

Appendix C: Landscape and Visual Amenity - Detailed Baseline and Assessment

9. Landscape and Visual Amenity

9.1 Introduction

- 9.1.1 This section presents the Strategic Environmental Assessment (SEA) of potential effects of the project on the landscape and visual receptors within the route corridor.
- 9.1.2 Landscapes are a significant part of the country's cultural and natural heritage, contributing to the economy and the wellbeing of the population. The Argyll & Bute region, where the route corridor is situated, is renowned for its natural beauty.

9.2 Methodology

- 9.2.1 The approach to the assessment has been informed by Fitting Landscapes: Securing more Sustainable Landscapes (Transport Scotland 2014), Guidelines for Landscape and Visual Impact Assessment 3rd Edition (GLVIA3) (Landscape Institute and IEMA 2013), DMRB LA107 Landscape and Visual Effects (Highways England 2020), Strategic Environmental Assessment: guidance (Scottish Government 2013) and Landscape Considerations in Strategic Environmental Assessment (Scottish Natural Heritage 2011).
- 9.2.2 A desk-based assessment was undertaken, focussing on nationally and regionally important landscapes and key visual receptor. The assessment of the likely effects was informed by the sensitivity of the receptors (susceptibility to change of the kind proposed combined with value of the receptor) and the magnitude of change (scale, extent, reversibility and duration).
- 9.2.3 The assessment has been informed by the study of publicly available sources including:
- Ordnance Survey (OS) Maps;
 - Scotland's Environment website;
 - NatureScot website;
 - Loch Lomond and The Trossachs National Park website;
 - Forestry and Land Scotland website;
 - Scottish Forestry Open Data;
 - Local authority plans and GIS data; and
 - Google Earth aerial imagery.
- 9.2.4 The potential effects on landscape and visual amenity have been assessed using the criteria defined in Table C9.1 below.

Table C9.1: Assessment Criteria for potential effects on Landscape and Visual Amenity

Score	Description	Colour coding and symbol
Minor positive effect	Positive effects are likely	+
Minor negative or uncertain environmental effect	Non-significant negative effects are likely, but can be reduced with mitigation	-
Significant negative effect	Significant negative effects are likely and may be difficult to reduce with mitigation	--

- 9.2.5 Duration of landscape and visual effects was judged on the following scale:
- short-term - zero to five years (mostly associated with construction effects);
 - medium-term - five to 15 years (likely to include operational effects before landscape mitigation planting becomes effective); and
 - long-term - 15 or more years (likely to include operational effects after landscape mitigation planting becomes effective).
- 9.2.6 The detailed assessment is focussed on the potential effects resulting from the operation of the project. The effects resulting from the operation of the proposed scheme are considered to be of long-term duration and largely irreversible, thus increasing magnitude of change. Temporary construction-phase effects, for example those arising from haul roads, plant and equipment, are typically short-term and reversible and thus likely to have a lower magnitude of change. Construction effects associated with the loss of landscape elements such as woodland, which would be permanent, are also considered in the assessment of operational effects.

Limitations to Assessment

- 9.2.7 No site survey has been undertaken to confirm the available baseline information or illustrate the assessment, due to the coronavirus travel restrictions present at the time of writing.

9.3 Detailed Baseline

Route Corridor Location

- 9.3.1 The route corridor is located in Glen Croe and Rest and Be Thankful mountain pass, broadly aligned with the existing A83. The corridor is approximately 5km long and 2km wide. The southern end of the route corridor is located approximately 2.5 km north of the village of Ardgartan on the western shores of Loch Long at the mouth of Croe Water and the northern end at Butterbridge in Glen Kinglas, approximately 1.5km north of the Rest and Be Thankful car park.



Image C9.1: Glen Croe from the Rest and Be Thankful / © Euan Nelson / cc-by-sa/2.0

National Park

- 9.3.2 The majority of the route corridor is located within the Loch Lomond and The Trossachs National Park (LLTNP). The National Park contains special landscapes, which include '*lochs, coastlines, forests and striking contrasts where the lowlands and highlands meet, with significant areas in the north still retaining a wilder feel. These have been created and shaped by both natural and human forces over millennia and are continuously evolving as the climate and the use of the land changes. The area also has a rich historic environment which is valued by residents and visitors alike*' (LLTNP, 2018).
- 9.3.3 Woodland coverage is an important feature of the landscape of the National Park and within the route corridor forestry and woodland occupies over a third of the approximately 10km² area.



Image C9.2: Lower slopes of Beinn Luibhean / © Iain Russell / cc-by-sa 2.0

- 9.3.4 The extents of LLTNP within the route corridor are shown on Figure C9.1 and the extent of forestry and woodland cover on Figure C9.2.

