tunnelling works.
Construction Tunnel	24 Months	Delivery of plant and materials, including concrete to construct and line the tunnel.
Emergency Egress and Access Tunnel	24 Months	Delivery of plant and materials, including concrete to construct and line the emergency tunnel.
Headrace Tunnel (low pressure)	3 Months	Delivery of plant and materials, including concrete to construct and line the headrace tunnel.
Tailrace Tunnel (low pressure)	29 Months	Delivery of plant and materials, including concrete to construct and line the tailrace tunnel.
Power Tunnel (low pressure)	37 Months	Delivery of plant and materials, including concrete to construct and line the power tunnel.
Ventilation Tunnel (low pressure)	37 Months	Delivery of plant and materials, including concrete to construct and line the ventilation tunnel.
Switchroom Building and HV Switchyard	12 Months	Delivery of plant and materials to undertake ground works and building super structures for switchroom and switchyard.
Powerhouse / Power Cavern	15 Months	Delivery of plant and materials, including delivery of concrete to undertake excavation works, create turbine and transformer halls, remove spoil and transport crane structure and superstructure.

Source: <Source>

4.2 Site Access and Construction Traffic Routes

4.2.1 Access to the site is anticipated to be facilitated by the following routes, also shown in *Figure 14.1 Study Area Roads (EIA Volume 3 Figures):*

- A819 between Inveraray and Dalmally. It is a single carriageway which is largely rural in character.
- A83 between Rest and Be Thankful and the proposed jetty location. This is a single-carriageway section of trunk road carrying two-way traffic. It is primarily rural in character and passes through the settlement of Inveraray.
- A85 between Taynuilt and east of the A85 / A819 junction. This is a single-carriageway section of trunk road carrying two-way traffic. It is primarily rural in character.

4.2.2 In addition to the public roads listed above, two dedicated construction traffic routes are proposed in the vicinity of Inveraray. *Figure 14.2 Inveraray Study Area Roads (EIA Volume 3: Figures)* shows these routes. East of Inveraray a dedicated route for construction traffic is proposed between the A83 and A819. This route runs north of Inveraray Castle and avoids the town and is referred to in this TA and throughout the EIAR as the Inveraray Bypass. This route will be used by construction traffic in both directions. West of Inveraray a new temporary marine facility with jetty is proposed on Loch Fyne. This jetty will be used to deliver abnormal indivisible loads (AIL) into the Study Area. AIL will leave the jetty and cross directly over

the A83 before continuing on a dedicated construction traffic route that links into Upper Avenue and connects to the A819 north of Inveraray.

4.2.3 Construction traffic will leave the public road from the A819 at Craig nan Sassanach where an existing track access to Old Military Road will route traffic towards the Development site. Upgrades will be required to the network of forest tracks that are proposed to accommodate construction traffic.

4.2.4 The B840 runs along the shore of Loch Awe, west of the Development site. However, construction traffic is not proposed to route via the B840 as it will use the A819 Craig nan Sassanach access. The proposed inlet / outlet structure at Loch Awe will require the existing alignment of the B840 to be revised and routed inland over a short distance to bypass the proposed inlet / outlet structure.

4.3 Marine Facility

4.3.1 The marine facility will consist of a temporary jetty, provided for the delivery of abnormal indivisible loads (AIL), such as transformers, turbine, and gantry cranes. Several different types of plant and equipment will be required for the construction and operation of the proposed marine facility. These include, but are not limited to:

- Barges.
- Long reach excavators.
- Tugs.
- Jack up barges.
- Workboats.
- Temporary harbour cranes.
- Mobile cranes; and
- Piling rigs.

4.3.2 *Annex G Marine Facility* contains AECOM drawing number S03-Z2-06-DR-CE-326301 showing a conceptual arrangement for the proposed temporary marine facility with jetty.

4.4 B840 Realignment

4.4.1 The Development will have an inlet / outlet structure on Loch Awe in the vicinity of Balliemeanoch Farm Steading. This will be a physically substantial piece of permanent infrastructure. Drawings in *Annex H B840 Realignment* how the location and extents of the proposed inlet / outlet construction. It will have a significant impact on the B840 road in this location, both during the construction phase and thereafter when the pumped storage hydro scheme is operational.

4.4.2 It has been considered whether a temporary closure, or temporary local diversion, of the B840 would allow the inlet / outlet works to be completed, with the B840 retaining its current alignment once construction is complete. However, a temporary closure is not considered feasible as the work is programmed over several years, and the diversion route would be a considerable length. Furthermore, the completed inlet / outlet structure will be so significant in scale AECOM are of the view the B840 could not be retained on its current alignment.

4.4.3 As such, a permanent realignment of the B840 in the vicinity of the inlet / outlet structure is proposed. The proposed realignment of the B840 is to the landward side of the proposed inlet / outlet structure. *Annex H B840 Realignment* contains drawings with a conceptual realignment for the B840.

4.5 A819 Electric Cottage

4.5.1 Public consultation has raised a concern from the occupiers of Electric Cottage on the A819. They state the existing A819 road alignment (mainly the vertical geometry) and traffic speeds in the vicinity of their access can make exiting the cottage onto the A819 challenging. Fast moving traffic from the direction of Inveraray is their main concern, as the A819 is a national speed limit road past the access to the cottage. The occupiers are concerned that additional traffic on the A819 associated with the Development may exacerbate their access issues and concerns.

4.5.2 AECOM consider that a temporary extension to the 40mph limit on the A819 to encompass the Electric Cottage entrance may alleviate the occupiers' concerns. The current A819 40mph / National Speed Limit boundary is south of the cottage access. Moving the speed limit boundary some 580 meters north to include the cottage would be an appropriate solution for the duration of the Development's construction programme (some 72 months).

5. Construction Traffic

5.1 Introduction

5.1.1 This section presents the anticipated vehicular trip generation associated with the Development.

5.2 Construction Programme

5.2.1 The construction period is expected to last approximately 7 years, anticipated to begin in 2027 and being completed by 2034.

5.3 Vehicles, Plant and Equipment Requirement

5.3.1 Several different types of plant and equipment will be required for construction of the Development. These include, but are not limited to:

- Bulldozers.
- Mobile cranes.
- Mobile crushing and screening plant.
- Dump trucks – for the transportation of materials within the Development Site.
- Electric shuttle cars.
- Excavators.
- Graders.
- Low loaders – for delivery of plant and equipment.
- Mechanical breaking plant.
- Pumps.
- Drilling, piling, and blasting rigs.
- Rollers.
- 8-wheel tippers.
- Tractors and trailers.
- Temporary concrete batching plant.
- Temporary bunded fuelling station.
- Temporary floating track – i.e. bogmats or trackway system.
- Tunnel services – i.e. lighting, electricity, ventilation etc.
- Silt busters, silt curtains and dewatering tubes.
- Water bowsers and water cannons.
- Wheel wash facilities.

5.4 Construction Traffic Generation Calculations

5.4.1 The full output of calculations for forecasting construction traffic throughout the construction programme are included *Annex F Construction Traffic Programme*. The section details how these numbers were calculated, and the assumptions made to arrive at the forecast level of construction traffic.

5.4.2 AECOM has calculated materials required to be transported to site at various stages of the construction programme and have used professional judgement to determine how these would be transported to site. Different types of materials will clearly require different vehicle types to transport then with varying capacities. It has been determined that the different types of material would require the following vehicle types to transport them:

- Aggregate - HGV (20 tonne capacity)
- Geotextiles – HGV (20 tonne capacity)
- Rebar – HGV (20 tonne capacity)
- Steel – HGV (20 tonne capacity)
- Concrete – Concrete Mixer (7.6m³ capacity)
- Topsoil – HGV (20 tonne capacity)
- Rock – HGV (20 tonne capacity)
- Timber / Wood – HGV (20 tonne capacity)
- Plant – Low loader (AIL)
- Turbines – Low loader (AIL)
- Transformers – Low loader (AIL)

5.4.3 Knowing the quantities of each material projected to be required at each stage of construction has allowed the number of vehicles required throughout the construction programme to be determined by dividing the materials required by the capacity of the vehicle required to transport them. This is then multiplied by two to account for the two-way nature of material deliveries.

5.4.4 A detailed construction programme has been provided indicating the number of months that each stage of the construction will last for. It has been assumed that the total number of delivery vehicles required at each stage of construction will be spread uniformly across each month that that stage will take place. For example, it is forecast that the removal of topsoil for the headpond will take two months to complete and required 90 two-way vehicle trips in total, therefore 45 two-way vehicle trips have been assigned to each of those months.

5.5 Construction Personnel Traffic Generation

5.5.1 It is anticipated that there will be 600 staff on-site during the peak period of construction. At present, the arrangements for accommodation for staff has not been determined, however it is likely that workers will be housed locally (see workers' accommodation annex). This would provide accommodation for most staff working on site; however, some staff would still be expected to travel to site from elsewhere.

5.5.2 To determine the vehicle trips generated by staff during the peak month of construction, the following assumptions have been made:

- 85% of 600 staff will be transported to site by minibus. At present, it is considered likely that a minibus service will be provided to transport workers from the temporary workers' accommodation to site each day and vice versa. This will minimise the impact of staff vehicle trips to site and mean workers are being transported as sustainably as possible. It is assumed that each minibus has a capacity of 16 staff per bus.
- The remaining 15% of 600 staff will use private cars / LGVs as transport to and from the site daily. It is assumed that workers travelling to the site by private car / LGV will travel at a rate of 2 workers per vehicle, allowing for car sharing arrangements. Car sharing will be encouraged among staff to minimise the impact of staff trips on local roads and ensure staff are travelling as sustainably as possible.

5.5.3 The resulting calculation to determine the number of daily staff vehicle movements is shown in Table 5-1.

Table 5-1. Staff Vehicular Trip Generation

Mode	Share	Staff	Ratio	Vehicles	Two-way Movements
Minibus	85%	510	16 per minibus	32	64
Car / LGV	15%	90	2 per car / LGV	45	90
Total					**154**

Source: AECOM

5.6 Peak Month Construction Traffic Generation

5.6.1 Once construction traffic and staff traffic were assigned to the relevant months within the construction programme, it was necessary to determine the daily number of two-way vehicle trips that would be generated by the site. It was assumed there every month of construction would contain 22 days where construction would be taking place and therefore the site would be generating traffic. Monthly construction traffic has therefore been assigned uniformly across those 22 working days during each month to determine an average daily construction traffic number of vehicles.

5.6.2 The forecast HGV movements is then added to the forecast construction staff vehicle movements to arrive at the total daily vehicle movements during each month of the construction period. The month with the highest forecast daily construction movements is then selected for assessment as the peak period for construction traffic.

5.6.3 For the Development, the peak period for construction traffic is forecast to occur in month 11 (November) of 2027. This is primarily due to many HGVs being required to deliver aggregate for the formation of access tracks and the setup of the construction compound. It is forecast that, during month 11, there will be an average daily two-way generation of 490 HGV trips and 154 two-way staff trips, resulting in a total of 644 two-way vehicle trips to and from the site.

5.7 Construction Traffic Distribution

5.7.1 To allow an assessment on each road link within the Study Area to be undertaken, it has been necessary to make assumptions regarding which routes construction vehicles will take to and from the site. For assessment purposes, it is assumed construction traffic generated by the Development appears on all Study Area roads. This assumption provides a robust assessment of Development traffic on Study Area roads. However, this will not be the case in reality and there is a number of exceptions to this general assumption contained within this assessment. These are:

- Construction traffic route from A83 Jetty to A819 via Upper Avenue carries AIL traffic only.
- HGV construction traffic does not route through the town of Inveraray which encompasses the A819 Inveraray Town, A83 Aray Bridge and A83 Inveraray road links. A dedicated haul route is provided between the A83 and A819 north of Inveraray Castle (the Inveraray Bypass).
- Construction traffic does not route along the B840 which encompasses the B840 Cladich and B840 Ford road links.

5.7.2 The distribution of construction traffic and quantum of vehicles assessed on each road link is therefore shown in *Table 5-2* below:

Table 5-2. Construction Traffic Distribution (Month 11 - 2027)

Road Link	Construction Traffic Carried		Daily Two-way Vehicle Trips		
	HGV	Staff (Car/Van)	HGVs	Cars / Vans	Total
A85 Taynuilt	100%	100%	490	154	644
A85 West	100%	100%	490	154	644
A85 East	100%	100%	490	154	644
B840 Cladich	0%	0%	0	0	0
A819 Dalmally	100%	100%	490	154	644
Site Access Track	100%	100%	490	154	644
A819 Site Access	100%	100%	490	154	644
A819 Inveraray	100%	100%	490	154	644
A819 Inveraray Town Centre	0%	100%	0	154	154
Inveraray Bypass	100%	0%	490	0	490
A83 Aray Bridge	0%	100%	0	154	154
A83 Garron Bridge	100%	100%	490	154	644
A83 Rest and Be Thankful	100%	100%	490	154	644

Road Link	Construction Traffic Carried		Daily Two-way Vehicle Trips		
	HGV	Staff (Car/Van)	HGVs	Cars / Vans	Total
A815 Strachur	100%	100%	490	154	644
A83 Inveraray Town Centre	0%	100%	0	154	154
Upper Avenue AIL Route	0%	0%	0	0	0
A83 Lochgilphead	100%	100%	490	154	644
B840 Ford	0%	0%	0	0	0

5.8 Abnormal Indivisible Loads

5.8.1 There will be a requirement for some deliveries by abnormal indivisible loads (AIL) during the construction of the Development. These are partly associated with the transport of equipment to the site including cranes but will also be required for the transportation of the transformers, turbines, and other essential components. The environmental assessment of traffic and movement considers the peak month of construction and therefore does not include abnormal loads as they are not forecast during this month of construction.

5.8.2 Throughout the entire 108-month construction programme, it is anticipated that a total of 376 abnormal load movements will be required. These deliveries are expected to take place between January 2030 and November 2031 and will therefore be spread over a 23-month period. More detail is provided on abnormal loads at section 10.4 of this report.

5.9 Operational Traffic

5.9.1 It is anticipated that, once operational, the site will be minimally staffed. It would be expected that maintenance trips would be required on semi-regular basis. The maintenance visits would be expected to generate approximately 2-4 two-way trips, likely to be an LGV or private car which would be considered to have a negligible impact on the local road network.

5.9.2 It is likely that some larger scale maintenance would be required throughout the lifetime of the project on a potentially annual basis. This could involve an increase in LGV trips over the basic general maintenance so could generate in the region of 6-10 two-way LGV trips. Depending on the type of maintenance required, a relatively small number of HGV trips could also be required if materials or vehicles require to be transported to the site. As these trips would be relatively low frequency occurrences with a small number of vehicles, it would not be expected that this would have a significant impact on the local transport network.

5.9.3 The operational phase of the Development has been scoped out of this assessment and is therefore not considered further in this report.

6. Sensitivity of Receptors

6.1 Introduction

6.1.1 This section sets out the approach for determining the sensitivity of receptors on each road link assessed within *Chapter 14: Access, Traffic and Transport (Volume 2: Main Report)* for the Development.

6.2 Determining Sensitivity of Receptors

6.2.1 Receptors are locations or land-uses categorised by sensitivity or environmental value. *Table 6-1* describes the receptor sensitivity adopted for the assessment of Development traffic.

Table 6-1 Sensitivity of Receptors

Receptor Sensitivity	Description
Very High	The receptor has little or no ability to absorb change without fundamentally altering its present character, is of very high environmental value, or of international importance.
High	The receptor has low ability to absorb change without fundamentally altering its present character, is of high environmental value, or of international importance.
Medium	The receptor has moderate capacity to absorb change without significantly altering its present character, has some environmental value or is of regional importance.
Low	The receptor is tolerant of change without detriment to its character, is low environmental value, or local importance.
Negligible	The receptor is resistant to change and is of little environmental value.

6.2.2 For the purposes of this assessment, the Institute of Environmental Management and Assessment (IEMA) Guidelines identify receptors which are:

- People at home
- People at work
- Sensitive and/or vulnerable groups (including young age; older age; income; health status; social disadvantage; and access and geographic factors)
- Locations with concentrations of vulnerable users (e.g. hospitals, places of worship, schools)
- Retail areas
- Recreational areas
- Tourist attractions
- Collision clusters and routes with road safety concerns
- Junctions and highway links at (or over capacity)

6.2.3 Each road link within the Study Area has been assessed against the criteria above. Professional engineering judgement has been used to assign a rating of Negligible, Low, Medium, High or Very High for each road link against each of the categories above. To assign each road link an overall sensitivity score, a numbering system has been used which assigns scores for each category based on the sensitivity level as set out above. The scoring system works as follows:

- Negligible – 1 point
- Low – 2 points
- Medium – 3 points
- High – 4 points
- Very High – 5 points

6.2.4 Once each link had been assigned a score for each category, an average score was obtained across all the categories to determine the overall score each link. The average score allowed an overall sensitivity for each link to be determined as per the same point system as above.

6.3 Results

6.3.1 The full assessment result of the assessment is shown in *Table 6-2* overleaf.

Table 6-2. Sensitivity of Receptors Assessment

Road Link	Sensitivity Criteria									Total Score	Average Score	Overall Sensitivity Rating
	People at Home	People at Work	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			
A85 Taynuilt	Medium	Low	Negligible	Low	Low	Medium	Negligible	Medium	Negligible	18	2.00	Low
A85 West	Negligible	Negligible	Negligible	Negligible	Low	low	Medium	Negligible	Negligible	13	1.44	Negligible
A85 East	Low	Low	Negligible	Negligible	Negligible	Low	Negligible	Negligible	Negligible	12	1.33	Negligible
B840 Cladich	High	Negligible	Medium	Medium	Negligible	High	Medium	Negligible	Medium	23	2.56	Medium
A819 Dalmally	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	9	1.00	Negligible
Site Access Track	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	9	1.00	Negligible
A819 Site Access	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	9	1.00	Negligible
A819 Inveraray	Low	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	10	1.11	Negligible
A819 Inveraray Town Centre	Very High	Very High	Very High	Very High	Very High	Very High	Very High	Negligible	Negligible	41	4.56	Very High
Inveraray Bypass	Negligible	Negligible	Negligible	Negligible	Negligible	Medium	Medium	Negligible	Negligible	13	1.44	Negligible
A83 Aray Bridge	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	High	Negligible	High	15	1.67	Negligible
A83 Garron Bridge	Negligible	Low	Low	Low	Negligible	Negligible	Negligible	Low	Negligible	13	1.44	Negligible
A83 Rest and Be Thankful	Negligible	Low	Low	Negligible	Medium	Medium	Negligible	High	Medium	20	2.22	Low
A815 Strachur	Low	Low	Low	Negligible	Low	Low	Low	High	Negligible	18	2.00	Low
A83 Inveraray Town Centre	Very High	Very High	Very High	Very High	Very High	Very High	Very High	Negligible	Negligible	41	4.56	Very High
Upper Avenue AIL Route	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	9	1.00	Negligible
A83 Lochgilphead	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	9	1.00	Negligible
B840 Ford	Low	Low	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	11	1.22	Negligible

7. Fear and Intimidation

7.1 Introduction

7.1.1 This section sets out the process by which the Fear and Intimidation on and by Road Users assessment was undertaken with Chapter 14 of the EIA *(Chapter 14: Access, Traffic and Transport (Volume 2: Main Report*)). This assessment has been undertaken in line with guidance set out in IEMA Guidelines 2023.

7.2 Methodology

7.2.1 IEMA Guidelines 2023 states that fear and intimidation on a given road link is dependent on:

- The total volume of traffic
- The heavy vehicle composition
- The speed of vehicles
- The proximity of traffic to people

7.2.2 A weighting system is set out in IEMA Guidelines 2023 to allow assessors to determine the likelihood of fear and intimidation given the characteristics set out above. This is achieved by determining a 'degree of hazard' which allows a score to be provided for each highway link within the Study Area and a resulting 'magnitude of impact' to be determined.

7.2.3 A degree of hazard score for each of total volume of traffic, heavy vehicle flow and average vehicle speed is determined using *Table 3.*1 in the IEMA Guidelines 2023, replicated below.

Table 7-1. Fear and Intimidation Degree of Hazard Scoring

Average Traffic Flow over 18-hour day – all vehicles/hour 2-way (a)	Total 18-hour heavy vehicle flow (b)	Average vehicle speed (c)	Degree of hazard score
+1,800	+3,000	>40	30
1,200–1,800	2,000–3,000	30-40	20
600–1,200	1,000-2,000	20-30	10
<600	<1,000	<20	0

Source: Table 3.1 IEMA Guidelines 2023

7.2.4 The total degree of hazard score from all three elements (total volume of traffic, heavy vehicle flow and average vehicle speed) is combined to provide a level of fear and intimidation. *Table 3.2* in IEMA Guidelines 2023 provides the thresholds that should be used to determine this.

Table 7-2. Levels of Fear and Intimidation

Level of Fear and Intimidation	Total Degree of Hazard Score (a)+(b)+(c)
Extreme	71+
Great	41-70
Moderate	21-40
Small	0-20

Source: Table 3.2 IEMA Guidelines 2023

7.2.5 The magnitude of change for fear and intimidation for a Development is then approximated with reference to the changes in the level of fear and intimidation from baseline conditions. *Table 3.3* from the IEMA Guidelines is used to determine the magnitude of change from a given change in level of fear and intimidation. This table is replicated below.

Table 7-3. Fear and Intimidation - Magnitude of Change

Magnitude of Change	Change in Fear and Intimidation Level from Baseline Conditions
High	Two step changes in Fear and Intimidation Level
Medium	One step change in Fear and Intimidation Level, but with: • >400 veh increase in average 18hr AV two-way all vehicle flow; and/or • >500 HV increase in total 18hr HV flow
Low	One step change in Fear and Intimidation Level, but with: • <400 veh increase in average 18hr AV two-way all vehicle flow; and/or • <500 HV increase in total 18hr HV flow
Negligible	No step change in Fear and Intimidation Level

Source: Table 3.3 IEMA Guidelines 2023

7.3 Results

7.3.1 The results of the fear and intimidation assessment for the Development and Cumulative development are included in *Annex I Fear and Intimidation* and are summarised in *Table 7-4* below.

Table 7-4. Fear and Intimidation Magnitude of Change Assessment Summary

Road Link	Magnitude of Change	
	The Development	Cumulative Development
A85 Taynuilt	Negligible	Medium
A85 West	Negligible	Negligible
A85 East	Negligible	Negligible
B840 Cladich	Negligible	Negligible
A819 Dalmally	Negligible	Negligible
Site Access Track	Negligible	Negligible
A819 Site Access	Negligible	Negligible
A819 Inveraray	Negligible	Negligible
A819 Inveraray Town	Negligible	Negligible
Inveraray Bypass	Negligible	Negligible
A83 Aray Bridge	Negligible	Negligible
A83 Garron Bridge	Negligible	Negligible
A83 Rest and Be Thankful	Negligible	Negligible
A815 Strachur	Negligible	Negligible
A83 Inveraray	Negligible	Negligible
Upper Avenue AIL Route	Negligible	Negligible
A83 Lochgilphead	Negligible	Negligible
B840 Ford	Negligible	Negligible

8. HGV / AIL Swept Path Analysis

8.1 Introduction

8.1.1 HGV / AIL swept path analysis has been undertaken on Study Area roads as follows.

- The proposed Inveraray Bypass north of Inveraray Castle between the A83 and A819
- The proposed AIL route on Upper Avenue, between the A83 jetty and the A819.
- A819 site access.

8.1.2 The swept path analysis drawings are contained with *Annex J Swept Path Analysis*.

8.2 Proposed Inveraray Bypass

8.2.1 The proposed Inveraray Bypass will route HGV construction traffic between the A83 and A819. Its purpose is to avoid routing HGV construction traffic over the Aray Bridge and through Inveraray town centre.

8.2.2 AECOM drawings S03-ZD-02-DR-TR-302208 to S03-ZD-02-DR-TR-302210 show the swept path analysis for the proposed Inveraray Bypass between the A83 and A819. The drawings show the locations where marshalling points will be located to allow stacking of vehicles off the main carriageway. These will be located close to either end of the route (A83 end and A819 end) and will ensure construction vehicles are not disrupting the flow of the traffic on the public road network.

8.2.3 These drawings also show the proposed locations of passing places on the route which will operate on a line-of-sight basis, allowing two-way flow. For the proposed passing places, inbound (westbound) vehicles will give way to outbound (eastbound) vehicles.

8.2.4 The analysis shows that the route would have sufficient width to accommodate the HGV movements which are proposed to utilise it. Although a strict traffic management plan will be in place throughout to manage vehicles leaving and joining the route.

8.3 Proposed AIL Route (Upper Avenue)

8.3.1 The Upper Avenue AIL route has been assessed for the worst case AIL load. That is a 280-tonne transformer with dimensions 10.5m x 4m x 4.8m. This represents the largest and heaviest AIL to be transported from the jetty to the A819 via Upper Avenue.

8.3.2 AECOM drawings S03-ZD-02-DR-TR-302202 to S03-ZD-02-DR-TR-302204 show the swept path analysis for the proposed AIL Route utilising Upper Avenue. The drawings show a marshalling area immediately north of the A83 which will allow vehicles to turn. The route will accommodate one-way AIL movements only and traffic will be co-ordinated to ensure that only one vehicle is utilising the route at any time. The drawings show that some widening, and realignment is required on the route but that AIL movements can be achieved. Additionally, some vegetation clearance is required at the A819 / Upper Avenue junction. The proposed Upper Avenue AIL route will be provided to ensure vehicles can safely pass a memorial stone.

8.3.3 AECOM drawings S03-ZD-02-DR-TR-302212 shows the proposed traffic management at the location where the proposed jetty meets the A83 carriageway. This includes appropriate signage indicating works, heavy plant crossing and forewarning of temporary traffic signals when loads are being moved. Part time signals will be installed on the A83 carriageway to the east and west of the A83 / Upper Avenue junction as well as on Upper Avenue and at the proposed jetty access road. All signs will be compliant with The Traffic Signs Regulations and General Directions (TSRGD).

8.4 Site Access

8.4.1 AECOM drawings S03-ZD-02-DR-TR-302206 and S03-ZD-02-DR-TR-302217 show how worst-case abnormal loads will interact with proposed site access from the A819 to site. The swept path analysis shows where areas of widening are required at the accesses to ensure AIL can negotiate them in one movement.

9. Cumulative Development

9.1 Introduction

9.1.1 This section sets out the process by which cumulative development traffic was incorporated into the Traffic and Transport assessment in *Chapter 14: Access, Traffic and Transport (Volume 2: Main Report*).

9.2 Cumulative Effects

9.2.1 The effects of the Development will be assessed in combination with other projects that are either under construction or currently going through planning. Those approved or under construction will be considered as part of our baseline, those still going through the planning process will be considered as part of our cumulative assessment. Projects to be included within the cumulative assessment will be identified through consultation and a search of the ABC planning portal as well as that of the ECU.

9.2.2 *Chapter 4: Approach to EIA (Volume 2: Main Report) Table 4.8 Cumulative Developments* lists developments that have been identified as either going through screening or scoping, with a granted planning application, or under construction at present to be included within the cumulative assessment.

9.2.3 Cumulative developments which have been identified as operational are accounted for in the baseline traffic data. The remaining developments are shown in *Table 9-1*.

9.2.4 The data used in the traffic and transport assessment for the remaining three developments to be considered has been obtained from the following documents:

Table 9-1. Cumulative Development Traffic and Transport Data Sources

Scheme	Document	Date	Section
Cruachan II Hydro Scheme	Cruachan Expansion Project EIA Report – Volume 1 Main Report	May 2022	Table 9.15
	Cruachan Expansion Project – Transport Assessment	May 2022	Table 5.2
Blarghour Wind Farm	Blarghour Wind Farm - Section 36C Variation Application EIA Report (Volume 2: Main Report)	February 2023	Table 10.9
Upper Sonachan Wind Farm	Upper Sonachan Wind Park – Volume 1: Environmental Statement Chapters	October 2015	Table 12.12 – Table 12.15
Ladyfield Wind Farm	Ladyfield Renewable Energy Park - Environmental Impact Assessment Volume 1 Chapter 13	January 2024	Section 13.7.1 and Figures 13.1 – 13.4
Inveraray to Taynuilt (ITE/ITW) Tie-In to Creag Dhubh Substation	Volume 2 Technical Annex 2.2 Traffic Calculations	February 2023	Technical Annex 2.2
An Suidhe Substation Overhead Line Connection	An Suidhe EA Chapter 9	August 2022	Section 9.5
Creag Dhubh to Dalmally OHL	Section 37 EIA Volume 2 Chapter 13	April 2022	Section 13.5
Creag Dhubh – Inveraray OHL	EA Volume 2 Chapter 12	October 2022	Section 12.4
An Carr Dubh Wind Farm	EA Volume 1 Chapter 12	April 2023	Table 12.10

Scheme	Document	Date	Section
33kv Overhead Line - ETU 166 - Dalmally	Small development consisting of installation of 15 no. poles. No traffic information available therefore not considered.	N/A	N/A
Creag Dhubh substation	Creag Dhubh to Dalmally OHL Section 37 EIA Volume 2 Chapter 13	April 2022	Section 13.6
Inverary to Crossaig OHL	Inveraray to Crassaig 275kv Overhead Line Reinforcement EIA Report: Volume 2: Main Report	July 2018	Section 8.4
An Suidhe Substation	Project currently at screening, no traffic data available	N/A	N/A

9.3 Assumptions

9.3.1 A key assumption for the cumulative development assessment is that the peak period for forecast construction traffic generation for each of the developments will coincide with the peak period for construction traffic generation of the Development. In practice, this is highly unlikely to occur, and it would be anticipated that discussions would be undertaken to minimise the cumulative impact of all cumulative development in the area. However, to present a worst-case scenario of potential effects on the Study Area roads, this assumption has been made.

9.4 Cumulative Development Traffic

9.4.1 The cumulative development traffic data is included within *Annex K*.

10. Traffic Impacts

10.1 Introduction

10.1.1 This section presents the traffic and transport impacts of the construction traffic associated with the Development and presents an assessment of Cumulative Development.

10.2 Assumptions

10.2.1 For assessment purposes, it is assumed construction traffic generated by the Development appears on all Study Area roads. This assumption provides a robust assessment of Development traffic on Study Area roads. However, this will not be the case in reality and there is a number of exceptions to this general assumption contained within this assessment. These are:

- Construction traffic route from A83 Jetty to A819 via Upper Avenue carries AIL traffic only.
- HGV construction traffic does not route through the town of Inveraray which encompasses the A819 Inveraray Town, A83 Aray Bridge and A83 Inveraray road links.
- HGV construction traffic does not route along the B840 which encompasses the B840 Cladich and B840 Ford road links.
- Car / LGV trips associated with construction personnel have been assumed to occur on all Study Area roads. At present it is not known where staff will originate from, therefore, to provide a robust assessment, it has been assumed they will be on all Study Area roads. (Not including construction traffic haul routes: Inveraray Bypass and Upper Avenue AIL Route).

10.3 Traffic Impacts

10.3.1 The results of the assessment of the impacts of the Development as well as the Cumulative Development Assessment have been included in network flow diagrams, contained within *Appendix C Network Flow Diagrams. Table 10-1* below summarises the anticipated increases in traffic on Study Area roads.

Table 10-1. Traffic Impact on Study Area Roads

Road Link	2027 Baseline		The Development		The Development % Impact	
	HGV	All Vehs	HGV	All Vehs	HGV	All Vehs
A85 Taynuilt	189	5,105	490	644	259%	12.6%
A85 West	187	4,442	490	644	262%	14.5%
A85 East	185	3,892	490	644	265%	16.5%
B840 Cladich	6	362	0	0	0%	0%
A819 Dalmally	92	1,666	490	644	533%	38.6%
Site Access Track	0	0	490	644	-	-
A819 Site Access	94	1,735	490	644	521%	37.1%
A819 Inveraray	87	1,741	490	644	564%	36.9%
A819 Inveraray Town **Centre**	88	1,917	0	154	0%	8.04%
Inveraray Bypass	0	0	490	490	-	-
A83 Aray Bridge	234	4,297	0	154	0%	3.58%
A83 Garron Bridge	217	4,196	490	644	225%	15.3%
A83 Rest and Be Thankful	322	4,676	490	644	152%	13.7%
A815 Strachur	128	2,480	490	644	382%	25.9%
A83 Inveraray **Town Centre**	229	4,283	0	154	0%	3.6%

Road Link	2027 Baseline		The Development		The Development % Impact	
	HGV	All Vehs	HGV	All Vehs	HGV	All Vehs
Upper Avenue AIL Route	0	0	0	0	-	-
A83 Lochgilphead	226	3,564	490	644	216%	18%
B840 Ford	2	187	0	0	0%	0%

10.3.2 Forecast cumulative development impacts are summarised on Table 10-2 below, and are also included in network flow diagrams in *Annex C Network Flow Diagrams*.

Table 10-2. Traffic Impact on Study Area Roads of Cumulative Development

Road Link	2027 Baseline		Cumulative Development		Cumulative Development % Impact	
	HGV	All Vehs	HGV	All Vehs	HGV	All Vehs
A85 Taynuilt	189	5,105	1,322	6,540	599%	28%
A85 West	187	4,442	1,420	6,021	659%	35%
A85 East	185	3,892	1,318	5,327	612%	36%
B840 Cladich	6	362	6	516	0%	42%
A819 Dalmally	92	1,666	1,137	2,993	1,137%	79%
Site Access Track	0	0	490	644	High	High
A819 Site Access	94	1,735	1,139	3,062	1,112%	76%
A819 Inveraray	87	1,741	1,132	3,068	1,204%	76%
A819 Inveraray Town Centre	88	1,917	643	2,754	632%	43%
Inveraray Bypass	0	0	490	490	High	High
A83 Aray Bridge	234	4,297	288	4,505	23%	4%
A83 Garron Bridge	217	4,196	761	4,894	250%	16%
A83 Rest and Be Thankful	322	4,676	866	5,374	168%	14%
A815 Strachur	128	2,480	618	3,124	382%	25%
Upper Avenue AIL Route	0	0	0	0	0%	0%
A83 Inveraray Town Centre	229	4,283	550	4,886	140%	14%
A83 Lochgilphead	226	3,564	1,037	4,657	358%	30%
B840 Ford	2	187	2	341	0%	82%

10.3.3 Volume 15 of the Economic Assessment of Road Schemes in Scotland[1] contains information regarding the capacity of roads depending on their characteristics, including number of lanes, speed limits and road lane widths. The document also separates roads into urban and rural categories, providing the capacity for roads in vehicles per hour per direction. Given the anticipated increases in traffic on Study Area roads during construction of the Development, a capacity assessment has been undertaken referring to Table 5/3/2 of the above document. To allow a comparison to be made, the capacities, which are stated in vehicles per hour per direction have been multiplied by 18 (for 18 hours of traffic flow daily) and then by 2 (to cover both directions). Table 10-3 below shows the outcome of this assessment.

[1] CD012.004 - DMRB, Volume 15, Economic Assessment of Road Schemes in Scotland, The NESA Manual, Scottish Government (2015)

Table 10-3. Study Area Roads Capacity Assessment

Road Link	Road Type	Capacity (Daily)	Baseline + the Development Vehicles	Over Capacity?	Baseline + Cumulative Development	Over Capacity?
A85 Taynuilt	Rural – Typical Single 7.3m	43,200	5,749	No	6,540	No
A85 West	Rural – Typical Single 7.3m	43,200	5,086	No	6,021	No
A85 East	Rural – Typical Single 7.3m	43,200	4,536	No	5,327	No
B840 Cladich	Rural – Poor Single 5.5m	14,400	516	No	516	No
A819 Dalmally	Rural – Typical Single 7.3m	43,200	2,310	No	2,993	No
Site Access Track	Rural – Poor Single 5.5m	14,400	644	No	644	No
A819 Site Access	Rural – Typical Single 7.3m	43,200	2,379	No	3,062	No
A819 Inveraray	Rural – Typical Single 7.3m	43,200	2,385	No	3,068	No
A819 Inveraray Town Centre	Rural – Typical Single 7.3m	43,200	2,071	No	2,754	No
Inveraray Bypass	Rural – Poor Single 5.5m	14,400	490	No	490	No
A83 Aray Bridge	Rural – Typical Single 7.3m	43,200	4,451	No	4,505	No
A83 Garron Bridge	Rural – Typical Single 7.3m	43,200	4,840	No	4,894	No
A83 Rest and Be Thankful	Rural – Typical Single 7.3m	43,200	5,320	No	5,374	No
A815 Strachur	Rural – Typical Single 7.3m	43,200	3,124	No	3,124	No
Upper Avenue AIL Route	Rural – Poor Single 5.5m	14,400	4,437	No	0	No
A83 Inveraray Town Centre	Rural – Typical Single 7.3m	43,200	0	No	4,886	No
A83 Lochgilphead	Rural – Typical Single 7.3m	43,200	4,208	No	4,657	No
B840 Ford	Rural – Poor Single 5.5m	14,400	341	No	341	No

10.3.4 As shown in *Table 10-3* above, none of the roads identified within the Study Area would exceed their recommended capacity from Volume 15 of the Economic Assessment of Road Schemes in Scotland. This would suggest that, in terms of their geometry and traffic flows, all roads should be able to accommodate the increase in traffic resulting from the construction of the Development.

10.4 AIL

10.4.1 All AIL deliveries will arrive at the proposed jetty on Loch Fyne, connecting to the public road network on the A83, west of Inveraray. AIL movements will all follow a prescribed route which will be as follows:

- Crossing the A83 on the A83 Lochgilphead link via temporary signals only in operation at times of scheduled AIL deliveries.
- Utilising the proposed AIL route between the A83 and A819 via the upgraded Upper Avenue.
- A819 to site access.

10.4.2 The only road links which will be affected by AIL movements will be:

- A83 Lochgilphead
- Upper Avenue AIL Route
- A819 Inveraray
- A819 Site Access

10.4.3 No other links within the Study Area are proposed to be used for AIL movements.

10.4.4 During the full duration of construction, it is anticipated that there will be a total of 376 AIL movements required over 7 years. These are partly associated with the transportation of equipment to site, including cranes and excavators. The gantry cranes, transformers and turbines are also anticipated to be transported to site by AIL.

10.4.5 AIL axle loads have been estimated and are included in *Annex L AIL Axle Loadings*, at the end of this Appendix.

10.4.6 AIL deliveries would be scheduled for non-peak times to ensure that the impact on Study Area roads would be minimised however the likely impact of AIL movements would be as follows:

- Temporary delay on A83 Lochgilphead link for drivers with temporary traffic management in place while AIL are crossing the A83 carriageway from the proposed jetty to Upper Avenue. Delays will only occur at delivery times and the traffic management will not be operational outside of those times. (*AECOM Drawing Ref 302212 (Annex J Swept Path Analysis)).*
- No impact on Upper Avenue as this will be a dedicated AIL route for the Development will no general traffic using the route.
- Temporary delay on A819 Inveraray and A819 Site Access links for drivers following the AIL vehicles. AIL will be slow moving and will likely require an escort, meaning drivers will experience short terms delays on these links while AIL deliveries are taking place.

10.5 Road Traffic Accidents

10.5.1 The calculation for forecasting increases in road traffic accidents during the construction period of the Development has been based on 2023 traffic survey data and accident history gather from Crashmap. 2023 traffic survey data has been used to calculate a 'total annual vehicle kilometres' for each link in the Study Area. The Crashmap data for each link has then been used to derive a 'vehicle accident rate' for each link for 'slight,' 'serious' and 'fatal' accident severities. This rate is then applied to the increased vehicle kilometres generated because of the construction of the Development to arrive at a forecast for additional vehicle accidents.

10.5.2 *Table 10-4* below shows the forecast additional annual road traffic accidents during the construction period for the Development.

Table 10-4. Forecast Road Accidents on Study Area Roads

Road Link	Forecast Annual Injury Accidents by Severity					
	Recorded 2018-2022			The Development (Annual)		
	Slight	Serious	Fatal	Slight	Serious	Fatal
A85 Taynuilt	7	8	1	0.1	0.1	0.0
A85 West	0	0	0	0.0	0.0	0.0
A85 East	0	0	0	0.0	0.0	0.0
B840 Cladich	0	0	0	0.0	0.0	0.0
A819 Dalmally	1	5	0	0.0	0.1	0.0
A819 Site Access	0	3	0	0.0	0.1	0.0
A819 Inveraray	1	1	0	0.0	0.0	0.0
A83 Garron Bridge	3	3	0	0.0	0.0	0.0
A83 Rest and Be Thankful	4	7	0	0.0	0.1	0.0

Road Link	Forecast Annual Injury Accidents by Severity					
	Recorded 2018-2022			The Development (Annual)		
	Slight	Serious	Fatal	Slight	Serious	Fatal
A815 Strachur	3	3	2	0.1	0.1	0.0
A83 Lochgilphead	0	0	0	0.0	0.0	0.0
B840 Ford	0	0	0	0.0	0.0	0.0

10.5.3 *Table 10-4* shows that there is a very small forecast increase in road accidents because of the Development but the magnitude of this is considerably lower than 1 additional accident on each road link annually. It is considered that this represents a very low level of change and that in reality, this effect would be negligible.

10.5.4 *Table 10-5* below summarises the forecast cumulative development effect on road traffic accidents.

Table 10-5. Forecast Road Accidents on Study Area Roads (Cumulative Development)

Road Link	Forecast Annual Injury Accidents by Severity					
	Recorded 2018-2022			Cumulative Development (Annual)		
	Slight	Serious	Fatal	Slight	Serious	Fatal
A85 Taynuilt	7	8	1	0.2	0.3	0.0
A85 West	0	0	0	0.0	0.0	0.0
A85 East	0	0	0	0.0	0.0	0.0
B840 Cladich	0	0	0	0.0	0.0	0.0
A819 Dalmally	1	5	0	0.1	0.4	0.0
A819 Site Access	0	3	0	0.0	0.3	0.0
A819 Inveraray	1	1	0	0.1	0.1	0.0
A819 Inveraray Town Centre	0	0	0	0.0	0.0	0.0
A83 Garron Bridge	3	3	0	0.0	0.0	0.0
A83 Rest and Be Thankful	4	7	0	0.0	0.1	0.0
A815 Strachur	3	3	2	0.1	0.1	0.0
A83 Inveraray Town Centre	0	0	0	0.0	0.0	0.0
A83 Lochgilphead	0	0	0	0.0	0.0	0.0
B840 Ford	0	0	0	0.0	0.0	0.0

10.5.5 *Table 10-5* shows there would be a small increase in road traffic accidents forecast because of cumulative development. The forecast increases are considerably smaller than 1 additional road accident on each road link with the largest increase being an additional 0.4 serious accidents on the A819 Dalmally road link. The effect on road traffic accidents is therefore considered to be minor.

10.5.6 The full calculations to arrive at these forecasts is contained within *Annex M Accident Forecast Calculations.*

11. Framework Construction Traffic Management Plan

11.1 Purpose

11.1.1 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 Development to mitigate transport-related impacts. Access to the 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.

11.2 CTMP Development

11.2.1 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.

11.2.2 The CTMP would consider feedback from local residents and community groups and be developed in consultation with Argyll and Bute Council to establish the appropriate methods in which the impact of traffic related to the Development's construction can be minimised.

11.2.3 This document would be updated as necessary with input from Argyll and Bute Council following feedback from their consultation and planning process.

11.3 Hours of Work

11.3.1 Working hours for construction activities related to the Development would be agreed with Argyll and Bute Council, but are anticipated to be:

- 07:00 to 19:00 Monday to Friday.
- Saturday 07:00 to 13:00; and
- No construction should be carried out on Sundays or bank holidays unless in exceptional circumstances.
- Any work which is required or intended to take place outside of these hours, except for emergency situations, would be subject to prior agreement and/ or reasonable notice to Argyll and Bute Council.

11.4 Site Access

11.4.1 The Site 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 (when required). Vehicles would leave and access the site via the proposed site access tracks and no vehicles would be required to stop on the public highway itself when accessing the Site.

11.4.2 Warning signs would be established and maintained throughout the duration of construction works and would be situated at agreed locations to warn road users of the access.

11.5 Construction Traffic Routing

11.5.1 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 Development's CTMP.

11.5.2 The Site gates would 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.

11.5.3 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.

11.5.4 Likely routes that construction traffic will follow will be:

- A85
- A83
- A819
- Proposed Inveraray Bypass

11.5.5 It is considered that each of these routes can accommodate the additional construction traffic required for the 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.

11.6 Deliveries

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

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

11.7 Enforcement

11.7.1 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.

11.8 Speed Limit

11.8.1 The applicant would ensure that all Site traffic abides by local speed limits to maintain the safety of other road users and pedestrians. A Site 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 Development.

11.8.2 Signage would be in place prior to any works taking place which will advise of any temporary 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.

11.9 Summary

11.9.1 This chapter discusses the potential traffic management arrangements during construction at the Site and provides an assessment of the impacts on the Site during this period.

11.9.2 The hours of work at the Site are expected to be 07:00 – 19:00 from Monday to Friday and 07:00 – 13:00 on Saturdays with no work taking place on Sundays and bank holidays.

11.9.3 The Site 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 (when required). No construction vehicles would require stopping on the public highway.

11.9.4 It is anticipated that the likely routes of construction traffic would be via the A85, A83, A819 and Inveraray Bypass. Access to the site from the public highway will be facilitated by upgrading existing 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.

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

11.9.6 All traffic will abide by local speed limits with a 5mph speed limit enforced within the Site.

12. Summary and Conclusions

12.1 Summary & Conclusions

12.1.1 AECOM has been commissioned by Applicant to prepare a Transport Impact Assessment (TA) to accompany an Environmental Impact Assessment (EIA) Chapter (*Chapter 14: Access, Traffic and Transport) (Volume 2: Main Report)* for a pumped hydro storage development (the Development) near Balliemeanoch Farm Steading, Argyll and Bute.

12.1.2 The TA includes a review of relevant national, regional, and local transport policy.

12.1.3 The transport baseline includes a review of existing infrastructure as well as baseline traffic data, gathered by undertaking traffic surveys on the local road network during June 2023. The baseline review also considers the accident history of Study Area roads.

12.1.4 The Development is a PSH facility and is likely to be constructed over a programme lasting 7 years. It is proposed that access to the site will be taken from A819 via existing access tracks which will be upgraded. It is also proposed to upgrade existing tracks at Inveraray Castle and Upper Avenue to divert HGV traffic and AIL traffic respectively from Inveraray town centre. The proposed upgrade to Upper Avenue will connect to a jetty on Loch Fyne which shall be used to deliver AIL components to site.

12.1.5 A construction programme has been provided which shows that the peak period of construction traffic will be in November 2027. It has been demonstrated how the peak vehicular trip generation of the site has been calculated.

12.1.6 The assessment of environmental effects contained within *Chapter 14: Access, Traffic and Transport (Volume 2: Main Report)* requires that each road link is assessed for the sensitivity of its receptors. This assessment is included within this TA.

12.1.7 The IEMA Guidelines 2023 set out the process by which the fear and intimidation assessment for environmental impact assessments should be undertaken. This assessment is included within this TA.

12.1.8 Swept path analysis has been undertaken at various points within the Study Area, including the proposed Inveraray Bypass and Upper Avenue AIL route. It has been demonstrated that these routes can accommodate the construction vehicles proposed to use them.

12.1.9 The background for the cumulative development assessment is contained within this TA, analysing 4 cumulative development sites.

12.1.10 A Framework Construction Traffic Management Plan is provided, providing a high-level overview of some measures which could be included within the full CTMP. The full CTMP will be the responsibility of the contractor once appointed.

Annex A – Scoping Correspondence

Argyll and Bute Council
Comhairle Earra Ghàidheal agus Bhóid

Development and Economic Growth
Acting Director: Kirsty Flanagan

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22 September 2022

Our Ref.: 22/01453/SCOPE
Your Ref. : ECU00003444

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Dear Sirs,

ELECTRICITY ACT 1989

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017, SCOPING OPINION REQUEST FOR PROPOSED NEW PUMPED STORAGE HYDRO SCHEME AT BALLIEMEANOCH.

Section 36 Proposal by Intelligent Land Investments (ILI)

I write in reference to your consultation regarding the above and would thank you for agreeing to extend the timescales to allow additional time for this response. Please find the Council's consultation response to the scoping request enclosed.

I should point out that the issuing of this scoping consultation advice should not be taken to indicate support for the proposal on the part of Argyll and Bute Council. The Council's recommendation on any future S36 application would rely upon the consideration of the content of any accompanying environmental information, the responses of consultees, the views of third parties and any other material planning considerations which would be reported to Members to obtain their views.

Please note that in terms of the Council's 'Argyll and Bute Local Development Plan' (adopted 2015) the Council will support renewable energy and associated infrastructure developments where these are consistent with the principles of sustainable development and it can be adequately demonstrated that there would be no unacceptable significant adverse effects, whether individual or cumulative, including on local communities, natural and historic environments, landscape character and visual amenity, and that the proposals would be compatible with adjacent land uses and the Planning Policy Objectives of the Statutory Planning Framework in place at time of submission and determination of the S36 proposals

In respect of the Local Plan Planning Policy framework. Your attention is drawn to the emerging LDP 2. Depending upon the date of any future application this may have reached a stage in the adoption process where the weight to be afforded to this will be increased or it may be adopted.

I trust you find the enclosed information of assistance.

Yours sincerely

David Moore

Senior Planning Officer
Argyll and Bute Council

APPENDIX A
ELECTRICITY ACT 1989

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017

SCOPING CONSULTATION RESPONSE ON BEHALF OF ARGYLL & BUTE COUNCIL FOR PROPOSED SECTION 36 APPLICATION.

PROPOSAL: PROPOSED NEW PROPOSED NEW PUMPED STORAGE HYDRO SCHEME AT BALLIEMEANOCH.

DESCRIPTION OF PROPOSALS

The Applicant proposes to construct a Pump Storage Hydro (PSH) scheme close to Lochan Airigh approximately 4.4 km to the south of the village of Portsonachan and 9 km northwest of Inveraray in Argyll and Bute as shown on Figure 1.1 Location Plan. The applicant confirms that the Development Site was identified from a Scotland-wide site search exercise and is considered suitable due to a number of factors such as topography, underlying geology, and an appropriately sized catchment. The proposed Development will discharge water from its tailrace back into Loch Awe which is also utilised by the existing Cruachan scheme. Cruachan is a 440 MW pumped storage hydro-electric scheme which has been operating since 1965. There is a current S36 application lodged with the Scottish Minsters for an expansion of the Cruachan scheme.

The total area within the Development Site boundary is approximately 3,054 hectares (ha). The applicants clarify that of this area within the Development Site boundary will be developed). Balliemeanoch PSH will have a storage capacity of up to 45,000 megawatt hours (MWh) with up to 1,500 MW installed electrical generation capacity.

BUILD ELEMENTS

In respect of the current proposals the applicant confirms that these will involve the following main build elements:

- **Headpond** The upper reservoir, including embankment or dam. The headpond intake tower total estimated height is 60 m. Approximately 40 m below water and 20 m above top water level.

- **Embankment** Embankments or dams around the headpond reservoir/water body.

  There are three proposed embankments. The maximum embankment height is 110 m high above existing ground level. (425m AOD)

  Embankment Height 1 (Main) 110 m
  Embankment Height 2 (North) 15 m
  Embankment Height 3 (East) 20 m

- **Reservoir Water body** retained within the headpond embankments and the tailpond.

- **Tailpond** The lower reservoir. In this case this is the existing water body of Loch Awe.

- **Inlet / Outlet** The location where the tunnels (headrace / tailrace) enter the headpond and tailpond.

- **Headrace** The underground high-pressure tunnel connecting the headpond to the power

cavern.

- **Tailrace** The underground low-pressure tunnel connecting the power cavern to the tailpond.

- **Power Cavern** This is a below-ground component that will contain the combined pump / turbines, generators, switchgear and transformers.

- **Cable Tunnel** The underground tunnel hosting the power cables which will export the generated power from the underground power cavern to the surface at the sub/ switching station.

- **Access Tunnel** The underground tunnel providing access (construction and operation) to the power cavern.

- **Sub / switching station** This station will be an above-ground component that will consist of a secure electrical compound in which electrical equipment will be housed.

- **Spillway /Spillway Channel**. This spillway will consist of a buried pipeline and will be used as a system to drain any excess water from the headpond as well as being used for the scouring and draining down of the headpond in an emergency situation.

- **Surge Shaft(s)** Structures that are provided along the waterways to contain pressure fluctuations within the hydraulic system. The low-pressure tunnel surge shaft will be underground. The high-pressure tunnel surge shaft will be underground but may have section cut into the hillside (subject to design).

- **Pier Structure at Inveraray** Marine Facility Located on the coast near Inveraray, this facility is predominately temporary and will be used for large deliveries to site. The marine structure will be a pier structure that will project into Loch Fyne. The height / depth of the structure is determined by the seabed and tidal range. Dolphin structures, or equivalent, could be associated with the marine structure. These will be used for mooring larger vessels to the structure.

- **Access Tracks**

- **Compounds Temporary and permanent compounds** will be required across the proposed Development. Some will be used for construction related activities such as laydown areas, work yards and for general site maintenance. Others will be used for office space, parking areas, welfare areas, and accommodation. These may include electric

- **Temporary Accommodation** Some temporary accommodation will be provided within the above compounds, with an additional offsite camp required. It is estimated that the potential footprint of the offsite camp could be approximately 50,000 m² (subject to design). This temporary accommodation will likely be located close to the Development Site and/or along one of the construction access routes. This offsite location has yet to be identified with the relevant studies currently being undertaken.

- **charging points** for electric shuttle cars/buses.

CONTENT OF SCOPING REPORT

The following matters are addressed in the main chapter headings of the Scoping report

- Landscape and Visual Assessment
- Terrestrial Ecology
- Aquatic Ecology
- Marine Ecology

- Ornithology
- Geology and Ground Conditions
- Water Environment
- Flood Risk and Water Resources
- Cultural Heritage
- Access, Traffic and Transport
- Noise and Vibration
- Socio-Economics, Recreation and Tourism
- Climate
- Arboricultural Impact Assessment
- Marine Physical Environment & Coastal Processes
- Shipping and Navigation
- Commercial Fisheries

The Council is in general agreement with the topics identified in the Scoping Report for evaluation.

LANDSCAPE CHARACTER AND VISUAL IMPACT

The proposed development is located within the North Argyll Area of Panoramic Quality (APQ). Although this is not a national designation it is a development plan designation and reflects both the high quality and sensitivity of the landscape.

In the opinion of the Planning Authority the absence of any clear information associated with the temporary accommodation, location, design and potential impacts over a lengthy construction period (5 years) require to be included in any LVIA exercise. AS does restoration proposals to ensure that no long term adverse landscape/ecologica/peat impact is caused.

The need to ensure cumulative impacts of future development proposals are considered is acknowledged at 5.2.3 and 5.4.8. This is an area of Argyll which is currently subject to considerable number of large infrastructure proposals including S37 Power Line proposals by SSEN and large scale substation proposals at the current time. A current S36 application for an expansion to Cruachan is also before the ECU at the current time with impacts in terms of construction, waste movement and also extraction of water.

On this basis it is considered that landscape impacts, both in respect of the current proposals and associated infrastructure on landscape, together with a cumulative impact analysis in terms of the inter relationship between this proposal and other large infrastructure projects in the APQ area, are properly evaluated and considered in the EIAR at time of submission.

It is anticipated by the applicants that ten compounds will be required for the construction period and that four of these would be retained for the full duration of the proposed Development. The proposed locations use and approximate size of each of the compounds are detailed in Table 2.3 Proposed Construction Compounds and are shown on *Figure 1.2*. Table 2.3 indicates a total site area associated with construction compounds of some 73,000sqm and text further clarifies that:

The proposed construction compounds will be constructed with a mixture of imported material at the commencement of construction works, following which material that is generated from the tunnelling activities will be used. The compound surfaces are anticipated to be unsealed (stone, metalled or gravel surface) in nature and will be either floated (over peat) or built into the hillside depending on the site conditions and anticipated loads. Compounds 5, 6, 7, 8, 9, and 10 will be removed and the areas reinstated once construction is complete.

This is a significant area and although such impacts are most likely temporary, the EIAR requires to clarify impact, mitigation and restoration in respect of any compounds being formed given their scale and length of requirement. (5 year build programme)

It is welcomed that the applicants confirm at 2.7.2.5 that:

The offsite location for temporary workers' accommodation has yet to be identified with the relevant studies currently being undertaken. The Applicant will continue to liaise with the relevant stakeholders to determine this location. As part of this, the Applicant is committed to investigating the provision of permanent housing to the local market.

If this accommodation is proposed within the countryside and not within any settlement envelope or identified site suitable for such construction then LVIA analysis of potential impacts and construction activity associated with the provision of this such development will in the opinion of the planning authority be required as part of the application submission and not left to a conditional matter. However it is hoped that discussions over providing accommodation which may be able to be utilised by the community in the future will be able to be undertaken. At the present time , as no identified locations have been provided it is not considered appropriate to automatically scope such matters out and further details require to be provided as part of the S36 submission.

In terms of the suggested viewpoints as set out at Figure 5.6. Officers consider that views from the Duncan Bann Monument (near Dalmally) should be added as this is a popular and widely visited location for tourists and locals. It is located to the north east of the proposed development and may afford views of the headpond. Views from open water within Loch Awe at maximum visibility locations would also be recommended as this is a popular recreational Area both in summer and in winter associated with boating and fishing..

