Access to Argyll and Bute (A83)

Strategic Environmental Assessment

Post Adoption Statement

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15/11/21

Transport Scotland

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Jacobs AECOM

TRANSPORT SCOTLAND
CÒMHDHAIL ALBA

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Project-specific Terminology Used in Environmental Report

Terminology	Description
Corridor Options	Refers to the 11 route corridor options considered as part of the Preliminary Assessment, as shown on Figure 1.1. N.B. Four additional route corridors (12 to 15) arose from public consultation.
Preferred Corridor / Corridor	Refers to the preferred corridor (Corridor 1), selected as a result of the Preliminary Assessment, as shown on Figure 1.2.
Possible Route Options	Refers to the five coloured route options within Corridor 1 collectively, as shown on Figure 5.1.
Preliminary Assessment	Refers to the initial assessment of the 15 route corridor options, with the objective of identifying if corridors can be removed from further consideration at this stage to allow more detailed consideration of those corridors remaining and recommend a preferred corridor.
Preliminary Engineering Support Services	Design Manual for Roads and Bridges (DMRB) Stage 1 Assessment to identify a preferred corridor for access to Argyll and Bute. This includes the Preliminary Assessment described above.
Project	Refers to the Access to Argyll and Bute (A83) project as a whole. Although SEAs typically assess plans, programmes and strategies, the term 'project' is used in this Post Adoption Statement as an all-encompassing term, and is more suited to the spatial scale of corridor 1, which was the focus of the Environmental Report and is also the focus of this Post Adoption Statement.

1. Introduction

1.1 Project Background

1.1.1 Following recent landslide events in August 2020 at the Rest and Be Thankful on the A83 trunk road, one of which was the largest recorded in the area, Jacobs / AECOM was commissioned by Transport Scotland to undertake a Strategic Environmental Assessment (SEA) and provide preliminary engineering support services (PES) as the equivalent of a Design Manual for Roads and Bridges (DMRB) Stage 1 Assessment to identify a preferred corridor for improving access to Argyll and Bute. The DMRB sets a standard of good practice that has been developed principally for trunk roads.

1.1.2 SEAs are required to identify any significant environmental effects of certain plans, programmes and strategies (PPS) in Scotland. They are required to comply with the Environmental Assessment (Scotland) Act 2005 (the SEA Regulations).

1.1.3 As part of Transport Scotland's second Strategic Transport Projects Review (STPR2), an Initial Appraisal: Case for Change Report (Jacobs / AECOM 2021) was produced for the Argyll and Bute region, which set out the importance of the A83 as a 'vital artery' running through the region - a key transport corridor in need of investment. Due to the complexities of the route and the urgent need for a solution to the recurring landslides issues, it was decided that the Access to Argyll and Bute (A83) project should be taken forward in parallel with the STPR2 programme and to a level of detail that would support the early stages of project delivery.

1.1.4 There has been a need to consider the route corridor options available to improve resilience and safety for strategic traffic currently using the A83. This included examining the existing A83 corridor, as well as alternative corridors, both to the north and south of the existing route, that could provide a suitable alternative route to the A83. Eleven proposed route corridor options were presented on the Transport Scotland project website (Transport Scotland 2020a) for public consultation from September 2020 to the end of October 2020. These route corridors are shown on Figure 1.1.

1.1.5 This Post Adoption Statement reports how environmental considerations have been integrated into the project, and how consultation feedback has been taken into account. It also explains alternatives considered and the reasons for the selection of alternatives. Finally, this Post Adoption Statement presents a framework for the monitoring of the significant environmental effects identified in the SEA. Further detail is provided in Section 1.4.

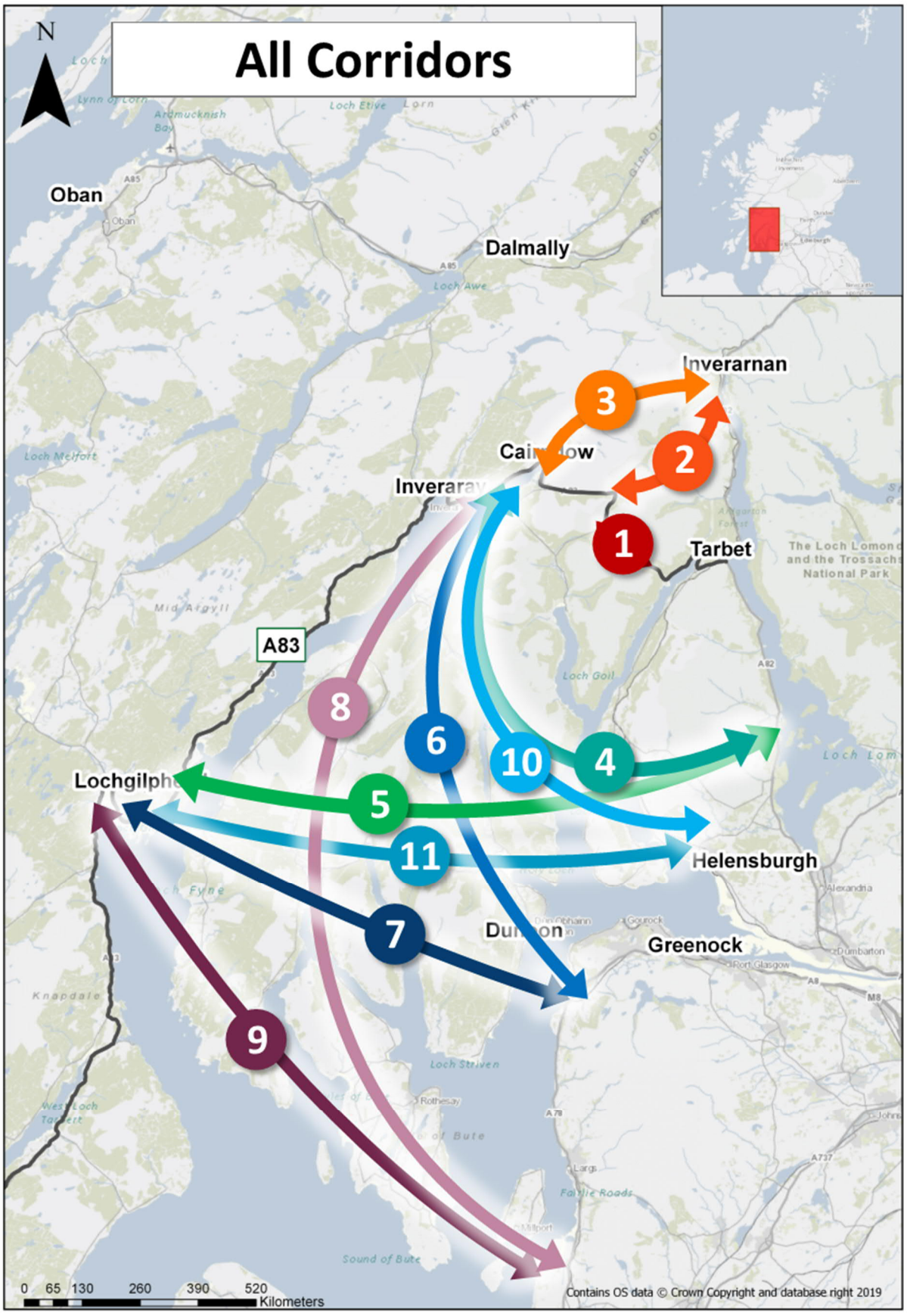

Figure 1.1: Schematic illustrating initial 11 Route Corridor Options (Transport Scotland 2020a)

1.1.7 The eleven proposed route corridors were subject to Preliminary Assessment for the SEA and PES. Four additional route corridors were suggested in feedback received from this public consultation, route corridors 12 to 15. The PES appraisal sets out the evidence base for problems and opportunities linked to the A83, drawing on relevant data analysis, policy review and stakeholder engagement. The PES appraisal also reports the engineering, traffic and economic assessments of the route corridors. The PES is split into two stages: Preliminary Assessment and Detailed Assessment.