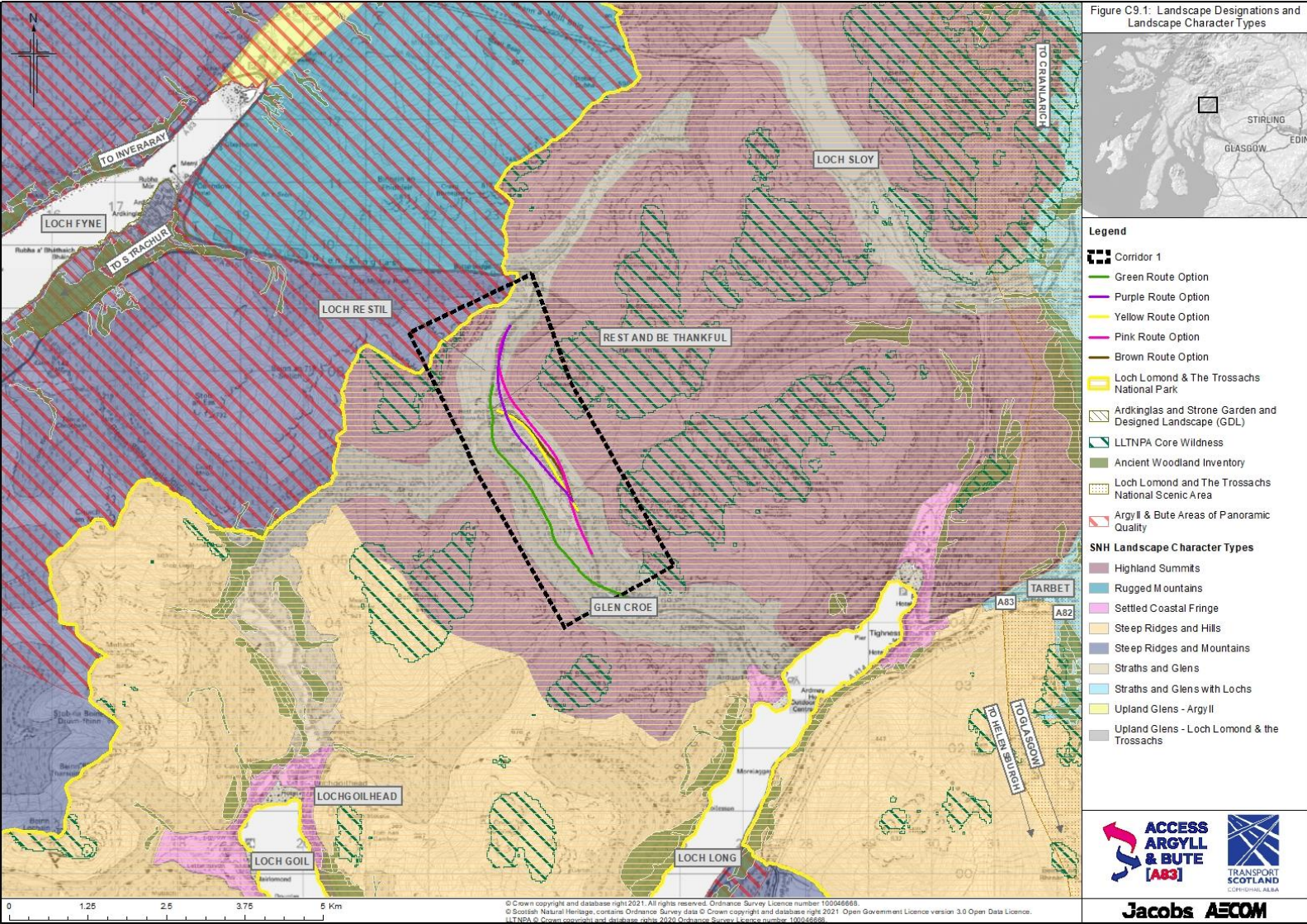


Figure C9.1: Landscape Designations and Landscape Character Types

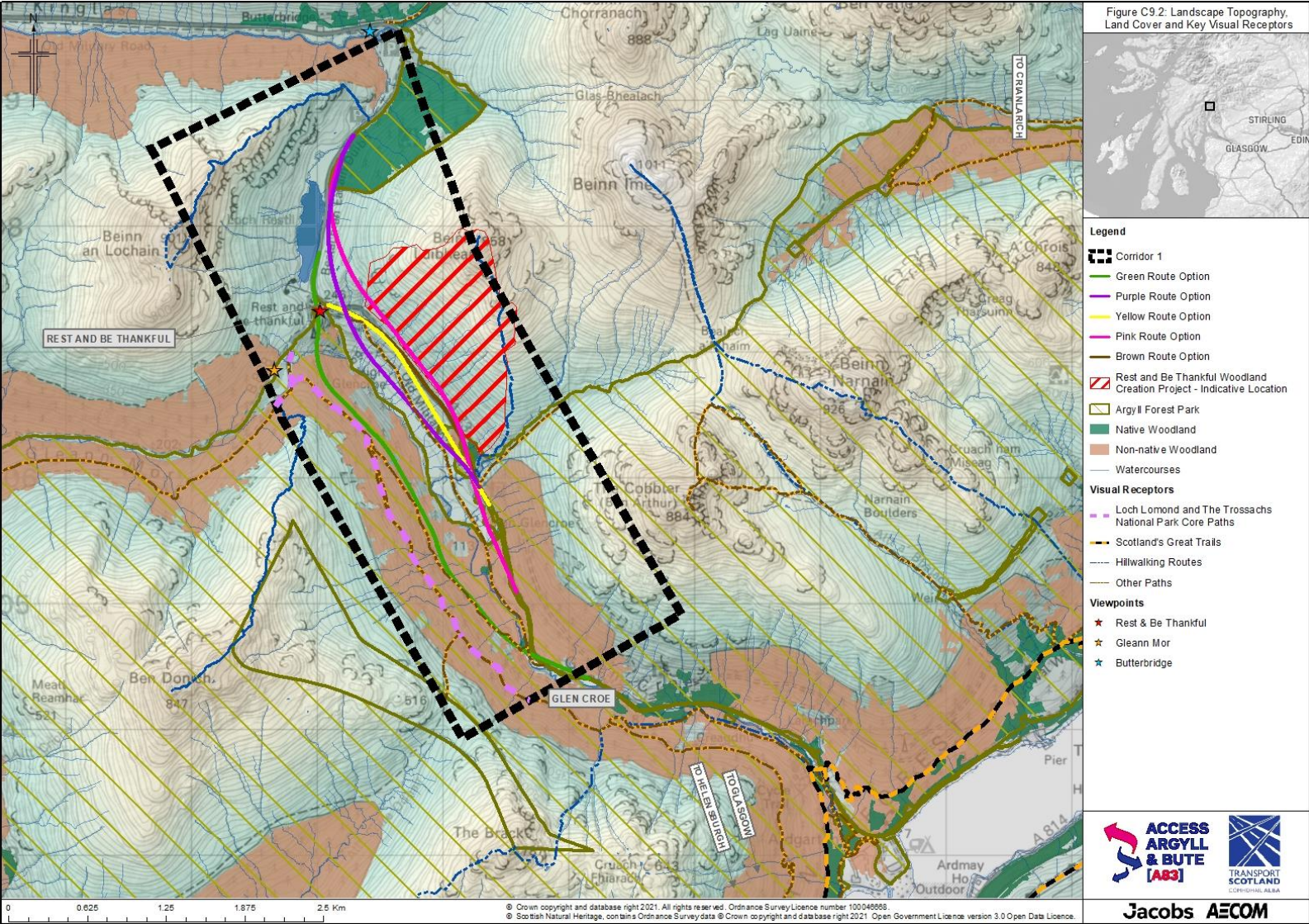


Figure C9.2: Landscape Topography, Land Cover and Key Visual Receptors

9.3.5 The Special Landscape Qualities of the Loch Lomond and The Trossachs National Park report (SNH 2010) identifies the following Special Qualities in the part of Argyll Forest where the route corridor is located:

- 'A remote area of high hills and deep glens;
- A land of forests and trees;
- Arrochar's mountainous and distinctive peaks; and
- The dramatic pass of Rest and Be Thankful'.



Image C9.3: Glen Croe, viewed from Rest and Be Thankful November 2006 / © Richard Harvey / CC-BY-SA-3.0



Image C9.4: Looking north along Glen Croe with The Cobbler visible to the right - Ardgartan Forest / © Crispin Purdye / cc-by-sa/2.0

- 9.3.6 The SNH report describes the Rest and Be Thankful mountain pass, a major route through the mountain ranges between Loch Long and Long Fyne as 'dramatic'. The view (described as 'memorable') from the pass is framed on one side by a series of steep, rocky hill slopes of Beinn an Lochain, Ben Donich and The Brack, and on the other, by the Arrochar massif (The Cobbler, or Ben Arthur, and Beinn Luibhean). Butterbridge is another landmark further north, at the junction of Glen Croe with Glen Kinglas just outside the route corridor. Glens Croe and Kinglas are described as possessing 'desolate, wild qualities.'



Image C9.5: Loch Restil from ascent to Stob Coire Creagach / © wfmillar / cc-by-sa/2.0

- 9.3.7 There are two roads which run along Glen Croe and converge at the Rest and Be Thankful pass. The lower, older route is of historical and cultural significance, serving originally as a drove road and then made into a military road the 1740s when the original stone seat bearing the inscription 'Rest and Be Thankful' at the summit of the pass was erected. For further information on Rest and Be Thankful Memorial Stone Listed Building please refer to Appendix C (Section 8: Cultural Heritage).



Image C9.6: The Old Military Road, Glen Croe / © Iain Lees / cc-by-sa/2.0

- 9.3.8 The newer road, constructed higher up on the southwestern slopes of The Cobbler and Beinn Luibhean in 1937- 1941, serves as the present A83 Trunk Road.
- 9.3.9 These routes are described as 'providing a strong sense of departure and arrival, from Highland to Lowland and vice versa'.

Wild Land and Core Wildness

- 9.3.10 Wild land is defined as largely semi-natural landscapes that show minimal signs of human influence and is based on the 2014 SNH map of Wild Land Areas (WLAs).
- 9.3.11 There are no WLAs within the route corridor. However, there are three areas of 'core wildness' within the route corridor, as identified within the LLTNP Partnership Plan 2018-2023 and in the LLTNP Trees and Woodland Strategy Landscape Capacity Study 2019 – 2039 (LLTNP, 2019c). They include two areas on the upper western slopes of The Cobbler and one on the upper western slopes of Beinn Luibhean.
- 9.3.12 The physical attributes which contribute to the experience of wildness (and thereby to the identification of wild land) are defined in the Wildness in Scotland's Countryside: Policy Statement 02/03 (SNH 2002), as follows:
- *'a high degree of perceived naturalness in the setting, especially in its vegetation*
 - *cover and wildlife, and in the natural processes affecting the land;*
 - *the lack of any modern artefacts or structures;*
 - *little evidence of contemporary human uses of the land;*
 - *landform which is rugged, or otherwise physically challenging; and*
 - *remoteness and/or inaccessibility'.*
- 9.3.13 The perceptual responses evoked by these physical attributes are often recognised as:
- *'a sense of sanctuary or solitude;*
 - *risk or, for some visitors, a sense of awe or anxiety, depending on the individual's emotional response to the setting;*
 - *perceptions that the landscape has arresting or inspiring qualities; and*
 - *fulfilment from the physical challenge required to penetrate into these places'.*

Areas of Panoramic Quality

- 9.3.14 The part of the route corridor located outside the LLTNP boundary (approximately 700m long at its north-western end) is located in the North Argyll Area of Panoramic Quality (APQ) identified in the Argyll and Bute Local Development Plan. The APQs are considered important not only for their physical landforms and scenic value, but also for the environmental assets that they represent, which can easily be destroyed or damaged by even a relatively small, insensitive development and as such must be protected.
- 9.3.15 The APQ in the route corridor is shown on Figure C9.1.

Landscape Character

- 9.3.16 The National Landscape Character Assessment of Scotland (NatureScot, 2019) was used to establish the baseline and the potential for significant landscape and visual effects. Landscape Character can be defined as the distinct, recognisable and consistent pattern of elements in the landscape that give each area its distinctiveness and 'sense of place'. Landscape Character Assessment shows the variety in landscapes and helps provide an understanding of what makes one landscape different from another. Scotland is divided into Landscape Character Types, each with their own distinct landscape character.

- 9.3.17 The route corridor is located within the Upland Glens - Loch Lomond & the Trossachs Landscape Character Type (LCT) 252, Highland Summits LCT 251 and Steep Ridges and Mountains LCT 34.
- 9.3.18 The landscape character types within the route corridor are shown on Figure C9.1 and the topography on Figure C9.2.
- 9.3.19 The Upland Glens - Loch Lomond & the Trossachs LCT 252 includes the larger glens which cut into the Highland Summits and Steep Ridges and Hills LCTs.



Image C9.7: Upland Glens - Loch Lomond & the Trossachs LCT 252 - Glen Croe from The Brack / © Iain Russell / cc-by-sa/2.0

- 9.3.20 The key characteristics of the Upland Glens - Loch Lomond & the Trossachs LCT 252 relevant to the route corridor comprise:
- *'Often narrow with little flat glen floor, strongly enclosed by steep hill slopes of the adjacent Steep Ridges and Hills and Highland Summits.*
 - *Steep glen sides often patterned with rocky outcrops, boulders and screes but also extensively forested, particularly on lower slopes.*
 - *Tributary burns and rivers cut deep gullies into slopes and many feature waterfalls and cascades, pools and rocky outcrops.*
 - *Walled pastures sometimes occasionally occurring on lower (usually south facing) slopes. Heather covers better drained areas and bright green flushes appear at spring lines on hill slopes.*
 - *Some glens covered with extensive coniferous forestry.*
 - *Relict wood pasture and Caledonian pine woodlands evident in some areas.*
 - *Scattered trees and native woodland trace the edges of burns.*
 - *Sparsely settled but with some isolated farms in lower reaches of glens, these often south-facing.*
 - *Significant cultural features in more open glens, including shielings and abandoned field systems.*
 - *Areas of crofting evident on some lower slopes.*
 - *Some important historic strategic routes for communications and key road links.*

- *Classic views channelled up and down the Glens, with steep side slopes framing landscapes that lie beyond them'.*

9.3.21 The Highland Summits LCT 251 comprises high mountains with a rugged and complex form and a massive scale. These mountains lie north of the Highland Boundary Fault in the Highlands and include the well-known 'Munro' peaks of Ben Lomond, Ben Lui, Beinn Ime, Ben More, Ben Arthur ("The Cobbler"), Beinn Narnain, and Ben Vorlich within the Loch Lomond and the Trossachs National Park, as well as the Corbetts, Beinn an Lochain and Ben Donich.