TRANSPORT AND WASTE MANAGEMENT

The applicants at 2.3 confirm that:

- There are no classified roads or tracks within the Development Site at the headpond or tail pond location. However, at Inveraray there is a <1 km section of classified road (A83) at the proposed pier location.

- Site access is proposed off the A819 which links the strategic trunk roads A85 to the north at Dalmally and A83 to the south at Inveraray. It is anticipated the general construction access will come from the north and south along the A819. Construction access from the south will bypass Inveraray via a section of unclassified existing track (to be upgraded) north of Inveraray Castle which will connect the A83 to the A819.

- Larger construction traffic, such as abnormal loads, will be delivered by boat to the proposed pier, where they would be transported to site via the A819. Access to the A819 will be via an upgraded existing access track that runs to the north, then east, from the A83, around the north of Inveraray. There are proposed upgrades to the existing unclassified road "Upper Avenue" at Inveraray and a new track linking this to the A83 at the proposed pier location.

- These upgrades are proposed to ease traffic and to avoid sensitive bridges within the area of Inveraray.

The Scoping Report clarifies that:

From the A819, it is proposed that access will be gained from two existing forestry tracks located at NN 08853 12473 and NN 10064 19980. Each of the proposed access routes will utilise existing forestry tracks as far as possible with some stretches of new track to be constructed. Both access tracks will link the A819 with the proposed headpond area located near Lochan Airigh as shown in Figure 1.2 above Ground Infrastructure.

Internal site access tracks will be required linking the Development components. These will be a mixture of permanent and temporary tracks to enable construction. These tracks will either be sealed or unsealed in nature. Existing access tracks and infrastructure will be utilised as far as possible; however, it is noted that the existing infrastructure such as bridges, culverts, and roads

may require upgrade. The material that will be used to construct the tracks will be made up of both imported material and material that is sourced from within the Development Site.

Access requirements between the construction compounds and the various work areas will change throughout the construction period. The majority of the traffic will be general construction vehicles such as dump trucks, HGV's and general large plant and equipment. General site traffic such as vans, minibuses, and four-wheel drive vehicles will also use the road network.
Construction traffic routes will be developed in parallel with the EIA and will take account of the suitability and capacity of local roads. If any existing roads need to be crossed, they will be crossed perpendicular so as to reduce the potential impact from construction traffic.

Para 2.7.2.2 further clarifies that:

The main vehicle movements would occur during the middle of the construction period, whilst the major earthworks above and below ground are underway. It is anticipated that the large plant and equipment will remain inside the construction areas for each component of the proposed Development and the operators and staff will be shuttled around site via light vehicles such as vans, minibuses and pickup trucks. Also included in the areas will be temporary fuelling stations with fuel bowsers and pumps although it is hoped that alternative fuels will be available in time for construction.

The tunnel boring machine (required if drill and blast construction of the tunnels not suitable) will be transported to the new marine facility, located on Loch Fyne, in a vessel. The components will then be transferred to land by either a roll on roll off vehicle or heavy lift equipment from a vessel to a transporter on land. The components will then be transported to site on the back of a specialised transporter either via the northerly or southerly access route from the A819 to the main development site. The marine facility area, as shown in Figure 1.2 above Ground Infrastructure, will consist of a marine facility that is expected to have both temporary and permanent components. The marine facility will accommodate the delivery of large components associated with the tunnelling and mechanical and electrical components. Several different types of plant and equipment will be required for the construction and operation of the proposed marine facility.

It is noted that the scoping report clarifies that;

The proposed Development requires a significant amount of material to construct the impoundment structures of the headpond. The design, shape, and size of the impoundment will be confirmed through the EIA process. However, at this stage, it is anticipated the main embankment structure could be around 110 m high and have a volume of around 4,600,000 m³…. The approximate material volume calculations are provided in Table 2.5. This is indicative at this stage until preliminary site investigation works have been undertaken in order to inform the design of the proposed Development and the cut and fill balance calculations. Therefore, it is proposed to provide an MMA as part of the EIAR which will provide additional information on the type and volume of materials generated from the proposed Development. This will also determine the requirement for any permanent storage of material which could be considerately landscaped, as opposed to significantly impacting the local transport network with movements offsite.

There will be a requirement to ensure that any proposals which would impact the roads network taken into account cumulative impacts on the network having regard to the fact that a large number of energy related infrastructure projects are proposed in the area. This is a potentially significant impact, not just in terms of road safety and capacity, but also in terms of the wider economy of Argyll and Bute if vital arteries are congested due to ongoing construction of both this and other S36 and S37 projects in the vicinity by both SSEN and Drax (Cruachan) as well as Windfarm and large SSEN substations.

The potential/confirmed construction phasing of other major infrastructure construction projects requires to be evaluated when the EIAR is submitted and not be left as a matter for conditional approval under any deemed consent, as a high level strategic review of road capacity and safety with Transport Scotland and the Argyll and Bute roads is considered to be required and may become a defining matter in the determination of the applications and not a matter suitable to be

addressed by conditions.

The applicants confirm that:

Due to the volume of material anticipated to be required for the construction of various components, a Materials Management Appraisal (MMA) will be undertaken as part of the EIA process and updated prior to construction, to ensure that the material that is generated from construction is classified and reused as far as practically possible

This is a welcomed commitment and waste management, materials and equipment importation and analysis of the safe capacity of the local road network is considered by the Planning Authority to be a substantive matter for the EIAR to address by submission and not a matter for conditional approval.

It is welcomed that the applicants confirm that:

The intention is to use as much of the rock / surplus material generated on site to construct the proposed Development components (embankment, roads, and concrete structures) whilst reducing the excess material to a minimum.

Officers are aware of the need to extract and export large volumes of rock/waste material from the Cruachan expansion proposals if this is approved and proceeds. It is considered that a "duty to co-operate" utilising best endeavours between the two S36 Hydro proposal developers should be required by the Scottish Ministers to ensure any waste from Cruachan which could be utilised at Balliemeanoch is not transported away from the local area if it has the potential to be used locally in accordance with sustainable objectives. A commitment to investigate such an agreement as part of the application proposals should in the opinion of the Planning Authority be provided as part of any S36 application submission.

ECOLOGY /NATURE CONSERVATION/MARINE ENVIRONMENT

The scoping report at 2.7.4.5 clarifies that once the proposed Development is fully commissioned, the working water volume will pass between the headpond and Loch Awe in order to provide the storage and generate electricity at peak times. It is anticipated that the average drawdown level of the headpond will be between 420 and 340 m AOD. The estimated drawdown in Loch Awe, when at Top Water Level (TWL), is estimated to be around 1 m.

The applicant's state that *a management/ water use agreement will need to be agreed with other water users in the Awe catchment to ensure there is sufficient water resource for all parties. It should be noted that a PSH scheme will tend to operate on cycles that are dictated by the energy markets, it is therefore considered unlikely that the scheme will fully empty then immediately fill.*

Given that there is also a current S36 application to expand Cruachan, there is a need to ensure that potential cumulative impacts of maximum simultaneous water draw for both schemes is considered unless a mechanism to restrict /avoid such a scenario can be suggested by Scottish Ministers. It is the opinion of the Planning Authority that such matters should not be left to the operational cycles of the energy markets to dictate the evaluation of potential maximum draw/discharge scenarios if both Cruachan and Balliemeanoch are operating.

Marine Policy Officer Comments

Overall Scoping Opinion

- It is the Officer's opinion that the proposed development does constitute an Environmental Impact Assessment (EIA) as defined under Schedule 2 of the EIA Regulations. The proposal will also require planning permission for any quayside and or pier/jetty construction, and will need to consider cumulative infrastructure impacts during the works and to ensure continued safe access / egress during this time. I further recommend that a precautionary approach be undertaken for the duration of works.

- The EIAR must provide updated site survey information where appropriate; all surveys and data sets after two years must be updated.

- Together with the EIAR, the applicant is requested to submit their Intertidal Phase 1 Survey, Subtidal Benthic Survey, and walkover fish habitat assessment.

- The applicant is requested to submit a Construction Environment Management Plan (CEMP) and Method Statement for all aspects of the proposed development. With respect to the marine and coastal environment, the CEMP must include a Noise Method Statement for impact piling and include all management plans as set out under section 3.4.1.6 Mitigation.

- In terms of possible introduction and spread of marine Invasive Non-Native Species (INNS), the applicant is requested to submit a Biosecurity Management Plan.

- In terms of water quality, drainage and flooding; all water assessments are to be submitted with the EIAR.

- The applicant is requested to submit a bathymetric survey, review of geotechnical information, a sediment dispersion study, and sediment sampling analysis for the Marine Facility in Loch Fyne.

Section 2.7.2.3 - Materials Management

1. It is welcomed that the applicant is proposing to apply for a Waste Management Licence (WML) and develop a Waste Management Plan (WMP) in support of their EIA.

2. I further welcome the proposed Materials Management Appraisal (MMA) to be included within the EIAR.

Chapter 5 – Landscape and Visual Amenity

• The Marine Facility proposal at Newtown, Loch Fyne is located within a Main Settlement Zone and the West Loch Fyne Local Landscape Area (LLA), as identified in the adopted Local Development Plan (LDP) 2015.

• Balliemeanoch, West Lochawe is located within the Lorn and Inner Isles Rural Opportunity Area, and the catchment of the Allt Beochlich watercourse is located within Lorn and Inner Isles Very Sensitive Area.

• Given the proposal is highly likely to have visual impacts and cumulative effects during and after the construction phase, the applicant is requested to submit a final Landscape and Visual Impact Assessment (LVIA) together with a Zone of Theoretical Visibility (ZTV), including schematics and photomontages from key viewpoints in support of their application at the final planning stage.

• The development's design and scale should respect the character and appearance of the surrounding area, and be consistent with Policy LDP 9 – Development Setting, Layout and Design, associated Supplementary Guidance and the Argyll and Bute Landscape Capacity Assessment.

Chapter 7 – Aquatic Ecology

• The Awe catchment is the largest and most diverse freshwater catchment area in Argyll, which sustains a variety of fish species and habitats that are an important part of the region's biodiversity. These freshwater habitats include; streams, rivers and lochs, which is an important fishery for Atlantic salmon (Salmo salar), brown trout (Salmo trutta), European eel (Anguilla Anguilla) and lamprey species. The Atlantic salmon is protected in its freshwater life-cycle stages under Schedule 3 of the Conservation (Natural Habitats, &c.) Regulations 1994, and is a UK Biodiversity Action Plan (BAP) priority species. Brown trout are also a UK BAP priority species. The health of salmonids and other fish populations are dependent on clean freshwater habitats

throughout the catchment. The general trends in abundance of fish indicate a decline in natal species with consequences for the performance of the fisheries. Human-derived pressures acting on freshwater habitats include; forestry, agriculture, infrastructure development including the increasing development of renewable energy schemes (Awe Catchment Fishery Management Plan 2014-19).

- Loch Awe and its catchment is an important migratory route for salmonids. Changes to water flows can impede successful migration up stream. Correct water flows are essential for allowing access to spawning grounds, including a sufficient water level for the survival of buried eggs. It will therefore be important that throughout the construction and operational phases, the applicant is advised to ensure that all naturally available habitat is accessible to fish, including: sufficient water flows; the hydrology (drainage), underlying geology, and geomorphology is not affected, and to provide mitigation against any habitat loss/damage through a habitat restoration programme.

- The electric fishing and e-DNA surveys that were conducted in October 2021 are welcomed. The field survey results to be published in the Ecological Impact Assessment (EcIA) component of the EIAR is further welcomed and is to be submitted with the EIAR.

- In addition to the previous surveys conducted, it will be important to note that a pre-commencement walkover Scottish Fisheries Coordination Centre (SFCC) fish habitat assessment should be undertaken on the Allt Beochlich watercourse and main tributary watercourses of Loch Awe and Loch Fyne. The assessment should aim to quantify and evaluate the condition of freshwater habitats utilised for recruitment by fish, and in particular salmonids prior to the commencement of the Construction Phase.

- The applicant is to note that a ‘soft start’ approach to deter fish from the immediate area and all impact piling works across the development should not be undertaken during the salmonid smolt migration period (March to end of June).

- The applicant is advised to consult with Argyll Fisheries Trust (AFT), Argyll District Salmon Fishery Board (ADSFB) and the Awe District River Improvement Association (ADRIA) in the first instance for further advice on survey methods.

- Otters are classed as European Protected Species (EPS) under the Conservation (Natural Habitats, &c.) Regulations 1994, as translated into domestic legislation post-Brexit and via the Wildlife and Countryside Act 1981 (as amended).

o The applicant has undertaken a survey for protected mammals that included otter. A pre-construction survey and general good practice measures are advised. Welcome mitigation measures as outlined in Section 6.5 Likely Mitigation Measures.

o An EPS Licence to conduct works will be required through NatureScot: -

https://www.nature.scot/professional-advice/protected-areas-and-species/licensing/species-licensing-z-guide/otters/otters-licences-development.

Chapter 8 – Marine Ecology

- Upper Loch Fyne is designated as a Nature Conservation Marine Protected Area (NCMPA) for burrowed mud habitat and flame shell beds, and has a Marine Conservation Order in place to protect the horse mussel beds. It is important to note that Priority Marine Features (PMFs) have also been recorded in the development area for the proposed Marine Facility, and include:

o kelp and seaweed communities on sublittoral sediment;

o fireworks anemone (Pachycerianthus multiplicatus);

o tall seapen (Funiculina quadrangularis);

o mud burrowing amphipod (Maera loveni).

• As the construction and operational phases may have Likely Significant Effects (LSEs) to the benthic habitats and PMFs, it is therefore agreed and welcomed that the applicant undertake an Intertidal Phase 1 Survey and a Subtidal Benthic Survey as discussed under section 8.3 – Methodology of the Scoping Report. The applicant is further advised to consult with NatureScot to confirm appropriate survey methodologies.

• Loch Shira is an important nursery area for salmon and sea trout populations, and is part of the Loch Fyne Marine Consultation Area.

• The 'Loch Fyne Coastal Strip' Shellfish Growing Water extends throughout most of the policy zone, except for the coastline from Newtown to 1 km north of Inveraray. Native oysters, Pacific oysters, and Purple sea urchin are farmed at Ardkinglas, Loch Fyne Oysters Ltd.

Possible Likely Significant Effects to cetaceans, seals, basking sharks

• Loch Fyne lies out-with formally designated areas for harbour porpoise (Phocoena phocoena), other cetaceans, seals, and basking shark (Cetorhinus maximus).

• It is however important to note that cetaceans, seals, and basking sharks that frequent the area can come into contact with vessel and pier operations. The applicant is therefore advised to operate vessels at low speeds. The Marine Mammal Monitoring Management/Sighting Plan with 'soft start' approach in place over the construction period is welcomed. The applicant is advised to log daily cetacean and basking shark sightings and prepare a report during the construction period. NatureScot should be able to provide further details and a suitable method.

• As a measure of good practice the applicant is advised to apply for:

1. European Protected Species (EPS) Licence for possible disturbance to cetaceans;

2. Under Part I, section 16(3)(i) of the Wildlife and Countryside Act 1981, a licence to disturb basking sharks (Cetorhinus maximus).

Underwater noise and pier structure piling works

• Limited information has been provided on the proposed piling works for the construction of the Marine Facility. It is recommended that the contractor provide within their Construction Environment Management Plan (CEMP) a Method Statement. The Method Statement must detail the proposed piling works, including duration, type of piling, predicted noise levels and mitigation measures that will be adhered to. The CEMP and Method Statement must be agreed by the Council in consultation with NatureScot prior to works commencing.

• In addition to the above, the applicant will adopt JNCC mitigation protocols to minimise disturbance to marine mammals from piling sound (JNCC, 2010); this approach is welcomed. The JNCC guidance is located under the following web link: Statutory nature conservation agency protocol for minimising the risk of injury to marine mammals from piling noise:

http://jncc.defra.gov.uk/pdf/JNCC_Guidelines_Piling%20protocol_August%202010.pdf.

• The applicant is further advised to review The Protection of Marine European Protected Species from Injury and Disturbance - Guidance for Scottish Inshore Waters (July 2020) document on the following web link:

o https://www.gov.scot/publications/marine-european-protected-species-protection-from-injury-and-disturbance/.

• Shipping activities have the potential to introduce Invasive Non Native Species (INNS) into the waters and coastline of Argyll. I note that the applicant has not developed a biosecurity plan for the potential introduction and spread of INNS, namely; the carpet sea squirt

(Didemnum vexillum), the leathery sea squirt (Styela clava), and wireweed (Sargassum muticum). The applicant is requested to provide a Biosecurity Management Plan (BMP) with their EIAR. The BMP should detail good practice methods to avoid and limit the introduction and spread of INNS that relate to the shipping activities in particular.

- The applicant must adopt pollution prevent strategies for potential diesel, hydraulic and battery spillages into the environment (shoreline & at sea). Further to the applicant's pollution Likely Mitigation Measures outlined under section 8.5, it is advised that the contractor follow appropriate Pollution Prevention Guidelines located on the NetRegs and SEPA web links respectively:

  - https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/guidance-for-pollution-prevention-gpps-full-list/;

  - https://www.sepa.org.uk/regulations/water/guidance/.

Chapter 11 – Water Environment

- Under the SEPA Loch classification system, Loch Awe is classified as having an overall Moderate ecological status and a chemical status of Pass. The Awe catchment is classified as a Heavily Modified Water Body (HMWB) due to the alterations of the water body for hydroelectricity generation. SEPA should be able to advise if the proposal is likely to further significantly impact the Awe catchment. The proposed: Water Quality and Water Resource Impact Assessment, Hydro-morphological Survey, and Water Framework Directive (WFD) Assessment are welcomed and should be submitted with the EIAR.

- The applicant is requested to submit full details of the Water Management Plan and Surface Water Drainage Strategy, including the Emergency Response Management Plan, and mitigation measures within their Flood Risk Assessment. It will be important that the proposed development does not attribute to an increase in excess surface and ground water accumulations. It will also be important that the development does not attribute to an increase in pollution and any siltation/spoil entering Loch Awe, including the Oban and Kintyre groundwater bodies, and private water supplies.

- The applicant is advised to adhere to good practice measures for working in and near to watercourses during the construction phase, and should include:

  - Installation of silt interception traps to minimise unchecked contaminated run-off;

  - Appropriate artificial drainage must be designed and installed;

  - Fuels and other chemicals must be stored securely within the site construction compound;

  - Appropriate wash-out facilities must be available for vehicles and machinery;

  - Trenches and excavations must be covered at the end of each working day.

- Abstractions and discharges are regulated by the Water Environment (Controlled Activities) (Scotland) Regulations 2011, more commonly known as the Controlled Activity Regulations (CAR) licence process. The applicant must apply for a CAR licence. Full details on how to apply for a CAR licence are located at: https://www.sepa.org.uk/regulations/water/.

SEPA will provide specific advice relating to the freshwater abstractions and discharges.

Existing Aquaculture and other users

- Dawnfresh Seafoods Ltd. operate two rainbow trout fin fish farms in Loch Awe. Existing hydro generation schemes may also be effected by the development. Depending on the volume of water abstracted over a 24 hour period, there may be an impact to Loch Awe ecology and its water

level. It will therefore be important for the applicant to consult with SEPA and other loch users prior to works commencing.

Chapter 12 – Flood Risk and Water Resources

• The applicant is to include a Flood Risk Assessment (FRA) within their EIAR. The FRA will comply with all related water policies as outlined under Local Development Plan (LDP) above.

Chapter 14 – Access Traffic and Transport

• Under Policy 42 – Safeguarding Piers, Ports and Harbours; development proposals for a new temporary pier, port or harbour facilities will only be considered where it has been clearly demonstrated how the whole site including any related access and working areas can be restored to the satisfaction of the planning authority once the facilities are no longer required.

• The applicant must provide the proposed pier/jetty and wharf construction details within their CEMP and Method Statement together with their planning application. The proposal will need to consider cumulative infrastructure impacts during the works and to ensure continued safe access / egress during this time.

Chapter 15 – Noise and Vibration

• Mitigation measures to abate noise and vibration should be deployed during the construction and operational phase of the development. Predicted noise and vibration levels should be detailed within the CEMP and EIAR.

• As limited information is provided on the proposed impact piling works for the Marine Facility, the applicant/contractor is requested to submit a Noise Method Statement for the construction and operation that outlines timing, duration and expected noise levels. The Noise Method Statement should detail potential Likely Significant Effects (LSEs) and be agreed by the Planning Authority and NatureScot respectively prior to works being commenced.

Chapter 19 – Marine Physical Environment & Coastal Processes

Impacts on water quality (Loch Fyne)

• It is important to note that the Loch Fyne coastal strip is a shellfish growing water. Dredging impacts associated with the Marine Facility may have a Likely Significant Effect (LSE) to the ‘Good’ classification of the Upper Loch Fyne waterbody from siltation. If dredging and maintenance dredging is confirmed by the applicant, the use of a silt curtain boom is advised throughout all dredging periods to avoid siltation, sediment dispersion, and pollution events. It is further advised that the contractor consult with SEPA on this issue and follow appropriate dredging guidance located on the SEPA web link:

o https://www.sepa.org.uk/regulations/water/guidance/#dredging.

• If dredging is a requirement of the Marine Facility, the applicant will need to apply for a Marine Licence to dredge from Marine Scotland – Licensing and Operations Team (MS-LOT) and the Crown Estate (Scotland) respectively. All licensable marine work information is available on the following web links:

o https://www.gov.scot/publications/marine-licensing-applications-and-guidance/

o https://www.crownestatescotland.com/scotlands-property/coastal/marine-works.

• The proposed bathymetric survey, the detailed review of geotechnical information, and a sediment dispersion study around the marine facility area to understand potential coastal morphology and sediment transport at the site are required and must be detailed within the EIAR. As a matter of good practice, the effects of fine sediment dispersion due to maintenance dredging and disposal should not be scoped out of the EIAR. The applicant should explain

more thoroughly their reason for this.

- A sediment sampling analysis is further required and must also be detailed within the EIAR.

- A site walkover survey and development of a numerical hydrodynamic model are welcomed, and the results should be presented within the EIAR.

- The applicant is to note that the number of functioning sea outfalls identified in the Loch Fyne ICZM Plan may have changed since its publication in 2009. It is recommended that the applicant consult with SEPA and Scottish Water in the first instance to confirm existing and proposed sea outfalls in the vicinity of the proposed development.

- The monitoring of Total Suspended Solids (TSS) during the construction phase is welcomed, but if levels are exceeded, the applicant will need to address what appropriate action will be taken to ensure that adverse impacts are minimised and mitigated for.

Chapter 20 – Shipping and Navigation

- The applicant is advised to consult with Clydeport, Northern Lighthouse Board, Ministry of Defence, CalMAC, The Scottish Salmon Company, and the RYA to determine what would be the proposed affects to safe navigation and recreational boating during construction of the Marine Facility in Loch Fyne.

Chapter 21 – Commercial Fisheries

- The review of the commercial fleet and baseline assessment in Loch Fyne is welcomed. The applicant should provide a complete assessment of commercial fisheries to inform the EIAR and consult with the West Coast Regional Inshore Fisheries Group, and the Clyde Fishermen's Association in the first instance.

General comments

Interaction with other activities

- The Council is required to protect public access rights to and along the foreshore for all non-motorised users. Where there is a pier or breakwater structure that will obstruct access along a foreshore or loch side, a reasonable means of passing by the obstruction should be provided to allow the public to exercise their right of access along the shore, where appropriate.

- Any pier/jetty construction should be marked according to advice from the Northern Lighthouse Board.

- The proposal is a large engineering operation which is likely to have significant interaction with road transportation. However, the proposed development is considered to be consistent with the relevant policies of the Local Development Plan.

Pre-application discussion

- The applicant should undertake pre-application discussion with relevant stakeholders in addition to those previously discussed, including: SEPA, Scottish Water, NatureScot, AFT, ADSFB, ADRIA, Loch Fyne Oysters Ltd, and Dawnfresh Seafoods Ltd. in the first instance. Where appropriate, the applicant should provide a summary of pre-application discussion undertaken with key stakeholders in support of a full S36 application.

Biodiversity Officer Comments

No comments have been received at time of writing.

West of Scotland Archaeology Service Comments

I refer to the above scoping request. The scoping report cultural heritage section is quite general but I agree with the statements made and do not think that indirect/setting issues will form a major problem for the scheme. I agree there will be a major direct impact on undesignated sites and that a suite of mitigation will be required for dealing with this and the potential for buried remains in areas of proposed ground disturbance. I agree that walk over survey is required for areas of proposed ground disturbance and flooding and look forward to the EIA report in due course.

Area Roads Engineer Comments

These have not been received at time of writing. However the stated intention within the Scoping Report to discuss roads capacity/safety matters and potential cumulative impact issues with Transport Scotland and the Area Roads Manager prior to submission of the application is welcomed.

OVERALL CONCLUSIONS OF SCOPING REPORT

The Scoping Report at Table 3.2 summarises the matters to be evaluated within the proposed EIAR and also those matters which are proposed to be scoped out. This is set out below:

Table 3.2 Summary, Proposed EIA Scope

Environmental Topic	Proposed Scope of Assessment	Element Proposed to be Scoped Out
Landscape and Visual Assessment	Assessment of the effects on landscape character and visual amenity for construction, operation and decommissioning of the proposed Development.	Decommissioning
Terrestrial Ecology	Survey and assessment of: • Habitats, including NVC; • Protected mammals; • Butterflies, dragonflies and damselflies; and • Terrestrial and riparian invasive non-native species.	Decommissioning
Aquatic Ecology	Survey and assessment of: • Habitats • Fish • Aquatic macrophyte • Macroinvertebrate • Freshwater invasive non-native species	Decommissioning
Marine Ecology	Assessment of marine designated sites, benthic habitats and species, marine fish, elasmobranchs, marine mammals and marine invasive non-native species.	Decommissioning
Ornithology	Survey and assessment of habitats and breeding birds including raptor survey (including eagles), diver survey and moorland bird survey.	Decommissioning
Geology and Ground Conditions	Assessment of geology and hydrogeology including ground investigations and peat assessments.	Assessment of operational effects. Decommissioning
Water Environment	Assessment of water quality and water resource, hydrological assessment and a Water Framework Directive (WFD) assessment.	Decommissioning
Flood Risk and Water Resources	Production of Flood Risk Assessment and hydrological assessment	Breach analysis. Decommissioning
Cultural Heritage	Assessment of effects on cultural heritage assets and their setting that are within the zone of theoretical visibility up to up to 3km of the Development Site Boundary.	Decommissioning

Environmental Topic	Proposed Scope of Assessment	Element Proposed to be Scoped Out
Access, Traffic and Transport	Details of the proposed access route from the principal road network, the point(s) of access to the proposed Development Site and an indication of the likely number of vehicle movements and traffic management plans required during construction.	Assessment of operational and decommissioning effects.
Noise and Vibration	Assessment of construction and operation noise and vibration.	Baseline vibration survey. Decommissioning
Socio-economics, Recreation and Tourism	Assessment of the effects on the local community, local economy, recreation and tourism in the area.	Effects on business within the proposed Development Site. Population demographics. Decommissioning
Climate	Greenhouse Gas impact assessment.	Decommissioning
Arboricultural Impact Assessment	Identify trees to be removed and will consider any impacts to retained trees including how they can be protected.	Operation and Decommissioning
Marine Physical Environment & Coastal Processes	Potential impacts of the proposed Marine Facility on physical marine and coastal processes.	Decommissioning
Shipping and Navigation	Potential impacts on current shipping and sea users from the movement of plant / material by sea and from construction of the marine facility.	Decommissioning
Commercial Fisheries	Potential impacts of the proposed Development on the receptor commercial fisheries.	Decommissioning

The matters identified for inclusion in the EIAR and also those matters identified to be scoped out as set out at table 3.2 are generally agreed by the Planning Authority. However it is considered that waste management should be specifically scoped into the EIAR to fully evaluate to what extent the objective of minimising importation of materials can actually be achieved. This can be included in the Access/Traffic and Transport section of the EIAR as it has direct relevance to the likely impact in respect of these matters, both in respect of this application, but also cumulative evaluation.

Given the amount of proposed S36, S37 and major application energy related infrastructure proposals either submitted or in the pipeline in the general North Argyll area the Planning Authority is becoming increasingly concerned about potential cumulative impacts and would request that the following matters are specifically scoped into the EIAR:

Cumulative Landscape Impacts

There is a considerable amount of major S36 and S37 energy related infrastructure applications either submitted or in the pipeline within the North Argyll Area. The Council is therefore concerned that cumulative impacts on landscape capacity to absorb all of this development is carefully evaluated as part of any EIAR submissions.

Cumulative Roads Impacts

It is noted that in this case the applicants seek to utilise a new pier and upgraded forest tracks to keep traffic off of the A819 in the proximity of Inveraray, and in transportation terms this would be welcomed if it is feasible to do so. However far greater detail on the actual engineering construction works is considered to be required as part of the EIAR in order to understand whether the importation of plant/materials and the handling or removal of any waste can realistically be undertaken with no material impacts on the road network or necessary upgrading works.

This is not considered a matter suitable for resolution through condition and should form part of the EIAR to provide confidence that promoted solutions are in fact deliverable.

A cumulative assessment in relation to other proposed major infrastructure projects in the area is also considered to be necessary at time of submission. The commitment to seek to agree these matters as set out at 14.3.1 of the Scoping Report is welcomed.

Cumulative Water Extraction and Discharge Impacts on Loch Awe

There is also a need to ensure that the cycles of water extraction to the main holding loch and that of the proposed Cruachan expansion from Loch Awe are fully considered as a potential cumulative extraction of waters to ensure that the marine environment is not adversely impacted through reduced water levels or any other related impacts.

Environmental Topic	Proposed Scope of Assessment	Element Proposed to be Scoped Out
Access, Traffic and Transport	Details of the proposed access route from the principal road network, the point(s) of access to the proposed Development Site and an indication of the likely number of vehicle movements and traffic management plans required during construction.	Assessment of operational and decommissioning effects.
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This is not considered a matter suitable for resolution through condition and should form part of the EIAR to provide confidence that promoted solutions are in fact deliverable.

A cumulative assessment in relation to other proposed major infrastructure projects in the area is also considered to be necessary at time of submission. The commitment to seek to agree these matters as set out at 14.3.1 of the Scoping Report is welcomed.

Cumulative Water Extraction and Discharge Impacts on Loch Awe

There is also a need to ensure that the cycles of water extraction to the main holding loch and that of the proposed Cruachan expansion from Loch Awe are fully considered as a potential cumulative extraction of waters to ensure that the marine environment is not adversely impacted through reduced water levels or any other related impacts.

The information contained at 12.3.1 is welcomed. However the EIAR should be required to specifically calculate maximum extraction for Balliemeanoch coinciding with maximum extraction from Loch Awe for the proposed Cruachan Extension. References to Market cycles being involved in defining such matters do not seem to clearly commit to undertaking this maximum extraction and discharge cumulative impact exercise.

I trust you find the above of assistance. Please do not hesitate to contact me if I can assist you further.

David Moore
Major Applications Team
23 October 2017

Development Management and Strategic Road Safety
Roads Directorate

Buchanan House, 58 Port Dundas Road, Glasgow G4 0HF
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TRANSPORT SCOTLAND
CÒMHDHAIL ALBA

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

Econsents_Admin@gov.scot

Your ref:
EC00003444

Our ref:
GB01T19K05

Date:10/08/2022

Dear Sirs,

ELECTRICITY ACT 1989

THE ELECTRICITY (APPLICATIONS FOR CONSENT) REGULATIONS 2017

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR BALLIEMEANOCH PUMPED STORAGE HYDRO SCHEME

With reference to your recent correspondence on the above development, we acknowledge receipt of the Scoping Report (SR) prepared by Aecom in support of the above development.

This information has been passed to SYSTRA Limited for review in their capacity as Term Consultants to Transport Scotland – Roads Directorate. Based on the review undertaken, we would provide the following comments.

Proposed Development

The proposed development comprises a Pumped Storage Hydro (PSH) scheme with a storage capacity of up to 45,000 MWh with up to 1,500 MW installed electrical generation capacity. The site is located approximately 4.4km to the south of Portsonachan and 9km north-west of Inveraray in Argyll and Bute. The nearest trunk road to the site is the A85(T) which lies approximately 8.6km to the north. The site will be accessed via the A819 local road. The SR states that in addition to the A85(T), the A83(T) would likely be used by a proportion of general construction traffic coming to the site from the east or south-west.

Assessment of Environmental Impacts

Chapter 14 of the SR presents the proposed assessment of the impacts associated with Access Traffic and Transport. We note that the thresholds as indicated within the Institute of Environmental Management and Assessment (IEMA) Guidelines for the Environmental Assessment of Road Traffic are to be used as a screening process for the assessment. Transport Scotland is in agreement with this approach.

The SR also indicates that potential trunk road related environmental impacts such as pedestrian delay, pedestrian amenity, accidents and safety etc will be considered and assessed where appropriate (i.e. where Institute of Environmental Management and Assessment Guidelines for further assessment are breached). These specify that road links should be taken forward for further detailed assessment if:

- Traffic flows will increase by more than 30%, or
- The number of HGVs will increase by more than 30%, or
- Traffic flows will increase by 10% or more in sensitive areas.

The SR indicates that the study area will include the A85(T), A83(T), A819, and the B840.

With regard to base traffic, the SR states that ATCs will be undertaken during a neutral month during 2022 which will provide two-way traffic flows and be classified by vehicle type, including HGVs. Figure 14.1 of the SR presents the proposed locations of these ATC counts. We note that in addition to A83(T) counts, only one count is proposed on the A85(T), located at Taynuilt – some 17km west of the junction of the A85(T) with the A819. Transport Scotland would state that base traffic in the vicinity of the A85(T)/ A819 junction should be used.

We note that it is proposed to establish design year traffic flows using "National Road Traffic Forecasts (Great Britain)," (NRTF) 'low' growth assumptions. Transport Scotland is satisfied with this approach.

We note that it is proposed that operational and decommissioning transport impacts will be scoped out of the EIAR. Transport Scotland considers this appropriate in this instance.

Abnormal Loads Assessment

We understand that development components will originate from the Inveraray Marine Facility. The SR states that it is not envisaged that abnormal load vehicles would use the A83(T); they will be transported to site via the A819 via an upgraded existing access track that runs to the north then east, from the A83(T), around the north of Inveraray. It also states that there are proposed upgrades to the existing unclassified road "Upper Avenue" at Inveraray and a new track linking this to the A83(T) at the proposed pier location.

Transport Scotland would state that any proposed changes to the trunk road network must be discussed and approved (via a technical approval process) by the appropriate Area Manager. At this stage, we would advise that 1:500 scale plans of any new or modified access from the trunk road should be submitted along with visibility splay plans. This will allow the standard of the junction to be assessed. It would be helpful to engage with the Area Manager for the A83(T) who is Neil McFarlane and who can be contacted at neil.macfarlane@transport.gov.scot.

Transport Scotland will require to be satisfied that any abnormal loads can negotiate the A83(T) junction, therefore, an Abnormal Loads Assessment and swept path analysis will be required.

I trust that the above is satisfactory and should you wish to discuss any issues raised in greater detail please do not hesitate to contact me or alternatively, Alan DeVenny at SYSTRA's Glasgow Office on 0141 343 9636.

Yours faithfully

Redacted

Gerard McPhillips

Transport Scotland
Roads Directorate

cc Alan DeVenny – SYSTRA Ltd.

Annex B – Traffic Survey Data

Site 1 — 14135 / Inverary 1 — 14135 / Inverary
Location A83 south of Inverary Golf Club — June 2021 A83 south of Inverary Golf Club — June 2021
Direction North South — Automatic Traffic Count North South — Automatic Traffic Count

Virtual Day (7)

Time	Total	Classification												]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%	Mean	Vpp
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	60	60	68 ACPO	68 ACPO	75 DfT	75 DfT		85
0000	13	0	9	0	2	0	1	0	0	0	1	0	0	0	3.3	0	0.0	0	0.0	49.3	55.6
0100	9	0	5	0	2	0	0	0	0	0	0	0	0	0	1.7	0	0.0	0	0.0	47	-
0200	6	0	2	0	2	0	0	0	0	0	1	0	0	0	4.9	0	0.0	0	0.0	47.1	-
0300	5	0	2	0	1	0	0	0	0	0	0	0	0	0	5.9	0	0.0	0	0.0	48.2	-
0400	15	0	7	0	5	0	0	0	0	1	2	0	0	1	7.7	0	2.9	0	0.0	47.8	57.2
0500	31	0	18	0	8	1	0	0	1	2	1	0	0	2	7.4	0	0.9	0	0.0	49	57.8
0600	73	0	48	2	12	1	3	0	1	2	4	0	0	6	8.1	0	0.4	0	0.0	49.5	56.8
0700	124	1	87	3	21	2	3	0	1	2	4	0	0	3	2.8	0	0.3	0	0.0	47.5	53.8
0800	187	2	133	3	33	3	6	1	1	1	3	0	0	4	1.9	0	0.2	0	0.1	46.5	52.8
0900	213	5	169	3	27	1	3	1	1	2	2	0	0	2	1.1	0	0.1	0	0.1	45.4	51.9
1000	265	9	200	5	38	2	2	1	2	2	2	0	0	4	1.5	0	0.1	0	0.0	44.8	50.6
1100	267	10	209	6	30	1	4	0	1	2	4	0	0	5	1.7	1	0.5	0	0.1	44.5	50.2
1200	291	11	228	8	34	0	2	0	2	2	3	0	0	5	1.8	1	0.2	0	0.0	44.3	50.4
1300	283	10	219	6	34	2	4	0	1	3	3	0	0	6	2.1	1	0.4	0	0.1	44	50.4
1400	274	9	218	5	32	2	2	1	1	1	3	0	0	4	1.6	1	0.4	0	0.1	44.9	51.1
1500	275	9	222	3	29	1	3	0	1	1	6	0	0	6	2.1	1	0.4	1	0.2	45	51.3
1600	273	10	218	3	33	1	2	0	1	1	2	0	0	8	3.0	2	0.8	0	0.1	45.7	51.8
1700	241	4	203	2	22	1	2	0	1	1	4	0	0	7	2.9	1	0.2	0	0.0	46.2	52.9
1800	186	2	161	2	16	0	2	0	0	1	1	0	0	6	3.3	1	0.8	1	0.3	47.9	54.1
1900	144	2	120	2	13	1	1	0	1	2	2	0	0	4	3.0	0	0.2	0	0.2	46.5	53
2000	94	1	81	1	6	1	2	0	0	1	2	0	0	6	6.2	1	1.1	0	0.2	48.6	55.8
2100	74	0	61	1	7	1	2	0	0	1	1	0	0	4	5.4	1	1.2	0	0.0	48.7	55.8
2200	37	0	31	0	3	0	2	0	0	0	1	0	0	1	2.3	0	0.8	0	0.0	47.3	54.5
2300	24	0	18	1	2	0	2	0	0	1	1	0	0	2	7.1	0	1.2	0	0.0	48.1	54.6
07-19	2879	84	2268	50	349	16	36	5	13	19	37	1	1	60	2.1	11	0.4	2	0.1	45.4	51.7
06-22	3264	87	2579	56	386	21	44	5	16	25	44	1	1	80	2.5	13	0.4	3	0.1	45.7	52.2
06-00	3326	87	2628	57	391	21	48	5	16	25	46	1	1	83	2.5	14	0.4	3	0.1	45.7	52.3
00-00	3404	88	2670	58	412	22	49	5	18	29	51	1	1	88	2.6	15	0.4	3	0.1	45.8	52.4

Speed Bins (mph)

Time	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	0	0	0	0	0	0	0	0	2	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	1	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	3	2	2	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	1	1	5	7	8	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	1	5	12	19	20	10	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	1	0	0	0	0	8	35	39	28	10	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	1	0	1	1	4	14	51	64	37	10	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	1	2	1	3	5	24	62	64	39	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	1	2	1	1	8	32	90	84	34	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	1	1	1	11	39	95	77	28	10	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	3	2	1	2	9	42	101	85	33	9	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	2	3	1	2	10	49	91	78	31	9	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	1	2	1	0	7	41	85	83	37	12	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	2	2	1	2	7	34	88	85	36	12	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	1	1	1	1	6	37	81	83	41	13	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	1	1	1	1	7	26	61	76	42	16	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	1	0	0	0	2	13	43	64	40	17	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	1	1	1	0	2	14	38	48	24	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	1	6	21	29	20	11	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	1	5	14	23	17	9	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	1	2	8	12	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	1	2	6	6	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	0	2	15	17	10	14	75	360	883	881	425	138	39	14	5	2	1	0	0	0	0	0	0	0	0	0	0	0
06-22	0	2	16	19	11	14	79	389	966	1000	506	179	53	18	6	2	1	0	0	0	0	0	0	0	0	0	0	0
06-00	0	2	17	20	12	14	81	393	981	1019	519	185	54	20	7	2	1	0	0	0	0	0	0	0	0	0	0	0
00-00	0	2	17	20	12	15	82	401	995	1038	538	196	57	20	7	2	1	0	0	0	0	0	0	0	0	0	0	0

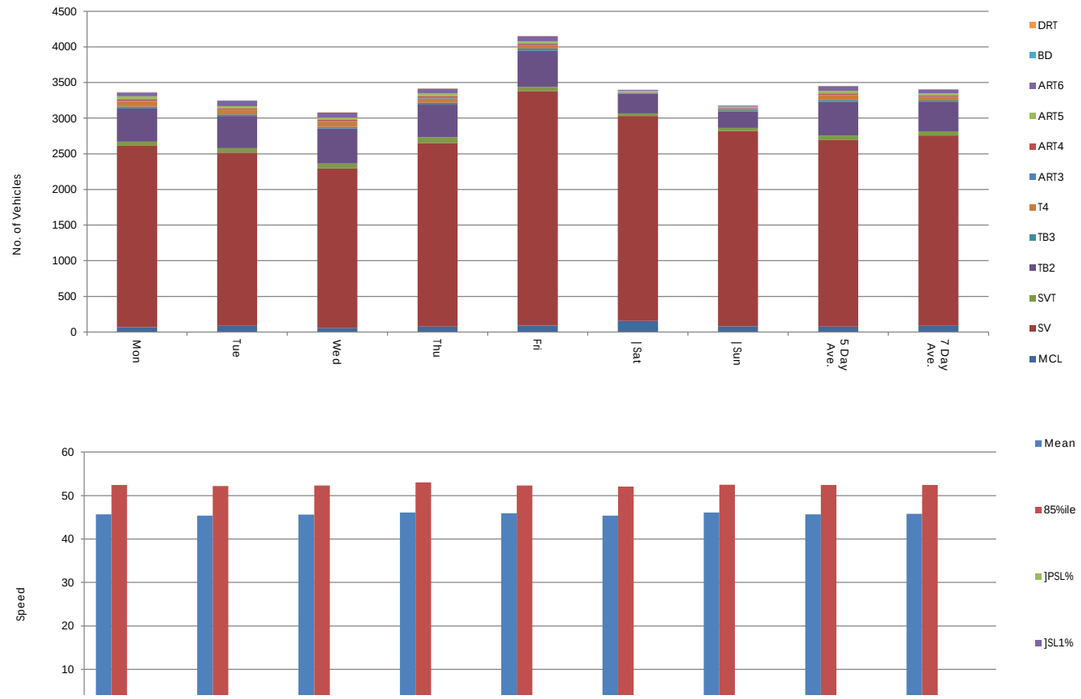
Virtual Week (1)

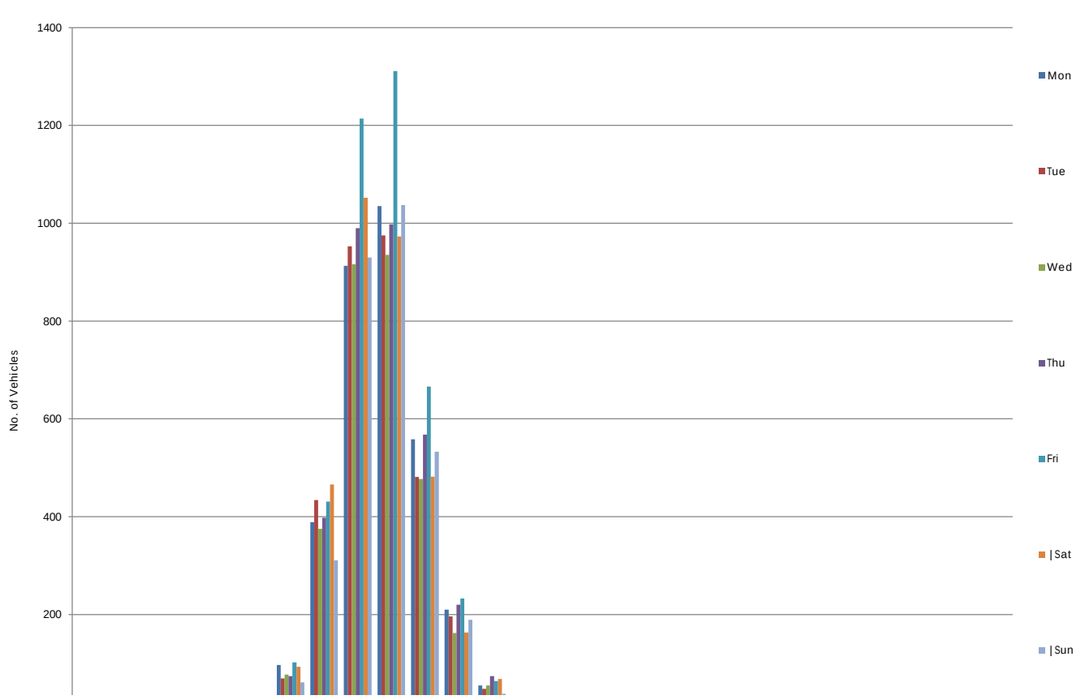
Time	Total	Classification												]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%	Mean	Vpp
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	60	60	68 ACPO	68 ACPO	75 DfT	75 DfT		85
Mon	3361	68	2545	55	468	25	74	5	28	38	53	1	1	77	2.3	11	0.3	4	0.1	45.7	52.4
Tue	3250	89	2427	62	451	24	61	3	22	31	77	3	0	68	2.1	10	0.3	3	0.1	45.4	52.2
Wed	3079	53	2242	70	489	23	75	5	17	34	69	0	2	77	2.5	8	0.3	0	0.0	45.6	52.3
Thu	3414	78	2574	78	460	27	58	9	22	43	62	1	2	109	3.2	14	0.4	4	0.1	46.1	53
Fri	4149	91	3288	61	509	29	46	7	17	33	67	0	1	110	2.7	21	0.5	3	0.1	45.9	52.3
]Sat	3394	155	2876	36	275	8	6	2	8	15	12	1	0	107	3.2	23	0.7	4	0.1	45.4	52.1
]Sun	3178	79	2740	42	231	19	22	6	12	9	17	1	0	65	2.0	15	0.5	1	0.0	46.1	52.5
5 Day Ave.	3451	76	2615	65	475	26	63	6	21	36	66	1	1	88	2.5	13	0.4	3	0.1	45.7	52.4
7 Day Ave.	3404	88	2670	58	412	22	49	5	18	29	51	1	1	88	2.6	15	0.4	3	0.1	45.8	52.4
--	23825	613	18692	404	2883	155	342	37	126	203	357	7	6	613	2.6	102	0.4	19	0.1	45.8	52.4

Speed Bins (mph)

Time	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Mon	0	4	17	24	17	20	97	389	913	1035	558	210	55	14	4	3	1	0	0	0	0	0	0	0	0	0	0	0
Tue	0	0	19	21	16	18	69	434	953	975	481	196	48	12	5	2	1	0	0	0	0	0	0	0	0	0	0	0
Wed	0	3	21	14	10	12	77	375	916	935	477	162	55	19	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Thu	0	1	20	17	10	9	74	398	990	998	568	220	74	28	3	3	1	0	0	0	0	0	0	0	0	0	0	0
Fri	0	3	20	26	12	21	102	431	1214	1311	666	233	64	29	14	3	0	0	0	0	0	0	0	0	0	0	0	0
]Sat	0	3	15	17	12	11	93	466	1052	973	482	163	68	21	14	3	1	0	0	0	0	0	0	0	0	0	0	0
]Sun	0	1	9	22	7	13	61	311	930	1037	533	189	38	19	7	1	0	0	0	0	0	0	0	0	0	0	0	0
5 Day Ave.	0	2	19	20	13	16	84	405	997	1051	550	204	59	20	6	2	1	0	0	0	0	0	0	0	0	0	0	0
7 Day Ave.	0	2	17	20	12	15	82	401	995	1038	538	196	57	20	7	2	1	0	0	0	0	0	0	0	0	0	0	0
--	0	15	121	141	84	104	573	2804	6968	7264	3765	1373	402	142	50	15	4	0	0	0	0	0	0	0	0	0	0	0

Summary Graphs





Site	2	14135 / Inverary 2		14135 / Inverary
Location	A83 approx 150m south of Inverary Parish Church	June 2021 A83 approx 150m south of Inverary Parish Church		June 2021
Direction	North South	Automatic Traffic Count North South		Automatic Traffic Count

Virtual Day (5)

| Time | Total | Classification | | | | | | | | | | | |]PSL 30 |]PSL% 30 |]SL1 35 ACPO |]SL1% 35 ACPO |]SL2 45 DfT |]SL2% 45 DfT | Mean | Vpp 85 | Speed Bins (mph) | | | | | | | | | | | |

Site 3
Location A819 approx 75m north of Inverary Castle Car Park
Direction North South

14135 / Inverary 3
June 2021 A819 approx 75m north of Inverary Castle Car Park
Automatic Traffic Count North South

14135 / Inverary
June 2021
Automatic Traffic Count

Virtual Day (7)

| Time | Total | Classification | | | | | | | | | | | |]PSL |]PSL% |]SL1 |]SL1% |]SL2 |]SL2% | Mean | Vpp | Speed Bins (mph) | | | | | | | | | | | |

Site 4
Location A83 approx 100m south of Aray Bridge
Direction North South

14135 / Inverary 4
June 2021 A83 approx 100m south of Aray Bridge
Automatic Traffic Count North South

14135 / Inverary
June 2021
Automatic Traffic Count

Virtual Day (7)

| Time | Total | Classification | | | | | | | | | | | |]PSL |]PSL% |]SL1 |]SL1% |]SL2 |]SL2% | Mean | Vpp | Speed Bins (mph) | | | | | | | | | | | |

Site 5
Location A83 approx 350m south of Garron Bridge
Direction North South

14135 / Inverary 5
June 2021 A83 approx 350m south of Garron Bridge
Automatic Traffic Count North South

14135 / Inverary
June 2021
Automatic Traffic Count

Virtual Day (7)

| Time | Total | Classification | | | | | | | | | | | |]PSL |]PSL% |]SL1 |]SL1% |]SL2 |]SL2% | Mean | Vpp | Speed Bins (mph) | | | | | | | | | | | |

Site	6
Location	A819 approx 150m south of the residential property access
Direction	North South

Virtual Day (7)

Time	Total	1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	]PSL 60	]PSL% 60	]SL1 68 ACPO	]SL1% 68 ACPO	]SL2 75 DfT	]SL2% 75 DfT	Mean	Vpp 85
0000	5	0	3	0	1	0	0	0	0	0	0	0	0	0	8.6	0	5.7	0	5.7	53.5	-
0100	4	0	2	0	1	0	1	0	0	0	0	0	0	1	37.0	0	11.1	0	3.7	57.9	-
0200	2	0	1	0	1	0	0	0	0	0	1	0	0	0	17.7	0	11.8	0	11.8	52.1	-
0300	2	0	1	0	1	0	0	0	0	0	0	0	0	0	13.3	0	13.3	0	6.7	52.9	-
0400	5	0	4	0	1	0	0	0	0	0	0	0	0	2	37.8	1	21.6	0	5.4	58.8	-
0500	11	0	7	0	2	0	1	0	0	0	1	0	0	5	48.1	2	19.5	1	5.2	60.2	71.8
0600	27	0	18	1	5	0	1	0	0	1	1	0	0	9	34.0	3	11.7	0	1.6	57.4	67
0700	55	1	38	1	8	0	3	0	1	1	2	0	0	18	32.4	5	9.8	2	2.9	56.7	65.4
0800	69	1	49	2	13	1	2	0	0	1	0	0	0	21	31.0	7	10.6	3	4.0	56.5	65.6
0900	93	7	69	1	13	0	1	0	0	0	1	0	0	22	23.8	7	7.4	2	2.6	54.8	63.7
1000	142	11	106	2	18	2	2	0	0	0	1	0	0	30	21.3	11	8.1	4	3.0	53.8	62.9
1100	142	12	104	3	20	0	2	0	0	0	1	0	0	28	20.0	10	7.0	5	3.5	54.4	62.9
1200	148	17	106	3	18	1	1	0	0	0	1	0	0	30	20.6	10	6.8	3	2.0	54.4	61.9
1300	139	14	98	3	19	1	1	0	0	1	1	0	0	31	22.5	11	8.1	4	3.0	54.7	62.7
1400	137	14	97	2	19	2	1	0	0	1	2	0	0	32	23.0	14	9.9	5	3.5	55.1	64.2
1500	145	15	103	3	17	1	1	0	1	1	3	0	0	34	23.2	16	10.8	8	5.6	54.7	63.6
1600	143	12	109	1	16	1	1	0	0	0	2	0	0	36	25.3	12	8.7	5	3.8	55.3	63.5
1700	127	6	103	2	12	1	2	0	0	1	1	0	0	33	26.2	12	9.3	5	4.2	56.2	65
1800	85	3	70	1	10	0	1	0	0	0	1	0	0	29	33.4	10	11.4	4	4.7	57.3	65.9
1900	60	2	49	1	5	1	1	0	0	0	0	0	0	18	30.7	6	10.0	3	5.5	56.6	64.6
2000	41	2	32	0	5	1	0	0	0	0	1	0	0	14	33.2	6	14.2	2	5.9	57.6	67.1
2100	30	1	24	0	4	0	0	0	0	0	1	0	0	12	40.9	4	13.5	1	4.8	58	67.2
2200	18	0	14	0	2	0	0	0	0	1	1	0	0	6	34.2	1	7.3	0	2.4	55.3	65.1
2300	11	0	8	0	1	0	0	0	0	0	1	0	0	3	32.0	2	17.3	1	6.7	58.6	70
07-19	1425	113	1053	25	183	9	16	3	3	6	15	0	0	345	24.2	125	8.8	51	3.6	55.1	63.6
06-22	1583	118	1176	28	201	11	18	3	3	7	18	0	0	398	25.2	144	9.1	58	3.7	55.3	64
06-00	1611	118	1198	28	204	11	18	3	3	8	20	0	0	408	25.3	148	9.2	60	3.7	55.4	64
00-00	1641	118	1216	28	210	11	20	3	3	9	22	0	0	418	25.4	152	9.3	61	3.7	55.4	64.1

Virtual Day (7) — Speed Bins (mph)

Time	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	1	3	6	8	4	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	1	3	8	12	13	9	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	1	4	11	18	14	10	6	3	2	1	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	3	5	18	23	20	11	6	3	1	1	1	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	1	1	4	12	31	39	22	13	8	5	2	1	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	3	12	34	34	30	13	7	4	2	1	1	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	1	2	11	30	38	34	16	7	4	1	1	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	1	3	10	27	36	31	17	5	5	2	1	1	0	0	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	1	1	3	12	26	30	33	13	9	5	2	1	1	0	1	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	1	4	14	33	35	24	13	8	4	3	3	1	0	0	1	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	1	4	10	23	40	29	19	7	4	2	1	1	1	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	1	1	6	21	36	29	14	10	4	3	0	1	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	1	5	11	18	21	14	6	4	2	1	1	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	1	0	0	3	8	15	14	10	4	1	1	1	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	1	2	5	9	10	7	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	1	1	3	6	6	6	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	2	2	4	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	1	1	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	0	0	1	2	0	3	8	29	104	273	361	300	164	84	46	23	11	8	4	2	1	2	0	0	0	0	0	0
06-22	0	0	1	2	1	4	9	31	111	292	396	338	191	97	52	26	14	8	4	2	1	2	0	0	0	0	0	0
06-00	0	0	1	2	1	4	9	31	114	295	403	343	195	99	54	27	14	8	4	2	1	2	0	0	0	0	0	0
00-00	0	0	1	2	1	4	9	32	115	301	410	349	198	103	55	28	15	9	4	2	1	2	0	0	0	0	0	0

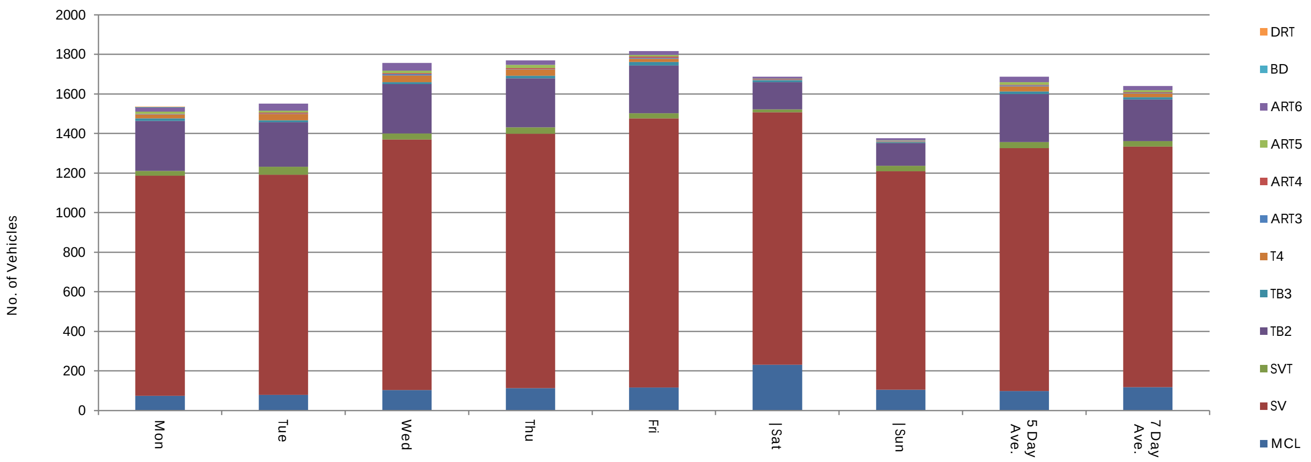
Virtual Week (1)

