A82 Tarbet to Inverarnan

Welcome

This exhibition provides an overview of the route option assessment work Transport Scotland has been taking forward for the A82 Tarbet to Inverarnan upgrade project and presents the preferred route option.

Transport Scotland staff and their consultants will be happy to assist you with any queries you may have in relation to the scheme.

A leaflet summarising the exhibition is available for you to take away, as well as a feedback form where we welcome your comments.

Further information is available on the Transport Scotland website:
www.transportscotland.gov.uk/project/a82-tarbet-inverarnan-upgrade

Driving southbound at Creag An Arnain.

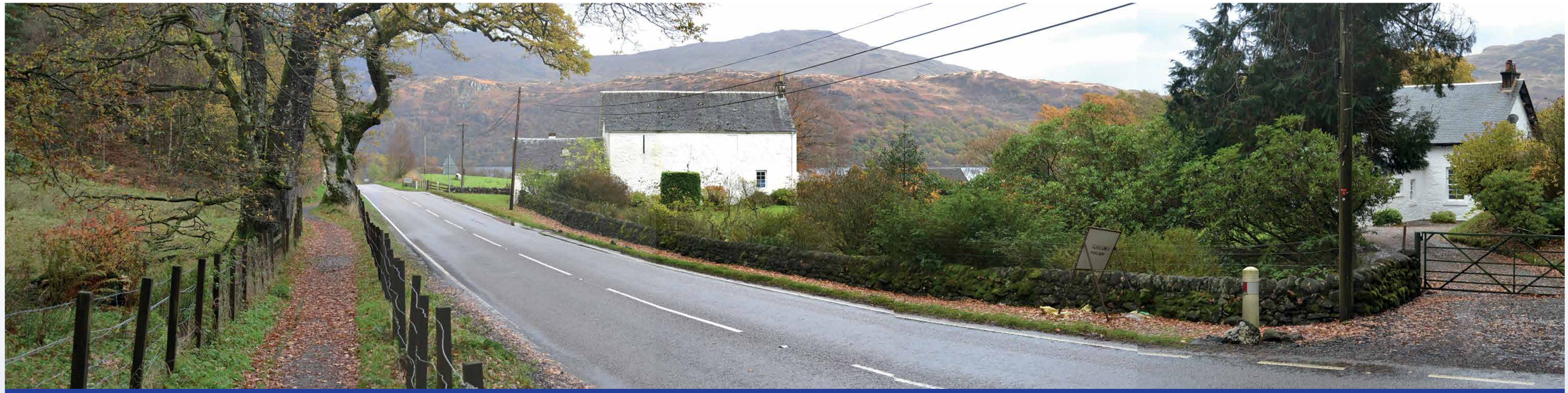
Introduction

The A82 between Tarbet and Inverarnan is set within the dramatic landscape of the Loch Lomond and The Trossachs National Park.

The existing 17 kilometres of trunk road closely follows the shoreline of Loch Lomond and includes a number of issues that are not appropriate for a modern trunk road. These include narrow road widths, poorly sited accesses, tight bends, poor forward visibility and slippery road conditions in places.

All these issues contribute to low journey speeds, a high accident rate and poor journey time reliability.

Transport Scotland appointed CH2M Fairhurst Joint Venture (CFJV) in 2013 to undertake design and assessment work for the proposed upgrade of the A82 trunk road between Tarbet and Inverarnan. This exhibition shows the outcome of the route option assessment process and displays the preferred route option to be taken forward for detailed assessment.



Looking north towards Inveruglas.