Image C9.8: Highland Summits LCT 251 - View from Beinn Ime / © William Starkey / cc-by-sa/2.0

9.3.22 The key characteristics of the Highland Summits LCT 251 relevant to the route corridor comprise:

- *'High mountains generally lying above 800 metres, but lower and intensely craggy in the core of the Trossachs where geology is particularly complex.*
- *Steep slopes often covered in scree.*
- *Narrow rocky ridges, deeply scooped corries and rocky gullies on many of these mountains.*
- *Narrow glens deeply cut into the mountains, often contain fast-flowing burns and waterfalls.*
- *Strongly patterned landscape with exposed rock, crags, small lochs and myriad water courses significantly increasing complexity.*
- *Simple vegetation cover, largely comprising semi-natural grassland with patchy heather and ground-hugging alpine species on upper slopes and summits. Bracken and bog occur on lower slopes and within glen floors. Coniferous forestry present on some lower slopes, extending up into glens.*
- *Broadleaf woodlands rare, confined to steeper slopes with fragments of oak and birch tracing burns and gullies.*
- *Very sparsely populated, with roads and dispersed settlement occurring only on its fringes.*
- *Impounded lochs, coniferous forestry and hydroelectric infrastructure and transmission lines close to the mountains northwest of Loch Lomond.*
- *Highly visible massive peaks and ridges of the mountains forming a scenic rugged backdrop to the lower settled loch shores, glens and straths.*

- *Instantly recognisable mountain forms such as the Cobbler are important landmark features*
- *Popular mountains with walkers because of their highly natural and rugged character, and the presence of 'Munro' and 'Corbett' peaks. The higher summits offer extensive views.*
- *Distinct sense of wild character of the summits due to their rugged and natural qualities, especially away from hydro-electric infrastructure and poorly integrated forestry'.*



Image C9.9: Highland Summits LCT 251 - A83, Glen Croe / © Richard Webb / cc-by-sa/2.0

- 9.3.23 The Steep Ridges and Mountains LCT 34 occurs in the Cowal area and at the head of Loch Fyne outside the LLTNP boundary. This upland landscape comprises steep-sided, craggy topped mountains and sharp ridges.
- 9.3.24 The key characteristics of the Steep Ridges and Mountains LCT 34 relevant to the route corridor comprise:
- *'Dramatic mountain ridges with steep, plummeting slopes and numerous rocky outcrops.*
 - *Ribbon lochs and meandering rivers on narrow floodplains form dramatic contrast to surrounding slopes.*
 - *Extensive conifer forests on lower slopes and open moorland, with bare rock faces on upper slopes and summits.*
 - *Contrast between open land on upper slopes beyond the head dyke, and large fields enclosed by stone walls within lower glens.*
 - *Scattered birch woodland alongside burns and on upper slopes and oak woodland on sheltered lower slopes'.*



Image C9.10: Steep Ridges and Mountains LCT 34 - Clachan Flats Wind Farm under construction / © Patrick Mackie / cc-by-sa/2.0

Landscape Elements and Features

- 9.3.25 There is one small freshwater loch, Loch Restil, and a large number of watercourses in the route corridor. For further details please refer to Appendix C (Section 6: Water Environment).



Image C9.11: Loch Restil © Sean Afnan sean82, CC0, via Wikimedia Commons

- 9.3.26 Land cover within the route corridor comprises predominantly large blocks of coniferous forestry plantation with scattered broadleaved trees and woodland along the watercourses, open grassland, scrub, moorland and rocky outcrops.



Image C9.12: Glen floor with native woodland along the edge of Croe Water by the A83 in Argyllshire / © Johnny Durnan / cc-by-sa/2.0

- 9.3.27 Almost the entire western section of the route corridor is located within the Argyll Forest Park. There are several small pockets of native broadleaved woodland along the valley floor and a larger block of young native pinewood near Butterbridge. The remaining woodland cover within the route corridor comprises large areas of coniferous forestry plantation. The woodland cover in the route corridor is shown on Figure C9.2.
- 9.3.28 There are few existing roads (the A83 Trunk Road, the B828 and the Old Military Road) present within the route corridor. An existing car park and viewpoint location is situated at the high point of the Rest and Be Thankful mountain pass at the northern end of the route corridor. There is a smaller car park on the southbound side of the existing A83 close to its crossing over Croe Water and another one by the Easan Dubh Fall in the northern part of the route corridor. Several forestry and farm access tracks cross are also present in the route corridor. For further information on the Old Military Road please refer to Appendix C (Section 8: Cultural Heritage).
- 9.3.29 There are three residential properties within the route corridor.

Landscape Sensitivity

- 9.3.30 The sensitivity of any given landscape has been based on an assessment of its value and its susceptibility to change of the type proposed. The following criteria were used as a basis for a desk-based evaluation of the likely sensitivity of the LCTs to the project:
- Landscape quality (or condition) - the physical state of repair of the individual element;
 - Landscape value (or importance) - the relative value that is attached to the individual landscape element;
 - Contribution to landscape/settlement character - the contribution of an individual element or group of elements to the local sense of place;
 - Scope for replacement - the ability or otherwise to replace an individual element or group of elements; and
 - Main trends for change - the degree of stability or level of change to the landscape.

9.3.31 The following key factors were also considered when assessing the sensitivity of the landscape character:

- Landscape designation;
- Remoteness / wildness;
- 'Grain' of the landscape in relation to route corridor orientation;
- Visibility – openness and potential to mitigate with screening, presence of screening – examination of route corridor landcover and topography, presence of sensitive receptors;
- Topography – valley/ lowland vs hills – examination of contours;
- Sensitive elements and features: watercourses crossing the route corridor, AWI woodland, distinctive landform features, cultural elements e.g. historic villages, GDLs etc.; and
- To what extent the route corridor follows an existing road / infrastructure corridor.

9.3.32 The descriptions used to assess the landscape value and susceptibility are provided in Table C9.2 below.

Table C9.2: Landscape Value and Susceptibility Descriptions

Assessment	Value	Susceptibility
High	The key characteristics that would be affected by the project contribute significantly to the perceived value of the landscape at regional or national level. This is likely to be recognised by designations, for example, National Park, NSA and GDL or presence of key viewpoints.	Key characteristics and features that are highly susceptible to the siting of a new road, such as distinctive, easily disrupted patterns (for example with respect to land-use boundary features or topography), prevalence of susceptible elements such as natural waterbodies, AWI woodlands or historic landscape features and few detracting built / infrastructure features. A sense of intimacy and shelter, or wildness and tranquillity, which contributes significantly to the distinctiveness of the LCT and how this is experienced.
Medium	The key characteristics that would be affected by the project contribute to the perceived value of the landscape at a regional or local level. This may be recognised by local landscape designations, for example APQ.	Key characteristics and features that are partially susceptible to the siting of a new road project such as a landscape with a distinct pattern. The existence of prominent linear features aligned with the route corridor or, large-scale built structures, or a broad sense of enclosure and a landform to which new road infrastructure route could fit may exist. The characteristics of the landscape may contribute to the distinctiveness of the LLCA but are experienced mainly locally or when moving through the landscape.
Low	The key landscape characteristics that would be affected by the project do not contribute to the perceived value of the landscape at a national or regional level. The landscape is valued mainly at a local level and not designated or recorded as being recognised for its value.	Key characteristics and features which are not particularly susceptible to the siting of a new road project with associated mitigation. This would be easily accommodated without significant effects. Route corridors of low susceptibility are likely to contain existing road along which the project would be routed.

9.3.33 The assessment of the value, susceptibility and overall sensitivity of the LCTs present within the route corridor is provided in Table C9.3.

Table C9.3: Landscape Sensitivity Assessment

LCT	Value	Susceptibility	Sensitivity
251 - Highland Summits	High (LLTNP, North Argyll APQ)	High (relatively wild, absence of roads, tracks, commercial forestry)	High

LCT	Value	Susceptibility	Sensitivity
252 - Upland Glens - Loch Lomond & the Trossachs	High (LLTNP, North Argyll APQ, key viewpoints – Rest and Be Thankful)	Medium (existing A, B and minor roads and tracks, large blocks of commercial forestry, sparse scattered properties, a broad sense of enclosure and a landform to which new road infrastructure route could fit)	Medium-High
34 - Steep Ridges and Mountains	High (North Argyll APQ, key viewpoints – Butterbridge)	Medium (existing roads and tracks, large blocks of commercial forestry)	Medium-High

Key Visual Receptor Locations

9.3.34 Residential receptors within the route corridor include Roadmans Cottage, Laigh Glencroe and High Glencroe. These are considered to be of high sensitivity.



Image C9.13: The isolated property at High Glencroe - Glen Croe / © Eileen Henderson / cc-by-sa/2.0

9.3.35 Two LLTNP core paths (both along forestry tracks in the western part of the route corridor) and several other minor paths and access tracks are located within the route corridor. People walking or cycling in the National Park or North Argyll APQ are considered to be of high sensitivity. None of Scotland’s Great Trails or National Cycle Network routes are located within the route corridor.



Image C9.14: Forest track below The Brack / © Mark Nightingale / cc-by-sa/2.0



Image C9.15: A Bench with a View - Looking across Glen Croe towards The Cobbler/ © Iain Thompson / cc-by-sa/2.0

9.3.36 The following key viewpoints identified by the Trees and Woodland Strategy and Trees and Woodland Strategy Landscape capacity study (LLTNP, 2019a) and considered to be of high sensitivity are located within the route corridor:

- LLTNP Viewpoint: A83 viewpoint, Glen Croe (at Rest and Be Thankful car park) with key views to the south-east along Glen Croe and to the north over Loch Restil. It is a highly scenic, renowned and historic viewpoint. For further information on Rest and Be Thankful Memorial Stone Listed Building please refer to Appendix C (Section 8: Cultural Heritage).