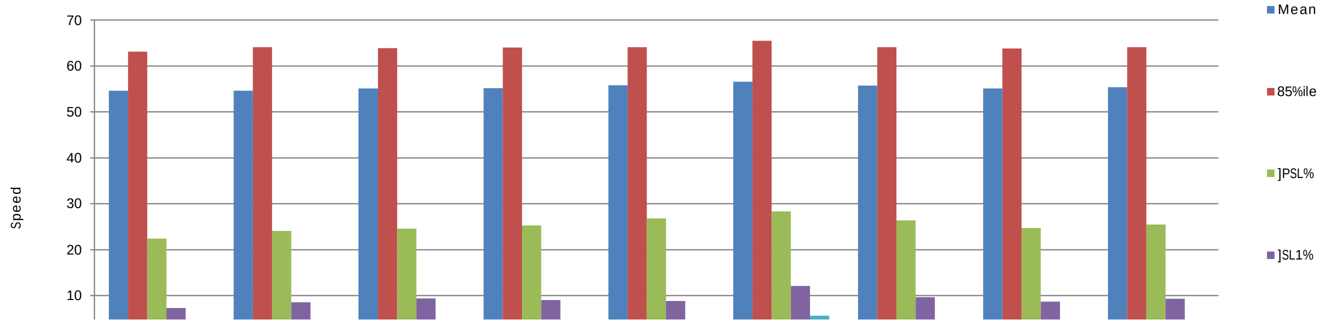
Time	Total	1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	]PSL 60	]PSL% 60	]SL1 68 ACPO	]SL1% 68 ACPO	]SL2 75 DfT	]SL2% 75 DfT	Mean	Vpp 85
Mon	1534	75	1111	25	253	13	18	2	2	11	22	1	1	344	22.4	112	7.3	44	2.9	54.6	63.1
Tue	1550	79	1113	40	225	10	32	2	4	10	35	0	0	373	24.1	132	8.5	50	3.2	54.6	64.1
Wed	1756	104	1266	31	248	10	34	7	4	14	38	0	0	431	24.5	164	9.3	64	3.6	55.1	63.9
Thu	1769	114	1284	33	247	13	33	1	5	16	23	0	0	447	25.3	160	9.0	60	3.4	55.2	64
Fri	1817	117	1360	25	241	18	16	6	6	8	20	0	0	487	26.8	160	8.8	60	3.3	55.8	64.1
|Sat	1686	231	1276	15	138	9	2	2	2	2	9	0	0	478	28.4	204	12.1	94	5.6	56.6	65.5
|Sun	1376	105	1105	27	115	5	3	3	1	2	10	0	0	363	26.4	133	9.7	57	4.1	55.7	64.1
5 Day Ave.	1685	98	1227	31	243	13	27	4	4	12	28	0	0	416	24.7	146	8.7	56	3.3	55.1	63.8
7 Day Ave.	1641	118	1216	28	210	11	20	3	3	9	22	0	0	418	25.4	152	9.3	61	3.7	55.4	64.1
--	11488	825	8515	196	1467	78	138	23	24	63	157	1	1	2923	25.4	1065	9.3	429	3.7	55.4	64.1

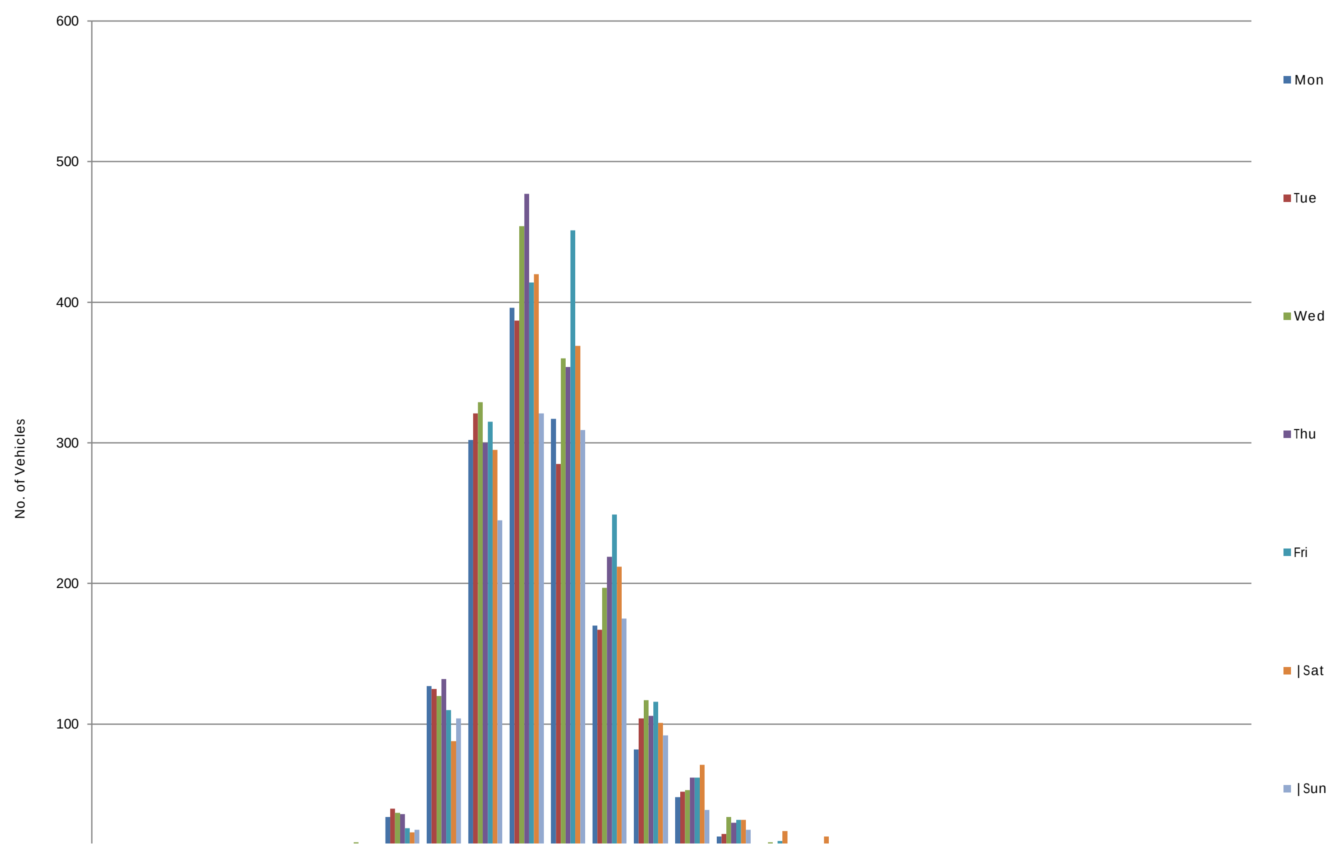
Virtual Week (1) — Speed Bins (mph)

Time	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Mon	0	2	0	1	0	2	9	34	127	302	396	317	170	82	48	20	9	5	7	1	0	2	0	0	0	0	0	0
Tue	0	0	4	0	1	4	10	40	125	321	387	285	167	104	52	22	14	9	5	0	0	0	0	0	0	0	0	0
Wed	0	0	1	2	0	6	16	37	120	329	454	360	197	117	53	34	16	7	4	2	0	0	1	0	0	0	0	0
Thu	0	0	0	4	2	5	12	36	132	300	477	354	219	106	62	30	12	9	4	4	1	0	0	0	0	0	0	0
Fri	0	0	2	3	1	1	7	26	110	315	414	451	249	116	62	32	17	6	2	2	0	1	0	0	0	0	0	0
|Sat	0	0	0	1	0	4	8	23	88	295	420	369	212	101	71	32	24	20	6	4	3	5	0	0	0	0	0	0
|Sun	0	0	1	1	0	3	4	25	104	245	321	309	175	92	39	25	10	7	3	4	4	4	0	0	0	0	0	0
5 Day Ave.	0	0	1	2	1	4	11	35	123	313	426	353	200	105	55	28	14	7	4	2	0	1	0	0	0	0	0	0
7 Day Ave.	0	0	1	2	1	4	9	32	115	301	410	349	198	103	55	28	15	9	4	2	1	2	0	0	0	0	0	0
--	0	2	8	12	4	25	66	221	806	2107	2869	2445	1389	718	387	195	102	63	31	17	8	12	1	0	0	0	0	0

Summary Graphs







Site	7	14135 / Inverary 7	14135 / Inverary
Location	A819 approx 150m north of access track	June 2021 A819 approx 150m north of access track	June 2021
Direction	North South	Automatic Traffic Count North South	Automatic Traffic Count

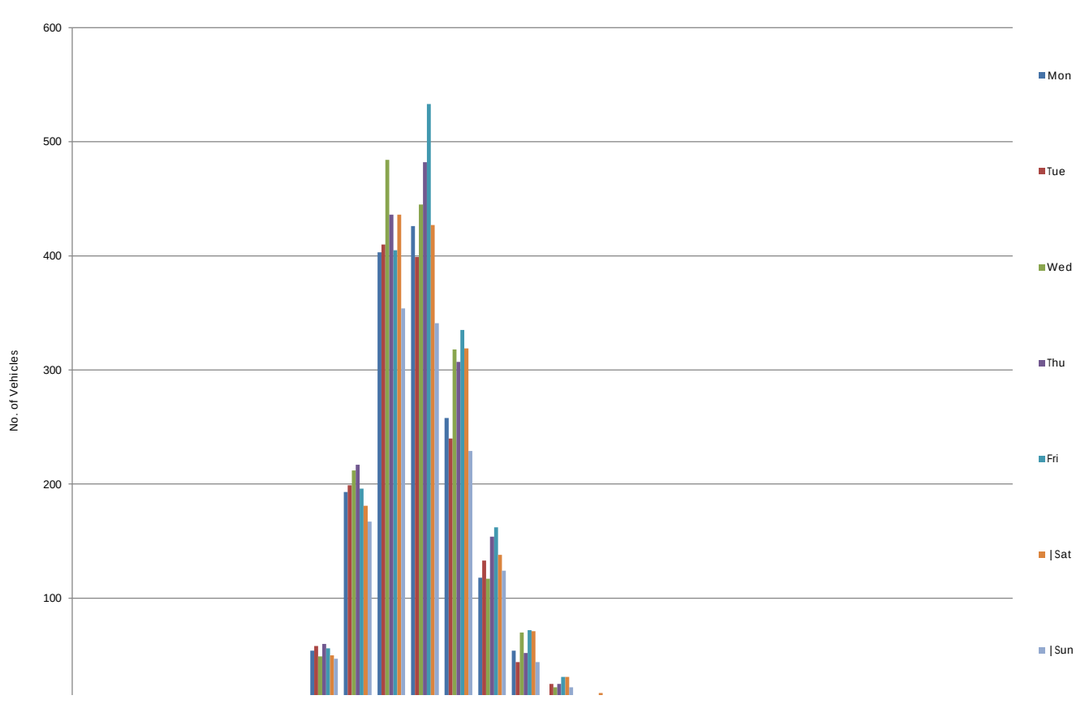
Virtual Day (7)

Time	Total	Classification												]PSL 60	]PSL% 60	]SL1 68 ACPO	]SL1% 68 ACPO	]SL2 75 DfT	]SL2% 75 DfT	Mean	Vpp 85	Speed Bins (mph)																										
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT									0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	5	0	3	0	1	0	0	0	0	0	0	0	0	0	8.6	0	2.9	0	0.0	50.9	-	0	0	0	0	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	4	0	3	0	1	0	0	0	0	0	0	0	0	1	13.8	0	6.9	0	0.0	54.6	-	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	2	0	1	0	0	0	0	0	0	0	1	0	0	0	17.7	0	11.8	0	0.0	50.2	-	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	2	0	0	0	1	0	0	0	0	0	0	0	0	0	16.7	0	8.3	0	0.0	50.8	-	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	5	0	4	0	0	0	0	0	0	0	1	0	0	2	33.3	1	11.1	0	0.0	55	-	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
0500	11	0	7	0	1	0	1	0	0	0	1	0	0	3	26.9	1	10.3	0	0.0	55.8	67	0	0	0	0	0	0	0	0	1	2	2	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0
0600	27	0	18	1	5	0	1	0	0	1	1	0	0	6	22.8	1	4.8	0	1.1	54.7	62.9	0	0	0	0	0	0	0	0	0	2	4	8	6	4	2	0	0	0	0	0	0	0	0	0	0	0
0700	56	1	41	1	8	0	2	0	0	1	2	0	0	10	17.6	2	3.1	0	0.0	53.9	61.5	0	0	0	0	0	0	0	0	1	4	10	17	13	6	3	1	0	0	0	0	0	0	0	0	0	0
0800	69	1	50	2	12	1	1	0	0	1	0	0	0	14	20.0	4	5.4	1	1.5	53.7	61.5	0	0	0	0	0	0	0	0	2	6	15	19	13	8	3	2	1	0	0	0	0	0	0	0	0	0
0900	92	7	69	1	12	1	1	0	0	0	1	0	0	13	14.0	3	3.4	1	0.8	52	59.5	0	0	0	0	0	0	1	1	2	11	23	26	15	8	3	2	1	0	0	0	0	0	0	0	0	0
1000	138	11	104	2	17	2	2	0	0	0	1	0	0	16	11.6	3	2.0	1	0.5	51	58.3	0	0	0	0	0	0	0	1	6	18	40	37	21	11	3	1	0	0	0	0	0	0	0	0	0	0
1100	143	12	105	3	20	1	1	0	0	0	1	0	0	17	12.0	3	2.4	1	1.0	51.3	58.6	0	0	0	0	0	0	0	0	4	22	42	37	21	11	4	1	1	0	0	0	0	0	0	0	0	0
1200	147	17	105	4	17	1	1	0	0	0	1	0	0	15	10.5	3	1.8	1	0.5	51.3	58	0	0	0	0	0	0	0	0	5	17	44	42	23	10	3	2	0	0	0	0	0	0	0	0	0	0
1300	139	14	97	4	18	2	1	0	0	1	1	0	0	15	10.7	4	2.9	1	0.9	51.3	58.4	0	0	0	0	0	0	0	1	6	18	37	40	22	8	4	1	1	0	0	0	0	0	0	0	0	0
1400	139	15	99	2	18	2	1	0	0	1	2	0	0	18	12.6	6	4.0	2	1.5	51.6	58.9	0	0	0	0	0	0	0	1	6	19	36	35	24	9	5	2	1	1	0	0	0	0	0	0	0	0
1500	146	16	106	3	15	1	2	0	1	0	2	0	0	17	11.3	7	4.5	1	1.0	50.7	58.2	0	0	0	0	0	0	0	0	7	26	44	31	20	7	5	3	1	0	0	0	0	0	0	0	0	0
1600	142	11	109	1	15	1	2	0	0	0	2	0	0	20	13.8	5	3.3	1	0.9	51.9	59.6	0	0	0	0	0	0	0	1	6	16	38	37	24	11	4	3	1	0	0	0	0	0	0	0	0	0
1700	125	6	101	2	12	1	1	0	0	1	1	0	0	21	16.7	5	3.8	2	1.5	52.9	60.6	0	0	0	0	0	0	0	1	3	12	33	33	23	13	5	1	1	0	0	0	0	0	0	0	0	0
1800	85	3	70	1	9	0	1	0	0	0	0	0	0	15	17.7	4	4.5	1	1.2	53.8	61.1	0	0	0	0	0	0	0	0	2	7	17	25	19	9	4	2	1	0	0	0	0	0	0	0	0	0
1900	59	2	49	1	4	1	1	0	0	0	0	0	0	11	19.4	3	4.8	1	1.7	54.2	61.4	0	0	0	0	0	0	0	0	0	5	12	17	13	6	3	1	0	0	0	0	0	0	0	0	0	0
2000	41	2	32	0	4	1	0	0	0	0	1	0	0	8	20.7	3	6.7	1	1.8	54.3	61.5	0	0	0	0	0	0	0	0	1	3	7	11	9	4	2	1	0	0	0	0	0	0	0	0	0	0
2100	29	1	24	0	3	0	0	0	0	0	1	0	0	7	24.6	1	3.4	0	1.5	55.2	63	0	0	0	0	0	0	0	0	1	2	5	6	8	5	2	0	0	0	0	0	0	0	0	0	0	0
2200	17	0	14	0	2	0	0	0	0	1	1	0	0	3	15.6	0	2.5	0	0.0	51.8	60.7	0	0	0	0	0	0	0	0	1	3	3	5	3	2	1	0	0	0	0	0	0	0	0	0	0	0
2300	11	0	8	0	1	0	0	0	0	0	1	0	0	2	19.7	1	6.6	0	2.6	54	62	0	0	0	0	0	0	0	0	0	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
07-19	1422	114	1055	26	171	14	16	2	3	5	14	0	0	190	13.3	47	3.3	14	1.0	51.9	59.3	0	1	0	1	1	2	6	49	175	380	379	239	110	46	20	8	3	2	1	0	0	0	0	0	0	0
06-22	1578	119	1177	28	188	16	19	2	3	7	17	0	0	223	14.1	55	3.5	16	1.0	52.1	59.6	0	1	0	1	1	2	7	52	188	408	421	275	130	55	22	9	4	2	1	0	0	0	0	0	0	0
06-00	1606	119	1199	29	191	16	19	2	3	7	19	0	0	228	14.2	56	3.5	16	1.0	52.1	59.6	0	1	0	1	1	2	7	53	192	412	429	281	133	56	23	9	4	2	1	0	0	0	0	0	0	0
00-00	1636	119	1218	29	195	17	20	3	4	9	22	0	0	234	14.3	58	3.6	16	1.0	52.2	59.7	0	1	0	1	1	2	7	53	195	418	436	287	135	58	24	9	4	2	1	0	0	0	0	0	0	0

Virtual Week (1)

Time	Total	Classification												]PSL 60	]PSL% 60	]SL1 68 ACPO	]SL1% 68 ACPO	]SL2 75 DfT	]SL2% 75 DfT	Mean	Vpp 85	Speed Bins (mph)																										
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT									0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Mon	1548	72	1138	28	239	15	22	1	2	11	20	0	0	197	12.7	43	2.8	10	0.6	51.6	59.2	0	1	0	3	0	3	10	54	193	403	426	258	118	54	15	7	2	1	0	0	0	0	0	0	0	0
Tue	1535	77	1109	36	215	15	29	3	4	13	34	0	0	215	14.0	50	3.3	13	0.8	51.7	59.5	0	2	0	0	1	4	7	58	199	410	399	240	133	44	25	7	4	0	2	0	0	0	0	0	0	0	0
Wed	1748	106	1265	32	234	16	33	4	7	13	38	0	0	225	12.9	66	3.8	16	0.9	52	59.1	0	0	0	1	0	4	10	49	212	484	445	318	117	70	22	10	2	1	2	1	0	0	0	0	0	0	0
Thu	1759	111	1293	36	223	20	30	1	6	13	25	1	0	245	13.9	49	2.8	14	0.8	52	59.3	0	0	1	0	3	4	4	60	217	436	482	307	154	52	25	7	6	1	0	0	0	0	0	0	0	0	0
Fri	1813	123	1372	25	215	25	15	5	4	9	19	1	0	276	15.2	64	3.5	11	0.6	52.6	60.1	0	1	1	3	1	0	6	56	196	405	533	335	162	72	31	6	3	1	1	0	0	0	0	0	0	0	0
]Sat	1686	238	1274	14	125	17	5	2	1	2	8	0	0	269	16.0	83	4.9	29	1.7	52.9	60.3	0	0	0	0	0	0	4	50	181	436	427	319	138	71	31	17	5	6	1	0	0	0	0	0	0	0	0
]Sun	1360	109	1074	30	115	9	6	3	1	2	11	0	0	211	15.5	54	4.0	21	1.5	52.3	60.2	0	1	0	1	1	0	8	47	167	354	341	229	124	44	22	11	5	4	1	0	0	0	0	0	0	0	0
5 Day Ave.	1681	98	1235	31	225	18	26	3	5	12	27	0	0	232	13.8	54	3.2	13	0.8	52.0	59.4	0	1	0	1	1	3	7	55	203	428	457	292	137	58	24	7	3	1	1	0	0	0	0	0	0	0	0
7 Day Ave.	1636	119	1218	29	195	17	20	3	4	9	22	0	0	234	14.3	58	3.6	16	1.0	52.2	59.7	0	1	0	1	1	2	7	53	195	418	436	287	135	58	24	9	4	2	1	0	0	0	0	0	0	0	0
--	11449	836	8525	201	1366	117	140	19	25	63	155	2	0	1638	14.3	409	3.6	114	1.0	52.2	59.7	0	5	2	8	6	15	49	374	1365	2928	3053	2006	946	407	171	65	27	14	7	1	0	0	0	0	0	0	0

Summary Graphs



Site 8
Location A819 approx 100m north of access track
Direction North South

14135 / Inverary 8
June 2021 A819 approx 100m north of access track
Automatic Traffic Count North South

14135 / Inverary
June 2021
Automatic Traffic Count

Virtual Day (7)

| Time | Total | Classification | | | | | | | | | | | |]PSL |]PSL% |]SL1 |]SL1% |]SL2 |]SL2% | Mean | Vpp | Speed Bins (mph) | | | | | | | | | | | |

Site 9
Location B840 approx 100m west of A819/ B840 junction
Direction North South

14135 / Inverary 9
June 2021 B840 approx 100m west of A819/ B840 junction
Automatic Traffic Count North South

14135 / Inverary
June 2021
Automatic Traffic Count

Virtual Day (7)

| Time | Total | Classification | | | | | | | | | | | |]PSL |]PSL% |]SL1 |]SL1% |]SL2 |]SL2% | Mean | Vpp | Speed Bins (mph) | | | | | | | | | | | |

Site 10 — 14135 / Inverary 10 — 14135 / Inverary
Location A85 approx 150m east of the A85/ A819 junction — June 2021 A85 approx 150m east of the A85/ A819 junction — June 2021
Direction East West — Automatic Traffic Count East West — Automatic Traffic Count

Virtual Day (7)

| Time | Total | Classification | | | | | | | | | | | |]PSL |]PSL% |]SL1 |]SL1% |]SL2 |]SL2% | Mean | Vpp | Speed Bins (mph) | | | | | | | | | | | |

Site	11	14135 / Inverary 11	14135 / Inverary
Location	A85 approx 150m west of the A85/ A819 junction	June 2021 A85 approx 150m west of the A85/ A819 junction	June 2021
Direction	North South	Automatic Traffic Count North South	Automatic Traffic Count

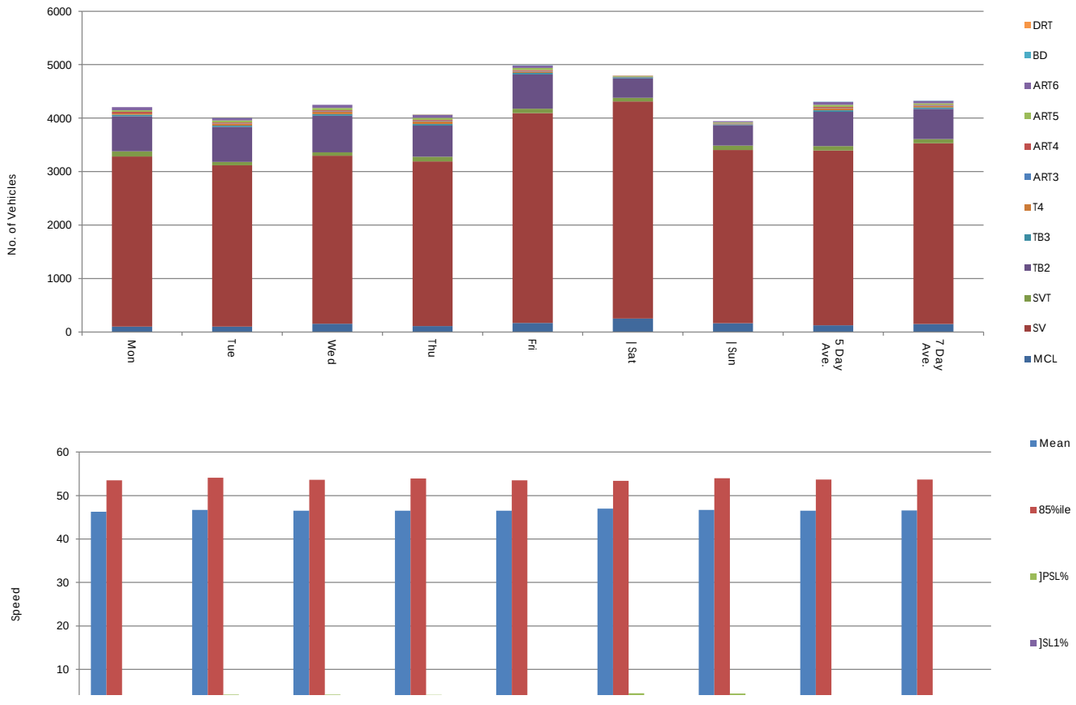
Virtual Day (7)

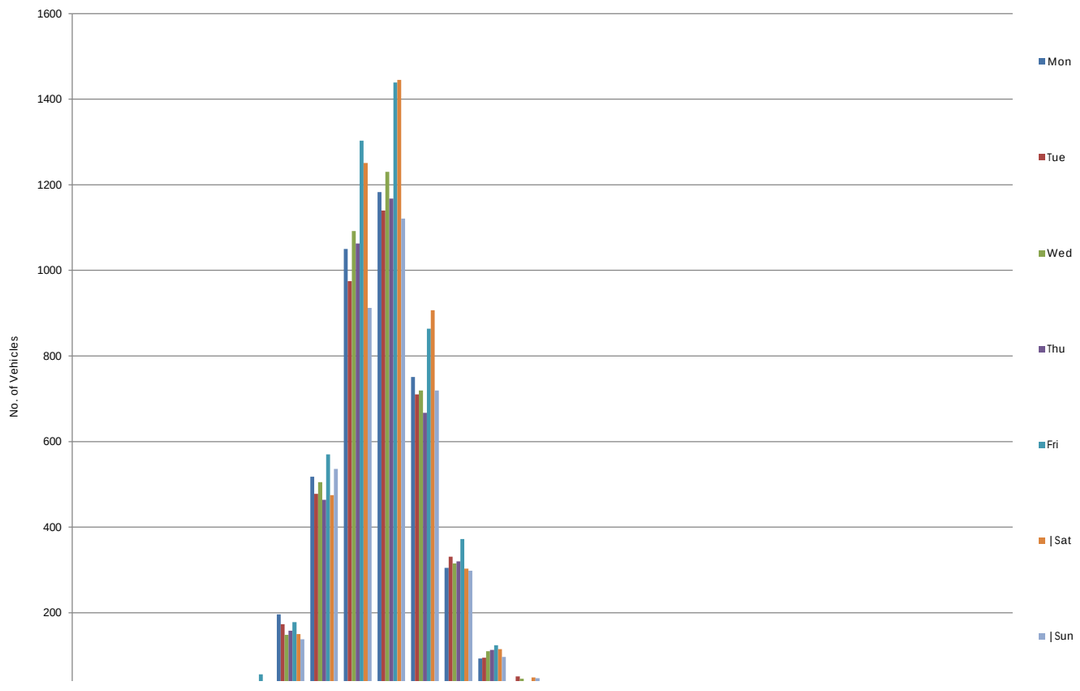
Time	Total	Classification												]PSL 60	]PSL% 60	]SL1 68 ACPO	]SL1% 68 ACPO	]SL2 75 DfT	]SL2% 75 DfT	Mean	Vpp 85	Speed Bins (mph)																										
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT									0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	13	0	8	1	2	0	0	0	0	1	0	0	0	2	11.8	0	3.2	0	1.1	49.9	58.3	0	0	0	0	0	0	0	1	2	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	10	0	5	0	1	0	0	0	0	1	2	0	0	1	9.9	0	1.4	0	0.0	49.4	56.5	0	0	0	0	0	0	0	1	1	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	8	0	4	0	2	0	1	0	0	1	2	0	0	1	8.5	0	3.4	0	0.0	49	-	0	0	0	0	0	0	0	0	1	2	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	10	0	5	0	2	0	0	0	1	1	1	0	0	1	10.3	0	2.9	0	1.5	49.3	-	0	0	0	0	0	0	0	0	1	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
0400	18	0	11	1	3	0	0	0	0	2	2	0	0	2	11.1	0	2.4	0	0.0	50.1	57.9	0	0	0	0	0	0	0	0	2	2	6	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0
0500	39	0	22	0	10	1	1	0	1	2	2	0	0	6	15.7	2	4.4	0	1.1	52.5	60.3	0	0	0	0	0	0	0	0	1	4	10	11	7	4	1	1	0	0	0	0	0	0	0	0	0	0
0600	70	1	46	1	15	0	1	0	1	3	3	0	0	7	9.6	1	1.2	0	0.2	50.2	58.3	0	0	0	0	0	0	0	1	6	11	16	15	13	5	1	0	0	0	0	0	0	0	0	0	0	0
0700	140	1	99	2	28	2	2	0	1	2	3	0	0	13	9.0	2	1.2	0	0.3	50	57.1	0	0	0	0	0	0	0	2	9	22	35	39	19	8	3	1	0	0	0	0	0	0	0	0	0	0
0800	199	2	154	4	31	1	2	0	1	2	2	0	0	8	4.2	1	0.6	0	0.1	48.7	55.1	0	0	0	0	0	0	0	4	14	36	62	52	22	6	2	0	0	0	0	0	0	0	0	0	0	0
0900	277	11	211	5	39	2	2	1	2	2	3	0	0	6	2.3	2	0.7	1	0.2	45.9	52.3	0	0	0	0	1	1	2	10	32	74	90	46	15	4	1	1	0	0	0	0	0	0	0	0	0	0
1000	389	16	303	8	49	3	3	1	1	2	3	0	0	3	0.9	1	0.1	0	0.0	44.1	50.3	0	0	0	0	1	2	5	24	64	117	113	45	13	2	1	1	0	0	0	0	0	0	0	0	0	0
1100	388	17	302	9	53	1	1	0	1	2	2	0	0	8	2.1	3	0.7	1	0.4	44.5	50.4	0	0	0	0	1	1	5	21	61	122	110	45	13	4	1	1	1	0	0	0	0	0	0	0	0	0
1200	397	17	308	10	53	2	1	1	1	1	3	0	0	9	2.4	3	0.8	1	0.2	45.3	51	0	0	0	0	0	0	4	17	52	120	128	51	16	5	2	1	0	0	0	0	0	0	0	0	0	0
1300	348	15	271	9	45	2	2	1	1	2	2	0	0	9	2.5	2	0.6	1	0.2	45.3	51.7	0	0	0	0	0	1	5	12	47	106	100	50	16	4	3	1	1	0	0	0	0	0	0	0	0	0
1400	363	17	280	6	51	2	1	1	1	1	2	0	0	9	2.4	1	0.3	0	0.0	45.2	51.8	0	0	0	0	0	1	4	19	49	107	105	51	18	6	3	0	0	0	0	0	0	0	0	0	0	0
1500	374	20	297	5	45	1	2	1	1	1	1	0	0	11	2.8	4	1.0	1	0.4	45.8	52.6	0	0	0	0	0	0	2	16	53	109	106	55	23	6	2	1	1	0	0	0	0	0	0	0	0	0
1600	330	17	267	4	36	2	1	0	1	1	1	0	0	14	4.3	4	1.2	1	0.4	46.9	53.7	0	0	0	0	1	0	2	12	37	81	96	65	23	8	3	1	1	1	0	0	0	0	0	0	0	0
1700	295	9	244	4	32	1	2	0	1	1	1	0	0	16	5.4	4	1.3	1	0.2	47.5	54.6	0	0	0	0	0	1	2	10	31	66	79	65	26	10	3	1	1	0	0	0	0	0	0	0	0	0
1800	224	5	189	2	22	1	2	0	0	1	2	0	0	15	6.6	3	1.4	0	0.2	49.1	56.3	0	0	0	0	1	0	1	3	13	41	69	55	26	9	4	2	0	0	0	0	0	0	0	0	0	0
1900	153	4	128	2	14	1	1	0	1	1	1	0	0	13	8.6	4	2.3	1	0.9	50	57.2	0	0	0	0	0	0	1	2	10	22	43	38	22	8	2	2	1	0	0	0	0	0	0	0	0	0
2000	120	2	101	1	12	1	0	0	0	0	1	0	0	10	8.4	2	1.4	1	0.7	49.8	57.2	0	0	0	0	0	0	1	3	7	19	35	28	17	5	3	1	0	0	1	0	0	0	0	0	0	0
2100	82	1	69	2	8	0	0	0	0	1	1	0	0	8	9.9	1	1.6	0	0.5	49.8	58.3	0	0	0	0	0	0	1	2	7	12	18	22	11	6	2	1	0	0	0	0	0	0	0	0	0	0
2200	46	0	36	1	6	0	0	0	0	2	0	0	0	4	8.1	2	3.4	0	0.6	49.2	57.1	0	0	0	0	0	0	0	2	4	9	10	9	8	2	1	1	0	0	0	0	0	0	0	0	0	0
2300	26	0	18	0	6	0	0	0	0	1	1	0	0	3	9.8	1	2.7	0	0.0	47.8	56.8	0	0	0	0	0	0	0	1	3	5	5	6	2	1	1	0	0	0	0	0	0	0	0	0	0	0
07-19	3726	145	2924	68	485	21	23	6	12	17	26	0	0	121	3.3	29	0.8	8	0.2	46.1	52.8	0	0	2	6	8	32	151	461	1001	1093	620	231	73	29	12	5	1	1	1	0	0	0	0	0	0	0
06-22	4151	152	3268	74	535	23	26	6	14	22	32	0	0	159	3.8	36	0.9	11	0.3	46.5	53.5	0	0	2	6	9	34	159	491	1066	1206	724	295	96	37	15	6	2	2	1	0	0	0	0	0	0	0
06-00	4223	152	3322	75	547	24	26	6	14	24	33	0	0	165	3.9	39	0.9	11	0.3	46.5	53.5	0	0	2	6	9	35	162	499	1080	1222	738	305	99	39	16	7	2	2	1	0	0	0	0	0	0	0
00-00	4322	152	3377	78	567	25	27	7	15	31	42	1	0	178	4.1	42	1.0	12	0.3	46.6	53.7	0	0	2	6	9	35	163	507	1092	1247	762	321	107	42	18	7	2	2	1	0	0	0	0	0	0	0

Virtual Week (1)

Time	Total	Classification												]PSL 60	]PSL% 60	]SL1 68 ACPO	]SL1% 68 ACPO	]SL2 75 DfT	]SL2% 75 DfT	Mean	Vpp 85	Speed Bins (mph)																										
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT									0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Mon	4205	104	3180	97	657	27	22	3	26	32	57	0	0	150	3.6	39	0.9	9	0.2	46.3	53.5	0	0	2	4	6	40	196	518	1050	1183	751	305	93	28	20	2	1	5	1	0	0	0	0	0	0	0
Tue	4011	101	3017	62	656	23	37	4	18	38	52	2	1	169	4.2	35	0.9	8	0.2	46.7	54.1	0	0	2	4	3	26	173	478	975	1140	710	331	95	51	15	7	1	0	0	0	0	0	0	0	0	0
Wed	4249	156	3139	67	683	30	44	11	18	45	56	0	0	179	4.2	42	1.0	10	0.2	46.5	53.6	0	0	3	11	11	36	148	505	1092	1230	719	315	110	46	13	5	2	2	1	0	0	0	0	0	0	0
Thu	4063	113	3076	88	585	29	54	6	15	42	53	1	1	169	4.2	30	0.7	5	0.1	46.5	53.9	0	0	2	4	14	34	158	464	1063	1168	667	320	113	37	14	2	1	2	0	0	0	0	0	0	0	0
Fri	4986	168	3928	80	642	30	23	12	17	37	48	1	0	187	3.8	38	0.8	12	0.2	46.5	53.5	0	0	2	9	6	56	178	570	1303	1439	864	372	124	33	18	8	4	0	0	0	0	0	0	0	0	0
]Sat	4795	254	4060	65	364	20	1	4	8	11	7	0	1	215	4.5	68	1.4	22	0.5	47	53.4	0	0	2	7	13	27	150	475	1251	1445	907	303	115	49	29	12	3	3	2	1	0	1	0	0	0	0
]Sun	3945	167	3238	84	382	16	11	6	6	13	22	0	0	176	4.5	41	1.0	16	0.4	46.7	54	0	0	2	5	9	29	138	536	912	1121	719	298	97	47	16	12	2	2	0	0	0	0	0	0	0	0
5 Day Ave.	4303	128	3268	79	645	28	36	7	19	39	53	1	0	171	4.0	37	0.9	9	0.2	46.5	53.7	0	0	2	6	8	38	171	507	1097	1232	742	329	107	39	16	5	2	2	0	0	0	0	0	0	0	0
7 Day Ave.	4322	152	3377	78	567	25	27	7	15	31	42	1	0	178	4.1	42	1.0	12	0.3	46.6	53.7	0	0	2	6	9	35	163	507	1092	1247	762	321	107	42	18	7	2	2	1	0	0	0	0	0	0	0
--	30254	1063	23638	543	3969	175	192	46	108	218	295	4	3	1245	4.1	293	1.0	82	0.3	46.6	53.7	0	0	15	44	62	248	1141	3546	7646	8726	5337	2244	747	291	125	48	14	14	4	1	0	1	0	0	0	0

Summary Graphs





Site 12 — 14135 / Inverary 12 — 14135 / Inverary
Location A815 approx 100m north of the A815/ A886 junction — June 2021 A815 approx 100m north of the A815/ A886 junction — June 2021
Direction North South — Automatic Traffic Count North South — Automatic Traffic Count

Virtual Day (7)

| Time | Total | Classification | | | | | | | | | | | |]PSL |]PSL% |]SL1 |]SL1% |]SL2 |]SL2% | Mean | Vpp | Speed Bins (mph) | | | | | | | | | | | |

Site 13
Location B840 approx 300m east of Ford
Direction North South

14135 / Inverary 13
June 2021 B840 approx 300m east of Ford
Automatic Traffic Count North South

14135 / Inverary
June 2021
Automatic Traffic Count

Virtual Day (7)

| Time | Total | Classification | | | | | | | | | | | | |]PSL |]PSL% |]SL1 |]SL1% |]SL2 |]SL2% | Mean | Vpp | Speed Bins (mph) | | | | | | | | | | | | |

Site 14
Location A83 approx 300m north of the A83/ B828 junction
Direction North South

14135 / Inverary 14
June 2021 A83 approx 300m north of the A83/ B828 junction
Automatic Traffic Count North South

14135 / Inverary
June 2021
Automatic Traffic Count

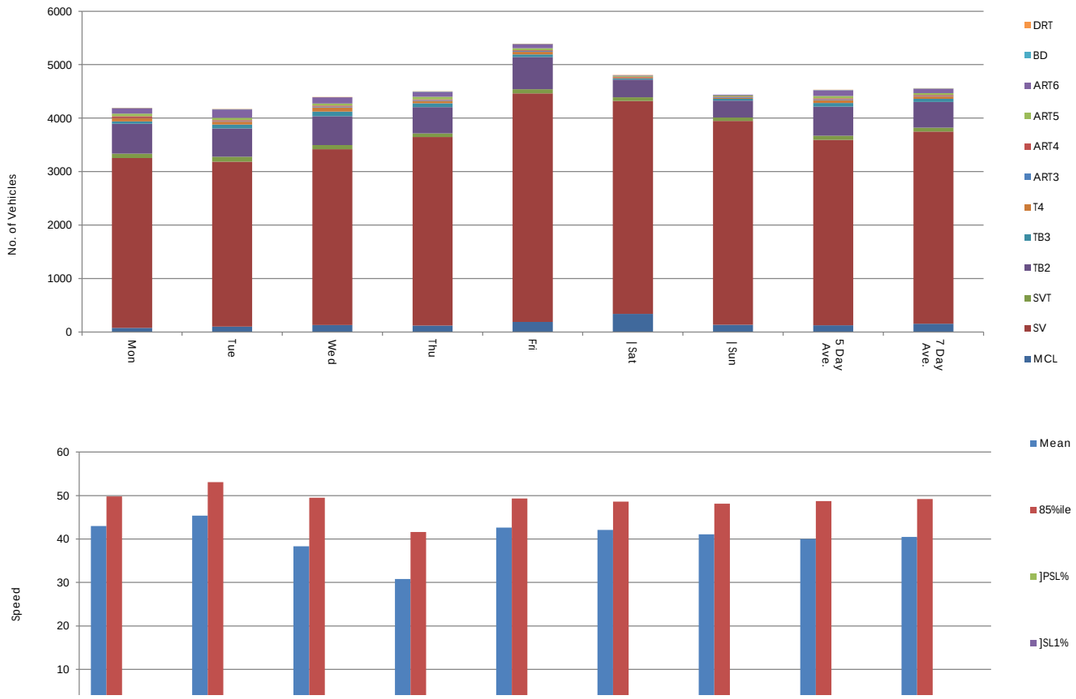
Virtual Day (7)

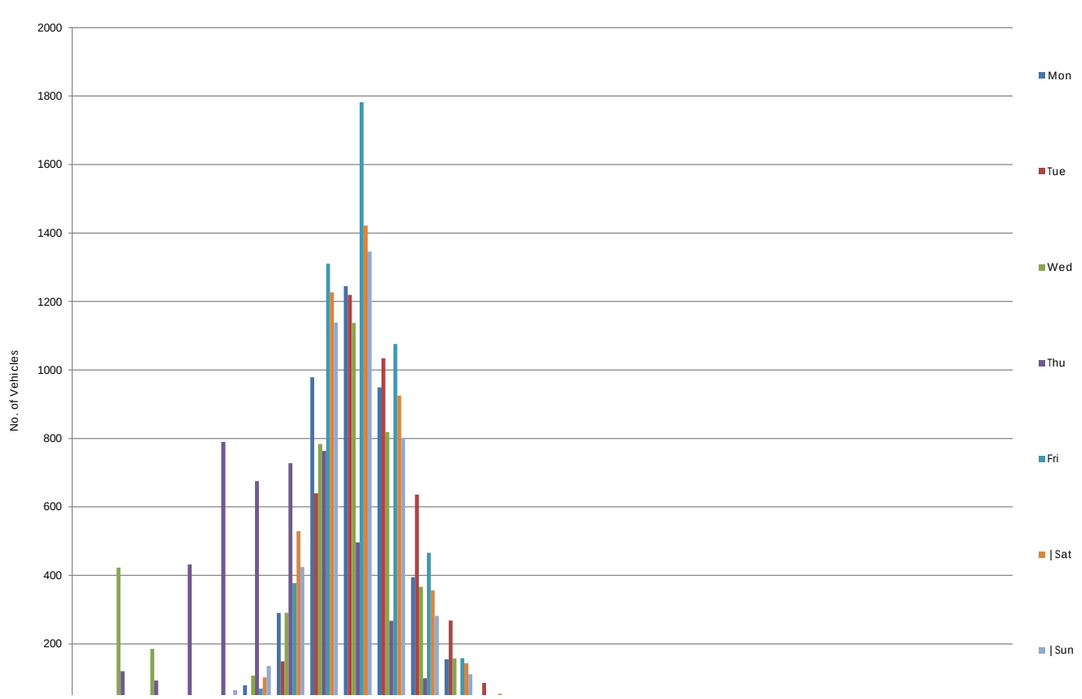
Time	Total	Classification												]PSL 60	]PSL% 60	]SL1 68 ACPO	]SL1% 68 ACPO	]SL2 75 DfT	]SL2% 75 DfT	Mean	Vpp 85	Speed Bins (mph)																										
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT									0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	24	1	21	0	2	0	0	0	0	0	0	0	0	0	1.2	0	0.6	0	0.0	27.8	51.3	1	8	2	0	1	0	1	2	2	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	22	0	17	0	2	0	0	0	0	0	1	0	0	0	2.0	0	0.7	0	0.0	27.2	47.7	1	3	4	3	2	1	1	2	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	11	0	7	0	2	0	0	0	0	1	1	0	0	0	2.6	0	1.3	0	0.0	41.2	49.6	0	0	0	0	0	0	1	3	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	10	0	5	0	2	1	0	0	0	1	1	0	0	0	0.0	0	0.0	0	0.0	43.7	-	0	0	0	0	0	0	1	1	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	23	0	12	0	7	1	0	0	0	1	1	0	0	1	5.5	0	0.6	0	0.0	47.5	55.6	0	0	0	0	0	0	1	2	3	5	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	35	0	20	1	7	1	0	0	0	1	4	0	0	2	4.8	1	1.6	0	0.4	46.6	55.3	0	0	0	0	0	0	1	1	5	9	6	7	4	1	1	0	0	0	0	0	0	0	0	0	0	0
0600	93	0	60	2	16	4	1	0	1	2	7	0	0	2	2.6	1	0.6	0	0.2	44.8	53.4	0	0	0	0	1	2	3	5	12	22	19	17	8	2	0	0	0	0	0	0	0	0	0	0	0	0
0700	154	1	106	3	25	6	2	1	1	3	7	0	0	3	2.1	0	0.0	0	0.0	42.9	52	0	0	0	0	1	8	7	9	24	39	34	21	8	3	0	0	0	0	0	0	0	0	0	0	0	0
0800	203	4	147	5	29	5	6	1	1	2	4	0	0	4	1.8	1	0.4	0	0.1	43.1	50.7	0	0	0	0	5	6	8	9	28	59	51	24	9	3	0	0	0	0	0	0	0	0	0	0	0	0
0900	258	8	194	5	33	4	3	1	2	2	5	0	0	3	1.2	1	0.3	0	0.1	41	49	0	0	0	1	5	13	12	24	49	73	51	21	8	2	0	0	0	0	0	0	0	0	0	0	0	0
1000	365	16	285	5	40	4	3	1	1	2	6	0	0	6	1.6	2	0.4	1	0.2	40.7	48.5	0	0	0	1	5	11	19	36	98	96	62	22	11	3	1	1	0	0	0	0	0	0	0	0	0	0
1100	394	18	317	7	36	5	4	1	1	2	4	0	0	2	0.5	1	0.2	1	0.2	39.2	46.8	0	0	0	2	10	18	15	49	105	109	56	19	7	1	0	0	0	0	0	0	0	0	0	0	0	0
1200	400	14	322	9	37	3	3	0	1	3	6	0	0	3	0.9	1	0.2	0	0.0	39.9	46.7	0	0	0	2	8	9	15	44	116	119	60	19	6	2	0	1	0	0	0	0	0	0	0	0	0	0
1300	391	18	308	7	42	3	3	0	2	3	4	0	0	3	0.9	0	0.1	0	0.0	40.6	47.5	0	0	0	1	7	9	16	35	105	118	64	24	8	3	1	0	0	0	0	0	0	0	0	0	0	0
1400	400	17	312	8	43	4	4	1	1	3	6	0	1	3	0.8	1	0.2	0	0.0	40.5	47.6	0	0	0	2	3	8	18	46	109	114	65	24	9	2	1	0	0	0	0	0	0	0	0	0	0	0
1500	379	18	299	6	42	3	2	0	1	0	6	0	0	5	1.4	1	0.3	0	0.1	41.3	48.5	0	0	0	0	5	10	12	38	88	109	74	26	10	4	1	0	0	0	0	0	0	0	0	0	0	0
1600	355	15	292	4	34	1	3	1	1	2	3	0	0	5	1.4	1	0.4	0	0.0	42.3	49.4	0	0	0	0	6	9	10	26	74	102	80	31	11	2	2	1	0	0	0	0	0	0	0	0	0	0
1700	287	12	239	3	24	1	1	1	0	1	4	0	0	6	2.1	1	0.4	0	0.1	42.7	50.7	0	0	0	0	5	10	9	19	48	79	67	32	12	4	1	1	0	0	0	0	0	0	0	0	0	0
1800	260	6	215	4	26	2	1	1	1	1	4	0	0	3	1.3	0	0.2	0	0.0	42.3	50.1	0	0	0	0	4	10	9	19	40	81	59	28	8	2	1	0	0	0	0	0	0	0	0	0	0	0
1900	202	5	172	2	12	4	2	0	1	2	2	0	0	4	2.0	1	0.5	0	0.1	35.6	49.4	0	17	17	8	7	9	18	30	41	28	18	6	3	1	1	0	0	0	0	0	0	0	0	0	0	0
2000	119	3	99	1	9	2	1	0	0	1	2	0	0	2	1.9	0	0.0	0	0.0	37.4	50.8	0	16	4	2	1	4	7	17	23	23	11	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	78	1	67	1	4	1	1	0	1	1	1	0	0	2	2.8	0	0.4	0	0.0	36.4	52.5	0	13	3	1	2	1	5	10	15	10	9	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0
2200	58	0	48	0	5	1	2	0	0	1	1	0	0	1	2.0	0	0.5	0	0.0	29.5	48.9	1	19	3	0	0	1	2	6	9	8	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	34	0	29	0	2	1	0	0	0	0	0	0	0	1	2.1	0	0.4	0	0.0	28.6	47	0	8	7	0	0	0	1	5	5	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	3846	146	3037	67	411	39	36	9	14	25	60	1	2	47	1.2	10	0.3	3	0.1	41.1	48.8	0	2	9	63	121	149	354	882	1098	722	291	108	32	9	4	1	1	0	0	0	0	0	0	0	0	0
06-22	4338	155	3434	72	452	50	42	9	17	30	72	2	2	58	1.3	12	0.3	3	0.1	40.8	49	1	48	33	75	134	167	389	952	1200	804	345	133	39	11	5	1	1	0	0	0	0	0	0	0	0	0
06-00	4429	156	3511	73	460	51	44	10	18	31	73	2	2	60	1.4	12	0.3	3	0.1	40.5	49	2	75	43	76	134	168	393	962	1213	816	352	135	40	12	6	1	1	0	0	0	0	0	0	0	0	0
00-00	4555	156	3593	75	481	55	45	10	19	36	81	2	2	64	1.4	13	0.3	3	0.1	40.5	49.2	4	85	49	79	137	170	398	977	1235	839	372	144	42	13	6	1	1	0	0	0	0	0	0	0	0	0

Virtual Week (1)

Time	Total	Classification												]PSL 60	]PSL% 60	]SL1 68 ACPO	]SL1% 68 ACPO	]SL2 75 DfT	]SL2% 75 DfT	Mean	Vpp 85	Speed Bins (mph)																										
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT									0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Mon	4188	78	3177	80	560	42	59	6	33	51	98	3	1	55	1.3	8	0.2	2	0.0	43	49.8	0	4	14	7	16	79	290	979	1245	949	395	155	42	9	2	0	0	0	0	2	0	0	0	0	0	0	0
Tue	4166	100	3084	92	533	73	53	9	21	43	156	1	1	130	3.1	24	0.6	0	0.0	45.4	53.1	1	1	8	27	27	26	149	640	1219	1034	636	268	86	30	14	0	0	0	0	0	0	0	0	0	0	0	0
Wed	4395	132	3289	75	540	89	74	16	20	37	118	0	5	68	1.5	23	0.5	7	0.2	38.3	49.5	9	423	185	25	23	107	291	784	1137	819	367	157	38	12	11	4	3	0	0	0	0	0	0	0	0	0	0
Thu	4502	122	3526	67	489	72	46	13	18	46	94	4	5	7	0.2	1	0.0	0	0.0	30.8	41.6	15	120	93	432	790	675	728	763	496	267	100	16	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Fri	5390	187	4277	78	600	50	49	13	15	41	75	3	2	75	1.4	16	0.3	6	0.1	42.6	49.3	1	29	11	17	19	69	377	1310	1782	1076	466	158	46	15	8	2	4	0	0	0	0	0	0	0	0	0	0
]Sat	4804	342	3980	67	330	26	16	0	14	17	11	0	1	69	1.4	8	0.2	3	0.1	42.1	48.6	0	2	1	5	22	102	529	1227	1422	925	356	144	54	8	4	0	2	1	0	0	0	0	0	0	0	0	0
]Sun	4440	134	3815	63	317	31	21	12	11	18	18	0	0	45	1.0	12	0.3	4	0.1	41.1	48.1	1	15	34	41	65	135	424	1139	1346	802	282	111	26	13	2	2	0	2	0	0	0	0	0	0	0	0	0	0
5 Day Ave.	4528	124	3471	78	544	65	56	11	21	44	108	2	3	67	1.5	14	0.3	3	0.1	40.0	48.7	5	115	62	102	175	191	367	895	1176	829	393	151	43	14	7	1	1	0	0	0	0	0	0	0	0	0	0	0
7 Day Ave.	4555	156	3593	75	481	55	45	10	19	36	81	2	2	64	1.4	13	0.3	3	0.1	40.5	49.2	4	85	49	79	137	170	398	977	1235	839	372	144	42	13	6	1	1	0	0	0	0	0	0	0	0	0	0	0
--	31885	1095	25148	522	3369	383	318	69	132	253	570	11	15	449	1.4	92	0.3	22	0.1	40.5	49.2	27	594	346	554	962	1193	2788	6842	8647	5872	2602	1009	297	89	41	8	9	3	0	0	2	0	0	0	0	0	0	0

Summary Graphs





Site	15	14135 / Inverary 15			14135 / Inverary
Location	A85 approx 200m east of the A85/ B845 junction	June 2021 A85 approx 200m east of the A85/ B845 junction			June 2021
Direction	North South	Automatic Traffic Count North South			Automatic Traffic Count

Virtual Day (7)

Time	Total	Classification												]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%	Mean	Vpp
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	30	30	35 ACPO	35 ACPO	45 DfT	45 DfT		85
0000	14	0	10	1	2	0	0	0	0	1	1	0	0	10	67.0	6	45.0	1	10.0	35.3	42.6
0100	10	0	7	0	0	0	0	0	0	1	1	0	0	8	79.4	5	51.5	0	4.4	34.9	-
0200	13	0	9	0	1	0	1	0	0	1	1	0	0	11	81.5	5	39.1	0	3.3	34.6	39.3
0300	10	0	8	0	1	0	0	0	0	0	1	0	0	8	85.3	5	55.9	1	11.8	35.8	-
0400	20	0	14	0	2	0	0	0	0	1	1	0	0	16	81.8	11	55.5	2	9.5	35.9	42.6
0500	47	1	29	1	10	1	1	0	0	2	2	0	0	37	78.8	19	40.9	4	9.1	35	41.6
0600	85	1	57	1	17	1	1	0	1	3	3	0	0	65	77.2	30	35.2	5	5.9	34.3	40.9
0700	179	2	134	2	34	2	2	0	0	1	3	0	0	119	66.6	49	27.2	4	2.3	32.8	38
0800	268	3	212	5	39	2	2	1	1	2	1	0	0	161	60.1	59	22.0	4	1.6	31.9	36.9
0900	326	11	249	7	46	3	4	0	2	3	2	0	0	217	66.6	77	23.5	5	1.6	32.2	37
1000	396	13	312	9	50	3	4	0	1	1	2	0	0	276	69.8	105	26.5	7	1.8	32.6	37.4
1100	392	14	308	9	52	2	2	1	1	1	2	0	0	259	66.2	97	24.7	8	2.2	32.3	37.4
1200	426	10	339	10	56	3	2	1	1	1	2	0	0	278	65.4	104	24.4	6	1.5	32.4	37.2
1300	371	14	291	8	48	2	3	1	1	2	2	0	0	251	67.7	100	26.9	6	1.7	32.5	37.9
1400	407	18	325	8	47	2	2	1	1	1	2	0	0	272	66.7	104	25.6	9	2.1	32.6	37.6
1500	401	15	326	6	48	2	2	1	1	0	1	0	0	259	64.7	103	25.6	9	2.2	32.3	37.5
1600	388	10	324	4	41	4	2	1	1	1	1	0	0	255	65.9	97	25.1	8	2.1	32.4	37.4
1700	351	9	295	4	38	1	1	0	1	1	1	0	0	239	68.0	93	26.4	8	2.4	32.6	37.7
1800	252	4	213	3	25	2	2	0	1	1	2	0	0	170	67.5	64	25.6	7	2.7	32.6	37.9
1900	176	6	147	1	16	1	1	0	1	2	1	0	0	123	70.0	53	30.2	6	3.2	33.2	38.6
2000	131	1	112	1	13	1	0	0	1	0	1	0	0	94	71.9	44	33.8	7	5.7	33.8	40
2100	93	1	79	1	10	0	0	0	1	1	0	0	0	69	73.8	33	35.8	5	5.7	34	40.5
2200	55	1	47	0	6	0	0	0	0	1	0	0	0	38	68.2	17	30.8	4	6.7	33.5	39.3
2300	28	0	20	1	5	0	0	0	0	2	0	0	0	20	71.5	10	37.8	2	6.2	34.2	41.3
07-19	4158	121	3327	75	523	27	29	6	12	15	22	1	0	2759	66.4	1051	25.3	82	2.0	32.4	37.5
06-22	4643	130	3722	79	580	31	31	6	15	21	27	1	0	3111	67.0	1212	26.1	106	2.3	32.6	37.7
06-00	4726	131	3788	80	591	31	31	7	15	23	28	1	0	3168	67.0	1239	26.2	111	2.4	32.6	37.7
00-00	4840	132	3865	82	607	33	33	7	16	29	35	1	0	3257	67.3	1291	26.7	121	2.5	32.6	37.8