A82 Tarbet to Inverarnan

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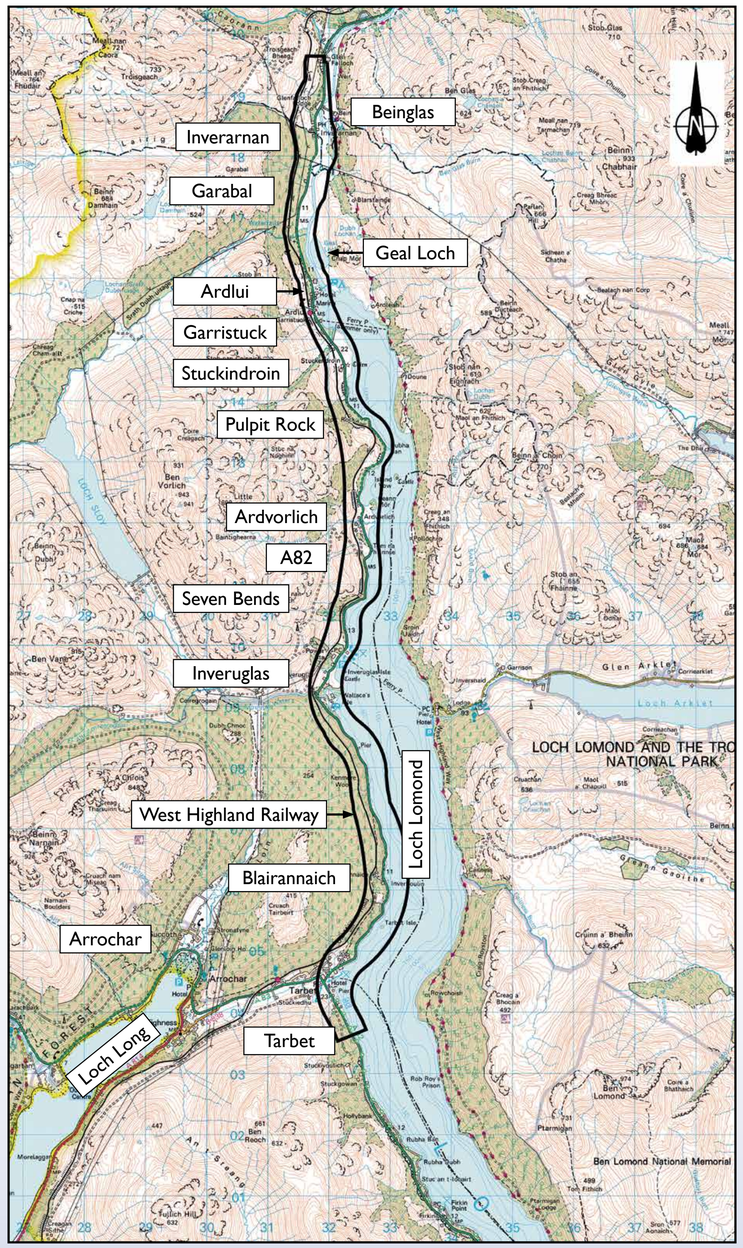
Scheme Background



The A82 trunk road is an economic lifeline for the communities directly served by the route and for the northwest highlands and islands.

Improvements to the A82 were identified within the Strategic Transport Project Review published in 2008, which set out the Scottish Government's transport investment priorities over the coming decades.

Following the completion of the Design Manual for Roads and Bridges (DMRB) Stage 1 assessment in early 2014, which recommended the on-line corridor, DMRB Stage 2 progressed to assess route alignment options within the preferred corridor.

A82 Tarbet to Inverarnan

Scheme Assessment Process

Design Manual for Roads and Bridges (DMRB)

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DMRB Stage 1
Identify the preferred Route Corridor

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DMRB Stage 2
Identify the preferred Route Options

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DMRB Stage 3
Development and assessment of preferred option

↓

Statutory Process
Publication of Draft Road Orders, Compulsory Purchase Order and Environmental Statement

↓

Procurement and Construction

Transport Scotland carries out a rigorous assessment process to establish the preferred option for a trunk road improvement scheme.

The preparation and development of trunk road schemes follows the scheme assessment process set out in the DMRB.