Image C9.16: Rest and Be Thankful / © The Aperture Geek / VisitScotland

- LLTNP Viewpoints: Butterbridge, Glen Kinglas (just outside of the northern edge of the route corridor) with key views to the south-east towards Beinn Luibhean and Beinn Ime and to the south towards Glen Croe. It is a scenic and historic viewpoint at the old, stone, single-arched bridge over Kinglas Water.



Image C9.17: Beinn Ime seen from the Butterbridge / © Grinner / CC BY-SA 3.0

- LLTNP Viewpoint: Minor road, Gleann Mor (on B828 approximately 600m southwest of the Rest and Be Thankful car park) with key views to the south-west towards Ben Donich and the north-east towards Beinn Luibhean.



Image C9.18: View towards Beinn Luibhean / © Phil Champion / CC BY-SA 2.0

9.3.36.1 Several highland summits popular with hill walkers, who are considered to be of high sensitivity, are located in the vicinity of, but outwith the route corridor. However, the hill walking trails to the summits of three nearby Corbetts, Ben Donich, Beinn Luibhean and Beinn an Lochain, are located within the route corridor.



Image C9.19: The Cobbler / © Iain Russell / cc-by-sa/2.0

9.3.37 The key visual receptors in and around the route corridor are shown on Figure C9.2.

Views from the road

9.3.38 The existing A83 in Glen Croe forms part of the scenic Argyll Coastal Route. People travelling on this route experience views of rugged mountains enclosing the glen, weather permitting, and in-between sections screened by coniferous forestry plantation. These people are considered to be of high sensitivity as they travel on a scenic tourist route but also experience the views as passing and at speed. Although this route is very scenic overall, due to frequent landslide and land slip events, the condition of the lower slopes of the Cobbler and Beinn Luibhean, and the engineered catch fencing installed to counteract the potential effects of debris flows toward the A83, have had a negative impact on the experience of travellers.



Image C9.20: Landslip defence in Glen Croe / © Trevor Littlewood / cc-by-sa/2.0

9.3.39 Recent improvements to the Old Military Road allow it to be used as a diversion when the A83 is blocked by a landslide. Vehicles using this diversion are required to travel in convoy, which has a negative impact on the experience of travellers. People walking, cycling and driving on this route are considered to be of medium-high sensitivity.



Image C9.21: Glen Croe - Old Military Road, 2015 / © Glen Wallace / CC BY-SA 2.0, via Wikimedia Commons

9.4 Evolution of Baseline and Trends

- 9.4.1 The main pressures that influence the character of the landscape in Scotland are land use intensification, incremental development, climate change and climate change adaptation and biosecurity threats.
- 9.4.2 The key trends within LLTNP identified in Live Park Local Development Plan Environmental Report (LLTNP 2016a) are:
- 'Increased cumulative landscape effects from development (housing, tourism, renewable energy, minerals, infrastructure) both within and outwith the Park.
 - Growing pressure for infrastructure upgrade with increased tourism and visitor numbers.
 - Increased value of wild land as part of the National Park's special qualities.
 - Increased value of dark skies as part of the Park's special qualities.
 - Decline in traditional land management resulting in effects on landscape character and traditional rural features'.
- 9.4.3 The existing forestry management plans, in particular large-scale clear felling, can potentially cause significant changes to the landscape and visual baseline. The Glen Croe Land Management Plan (Forestry and Land Scotland, 2018) identifies large blocks of forestry within the route corridor to be clear felled during Phase 1: 2019 - 2023 and Phase 2: 2024 - 2028.
- 9.4.4 Forestry and Land Scotland data indicate that a Rest and Be Thankful Woodland Creation Project is being undertaken on the steep south western flanks of Ben Luibhean. Forestry and Land Scotland are working in partnership with Transport Scotland and propose planting a mixed native woodland with a range of species selected to maximise slope stability. Natural regeneration of native species will also be encouraged and there is scope for further planting adjacent to the core project area.
- 9.4.5 In addition, the LLTNP Trees and Woodlands Strategy (2019) identifies large areas around the Highland summits as preferred or potential native woodland creation opportunities, while the Argyll and Bute Council Woodland and Forestry Strategy identifies small areas of potential woodland along the edges of existing woodland in Glen Kinglas.

9.5 Assessment

- 9.5.1 Desk-based assessment was undertaken, focussing on nationally and regionally important landscapes and taking account of receptors' sensitivity and the magnitude of change.
- 9.5.2 The effects of construction of the project are likely to be temporary, short to medium term and largely reversible, although they may still be significant, depending on the route alignment and structures, while the effects of the operation of the project are likely to be long term and permanent.
- 9.5.3 Limited information about the construction phase was available at the time of assessment. As construction methods and working areas for the possible route options have yet to be developed, a precautionary approach has been taken to the potential effects of construction on landscape and visual amenity. Potential construction effects could include:
- 9.5.4 The following activities typically associated with road schemes generally cause temporary adverse landscape and visual effects on receptors:
- removal of vegetation;
 - haulage routes and vehicles moving machinery and materials to and from the site;
 - machinery, potentially including heavy excavators, earth moving plant and cranes;
 - exposed bare earth over the extent of the proposed works;
 - structures, earthworks, road surfacing and ancillary works during construction;
 - temporary site compound areas including site accommodation and parking;
 - temporary soil storage heaps and stockpiles of construction materials;
 - lighting associated with night-time working and site accommodation;
 - temporary works associated with bridge/viaduct/tunnel/debris flow shelter construction operations; and
 - traffic management measures.
- 9.5.5 Most construction effects are likely to be short term (less than three years or for the duration of construction) except for loss of trees and woodland. The significance of landscape and visual effects from construction would be dependent on the chosen alignment, the presence, extent and method of any tunnelling as well as the presence and, extent of any large-scale structures.
- 9.5.6 The following detailed assessment focusses on the long-term effects resulting from the operation of the project.
- 9.5.7 The route corridor was assessed against the SEA Objective for Landscape and Visual Amenity. The guide questions have been adapted to reflect the baseline context for the route corridor.
- 9.5.8 In addition, five possible route options within the route corridor (Brown, Yellow, Green, Purple and Pink Route Options) have been assessed in more detail in relation to landscape and visual amenity, focussing on the differences between them. For further details on these options please refer to Chapter 5 (Project Description).
- 9.5.9 Table C9.4 presents the assessment of the likely effects of the route corridor against the SEA Objective for Landscape and Visual Amenity.
- 9.5.10 The effects of the project on individual landscape and visual receptors are provided in Tables C9.5 and C9.6.

Table C9.4: Landscape and Visual Amenity assessment using SEA Objectives and Guide Questions

Landscape and Visual Amenity SEA Objective	SEA Assessment Guide Question <i>'Does the route corridor...?'</i>	Route Corridor Assessment
Safeguard and enhance the character and diversity of the Scottish landscape, areas of valuable landscape	<ul style="list-style-type: none"> ▪ align with the four key aims of Transport Scotland's 'Fitting Landscapes' policy? (1. Ensure high quality of design and place; 2. Enhance and protect natural heritage; 3. Use resources wisely; 4. Build in adaptability to change)? 	<p>Uncertain - There is potential for significant negative effects on the natural heritage, but also a potential for:</p> <ul style="list-style-type: none"> ▪ delivering high-quality design and placemaking through sensitive alignment and design of structures; ▪ enhancing and protecting the natural heritage within the route corridor by providing effective mitigation; ▪ using resources wisely by utilising the existing infrastructure corridor and respecting existing landscape features; and ▪ building in adaptability to change and resilience through landscape design that has capacity for climate change adaptation and that links with adjacent habitats.
	<ul style="list-style-type: none"> ▪ avoid significant effects on designated landscapes? 	<p>No – There is potential for significant negative effects on the Special Landscape Qualities of the LLTNP.</p>
	<ul style="list-style-type: none"> ▪ avoid significant effects on the landscape character and elements? 	<p>No - There is potential for significant negative effects on the Upland Glens – Loch Lomond & the Trossachs LCT 252 and direct or indirect effects on Highland Summits LCT 251, as well as the landscape elements and features within the route corridor such as Loch Restil, woodland, forestry and distinct landform.</p>
	<ul style="list-style-type: none"> ▪ protect wild land and dark skies? 	<p>Uncertain - There is potential for significant negative effects on the LLTNP Core Wildness areas within the route corridor, however, there is no risk of negative effects on Wild Land Areas. In relation to protection of dark skies there is potential for avoiding unnecessary lighting over and above existing light sources present in the route corridor (e.g. from moving vehicles).</p>
	<ul style="list-style-type: none"> ▪ deliver sustainable and high-quality design and placemaking? 	<p>Uncertain - There is potential for delivering high-quality design and placemaking within the route corridor, however the details cannot be confirmed at this stage.</p>
	<ul style="list-style-type: none"> ▪ avoid significant effects on key visual receptors? 	<p>No - There is potential for significant negative effects on key visual receptors in the route corridor such as the Rest and Be Thankful viewpoint, nearby hill walking routes and residential receptors.</p>
	<ul style="list-style-type: none"> ▪ avoid significant effects on views from the road? 	<p>Uncertain - There is potential for negative or positive effects on the experience of the people travelling along the Argyll Coastal Route within the route corridor, depending on the route alignment and design of structures.</p>