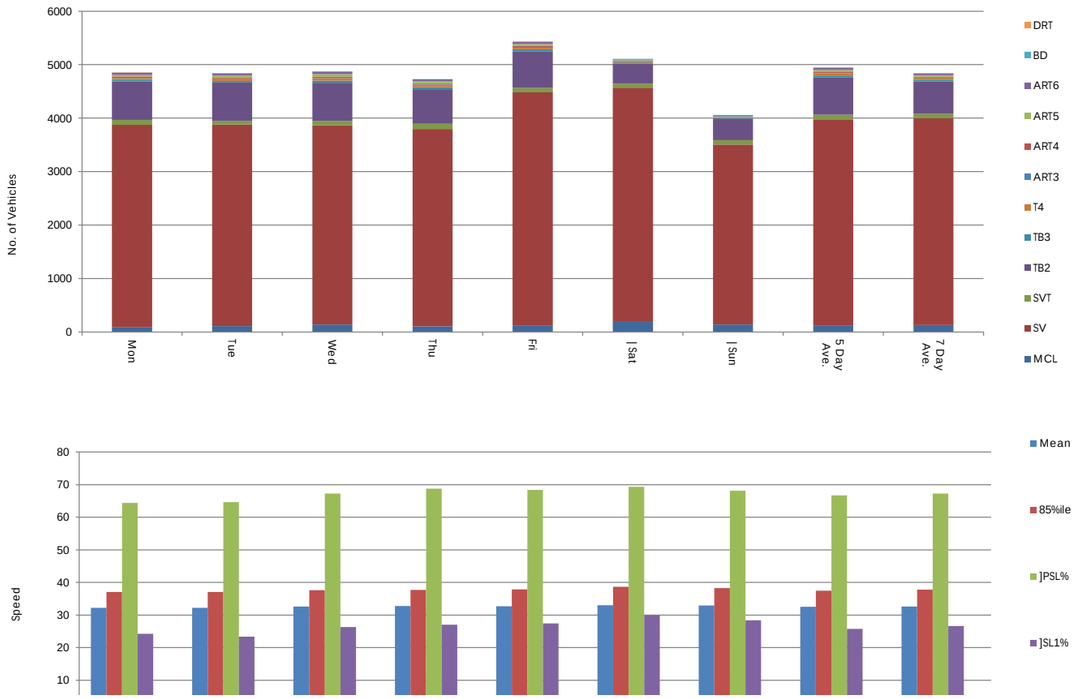
Time	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Speed Bins (mph)																											
0000	0	0	0	0	0	5	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	2	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	2	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	1	3	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	1	3	5	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	1	9	18	10	5	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	1	18	36	15	10	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	2	58	71	30	15	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	1	9	97	102	38	16	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	1	1	9	98	140	52	19	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	1	1	8	110	171	75	23	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	1	14	118	163	68	21	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	1	11	135	175	70	28	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	1	1	2	13	102	151	68	25	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	1	1	11	123	167	70	26	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	2	15	124	157	70	24	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	1	0	12	119	158	68	22	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	1	2	7	103	146	62	22	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	1	6	75	106	42	16	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	3	49	70	35	13	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	1	36	50	25	12	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	2	22	35	18	10	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	2	16	21	9	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	1	7	9	6	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	0	2	7	12	116	1262	1708	712	257	63	13	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	0	2	7	13	124	1387	1899	805	301	79	19	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	0	2	8	13	127	1409	1929	820	308	83	20	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	0	2	8	13	129	1431	1966	850	321	89	22	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

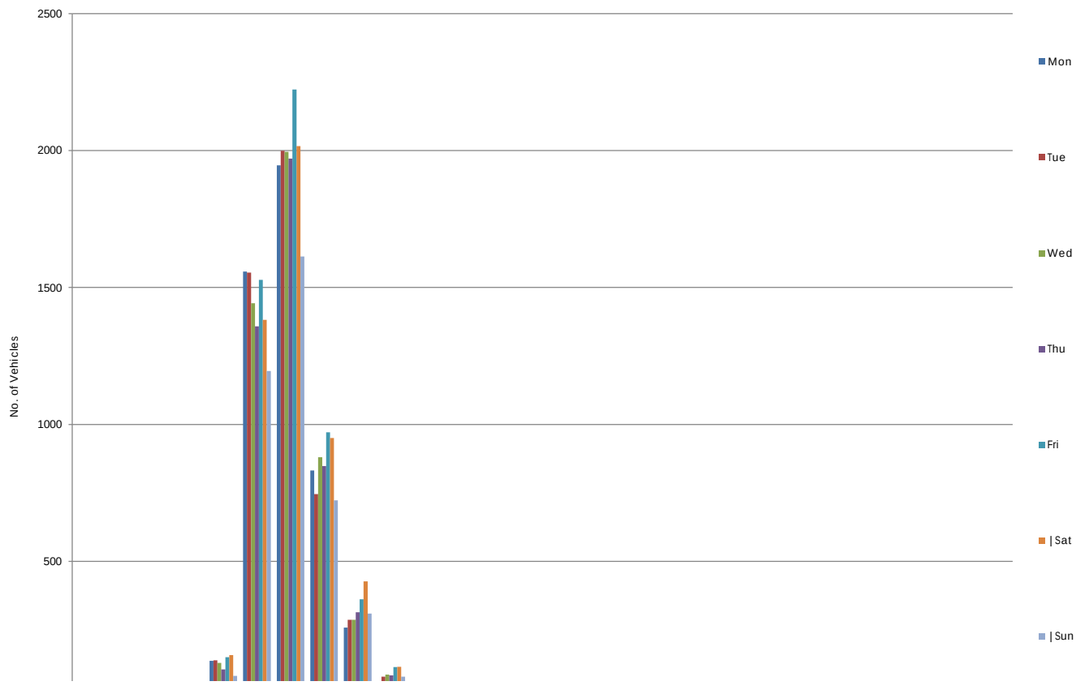
Virtual Week (1)

Time	Total	Classification												]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%	Mean	Vpp
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	30	30	35 ACPO	35 ACPO	45 DfT	45 DfT		85
Mon	4853	88	3787	93	718	36	28	6	21	32	43	0	1	3125	64.4	1179	24.3	89	1.8	32.2	37.1
Tue	4839	112	3767	70	720	29	44	2	20	35	39	1	0	3130	64.7	1131	23.4	98	2.0	32.2	37.1
Wed	4871	142	3722	83	713	43	41	4	24	48	49	2	0	3278	67.3	1283	26.3	116	2.4	32.6	37.6
Thu	4726	107	3691	95	649	38	50	7	14	35	39	1	0	3251	68.8	1280	27.1	118	2.5	32.8	37.7
Fri	5431	128	4354	82	680	45	30	12	21	33	45	0	1	3713	68.4	1490	27.4	157	2.9	32.7	37.9
]Sat	5104	204	4367	71	378	22	27	9	7	10	8	1	0	3541	69.4	1525	29.9	148	2.9	33	38.7
]Sun	4055	140	3368	83	389	17	12	6	7	11	21	1	0	2764	68.2	1151	28.4	119	2.9	32.9	38.3
5 Day Ave.	4944	115	3864	85	696	38	39	6	20	37	43	1	0	3299	66.7	1273	25.7	116	2.3	32.5	37.5
7 Day Ave.	4840	132	3865	82	607	33	33	7	16	29	35	1	0	3257	67.3	1291	26.7	121	2.5	32.6	37.8
--	33879	921	27056	577	4247	230	232	46	114	204	244	6	2	22802	67.3	9039	26.7	845	2.5	32.6	37.8

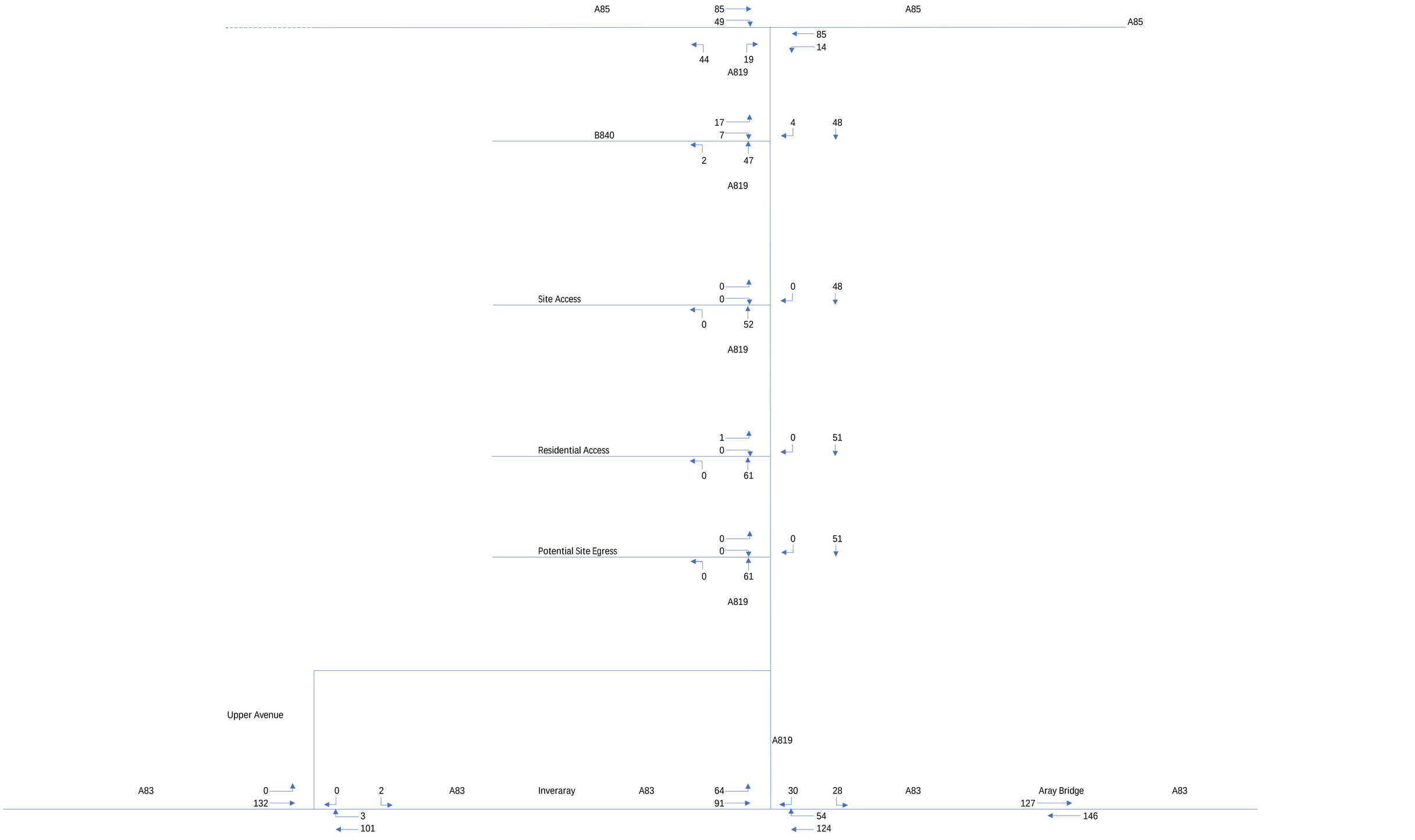
Time	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Speed Bins (mph)																											
Mon	0	3	5	25	137	1558	1946	832	258	63	21	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tue	0	2	6	8	139	1554	1999	746	287	79	13	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wed	0	3	9	10	129	1442	1995	880	287	87	20	6	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Thu	0	0	4	7	106	1358	1971	848	314	84	24	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Fri	0	2	20	18	150	1528	2223	971	362	114	32	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
]Sat	0	2	6	15	158	1382	2016	950	427	115	22	5	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0
]Sun	0	5	3	6	82	1195	1613	723	309	79	24	10	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Day Ave.	0	2	9	14	132	1488	2027	855	302	85	22	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7 Day Ave.	0	2	8	13	129	1431	1966	850	321	89	22	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
--	0	17	53	89	901	10017	13763	5950	2244	621	156	45	17	3	1	0	0	0	0	0	0	0	0	0	0	2	0

Summary Graphs

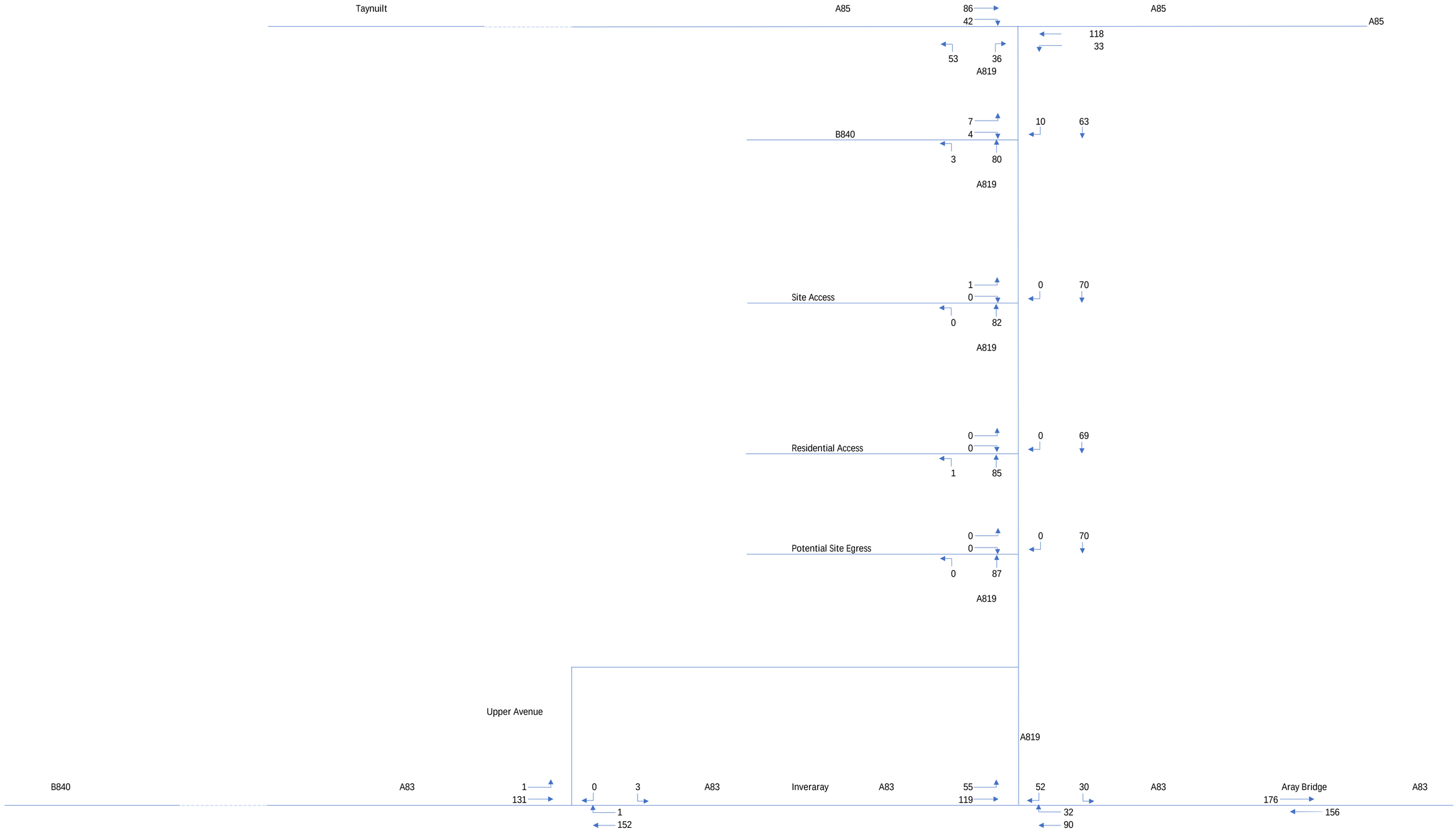




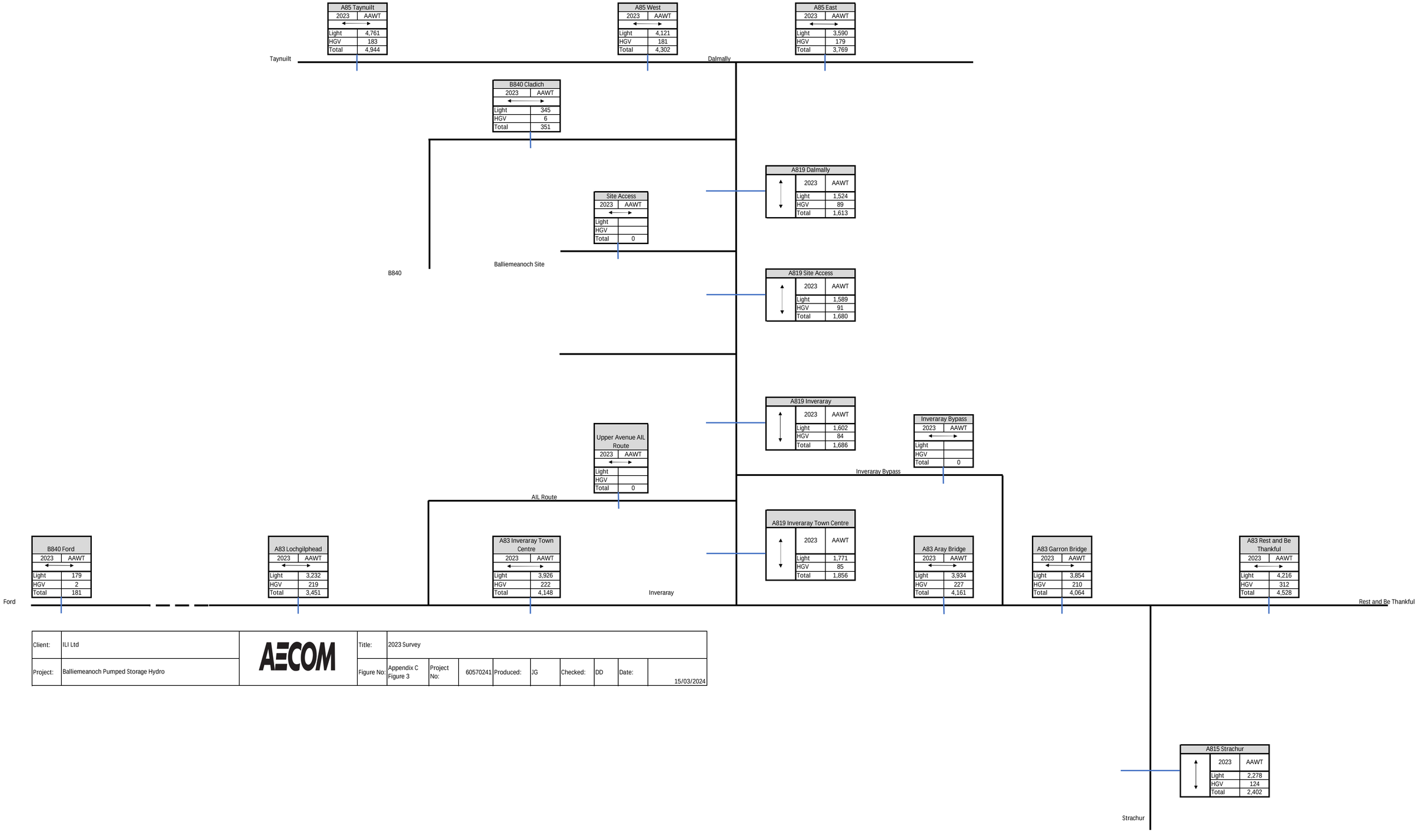
Annex C - Network Flow Diagrams



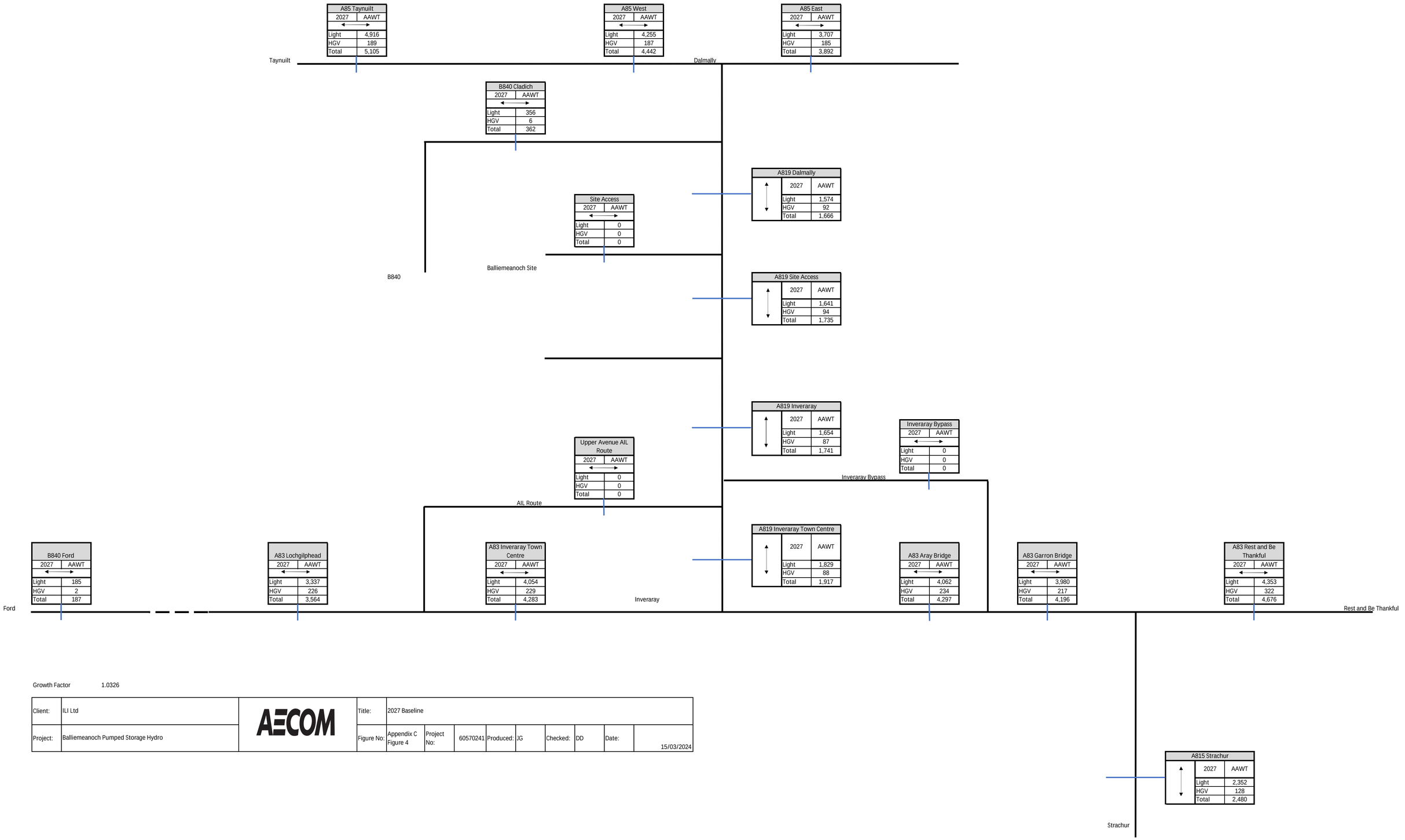
Client:	ILI Ltd	AECOM	Title:	AM Peak Junction Turning Counts (08:30 - 09:30)							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 1	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024



Client:	ILI Ltd	AECOM	Title:	PM Peak Junction Turning Counts (16:00 - 17:00)							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 2	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024

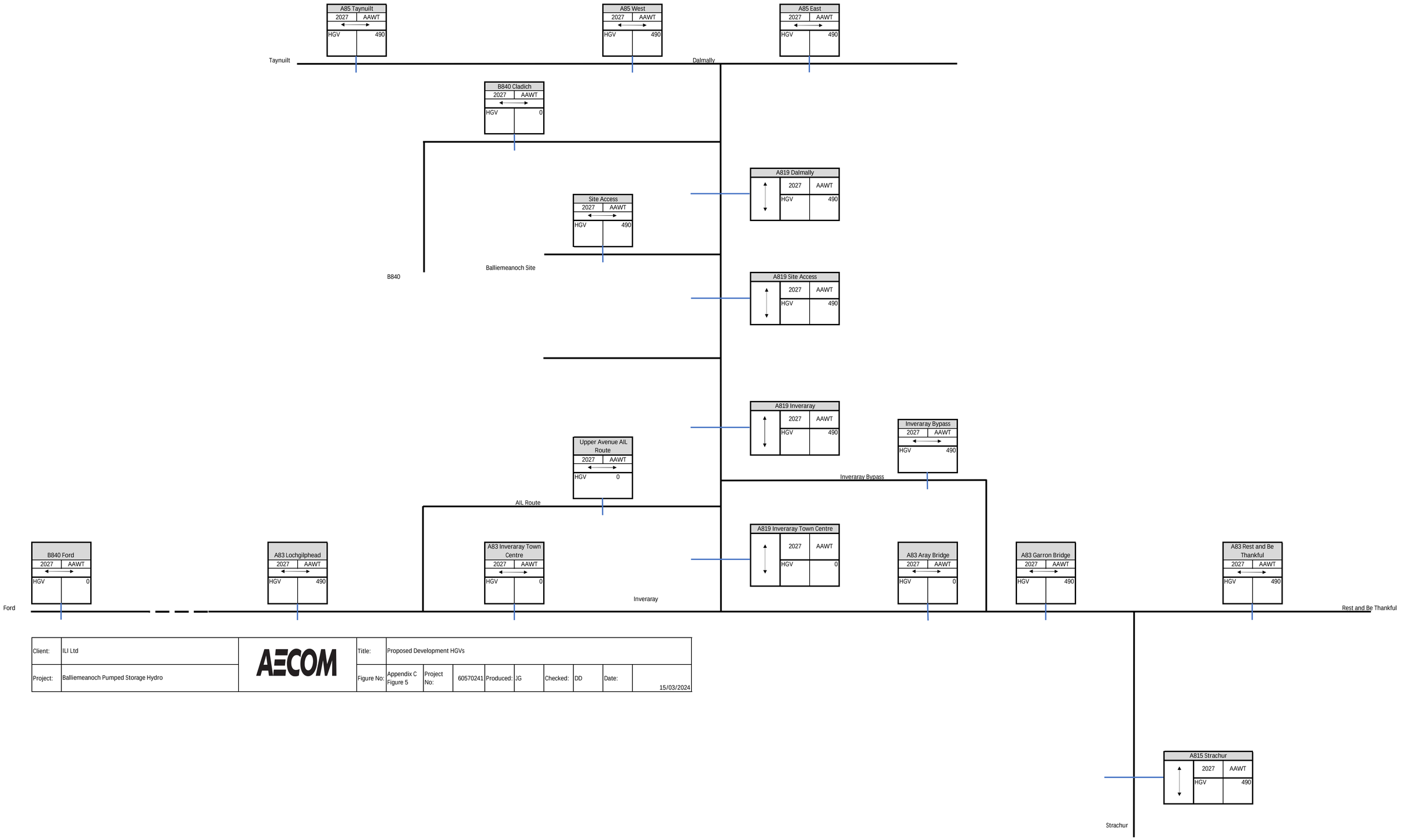


Client:	ILI Ltd	AECOM	Title:	2023 Survey							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 3	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024

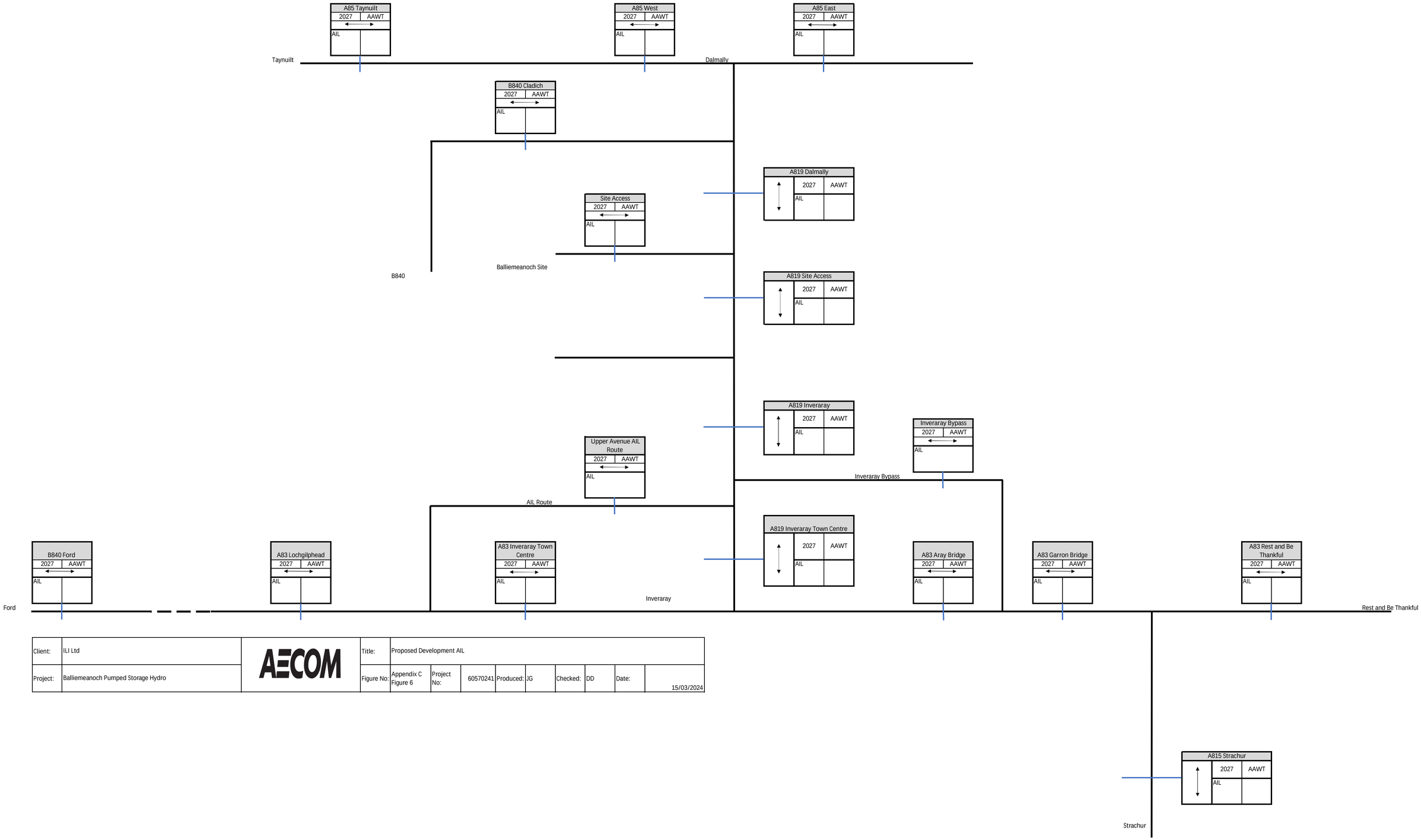


Growth Factor 1.0326

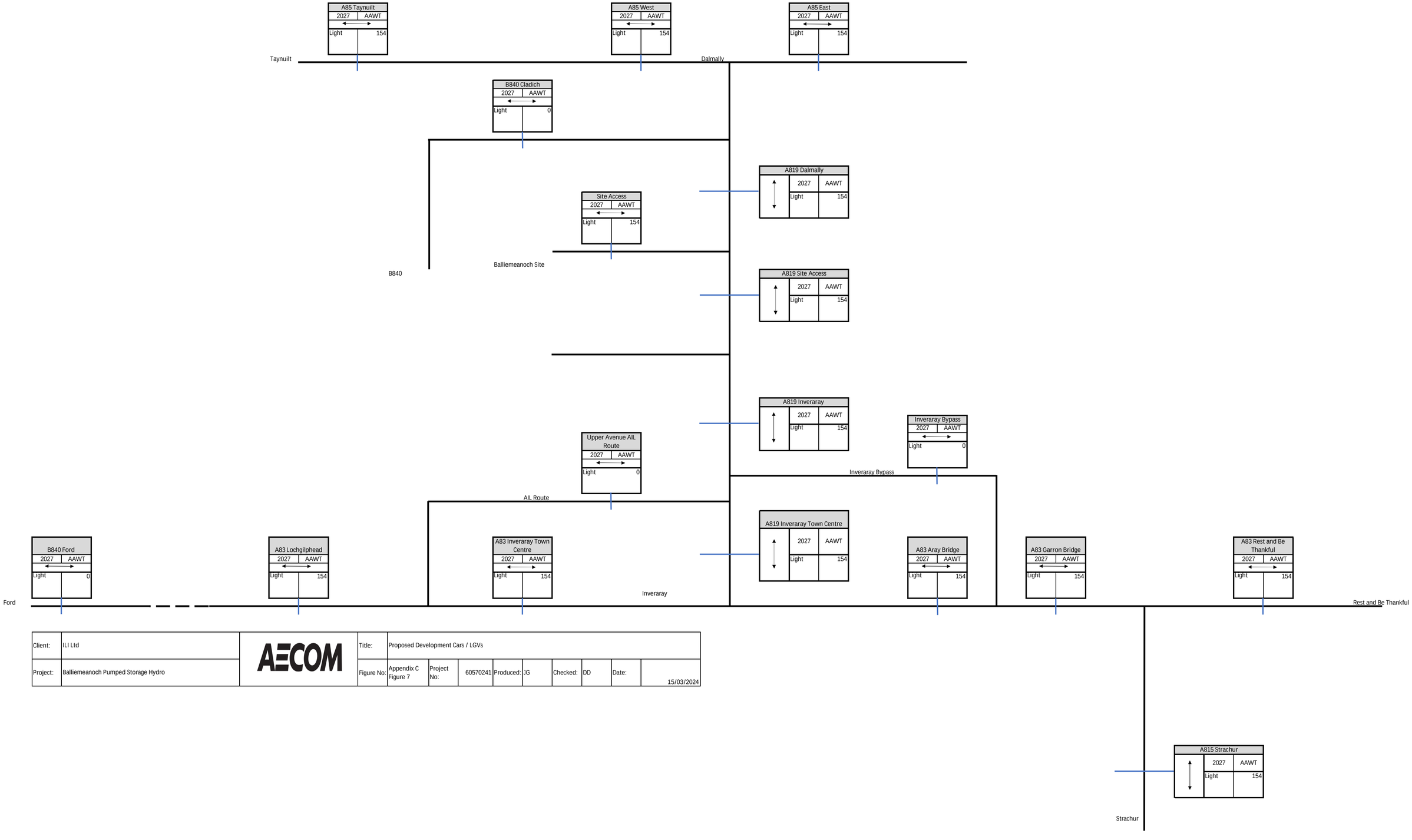
Client:	ILI Ltd	AECOM	Title:	2027 Baseline							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 4	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024



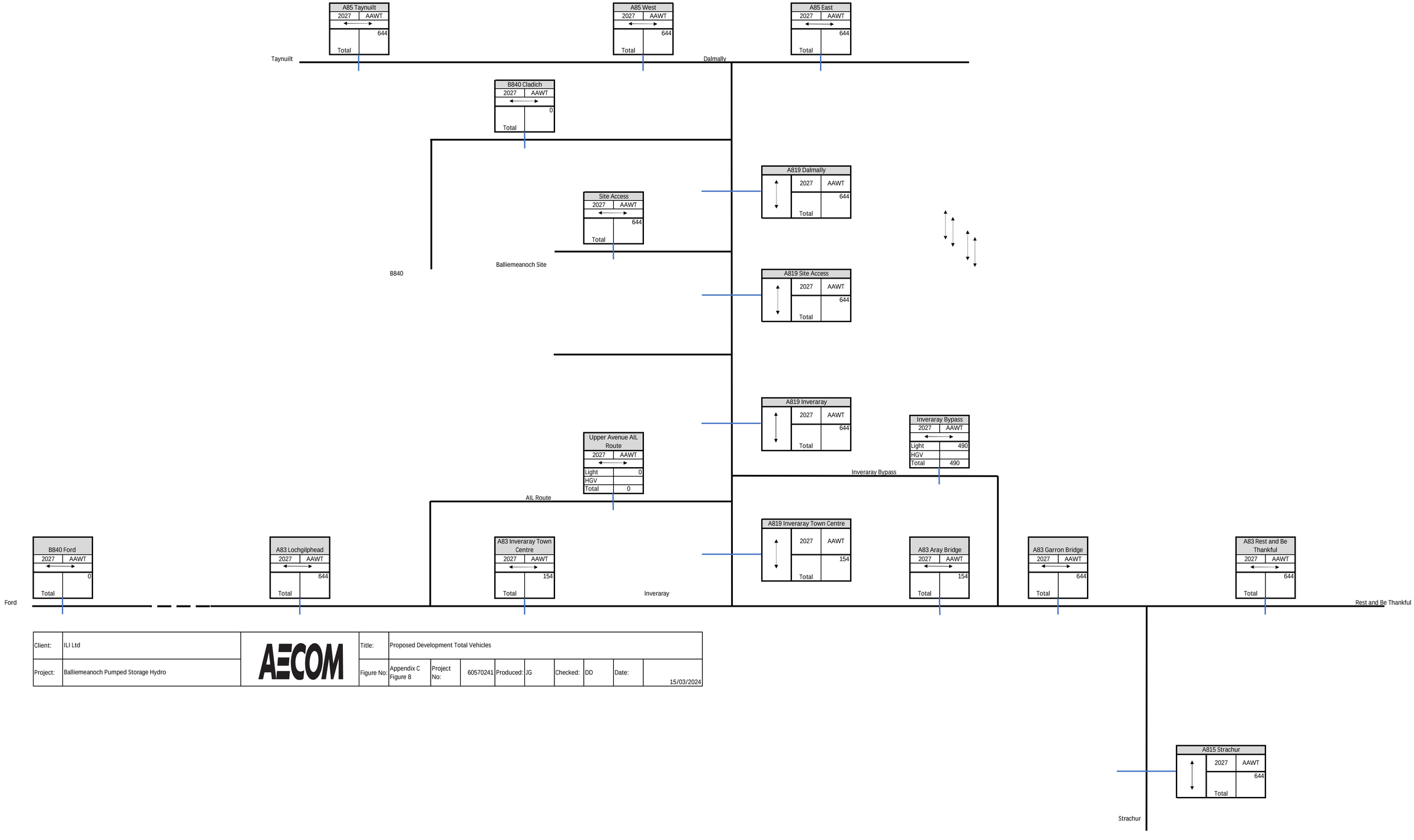
Client:	ILI Ltd	AECOM	Title:	Proposed Development HGVs						
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 5	Project No:	60570241	Produced:	JG	Checked:	DD	Date:	15/03/2024



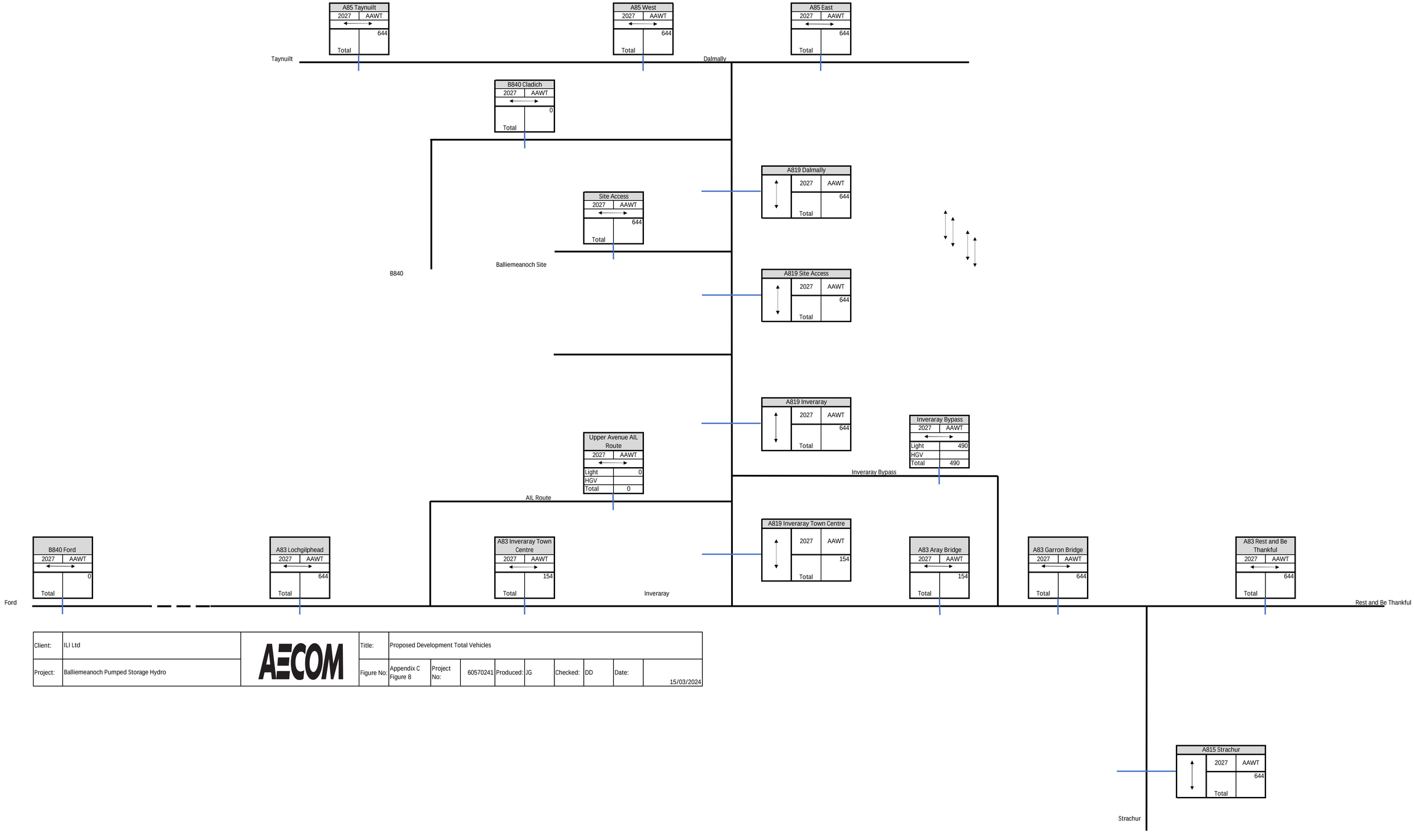
Client:	ILI Ltd	AECOM	Title:	Proposed Development AIL							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 6	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024



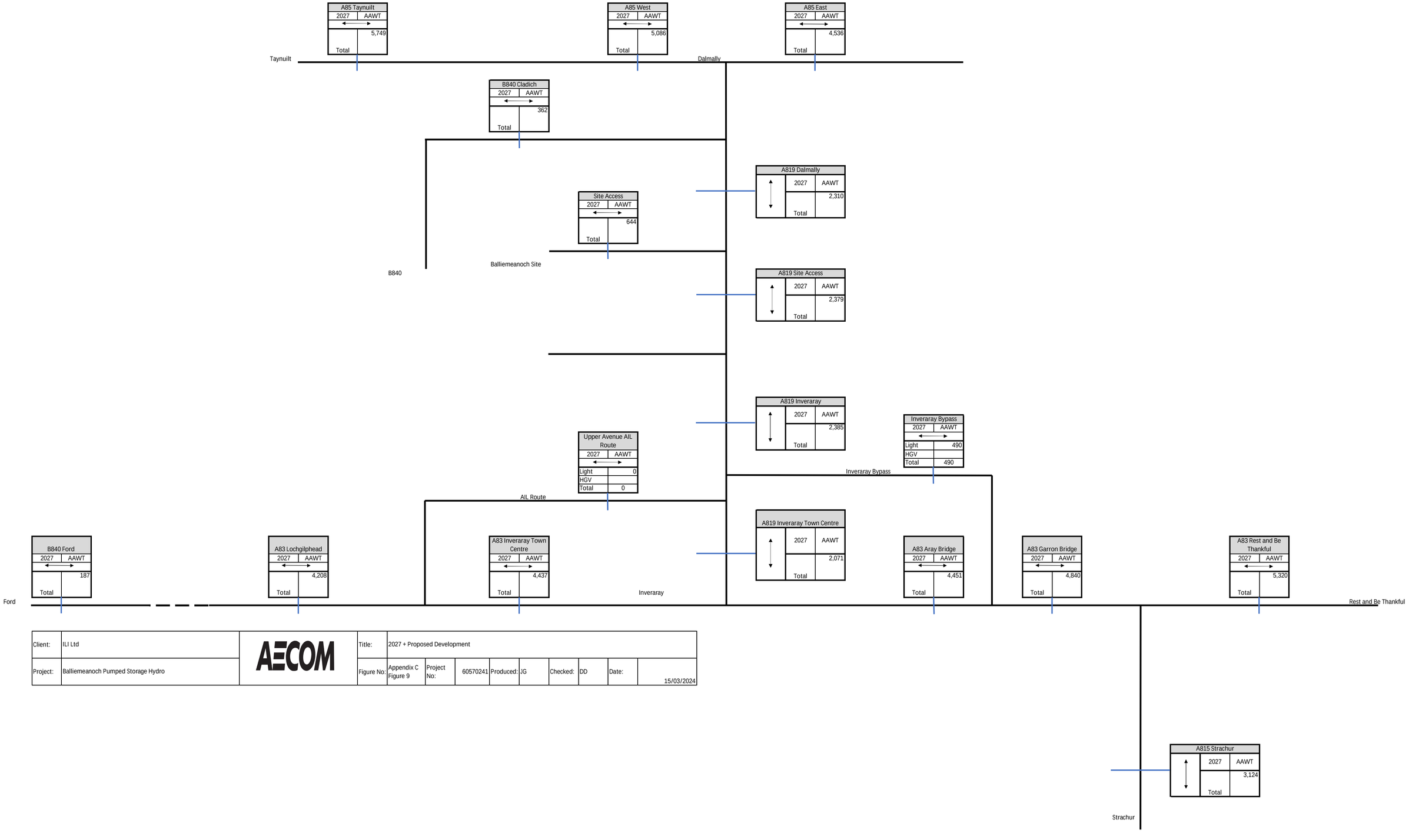
Client:	ILI Ltd	AECOM	Title:	Proposed Development Cars / LGVs							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 7	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024



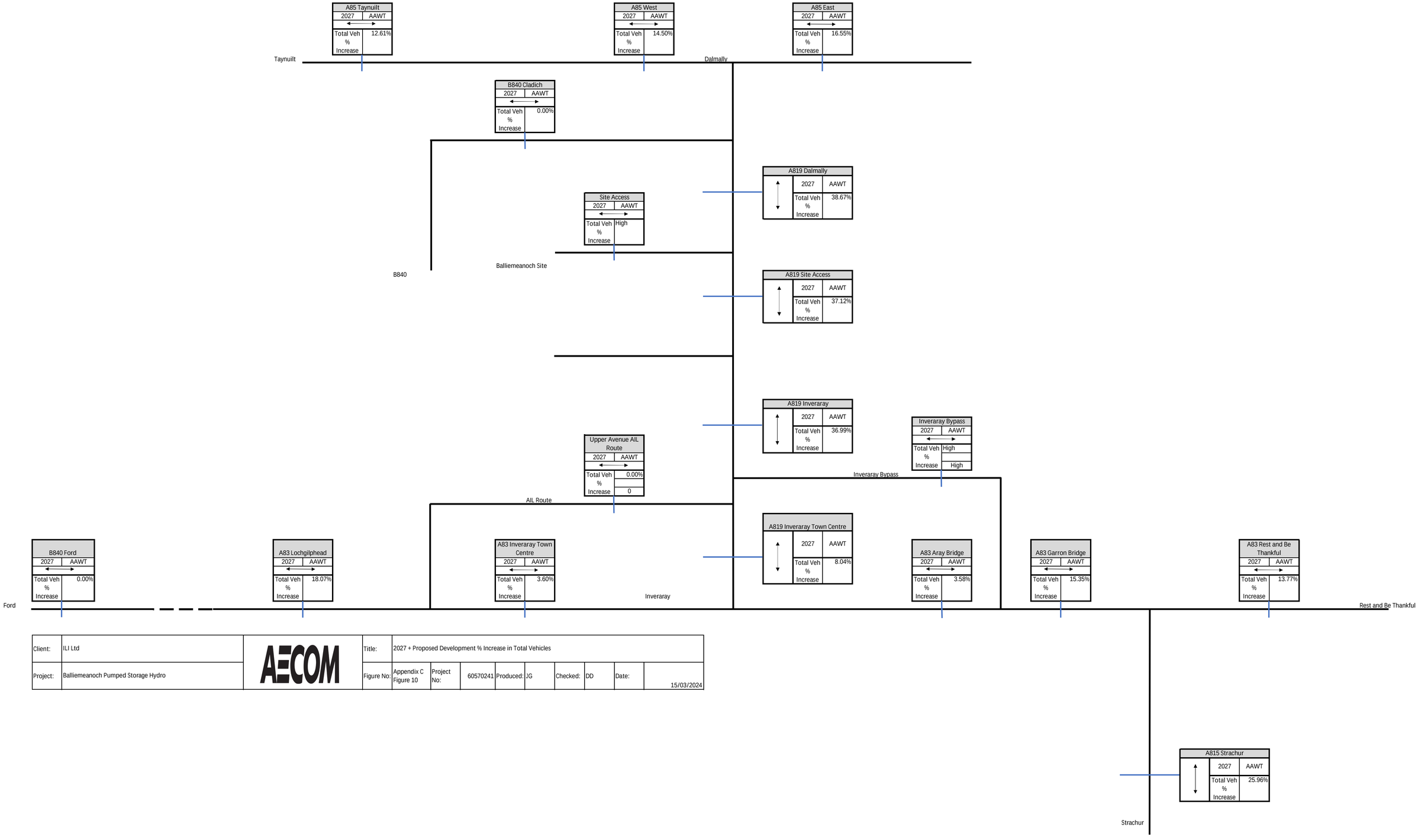
Client:	ILI Ltd	AECOM	Title:	Proposed Development Total Vehicles							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 8	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024



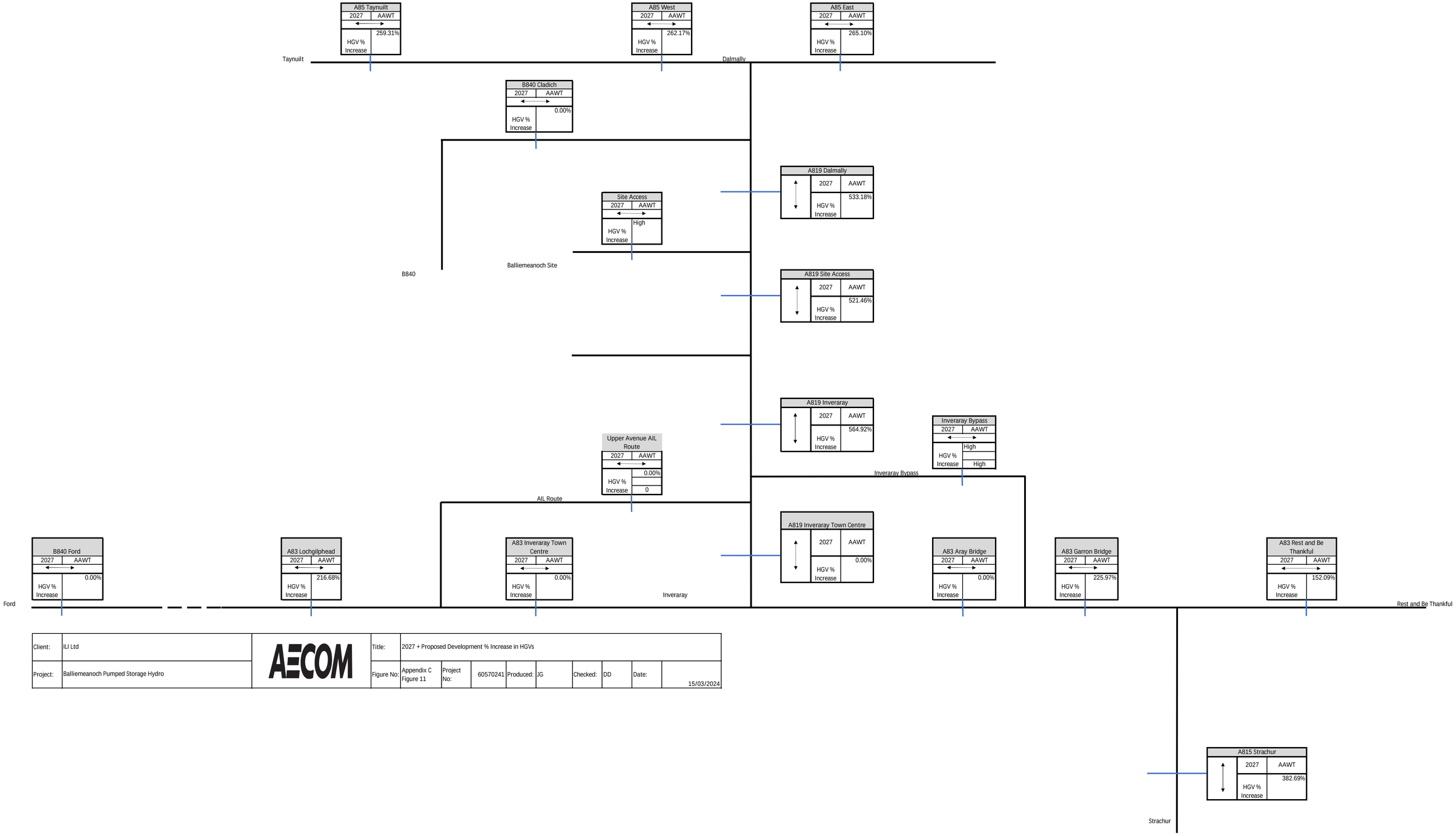
Client:	ILI Ltd	AECOM	Title:	Proposed Development Total Vehicles							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 8	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024



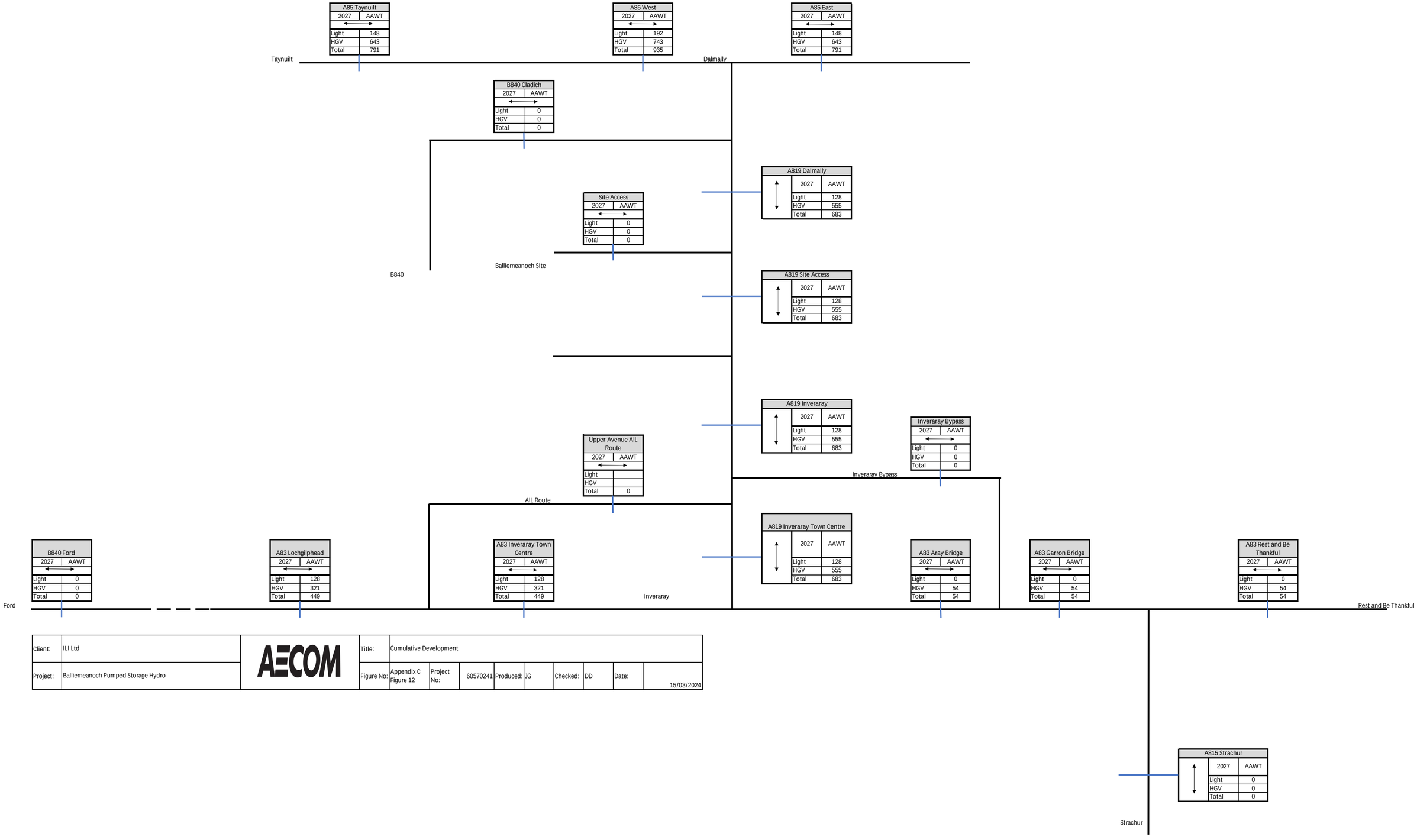
Client:	ILI Ltd	AECOM	Title:	2027 + Proposed Development							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 9	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024