1.1.8 The Preliminary Assessment included a sifting exercise, supported by a preliminary environmental assessment, which was undertaken as an early, additional step to the standard statutory SEA process. This has ensured that a proportionate approach to decision making has been adopted and that environmental constraints have been an integral part of the corridor assessment and selection of the preferred corridor. Each of the 15 route corridors were assessed at a high-level against SEA topics and assessment rating criteria. Engineering, traffic, and economic technical assessments were also important considerations that informed the selection of the preferred corridor. The environmental assessment component of the Preliminary Assessment, included as Appendix D (Route Corridor Options Baseline and Assessment) of the Environmental Report, described all the significant environmental constraints associated with each of the 15 route corridors. This baseline and constraints assessment was based on GIS mapping of the 15 route corridors and environmental receptors (a GIS tool called Project Mapper).

1.1.9 The outcome of the Preliminary Assessment was that corridor 1 was retained as the preferred route corridor. One of the principal reasons for this was that the Preliminary Assessment and SEA identified that there would be fewer environmental constraints for corridor 1 than the other route corridor options. Corridor 1 is shown on Figure 1.2.

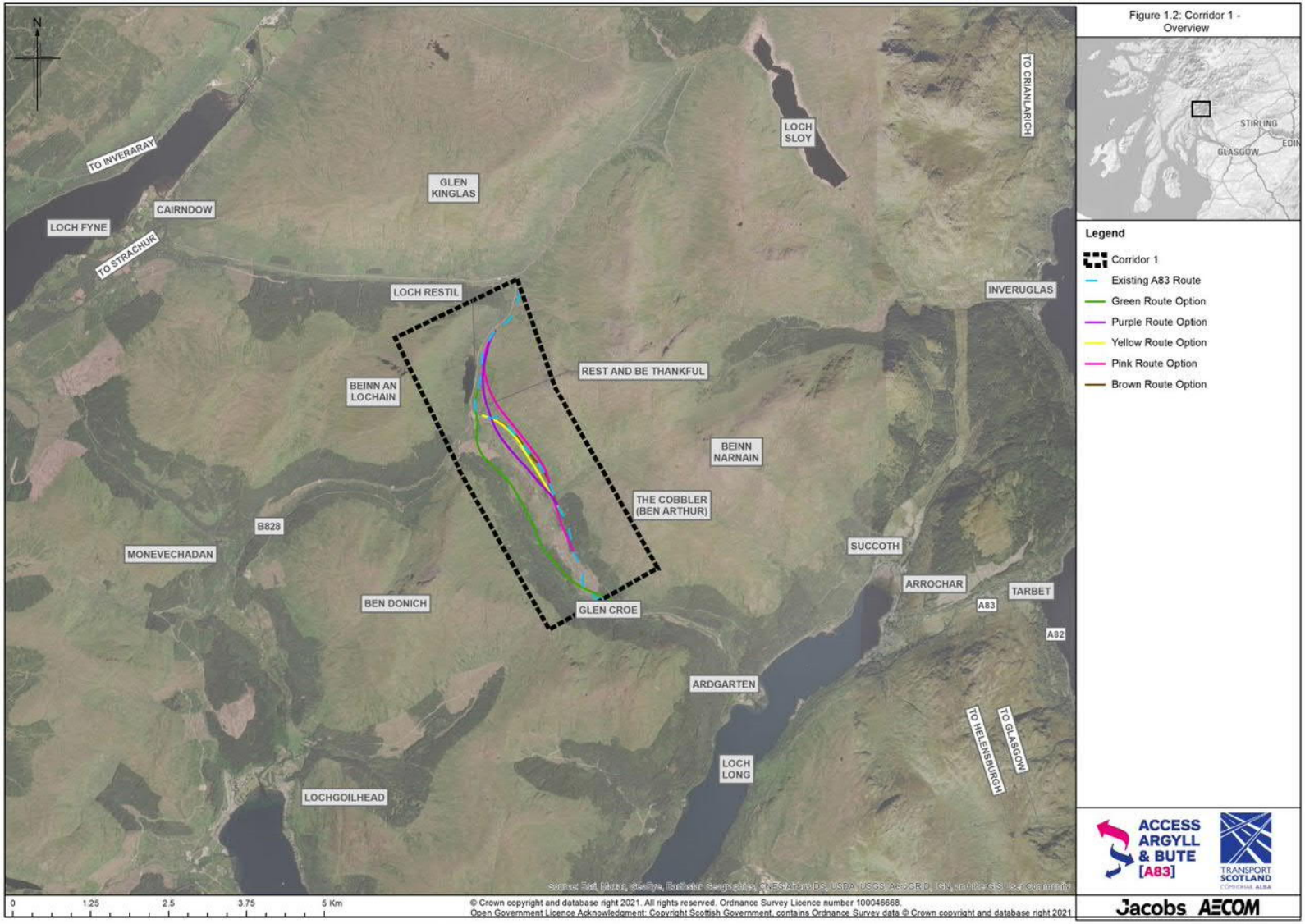

Figure 1.2: Preferred Corridor (Corridor 1) Overview

1.1.10 The purpose of the SEA at the second stage, Detailed Assessment, has been to identify any likely significant effects of the project by assessing any residual corridors following the Preliminary Assessment sifting exercise. The SEA Environmental Report stage therefore focused on the preferred corridor identified during the Preliminary Assessment, corridor 1. Where any likely significant effects are identified, avoidance and mitigation measures need to be identified in the SEA. The SEA also informs the development of the more detailed design and Environmental Impact Assessment (EIA) requirements at the project level. The SEA stages are described in Section 1.3 (SEA Stages).

1.2 Medium-term Solutions

1.2.1 The Environmental Report (Jacobs / AECOM (2021b) included a high-level assessment of five possible route options within corridor 1, as shown on Figure 1.2 (Preferred Corridor Overview). These possible route options are considered to be long-term solutions to improve the resilience of the A83. In the interim period, before the construction of any long-term solution in corridor 1, a number of medium-term solutions, including potential offline realignment options are being considered in relation to corridor 1 and the Old Military Road within it, to provide a more resilient temporary diversion route.