Table C9.5: Potential effects of the project on the landscape receptors

Landscape Receptor	Potential Effect	Duration	Score
<p>Special Landscape Qualities of the LLTNP including:</p> <ul style="list-style-type: none"> ▪ Remote area of high hills and deep glens ▪ Land of forests and trees ▪ Mountainous and distinctive peaks ▪ The dramatic pass of Rest and Be Thankful <p>(Sensitivity: High)</p>	<p>Direct negative effects are likely and can only partially be reduced with mitigation. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)</p>	<p>Long-term and Permanent</p>	Significant negative effect
<p>LLTNP Core Wildness areas on the upper western slopes of The Cobbler the upper western slopes of Beinn Luibhean (Sensitivity: High)</p>	<p>Indirect negative effects are likely and can only partially be reduced with mitigation. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)</p>	<p>Long-term and Permanent</p>	Significant negative effect
<p>North Argyll APQ (Sensitivity: High)</p>	<p>Indirect negative effects may occur but can be reduced with mitigation. (Magnitude of change: Low or Medium depending on the route alignment and design of structures)</p>	<p>Long-term and Permanent</p>	Minor negative or uncertain environmental effect
<p>Upland Glens - Loch Lomond & the Trossachs LCT 252 (Sensitivity: Medium-High)</p>	<p>Significant direct negative effects are likely and can only partially be reduced with mitigation. (Magnitude of change: Medium or High depending on the route alignment and design of structures)</p>	<p>Long-term and Permanent</p>	Significant negative effect
<p>Highland Summits LCT 251 (Sensitivity: High)</p>	<p>Indirect or direct negative effects are likely and can only partially be reduced with mitigation. (Magnitude of change: Low or Medium depending on the route alignment and design of structures)</p>	<p>Long-term and Permanent</p>	Significant negative effect
<p>Steep Ridges and Mountains LCT 34 (Sensitivity: Medium-High)</p>	<p>Indirect negative effects may occur but can be reduced with mitigation. (Magnitude of change: Low)</p>	<p>Long-term and Permanent</p>	Minor negative or uncertain environmental effect
<p>Landscape Elements and Features including:</p> <ul style="list-style-type: none"> ▪ Loch Restil ▪ Woodland/Forestry ▪ Distinct landform <p>(Sensitivity: High)</p>	<p>Significant direct and indirect negative effects are likely and can only partially be reduced with mitigation. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)</p>	<p>Long-term and Permanent</p>	Significant negative effect

Table C9.6: Summary of Effects on visual receptors

Visual Receptor	Potential Effect	Duration	Score
Residential receptors (Sensitivity: High)	Negative effects are likely and can only partially be reduced with mitigation. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)	Long-term and Permanent	Significant negative effect
LLTNP Viewpoint: A83 viewpoint, Glen Croe (at Rest and Be Thankful car park) (Sensitivity: High)	Significant negative effects are likely and can only partially be reduced with mitigation. (Magnitude of change: Medium or High depending on the route alignment and design of structures)	Long-term and Permanent	Significant negative effect
LLTNP Viewpoints: Butterbridge, Glen Kinglas (Sensitivity: High)	Minor negative effects are a possibility but should be minor given its location on the edge of the route corridor and where present could be reduced with mitigation. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)	Long-term and Permanent	Minor negative or uncertain environmental effect
LLTNP Viewpoint: Minor road, Gleann Mor (Sensitivity: High)	Negative effects are likely but can be reduced with mitigation. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)	Long-term and Permanent	Minor negative or uncertain environmental effect
Ben Donich hill walking trail (Sensitivity: High)	Negative effects are likely and can only partially be reduced with mitigation. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)	Long-term and Permanent	Significant negative effect
Beinn Luibhean hill walking trail (Sensitivity: High)	Negative effects are likely and can only partially be reduced with mitigation. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)	Long-term and Permanent	Significant negative effect
Beinn an Lochain hill walking trail (Sensitivity: High)	Negative effects are likely and can only partially be reduced with mitigation. (Magnitude of change: Medium or High depending on the route alignment and design of structures)	Long-term and Permanent	Significant negative effect
LLTNP core paths (Sensitivity: High)	Negative effects are likely but may be reduced further with mitigation. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)	Long-term and Permanent	Significant negative effect
Argyll Coastal Route (Sensitivity: High)	Both significant negative and positive effects are possible. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)	Long-term and Permanent	Minor negative or uncertain environmental effect
Old Military Road (Sensitivity: Medium-High)	Negative effects are likely but may be reduced with mitigation. (Magnitude of change: Low, Medium or High depending on the route alignment and design of structures)	Long-term and Permanent	Significant negative effect

Brown Route Option

- 9.5.11 The Brown Route Option is online, starting approximately 250m north-east of Roadmans Cottage and ending approximately 150m east of the Rest and Be Thankful car park. As it would mostly closely follow the alignment of the existing A83 and have the smallest footprint of the five alignment options it has the potential for minimising the landscape and visual effects on many receptors. However, this option would involve construction of a single or a series of debris flow shelters approximately 1.3km in length as well as widening works to accommodate it. A viaduct approximately 0.3km in length would also be required where the debris shelter finishes on the approach to the Rest and Be Thankful viewpoint. At that point, the route would pass the nearest residential property at a distance of approximately 250m (High Glencroe). In addition, earthworks may be required between Roadmans Cottage and Laigh Glencroe.
- 9.5.12 The Brown Route Option could potentially result in significant negative effects on the Special Qualities of the LLTNP and the local landscape character within the Upland Glens - Loch Lomond & the Trossachs LCT 252 during construction and operation as a result of introducing the debris flow shelter and viaduct structures.
- 9.5.13 The introduction of these structures would also be likely to have negative effects during construction and operation on the visual receptors in the route corridor, including people at the Rest and Be Thankful and Gleann Mor viewpoints, walkers on hill walking trails to Ben Donich and Beinn an Lochain, people travelling on the Old Military Road and the nearby residential receptors.
- 9.5.13.1 In addition, views from the Argyll Coastal Route would be negatively affected during operation by the long debris flow shelter, which is likely to compromise the travellers' experience of the surrounding scenery, with mitigation unlikely to be fully successful. However, the 'open' structure on the downslope side would provide a degree of landscape view for vehicle occupants as opposed to no view for travellers in the tunnel (Pink and Purple Route Options).
- 9.5.14 The debris flow shelter and the viaduct could potentially result in significant visual effects at the Rest and Be Thankful viewpoint, however, with careful design and mitigation these could be reduced or even made positive if the viaduct structure is an elegant feature, well integrated into the backdrop of the view and appropriately juxtaposed with the dramatic scenery.

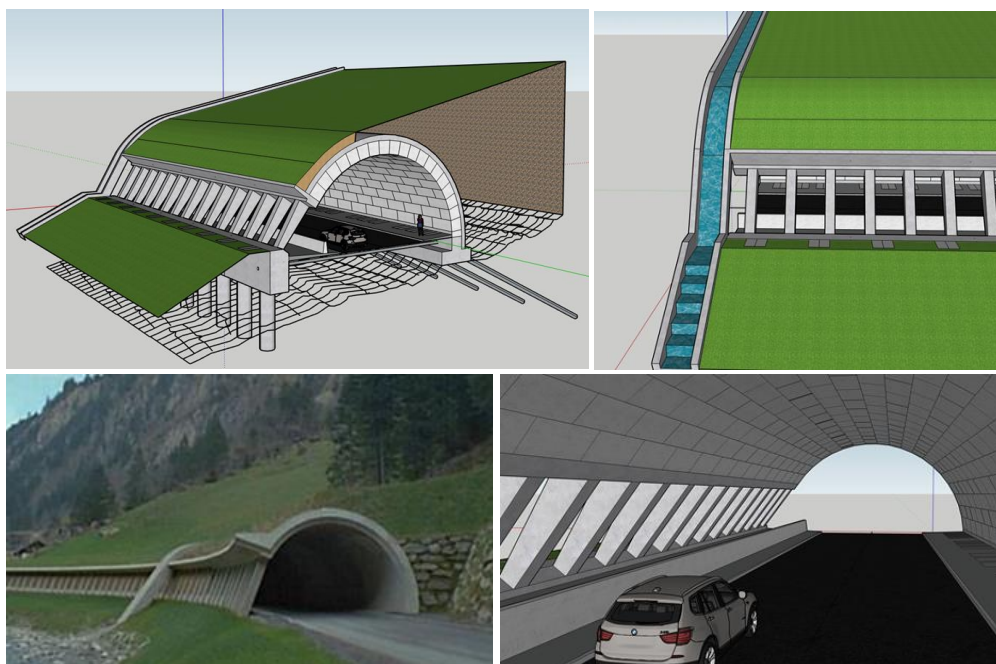


Diagram C9.1: Example of an open sided arch debris shelter structure to protect road from rockfall



Image C9.22: Example avalanche protection gallery in Gotthard Pass, Switzerland © Erich Westendarp via Pixabay



Image C9.23: Example of a canopy structure similar to a debris shelter - Avalanche protection, Austria / © Asumnipal / cc by-sa 4.0

Yellow Route Option

- 9.5.15 The Yellow Route Option is offline, starting approximately 230m north of Roadmans Cottage and ending approximately 20m east of the Rest and Be Thankful car park. It would require approximately 2.1km of new single carriageway between the existing A83 Trunk Road and the Old Military Road on the eastern side of the glen. This possible route option would include a viaduct (approximately 1.8km in length, six times the length of the one in the Brown Route Option) from Croe Water to the Rest and Be Thankful car park along the west-facing slopes of Beinn Luibhean. The viaduct would vary in height, with a maximum pier height of approximately 37m and would pass the nearest residential property at a distance of approximately 210m (High Glencroe).