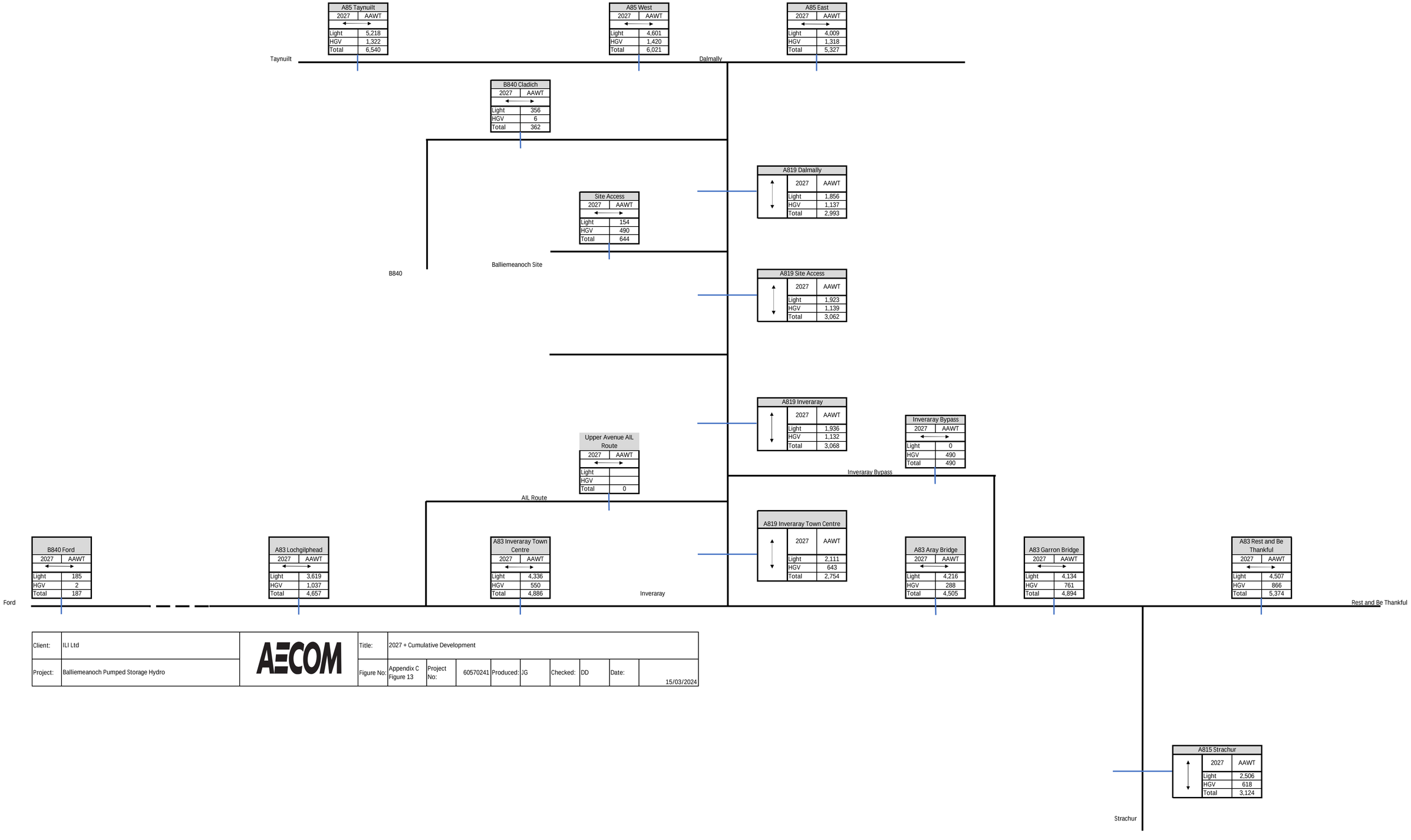
Client:	ILI Ltd	AECOM	Title:	2027 + Proposed Development % Increase in Total Vehicles							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 10	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024



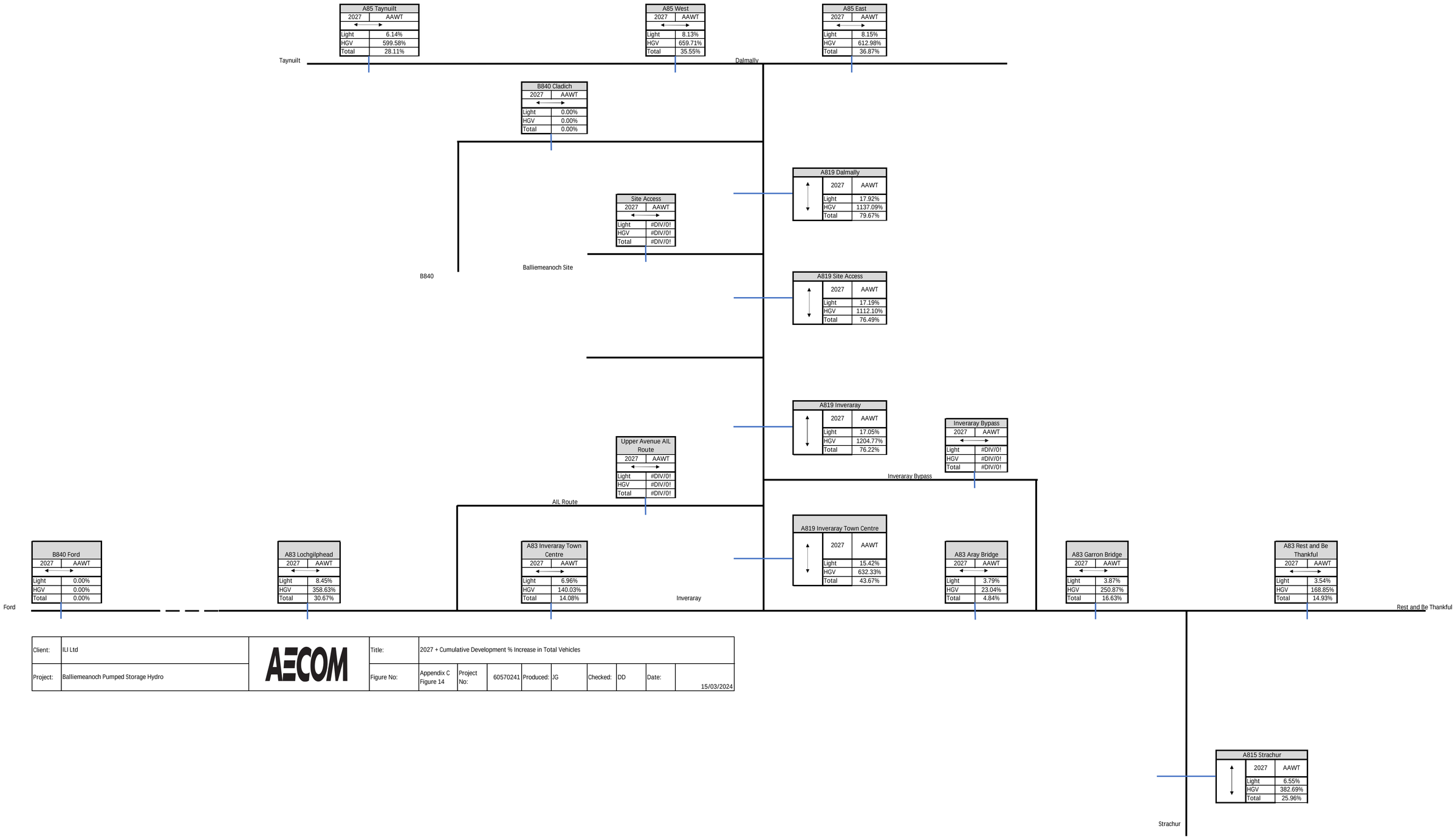
Client:	ILI Ltd	AECOM	Title:	2027 + Proposed Development % Increase in HGVs							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 11	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024



Client:	ILI Ltd	AECOM	Title:	Cumulative Development							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 12	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024

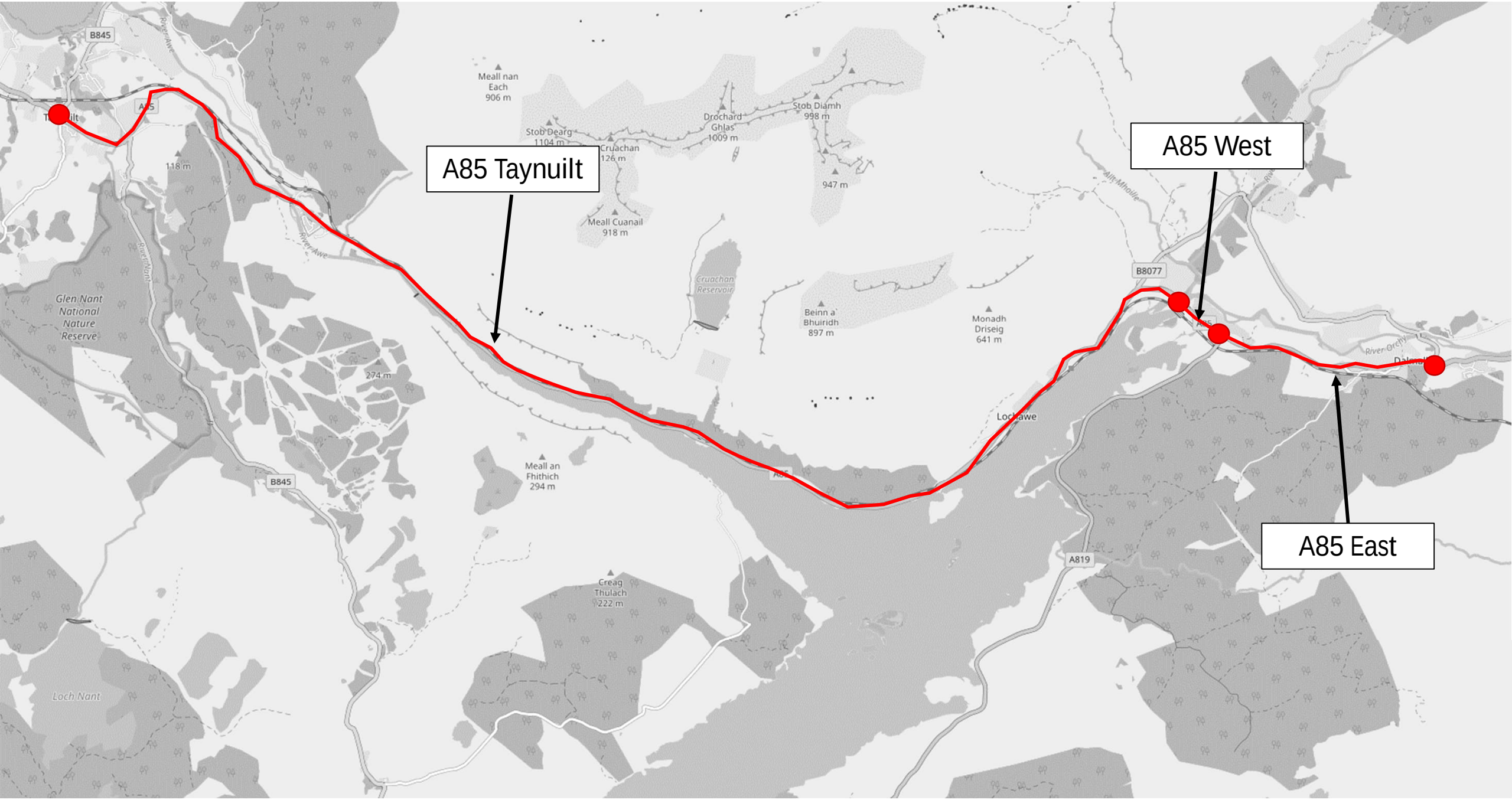


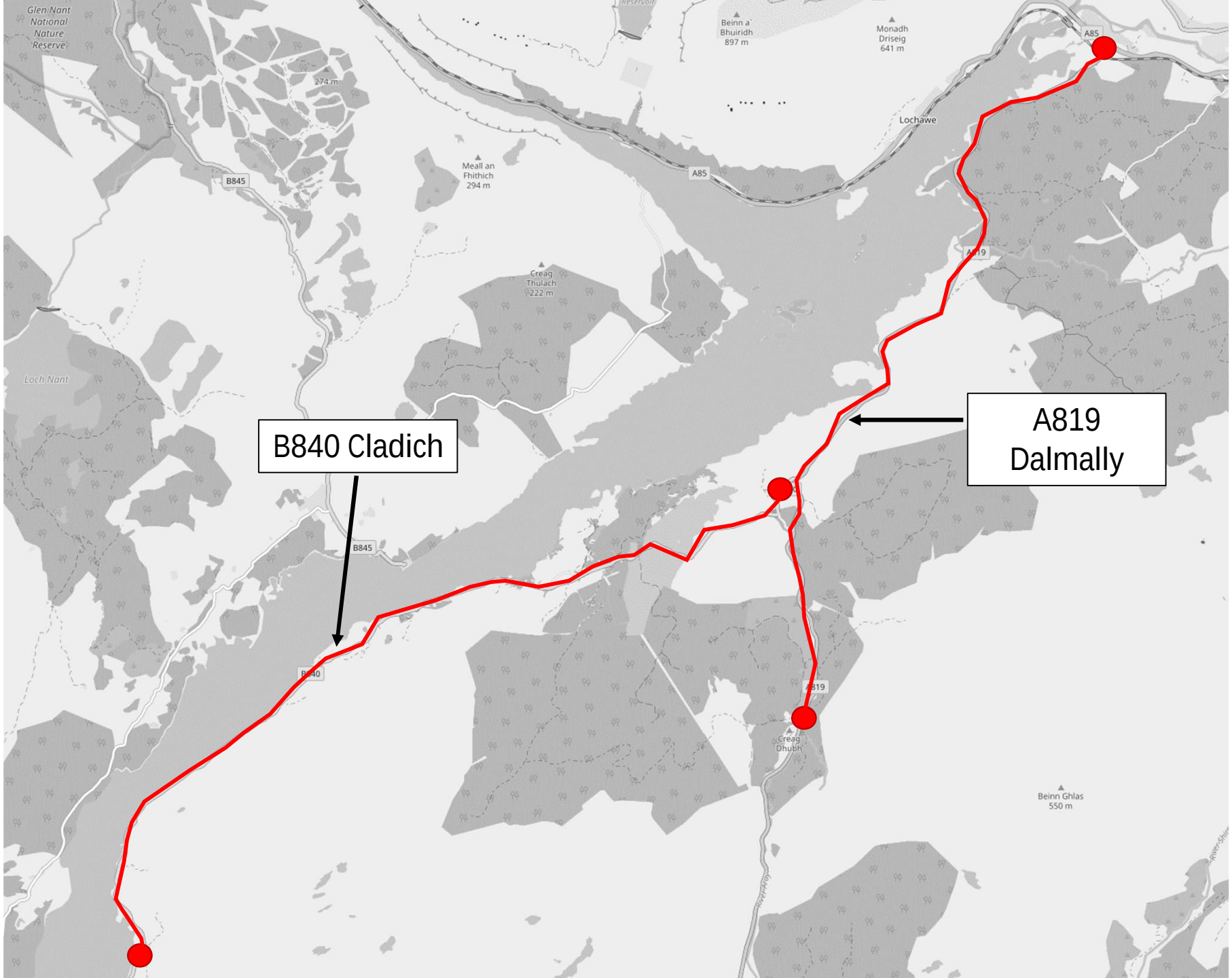
Client:	ILI Ltd	AECOM	Title:	2027 + Cumulative Development							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 13	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024

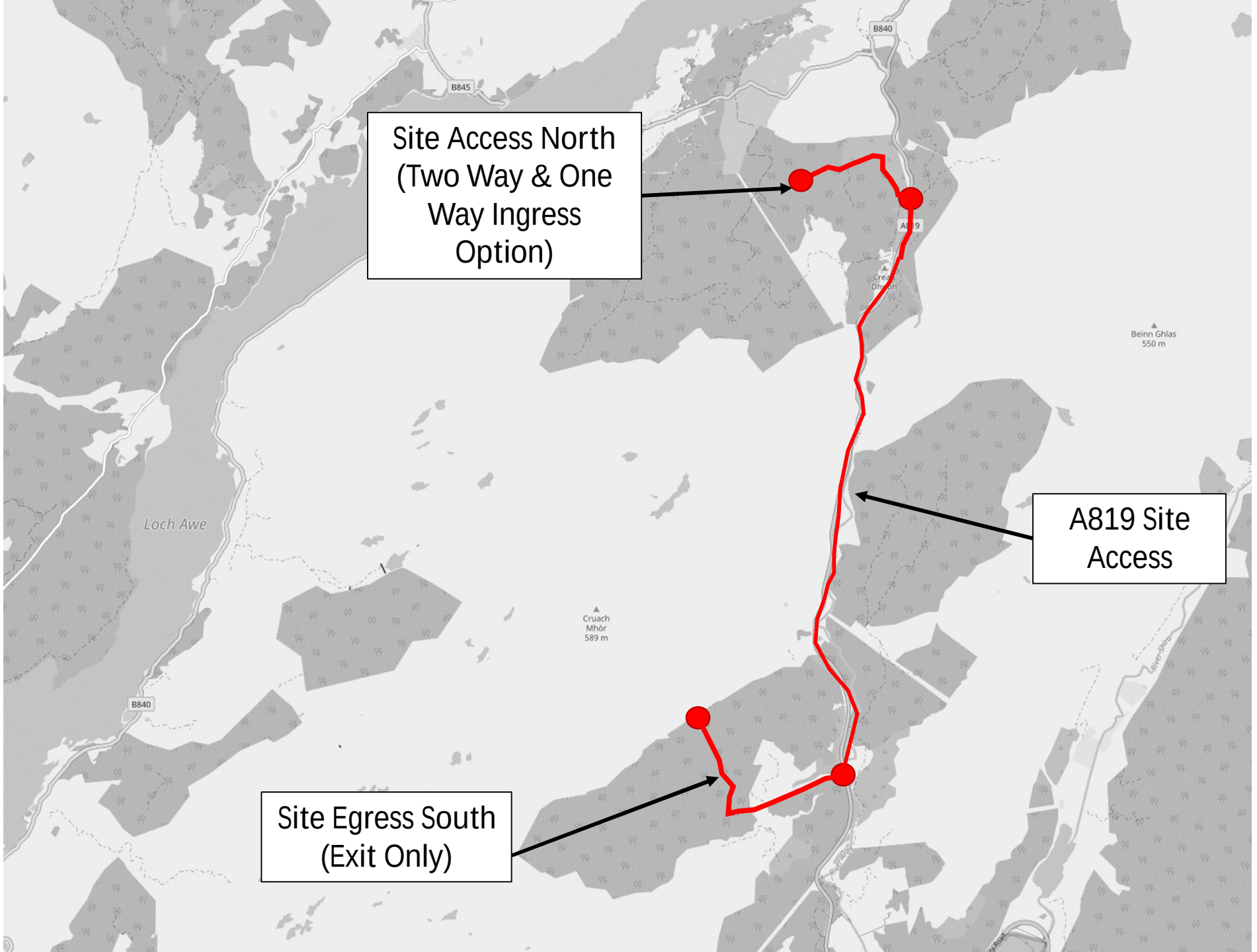


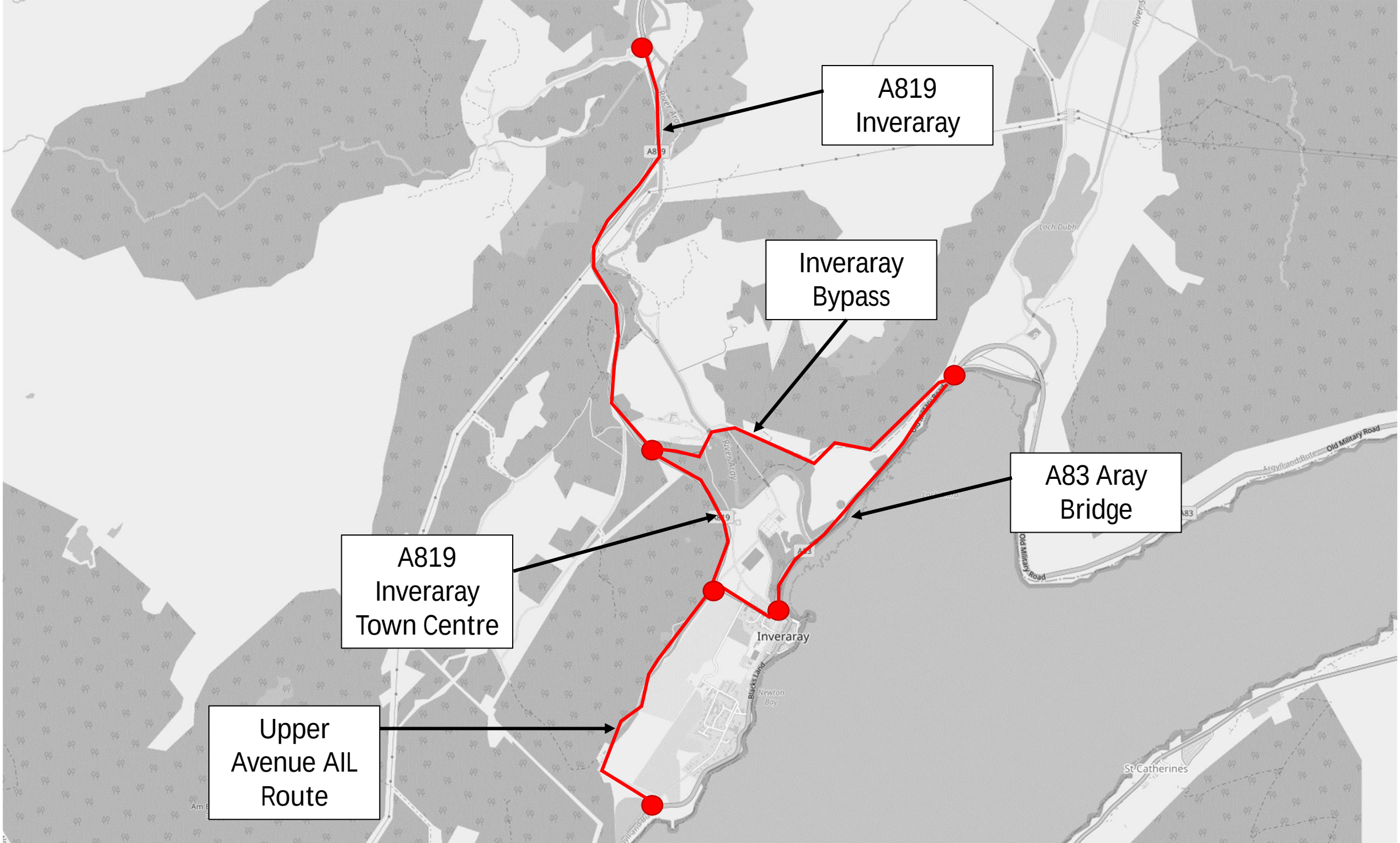
Client:	ILI Ltd	AECOM	Title:	2027 + Cumulative Development % Increase in Total Vehicles							
Project:	Balliemeanoch Pumped Storage Hydro		Figure No:	Appendix C Figure 14	Project No:	60570241	Produced:	JG	Checked:	DD	Date: 15/03/2024

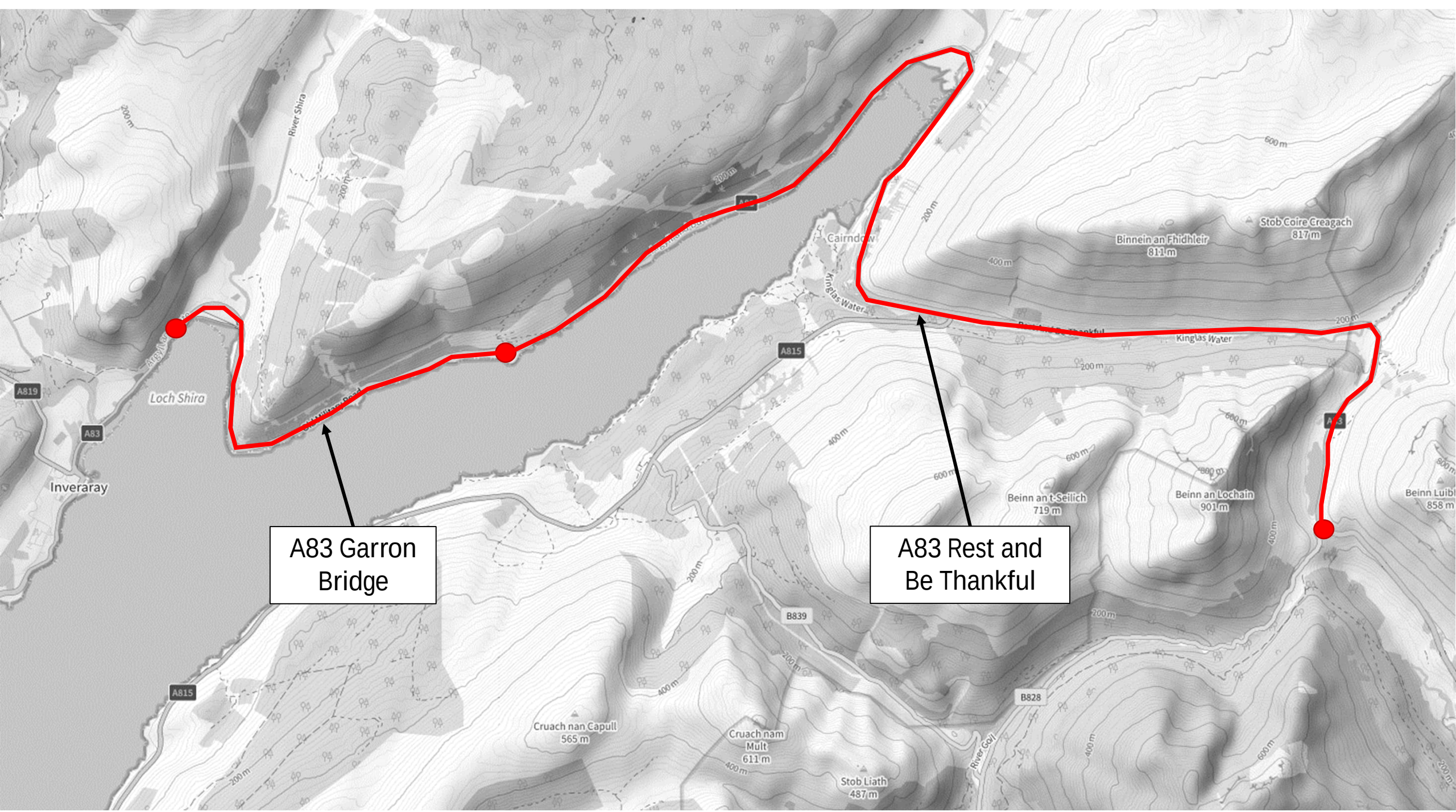
Annex D - Road Links

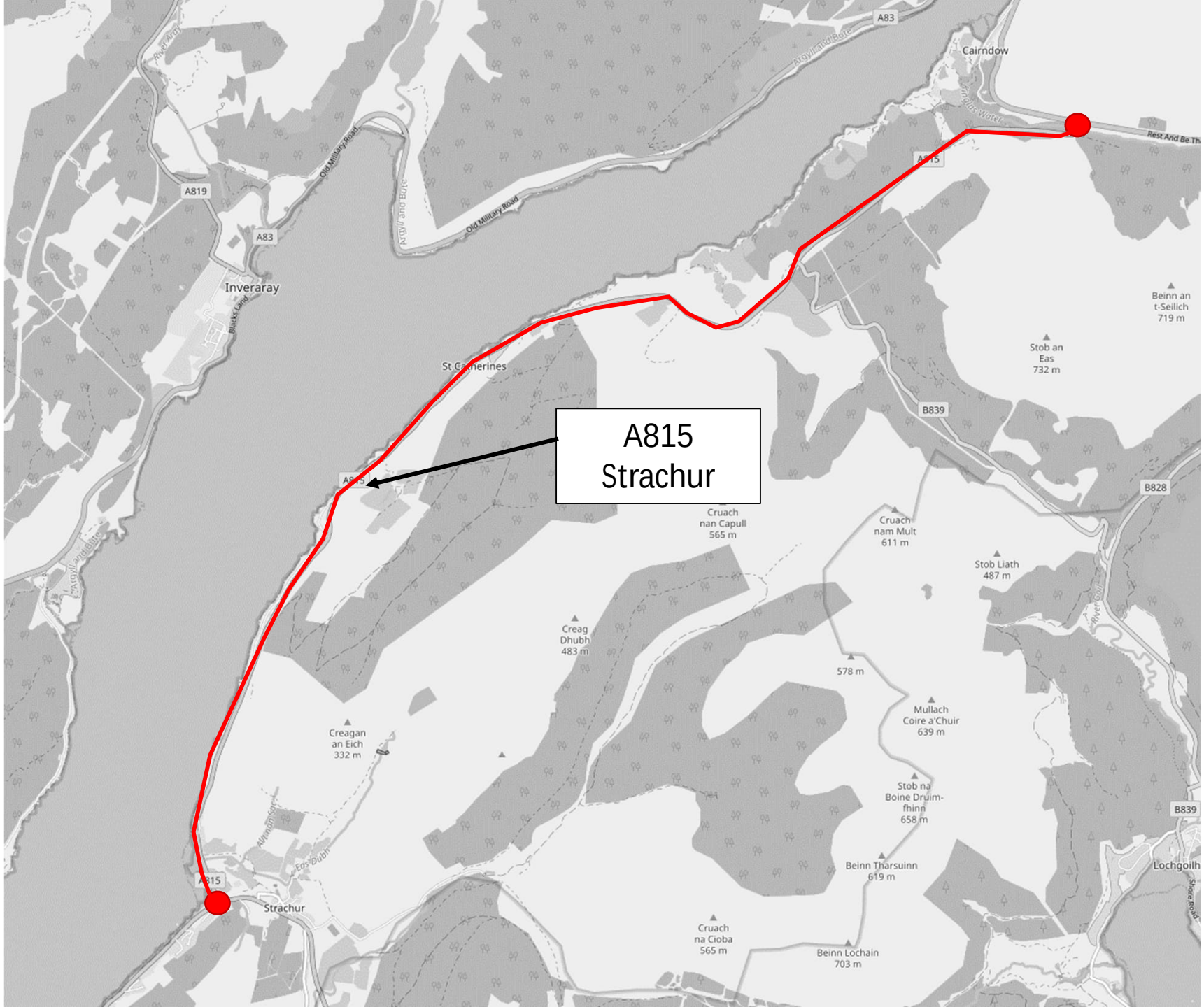

A85 Taynuilt
A85 West
A85 East
B845
A85
B8077
A819
Meall nan Each 906 m
Stob Dearg 1104 m
Cruachan 126 m
Drochard Ghlas 1009 m
Stob Diamh 998 m
947 m
Meall Cuanail 918 m
Cruachan Reservoir
Beinn a` Bhuiridh 897 m
Monadh Driseig 641 m
Glen Nant National Nature Reserve
River Awe
River Nant
Allt Mhoille
River Orchy
Loch Awe
Meall an Fhithich 294 m
Creag Thulach 222 m
Loch Nant
118 m
274 m

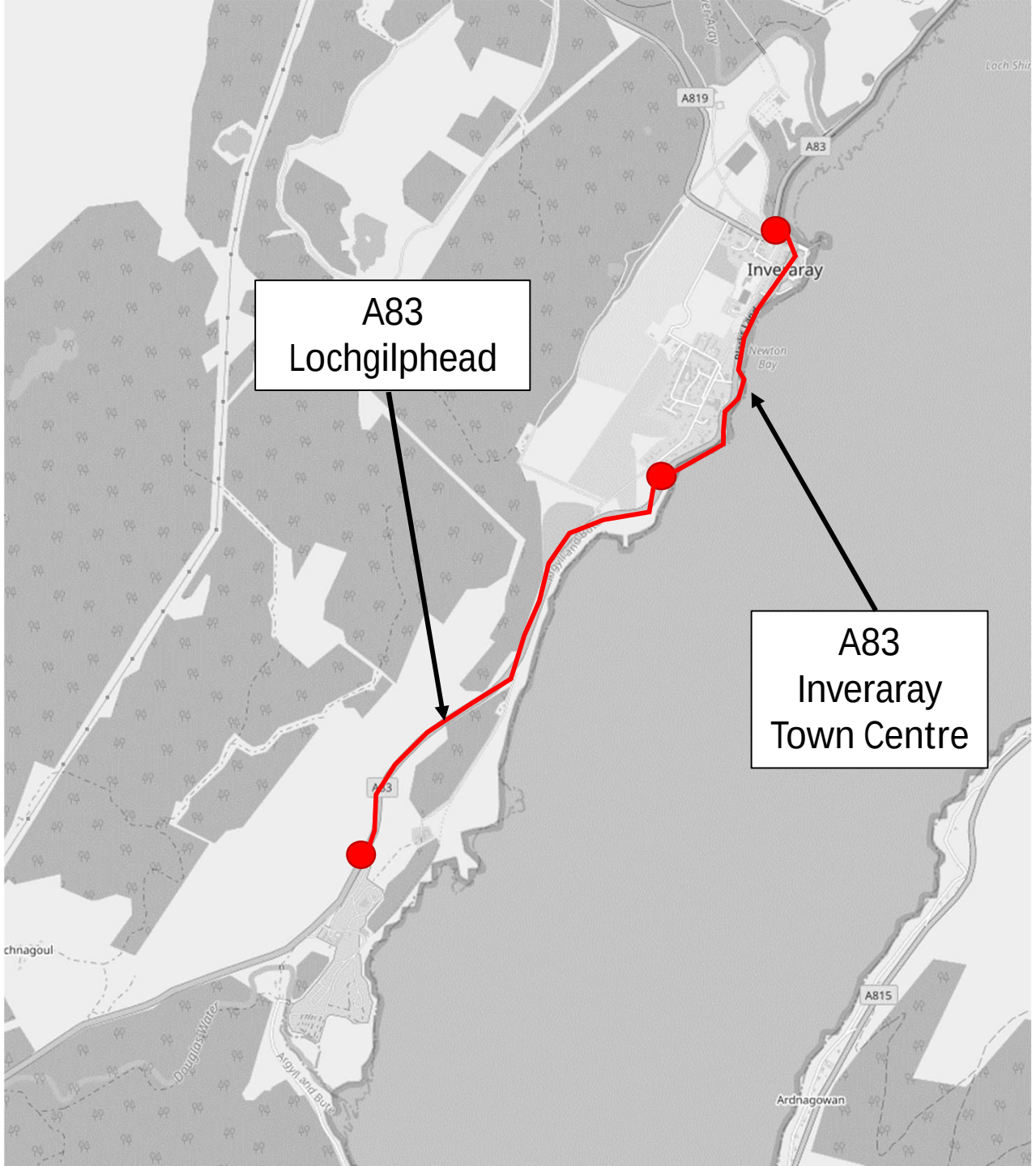

B840 Cladich
A819
Dalmally
A85
B845
Lochawe
Loch Nant
Glen Nant
National
Nature
Reserve
Beinn a'
Bhuiridh
897 m
Monadh
Driseig
641 m
Meall an
Fhithich
294 m
Creag
Thulach
222 m
Creag
Dhubh
Beinn Ghlas
550 m

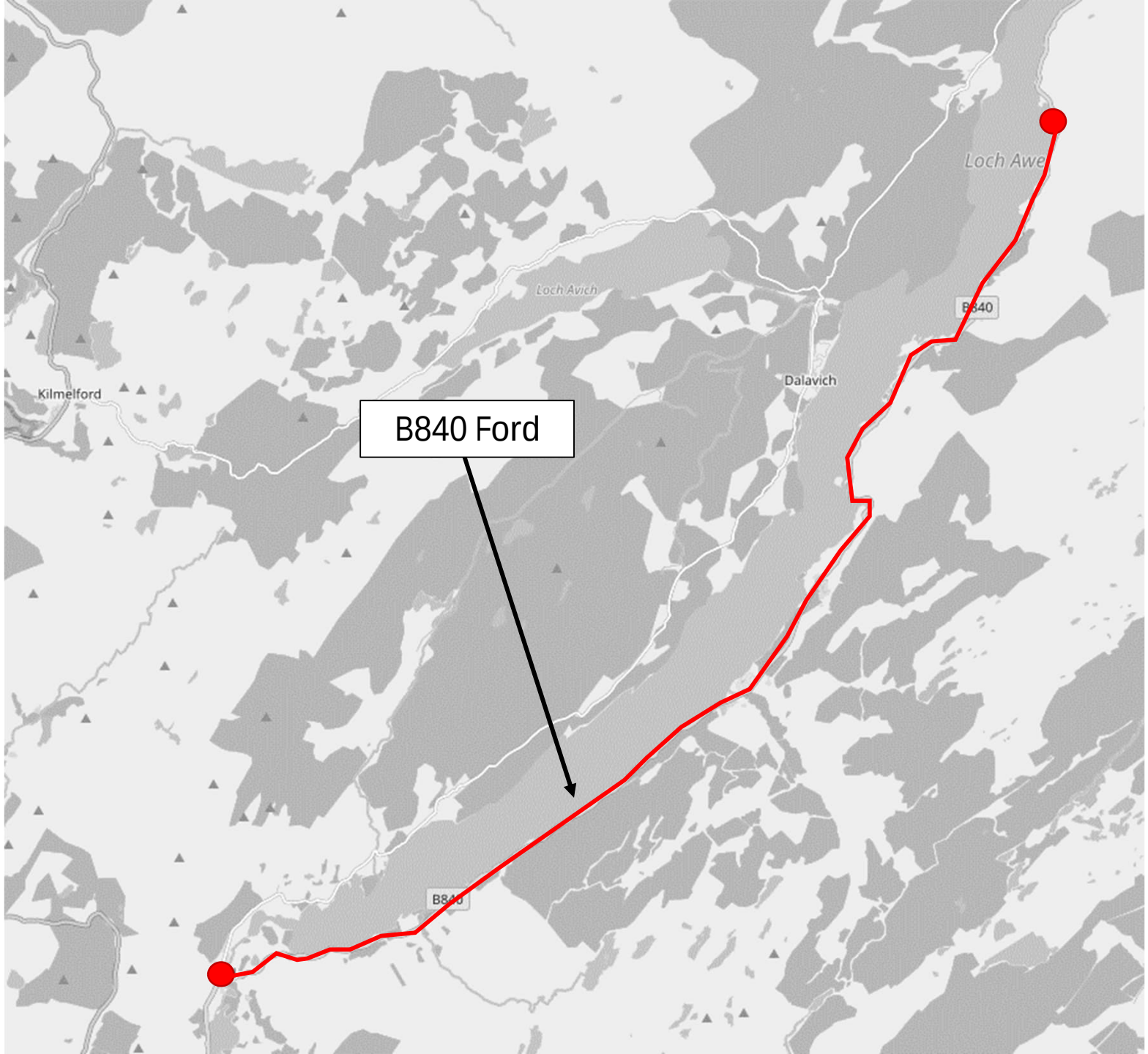

Site Access North (Two Way & One Way Ingress Option)
A819 Site Access
Site Egress South (Exit Only)
B840
B845
Loch Awe
Cruach Mhòr 589 m
Beinn Ghlas 550 m


A819
Inveraray
Inveraray
Bypass
A83 Aray
Bridge
A819
Inveraray
Town Centre
Upper
Avenue AIL
Route
Inveraray
A819
A83
Old Military Road
River Aray
Loch Dubh
Blacks Land
Newton
Bay
St Catherines

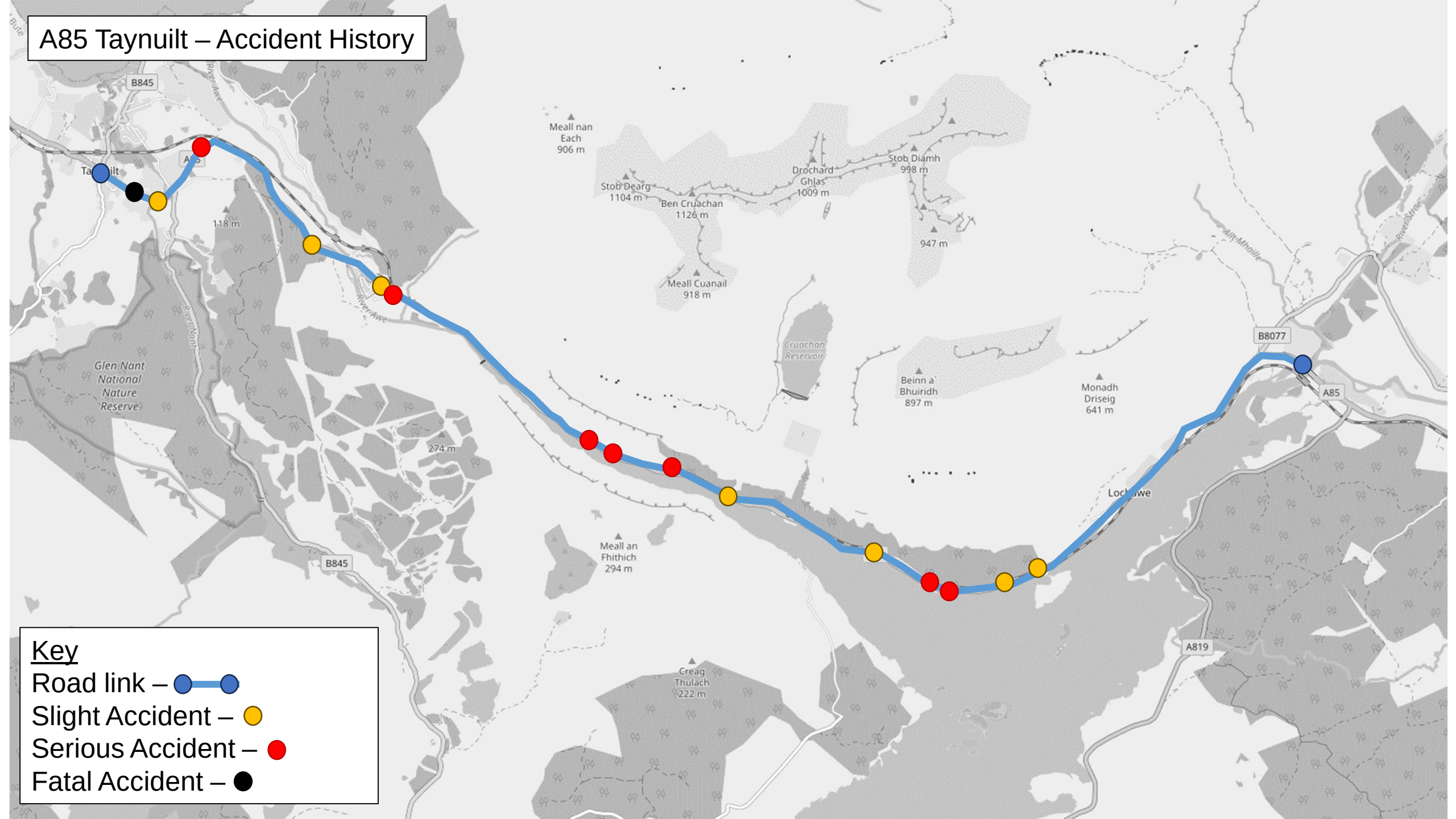

A83 Garron Bridge
A83 Rest and Be Thankful
Loch Shira
River Shira
Inveraray
Cairndow
Kinglas Water
Binnein an Fhidhleir
811 m
Stob Coire Creagach
817 m
Beinn an t-Seilich
719 m
Beinn an Lochain
901 m
Cruach nan Capull
565 m
Cruach nam Mult
611 m
Stob Liath
487 m
A815
A819
A83
B839
B828


A815
Strachur
A83
Cairndow
A819
Inveraray
Old Military Road
Argyll and Bute
St Catherines
B839
B828
Beinn an t-Seilich 719 m
Stob an Eas 732 m
Cruach nan Capull 565 m
Cruach nam Mult 611 m
Stob Liath 487 m
Creag Dhubh 483 m
578 m
Mullach Coire a'Chuir 639 m
Creagan an Eich 332 m
Stob na Boine Druim-fhinn 658 m
Beinn Tharsuinn 619 m
Lochgoilh
Cruach na Cioba 565 m
Beinn Lochain 703 m
Strachur


A83
Lochgilphead
A83
Inveraray
Town Centre
A819
A83
A815
Ardnagowan
Newton
Bay


Loch Awe
Loch Avich
B840
Dalavich
Kilmelford
B840 Ford
B840

Annex E - Road Accident History


A85 Taynuilt – Accident History
B845
Meall nan Each 906 m
Stob Dearg 1104 m
Ben Cruachan 1126 m
Drochard Ghlas 1009 m
Stob Diamh 998 m
947 m
Meall Cuanail 918 m
118 m
Glen Nant National Nature Reserve
River Awe
River Nant
Cruachan Reservoir
Beinn a' Bhuiridh 897 m
Monadh Driseig 641 m
B8077
A85
274 m
Meall an Fhithich 294 m
Loch Awe
A819
Creag Thulach 222 m
Key
Road link –
Slight Accident –
Serious Accident –
Fatal Accident –