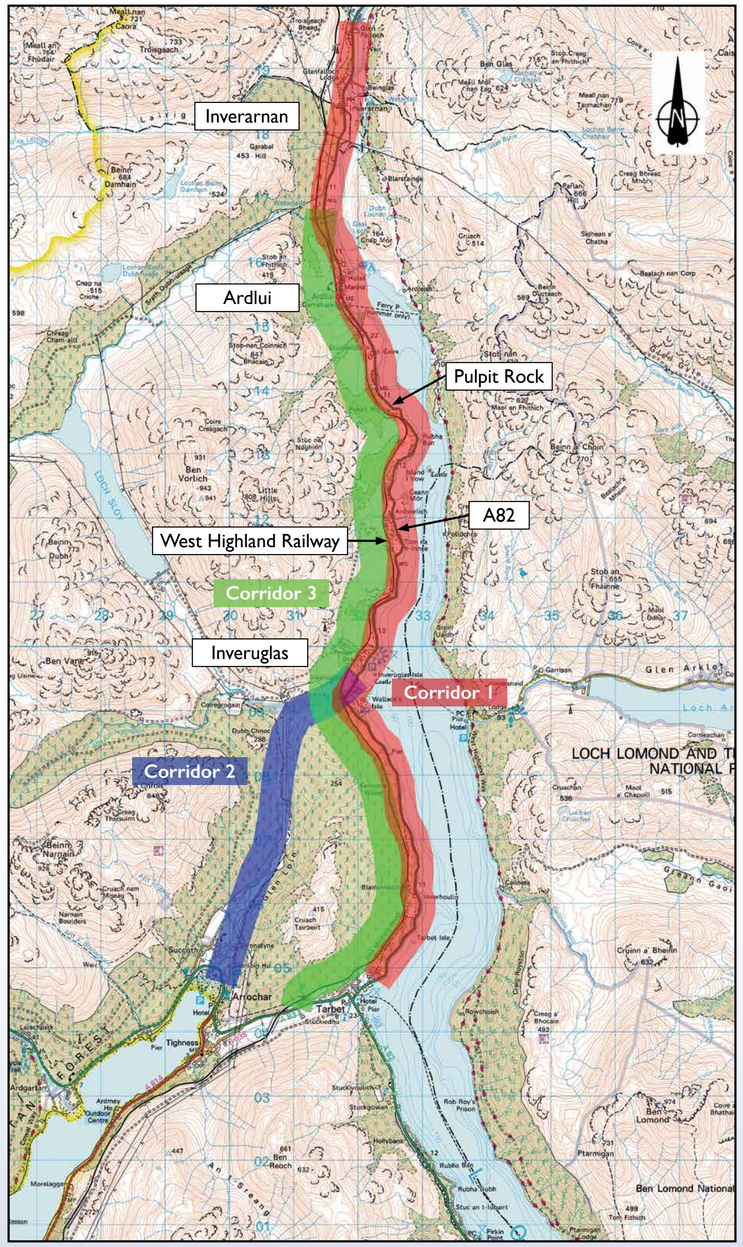
This is a three-stage assessment process that considers traffic, engineering, environmental and economic implications. Throughout the assessment process consultation is carried out with a large number of people and interested groups.

The DMRB Stage 1 assessment was completed in May 2014, identifying the existing A82 as the preferred route corridor.

The DMRB Stage 2 route option assessment to identify the preferred route option has now been completed. The outcome is summarised at this exhibition, in addition to displaying the preferred route option for the scheme.

A82 Tarbet to Inverarnan

Summary of DMRB Stage 1 Assessment



Following the identification of a wide range of route corridors and an initial sifting process, the three most feasible route corridors were identified as:

- Corridor 1 – The existing A82 route corridor
- Corridor 2 – A route corridor from Arrochar to Inveruglas along Glen Loin
- Corridor 3 – A route corridor above and to the west of the West Highland Line.

An assessment considering the engineering challenges, the environmental effects and the traffic and economic costs and benefits of the above corridors was undertaken. It was recommended that a corridor generally following the line of the existing A82 (Corridor 1) offered the greatest potential to maximise benefits. This was taken forward to DMRB Stage 2 (route option assessment) as the preferred corridor.

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Scheme Objectives

The route option assessment process has taken into account the scheme objectives and the Scottish Government's five appraisal criteria, namely; environment, safety, economy, integration, and accessibility and social inclusion.

The following scheme objectives have been set, in consultation with stakeholders, to address the main issues encountered along this section of the A82.

Journey time – To improve journey times for A82 trunk road users between Tarbet and Inverarnan.

Safety – To reduce personal injury accident numbers and their severity on the A82 between Tarbet and Inverarnan.

Stopping places – To provide appropriate stopping opportunities to aid driver comfort for visitors and for all trunk road users on the A82 between Tarbet and Inverarnan, taking account of the unique setting of the route within the National Park.

Accessibility – Seek to provide opportunities for enhanced access by sustainable modes of travel along the A82 corridor between Tarbet and Inverarnan.

Maintenance – To reduce disruption to road users resulting from the undertaking of routine maintenance activities on the A82 between Tarbet and Inverarnan.