- 9.5.16 The viaduct piers would not only be of substantial size but also require prominent deflector structures over a considerable length of the route. In addition, earthworks may be required near Rest and Be Thankful car park and near Roadmans Cottage.
- 9.5.17 This possible route option is likely to result in significant landscape and visual effects during construction and operation despite having the second smallest footprint of the five possible route options (after the Brown Route Option) due to the introduction of a large-scale viaduct, deflector structures and earthworks.
- 9.5.18 Significant negative effects would be likely on the Special Qualities of the LLTNP, the local landscape character within the Upland Glens - Loch Lomond & the Trossachs LCT 252 and LLTNP core wildness areas around the summits of Beinn Luibhean and The Cobbler as well as landscape elements and features such as distinct landform between Rest and Be Thankful and Loch Restil and commercial forestry south-east of where the existing A83 crosses Croe Water.
- 9.5.19 Significant negative effects would also be likely on the visual receptors within the route corridor during construction and operation, including people at the Rest and Be Thankful viewpoint, walkers on the LLTNP core paths and hill walking trails to Ben Donich, Beinn Luibhean and Beinn an Lochain, people travelling on the Old Military Road and residential receptors. There may be minor negative effects on Gleann Mor viewpoint.
- 9.5.20 With careful design and mitigation, the effects resulting from the introduction of the very prominent viaduct could be reduced or even made positive if the viaduct structure is an elegant feature, well integrated into the backdrop of the view and appropriately juxtaposed with the dramatic scenery. Such a structure would have the potential to contribute to placemaking within Glen Croe.
- 9.5.21 In addition, the Yellow Route Option could have positive effects during operation on the views from Argyll Coastal Route, given that the viaduct would allow the people travelling on it to appreciate the surrounding scenery from an elevated position.

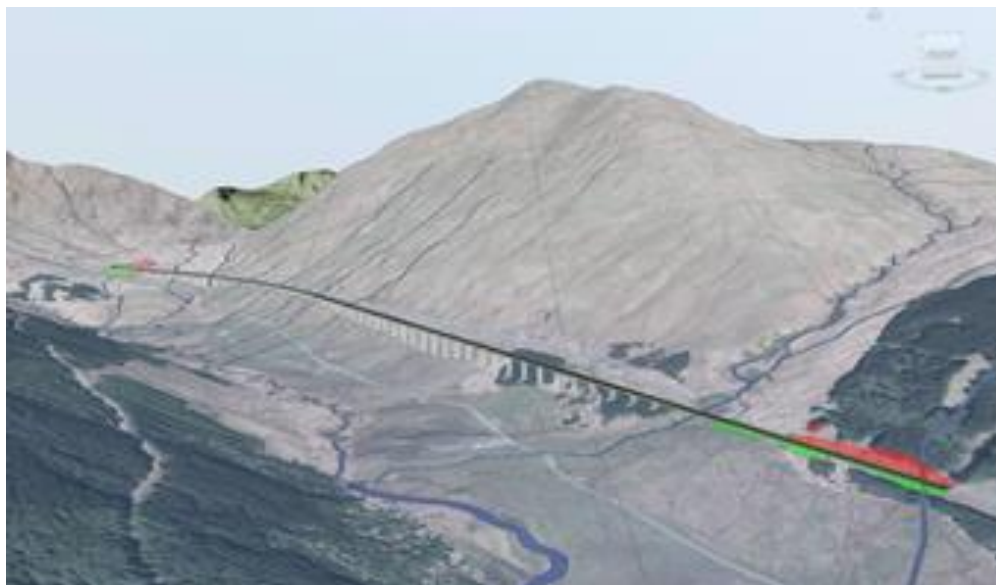


Image C9.24: Viaduct, embankments (green) and cuttings (red) visualisation (Autodesk InfraWorks 360, 2021)



Image C9.25: Example of a large-scale elegant placemaking structure - Glenfinnan Viaduct / © Christoph Strässler / cc-by-sa-2.0



Image C9.26: Example of a large-scale elegant placemaking structure - Queensferry Crossing / © G Laird / cc-by-sa/2.0

Green Route Option

- 9.5.22 The Green Route Option is offline, starting approximately 1.35km south of Roadmans Cottage and end approximately 360m north of the Rest and Be Thankful car park. It would require approximately 4.4km of new single carriageway on the opposite side of the glen to the existing A83. This option would broadly be aligned along the existing forestry access track and would cross the valley floor via a relatively short viaduct (approximately 0.2km in length), passing the nearest residential property at a distance of approximately 160m (High Glencroe) with a potential for significant visual effects on people at the property during construction phase. Another relatively short bridge or viaduct (approximately 0.2km in length) would be located to the north-west of the Rest and Be Thankful viewpoint. In addition, this possible route option would also require a section of the Rest and Be Thankful car park to be repositioned. It is possible that measures to protect against landslide risk may be required. This could be in the form of sections of viaduct, debris flow shelter or geotechnical measures to stabilise slopes.

- 9.5.23 Except for the northernmost 1km, this possible route option is located entirely within non-native commercial forestry plantation. As this alignment traverses the lower slopes of Ben Donich, it is likely to require numerous and potentially extensive earthworks or slope stabilisation measures on either side, resulting in the loss of existing forestry. The Green Route Option would potentially result in significant negative effects during construction and operation on the Special Qualities of the LLTNP, the local landscape character within the Upland Glens - Loch Lomond & the Trossachs LCT 252 as well as the landscape elements and features such as the forestry and landform characteristic of this area. It may also result in indirect negative effects on the LLTNP areas of core wildness around the summits of Beinn Luibhean and The Cobbler due to its position along the western side of the glen, and consequently increased visibility from the summits of Beinn Luibhean and The Cobbler on the other side of the glen.
- 9.5.24 This possible route option would be likely to have negative effects on the visual receptors in the route corridor, including walkers on the LLTNP core paths, walkers on hill walking trails to Ben Donich, Beinn Luibhean and Beinn an Lochain and people travelling on the Old Military Road. This possible route option would also require a section of the Rest and Be Thankful car park to be repositioned, the details of which are not known at DMRB Stage 1. Given the high scenic, historic and cultural value of this viewpoint this would likely result in significant negative effects. Further landslide mitigation works (e.g. viaducts, debris shelters, debris fencing, etc.) may also be required for this route option, increasing the landscape and visual effects of it. The Green Route Option is also likely to have a greater negative effect during construction and operation than the Yellow Route Option on people at the Gleann Mor viewpoint due to the closer proximity of this option to the viewpoint. In addition, it would likely result in negative effects during operation on the travellers' views from Argyll Coastal Route as the alignment amidst commercial forestry with associated patterns of felling and restocking would likely screen the views or detract from experiencing the scenery of Glen Croe, as would the potential debris shelters and fencing.
- 9.5.25 The relatively short viaducts could, with careful design and mitigation, result in positive visual effects during operation if the viaduct structure is an elegant and well-integrated feature.

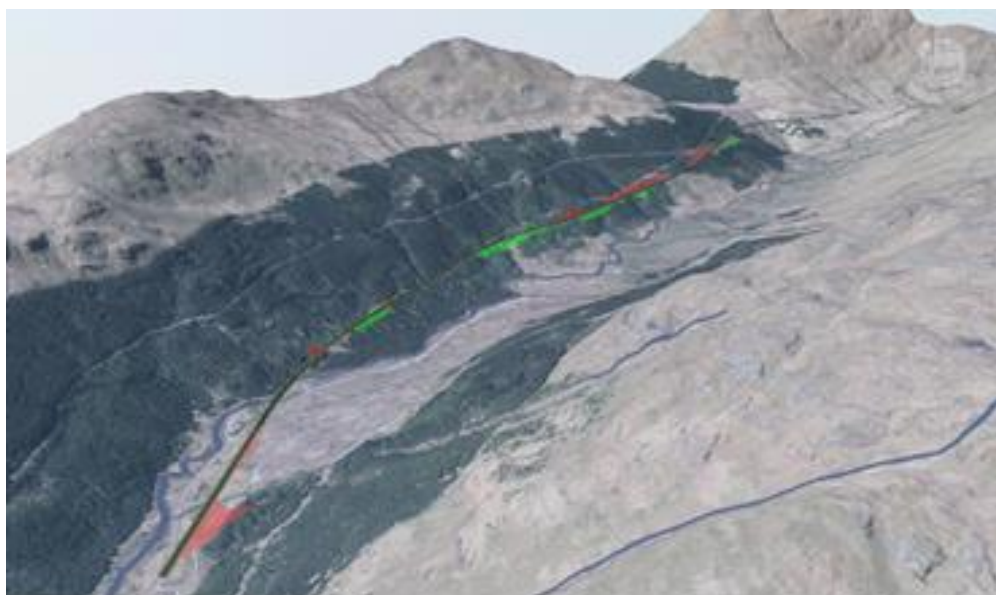


Image C9.27: Green Route Option alignment (Autodesk InfraWorks 360, 2021)



Image C9.28: Example of a simple viaduct structure - Railway viaduct over Allt Coralan, on the "Horseshoe" / © Chris / cc-by-sa / 2.0



Image C9.29: Example of clearfell in The Bin Forest / © Iain Macaulay / cc-by-sa/2.0

Purple Route Option

- 9.5.26 The Purple Route Option is offline, starting approximately 430m north of Roadmans Cottage and ending approximately 1.35km to the north of the Rest and Be Thankful car park. It would require approximately 3.1km of new single carriageway within the Glen Croe valley floor. As such it could potentially appear less prominent and have lesser effects during operation on the visual receptors (except those on the Old Military Road) than some of the more elevated and prominent possible route options, such as the Yellow, Green or Pink Route Options. However, there is a possibility that this route would cross the Old Military Road on an embankment of up to 50m in height, or alternatively on a viaduct. The route would then transition into a tunnel approximately 1.6km long and would re-emerge next to the junction between the A83 Trunk Road and an existing access track north of Loch Restil, an area where opportunities for mitigation screen planting may be limited. It would then follow the other, western side of Loch Restil to join B828.