A85 West – Accident History

Key

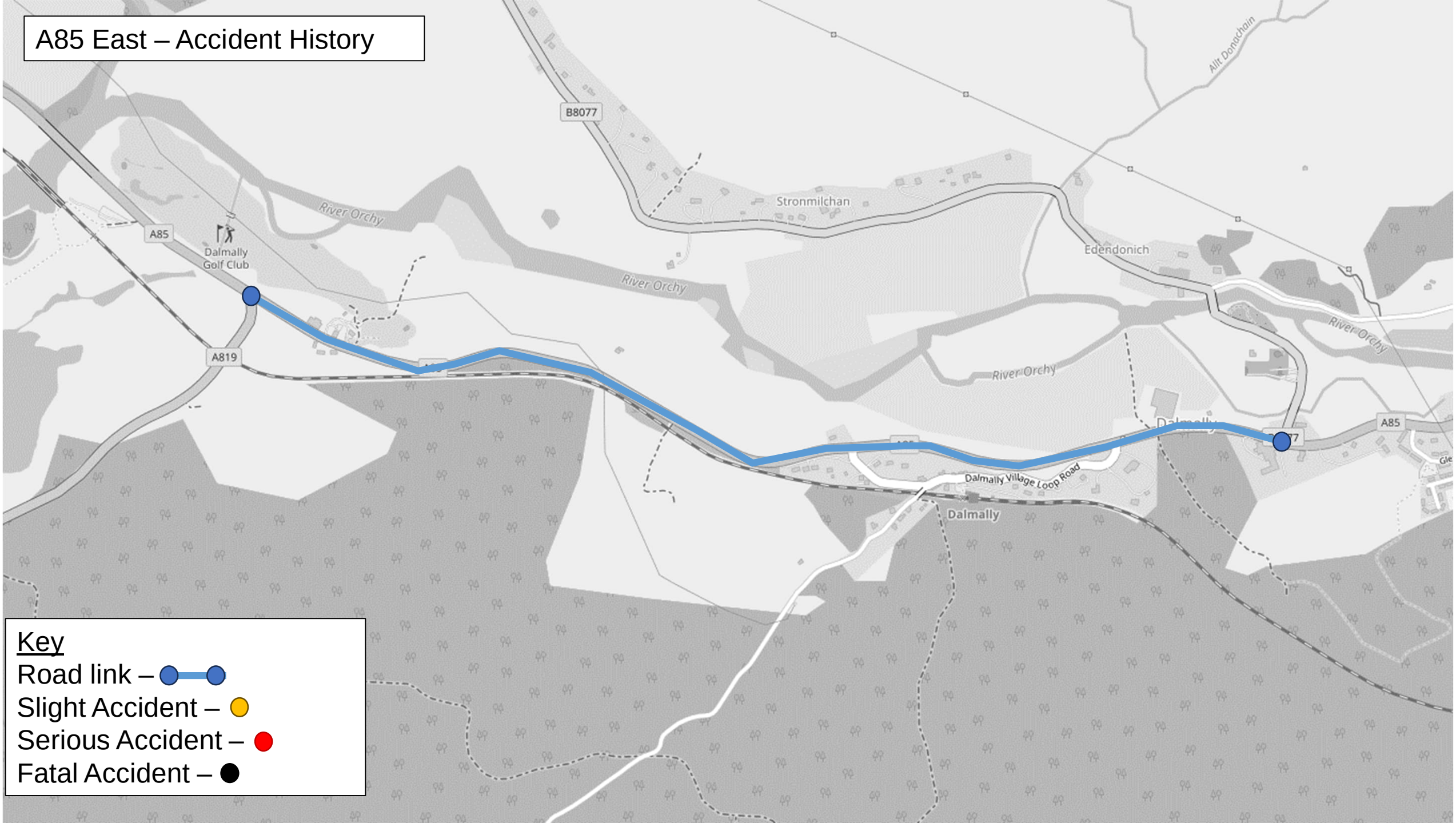
Road link –

Slight Accident –

Serious Accident –

Fatal Accident –

A85 East – Accident History



Key

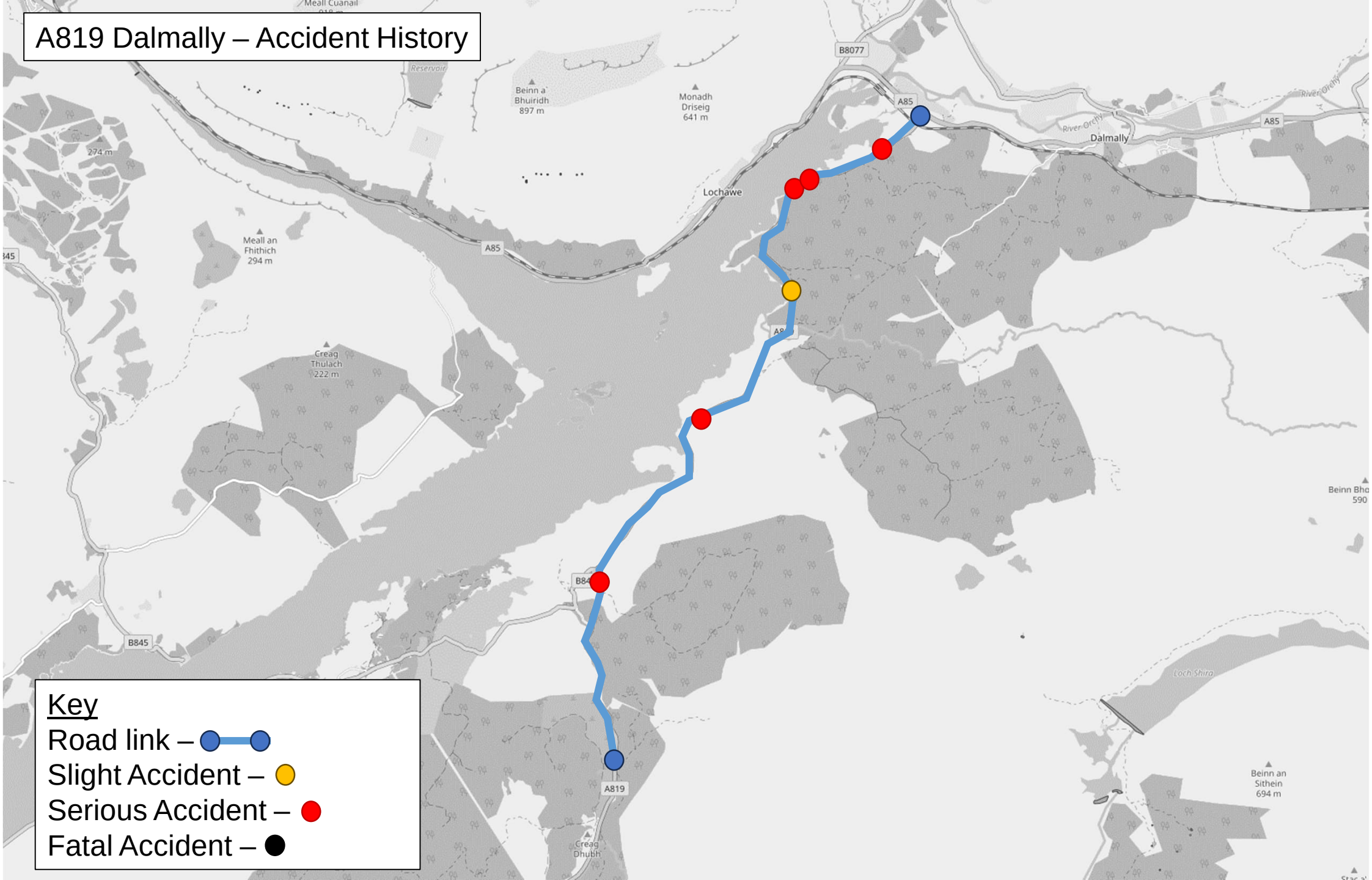
Road link –

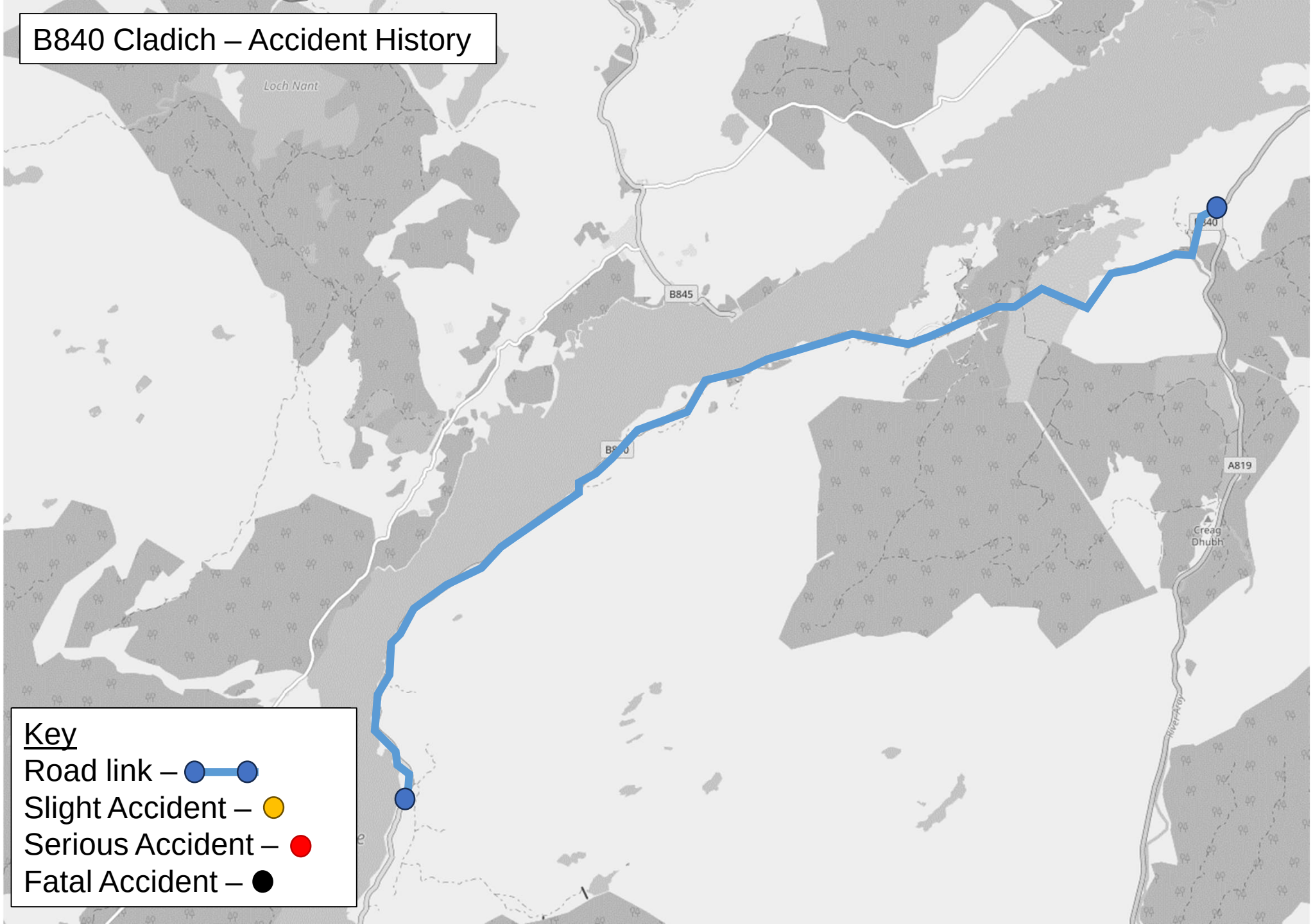
Slight Accident –

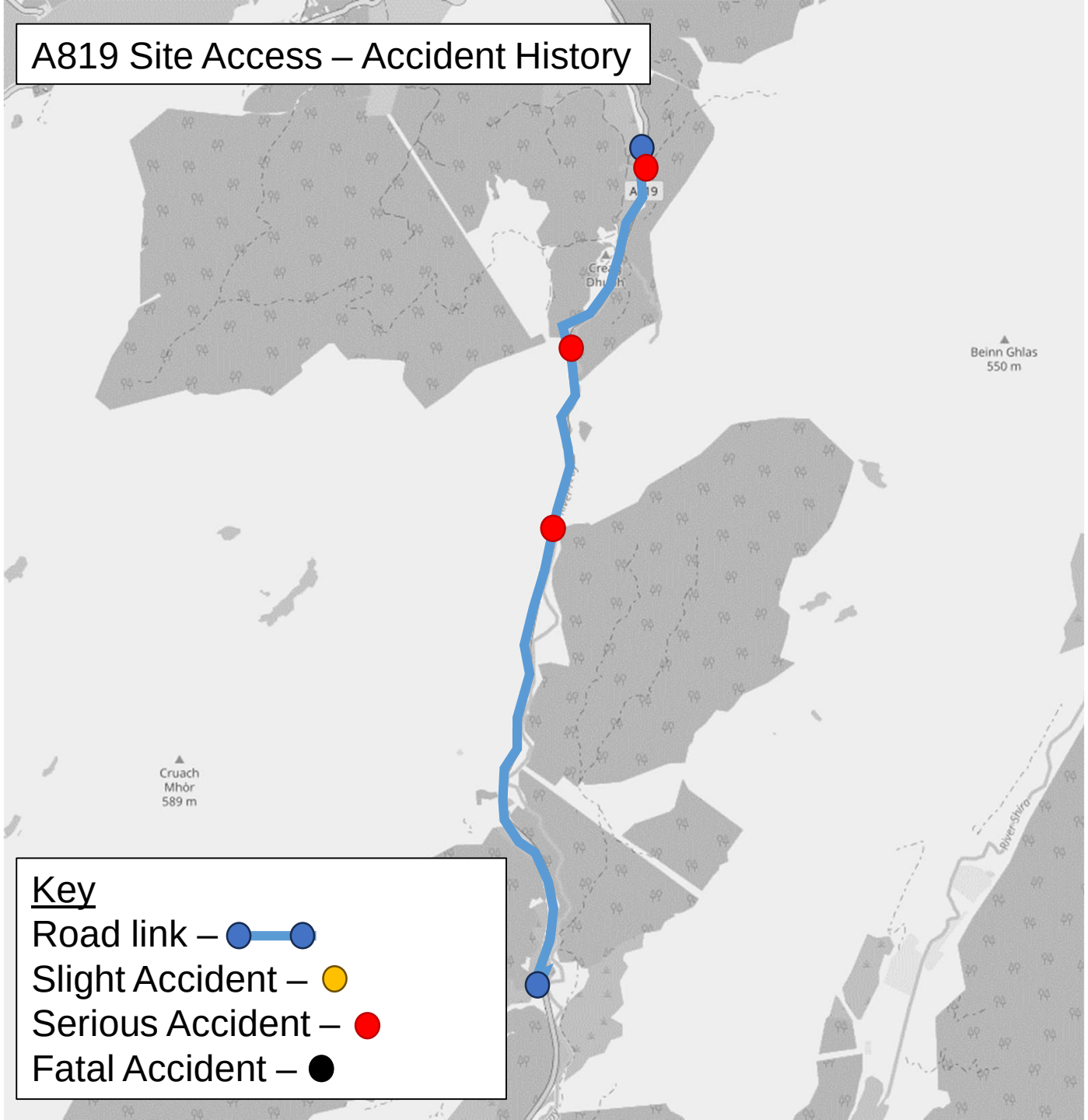
Serious Accident –

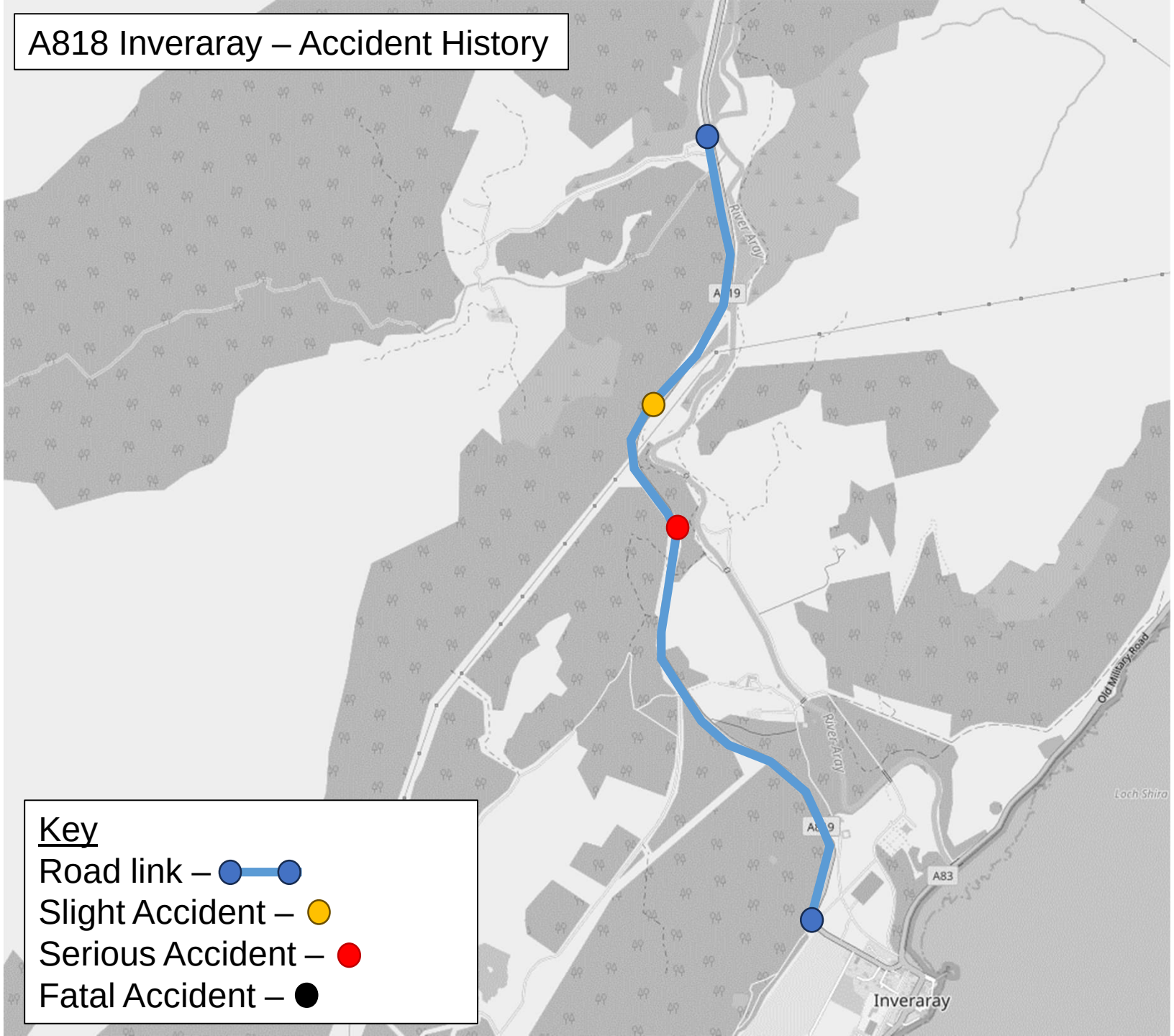
Fatal Accident –

A819 Dalmally – Accident History

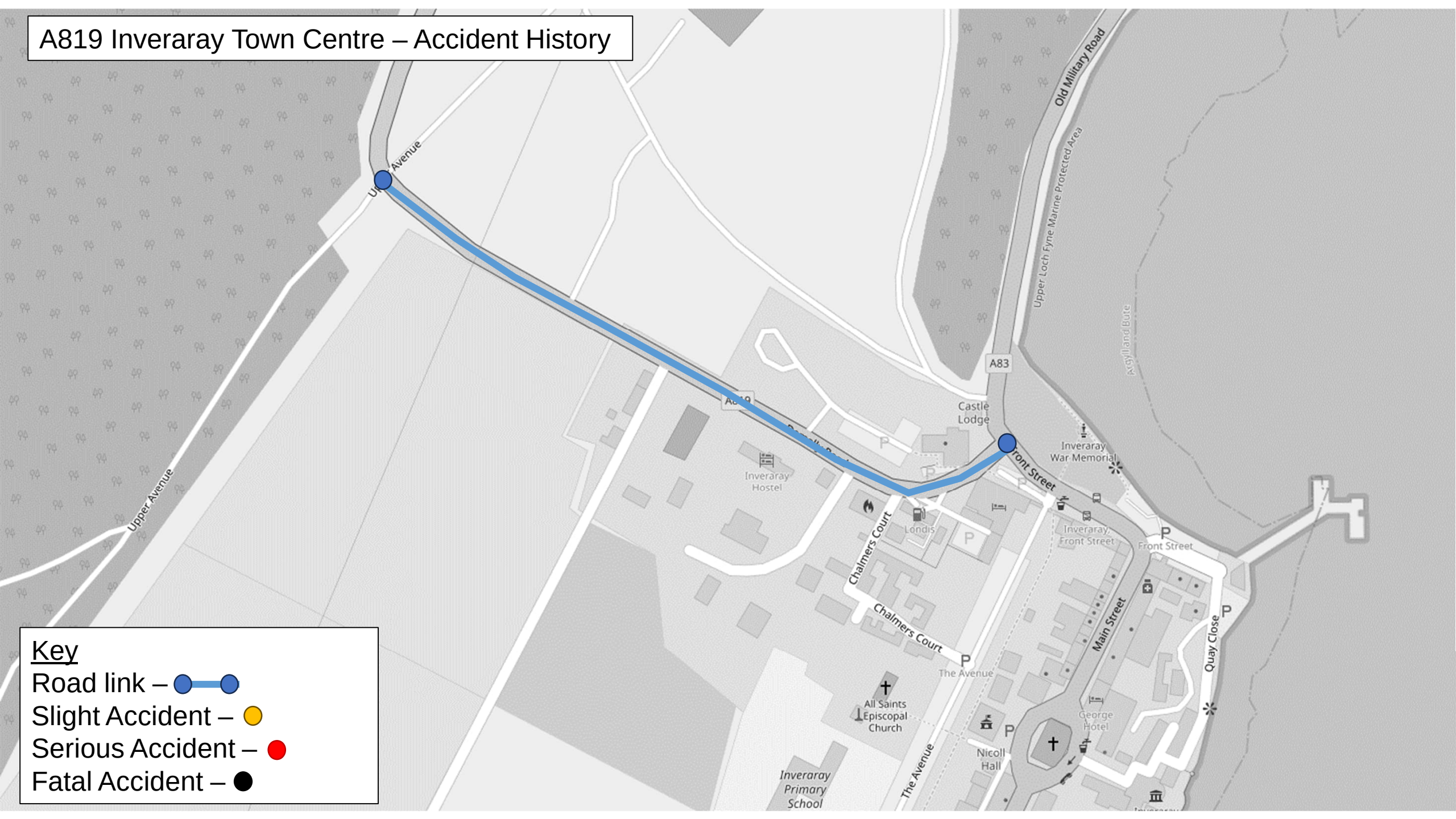



B840 Cladich – Accident History
Loch Nant
B845
A819
Creag Dhubh
Key
Road link –
Slight Accident –
Serious Accident –
Fatal Accident –


A819 Site Access – Accident History
Beinn Ghlas
550 m
Cruach
Mhòr
589 m
River Shira
Key
Road link –
Slight Accident –
Serious Accident –
Fatal Accident –


A818 Inveraray – Accident History
River Aray
A819
A83
Old Military Road
Loch Shira
Inveraray
Key
Road link –
Slight Accident –
Serious Accident –
Fatal Accident –

A819 Inveraray Town Centre – Accident History



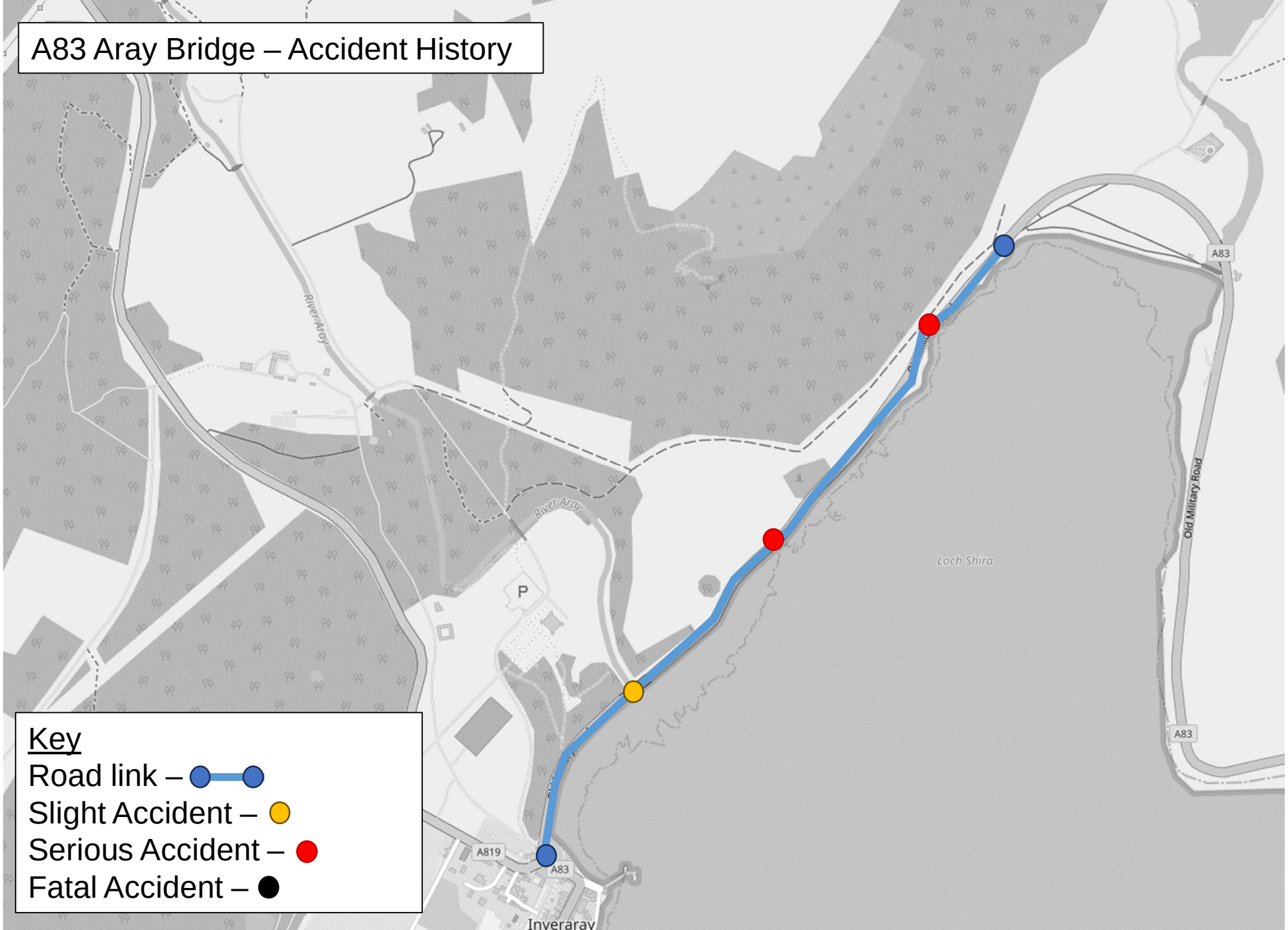
Key

Road link –

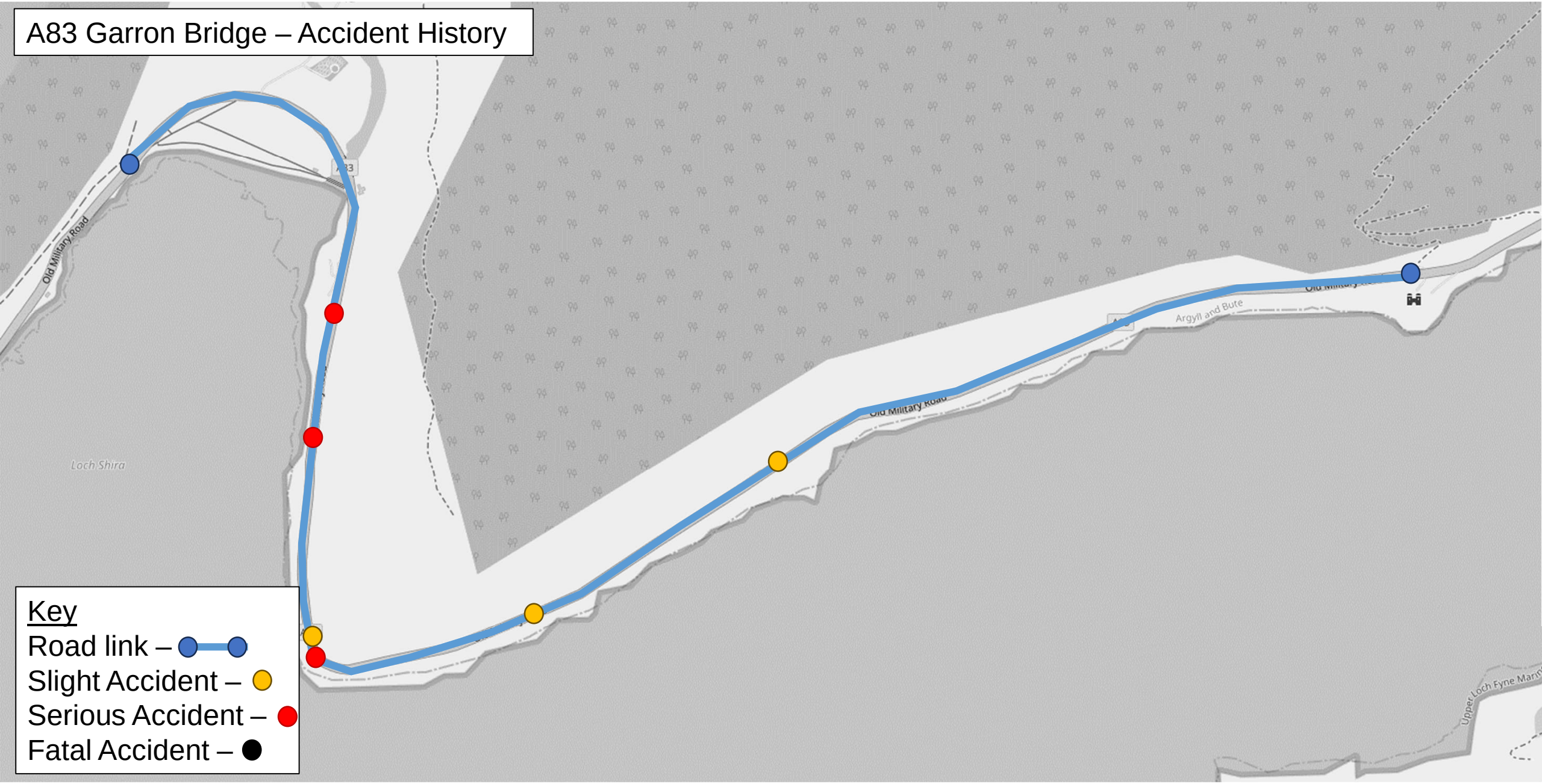
Slight Accident –

Serious Accident –

Fatal Accident –


A83 Aray Bridge – Accident History
Key
Road link –
Slight Accident –
Serious Accident –
Fatal Accident –
River Aray
River Aray
Loch Shira
Old Military Road
A83
A83
A83
A819
P
Inveraray

A83 Garron Bridge – Accident History



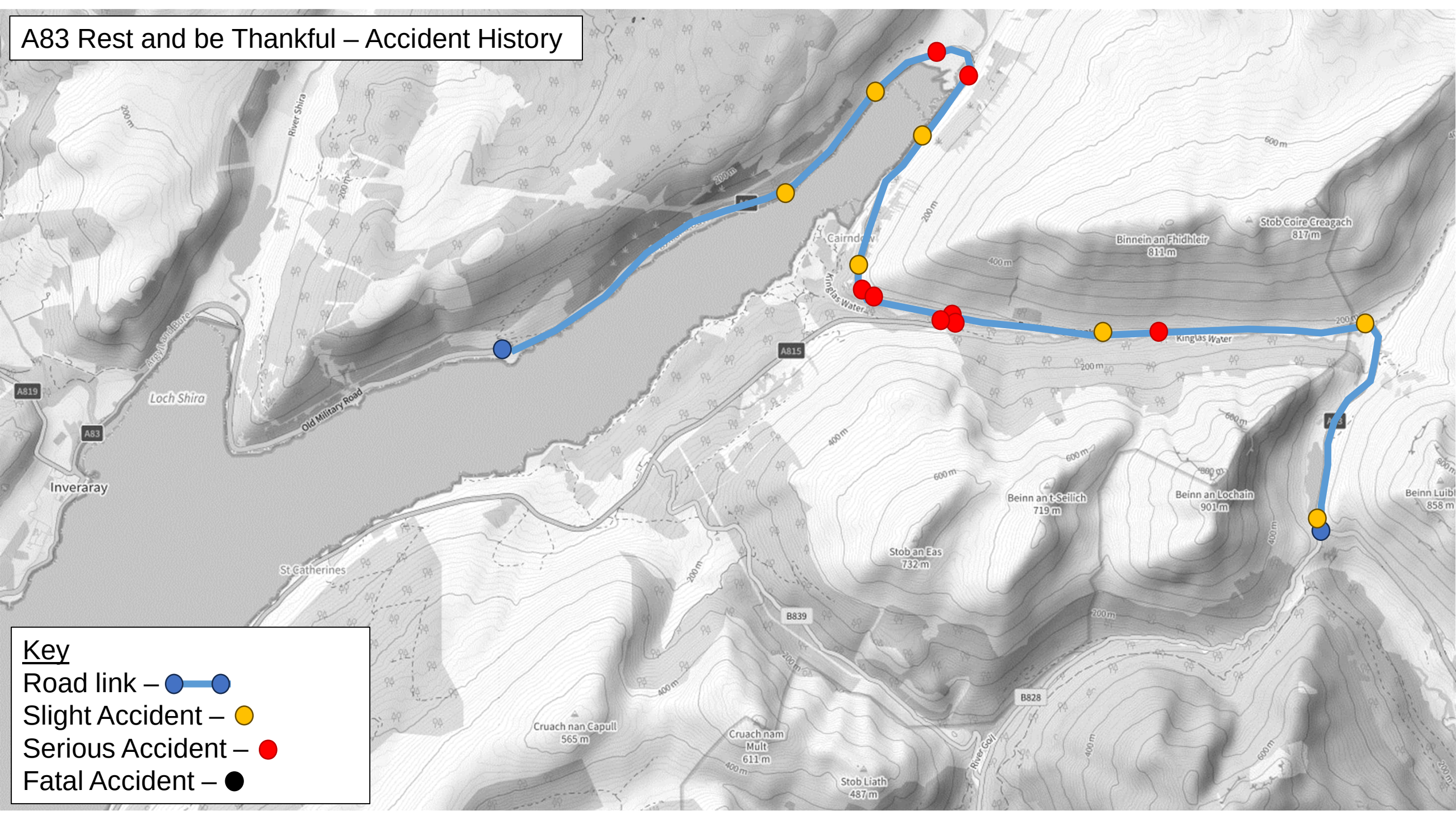
Key

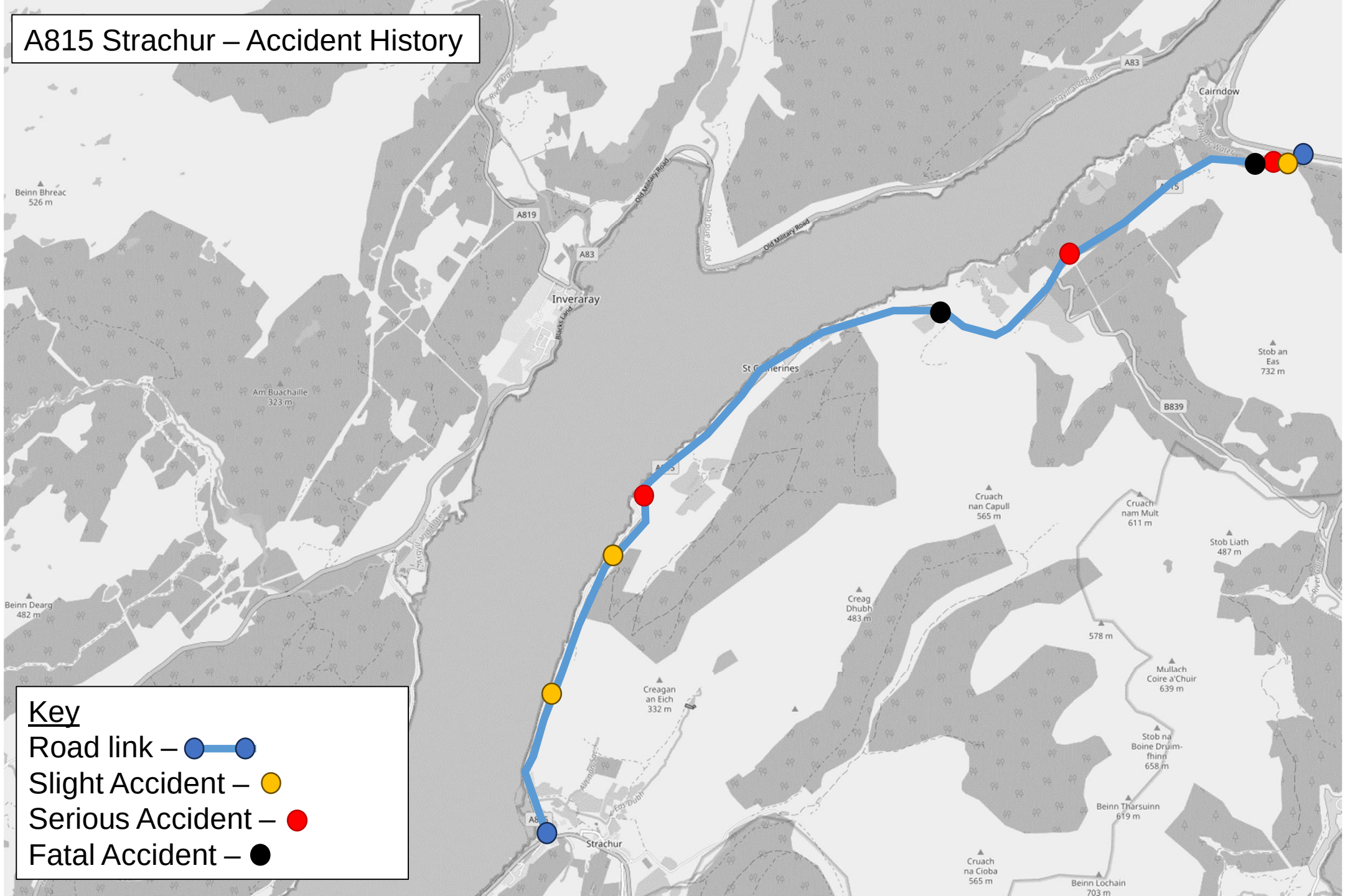
Road link –

Slight Accident –

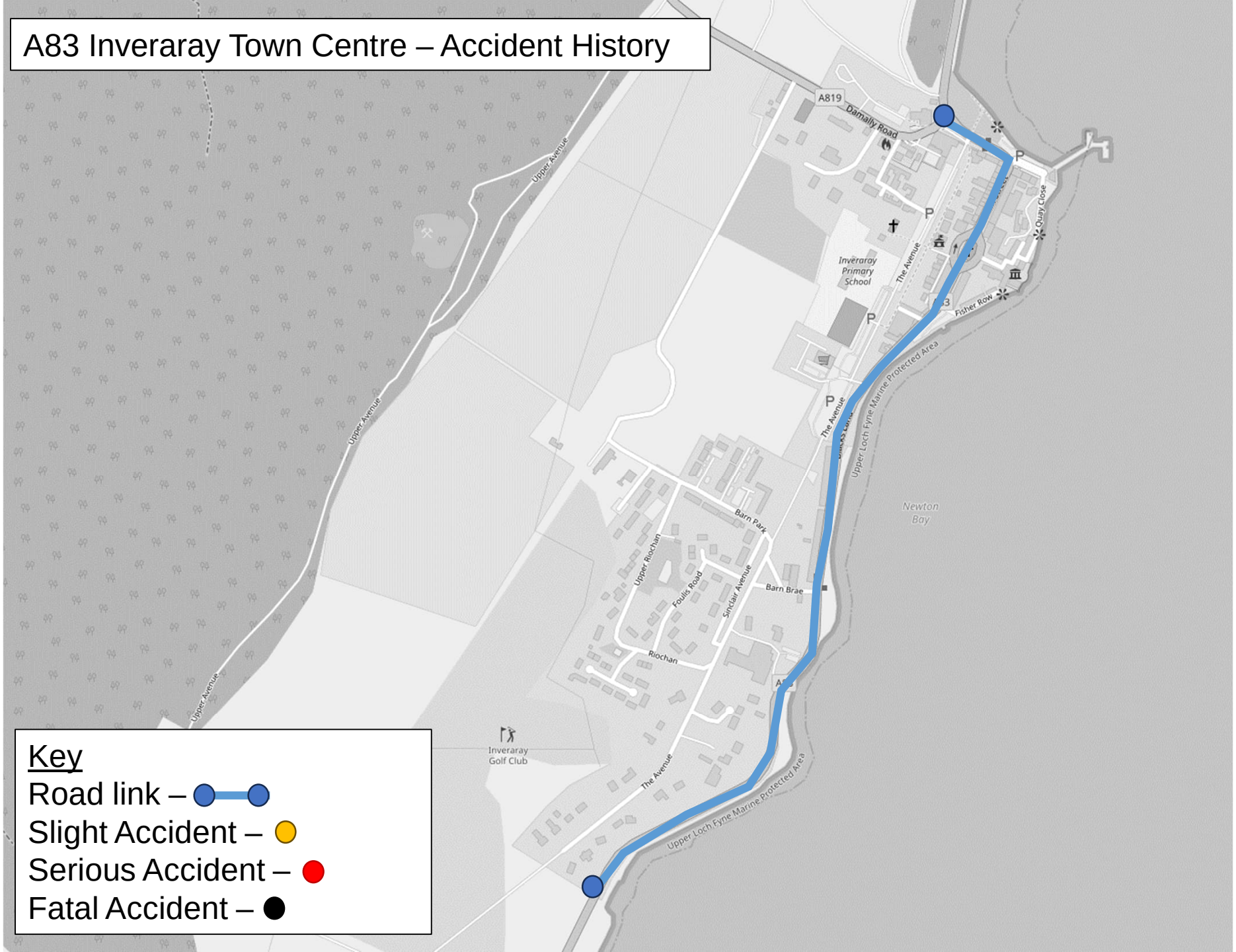
Serious Accident –

Fatal Accident –


A83 Rest and be Thankful – Accident History
Key
Road link –
Slight Accident –
Serious Accident –
Fatal Accident –
A815
A819
A83
B839
B828
Loch Shira
River Shira
Old Military Road
Inveraray
St Catherines
Kinglas Water
Cairndow
Binnein an Fhidhleir
811 m
Stob Coire Creagach
817 m
Beinn an t-Seilich
719 m
Beinn an Lochain
901 m
Stob an Eas
732 m
Cruach nan Capull
565 m
Cruach nam Mult
611 m
Stob Liath
487 m
River Goyl


A815 Strachur – Accident History
Key
Road link –
Slight Accident –
Serious Accident –
Fatal Accident –
Cairndow
Inveraray
Strachur
A819
A83
B839
Old Military Road
Beinn Bhreac
526 m
Am Buachaille
323 m
Beinn Dearg
482 m
Cruach
nan Capull
565 m
Creag
Dhubh
483 m
Creagan
an Eich
332 m
Cruach
nam Mult
611 m
Stob Liath
487 m
Stob an
Eas
732 m
578 m
Mullach
Coire a'Chuir
639 m
Stob na
Boine Druim-
fhinn
658 m
Beinn Tharsuinn
619 m
Cruach
na Cioba
565 m
Beinn Lochain
703 m

A83 Inveraray Town Centre – Accident History



Key

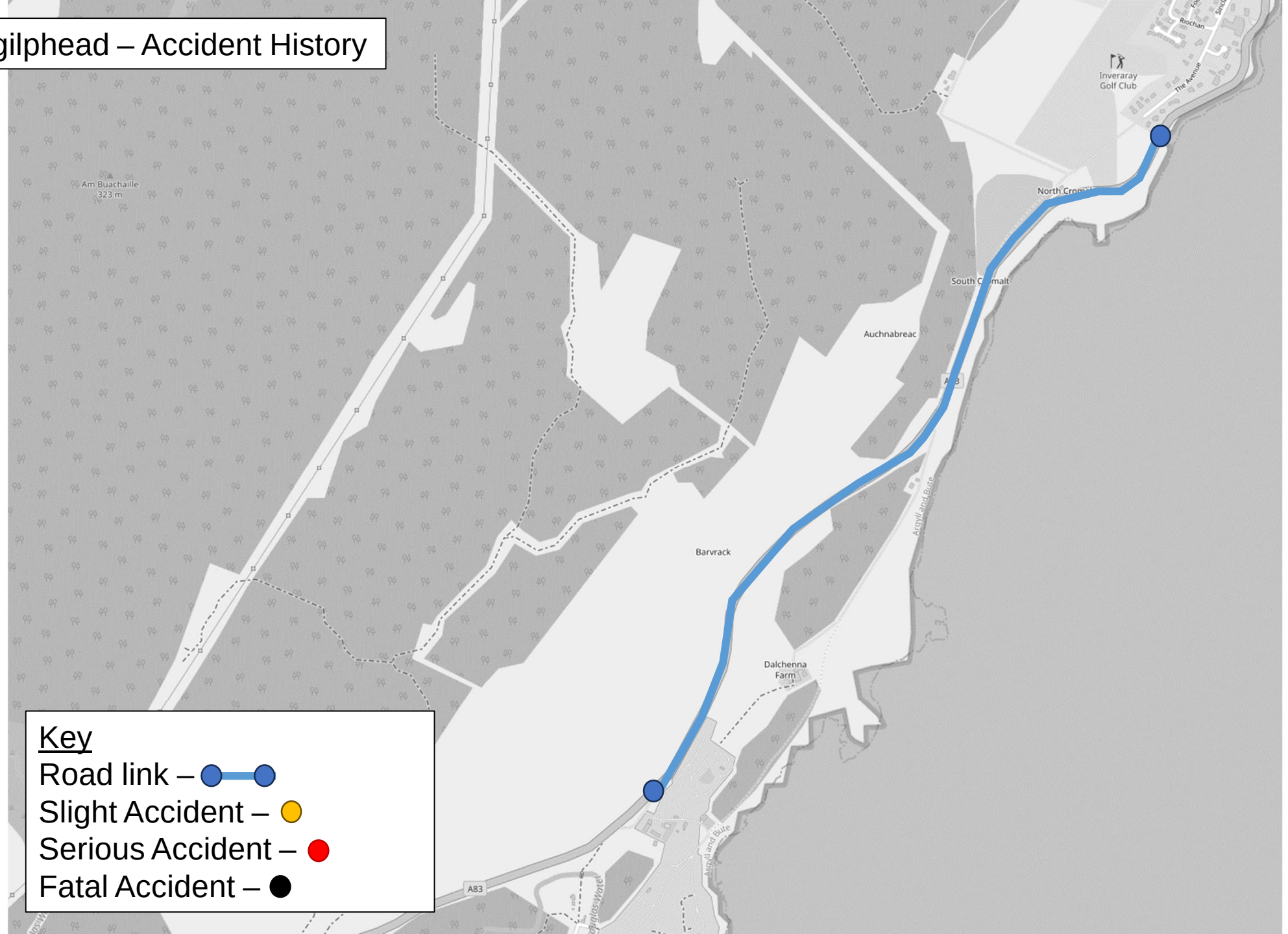
Road link –

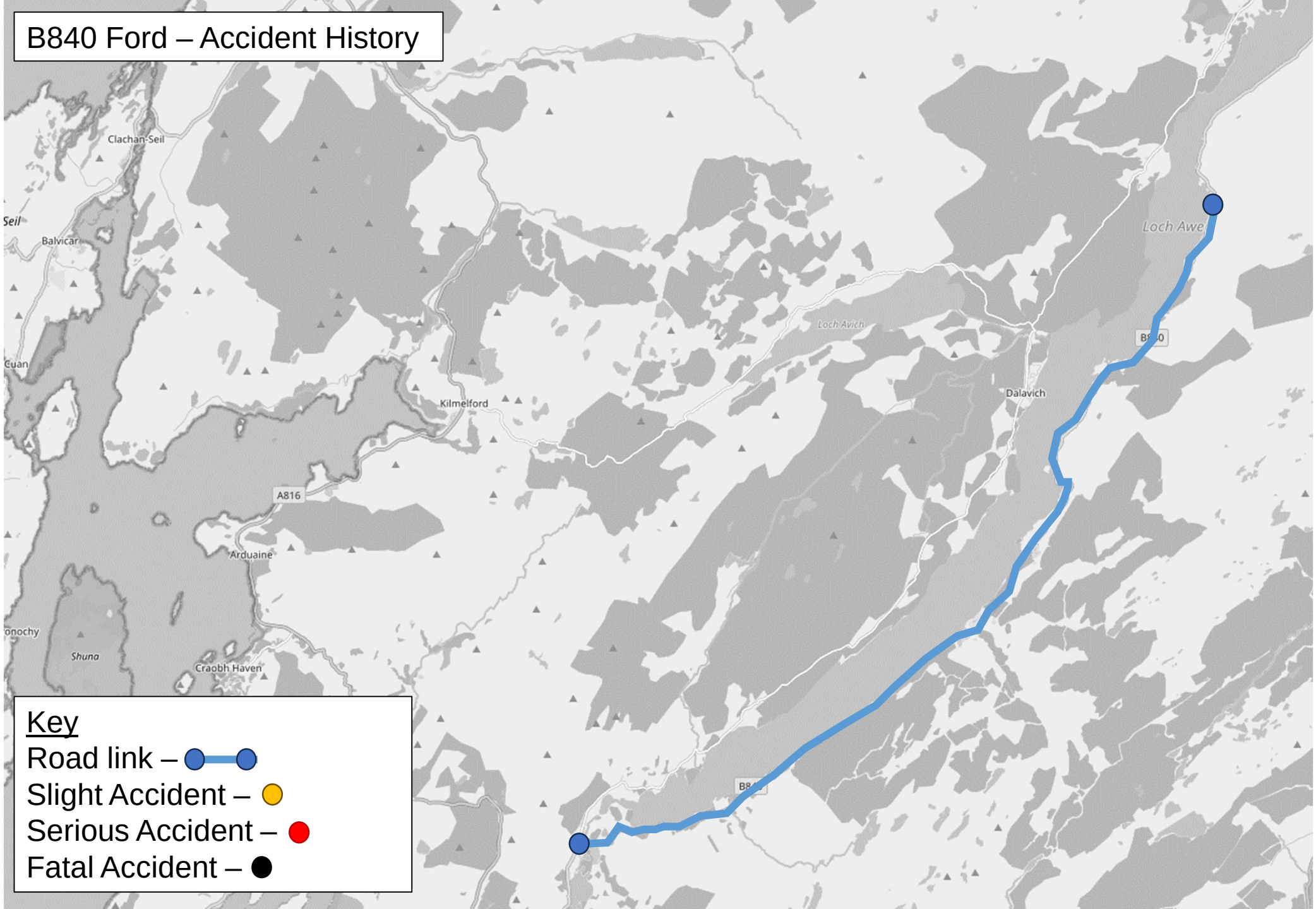
Slight Accident –

Serious Accident –

Fatal Accident –

A83 Lochgilphead – Accident History




B840 Ford – Accident History
Clachan-Seil
Balvicar
Kilmelford
A816
Arduaine
Craobh Haven
Shuna
Loch Avich
Loch Awe
Dalavich
Key
Road link –
Slight Accident –
Serious Accident –
Fatal Accident –

Annex F - Construction Traffic Programme

Project Name	Project Number	Document No.
Balliemeanoch PSH	60710998	

Created By:	Checked By:	Approved by:
AC	TP	DL

Key
Estimations TBC
Transport to make estimation
For Carbon Assessment Only

Construction Area	Components	Material	Length (m)	Width (m) / Height (m)	Quantity / Area (m²)	Volume (m³)	Density (kg/m³)	Tonnage (T)	Vehicle Trips	Comments	
Access (New)	Geotextiles (Floating Access)	Geotextile	4,995.00	10	49,950.00	4,995.00	970	4,845.15	485	100mm thich geotextiles (grids and textiles)	TR1
Access (New)	Stone for Access Track	Aggregate	4,995.00	10	49,950.00	29,970.00	2650	79,420.50	7,942	600mm depth	TR1
Access (Construction / Temp)	Stone for Access Track	Aggregate	4,142.42	5.00	20,712.08	10,356.04	2650	27,443.50	2,744	500mm depth	TR2
Access (Upgraded)	Stone for Access Track	Aggregate	12,301.91	10.00	123,019.08	61,509.54	2650	163,000.28	16,300	500mm depth. 4,995m of stone from V5 added to this row.	TR3
Access (New)	Stone for Access Track	Aggregate	11,394.06	10.00	113,940.56	56,970.28	2650	150,971.24	15,097	500mm depth	TR4
Access (Water crossings)	Concrete	Concrete	180	4	720	360.00	2400	864.00	95	Estimated - 6 nos. of watercourses	TR5
Access (Water crossings)	Rebar (Reinforcement)	Rebar				5.40	7850	42.39	4	Estimated- 1.5% of concrete voulme	TR6
Compounds (Permanent)	Concrete	Concrete	-	-	1,058.00	529.00	2400	1,269.60	139	0.5m foundation Gate House x 3, Spillway House	TR7
Compounds (Permanent)	Rebar (Reinforcement)	Rebar	-	-		5.29	7850	41.53	4	Concrete:Rebar Ratio: 1%	TR8
Compounds (Permanent)	Fencing - Mesh	Galvanised Steel (Mesh)	1,746.00	-	140.00	-	-	15.40	2	25m x 1.2m Mesh 110 kg per Roll 2 Rolls per 25m Section	TR9
Compounds (Permanent)	Fencing - Posts	Steel	1,746.00	3	582.00	1.00	7750	7.75	1	Pole every 3m 50mm D x 3m (H)	TR10
Compounds (Permanent)	M&E Plant and Equipment (Gate Shaft Lifting Equipment)	Various	-	-	-	-	-	-	16	30t 25m length Gantry Crane Stoplogs x2	TR11
Compounds (Permanent)	Machinery	Plant	-	-	-	-	-	-	12	Gate shaft lifting equipment x2 Stop logs x 2 Control systems	TR12
Compounds (Permanent)	Stone for Hardstanding	Aggregate	-	-	22,246.83	7,786.39	2650	20,633.93	2,063	350mm depth	TR13
Compounds (Permanent)	Safety grate for Surge shaft openings	Steel	15.00	15.00	1.00	11.25	7750	87.19	9	50mm deep grate 1 x Surge Shaft Grate	TR14
Compounds (Permanent)	Safety grate for Ventillation Shaft openings	Steel	10.00	10.00	3.00	15.00	7750	116.25	12	50mm deep grate 3 x Vent Shaft Grate	TR15
Compounds (Temporary)	Fencing - Mesh	Galvanised Steel (Mesh)	8,595.88	-	688.00	-	-	75.68	8	25m x 1.2m Mesh 110 kg per Roll 2 Rolls per 25m Section	TR16
Compounds (Temporary)	Fencing - Posts	Steel	8,595.88	3	2,865.29	1.00	7750	7.75	1	Pole every 3m 50mm D x 3m (H)	TR17
Compounds (Temporary)	Stone for Hardstanding	Aggregate	-	-	454,547.20	159,091.52	2650	421,592.53	42,159	350mm depth	TR18
Headpond Embankments	Concrete for Lining	Concrete	-	-	157,432.62	28,337.87	2400	68,010.89	7,457	180mm Concrete Lining	TR19
Headpond Embankments	Rebar (Reinforcement)	Rebar	-	-		283.38	7850	2,224.52	222	Concrete:Rebar Ratio: 1%	TR20
Headpond Embankments	Machinery		-	-	-	-	-	-	60	10 x Excavators 10 x Graders 10 x Dump Trailers 0 x Loaders 0 x Seeder	TR21
Headpond Embankments	Topsoil for Seeding	Topsoil			235,908.51	23,590.85	1600	37745.36208	3,775	Max. 100mm Topsoil	TR22
Headpond Inlet / Outlet Structure	Concrete	Concrete	-	-	-	7,000.00	2400	16,800.00	1,842	C3D Ouput 625mm Concrete Depth	TR23
Headpond Inlet / Outlet Structure	Rebar (Reinforcement)	Rebar	-	-	-	70.00	7850	549.50	55	Concrete:Rebar Ratio: 1%	TR24
Headpond Inlet / Outlet Structure	Rock Armour	Rock	-	-	-	13,265.60	2800	37,143.68	3,714	C3D Output 1:3 Slope from base of Screen to EG	TR25
Headpond Inlet / Outlet Structure	Formwork / Plant	Plant	varies	25	10768.75	1,292.25	550	710.74	71	C3D Output. 25% FOS	TR26
Headpond Inlet / Outlet Structure	Machinery		-	-	-	-	-	-	16	2 x Excavators 0 x Graders 2x Dump Trailers 2x Mobile Crane 2 x Loaders	TR27
Headpond Inlet / Outlet Structure	Coarse trashrack		30	25	750	67.50	7850	529.88	53	Estimates	TR28
Headpond Inlet / Outlet Structure	Gates		30	5	150	46.88	7850	367.97	37	Estimates	TR29
Marine Facility	Concrete	Concrete	18	10	16.26	162.60	2400	390.24	43	C3D Ouput 450mm Deep	TR30
Marine Facility	Bridge Deck	Steel	5	5	73	1,095.00	7750	8,486.25	849	600mm Deep NOT FOR TRANSPORT, FOR CARBON ASSESSMENT	TR31
Marine Facility	Piles	Steel	10	0.6	72	203.58	7750	1,577.71	158	Piles: 10m Depth 600mm diameter NOT FOR TRANSPORT, FOR CARBON ASSESSMENT	TR32
Marine Facility	Aggregate	Aggregate	18	10	5.059	50.59	2650	134.06	13	300mm Deep	TR33
Marine Facility	Rebar (Reinforcement)	Rebar	-	-	-	1.63	7850	12.76	1	Concrete:Rebar Ratio: 1%	TR34
Power Cavern	Concrete	Concrete	-	-		818,766.00	2400	1,965,038.40	215,465		TR35
Power Cavern	Rebar (Reinforcement)	Rebar	-	-		8,187.66	7850	64,273.13	6,427	Concrete:Rebar Ratio: 1%	TR36
Power Cavern -Turbine hall	Formwork / Plant	Timber/Wood	120	25	14500	2,175.00	550	1,196.25	120	Estimates	TR37
Power Cavern- Transformer hall	Formwork / Plant	Timber/Wood	120	20	8400	1,260.00	550	693.00	69	Estimates	TR38
Power Cavern and Transformer hall	M&E Plant and Equipment	Plant	-	-	-	-	-	-	64	Overhead Gantry Crane x 2 Turbines Transformers Control Systems	TR39
Switchyard	Concrete	Concrete	65	32	2080	1,040.00	2400	2,496.00	274	0.5m Foundation	TR40
Switchyard	Rebar (Reinforcement)	Rebar	-	-	-	10.40	7850	81.64	8	Concrete:Rebar Ratio: 1%	TR41
Switchyard	Fencing - Mesh	Galvanised Steel (Mesh)	490.00	-	40.00		0	4.40	1	25m x 1.2m Mesh 110 kg per Roll 2 Rolls per 25m Section	TR42
Switchyard	Fencing - Posts	Steel	490.00	3	164.00	1.00	7750	7.75	1	Pole every 3m 50mm D x 3m (H)	TR43
Switchyard	Formwork /plant	Timber/Wood	-	-	1500	-	-	25.20	2	Hi level estimate	TR44
Switchyard	M&E Plant and Equipment	Various	-	-	-	-	-	-		Switchgear	TR45
Switchyard	Stone for Hardstanding	Aggregate	-	-	13,243.20	3,972.96	2650	10,528.34	1,053	Max. 0.3m gravel	TR46
Tailpond Inlet / Outlet Structure	Concrete	Concrete	-	-	-	14,228.18	2400	34,147.63	3,744	C3D Ouput	TR47
Tailpond Inlet / Outlet Structure	Rebar (Reinforcement)	Rebar	-	-	-	142.28	7850	1,116.91	112	Concrete:Rebar Ratio: 1%	TR48
Tailpond Inlet / Outlet Structure	Screen (Pre-fab)	Steel	3	2	500	0.24	7750	930	93	2 x Pre-fabricated Inlet Screens (75m x 20m) to be joined on site. Delivery in 500No. 3m x 2m sections 40mm deep	TR49
Tailpond Inlet / Outlet Structure	Rock Armour	Rock	-	-	-	8,016.70	2800	22,446.76	2,245	C3D Output 1:3 Slope from base of Screen to EG	TR50
Tailpond Inlet / Outlet Structure	Cofferdam - Sheet Piles	Steel	585	5	488	54.00	7750	418.5	42	Pile Width: 1.2m Pile Thickness: 0.0085m Depth of Embedment: 5m	TR51
Tailpond Inlet / Outlet Structure	Cofferdam - Bracing	Steel	585	5	488	54.00	7750	418.5	42	Assume that Bracing (T) = Sheet Pile (T)	TR52
Tailpond Inlet / Outlet Structure	Formwork / Plant	Plant	-	-	16405	-	-	197	20	C3D Output. 25% FOS	TR53
Tailpond Inlet / gate house	Formwork / Plant	Plant	-	-	5152	-	-	61.824	6	40% extra considered for the uncertainity in the design	TR54
Tailpond Inlet / Outlet Structure	Machinery	Plant	-	-	-	-	-	-	16	2x Excavators 0 x Graders 2 x Dump Trailers 2x Mobile Crane 2 x Loaders	TR55
Tunnels	Lining Concete	Concrete	-	-	-	70,316.07	2400	168,758.57	18,504	400mm Concrete Lining	TR56
Tunnels	Rebar (Reinforcement)	Rebar	-	-	-	7,031.61	7850	55,198.11	5,520	Concrete:Rebar Ratio: 1%	TR57
Tunnels	Machinery	Various	-	-	-	-	-	-	220	For 5 tunnel sites (3x Access, 2x Waterways) 20x Excavators 20 x Graders 20 x Loaders 50 x Dump Trailers	TR58
Tunnels	Formwork system / Plant	Plant	-	-	131,842.63	-	-	1,582.11	158	25% less considered for the tunnel invert, 1/2" thick ply considered for the formwork system and weight 12kg/m2 with timber support	TR59

Assumptions
1. Quantities are high-level estiamtes and are to inform the transport assessment for the EIA
2. Vehicle trips is only for on and off site trips

Project Details

Project Name	Project Number	Document No.
Balliemeanoch PSH	60710998	
Created By:	**Checked By:**	**Approved by:**
AC	TP	DL

Number of 2-way Trips per Month

Task Name	Duration	Start	Finish	Months	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	Total
				Year	2027												2028												
Baliemeanoch PSH	114	01/10/2024	03/04/2034																										0
PROJECT DEVELOPMENT AND DESIGN																													0
Environmental studies and pre-feed design	18	01/10/2023	13/02/2025																										0
FEED design, Tendering and contract	24	14/02/2025	17/12/2026																										0
CIVIL WORKS																													0
Enabling Works																													0
Existing access Improvements	6	19/01/2027	05/07/2027		3,174	3,174	3,174	3,174	3,174	3,174																			19,044
General Mobilisation																													0
Construction compound set up (permanent and temporary)	6	06/07/2027	20/12/2027								7,399	7,399	7,399	7,399	7,399	7,399													44,394
Safety and security measures	4	21/12/2027	10/04/2028														8	8	8	8									31
Burrow pit open and operation	9	06/07/2027	13/03/2028																										0
Demobilisation	23	01/01/2030	03/11/2031																										312
Test Audit and and confirmatory site investigations	9	06/07/2027	13/03/2028																										0
Form access to borrow pits	9	06/07/2027	13/03/2028																										0
Jetty works / pontoon	12	06/07/2027	05/06/2028								89	89	89	89	89	89	89	89	89	89	89	89							1,064
Upper Reservoir																													0
Form access including bridge / culverts	9	06/07/2027	13/03/2028								2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625	2,625										23,623
Removal of top soil	2	14/03/2028	08/05/2028																	38	38								76
Constrruction diversion	2	14/03/2028	08/05/2028																										0
Stabilisation works	4	09/05/2028	28/08/2028																										0
Void reprofiling	2	29/08/2028	23/10/2028																										0
Foundation improvement works / grout curtain	6	24/10/2028	09/04/2029																										0
Concrete Core / concrete lining U/s face	23	10/04/2029	10/02/2031																										7,680
Embankment 1 construction and burrow pit operation	23	10/04/2029	10/02/2031																										3,775
Embankment 2 construction and burrow pit operation	12	22/10/2028	20/09/2029																										0
Spillway Construction	9	22/10/2028	28/06/2029																										0
Upper reservoir Inlet and gate shaft works	17	14/03/2028	30/07/2029																340	340	340	340	340	340	340	340	340	340	5,772
Lower Reservoir																													0
B840 Diversion works	4	06/07/2027	25/10/2027																										0
Coffering inlet area	4	26/10/2027	14/02/2028												21	21	21	21											84
Removal of top soil	1	26/10/2027	22/11/2027												16														16
Open a deep trench for gate house and bifucation works	9	23/11/2027	31/07/2028																										0
Inlet shaft and Gate house	17	01/08/2028	17/12/2029																					0	0	0	0	0	6
Inlet/outlet structure	17	01/08/2028	17/12/2029																					233	233	233	233	233	3,969
Rock excavation infront of inlet and armouring works	3	18/12/2029	11/03/2030																										2,245
Dismantel coffering works and reinstating area	3	12/03/1930	03/06/2030																										0
Tunnelling works																													0
Form access to portal sites	2	06/07/2027	30/08/2027								110	110																	220
Tunnel Portal - Construction	4	31/08/2027	20/12/2027										40	40	40	40													158
Tunnel Portal - Emergency egress	4	31/08/2027	20/12/2027																										0
Ancilliary works - tunnelling	4	15/02/2028	05/06/2028																										0
Construction Tunnel																													0
Tunnel excavation (D&B / TBM) - Construction	24	21/12/2027	22/10/2029																										0
Tunnel lining -Construction	24	21/12/2027	22/10/2029																										0
Vertical ventilation shaft on construction tunnel	6	21/02/2029	07/08/2029																										0
Conveyor set up and spoil transport	24	21/12/2027	22/10/2029																										0
Emergency Egress and Access Tunnel (EE&AT)																													0
Tunnel excavation (D&B / TBM) - EE&AT	24	21/12/2027	22/10/2029																										0
Tunnel lining -EE&AT	24	21/12/2027	22/10/2029																										0
Vertical ventilation shaft on emergency tunnel	6	21/02/2029	07/08/2029																										0
Conveyor set up and spoil transport	24	21/12/2027	22/10/2029																										0
Headrace Tunnel (low pressure)- HTLP																													0
Tunnel excavation - HTLP	3	31/07/2029	22/10/2029																										0
Tunnel lining -HTLP	3	31/07/2029	22/10/2029																										0
Conveyor set up and spoil transport	3	31/07/2029	22/10/2029																										0
Surge Shaft works - SS	9	23/10/2029	01/07/2030																										0
SS lining -HTLP	9	23/10/2029	01/07/2030																										0
Conveyor set up and spoil transport	9	23/10/2029	01/07/2030																										0
Headrace Tunnel (high pressure) - HTHP																													0
Tunnel excavation - HTHP	5	02/07/2030	18/11/2030																										0
Tunnel lining -HTHP	5	02/07/2030	18/11/2030																										0
Conveyor set up and spoil transport	5	02/07/2030	18/11/2030																										0
Tailrace Tunnel -TT																													0
Tunnel excavation - TT from Power cavern	29	17/12/2030	04/04/2033																										10,296
Tunnel lining -TT	29	17/12/2030	04/04/2033																										0
Conveyor set up and spoil transport	29	17/12/2030	04/04/2033																										0
Power Tunnel -PT																													0
Tunnel Portal -PT	4	06/07/2027	25/10/2027																										0
Tunnel excavation - from Tunnel Portal-PT	37	26/10/2027	18/11/2030																										0
Tunnel lining -PT	37	26/10/2027	18/11/2030												371	371	371	371	371	371	371	371	371	371	371	371	371	371	13,728
Conveyor set up and spoil transport	37	26/10/2027	18/11/2030																										0
Ventilation Tunnel - VT																													0
Excavation Horizontal ventilation tunnel -HVT	12	17/12/2030	17/11/2031																										0
Main vertical ventilation shafts	12	18/11/2031	18/10/2032																										0
Short ventilation shafts	10	18/11/2031	23/08/2032																										0
Lining -Vertical and Horizontal ventilation tunnels	24	17/12/2030	23/10/2032																										0
Conveyor set up and spoil transport	24	17/12/2030	23/10/2032																										0
Switchroom Building and HV Switchyard																													0
Ground works	6	06/07/2027	20/12/2027								176	176	176	176	176	176													1,057
Super structures	12	21/12/2027	20/11/2028																										0
AIS Switchyard - civil	12	21/11/2028	22/10/2029																								23	23	282
Powerhouse / Power Cavern																													0
Cavern excavation - Turbine hall	15	23/10/2029	16/12/2030																										0
Cavern excavation - Transformaer hall	9	23/10/2029	01/07/2030																										0
Lining and support works	14.5	23/10/2029	16/12/2030																										123,853
Conveyor set up and spoil transport	15	23/10/2029	16/12/2030																										0
Crane Structure	2	01/07/2031	25/08/2031																										0
Superstructure	11.5	17/12/2030	17/11/2031																										98,228
M&E Installation																													0
M&E installation complete																													0
Procurement and Manufacture	45	01/01/2027	13/06/2030																										0
Transport	17	14/06/2030	30/10/2031																										64
Installation	24	18/11/2031	19/09/2033																										0
Dry Commissioning	3	20/09/2033	12/12/2033																										0
Wet Commissioning	4	13/12/2033	03/04/2034																										0
Grid Connection																													0
Grid substation	24	23/10/2029	25/08/2031																										0
Double circuit cable	18	19/11/2030	05/04/2032																										0
Interface works TSO to client infrastructure	3	20/09/2033	12/12/2033																										0
Commissioning	4	13/12/2033	03/04/2034																										0
Total Monthly HGV Movements*					3,174	3,174	3,174	3,174	3,174	3,174	10,399	10,399	10,328	10,328	10,736	10,720	3,113	3,113	3,432	845	837	799	711	944	944	944	968	968	359,976
Daily HGV movements					144	144	144	144	144	144	473	473	469	469	488	487	142	142	156	38	38	36	32	43	43	43	44	44	
Daily Worker Car & LGV Movements					154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	
Daily Total Vehicle Movements					298	298	298	298	298	298	627	627	623	623	642	641	296	296	310	192	192	190	186	197	197	197	198	198	
Daily Vehicle Movements (Balanced)					300	300	300	300	300	300	628	628	624	624	644	642	296	296	310	194	194	192	188	198	198	198	198	198	
Daily HGV Movements (Balanced)					146	146	146	146	146	146	474	474	470	470	490	488	142	142	156	40	40	38	34	44	44	44	44	44	
Daily Car & LGV Movements (Balanced)					154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	