1.2.2 The medium-term solutions currently being considered include improvements to the Old Military Road to provide operational improvements and hazard mitigation. Offline options are also being considered that would provide a medium-term temporary diversion route further to the west of the Glen, including potentially along the same line as some of the long-term options. Options that run along the existing forestry track are also being considered.

1.2.3 The medium-term potential solutions have been identified since the publication of the Environmental Report and have therefore not been assessed in this SEA. However, the mitigation and monitoring framework provided in Section 5 (SEA Monitoring Framework) of this Post Adoption Statement will apply to the mitigation and monitoring of any potential cumulative effects of the long-term and medium-term solutions combined. An EIA Screening/Scoping assessment will determine the need for an Environmental Impact Assessment Report (EIAR) and the environmental topics to be assessed respectively. If an EIAR is required, it will also include a cumulative effects assessment that considers the long-term solutions. The mitigation and monitoring requirements included in any such EIAR will also need to apply to the medium and long-term solutions. The EIA would be produced to align with DMRB LA 101(Highways England et al., 2019), LA 103 (Highways England et al., 2020a) and LA 104 (Highways England et al., 2020b).

1.2.4 The long-term solutions will also need to incorporate the environmental mitigation and enhancement measures that will be identified in the Medium-Term Solutions EIA, given that the decision on the long-term solutions and design of that scheme comes later.

1.3 SEA Stages

1.3.1 The primary purpose of this SEA has been to explore the potential for the Access to Argyll and Bute (A83) project to lead to positive or negative significant environmental effects. The first stage was to produce a Screening Report, which described how an SEA would be undertaken. Following screening, the key remaining stages of SEA for the Access to Argyll and Bute (A83) project are:

- SEA Scoping Report (complete) - Scoping Reports provide sufficient information about the potential environmental effects of a project such as this to allow the Consultation Authorities to provide an informed view regarding the environmental topics to be included in the SEA. Scoping Reports also provide a proposed methodology to be used for assessing potential environmental effects.
- Draft Environmental Report (complete) – The assessment stage establishes the likely significant (positive and negative) environmental effects of implementing the Access to Argyll and Bute (A83) project. Any potential reasonable alternatives were considered at this stage, along with viable mitigation measures to avoid, reduce or offset adverse effects. The assessment and a summary of key

findings were included in the Draft Environmental Report, which was available for consultation alongside the PES, as described in Chapter 2 (Consultation and Stakeholder Engagement).

- Post Adoption Statement (this stage) - The purpose of this stage is described in Section 1.4 (Purpose of this Statement).
- Monitoring (this stage) – any significant environmental effects predicted in the SEA will need to be monitored, according to the monitoring programme set out in this Post Adoption Statement, and remedial action taken in response to the monitoring, where required.

1.4 Purpose of this Statement

1.4.1 SEA Post Adoption Statements are intended to improve the transparency of decision-making within plan-making and strategic planning for projects such as the Access to Argyll and Bute (A83).

1.4.2 This Post Adoption Statement documents:

- how environmental considerations have been integrated into the project;
- how the Environmental Report and consultation responses have been taken into account;
- the reasons for choosing the project in light of other reasonable alternatives considered by the SEA; and
- the measures to be taken to monitor the significant environmental effects of implementing the project.

1.5 Report Structure

1.5.1 This section explains how the SEA Post Adoption Statement is structured and sets out what is included in each chapter.

- Chapter 1 (Introduction / this chapter) summarises the general background to the Access to Argyll and Bute (A83) PES and SEA;
- Chapter 2 (Consultation and Stakeholder Engagement) summarises the consultation responses received at the Scoping Report and Environmental Report stages and explains how they were taken into account by the project and SEA;
- Chapter 3 (Integration of Environmental Considerations into the Project) summarises how environmental constraints and opportunities were integrated into the project;
- Chapter 4 (Reasons for Choosing the Project as Adopted) sets out the rationale for choosing the project in light of other reasonable alternatives;
- Chapter 5 (SEA Monitoring) sets out the monitoring framework, which incorporates responses to consultation feedback received on the draft mitigation, enhancement and monitoring measures that were presented in the Environmental Report;
- Chapter 6 (Future Environmental Assessment) sets out the requirements for further environmental assessment and survey work required at each project stage; and
- Chapter 7 (Concluding Statements) provides a concluding summary for the Post Adoption Statement.
- Glossary of Terms - provides a list of the technical terms used in the Post Adoption Statement and an explanation of these.
- List of Acronyms and Abbreviations - provides a list of the full terms of the acronyms and abbreviations used throughout the Post Adoption Statement.
- Appendix A (Summary of Consultation) contains a summary of the consultation responses received from the statutory and non-statutory consultees at each SEA stage and how the SEA has responded to them.

1.6 Key Facts

Table 1.1: Key Facts relating to the Access to Argyll and Bute (A83) project

Key Facts	
Project	*Access to Argyll and Bute (A83)*
Responsible Authority	*Transport Scotland*
Purpose of PES and SEA	*To identify a preferred corridor for access to Argyll and Bute from the wider transport network. This will review the problems and opportunities relating to the existing A82, A83, A85 and A828 Trunk Roads and consider various route corridor options, including the existing A83 Trunk Road corridor.*
Scheme objectives	▪ *TPO1 Resilience – reduce the impact of disruption for travel to, from and between key towns within Argyll & Bute, and for communities accessed via the strategic road network.* ▪ *TPO2 Safety – positively contribute towards the Scottish Government's Vision Zero road safety target by reducing accidents on the road network and their severity.* ▪ *TPO3 Economy – reduce geographic and economic inequalities within Argyll & Bute through improved connectivity and resilience.* ▪ *TPO4 Sustainable travel – encourage sustainable travel to, from and within Argyll & Bute through facilitating bus, active travel and sustainable travel choices.* ▪ *TPO5 Environment - protect the environment and the benefits local communities and visitors obtain from the natural environment by enhancing natural capital assets and ecosystem service provision through delivery of sustainable transport infrastructure.*
Area to be Considered	*The study area for the SEA Scoping Report included the 11 route corridor options which have undergone Preliminary Assessment (shown on Figure 1.1). Following identification of a preferred corridor, the study area for the SEA Environmental Report (and hence this Post Adoption Statement) was reduced to the 2km wide area for corridor 1 (shown on Figure 1.2).*
Period Covered by the PES and SEA	*2021 - 2030*
Frequency of Update	*Live project with ongoing updates for DMRB Stages 2 and 3*
Project Website	*https://www.transport.gov.scot/projects/a83-access-to-argyll-and-bute/*
Non-Technical Summary	*https://www.transport.gov.scot/projects/a83-access-to-argyll-and-bute/*
Contact Details	*Comments can be provided by email to: Sinead.Thom@transport.gov.scot and Steve.Isaac@jacobs.com; or by post to: [Transport Scotland, Buchanan House, 58 Port Dundas Road, Glasgow, G4 0HF]*

2. Consultation and Stakeholder Engagement

2.1 SEA Consultation Requirements

2.1.1 The SEA has been developed to incorporate the feedback from statutory Consultation Authorities in Scotland:

- Scottish Environment Protection Agency (SEPA);
- NatureScot; and
- Historic Environment Scotland (HES).