- 9.5.27 The Purple Route Option could potentially result in significant negative effects during construction and operation on the Special Qualities of the LLTNP and the local landscape character within the Upland Glens - Loch Lomond & the Trossachs LCT 252, the Highland Summits LCT 251, the LLTNP core wildness areas around the summits of Beinn Luibhean and The Cobbler as well as landscape elements and features, such as Loch Restil and commercial forestry. These effects would result from introducing the new carriageway, large-scale embankment or viaduct, and tunnel portals, ventilation and escape shafts (if required) as well as additional landslide protection mitigation works and a realigned A83/ B828 junction. The significance of effects would vary depending on the tunnel construction method and design of the viaduct or embankments in the valley floor.
- 9.5.28 There may also be significant negative effects during construction and operation on the visual receptors within the route corridor, including people at the Rest and Be Thankful viewpoint, walkers on the LLTNP core paths and hill walking trails to Ben Donich, Beinn Luibhean and Beinn an Lochain, people travelling on the Old Military Road and residential receptors due to the introduction of the new carriageway, the high embankments or viaduct as well as tunnel portals and ventilation and escape shafts. It is anticipated the sensitive design and mitigation could reduce potential negative effects.
- 9.5.29 Should the viaduct be introduced instead of the high embankment it could, with careful design and mitigation, result in positive visual effects during operation if the structure was an elegant and well-integrated feature.
- 9.5.30 The Purple Route Option would also result in significant negative effects during operation on the travellers' views from Argyll Coastal Route, the 1.6km-long tunnel depriving them of the spectacular views and the drama associated with ascending and descending the Rest and Be Thankful Pass. Those taking the new link road to the B828 would, however, be partially compensated by the views of picturesque Loch Restil whilst traveling on the lower slopes of Beinn an Lochain.



Image C9.30: Example of a large-scale elegant structure – Otira Viaduct, Arthurs Pass, New Zealand / © flickrpd



Image C9.31: Example of a tunnel portal with low visual 'clutter' - A27 Southwick Hill Tunnels / © Colin Park / cc-by-sa/2.0

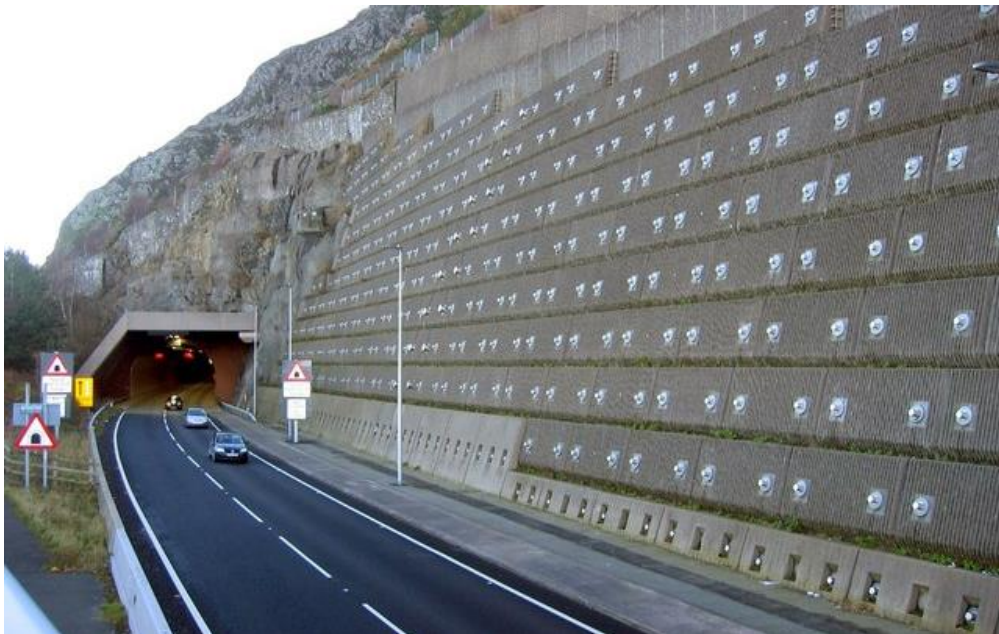


Image C9.32: Example of slope stabilisation measures - Pen y Clip Tunnel, Llanfairfechan / © Chris Andrews / cc-by-sa/2.0

Pink Route Option

- 9.5.31 The Pink Route Option is offline, starting approximately 480m south of Roadmans Cottage and ending approximately 1.35km to north of the Rest and Be Thankful car park. It would require approximately 3.7km of new single carriageway with approximately 3km in a tunnel positioned between the existing A83 and the Croe Water, passing approximately 20m to the south of the nearest residential property (Roadmans Cottage) and likely to result in significant visual effects on people at the property during construction phase. The tunnel would re-emerge next to the junction between the A83 Trunk Road and an existing access road north of Loch Restil and the road would continue approximately 300m further than in the Purple Route Option, through the edge of the young native pinewood on the north-western slopes of Beinn Luibhean.

- 9.5.32 The tunnel portals and associated ventilation and escape shafts would be likely to have negative effects during construction and operation on the landscape and visual amenity of this area, especially given that the approach to either tunnel portal may require additional landslide protection mitigation works. This possible route option would also require a new realigned junction between the A83/ B828 roads resulting in further landscape effects.
- 9.5.33 The Pink Route Option could potentially result in negative effects during construction and operation on the Special Qualities of the LLTNP and the local landscape character within the Upland Glens - Loch Lomond & the Trossachs LCT 252, the Highland Summits LCT 251, the LLTNP core wildness areas around the summits of Beinn Luibhean and The Cobbler as well as landscape elements and features, such as the young, native pinewood to the north-east of Loch Restil, as a result of introducing the new carriageway, the tunnel portals and tunnel ventilation and escape shafts. This possible route option would also be likely to have negative effects on the planned Rest and Be Thankful Woodland Creation Project.
- 9.5.34 Negative effects would also be likely during construction and operation on the visual receptors within the route corridor, including people at the Rest and Be Thankful viewpoint, walkers on the LLTNP core paths and hill walking trails to Ben Donich, Beinn Luibhean and Beinn an Lochain, people travelling on the Old Military Road and residential receptors, largely due to the introduction of the tunnel portals and ventilation and escape shafts.
- 9.5.35 The Pink Route Option could also result in significant negative effects during operation on the travellers' views from Argyll Coastal Route. People travelling on this route would go through a 3km-long tunnel instead of ascending and descending the Rest and Be Thankful Pass and as such would miss out on the dramatic scenery of Glen Croe as well as on the important landscape 'threshold' of the pass.



Image C9.33: Southwick Hill Tunnel © Simon Carey / CC BY-SA 2.0



Image C9.34: Example of a tunnel portal - Penmaenbach Tunnel, Eastern Portal, Wales / © David Dixon / cc-by-sa/2.0



Image C9.35: Example of a tunnel ventilation shaft - Totley Tunnel ventilation shaft, Diggle / © Stephen Burton / cc-by-sa/2.0

9.6 Inter-relationships with other SEA topics

- 9.6.1 Table C9.7 presents the inter-relationships identified between Landscape and Visual Amenity and the other SEA topics.

Table C9.7: Inter-related SEA topics

SEA Topic	Relationship with Landscape and Visual Amenity
Climatic Factors	Climate change affects landscape directly and indirectly through coastal erosion, flooding, wetter, warmer conditions, as well as droughts and more frequent storm events. In the long term it can alter landform, landscape pattern and character of the area, influence the plant species composition and distribution within land cover or damage existing landscape elements and features. Climate change can contribute to the spread of pests and diseases, which in turn affects the landscape resource as well as visual amenity (e.g. when a large number of trees dies off as a result of pest or disease and needs to be felled). Furthermore, climate change adaptation measures affect the landscape and visual receptors through the increasing introduction of renewable energy infrastructure into previously remote landscapes with few signs of human activity. Landscape elements, such as trees, woodlands and moorlands, act as 'carbon sinks' (i.e. absorb and lock away more carbon from the atmosphere than they release) making a useful contribution to mitigating climate change. Conversely, any deforestation (i.e. overall loss in the total area of woodland) equates to the carbon being released back into the atmosphere which fuels further climate change.
Air Quality	Landscape elements such as trees and other vegetation absorb pollutants and particulate matter through their leaves and needles and thereby help to improve air quality. Less plant cover means less filtering capacity to clean the air.
Biodiversity	The Biodiversity SEA topic is relevant to landscape, as landscape provides creating habitat for wildlife. Changes to the landscape resource can alter habitats and their connectivity, which can result in both positive and negative effects on biodiversity, flora and fauna. Conversely, any mitigation and enhancement measures relevant to biodiversity can have an impact on the landscape and visual amenity. For these reasons, any landscape or planting proposals put forward as part of mitigation are normally prepared in consultation with Biodiversity specialists. Biodiversity Net Gain assessment results can be factored into landscape design considerations to deliver more environmentally sustainable designs.
Water Environment	The Water Environment SEA topic is relevant to landscape as landscape elements and features rely on the water environment and can be damaged by flooding or being subjected to prolonged waterlogging. Conversely, landscape elements such as woodland intercept rainfall, increase transpiration, increase the filtration of surface water and slow the flow of water.
Cultural Heritage	Landscape incorporates cultural heritage resources (assets), which help to shape the historic landscape character. Cultural heritage and landscape both contribute to a sense of place. Cultural heritage assets include inventory gardens and designed landscapes. Some cultural heritage resources also act as landmarks or key viewpoints in the landscape, influence cultural associations of a place and affect the sensitivity of landscape receptors. Cultural heritage assets can also contribute to the visual amenity of the area. Landscape and visual mitigation and enhancement measures can have an effect on cultural heritage assets so should be prepared in consultation with cultural heritage specialists.
Population and Human Health	The Population and Human Health SEA topic is relevant as green and open spaces in the landscapes provides opportunities for people to exercise as well as enjoy and experience nature, enhancing their quality of life and improving their physical and mental health and wellbeing. Although anecdotal evidence of the latter has long been known, there is a growing body of scientific research related to this interrelationship and its importance has become highlighted during the COVID-19 pandemic. In addition, tourism and consequently the economic welfare of local communities often rely on the rich, scenic landscapes of the area. Residential properties, core paths, hill walking trails, long distance walking and cycling routes and roads all serve as locations from which people (i.e. visual receptors) experience views and any changes to them.
Material Assets	Landscape elements (e.g. trees and woodland) provide numerous ecosystem services (i.e. processes by which the environment produces natural resources utilised by us all, such as clean air, water, food and raw materials). These are increasingly recognised and accounted for as Scottish natural capital (i.e. natural assets that humans derive a wide range of services from) and as such comprise Material Assets.
Soil	Soil supports the growth of plants and trees which constitute part of the landscape resource.