Task Name															Check = 0
Existing access Improvements	TR2	2,744	TR3	16,300									**Total**	19,044	0
Construction compound set up (permanent and temporary)	TR7	139	TR8	4	TR13	2,063	TR18	42,159	TR11	16	TR12	12	**Total**	44,394	0
Safety and security measures	TR9	1.54	TR10	1	TR14	9	TR15	12	TR16	8	TR17	1	**Total**	31	0
Demobilisation	TR21	60	TR27	16	TR55	16	TR58	220					**Total**	312	0
Jetty works / pontoon	TR30	43	TR31	849	TR32	158	TR33	13	TR34	1			**Total**	1,064	0
Form access including bridge / culverts	TR1	8,427	TR4	15,097	TR5	95	TR6	4					**Total**	23,623	0
Removal of top soil	TR21	60	TR27	16									**Total**	76	0
Concrete Core / concrete lining U/s face	TR19	7,457	TR20	222									**Total**	7,680	0
Embankment 1 construction and burrow pit operation	TR22	3,775											**Total**	3,775	0
Upper reservoir Inlet and gate shaft works	TR23	1,842	TR24	55	TR25	3,714	TR26	71	TR28	53	TR29	37	**Total**	5,772	0
Coffering inlet area	TR51	42	TR52	42									**Total**	84	0
Removal of top soil	TR55	16											**Total**	16	0
Inlet shaft and Gate house	TR54	6											**Total**	6	0
Inlet/outlet structure	TR53	20	TR47	3,744	TR48	112	TR49	93					**Total**	3,969	0
Rock excavation infront of inlet and armouring works	TR50	2,245											**Total**	2,245	0
Form access to portal sites	TR58	220											**Total**	220	0
Tunnel Portal - Construction	TR59	158											**Total**	158	0
Tunnel excavation - TT from Power cavern	TR56	7,930	TR57	2,366									**Total**	10,296	0
Tunnel lining -PT	TR56	10,574	TR57	3,154									**Total**	13,728	0
Ground works	TR42	1	TR43	1	TR44	2	TR46	1,053					**Total**	1,057	0
AIS Switchyard - civil	TR40	274	TR41	8									**Total**	282	0
Lining and support works	TR35	120,163	TR36	3,584	TR37	67	TR38	39					**Total**	123,853	0
Superstructure	TR35	95,302	TR36	2,843	TR37	53	TR38	31					**Total**	98,228	0
Transport	TR39	64	TR45	0									**Total**	64	0
Total Monthly HGV Movements*														359,976	0

	Daily Max	High-Intensity	Average Daily Traffic	Routine
Daily Vehicle Movements (Balanced)	**644**	**581**	**341**	**199**
Daily HGV Movements (Balanced)	**490**	**427**	**187**	**45**
Daily Car & LGV Movements (Balanced)	**154**	**154**	**154**	**154**

Project Details

Project Name	Project Number	Document No.
Baliemeanoch PSH	60710998	
Created By:	**Checked By:**	**Approved by:**
AC	TP	DL

Number of 2-way Trips per Month

Task Name	Duration	Start	Finish	Months	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	Total
				Year	2029												2030												
Baliemeanoch PSH	114	01/10/2024	03/04/2034																										0
PROJECT DEVELOPMENT AND DESIGN																													0
Environmental studies and pre-feed design	18	01/10/2023	13/02/2025																										0
FEED design, Tendering and contract	24	14/02/2025	17/12/2026																										0
CIVIL WORKS																													0
Enabling Works																													0
Existing access Improvements	6	19/01/2027	05/07/2027																										19,044
General Mobilisation																													0
Construction compound set up (permanent and temporary)	6	06/07/2027	20/12/2027																										44,394
Safety and security measures	4	21/12/2027	10/04/2028																										31
Burrow pit open and operation	9	06/07/2027	13/03/2028																										0
Demobilisation	23	01/01/2030	03/11/2031														14	14	14	14	14	14	14	14	14	14	14	14	312
Test Audit and and confirmatory site investigations	9	06/07/2027	13/03/2028																										0
Form access to borrow pits	9	06/07/2027	13/03/2028																										0
Jetty works / pontoon	12	06/07/2027	05/06/2028																										1,064
Upper Reservoir																													0
Form access including bridge / culverts	9	06/07/2027	13/03/2028																										23,623
Removal of top soil	2	14/03/2028	08/05/2028																										76
Constrruction diversion	2	14/03/2028	08/05/2028																										0
Stabilisation works	4	09/05/2028	28/08/2028																										0
Void reprofiling	2	29/08/2028	23/10/2028																										0
Foundation improvement works / grout curtain	6	24/10/2028	09/04/2029																										0
Concrete Core / concrete lining U/s face	23	10/04/2029	10/02/2031					334	334	334	334	334	334	334	334	334	334	334	334	334	334	334	334	334	334	334	334	334	7,680
Embankment 1 construction and burrow pit operation	23	10/04/2029	10/02/2031					164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	3,775
Embankment 2 construction and burrow pit operation	12	22/10/2028	20/09/2029																										0
Spillway Construction	9	22/10/2028	28/06/2029																										0
Upper reservoir Inlet and gate shaft works	17	14/03/2028	30/07/2029		340	340	340	340	340	340	340																		5,772
Lower Reservoir																													0
B840 Diversion works	4	06/07/2027	25/10/2027																										0
Coffering inlet area	4	26/10/2027	14/02/2028																										84
Removal of top soil	1	26/10/2027	22/11/2027																										16
Open a deep trench for gate house and bifucation works	9	23/11/2027	31/07/2028																										0
Inlet shaft and Gate house	17	01/08/2028	17/12/2029		0	0	0	0	0	0	0	0	0	0	0	0													6
Inlet/outlet structure	17	01/08/2028	17/12/2029		233	233	233	233	233	233	233	233	233	233	233	233													3,969
Rock excavation infront of inlet and armouring works	3	18/12/2029	11/03/2030														748	748	748										2,245
Dismantel coffering works and reinstating area	3	12/03/1930	03/06/2030																										0
Tunnelling works																													0
Form access to portal sites	2	06/07/2027	30/08/2027																										220
Tunnel Portal - Construction	4	31/08/2027	20/12/2027																										158
Tunnel Portal - Emergency egress	4	31/08/2027	20/12/2027																										0
Ancilliary works - tunnelling	4	15/02/2028	05/06/2028																										0
Construction Tunnel																													0
Tunnel excavation (D&B / TBM) - Construction	24	21/12/2027	22/10/2029																										0
Tunnel lining -Construction	24	21/12/2027	22/10/2029																										0
Vertical ventilation shaft on construction tunnel	6	21/02/2029	07/08/2029																										0
Conveyor set up and spoil transport	24	21/12/2027	22/10/2029																										0
Emergency Egress and Access Tunnel (EE&AT)																													0
Tunnel excavation (D&B / TBM) - EE&AT	24	21/12/2027	22/10/2029																										0
Tunnel lining -EE&AT	24	21/12/2027	22/10/2029																										0
Vertical ventilation shaft on emergency tunnel	6	21/02/2029	07/08/2029																										0
Conveyor set up and spoil transport	24	21/12/2027	22/10/2029																										0
Headrace Tunnel (low pressure)- HTLP																													0
Tunnel excavation - HTLP	3	31/07/2029	22/10/2029																										0
Tunnel lining -HTLP	3	31/07/2029	22/10/2029																										0
Conveyor set up and spoil transport	3	31/07/2029	22/10/2029																										0
Surge Shaft works - SS	9	23/10/2029	01/07/2030																										0
SS lining -HTLP	9	23/10/2029	01/07/2030																										0
Conveyor set up and spoil transport	9	23/10/2029	01/07/2030																										0
Headrace Tunnel (high pressure) - HTHP																													0
Tunnel excavation - HTHP	5	02/07/2030	18/11/2030																										0
Tunnel lining -HTHP	5	02/07/2030	18/11/2030																										0
Conveyor set up and spoil transport	5	02/07/2030	18/11/2030																										0
Tailrace Tunnel -TT																													0
Tunnel excavation - TT from Power cavern	29	17/12/2030	04/04/2033																										0
Tunnel lining -TT	29	17/12/2030	04/04/2033																										10,296
Conveyor set up and spoil transport	29	17/12/2030	04/04/2033																										0
Power Tunnel -PT																													0
Tunnel Portal -PT	4	06/07/2027	25/10/2027																										0
Tunnel excavation - from Tunnel Portal-PT	37	26/10/2027	18/11/2030																										0
Tunnel lining -PT	37	26/10/2027	18/11/2030		371	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371	371		13,728
Conveyor set up and spoil transport	37	26/10/2027	18/11/2030																										0
Ventilation Tunnel - VT																													0
Excavation Horizontal ventilation tunnel -HVT	12	17/12/2030	17/11/2031																										0
Main vertical ventilation shafts	12	18/11/2031	18/10/2032																										0
Short ventilation shafts	10	18/11/2031	23/08/2032																										0
Lining -Vertical and Horizontal ventilation tunnels	24	17/12/2030	23/10/2032																										0
Conveyor set up and spoil transport	24	17/12/2030	23/10/2032																										0
Switchroom Building and HV Switchyard																													0
Ground works	6	06/07/2027	20/12/2027																										1,057
Super structures	12	21/12/2027	20/11/2028																										0
AIS Switchyard - civil	12	21/11/2028	22/10/2029		23	23	23	23	23	23	23	23	23	23															282
Powerhouse / Power Cavern																													0
Cavern excavation - Turbine hall	15	23/10/2029	16/12/2030																										0
Cavern excavation - Transformaer hall	9	23/10/2029	01/07/2030																										0
Lining and support works	14.5	23/10/2029	16/12/2030											8542	8542	8542	8542	8542	8542	8542	8542	8542	8542	8542	8542	8542	8542	4271	123,853
Conveyor set up and spoil transport	15	23/10/2029	16/12/2030																										0
Crane Structure	2	01/07/2031	25/08/2031																										0
Superstructure	11.5	17/12/2030	17/11/2031																									4271	98,228
M&E Installation																													0
M&E installation complete																													0
Procurement and Manufacture	45	01/01/2027	13/06/2030																										0
Transport	17	14/06/2030	30/10/2031																			4	4	4	4	4	4	4	64
Installation	24	18/11/2031	19/09/2033																										0
Dry Commissioning	3	20/09/2033	12/12/2033																										0
Wet Commissioning	4	13/12/2033	03/04/2034																										0
Grid Connection																													0
Grid substation	24	23/10/2029	25/08/2031																										0
Double circuit cable	18	19/11/2030	05/04/2032																										0
Interface works TSO to client infrastructure	3	20/09/2033	12/12/2033																										0
Commissioning	4	13/12/2033	03/04/2034																										0
Total Monthly HGV Movements*					968	968	968	1,466	1,466	1,466	1,466	1,126	1,126	9,668	9,644	9,644	10,172	10,172	10,172	9,424	9,424	9,428	9,428	9,428	9,428	9,428	9,428	9,412	359,976
Daily HGV movements					44	44	44	67	67	67	67	51	51	439	438	438	462	462	462	428	428	429	429	429	429	429	429	428	
Daily Worker Car & LGV Movements					154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	
Daily Total Vehicle Movements					198	198	198	221	221	221	221	205	205	593	592	592	616	616	616	582	582	583	583	583	583	583	583	582	
Daily Vehicle Movements (Balanced)					198	198	198	222	222	222	222	206	206	594	594	594	618	618	618	584	584	584	584	584	584	584	584	582	
Daily HGV Movements (Balanced)					44	44	44	68	68	68	68	52	52	440	440	440	464	464	464	430	430	430	430	430	430	430	430	428	
Daily Car & LGV Movements (Balanced)					154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	

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Project Details

Project Name	Project Number	Document No.
Balliemeanoch PSH	60710998	
Created By:	**Checked By:**	**Approved by:**
AC	TP	DL

Number of 2-way Trips per Month

Task Name	Duration	Start	Finish	Months	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	Total
				Year	2031												2032												2033		
Baliemeanoch PSH	114	01/10/2024	03/04/2034																												0
PROJECT DEVELOPMENT AND DESIGN																															0
Environmental studies and pre-feed design	18	01/10/2023	13/02/2025																												0
FEED design, Tendering and contract	24	14/02/2025	17/12/2026																												0
CIVIL WORKS																															0
Enabling Works																															0
Existing access Improvements	6	19/01/2027	05/07/2027																												19,044
General Mobilisation																															0
Construction compound set up (permanent and temporary)	6	06/07/2027	20/12/2027																												44,394
Safety and security measures	4	21/12/2027	10/04/2028																												31
Burrow pit open and operation	9	06/07/2027	13/03/2028																												0
Demobilisation	23	01/01/2030	03/11/2031		14	14	14	14	14	14	14	14	14	14	14																312
Test Audit and and confirmatory site investigations	9	06/07/2027	13/03/2028																												0
Form access to borrow pits	9	06/07/2027	13/03/2028																												0
Jetty works / pontoon	12	06/07/2027	05/06/2028																												1,064
Upper Reservoir																															0
Form access including bridge / culverts	9	06/07/2027	13/03/2028																												23,623
Removal of top soil	2	14/03/2028	08/05/2028																												76
Consrtruction diversion	2	14/03/2028	08/05/2028																												0
Stabilisation works	4	09/05/2028	28/08/2028																												0
Void reprofiling	2	29/08/2028	23/10/2028																												0
Foundation improvement works / grout curtain	6	24/10/2028	09/04/2029																												0
Concrete Core / concrete lining U/s face	23	10/04/2029	10/02/2031		334	334																									7,680
Embankment 1 construction and burrow pit operation	23	10/04/2029	10/02/2031		164	164																									3,775
Embankment 2 construction and burrow pit operation	12	22/10/2028	20/09/2029																												0
Spillway Construction	9	22/10/2028	28/06/2029																												0
Upper reservoir Inlet and gate shaft works	17	14/03/2028	30/07/2029																												5,772
Lower Reservoir																															0
8840 Diversion works	4	06/07/2027	25/10/2027																												0
Coffering inlet area	4	26/10/2027	14/02/2028																												84
Removal of top soil	1	26/10/2027	22/11/2027																												16
Open a deep trench for gate house and bifucation works	9	23/11/2027	31/07/2028																												0
Inlet shaft and Gate house	17	01/08/2028	17/12/2029																												6
Inlet/outlet structure	17	01/08/2028	17/12/2029																												3,969
Rock excavation infront of inlet and armouring works	3	18/12/2029	11/03/2030																												2,245
Dismantel coffering works and reinstating area	3	12/03/1930	03/06/2030																												0
Tunnelling works																															0
Form access to portal sites	2	06/07/2027	30/08/2027																												220
Tunnel Portal - Construction	4	31/08/2027	20/12/2027																												158
Tunnel Portal - Emergency egress	4	31/08/2027	20/12/2027																												0
Ancilliary works - tunnelling	4	15/02/2028	05/06/2028																												0
Construction Tunnel																															0
Tunnel excavation (D&B / TBM) - Construction	24	21/12/2027	22/10/2029																												0
Tunnel lining -Construction	24	21/12/2027	22/10/2029																												0
Vertical ventilation shaft on construction tunnel	6	21/02/2029	07/08/2029																												0
Conveyor set up and spoil transport	24	21/12/2027	22/10/2029																												0
Emergency Egress and Access Tunnel (EE&AT)																															0
Tunnel excavation (D&B / TBM) - EE&AT	24	21/12/2027	22/10/2029																												0
Tunnel lining -EE&AT	24	21/12/2027	22/10/2029																												0
Vertical ventilation shaft on emergency tunnel	6	21/02/2029	07/08/2029																												0
Conveyor set up and spoil transport	24	21/12/2027	22/10/2029																												0
Headrace Tunnel (low pressure)- HTLP																															0
Tunnel excavation - HTLP	3	31/07/2029	22/10/2029																												0
Tunnel lining -HTLP	3	31/07/2029	22/10/2029																												0
Conveyor set up and spoil transport	3	31/07/2029	22/10/2029																												0
Surge Shaft works - SS	9	23/10/2029	01/07/2030																												0
SS lining -HTLP	9	23/10/2029	01/07/2030																												0
Conveyor set up and spoil transport	9	23/10/2029	01/07/2030																												0
Headrace Tunnel (high pressure) - HTHP																															0
Tunnel excavation - HTHP	5	02/07/2030	18/11/2030																												0
Tunnel lining -HTHP	5	02/07/2030	18/11/2030																												0
Conveyor set up and spoil transport	5	02/07/2030	18/11/2030																												0
Tailrace Tunnel -TT																															0
Tunnel excavation - TT from Power cavern	29	17/12/2030	04/04/2033																												0
Tunnel lining -TT	29	17/12/2030	04/04/2033		355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	355	10,296
Conveyor set up and spoil transport	29	17/12/2030	04/04/2033																												0
Power Tunnel -PT																															0
Tunnel Portal -PT	4	06/07/2027	25/10/2027																												0
Tunnel excavation - from Tunnel Portal-PT	37	26/10/2027	18/11/2030																												0
Tunnel lining -PT	37	26/10/2027	18/11/2030																												13,728
Conveyor set up and spoil transport	37	26/10/2027	18/11/2030																												0
Ventilation Tunnel - VT																															0
Excavation Horizontal ventilation tunnel -HVT	12	17/12/2030	17/11/2031																												0
Main vertical ventilation shafts	12	18/11/2031	18/10/2032																												0
Short ventilation shafts	10	18/11/2031	23/08/2032																												0
Lining -Vertical and Horizontal ventilation tunnels	24	17/12/2030	23/10/2032																												0
Conveyor set up and spoil transport	24	17/12/2030	23/10/2032																												0
Switchroom Building and HV Switchyard																															0
Ground works	6	06/07/2027	20/12/2027																												1,057
Super structures	12	21/12/2027	20/11/2028																												0
AIS Switchyard - civil	12	21/11/2028	22/10/2029																												282
Powerhouse / Power Cavern																															0
Cavern excavation - Turbine hall	15	23/10/2029	16/12/2030																												0
Cavern excavation - Transformaer hall	9	23/10/2029	01/07/2030																												0
Lining and support works	14.5	23/10/2029	16/12/2030																												123,853
Conveyor set up and spoil transport	15	23/10/2029	16/12/2030																												0
Crane Structure	2	01/07/2031	25/08/2031																												0
Superstructure	11.5	17/12/2030	17/11/2031		8542	8542	8542	8542	8542	8542	8542	8542	8542	8542	8542																98,228
M&E Installation																															0
M&E installation complete																															0
Procurement and Manufacture	45	01/01/2027	13/06/2030																												0
Transport	17	14/06/2030	30/10/2031		4	4	4	4	4	4	4	4	4	4																	64
Installation	24	18/11/2031	19/09/2033																												0
Dry Commissioning	3	20/09/2033	12/12/2033																												0
Wet Commissioning	4	13/12/2033	03/04/2034																												0
Grid Connection																															0
Grid substation	24	23/10/2029	25/08/2031																												0
Double circuit cable	18	19/11/2030	05/04/2032																												0
Interface works TSO to client infrastructure	3	20/09/2033	12/12/2033																												0
Commissioning	4	13/12/2033	03/04/2034																												0
Total Monthly HGV Movements*					9,412	9,412	8,914	8,914	8,914	8,914	8,914	8,914	8,914	8,914	8,910	355	355	355	355	355	355	355	355	355	355	355	355	355	355	359,976
Daily HGV movements					428	428	405	405	405	405	405	405	405	405	405	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Daily Worker Car & LGV Movements					154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	
Daily Total Vehicle Movements					582	582	559	559	559	559	559	559	559	559	559	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	
Daily Vehicle Movements (Balanced)					582	582	560	560	560	560	560	560	560	560	560	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	
Daily HGV Movements (Balanced)					428	428	406	406	406	406	406	406	406	406	406	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	
Daily Car & LGV Movements (Balanced)					154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	

Check = 0

TR2	2,744	TR3	16,300							**Total**	19,044
TR7	139	TR8	4	TR13	2,063	TR18	42,159	TR11	16	TR12	12
TR9	1.54	TR10	1	TR14	9	TR15	12	TR16	8	TR17	1
TR21	60	TR27	16	TR55	16	TR58	220				
TR30	43	TR31	849	TR32	158	TR33	13	TR34	1		
TR1	8,427	TR4	15,097	TR5	95	TR6	4				
TR21	60	TR27	16								
TR19	7,457	TR20	222								
TR22	3,775										
TR23	1,842	TR24	55	TR25	3,714	TR26	71	TR28	53	TR29	37
TR51	42	TR52	42								
TR55	16										
TR54	6										
TR53	20	TR47	3,744	TR48	112	TR49	93				
TR50	2,245										
TR58	220										
TR59	158										
TR56	7,930	TR57	2,366								
TR56	10,574	TR57	3,154								
TR42	1	TR43	1	TR44	2	TR46	1,053				
TR40	274	TR41	8								
TR35	120,163	TR36	3,584	TR37	67	TR38	39				
TR35	95,302	TR36	2,843	TR37	53	TR38	31				
TR39	64	TR45	0								

Total	1,064										
Total	23,623										
Total	76										
Total	7,680										
Total	3,775										
Total	5,772										
Total	84										
Total	16										
Total	6										
Total	3,969										
Total	2,245										
Total	220										
Total	158										
Total	10,296										
Total	13,728										
Total	1,057										
Total	282										
Total	123,853										
Total	98,228										
Total	64										

Project Details

Project Name	Project Number	Document No.
Balliemeanoch PSH	60710998	

Created By:	Checked By:	Approved by:
AC	TP	DL

Number of 2-way Trips per Month

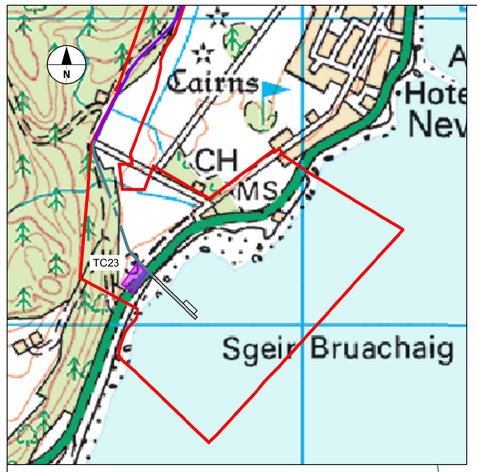
Check = 0

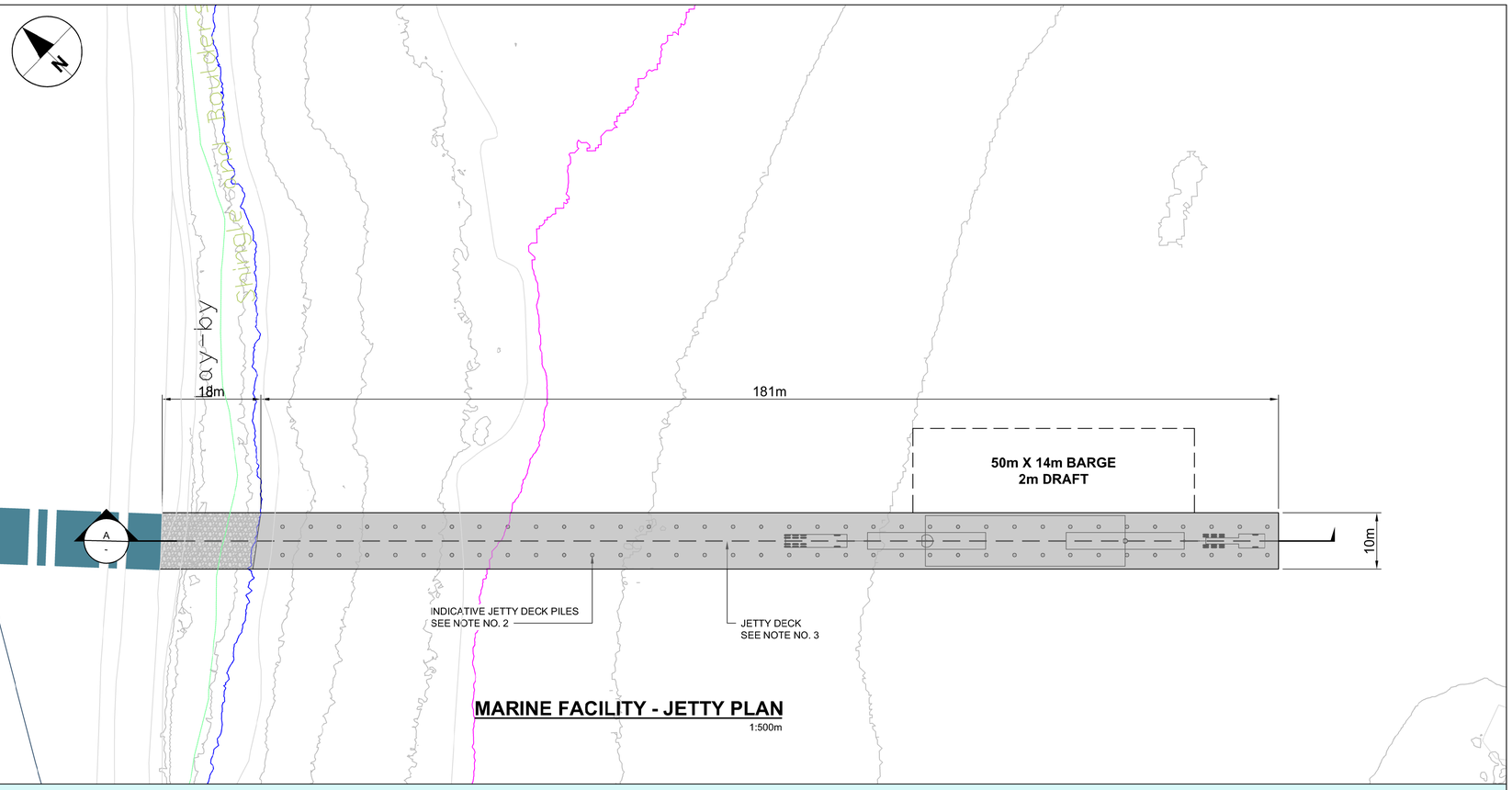
Task Name	Duration	Start	Finish	Total															
Baliemeanoch PSH	114	01/10/2024	03/04/2034	0															
PROJECT DEVELOPMENT AND DESIGN				0															
Environmental studies and pre-feed design	18	01/10/2023	13/02/2025	0															
FEED design, Tendering and contract	24	14/02/2025	17/12/2026	0															
CIVIL WORKS				0															
Enabling Works				0															
Existing access Improvements	6	19/01/2027	05/07/2027	19,044	TR2	2,744	TR3	16,300									Total	19,044	0
General Mobilisation				0															
Construction compound set up (permanent and temporary)	6	06/07/2027	20/12/2027	44,394	TR7	139	TR8	4	TR13	2,063	TR18	42,159	TR11	16	TR12	12	Total	44,394	0
Safety and security measures	4	21/12/2027	10/04/2028	31	TR9	1.54	TR10	1	TR14	9	TR15	12	TR16	8	TR17	1	Total	31	0
Burrow pit open and operation	9	06/07/2027	13/03/2028	0															
Demobilisation	23	01/01/2030	03/11/2031	312	TR21	60	TR27	16	TR55	16	TR58	220					Total	312	0
Test Audit and and confirmatory site investigations	9	06/07/2027	13/03/2028	0															
Form access to borrow pits	9	06/07/2027	13/03/2028	0															
Jetty works / pontoon	12	06/07/2027	05/06/2028	1,064	TR30	43	TR31	849	TR32	158	TR33	13	TR34	1			Total	1,064	0
Upper Reservoir				0															
Form access including bridge / culverts	9	06/07/2027	13/03/2028	23,623	TR1	8,427	TR4	15,097	TR5	95	TR6	4					Total	23,623	0
Removal of top soil	2	14/03/2028	08/05/2028	76	TR21	60	TR27	16									Total	76	0
Constrruction diversion	2	14/03/2028	08/05/2028	0															
Stabilisation works	4	09/05/2028	28/08/2028	0															
Void reprofiling	2	29/08/2028	23/10/2028	0															
Foundation improvement works / grout curtain	6	24/10/2028	09/04/2029	0															
Concrete Core / concrete lining U/s face	23	10/04/2029	10/02/2031	7,680	TR19	7,457	TR20	222									Total	7,680	0
Embankment 1 construction and burrow pit operation	23	10/04/2029	10/02/2031	3,775	TR22	3,775											Total	3,775	0
Embankment 2 construction and burrow pit operation	12	22/10/2028	20/09/2029	0															
Spillway Construction	9	22/10/2028	28/06/2029	0															
Upper reservoir Inlet and gate shaft works	17	14/03/2028	30/07/2029	5,772	TR23	1,842	TR24	55	TR25	3,714	TR26	71	TR28	53	TR29	37	Total	5,772	0
Lower Reservoir				0															
B840 Diversion works	4	06/07/2027	25/10/2027	0															
Coffering inlet area	4	26/10/2027	14/02/2028	84	TR51	42	TR52	42									Total	84	0
Removal of top soil	1	26/10/2027	22/11/2027	16	TR55	16											Total	16	0
Open a deep trench for gate house and bifucation works	9	23/11/2027	31/07/2028	0															
Inlet shaft and Gate house	17	01/08/2028	17/12/2029	6	TR54	6											Total	6	0
Inlet/outlet structure	17	01/08/2028	17/12/2029	3,969	TR53	20	TR47	3,744	TR48	112	TR49	93					Total	3,969	0
Rock excavation infront of inlet and armouring works	3	18/12/2029	11/03/2030	2,245	TR50	2,245											Total	2,245	0
Dismantel coffering works and reinstating area	3	12/03/1930	03/06/2030	0															
Tunnelling works				0															
Form access to portal sites	2	06/07/2027	30/08/2027	220	TR58	220											Total	220	0
Tunnel Portal - Construction	4	31/08/2027	20/12/2027	158	TR59	158											Total	158	0
Tunnel Portal - Emergency egress	4	31/08/2027	20/12/2027	0															
Ancilliary works - tunnelling	4	15/02/2028	05/06/2028	0															
Construction Tunnel				0															
Tunnel excavation (D&B / TBM) - Construction	24	21/12/2027	22/10/2029	0															
Tunnel lining -Construction	24	21/12/2027	22/10/2029	0															
Vertical ventilation shaft on construction tunnel	6	21/02/2029	07/08/2029	0															
Conveyor set up and spoil transport	24	21/12/2027	22/10/2029	0															
Emergency Egress and Access Tunnel (EE&AT)				0															
Tunnel excavation (D&B / TBM) - EE&AT	24	21/12/2027	22/10/2029	0															
Tunnel lining -EE&AT	24	21/12/2027	22/10/2029	0															
Vertical ventilation shaft on emergency tunnel	6	21/02/2029	07/08/2029	0															
Conveyor set up and spoil transport	24	21/12/2027	22/10/2029	0															
Headrace Tunnel (low pressure)- HTLP				0															
Tunnel excavation - HTLP	3	31/07/2029	22/10/2029	0															
Tunnel lining -HTLP	3	31/07/2029	22/10/2029	0															
Conveyor set up and spoil transport	3	31/07/2029	22/10/2029	0															
Surge Shaft works - SS	9	23/10/2029	01/07/2030	0															
SS lining -HTLP	9	23/10/2029	01/07/2030	0															
Conveyor set up and spoil transport	9	23/10/2029	01/07/2030	0															
Headrace Tunnel (high pressure) - HTHP				0															
Tunnel excavation - HTHP	5	02/07/2030	18/11/2030	0															
Tunnel lining -HTHP	5	02/07/2030	18/11/2030	0															
Conveyor set up and spoil transport	5	02/07/2030	18/11/2030	0															
Tailrace Tunnel -TT				0															
Tunnel excavation - TT from Power cavern	29	17/12/2030	04/04/2033	0															
Tunnel lining -TT	29	17/12/2030	04/04/2033	10,296	TR56	7,930	TR57	2,366									Total	10,296	0
Conveyor set up and spoil transport	29	17/12/2030	04/04/2033	0															
Power Tunnel -PT				0															
Tunnel Portal -PT	4	06/07/2027	25/10/2027	0															
Tunnel excavation - from Tunnel Portal-PT	37	26/10/2027	18/11/2030	0															
Tunnel lining -PT	37	26/10/2027	18/11/2030	13,728	TR56	10,574	TR57	3,154									Total	13,728	0
Conveyor set up and spoil transport	37	26/10/2027	18/11/2030	0															
Ventilation Tunnel - VT				0															
Excavation Horizontal ventilation tunnel -HVT	12	17/12/2030	17/11/2031	0															
Main vertical ventilation shafts	12	18/11/2031	18/10/2032	0															
Short ventilation shafts	10	18/11/2031	23/08/2032	0															
Lining -Vertical and Horizontal ventilation tunnels	24	17/12/2030	23/10/2032	0															
Conveyor set up and spoil transport	24	17/12/2030	23/10/2032	0															
Switchroom Building and HV Switchyard				0															
Ground works	6	06/07/2027	20/12/2027	1,057	TR42	1	TR43	1	TR44	2	TR46	1,053					Total	1,057	0
Super structures	12	21/12/2027	20/11/2028	0															
AIS Switchyard - civil	12	21/11/2028	22/10/2029	282	TR40	274	TR41	8									Total	282	0
Powerhouse / Power Cavern				0															
Cavern excavation - Turbine hall	15	23/10/2029	16/12/2030	0															
Cavern excavation - Transformaer hall	9	23/10/2029	01/07/2030	0															
Lining and support works	14.5	23/10/2029	16/12/2030	123,853	TR35	120,163	TR36	3,584	TR37	67	TR38	39					Total	123,853	0
Conveyor set up and spoil transport	15	23/10/2029	16/12/2030	0															
Crane Structure	2	01/07/2031	25/08/2031	0															
Superstructure	11.5	17/12/2030	17/11/2031	98,228	TR35	95,302	TR36	2,843	TR37	53	TR38	31					Total	98,228	0
M&E Installation				0															
M&E installation complete				0															
Procurement and Manufacture	45	01/01/2027	13/06/2030	0															
Transport	17	14/06/2030	30/10/2031	64	TR39	64	TR45	0									Total	64	0
Installation	24	18/11/2031	19/09/2033	0															
Dry Commissioning	3	20/09/2033	12/12/2033	0															
Wet Commissioning	4	13/12/2033	03/04/2034	0															
Grid Connection				0															
Grid substation	24	23/10/2029	25/08/2031	0															
Double circuit cable	18	19/11/2030	05/04/2032	0															
Interface works TSO to client infrastructure	3	20/09/2033	12/12/2033	0															
Commissioning	4	13/12/2033	03/04/2034	0															

Months	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	Total		
Year	2033												2034														
Tunnel lining -TT	355	355	355	355																					10,296		
Total Monthly HGV Movements*	355	355	355	355	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	359,976	359,976	0
Daily HGV movements	16	16	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Daily Worker Car & LGV Movements	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154			
Daily Total Vehicle Movements	170	170	170	170	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154			
Daily Vehicle Movements (Balanced)	172	172	172	172	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154			
Daily HGV Movements (Balanced)	18	18	18	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Daily Car & LGV Movements (Balanced)	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154			

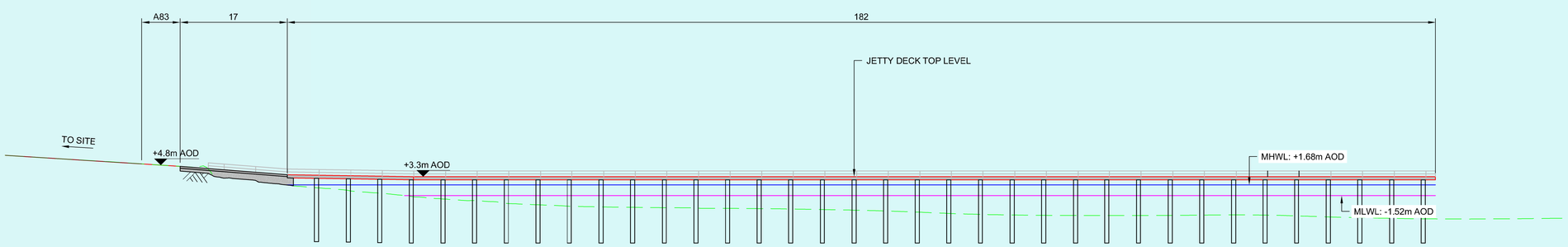
	Daily Max	High-Intensity	Average Daily Traffic	Routine
Daily Vehicle Movements (Balanced)	644	581	341	199
Daily HGV Movements (Balanced)	490	427	187	45
Daily Car & LGV Movements (Balanced)	154	154	154	154

Annex G- Marine Facility





MARINE FACILITY - JETTY PLAN
1:500m



A MARINE FACILITY - JETTY LONGSECTION
1:400m

NOT FOR CONSTRUCTION

FOR INFORMATION ONLY

AECOM

PROJECT

Balliemeanoch
Pumped Storage Hydro

CLIENT

ILI (Borders PSH) Ltd.
The Shires, 33 Bothwell Road
Hamilton, ML3 0AS

CONSULTANT

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Edinburgh, EH3 5DA
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www.AECOM.com

LEGEND

- RED LINE BOUNDARY
- EXISTING GROUND LEVEL
- MEAN HIGH WATER SPRING (MHWS)
- MEAN LOW WATER SPRING (MLWS)

NOTES

1. DRAWING IS FOR INDICATIVE PURPOSES ONLY
2. 600mm Ø PILES SHOWN INDICATIVELY IN 5m x 5m ARRANGEMENT. FINAL ARRANGEMENT, DIAMETER AND DEPTH OF PILES TO BE CONFIRMED AT DETAILED DESIGN STAGE.
3. JETTY DECK SHOWN INDICATIVELY AS 600mm DEEP PRE-FABRICATED STEEL BRIDGE. FINAL ARRANGEMENT TO BE CONFIRMED AT DETAILED DESIGN STAGE.
4. MAKEUP OF EXISTING A83 UNKNOWN AT THIS STAGE.
5. TRANSPORT VEHICLE TO CROSS A83 SUBJECT TO TRAFFIC MANAGEMENT.

APPROVED FOR ISSUE

A	AC	DL	
I/R	DRAWN BY	CHECKED	APPROVED

ISSUE/REVISION

A	09.11.2023	DESIGN FREEZE
I/R	DATE	DESCRIPTION

SHEET TITLE

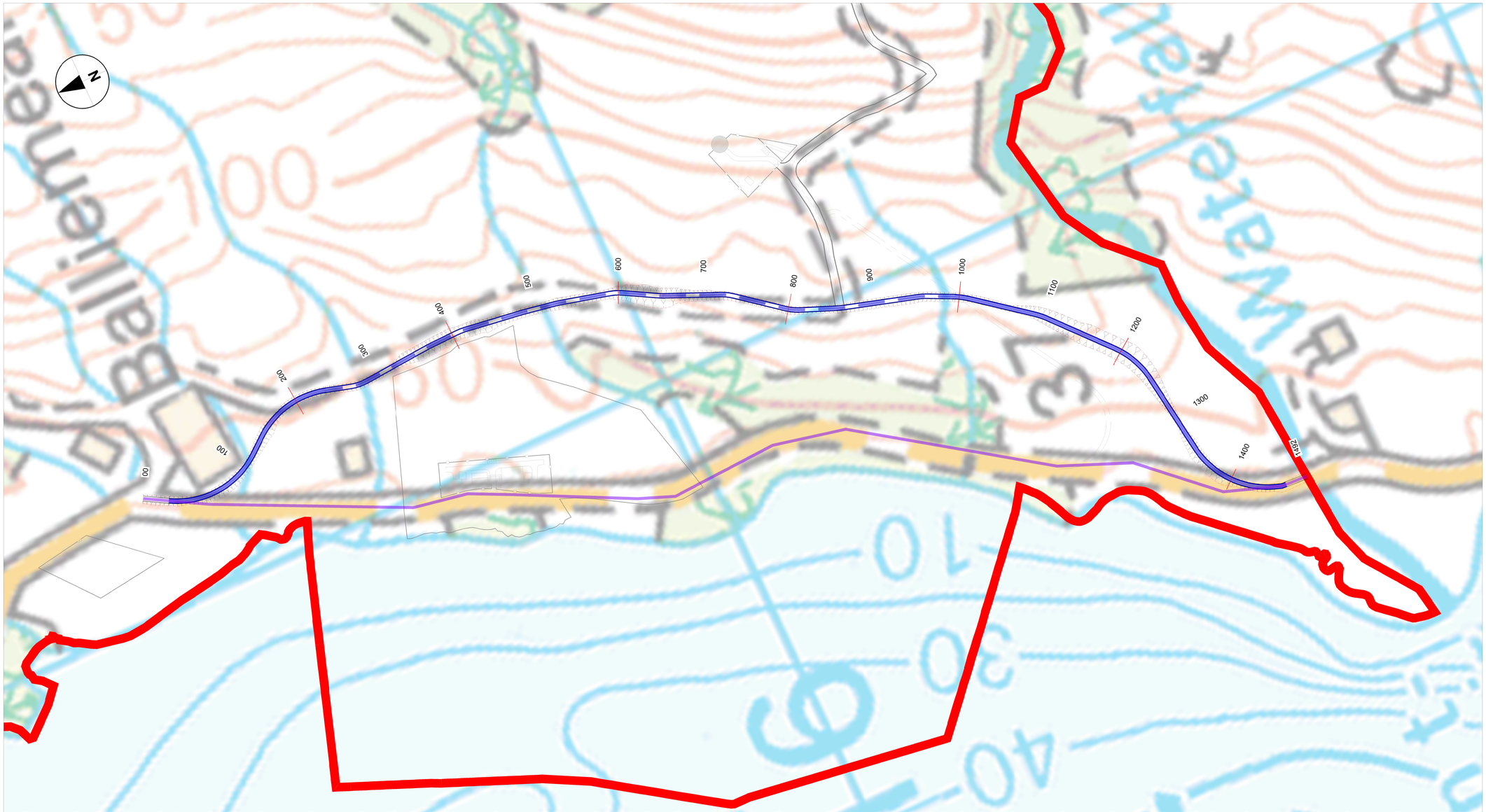
BALLIEMEANOCH PSH
ZONE 2 - TEMPORARY JETTY
PLAN & SECTION

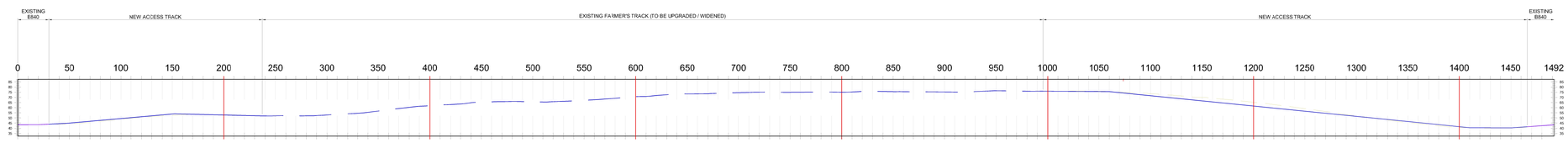
SHEET NUMBER

S03-Z2-06-DR-CE-326301

Project Management Initials: Designer: AC Checked: DL Approved:
Last saved by: AARON.CLEGHORN (2023-11-09) Last Plotted: 2023-12-07 AutoCAD Version: 24.1S (LMS TECH)
Filename: C:\PWWORKING\AECOM_DS\09_UK_2020\DMS7/6682\S03-Z2-06-DR-CE-326301.DWG

Annex H - B840 Realignment





GRADIENTS @ 200m INCREMENTS			
RANGE	**Level 1 (mAOD)**	**Level 2 (mAOD)**	**GRADIENT (%)**
0 - 200m	43.7	53	4.7
200m - 400m	53	61.8	4.4
400m - 600m	61.8	71	4.6
600m - 800m	71	75	2
800m - 1,000m	75	76	2.5
1,000m - 1,200m	76	61.6	(-) 7.2
1,200m - 1,400m	61.6	41.6	(-) 10
1,400m - 1,492m	41.6	43.4	(-) 2

A | B840 DIVERSION LONGSECTION

1:2500m

NOT FOR CONSTRUCTION

FOR INFORMATION ONLY

AECOM

PROJECT

Balliemeanoch
Pumped Storage Hydro

CLIENT

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LEGEND

- RED LINE BOUNDARY
- EXISTING B840 PUBLIC ROAD
- B840 DIVERSION - NEW ACCESS TRACK
- B840 DIVERSION - NEW ACCESS TRACK
- EARTHWORKS EXTENT
- CUT/FILL TADPOLES
- TRACK / DITCH EXTENTS

NOTES

1. DRAWING IS FOR INDICATIVE PURPOSES ONLY
2. EXISTING FARMER'S TRACK TO BE WIDENED TO ACCOMMODATE TEMPORARY B-ROAD TRAFFIC
3. ALIGNMENTS BASED ON 5m DTM AND OS MASTERMAP. ANY DISCREPANCIES BASED ON MAPPING IS PURELY VISUAL
4. ACCESS TRACK TO THE NORTH SHOWN INDICATIVELY FOR REFERENCE

0 62.5 125 m
1:2500

APPROVED FOR ISSUE

A	AC	ST	
I/R	DRAWN BY	CHECKED	APPROVED

ISSUE/REVISION

I/R	DATE	DESCRIPTION

SHEET TITLE

BALLIEMEANOCH PSH
B840 ROAD DIVERSION PLAN & LONG SECTION

SHEET NUMBER

S03-Z1-02-DR-CE-312301

Project Management Initials: Designer: AC Checked: ST Approved: ____

Last saved by: AARON.CLEGHORN(2024-01-16) Last Plotted: 2024-01-16 AutoCAD Version: 24.1S (LMS TECH)
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Annex I - Fear and Intimidation

Baseline Fear and Intimidation Level

Road Link	18 Hour Flow	Average traffic flow over 18 hour day	Total 18-hour heavy vehicle flow	Average Vehicle Speed	Degree of Hazard Score A	Degree of Hazard Score B	Degree of Hazard Score C	Degree of Hazard Score Total	Level of Fear and Intimdiation	Magnitude of Change
A85 Taynuilt	5,078	282	157	33	0	0	20	20	Small	
A85 West	4,361	242	131	47	0	0	30	30	Moderate	
A85 East	3,874	215	134	43	0	0	30	30	Moderate	
B840 Cladich	351	20	8	24	0	0	10	10	Small	
A819 Dalmally	1,605	89	65	49	0	0	30	30	Moderate	
Site Access Track	0	0	0	0	0	0	0	0	Small	
A819 Site Access	1,658	92	68	52	0	0	30	30	Moderate	
A819 Inveraray	1,664	92	65	55	0	0	30	30	Moderate	
A819 Inveraray Town Centre	1,807	100	66	40	0	0	20	20	Small	
Inveraray Bypass	0	0	0	0	0	0	0	0	Small	
A83 Aray Bridge	4,202	233	173	34	0	0	20	20	Small	
A83 Garron Bridge	4,096	228	160	49	0	0	30	30	Moderate	
A83 Rest and Be Thankful	4,573	254	239	41	0	0	30	30	Moderate	
A815 Strachur	2,295	128	91	39	0	0	20	20	Small	
A83 Inveraray Town Centre	3,666	204	44	25	0	0	10	10	Small	
Upper Avenue AIL Route	0	0	0	0	0	0	0	0	Small	
A83 Lochgilphead	3,434	191	168	46	0	0	30	30	Moderate	
B840 Ford	171	10	2	25	0	0	10	10	Small	

Proposed Development Magnitude of Change

Road Link	18 Hour Flow	Average traffic flow over 18 hour day	Total 18-hour heavy vehicle flow	Average Vehicle Speed	Degree of Hazard Score A	Degree of Hazard Score B	Degree of Hazard Score C	Degree of Hazard Score Total	Level of Fear and Intimdiation	Magnitude of Change
A85 Taynuilt	5,722	318	647	33	0	0	20	20	Small	Negligible
A85 West	5,005	278	621	47	0	0	30	30	Moderate	Negligible
A85 East	4,518	251	624	43	0	0	30	30	Moderate	Negligible
B840 Cladich	505	28	8	24	0	0	10	10	Small	Negligible
A819 Dalmally	2,249	125	555	49	0	0	30	30	Moderate	Negligible
Site Access Track	644	36	490	0	0	0	0	0	Small	Negligible
A819 Site Access	2,302	128	558	52	0	0	30	30	Moderate	Negligible
A819 Inveraray	2,308	128	555	55	0	0	30	30	Moderate	Negligible
A819 Inveraray Town Centre	1,961	109	66	40	0	0	20	20	Small	Negligible
Inveraray Bypass	490	27	490	0	0	0	0	0	Small	Negligible
A83 Aray Bridge	4,356	242	173	34	0	0	20	20	Small	Negligible
A83 Garron Bridge	4,740	263	650	49	0	0	30	30	Moderate	Negligible
A83 Rest and Be Thankful	5,217	290	729	41	0	0	30	30	Moderate	Negligible
A815 Strachur	2,939	163	581	39	0	0	20	20	Small	Negligible
A83 Inveraray Town Centre	3,820	212	44	25	0	0	10	10	Small	Negligible
Upper Avenue AIL Route	0	0	0	0	0	0	0	0	Small	Negligible
A83 Lochgilphead	4,078	227	658	46	0	0	30	30	Moderate	Negligible
B840 Ford	325	18	2	25	0	0	10	10	Small	Negligible

Cumulative Development Magnitude of Change

Road Link	18 Hour Flow	Average traffic flow over 18 hour day	Total 18-hour heavy vehicle flow	Average Vehicle Speed	Degree of Hazard Score A	Degree of Hazard Score B	Degree of Hazard Score C	Degree of Hazard Score Total	Level of Fear and Intimdiation	Magnitude of Change
A85 Taynuilt	6,540	363	1,322	33	0	10	20	30	Moderate	Medium
A85 West	6,021	335	1,420	47	0	10	30	40	Moderate	Negligible
A85 East	5,773	321	1,464	43	0	10	30	40	Moderate	Negligible
B840 Cladich	516	29	6	24	0	0	10	10	Small	Negligible
A819 Dalmally	3,439	191	1,283	49	0	10	30	40	Moderate	Negligible
Site Access Track	644	36	490	0	0	0	0	0	Small	Negligible
A819 Site Access	3,853	214	1,503	52	0	10	30	40	Moderate	Negligible
A819 Inveraray	3,859	214	1,496	55	0	10	30	40	Moderate	Negligible
A819 Inveraray Town Centre	3,545	197	1,007	40	0	10	20	30	Moderate	Low
Inveraray Bypass	490	27	490	0	0	0	0	0	Small	Negligible
A83 Aray Bridge	5,223	290	608	34	0	0	20	20	Small	Negligible
A83 Garron Bridge	5,612	312	1,081	49	0	10	30	40	Moderate	Negligible
A83 Rest and Be Thankful	5,374	299	866	41	0	0	30	30	Moderate	Negligible
A815 Strachur	3,124	174	618	39	0	0	20	20	Small	Negligible
A83 Inveraray Town Centre	4,886	271	550	25	0	0	10	10	Small	Negligible
A83 Lochgilphead	5,116	284	1,329	46	0	10	30	40	Moderate	Negligible
B840 Ford	341	19	2	25	0	0	10	10	Small	Negligible

Annex J - Swept Path Analysis

ISO A0 841mm x 1189mm | Project Management Initials: | Designer: CH | Checked: DD | Approved: | Last saved by: HATTONCM | Last Plotted: 2024-02-27

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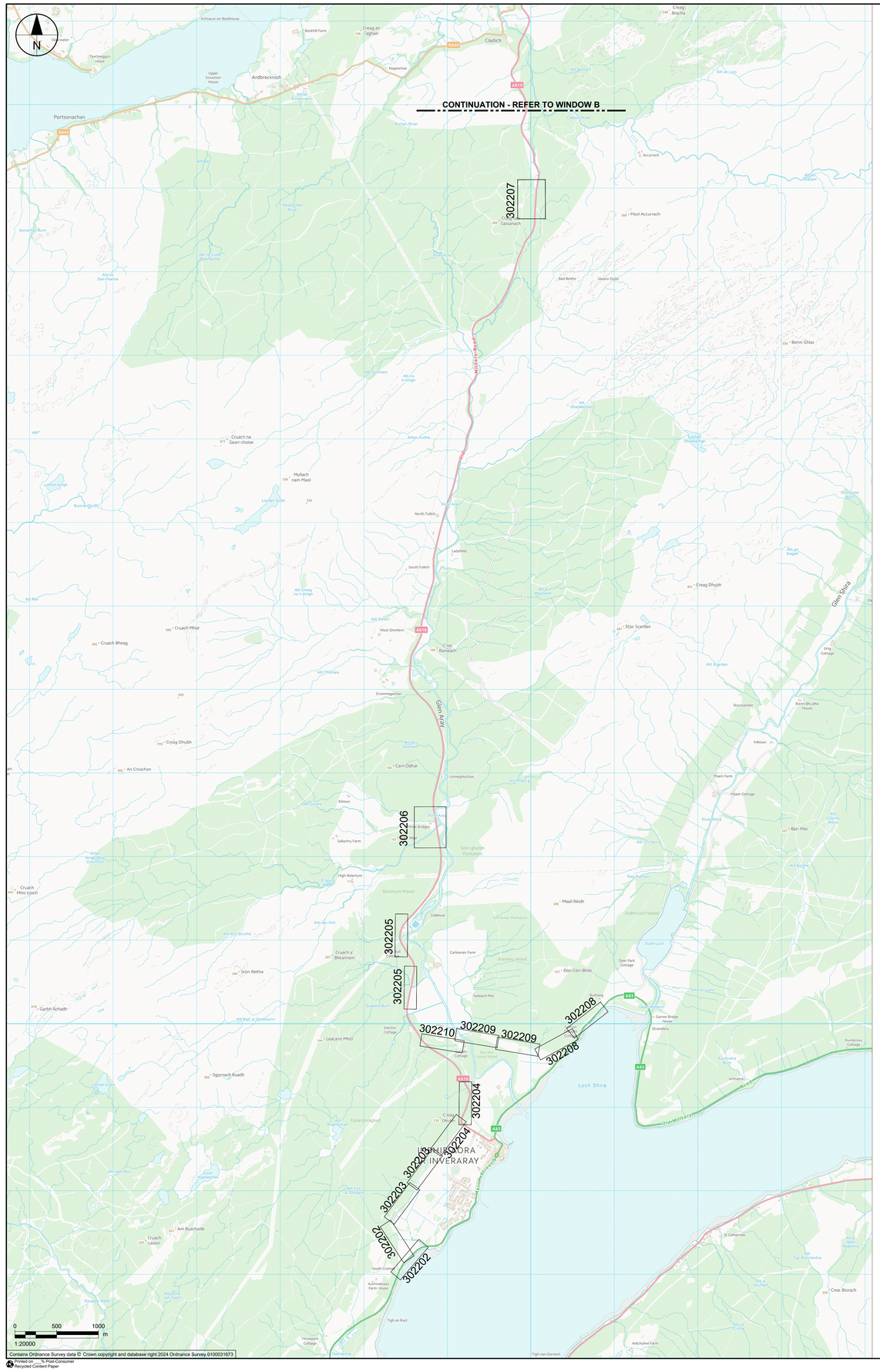