A82 Tarbet to Inverarnan

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Engineering Challenges

- The existing road is severely constrained by Loch Lomond and the West Highland Line. Upgrading will require cutting into the steep, rocky hillside and extending out into the loch.
- The road alignment is poor in places and has a number of sharp bends with reduced visibility.
- The road is narrow, being less than six metres wide in places. With limited verges and hardstrips, wider vehicles often have difficulties in passing oncoming traffic. Some bridges also cause a restriction to traffic flow due to a reduced width between parapets.
- Some accesses to properties have poor visibility both onto and from the trunk road.
- There are a number of informal and unofficial laybys.
- There is no continuous footpath, nor a dedicated cycle provision.
- Although there is some road drainage, water runs off the hillside directly on to the road, causing slippery conditions. Flood waters from the River Falloch can also encroach onto the road.
- There are electrical, water and telecommunications services adjacent to the road which may require diversion.

Narrow section of road.

Access track south of Ardlui.

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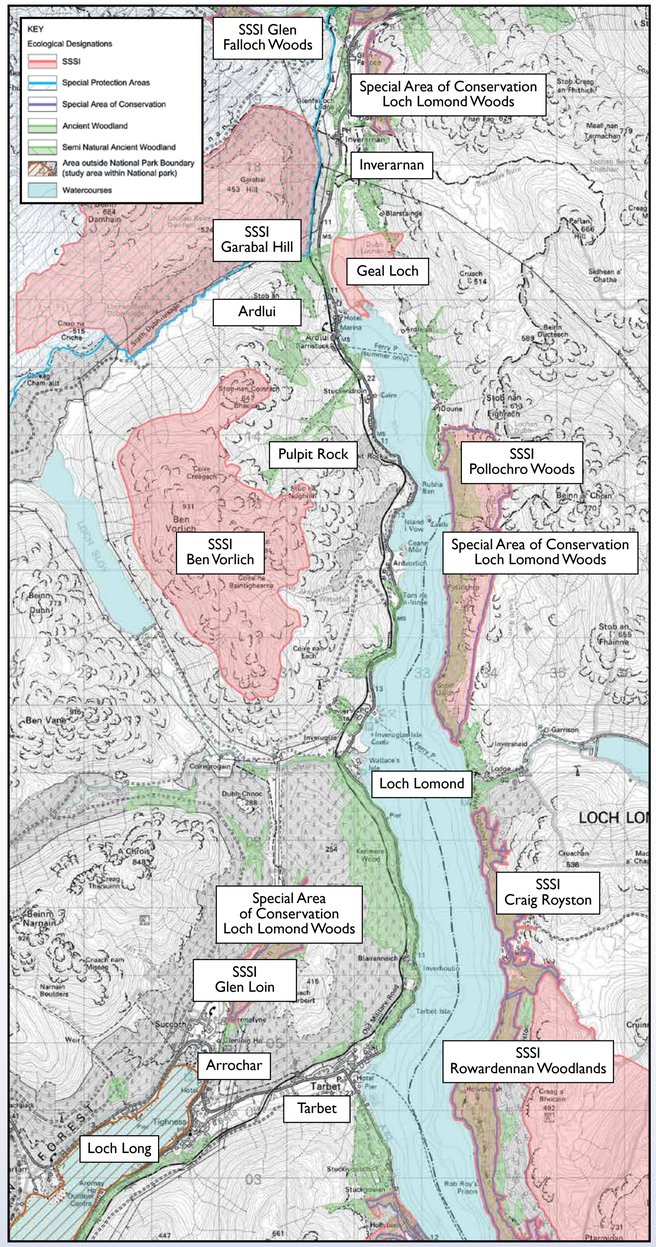
Environmental Challenges



- Loch Lomond and its environment is internationally renowned for its landscape with lochs and steep, high hills providing dramatic and scenic views. This attracts tourists and visitors for outdoor activities.
- The scheme sits within the Loch Lomond and The Trossachs National Park, which was created in 2002 to safeguard the outstanding and diverse landscape, habitats and communities.
- There are a number of environmental designated sites including Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), Special Protection Areas (SPA) and areas of Ancient and Semi Natural Ancient Woodland.
- There are three Scheduled Monuments adjacent to the road (Inveruglas Isle Castle, Island I Vow Castle and Pulpit Rock).
- There are a number of protected species within the area including bats, otters, red squirrels and powan.
- The major water bodies of Loch Lomond, River Falloch and Inveruglas Water have a current ecological status of 'moderate', 'poor' and 'bad' respectively.