9.7 Conclusions

9.7.1 The project has the potential to cause significant negative effects on the following landscape receptors within the route corridor as a result of the construction and operation of the carriageway and supporting infrastructure:

- Special Qualities of the LLTNP;
- LLTNP core wildness areas around the summits of The Cobbler and Beinn Luibhean;
- Upland Glens – Loch Lomond & the Trossachs LCT 252;
- Highland Summits LCT 251; and
- local landscape elements and features such as Loch Restil, woodland, forestry and distinct landform.

9.7.2 The project also has the potential to cause significant negative effects on the following visual receptors within the route corridor as a result of the construction and operation of the carriageway and supporting infrastructure:

- residential receptors;
- LLTNP Viewpoint: A83 viewpoint, Glen Croe (at Rest and Be Thankful car park);
- Ben Donich, Beinn Luibhean and Beinn an Lochain hill walking trails;
- LLTNP core paths; and
- Old Military Road.

9.7.3 There may be opportunities to reduce some of the negative landscape and visual effects of the project and associated large-scale structures on the nearby landscape and visual receptors through embedded landscape mitigation, including careful route selection and alignment of the project, integration with the surrounding topography, input into the design of structures and earthworks, minimising loss of existing vegetation during construction and providing mitigation planting that seamlessly integrates with the surrounding landscape. There may be opportunities to deliver positive landscape effects by large-scale woodland planting.

9.7.4 There may also be opportunities to deliver benefits by enhancing the scenic walking, cycling, hiking and driving routes and key viewpoints in the area, such as the Rest and Be Thankful car park. Consideration should be given to the experience of people traveling along the route and any opportunities for preserving key views and providing high-quality stopping places to take advantage of them to enable enjoyment of the special landscape qualities of the surrounding area.

9.7.5 The Brown Route Option stands out as having the greatest potential for minimising the landscape and visual effects on nearby landscape and visual receptors (except people travelling on the Argyll Coastal Route) due to the smallest footprint and closest alignment along the existing A83 out of the five possible route options.

9.7.6 People travelling on the Argyll Coastal Route through the tunnel (1.6km-long in Purple Route Option and 3km-long in Pink Route Option) would be unable to view the unique scenery whilst in the tunnel, while those travelling through a debris flow shelter (Brown Route Option and potentially Green Route Option) would have their opportunities for enjoying the scenery along the route only partially hindered. The same receptors travelling on a viaduct (mostly Yellow Route Option, but to a lesser degree also Green, Brown and potentially Purple Route Options) would benefit from the elevated position and be better placed for appreciating the scenic views.

9.7.7 In addition, the tunnels in Purple and Pink Route Options would result in greater or lesser negative landscape and visual effects depending on the tunnel construction method, however, the tunnel portals and prominent ventilation and escape shafts would result in negative landscape and visual effects regardless of the tunnel construction method.

9.7.8 The viaducts included as part of the Yellow (1.8km-long), but also Brown (0.3km long), Green (0.3km and 0.2km long) and potentially Purple Route Option could result in significant landscape and visual effects, although, with careful design and mitigation the effect could be reduced or even made positive, should these structures be designed as elegant features, well integrated into the backdrop of the views and appropriately juxtaposed with the dramatic scenery. If designed sensitively in this manner to fit the context of the route corridor within Glen Croe, these structures could contribute to placemaking and potentially become landmarks and enhance their surroundings.

9.8 Mitigation, Enhancement and Design Recommendations

9.8.1 Table C9.8 sets out the SEA recommendations in relation to landscape and visual amenity mitigation, enhancement and monitoring.

Table C9.8: Potential mitigation, enhancement and monitoring recommendations in relation to Landscape and Visual Amenity

Mitigation / Enhancement / Monitoring Measure	Stage of Implementation (e.g. DMRB Stage 2, DMRB Stage 3)	Responsible Party for Implementation/ Monitoring of Measure	Consultation/ Approvals Required
Develop a landscape strategy and design objectives which will help to integrate the road with the surrounding landscape and mitigate effects of the project where possible, and new large-scale structures in particular, on the nearby landscape and visual receptors through sympathetic, sensitive design, alignment, micro-siting and ongoing consultation with relevant stakeholders. Embed landscape mitigation in the design where possible including the careful route selection and alignment of the project, input into the design of structures and form and extent of earthworks, woodland planting limiting the extent of the cutting slopes, minimising loss of woodland.	DMRB Stage 2 and Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	Consultation with Loch Lomond and The Trossachs National Park Authority (LLTNPA), NatureScot, Argyll & Bute Council, Forestry and Land Scotland, Historic Environment Scotland
Recognise, respect and protect the special landscape qualities of the National Park evident in the route corridor and seek to avoid significant negative effects on them where possible and provide opportunities to experience them through careful design. Equally, identify any undesignated landscape elements and features of relatively high value and seek to protect them in the same manner	Throughout the lifecycle of the project	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.	Consultation with LLTNPA, NatureScot

Mitigation / Enhancement / Monitoring Measure	Stage of Implementation (e.g. DMRB Stage 2, DMRB Stage 3)	Responsible Party for Implementation/ Monitoring of Measure	Consultation/ Approvals Required
<p>Minimise the loss of all existing vegetation wherever possible and in particular retain mature trees and woodland as well as ancient woodland wherever possible. Where loss of existing vegetation is unavoidable, seek to provide replacement planting which corresponds to, or exceeds, the natural capital value of the landscape elements and ecosystem services lost as a result of the project. Consider not just quantity but also quality so that if a small area of mature trees needs to be felled to make space for the project ensure a larger area of young trees is planted so as to balance out the loss of structure and function provided by mature trees.</p>	<p>Throughout the lifecycle of the project</p>	<p>Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.</p>	<p>Consultation with LLTNPA, NatureScot, Argyll & Bute Council, Forestry and Land Scotland</p>
<p>Continuously collaborate with other relevant disciplines and perform regular design quality checks to ensure any prominent, elevated or vertical structures such as bridges, viaducts, tunnel portals, ventilation and escape shafts etc are designed to be aesthetically pleasing and/or visually unobtrusive where possible to be in keeping with the local environment and minimise the negative effects on the landscape resource, including the landscape character and setting of any natural or cultural heritage assets, and the nearby visual receptors, including those travelling along the A83.</p>	<p>Throughout the lifecycle of the project</p>	<p>Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.</p>	<p>Consultation with LLTNPA, Architecture & Design Scotland, NatureScot, Argyll & Bute Council, Forestry and Land Scotland, Historic Environment Scotland</p>
<p>Ensure any SuDS features maximise multi-functionality where possible and deliver amenity and biodiversity benefits as well as attenuation and treatment. Mitigate negative landscape and visual effects by integrating with surrounding topography, using natural characteristics in design and planting with native aquatic and terrestrial species suitable to local context to provide wildlife habitat and visual interest.</p>	<p>Throughout the lifecycle of the project</p>	<p>Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.</p>	<p>Consultation with LLTNPA, NatureScot, SEPA</p>
<p>Take account of local species composition, forest and woodland strategies, climate change adaptation and biosecurity threats when developing planting proposals.</p>	<p>Throughout the lifecycle of the project</p>	<p>Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.</p>	<p>Consultation with LLTNPA, NatureScot, Forestry and Land Scotland</p>

Mitigation / Enhancement / Monitoring Measure	Stage of Implementation (e.g. DMRB Stage 2, DMRB Stage 3)	Responsible Party for Implementation/ Monitoring of Measure	Consultation/ Approvals Required
Develop planting and landscape proposals that seamlessly integrate with surrounding landscape and ensure positive effects for biodiversity. Maintain and, where possible, enhance ecological and landscape connectivity and minimise fragmentation. Consider and contribute towards local and strategic biodiversity priorities through planting proposals. Ensure long term management.	Throughout the lifecycle of the project	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.	Consultation with LLTNPA, NatureScot, Forestry and Land Scotland
Preserve key vistas/focal points from key viewpoints and maintain or enhance the evolving narrative of the existing scenic routes (walking, cycling, hiking or driving). Consider views from the road and where possible provide good lines of sight to the stunning views of the iconic landscapes and high-quality stopping places along the route to take advantage of key views.	Throughout the lifecycle of the project	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.	Consultation with LLTNPA, NatureScot, Argyll & Bute Council
Consider the dark skies and perceived wildness of the local landscape and where possible avoid significant effects on them.	Throughout the lifecycle of the project	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.	Consultation with LLTNPA, NatureScot
Provide screen planting of the project, where appropriate, for nearby residential receptors which takes account of different seasons and times of day.	Throughout the lifecycle of the project	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.	Consultation with Argyll & Bute Council, LLTNPA, NatureScot

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