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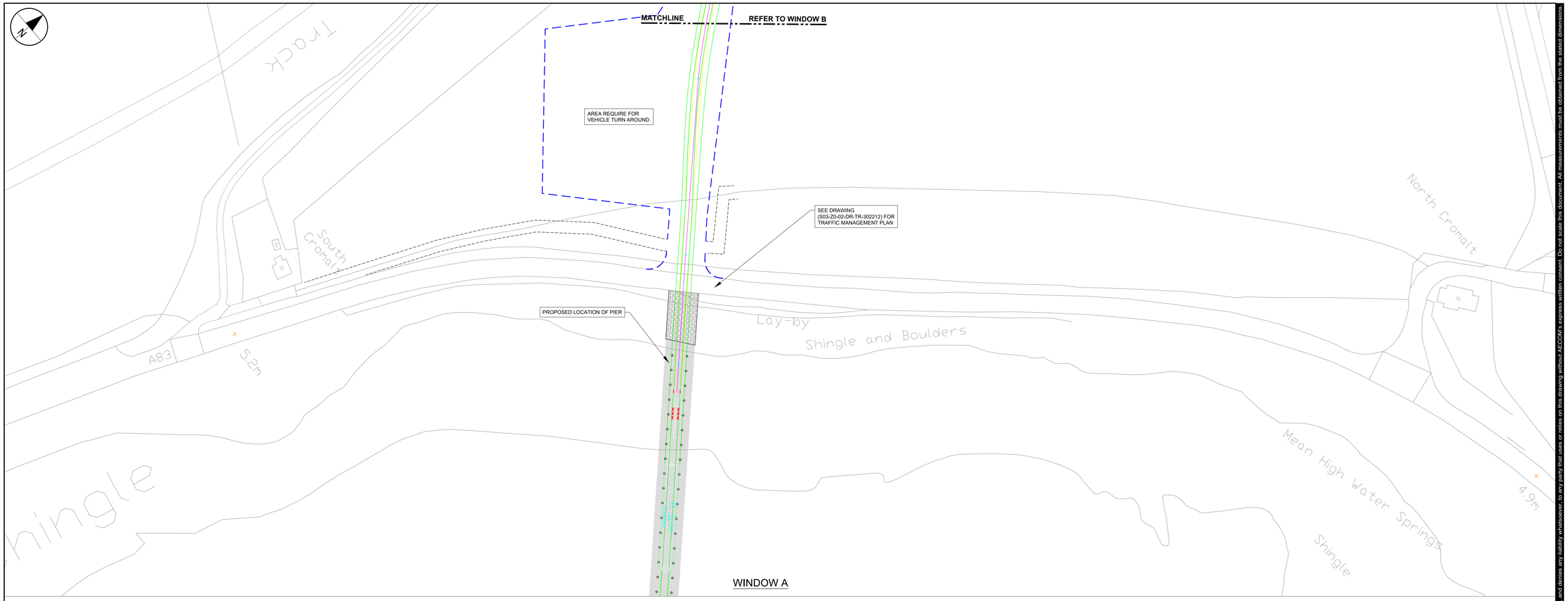
ROUTE OVER VIEW SHEET PLAN

SHEET NUMBER

S03-Z0-02-DR-TR-302201



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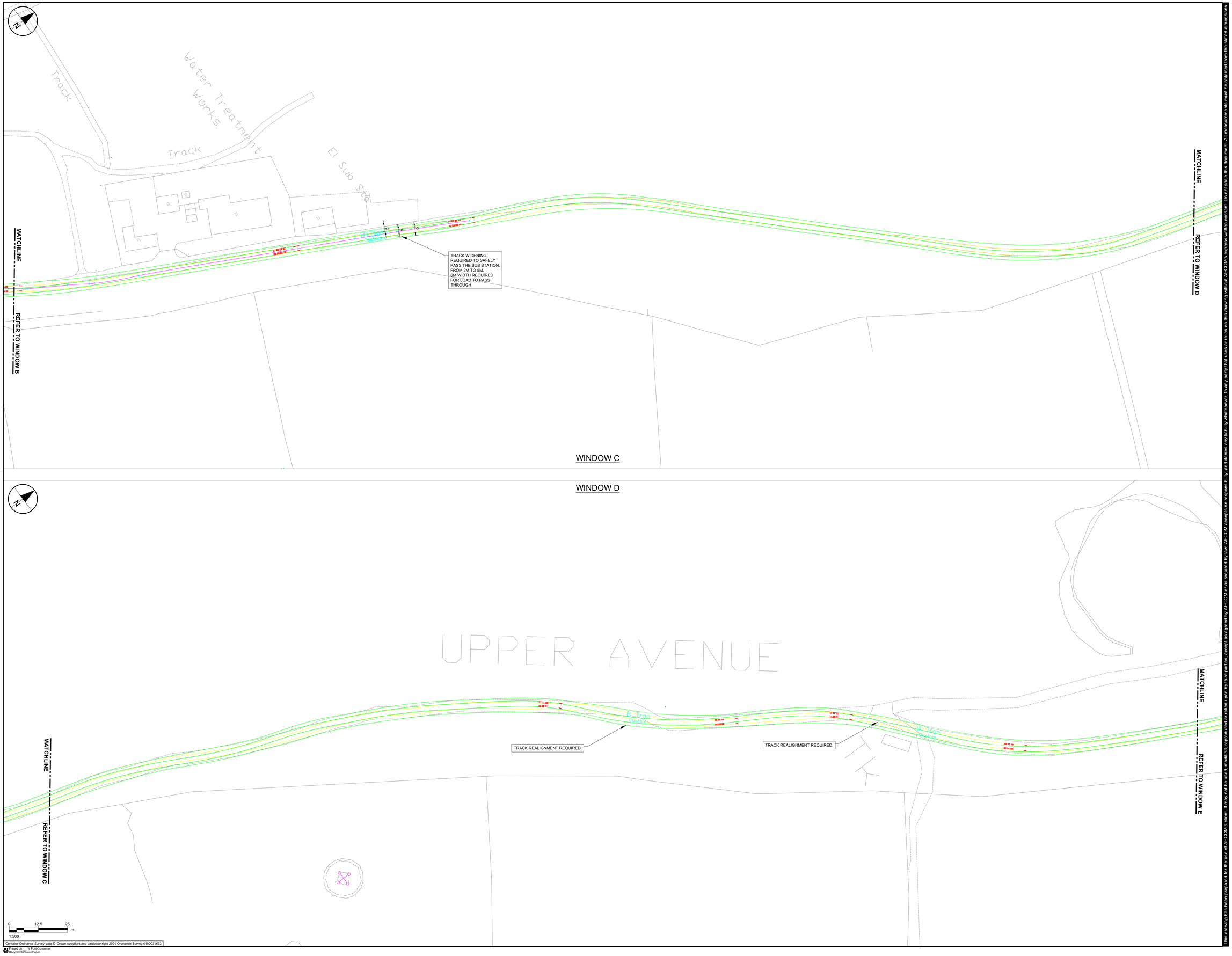

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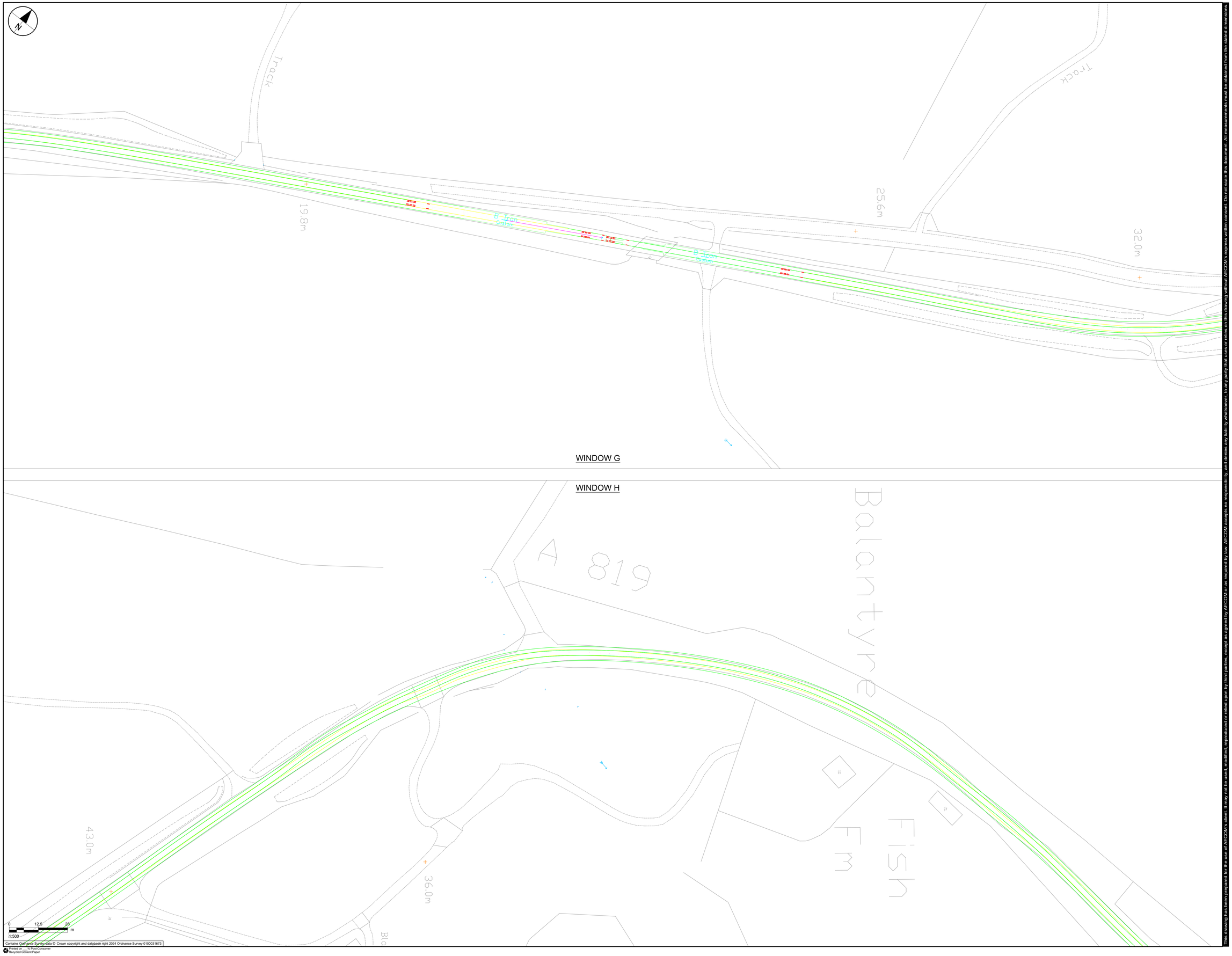

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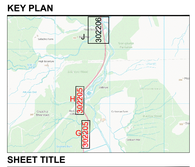

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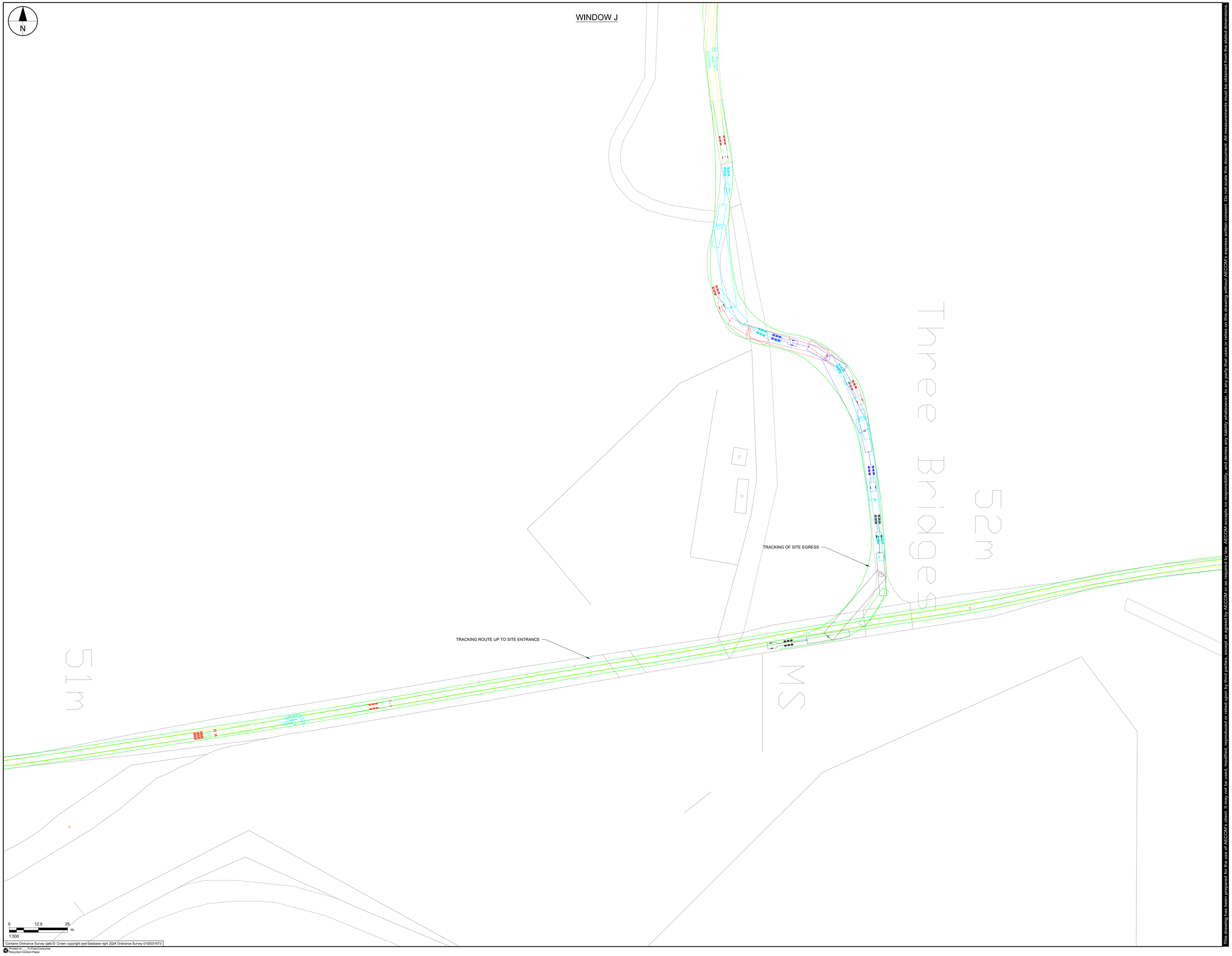
WINDOW J



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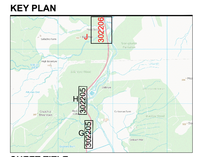

SHEET TITLE

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SHEET NUMBER

S03-Z0-02-DR-TR-302206

Project Management Initials: Designer: CH Checked: DD Approved: ISO A0 841mm x 1189mm

N

WINDOW K
VEHICLE ACCESS UP SITE ENTRY

TRACKING ROUTE UP TO SITE ENTRANCE

WINDOW L
VEHICLE TURNING INTO SITE ENTRY

WINDOW M
LIEBHER LATTICE CRANE
TURNING INTO SITE ENTRY

A 819

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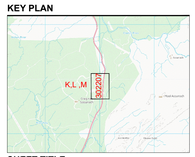

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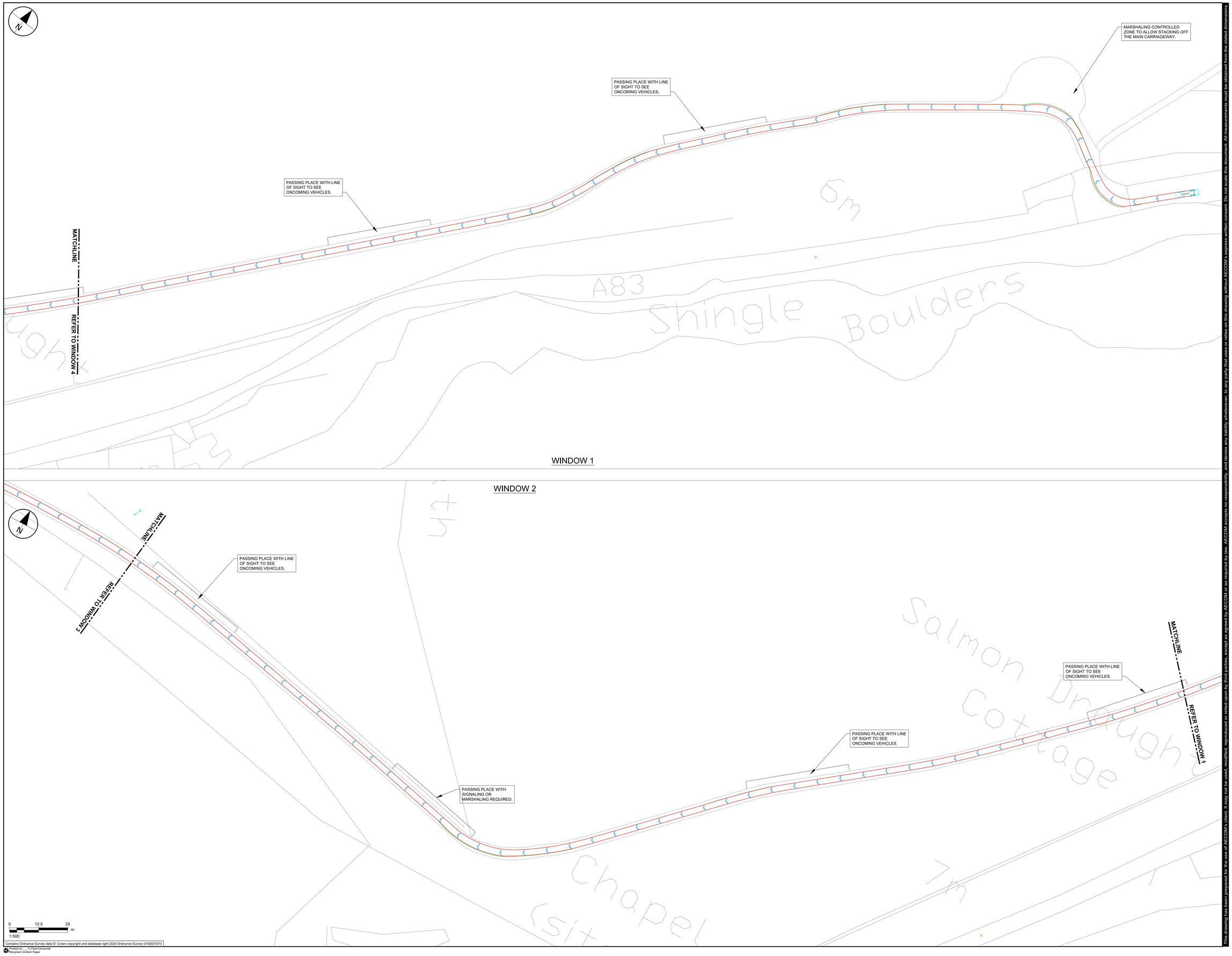

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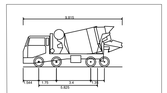

Concrete Mixer 8m3

Overall Length	9.815m
Overall Width	2.469m
Overall Body Height	4.027m
Min Body Ground Clearance	0.358m
Track Width	2.469m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.000m

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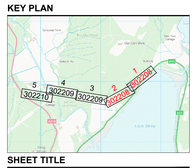

SHEET TITLE

A85-A819
TRACKING

SHEET NUMBER

S03-Z0-02-DR-TR-302208

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WINDOW 3

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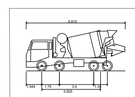

Concrete Mixer 8m3

Overall Length	9.815m
Overall Width	2.469m
Overall Body Height	4.027m
Min Body Ground Clearance	0.358m
Track Width	2.469m
Lock to lock time	5.00s
Kerb to Kerb Turning Radius	11.000m

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KEY PLAN

SHEET TITLE

A85-A819
TRACKING

SHEET NUMBER

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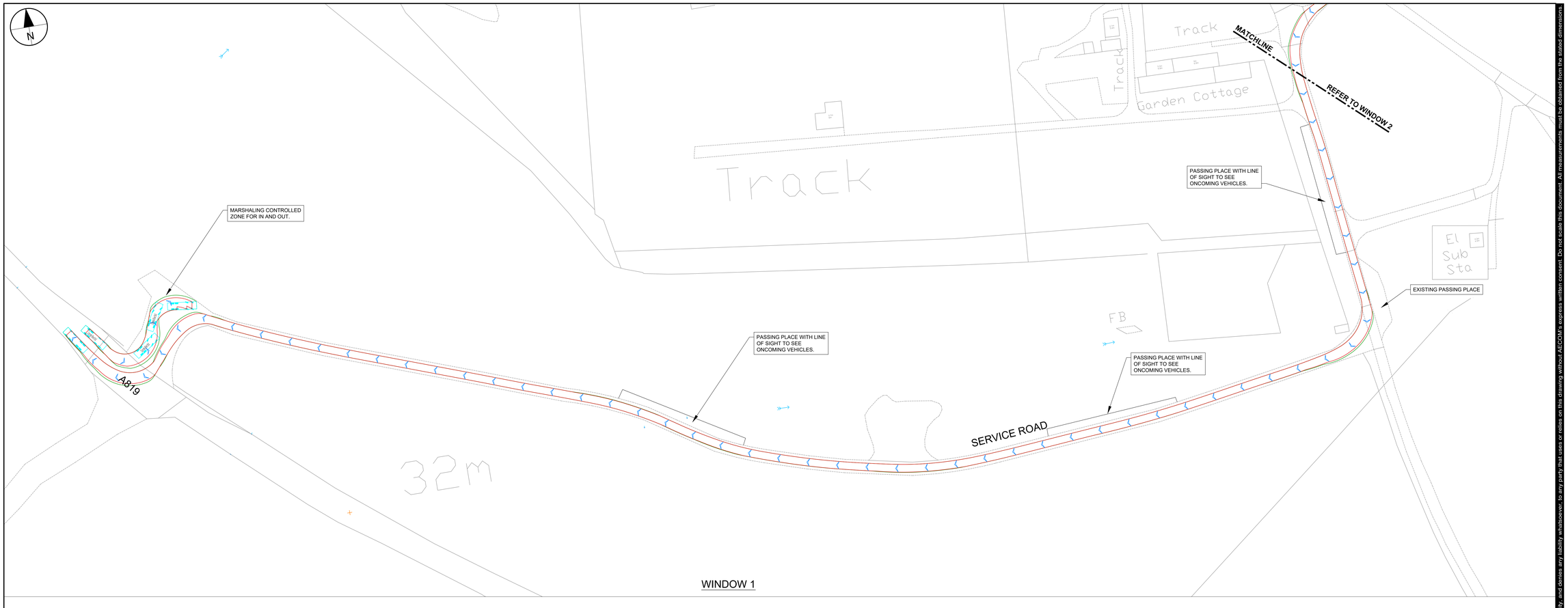

WINDOW 1

0 12.5 25 m

1:500

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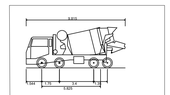

Concrete Mixer 8m3

Overall Length	9.815m
Overall Width	2.469m
Overall Body Height	4.027m
Min Body Ground Clearance	0.358m
Track Width	2.469m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.000m

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A85-A819
TRACKING

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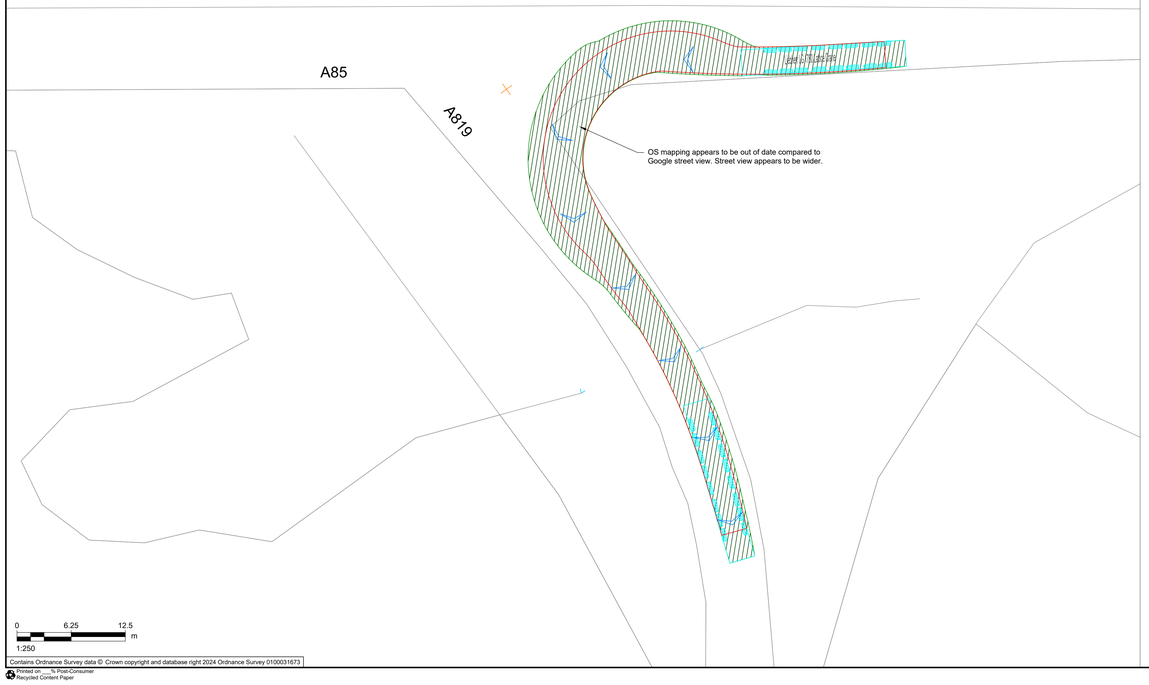
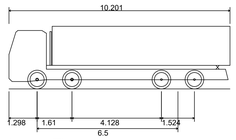
S03-Z0-02-DR-TR-302210

Large Tipper

Large Tipper

Liebher Lattice Crane

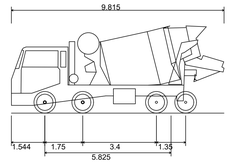




Large Tipper

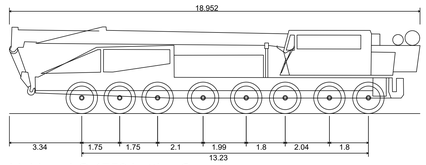
Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

Large Tipper



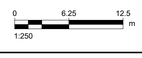
Concrete Mixer 8m3

Overall Length	9.815m
Overall Width	2.469m
Overall Body Height	4.027m
Min Body Ground Clearance	0.358m
Track Width	2.469m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.000m



Liebherr LG 1750 Lattice Crane

Overall Length	18.952m
Overall Width	3.000m
Overall Body Height	4.000m
Min Body Ground Clearance	0.715m
Track Width	3.000m
Lock to lock time	5.00s
Kerb to Kerb Turning Radius	12.977m



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PROJECT

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Pumped Storage Hydro

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ISSUE/REVISION

I/R	DATE	DESCRIPTION
A	2024-02-26	FIRST ISSUE

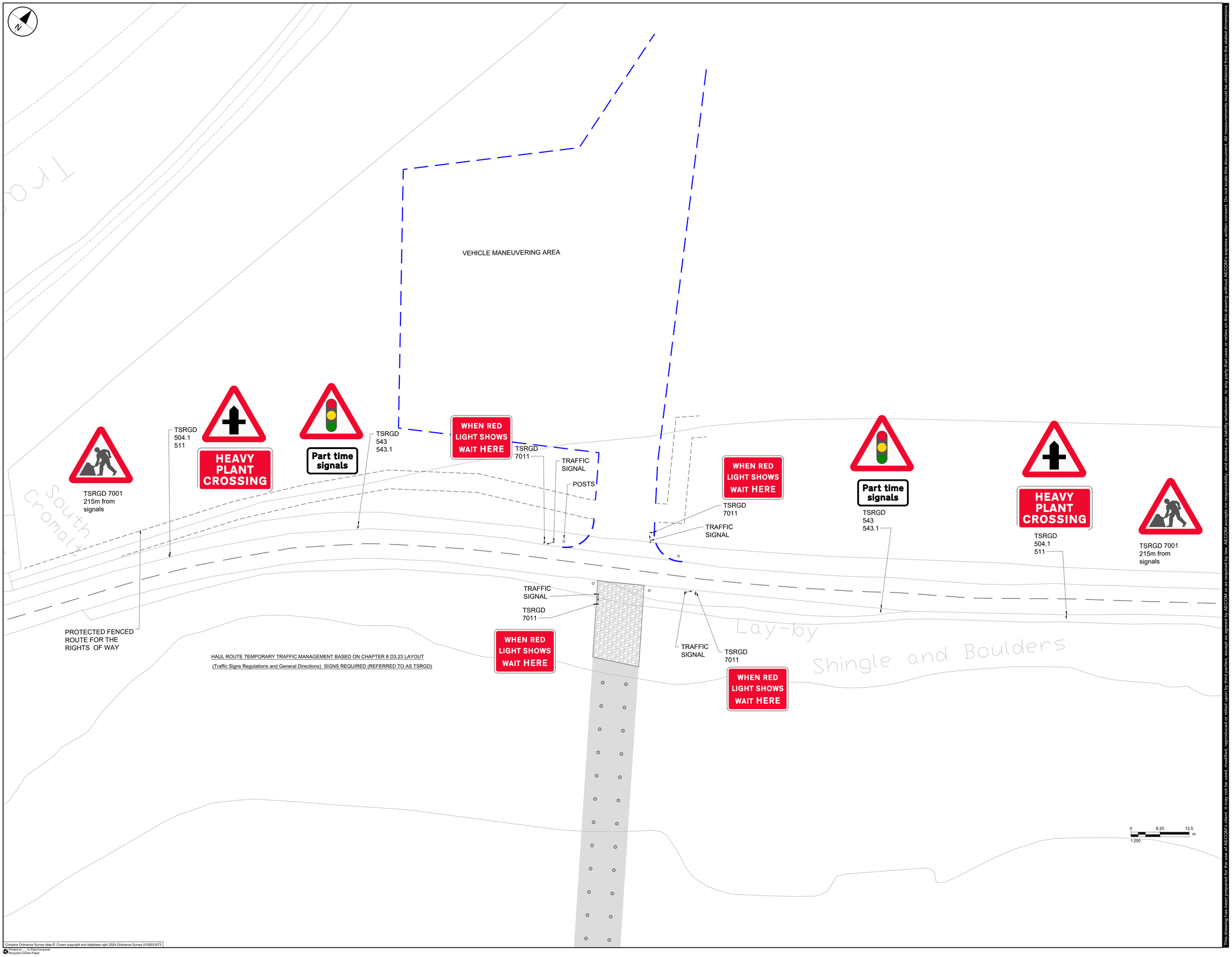
KEY PLAN

SHEET TITLE

JUNCTION A85-A819
VEHCILE TRACKING

SHEET NUMBER

S03-Z0-02-DR-TR-302211



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ISSUE/REVISION

IR	DATE	DESCRIPTION
A	2024-02-26	FIRST ISSUE

KEY PLAN

SHEET TITLE

A83 PIER TRAFFIC MANAGEMENT

SHEET NUMBER

S03-Z0-02-DR-TR-302212

Annex K – Cumulative Development

Road Link	Cruachan II Hydro Scheme			Blarghour Wind Farm			Upper Sonachan Wind Farm			Ladyfield Wind Farm		
	HGVs	Cars / Vans	Total	HGVs	Cars / Vans	Total	HGVs	Cars / Vans	Total	HGVs	Cars / Vans	Total
A85 Taynuilt	320	0	320	76	0	76	0	0	0	267	128	395
A85 West	464	0	464	76	0	76	0	0	0	267	128	395
A85 East	320	0	320	76	0	76	0	0	0	267	128	395
B840 Cladich	0	0	0	0	0	0	0	0	0	0	0	0
A819 Dalmally	0	0	0	108	0	108	180	0	180	267	128	395
Site Access Track	0	0	0	0	0	0	0	0	0	0	0	0
A819 Site Access	0	0	0	108	0	108	180	0	180	267	128	395
A819 Inveraray	0	0	0	108	0	108	180	0	180	267	128	395
A819 Inveraray Town	0	0	0	108	0	108	180	0	180	267	128	395
Inveraray Bypass	0	0	0	0	0	0	0	0	0	0	0	0
A83 Aray Bridge	0	0	0	54	0	54	0	0	0	0	0	0
A83 Garron Bridge	0	0	0	54	0	54	0	0	0	0	0	0
A83 Rest and Be Thankful	0	0	0	54	0	54	0	0	0	0	0	0
A815 Strachur	0	0	0	0	0	0	0	0	0	0	0	0
Upper Avenue AIL Route	0	0	0	0	0	0	0	0	0	0	0	0
A83 Inveraray	0	0	0	54	0	54	0	0	0	267	128	395
A83 Lochgilphead	0	0	0	54	0	54	0	0	0	267	128	395
B840 Ford	0	0	0	0	0	0	0	0	0	0	0	0

Road Link	Inveraray to Taynuilt (ITE/ITW) Tie-In to Creag Dhubh Substation			An Suidhe Substation Overhead Line Connection			Creag Dhubh to Dalmally OHL			Creag Dhubh – Inveraray OHL		
	HGVs	Cars / Vans	Total	HGVs	Cars / Vans	Total	HGVs	Cars / Vans	Total	HGVs	Cars / Vans	Total
A85 Taynuilt	0	0	0	0	0	0	0	0	0	0	0	0
A85 West	0	0	0	0	0	0	0	0	0	0	0	0
A85 East	10	0	10	0	0	0	82	150	232	0	0	0
B840 Cladich	0	0	0	0	0	0	0	0	0	0	0	0
A819 Dalmally	10	0	10	0	0	0	82	150	232	0	0	0
Site Access Track	0	0	0	0	0	0	0	0	0	0	0	0
A819 Site Access	10	0	10	0	0	0	82	150	232	0	0	0
A819 Inveraray	0	0	0	0	0	0	0	0	0	0	0	0
A819 Inveraray Town	10	0	10	0	0	0	82	150	232	0	0	0
Inveraray Bypass	0	0	0	0	0	0	0	0	0	0	0	0
A83 Aray Bridge	10	0	10	0	0	0	82	150	232	74	40	114
A83 Garron Bridge	10	0	10	0	0	0	82	150	232	74	40	114
A83 Rest and Be Thankful	0	0	0	0	0	0	0	0	0	0	0	0
A815 Strachur	0	0	0	0	0	0	0	0	0	0	0	0
Upper Avenue AIL Route	0	0	0	0	0	0	0	0	0	0	0	0
A83 Inveraray	0	0	0	0	0	0	0	0	0	0	0	0
A83 Lochgilphead	0	0	0	0	0	0	0	0	0	74	40	114
B840 Ford	0	0	0	0	0	0	0	0	0	0	0	0

Road Link	An Carr Dubh Wind Farm			33kv Overhead Line - ETU 166 - Dalmally			Creag Dhubh Substation			Inverary to Crossaig OHL		
	HGVs	Cars / Vans	Total	HGVs	Cars / Vans	Total	HGVs	Cars / Vans	Total	HGVs	Cars / Vans	Total
A85 Taynuilt	0	0	0	0	0	0	0	0	0	0	0	0
A85 West	0	0	0	0	0	0	0	0	0	0	0	0
A85 East	0	0	0	0	0	0	54	150	204	0	0	0
B840 Cladich	0	0	0	0	0	0	0	0	0	0	0	0
A819 Dalmally	0	0	0	0	0	0	54	150	204	0	0	0
Site Access Track	0	0	0	0	0	0	0	0	0	0	0	0
A819 Site Access	100	58	158	0	0	0	54	150	204	118	69	187
A819 Inveraray	0	0	0	0	0	0	0	0	0	0	0	0
A819 Inveraray Town	100	58	158	0	0	0	54	150	204	118	69	187
Inveraray Bypass	0	0	0	0	0	0	0	0	0	0	0	0
A83 Aray Bridge	100	58	158	0	0	0	54	150	204	0	0	0
A83 Garron Bridge	100	58	158	0	0	0	54	150	204	0	0	0
A83 Rest and Be Thankful	0	0	0	0	0	0	0	0	0	0	0	0
A815 Strachur	0	0	0	0	0	0	0	0	0	0	0	0
Upper Avenue AIL Route	100	0	100	0	0	0	0	0	0	0	0	0
A83 Inveraray	0	0	0	0	0	0	0	0	0	0	0	0
A83 Lochgilphead	100	58	158	0	0	0	0	0	0	118	69	187
B840 Ford	0	0	0	0	0	0	0	0	0	0	0	0

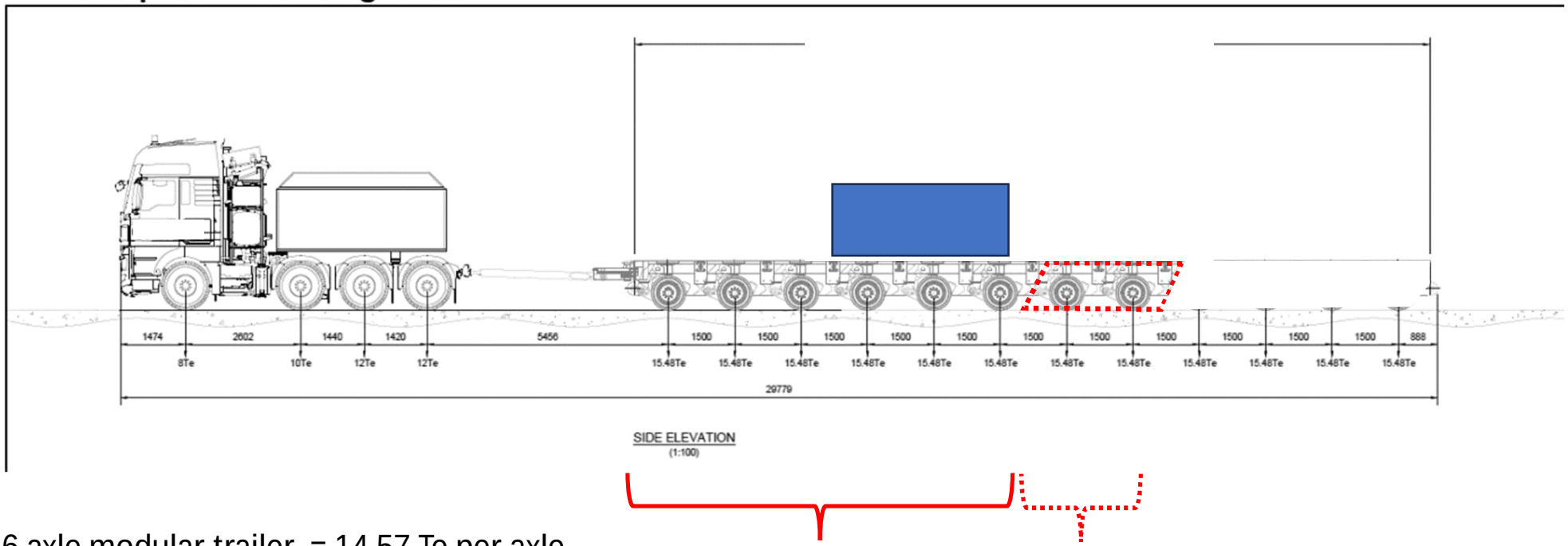
Road Link	An Suidhe Substation			Total		
	HGVs	Cars / Vans	Total	HGVs	Cars / Vans	Total
A85 Taynuilt	0	0	0	663	128	791
A85 West	0	0	0	807	128	935
A85 East	0	0	0	809	428	1237
B840 Cladich	0	0	0	0	0	0
A819 Dalmally	0	0	0	701	428	1129
Site Access Track	0	0	0	0	0	0
A819 Site Access	0	0	0	919	555	1474
A819 Inveraray	0	0	0	555	128	683
A819 Inveraray Town	0	0	0	919	555	1474
Inveraray Bypass	0	0	0	0	0	0
A83 Aray Bridge	0	0	0	374	398	772
A83 Garron Bridge	0	0	0	374	398	772
A83 Rest and Be Thankful	0	0	0	54	0	54
A815 Strachur	0	0	0	0	0	0
Upper Avenue AIL Route	0	0	0	100	0	100
A83 Inveraray	0	0	0	321	128	449
A83 Lochgilphead	0	0	0	613	295	908
B840 Ford	0	0	0	0	0	0

Annex L- Axle Loadings

Component	No. Units	Estimated Size (m) [L x W x H]	Appx Weight (t)
Turbine Head Cover	4	4.5 x 4.5 x 2.5	70
Generator Shaft	4	11	90
Stator Frame	4	7 x 5 x 5	55
Generator Hub	4	4 x 4 x 4	165
Transformer	4	12 x 8 x 6	280
Powerhouse Crane	2	25 x 3 x 3	55

Turbine Head Cover	4	4.5 x 4.5 x 2.5	70

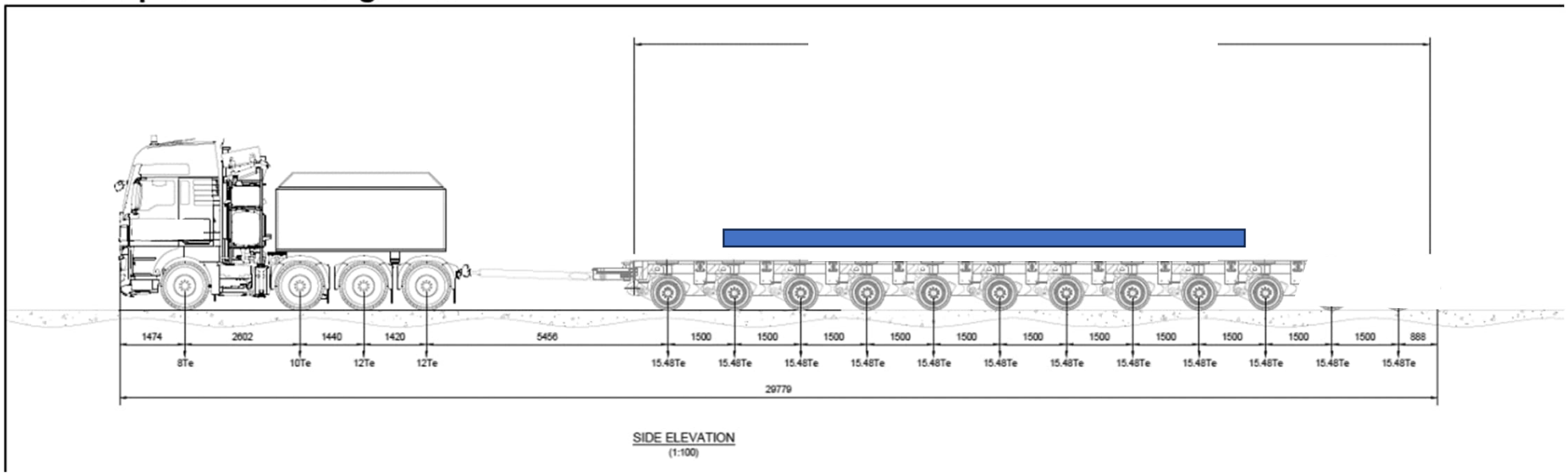
2.2. Transportation Arrangement



6 axle modular trailer = 14.57 Te per axle
8 axle modular trailer = 11.65 Te per axle.

Generator Shaft	4	11	90

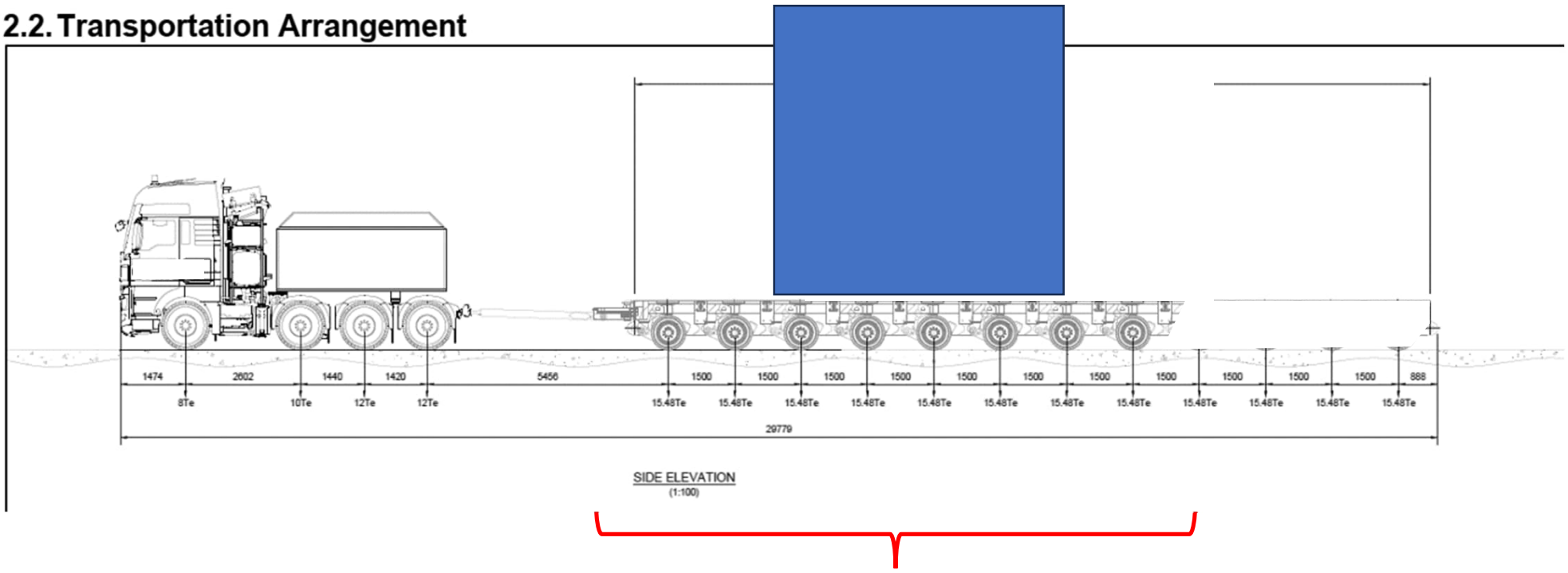
2.2. Transportation Arrangement



10 axle modular trailer = 11.90 Te per axle

Stator Frame	4	7 x 5 x 5	55

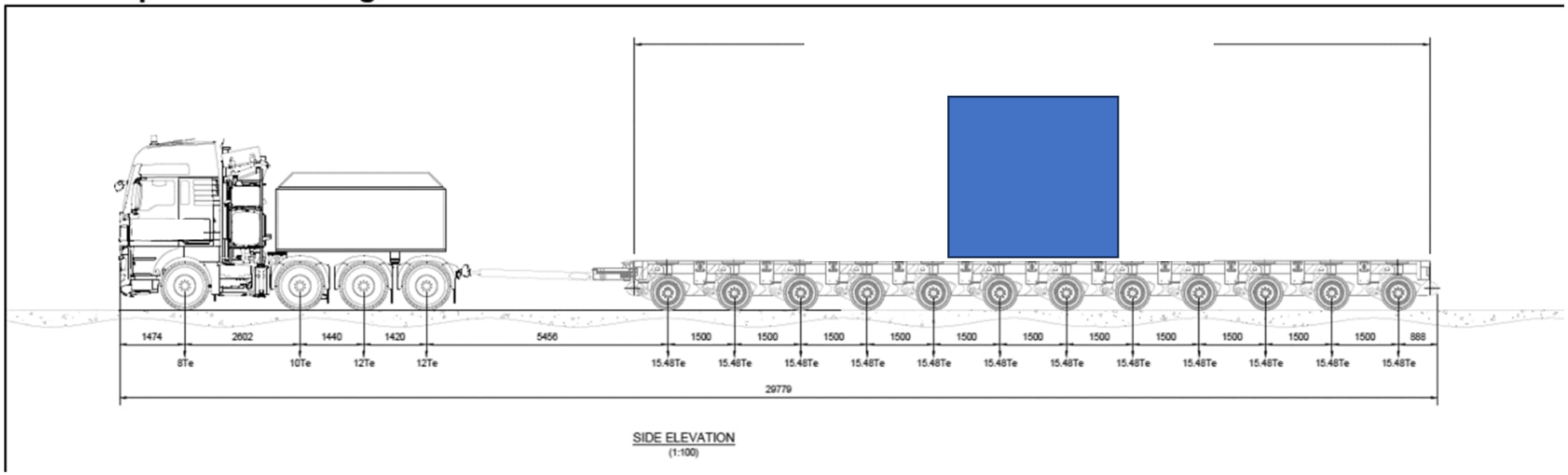
2.2. Transportation Arrangement



8 axle modular trailer = 9.77 Te per axle

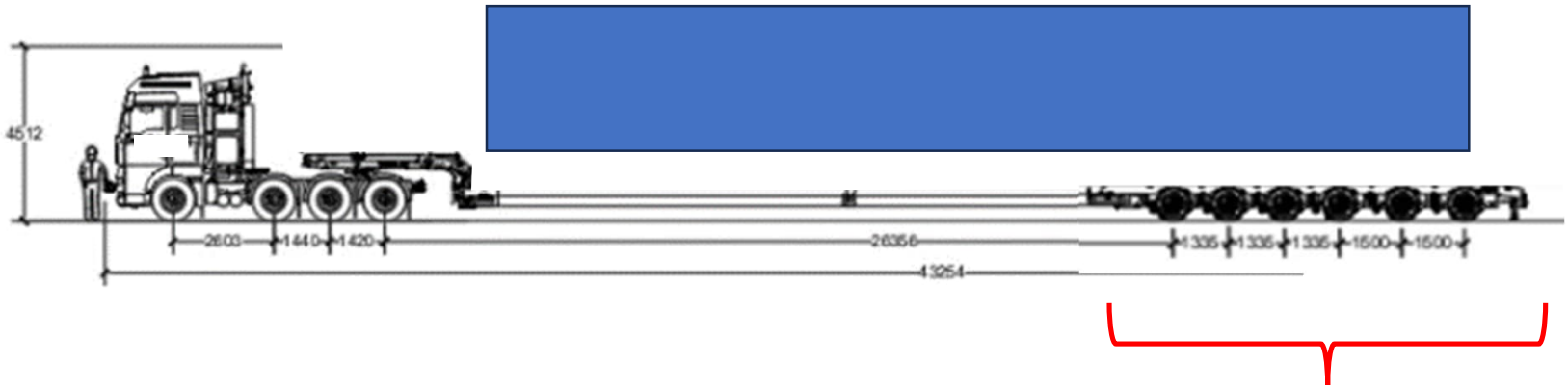
Generator Hub	4	4 x 4 x 4	165

2.2. Transportation Arrangement



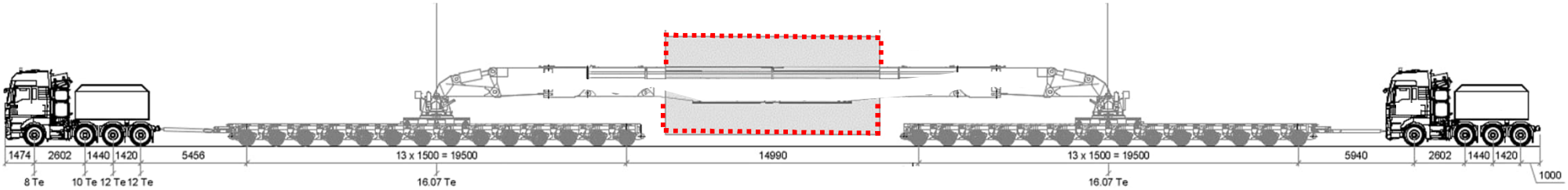
12 axle modular trailer = 16.65 Te per axle

Powerhouse Crane	2	25 x 3 x 3	55



6 axle Step Trailer ~ 10.5 Te per axle

Transformer	4	12 x 8 x 6	280



Trailer Tare = 160 Te
Girder Trailer = 2 x Bogies @ 14 x axles per Bogie
Load per Bogie = (280 +160)/2 = 220 Te
Load per Axle = 220 / 14 = 15.7 Te
Ground Block Loading = 3.49 Te / m^2

Annex M – Accident Forecast

Road	Forecast Annual Injury Accidents by Severity (Cumulative Development)												
	Recorded 2018-2022			Link Length	Annual Flow	Vehicle Kms	Accidents Per Veh KM			Cumulative Development Additional KMs	Cumulative Development (Annual)		
	Slight	Serious	Fatal				Slight	Serious	Fatal		Slight	Serious	Fatal
A85 Taynuilt	7	8	1	16.8	1804560	30316608	4.6179E-08	5.2776E-08	6.597E-09	4874284.8	0.2	0.3	0.0
A85 West	0	0	0	0.65	1570230	1020649.5	0	0	0	270956.4	0.0	0.0	0.0
A85 East	0	0	0	2.7	1375685	3714349.5	0	0	0	645136.8	0.0	0.0	0.0
B840 Cladich	0	0	0	12.4	128115	1588626	0	0	0	40656	0.0	0.0	0.0
A819 Dalmally	1	5	0	10.6	588745	6240697	3.2048E-08	1.6024E-07	0	2773214.4	0.1	0.4	0.0
Site Access Track	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
A819 Site Access	0	3	0	8.1	613200	4966920	0	1.208E-07	0	2119154.4	0.0	0.3	0.0
A819 Inveraray	1	1	0	2.7	615390	1661553	1.2037E-07	1.2037E-07	0	706384.8	0.1	0.1	0.0
A819 Inveraray Town Centre	0	0	0	1.9	677440	1287136	0	0	0	419839.2	0.0	0.0	0.0
Inveraray Bypass	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
A83 Aray Bridge	1	2	0	2	1518765	3037530	6.5843E-08	1.3169E-07	0	109824	0.0	0.0	0.0
A83 Garron Bridge	3	3	0	3.6	1483360	5340096	1.1236E-07	1.1236E-07	0	344044.8	0.0	0.0	0.0
A83 Rest and Be Thankful	4	7	0	11.7	1652720	19336824	4.1372E-08	7.2401E-08	0	1118145.6	0.0	0.1	0.0
A815 Strachur	3	3	2	15.3	876730	13413969	4.4729E-08	4.4729E-08	2.982E-08	1244073.6	0.1	0.1	0.0
Upper Avenue AIL Route	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
A83 Inveraray Town Centre	0	0	0	1.2	1514020	1816824	0	0	0	191030.4	0.0	0.0	0.0
A83 Lochgilphead	0	0	0	1.5	1259615	1889422.5	0	0	0	299772	0.0	0.0	0.0
B840 Ford	0	0	0	21.7	66065	1433610.5	0	0	0	882235.2	0.0	0.0	0.0

Road	Forecast Annual Injury Accidents by Severity (Proposed Development)												
	Recorded 2018-2022			Link Length	Annual Flow	Vehicle Kms	Accidents Per Veh KM			Proposed Development Additional KMs	Proposed Development (Annual)		
	Slight	Serious	Fatal				Slight	Serious	Fatal		Slight	Serious	Fatal
A85 Taynuilt	7	8	1	16.8	1804560	30,316,608	4.6179E-08	5.2776E-08	6.597E-09	1,366,042	0.1	0.1	0.0
A85 West	0	0	0	0.65	1570230	1,020,650	0	0	0	52,853	0.0	0.0	0.0
A85 East	0	0	0	2.7	1375685	3,714,350	0	0	0	219,542	0.0	0.0	0.0
B840 Cladich	0	0	0	12.4	128115	1,588,626	0	0	0	504,134	0.0	0.0	0.0
A819 Dalmally	1	5	0	10.6	588745	6,240,697	3.2048E-08	1.6024E-07	0	861,907	0.0	0.1	0.0
Site Access Track	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
A819 Site Access	0	3	0	8.1	613200	4,966,920	0	1.208E-07	0	658,627	0.0	0.1	0.0
A819 Inveraray	1	1	0	2.7	615390	1,661,553	1.2037E-07	1.2037E-07	0	219,542	0.0	0.0	0.0
A819 Inveraray Town Centre	0	0	0	1.9	677440	1,287,136	0	0	0	77,246	0.0	0.0	0.0
Inveraray Bypass	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
A83 Aray Bridge	1	2	0	2	1518765	3,037,530	6.5843E-08	1.3169E-07	0	81,312	0.0	0.0	0.0
A83 Garron Bridge	3	3	0	3.6	1483360	5,340,096	1.1236E-07	1.1236E-07	0	292,723	0.0	0.0	0.0
A83 Rest and Be Thankful	4	7	0	11.7	1652720	19,336,824	4.1372E-08	7.2401E-08	0	951,350	0.0	0.1	0.0
A815 Strachur	3	3	2	15.3	876730	13,413,969	4.4729E-08	4.4729E-08	2.982E-08	1,244,074	0.1	0.1	0.0
Upper Avenue AIL Route	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
A83 Inveraray Town Centre	0	0	0	1.2	1514020	1,816,824	0	0	0	48,787	0.0	0.0	0.0
A83 Lochgilphead	0	0	0	1.5	1259615	1,889,423	0	0	0	121,968	0.0	0.0	0.0
B840 Ford	0	0	0	21.7	66065	1,433,611	0	0	0	882,235	0.0	0.0	0.0

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