Otter

Red squirrel

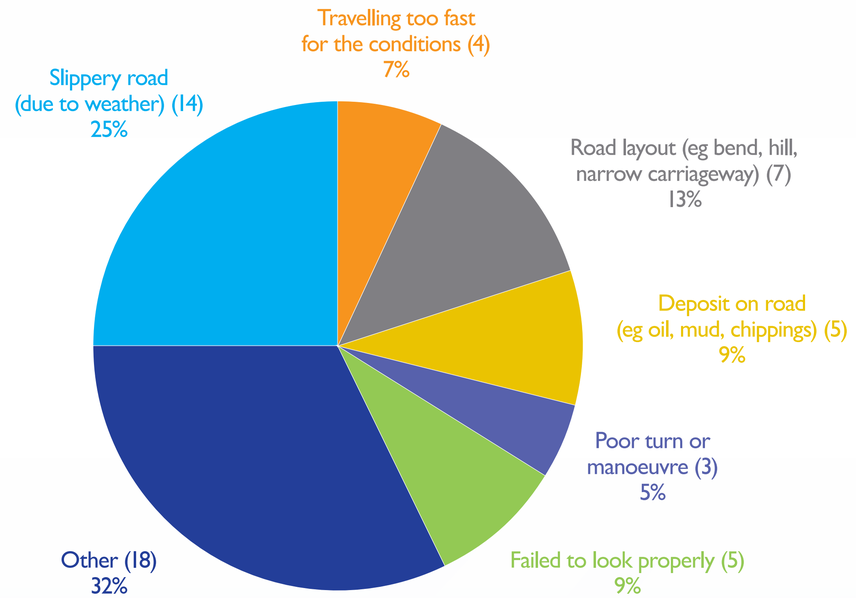
A82 Tarbet to Inverarnan

Traffic and Safety

Information on existing traffic flows and type of vehicles using the road was obtained from automatic traffic counters and traffic surveys:

- There is a high proportion of car traffic on this section of the A82 (85% Cars, 8% HGVs, 7% LGVs).
- This section of the A82 has an average annual daily total of 3,500 vehicles. Flows in the summer typically peak at 5,500 vehicles.
- Journey times can vary, depending on the time of year, day of the week and type of vehicles encountered.
- In the five year period between 2009 and 2013 there were 56 personal injury accidents on this road. The 'Killed or Serious Injury' accident rate for this section of trunk road network is over four times the national average.
- The main contributory factor to accidents has been recorded as 'slippery road (due to weather)'.

Main accident contributory factors between 2009 and 2013



Numbers in brackets are the total of the accidents type recorded between 2009 and 2013

A82 Tarbet to Inverarnan

Work Carried Out

Surveys and studies have been carried out to inform the assessment and development of route options.

In addition, workshops and consultations were held with statutory bodies and stakeholder groups. These include the Loch Lomond and The Trossachs National Park, Scottish Natural Heritage and local community councils, amongst many others.

The following summarises some of the key surveys and studies carried out to date:

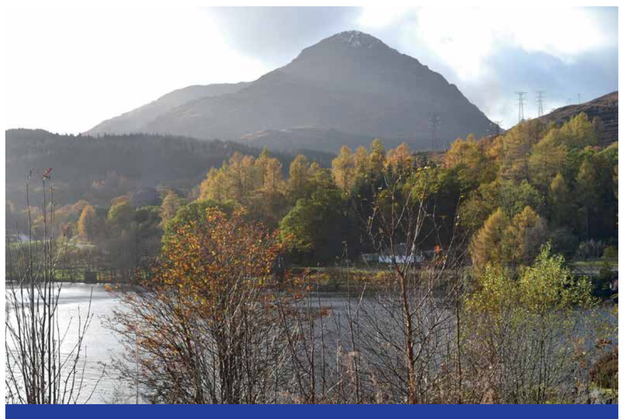
Preliminary ground investigation work.

Exposed rock outcrop survey.