2.1.2 The Consultation Authorities also sit on an Environmental Steering Group (ESG) that was formed for this project – the ESG is described in Section 2.3 (Environmental Steering Group). Feedback from the wider ESG members in addition to the Consultation Authorities has been incorporated into the SEA at each stage.

2.1.3 The SEA Scoping Report, Draft Environmental Report and this Post Adoption Statement have all been submitted to the SEA Gateway (https://www.gov.scot/policies/environmental-assessment/strategic-environmental-assessment-sea/) and published on the Transport Scotland website (Transport Scotland 2020a).

2.1.4 All consultation feedback received from the consultation on the Scoping Report and Environment Report, and the SEA responses to this feedback, is included in Appendix A of this Post Adoption Statement.

2.2 Engagement with the General Public

2.2.1 In relation to the Access to Argyll and Bute (A83) project, Transport Scotland published details of the 11 route corridor options on its website on 23 September 2020, with a request for public feedback on local information and constraints in relation to the route corridors by 30 October 2020 (Transport Scotland 2020b). The feedback received has informed the DMRB Stage 1 data collection for the SEA and PES assessment of corridors and Preliminary Assessment work, including environmental assessment. Four variants of corridor 1 were suggested by the general public during this consultation (route corridors 12 to 15) and these were also assessed in the Preliminary Assessment.

2.2.2 A public consultation on the recommended preferred route corridor and possible route options took place between 18 March and 28 May 2021. This consultation can be found here: https://www.transport.gov.scot/publication/recommended-preferred-route-corridor-and-possible-route-options-march-2021-a83-access-to-argyll-and-bute/. There was only one public consultation response received from this consultation that related to the SEA, as follows: '*The key opportunities identified in the SEA section 9 are excellent and valid and should be considered and integrated where possible into the final design and plans for ongoing management of the road*.' These environmental opportunities are included in Section 5 (SEA Monitoring Framework) of this Post Adoption Statement.

2.2.3 An interactive project StoryMap has been developed by the Jacobs/AECOM digital team and is available to view online: https://storymaps.arcgis.com/stories/5c9aa6c915854ff78341a77910c68da4.

2.2.4 The StoryMap sits within Transport Scotland's Access to Argyll and Bute (A83) website to give visitors an insight into the work that has been undertaken by various teams including engineers, planners, and environmental specialists to inform the preferred corridor option selection. The StoryMap will continue to support stakeholder engagement as work on the project progresses through subsequent stages.

2.2.5 The SEA Scoping Report, Environmental Report and this Post Adoption Statement are all available on Transport Scotland's website for public consultation. The Environmental Report, including an interactive

digital non-technical summary, is available here: https://www.transport.gov.scot/publication/strategic-environmental-assessment-a83-access-to-argyll-and-bute/.

2.2.6 A public notice about the SEA Environmental Report consultation was placed in the Campbeltown Courier and Argyllshire Advertiser in May 2021.

2.2.7 All SEA documents are available on Scotland's SEA Gateway website:

https://www.gov.scot/policies/environmental-assessment/strategic-environmental-assessment-sea/.

2.3 Environmental Steering Group

2.3.1 An Environmental Steering Group (ESG) has been established for the Access to Argyll and Bute (A83) project. The ESG members and terms of reference broadly follow the approach taken for other Transport Scotland projects, such as the A9 and A96 dualling programmes and their respective SEAs. The first ESG (virtual) meeting took place on 27 October 2020.

2.3.2 The ESG aims to:

- provide an opportunity for participating organisations to influence corridor option Preliminary Assessment and review emerging design proposals;
- facilitate efficient and effective two-way communication between the A83 project team and the organisations participating in the group; and
- provide an opportunity for the organisations participating in the group to discuss any issues relevant to the PES and SEA.

2.3.3 The ESG members comprise the following organisations:

- Transport Scotland;
- Jacobs/AECOM;
- The SEA Statutory Consultation Authorities (NatureScot, HES, SEPA);
- Argyll & Bute Council, Inverclyde Council, North Ayrshire Council, Stirling Council;
- Loch Lomond and The Trossachs National Park Authority (LLTNPA);
- Marine Scotland; and
- Scottish Forestry.

2.3.4 Local councils were invited to the ESG based on whether the 11 route corridors for the Access to Argyll and Bute (A83) project would intersect their council areas.

2.3.5 Typically, there have been monthly calls with the ESG to discuss updates and pertinent environmental and project-related issues. Regular ESG calls will continue throughout the DMRB Stage 2 and DMRB Stage 3 assessment process to ensure robust consultee engagement and input as the project design progresses.

2.3.6 Feedback from the ESG relating to the Scoping Report and Environmental Report is described in Section 3.4 (Integration of ESG Feedback).

3. Integration of Environmental Considerations into the Project

3.1 Introduction

3.1.1 This chapter provides an overview of how the SEA process considered a range of environmental issues and ensured that these were integrated into the project. It should also be noted that environmental considerations will continue to be integrated throughout the project lifecycle. This is demonstrated in the monitoring framework of Chapter 5 (SEA Monitoring Framework), which will be updated to show progress against each monitoring measure at each project stage.

3.2 Preliminary Assessment

3.2.1 Environmental constraints were considered as part of the Preliminary Assessment (as discussed in Section 1.1: Project Background) and have been further analysed as part of the scoping stage of the SEA. Constraints within the 15 route corridor options - for example, internationally and nationally designated sites - present a risk to obtaining consent for the project due to the potential for irreversible significant effects. The difficulty in reducing significant effects to an acceptable level could result in failure to meet environmental targets and non-compliance with legislation.

3.2.2 Many of the 15 route corridors had significant environmental constraints associated with them. The decision to retain corridor 1 (with an existing A-trunk road) as the preferred corridor was partly based on the significant environmental constraints associated with these other route corridors and corridor 1 containing fewer environmental constraints than all other route corridors. Environmental considerations therefore influenced the retention of corridor 1 and hence the project focus on this 2km wide corridor in the Glen Croe valley.

3.3 Environmental Report

3.3.1 The SEA reported that there would be likely significant (negative) environmental effects in the following SEA topics and sub-topics:

- Biodiversity, Fauna and Flora (designated sites, other habitats, species of conservation interest);
- Water Environment (hydrogeology, hydromorphology); and
- Landscape and Visual Amenity (National Park, various landscape and visual receptors, including landscape character and viewpoints).

3.3.2 The effects identified are at a strategic level and it is expected that through design development and mitigation measures at subsequent DMRB assessment stages it would be possible to reduce these effects. The SEA also identified a number of key opportunities, under the following general themes:

- decarbonise construction, through innovation in design, procurement and construction methods;
- promote active travel;
- provide green infrastructure;
- improve road safety;
- promote positive effects for biodiversity;
- improve watercourse hydromorphology;
- reduce the likelihood of fluvial flood risk; and
- design viaducts and other structures to fit in with the local environment and contribute to placemaking.

3.3.3 These opportunities and many others were included in the draft mitigation and monitoring framework, provided in Chapter 10 (SEA Mitigation and Monitoring) of the Environmental Report, which has now been updated and included in Chapter 5 (SEA Monitoring Framework) of this Post Adoption Statement.

3.4 Integration of ESG Feedback into the SEA

3.4.1 Key points raised by members of the ESG are set out in this section, including responses received on the Scoping Report issued in December 2020 and the Environmental Report issued for consultation between April and July 2021. This section shows how these points have been considered and addressed within the SEA. For a full summary of the Scoping Report and Environmental Report consultation, refer to Appendix A (Summary of Consultation).

Scheme Objectives

3.4.2 As outlined in Section 1.6 (Key Facts), five overarching scheme objectives have been developed over the course of the project. TP05 relates specifically to the environment. Feedback received from ESG members HES and NatureScot in their scoping responses suggested that the wording of the TP05 objective be updated to include 'protect the environment'. This change was since incorporated into the TPO5 objective, which was used in the Preliminary Assessment.

SEA Objectives and Guide Questions

3.4.3 Members of the ESG were given the opportunity to provide feedback on the SEA Objectives and Guide Questions set out in the Environmental Report. As explained in the Environmental Report, the overarching SEA Objectives were developed on a national basis for the STPR2 SEA and the guide questions were amended according to the requirements of the project.

3.4.4 Feedback received from Scottish Forestry resulted in additional SEA Objective guide questions being added under the Climatic Factors, Material Assets, Water Environment and Soils topics.

3.4.5 Feedback received from HES, LLTNPA, and Marine Scotland resulted in the guide questions being updated for Cultural Heritage, Population and Human Health, and the Water Environment, respectively.

Consideration of Forestry and Woodland in this SEA

3.4.6 During ESG meetings from October to December 2020, Scottish Forestry raised the point that, while SEA topics considered several environmental topics related to forestry, there was no specific section of the proposed Draft Environmental Report that would assess impacts on these assets. Scottish Forestry suggested consideration of local and regional woodland and forestry strategies and datasets of existing areas of forestry would be useful in determining potential effects on forestry within the corridor(s) with regard to landscape, soils, and biodiversity, as well as effects on the future viability of commercial operations and amenity aspects. Other ESG members, including LLTNPA and NatureScot, agreed with this and noted the wider biodiversity benefits of native and non-native woodland. Scottish Forestry also raised the potential for tree health to be a strategic issue.

3.4.7 In response to Scottish Forestry concerns, Jacobs/AECOM developed the approach to assessing forestry within the SEA to ensure all relevant effects would be captured. Jacobs/AECOM presented a proposed approach to assessing forestry and woodland in the SEA at the January 2021 ESG meeting, as follows:

- forestry was discussed across the SEA topics (soils, material assets, landscape & visual, water, biodiversity), including inter-relationships. Impacts on different forestry types will be assessed at a high level;
- SEA considers potential effects on existing and planned forested areas, as well as identify opportunities, e.g. for additional planting (in alignment/with reference to what is set out in the

various relevant Forestry Strategies and Management Plans). These plans were also be added to the PPS Review (Appendix B: Plans, Policies and Strategies Review) of the Environmental Report;

- mitigation, enhancement and monitoring measures that relate to forestry were described in the Environmental Report;
- areas of commercial forestry[1], woodland on the Ancient Woodland Inventory (AWI), native woodland and non-native woodland were shown on SEA figures. These are included in Appendix C (Section 5: Biodiversity, Figure C5.1 and Section 9: Landscape and Visual Amenity, Figure C9.2) of the Environmental Report; and
- the Environmental Report included additional recommendations on how forestry strategies and management plans are considered at future DMRB stages.

3.4.8 Comments were received from Scottish Forestry on the Scoping Report in February 2021 in relation to previous comments, suggesting further relevant PPS, and querying why the approach outlined in paragraph 3.4.7 above was not included. Jacobs/AECOM responded to explain that the Scoping Report would not be updated but that Scottish Forestry comments were responded to in the Environmental Report.

Landscape Character Assessment

3.4.9 Throughout the SEA consultation process, LLTNPA has provided valuable advice regarding the Landscape Character Assessment (LCA) approach. In October 2020, LLTNPA stated in an email: '*In making decisions, we do not discriminate between those parts of the National Park that have the older National Scenic Areas (NSAs) in them and those that do not. I advocate that this approach be applied in the route corridor options assessment process including SEA and subsequent EIA process at later stages.'* In relation to this point, the landscape and visual amenity assessment in Appendix C (Section 9: Landscape and Visual Amenity) of the Environmental Report has not discriminated between the parts of the National Park that have the older National Scenic Areas (NSAs) in them and those that do not. The environmental component of the Preliminary Assessment and the SEA both describe the potential effects on the special qualities identified for all relevant areas of the National Park.

3.4.10 Additionally, at the ESG meeting in January 2020, Jacobs/AECOM queried which guidance LLTNPA would prefer to be used for the SEA. LLTNPA responded that NatureScot's LCA should be used and added that the sections on wild land areas and special landscape qualities for the National Park are particularly important to consider. As a result, Jacobs/AECOM has adopted the NatureScot National Landscape Character Assessment for undertaking the landscape assessment within the SEA presented in Appendix C (Section 9: Landscape and Visual Amenity) of the Environmental Report.

Positive Effects for Biodiversity and Net Zero Emissions

3.4.11 Throughout the consultation process, members of the ESG – notably Argyll and Bute Council, NatureScot and LLTNPA – have raised the key issues of the Scottish Government's focus on securing positive effects for biodiversity (see Section 8: Glossary of Terms) as well as Scotland's Net Zero[2] emissions targets, and queried how these would be addressed as part of the project. Argyll and Bute Council also pointed out that the Nature Conservation (Scotland) Act 2004, requires all public bodies to further the conservation of biodiversity when carrying out their responsibilities.

3.4.12 Appendix C (Section 5: Biodiversity) of the Environmental Report sets out a recommendation in relation to adopting the principle of securing positive effects for biodiversity throughout the project life cycle. Consideration of securing positive effects for biodiversity is set out in updated DMRB Biodiversity guidance which will be used in the subsequent stages of design development.

[1] The GIS dataset for commercial forestry was not included in the figures of Appendix C (Figures C5.1 and C9.2) as the data was unsuitable for clear display.

[2] The Scottish government has set itself a legally-binding target to cut greenhouse gas emissions to net zero by 2045, five years ahead of the date set for the UK as a whole.

3.4.13 Appendix C (Section 1: Climatic Factors) of the Environmental Report refers to the Net Zero targets in relation to the project and recommends that opportunities for offsetting carbon impacts should be considered where possible throughout the lifecycle of the project.

In the March 2021 ESG meeting, NatureScot raised the point that securing 'positive effects for biodiversity' would be the preferred term rather than 'Biodiversity Net Gain'. 'Positive effects for biodiversity' is the term used in the National Planning Framework (NPF) 4 and in the Scottish Biodiversity Statement of Intent (Scottish Government 2020). It was agreed that this terminology would be used in the Environmental Report and documents produced at subsequent DMRB stages, including this Post Adoption Statement.