Engineering surveys and studies

- Topographic and structures surveys
- Exposed rock outcrop survey
- Preliminary ground investigation
- Loch level monitoring
- Flood risk assessment
- Review of construction techniques
- Development of route options alignments

Reptile survey work.



View of road at Inveruglas.

Environmental surveys and studies

- Ecology surveys (bats, otters, birds, fish, pine martens, red squirrels, reptiles and water voles)
- Fisheries surveys within the loch and its watercourses
- National vegetation classification survey
- Landscape and visual appraisal
- Noise and air quality assessments

A83 junction at Tarbet.

Parking survey work.

Traffic & economic surveys and studies

- Traffic surveys
- Parking surveys
- Review of accident data
- Journey time assessment
- Consultations with individual stakeholders
- Local and wider area business surveys
- Economics assessment

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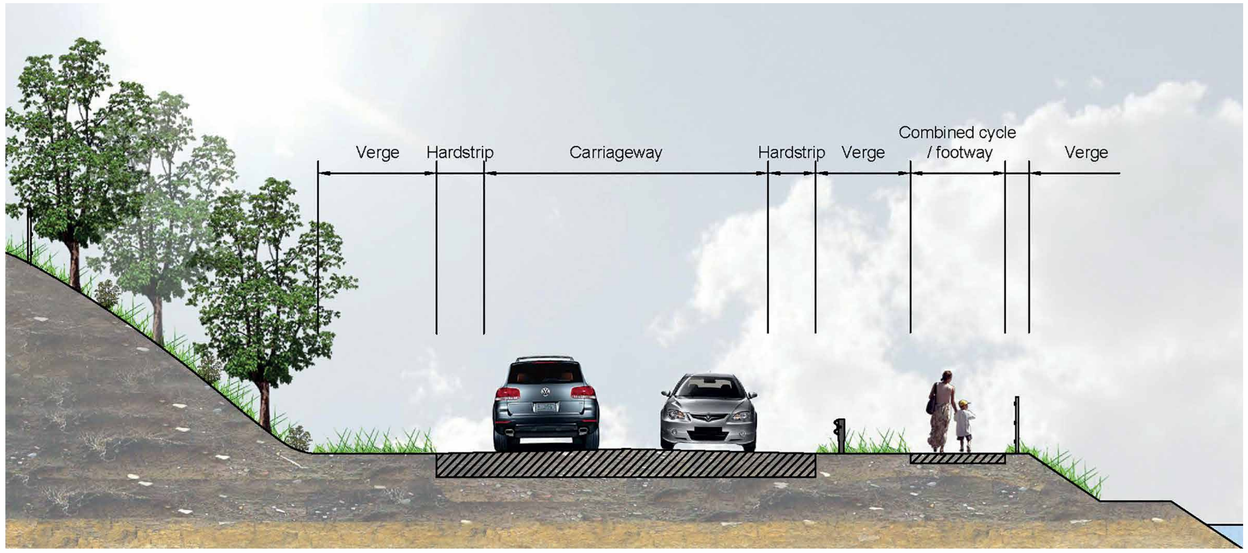
Road Cross Section

A typical road cross section for the upgrade is illustrated below:



- A 6 metre wide carriageway with 1 metre wide hardstrips has been assessed for all options.
- The road width will be widened around bends.
- A wider 7.3 metre carriageway with 1 metre wide hardstrips will also be considered in the next stage of assessment.
- A 2 metre wide combined cycleway and footpath is also included for all the options.

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Route Options Assessed

A number of route options and sub options were considered and sifted. Four route options were then developed for assessment:

Route Option 1 – an online route

Route Option 2 – an online route with inland sections

Route Option 3 – an online route with over-loch sections

Route Option 4 – an option with fewest bends

These options can be viewed on the adjacent map.