Plans, Policies and Strategies

3.4.14 Throughout the consultation process, members of the ESG have provided information on PPS relevant to the project. These were included within Appendix B (Plans, Policies and Strategies Review) of the Environmental Report. The pertinent environmental issues and legislative and policy requirements arising from the PPS review are referred to in the topic assessments presented in Appendix C (Detailed Baseline and Assessment) of the Environmental Report.

Medium-term Solutions

3.4.15 Although the potential solutions described in Section 1.2 (Medium-term Solutions) were not available for the preparation of the Environmental Report, they will need to be considered in terms of potential cumulative effects with the long-term solutions. ESG members have highlighted this requirement for cumulative effects assessment in relation to all environmental topics, but have emphasised the need to consider the potential cumulative effects of medium and long-term solutions on forestry, surface water runoff, pollution and landscape. As the medium-term solutions are still in an early stage of development, the Medium-Term Solutions EIA will be an effective way to assess the potential cumulative effects and identify targeted mitigation and enhancement measures that relate to the individual medium and long-term solutions and their potential combined cumulative effects. The long-term solutions will also need to incorporate the environmental mitigation and enhancement measures that will be included in the Medium-Term Solutions EIA, given the decision on the long-term solutions and design of that scheme comes later.

3.5 Summary of Integration of Environmental Considerations into the Project

3.5.1 Table 3.1 shows how environmental considerations influenced each stage of the project.

Table 3.1 Integration of SEA considerations into the Project

SEA Stage	Activity or Task	How SEA considerations were integrated into the project
Inception and Scoping	ESG meetings	Feedback from ESG members directly influenced the wording used in the scheme objectives and the SEA objectives and their underlying guide questions. Argyll and Bute Council, NatureScot and LLTNPA raised the key issues of securing positive effects for biodiversity and Scotland's Net Zero emissions targets. Additional text on these areas was added to the Scoping Report and the Environmental Report. The LLTNPA also advised on the most appropriate guidance to use for the Landscape Character Assessment component of the SEA.
	ESG scoping report feedback	Comments were received from ESG members on the draft scoping report. This included feedback from NatureScot, HES, Scottish Forestry, LLTNPA, and Argyll and Bute Council, suggesting further relevant PPS to add to the PPS review. At the request of the LLTNPA, additional detail was added to the Scoping Report relating to existing outdoor recreation provision such as core paths, long distance trails and active travel connections to communities. The close relationship between population and health, material assets and landscape were also described in the SEA Topic Interrelationships section of the Environmental Report. NatureScot feedback on the proposed SEA methodology led to additional consideration of non-designated biodiversity sites in the mapping, the Scoping Report and Environmental Report. Enhancement opportunities in relation to green infrastructure, active travel and modal shift were added to the recommendations and Monitoring Framework of the Environmental Report.
	PPS Review	Review of wide range of PPS to identify key environmental protection/ policy themes to take into account in the SEA and PES
	GIS mapping of constraints and opportunities	The mapping of constraints, including environmental designations, was undertaken using an interactive mapping tool called Project Mapper. This allowed SEA practitioners to clearly identify the constraints associated with each of the 15 route corridor options and make avoidance and mitigation recommendations in the Scoping Report
Environmental Report	Scoping consultation responses received from ESG	The Environmental Report included an appendix (Appendix E: Summary of Consultation Responses) that showed how each of the consultation responses had been taken into account and how specific environmental issues had been added or expanded on in the Environmental Report
	Update PPS review	The PPS review of the Environmental Report (Appendix B: Plans, Policies and Strategies Review) provided a summary of key constraints for the SEA to consider, and documented the additional range of PPS considered following ESG feedback on the SEA Scoping Report.
	Update baseline data	As the Scoping Report covered the Argyll and Bute region generally, additional data relating specifically to Corridor 1 was added to the Environmental Report. This included data provided by the ESG.

	SEA and the influence of environmental aspects on the development of corridor 1 possible route options	Environmental constraints influenced the early design development of the five possible route options, as shown for each of the options below. Purple Route Option - The Purple route option would involve the construction of a new single carriageway road, approximately 3.2km long located along the valley floor of Glen Croe. The route would then enter a tunnel approximately 1.2km long passing under the Old Military Road and the A83 Trunk Road near High Glen Croe. The B828 local road would likely be extended to the north tunnel portal and a new junction created between the A83 Trunk Road and B828 local road. In the previous study in 2012/13 the B828 local road was proposed to be realigned around the west side of Loch Restil. However, as this area is within the Beinn an Lochan SSSI, the realignment of the B828 local road, required as part of this route option, is proposed to follow the existing A83 alignment so far as possible. Purple Route Option - The potential for impacts on private land, habitats, floodplain and the water environment has resulted in a sub-option of the purple route option being identified, which includes a viaduct rather than an earthworks embankment with a large footprint. Pink Route Option - The Pink route option would involve the construction of a new single carriageway road, approximately 4.1km long, of which approximately 2.9km would be within a tunnel. Similar to the purple option, the realignment of the B828 local road, required as part of this route option, is proposed to follow the existing A83 alignment so far as possible, due to the Beinn an Lochan SSSI. Pink & Purple Route Options - The northern tunnel portal for both the pink and purple possible route options within corridor 1, as well as corridors 13 and 15, was also amended to avoid the Butter Bridge, Kinglas Water Category B Listed Building (NGR: NN 23417 9514) and the Class 1 peat area near Butterbridge. Pink & Purple Route Options - A significant consideration in the development of the possible route options was to try and reduce the visual impacts, particularly as corridor 1 is within a scenic glen that sits within the National Park boundary. One of the solutions for this was the tunnel options proposed for the purple and pink possible route options. Green Route Option - The Green route option would involve the construction of a new single carriageway road, approximately 4.3km long on the opposite side of the valley to the existing A83 Trunk Road. The alignment of the green possible route option is influenced by the need to reduce earthworks, landscape impacts and woodland loss. Consideration is also being given to the alignment of the green route option at the crossing of the Croe Water at the south-east end of the route in order to reduce the extents of the route option in the floodplain at this location. The alignment of the green route option also crosses a prominent gulley at the north-west end of the route and consideration is being given to reducing the footprint of the structure, to potentially reduce landscape impact, habitat loss and impact on the water environment.

SEA Stage	Activity or Task	How SEA considerations were integrated into the project
		Yellow Route Option - The Yellow route option would involve the construction of a new single carriageway road, approximately 2.1km long, located between the existing A83 Trunk Road and the Old Military Road. This would include a length of new road on a viaduct approximately 1.8km long. The potential for impacts on private land, habitats and the water environment has resulted in the yellow route option being identified, which includes a viaduct rather than an earthworks embankment with a large footprint. Brown Route Option - The Brown route option would involve the construction of a debris flow shelter over a length of approximately 1.3km to protect the road and road users in the event of future landslide and/or debris flow events. This option is generally along the alignment of the existing A83 Trunk Road and has been identified to avoid encroachment onto the glen and potentially reduce landscape impacts. All Options - A topographic survey will help inform which infrastructure can be retained in order to reduce the construction footprint of the project – for example, the re-use of the existing Rest and Be Thankful car park and minimising impacts on the setting of the Rest and Be Thankful Memorial Stone Listed Building. All Options - Roundabouts were avoided in the development of the options due to the potential lighting impacts associated with roundabouts.
	Cumulative assessment, including predicted cumulative effects and in-combination effects with other proposals.	The cumulative assessment took account of key mitigation measures proposed for the project; where additional mitigation was considered appropriate to reduce or avoid potential significant cumulative effects, this was presented in the SEA findings and draft monitoring framework in the Environmental Report.
	Draft Mitigation, Enhancement and Monitoring Framework	The Mitigation, Enhancement and Monitoring Framework in Section 5 of this report describes the key requirements to protect the environment at each project stage
	Signposting any further environmental assessment required	The environmental assessment requirements for each DMRB stage are described in the Environmental Report and this Post Adoption Statement (Section 6: Future Environmental Assessment).
	Habitats Regulations Appraisal	NatureScot's HRA guidance (see https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra) was used as a key reference source in the Access to Argyll and Bute HRA. NatureScot confirmed they agreed with the conclusions of the HRA in an email dated 20 August 2021.
	Natural capital considerations	The natural capital requirements for each DMRB stage were described in Table 1.1 of the Environmental Report and are also included in the mitigation and monitoring framework in Section 5: SEA Monitoring Framework of this Post Adoption Statement

4. Reasons for Choosing the Project as Adopted

4.1 Preliminary Assessment and SEA Scoping Stage Influences on Project

4.1.1 The 15 route corridor options assessed at the Preliminary Assessment stage, as described in Section 3.2 (Preliminary Assessment), were considered as 'reasonable alternatives', as defined in the SEA Regulations. The decision to retain corridor 1 (with an existing A-trunk road) as the preferred corridor was partly based on the significant environmental constraints associated with the other route corridors and corridor 1 containing fewer environmental constraints than all other route corridors. Environmental considerations therefore influenced the retention of corridor 1 and hence the project focus on this 2km wide corridor in the Glen Croe valley.

4.1.2 Feedback received from ESG members during the regular meetings and the SEA Scoping Report consultation also highlighted the potential significant environmental issues that needed to be considered for the project and this SEA. This feedback is described in Section 3.4 (Integration of ESG Feedback into the SEA) of this Post Adoption Statement.

4.2 Detailed Assessment and Environmental Report Stage Influences on Project

4.2.1 Environmental considerations have been, and will continue to be, a significant influence on the development of the project. As described in Table 3.1, environmental constraints influenced the alignment and development of the possible route options within corridor 1, particularly to avoid impacts on the Beinn an Lochan Site of Special Scientific Interest (SSSI). These possible route options are identified on Figure 1.2.

4.2.2 A significant consideration in the development of the possible route options was to try and reduce the visual impacts, particularly as corridor 1 is within a scenic glen that sits within the National Park boundary. One of the solutions for this was a tunnel option, as proposed for the purple and pink possible route options. Viaducts were also proposed for the yellow and purple possible route options, to avoid the need for permanent large embankments. The alignment of the green possible route option has also been influenced by the need to reduce earthworks, landscape impacts and woodland loss. The brown possible route option is generally along the alignment of the existing A83 Trunk Road and has been identified to avoid encroachment onto the glen and potentially reduce landscape impacts. Roundabouts were also avoided in the development of the options due to their potential lighting impacts.

4.2.3 The Environmental Report recommended that any of the five possible route options taken forward to DMRB Stage 2 should undergo further assessment, including field surveys where required, in order to explore the environmental effects and mitigation measures associated with each possible route option in more detail.

4.2.4 Ecological surveys and further environmental assessment, including the production of an EIA for the medium-term solutions (as described in Section 1.2: Medium-Term Solutions) will continue to influence the project route option selection process as well as the alignment of the preferred route options for the medium and long term.

4.2.5 A topographic survey will help inform which infrastructure can be retained in order to reduce the construction footprint of the project – for example, the re-use of the existing Rest and Be Thankful car park and minimising impacts on the setting of the Rest and Be Thankful Memorial Stone Listed Building.

4.2.6 As noted in paragraph 4.1.2, ESG members provided feedback on potential significant environmental effects. The ongoing regular ESG meetings will also help to influence the project route option selection process as well as the alignment of the preferred route options for the medium and long term.

5. SEA Monitoring Framework

5.1 Proposed Mitigation, Enhancement and Monitoring Framework

5.1.1 The intention of the mitigation, enhancement and monitoring measures listed in this chapter is to develop a project-level assessment framework and checklist to ensure that these measures are embedded and tested across each stage of project design and also carried through to the project construction and operational stages. This framework has been updated to respond to feedback received from the public consultation on the Environmental Report.

5.2 Mitigation, Enhancement and Monitoring Recommendations

5.2.1 Table 5.1 provides a framework based on the design development, mitigation and enhancement recommendations in the assessment of the SEA topics presented in the Environmental Report. Although many of these recommendations will also apply to the medium-term solutions, an updated framework of recommendations will be provided in the Medium-Term Solutions EIA, as described in Section 1.2 (Medium-Term Solutions) and Section 6.2 (Requirements for DMRB Stage 2).

5.2.2 Table 5.1 refers to stages of implementation as follows: DMRB Stage 2 which is route options comparative assessment, DMRB Stage 3 which is full EIA and preparation of the EIAR, Detailed design which is refinement of design prior to construction, pre-construction and construction phases, and to aspects relevant throughout the project lifecycle.

5.2.3 The final column of Table 5.1 is included to demonstrate that the framework should be used to record progress against recommendations at various stages throughout the project lifecycle.

Table 5.1 SEA Mitigation, Enhancement and Monitoring Framework

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	Progress (to be completed at future stages)
Climatic Factors				
The design of the project should seek to minimise material usage and the need for earthworks.	DMRB Stage 2 DMRB Stage 3 Detailed design	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	n/a	
The choice of materials used to construct the project should consider where it can implement sustainably sourced and low carbon materials. Consideration should also be given to the location of suppliers to minimise transportation distances, subject to any procurement limitations.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and procurement and by contractor during construction.	n/a	
Opportunities for offsetting should be considered where appropriate to contribute towards the national legislative target of achieving net zero emissions.	Throughout the project lifecycle	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	n/a	
The design of the project should seek to avoid areas of nationally important peat (Class 1 and 2) where possible. Indirect impacts of the design on peat (for example, a change in drainage) should be considered and mitigated.	DMRB Stage 2 DMRB Stage 3 Detailed design	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor	n/a	