A82 Tarbet to Inverarnan

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Route Options Summary

Key elements of the route option assessment are summarised below:

Topic	Consideration	Route Option 1 Online	Route Option 2 Inland sections	Route Option 3 Over-loch sections	Route Option 4 Fewest bends
Engineering	Route option length	16.85km	16.65.km	16.78km	16.52km
	Number of structures required	2 viaducts, 9 bridges	1 viaduct, 9 bridges	3 viaducts, 9 bridges	10 viaducts, 9 bridges
	Number of retaining walls required	25	24	22	12
	Percentage with two levels of drainage treatment	62	62	64	52
	Percentage of proposed route offline from current route	5%	20%	20%	30%
Environment	Overall assessment of impact on scheduled monuments	Minor	Minor	Minor	Moderate
	Overall assessment of impact on the landscape	Minor/moderate	Moderate	Moderate	Moderate
	Overall assessment of impact on otter habitat	Large	Large	Large/very large	Large/very large
	Overall assessment of impact on ancient woodland	Large	Large	Moderate	Moderate
	Overall assessment of impact on fish	Slight	Slight	Moderate	Moderate
Traffic/economics	Estimated journey time savings on opening	2 min 52 secs	3 min 12 secs	3 min 3 secs	3 min 26 secs
	Predicted personal injury accidents reductions over 60 years	408.2	411.2	409.8	412.8

A82 Tarbet to Inverarnan

Route Options Assessment

Findings from the route options assessment are summarised below:

Engineering

All route options will have particular challenges during construction due to the difficult terrain, working adjacent to and over the loch and proximity to live traffic.

All route options will require retaining walls, structures and viaducts in various combinations and to differing degrees.

Route Option 1 has the lowest volume of earthworks (excavations and construction of embankments) and provides good levels of drainage treatment. Route Options 1, 2 and 3 have comparable requirements for structures, although Route Option 3 may also require deep piling into the loch bed. Route Option 4 requires the largest earthworks and 'over-loch' construction.

Improved laybys can be provided on all route options along with a dedicated combined cycle/pedestrian footpath.

Environment

Route Option 1 has the lowest number of long-term significant effects on the landscape and visual impact. This is because it is comprised mainly of localised widening along the existing route.

Route Options 3 and 4 are expected to have the highest level of adverse impacts on nature conservation, mainly relating to disturbance to otters.

All route options offer beneficial improvement to the water environment when compared with the existing situation. Route Option 1 is preferred due to its opportunity to maximise improvements or remove existing impacts on the water environment.

All route options will require mitigation measures to reduce their potential impact on the environment.

Safety

All the route options will significantly improve road safety. In addition to reducing the number of personal injury accidents, the upgrade is also expected to reduce their severity.

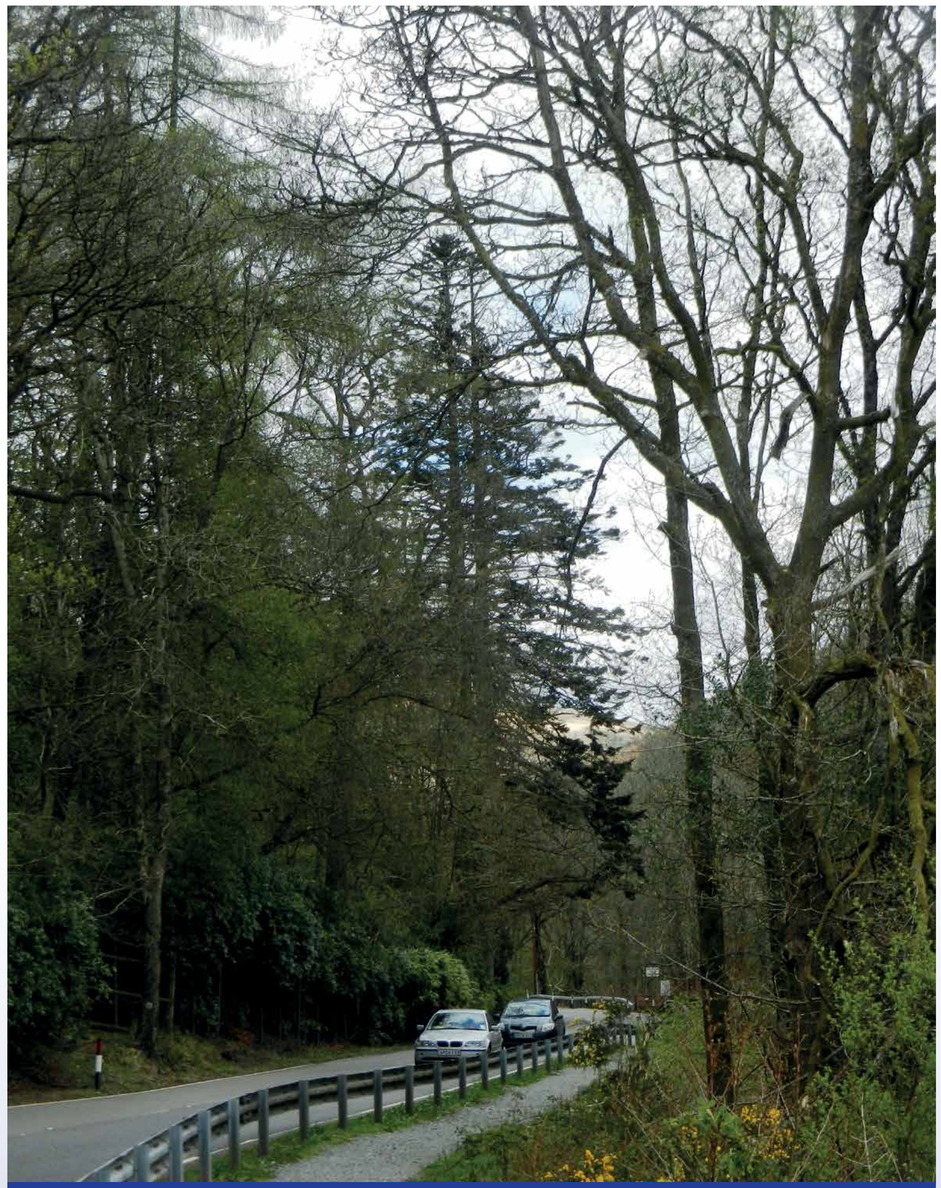
Traffic and Economics

Route Option 1 has the lowest estimated scheme cost and is predicted to offer the best economic return of the four route options.

Scheme Objectives

All route options meet the scheme objectives.

The Preferred Route Option



North of Inverarnan.

Based on the route options assessment process, Route Option 1 – online upgrade – is to be taken forward as the preferred route option.

Further consideration will be given to the following, as part of the design and development of the preferred route option (DMRB Stage 3 assessment process):

- Inclusion of two short off-line sections near Ardvorlich
- The alignment will be developed to reduce impact on properties and landowners
- The alignment will also be adjusted to assist construction and reduce delays to road users
- A carriageway width of 6 metres and 7.3 metres (both with 1 metre hardstrips) will be considered.

The preferred route option can be viewed in more detail on the following map.

A82 Tarbet to Inverarnan

What Happens Next?

Transport Scotland will now take forward the development and assessment of the preferred route option for the scheme.

The next stage of the assessment process will include:

- Consultation with stakeholders, affected landowners and the general public
- Design development of the preferred route option
- Identification of the land required for the scheme and preparation of Draft Orders, expected to be published in 2017, which will define the line of the developed preferred route option
- Environmental impact assessment of the developed preferred route option and preparation of Environmental Statement
- Development of suitable mitigation measures to reduce impacts on the environment.

As part of the work to improve this section of the A82 in advance of the upgrade scheme, Transport Scotland and the trunk road operating company, BEAR Scotland, will also be undertaking an intensive programme of short-term improvements which will include vegetation and tree canopy clearance, clearance and improvement of the existing drainage system, and the removal of loose stones and rocks from the verge of the existing A82. The feasibility of further medium-term interim improvements – such as localised schemes to widen the road at tight bends and additional improvements to the drainage system along the route – will also be investigated.

Signpost at entrance to Beinglas Farm.

A82 Tarbet to Inverarnan

Comments and Feedback

Thank you for attending the exhibition and your interest in the A82 Tarbet to Inverarnan upgrade project. We welcome your comments and feedback on the preferred route option presented. Comments can be made on the feedback forms provided and posted in the feedback box at this exhibition or sent by email or post.

Please email your comments to A82upgrade@ch2m.com or alternatively post to:

A82 Tarbet to Inverarnan Upgrade
CH2M Fairhurst Joint Venture
386 Alexandra Parade
Glasgow, G31 3AU

Please return your comment sheet by 13 November 2015.

For further information on the A82 Tarbet to Inverarnan Upgrade scheme please visit the Transport Scotland website:
www.transportscotland.gov.uk/project/a82-tarbet-inverarnan-upgrade

View across Loch Lomond towards Inveruglas.