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	Progress (to be completed at future stages)
		during detailed design and construction.		
The design of the project should seek to avoid areas of existing and future forestry to preserve woodland and its carbon sequestration value.	DMRB Stage 2 DMRB Stage 3 Detailed design	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	Consultation with Scottish Forestry	
Air Quality				
Adopt construction and traffic management methods which, as far as practicable, reduce dust and pollutant emissions. This information should be included in Construction Environmental Management Plans (CEMPs).	Construction	Contractor To be monitored through implementation of construction environmental management plans.	Consultation with Argyll and Bute Council and LLTNPA	
Explore integration of green infrastructure in project design (for example at the Rest and Be Thankful parking facilities)	DMRB Stage 2 DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	Consultation with Argyll and Bute Council and LLTNPA	
Population and Human Health				
Implementation of a communications strategy to keep local communities informed of the progress of the project and to provide channels for input/complaints/enquiries (e.g. telephone helpline, website, email, postal address etc).	DMRB Stage 2 DMRB Stage 3	Designer & Contractor To be monitored by Transport Scotland during subsequent	n/a	

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	Progress (to be completed at future stages)
	Pre-construction Construction	DMRB stages and by contractor during construction.		
Appointment of a community liaison officer to facilitate regular meetings with local communities to provide project updates and allow for feedback/input.	Pre-construction Construction	Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during construction.	n/a	
Early consultation with key stakeholders and active travel groups in order to develop active travel proposals to complement the project.	DMRB Stage 2 DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	Key stakeholders and active travel groups	
Regular consultation with outdoor/access officer, head of tourism and other relevant stakeholders within the LLTNPA to ensure that any effects on the normal operations of the Park during construction of the proposed project are minimised as far as practicable.	Pre-construction Construction	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during construction.	Consultation with LLTNPA	
Ensure the project complies with the Equalities Act 2010, and considers mitigation and enhancements for protected characteristic groups in the project design, including the design of linkages to walking and cycling routes and core path networks. The following impact assessments are being undertaken for the STPR2: Business and Regulatory Impact Assessment (BRIA)	DMRB Stage 2 DMRB Stage 3 Detailed design	Designer To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	n/a	

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	Progress (to be completed at future stages)
Child Rights and Wellbeing Impact Assessment (CRWIA) Equality Impact Assessment (EQIA) Fairer Scotland Duty Assessment Island Communities Impact Assessment (ICIA) These assessments will be reviewed and considered for applicability at the EIAR stage for the A83, to ensure good practice and regulatory or policy compliance:				
Design any permanent diversion in non-motorised user (NMU) routes to provide the same or improved standard of pathway for pedestrians, cyclists and equestrians.	DMRB Stage 2 DMRB Stage 3 Detailed design	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.	Consultation with Argyll and Bute Council and other groups, as required	
Schedule and control the timing of construction activities to minimise noise impacts on sensitive receptors. This information is to be included in CEMPs.	Construction	Contractor To be monitored through implementation of construction environmental management plans.	Consultation with Argyll and Bute Council and LLTNPA	
Adopt construction and traffic management methods which, as far as practicable, maintain access for road users and NMUs during construction periods. This information is to be included in a Construction Traffic Management Plan (CTMP).	Construction	Contractor To be monitored through implementation of CTMP.	Consultation with Argyll and Bute Council and LLTNPA	

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	Progress (to be completed at future stages)
Material Assets				
The choice of materials used to construct the preferred route should consider where it can implement sustainably sourced and low carbon materials. Consideration should also be given to the location of suppliers to minimise transportation distances. This information should be included in design and CEMPs.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during procurement and by contractor during detailed design and construction.	n/a	
Produce a waste management strategy and ensure that the waste hierarchy is followed.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.	Consultation with SEPA	
The loss of woodland should be replaced through tailored planting mitigation.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during design and construction.	Consultation with ESG	
Appropriate notice and diversionary routes should be provided prior to construction to inform road users of disruption.	Pre-construction and during construction	Contractor To be monitored through implementation of construction environmental management plans.	Consultation with Argyll and Bute Council, LLTNPA and Trunk Road Operating Company	

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	Progress (to be completed at future stages)
Biodiversity				
Where feasible, the project should avoid sites designated for their biological interest, particularly sites of international and national importance.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Consultation with NatureScot	
Should the project require the loss of habitat from an internationally or nationally designated site, bespoke mitigation or compensation could be required. The specific details would be prepared at DMRB Stage 3.	DMRB Stage 3 Construction	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Consultation with NatureScot	
The design of the project should seek to minimise overall land-take to reduce adverse impacts to biodiversity.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	n/a	
The project should seek to ensure permeability for wildlife. This could include, where appropriate, the provision of mammal crossings or fish passage through culverts.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor	n/a	

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	Progress (to be completed at future stages)
		during detailed design and construction.		
The principle of securing positive effects for biodiversity should be adopted, to ensure compliance with government policy, DMRB guidance and that functional ecosystems are maintained.	Throughout the project lifecycle Monitoring approach to be developed at DMRB Stage 3 but could include Biodiversity Metric 2.	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	n/a	
The loss of woodland and other notable habitats should be replaced through tailored planting mitigation to ensure contiguousness of woodland.	DMRB Stage 3 Pre-construction Planting/regrowth would be monitored. Details to be developed at DMRB Stage 3.	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	n/a	
A CEMP should be developed. This should include a Biosecurity Plan, an Ecological Management Plan and Species Management Plans as required.	DMRB Stage 3 Pre-construction Construction The plans would be refined and updated during the construction stage and finalised at the end of construction to support future management and operation	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and procurement, and by contractor's Ecological Clerk of Works (ECoW) on site during construction.	Consultation with 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	Progress (to be completed at future stages)
Schedule construction activities to reduce disturbance to species of conservation interest where practicable (e.g. seasonal restrictions or avoidance of works during the hours of darkness). Compliance would be monitored by an ECoW for the duration of works.	DMRB Stage 3 Construction	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and procurement, and by contractor's ECoW on site during construction.	n/a	
Water Environment				
The design of the project should be undertaken in line with best practice and relevant guidance, considering the requirements of The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) and in consultation with SEPA.	DMRB Stage 2, DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	SEPA Monitoring requirements to be agreed with regulator.	
Prevent deterioration of the status of surface water bodies during construction through appropriate pollution control for all potentially polluting activities.	Construction	Contractor	SEPA Monitoring requirements to be agreed with regulator.	
Incorporate effective SuDS to avoid or reduce impacts on water quality, informed by landscape and ecology specialists, such that SuDS features deliver other enhancement benefits where feasible.	DMRB Stage 2, DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	SEPA NatureScot Monitoring requirements to be agreed with regulator.	
Channel modifications, in-channel works and temporary/ permanent structures should seek to limit effects on channel hydromorphology and be designed in accordance with appropriate standards and best practice. Where	Throughout the project lifecycle	Designer & Contractor	SEPA	

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	Progress (to be completed at future stages)
practicable efforts should seek to improve the current situation for surface water bodies with existing morphological pressures.		To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Monitoring requirements to be agreed with regulator.	
Hydrogeology and geotechnical surveys should be undertaken to determine groundwater levels within the vicinity of the project. In excavation areas confirmed to intercept groundwater, potential effects should be assessed at later design stages.	DMRB Stage 2, DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	SEPA Monitoring requirements to be agreed with regulator.	
Design of tunnels should include a dewatering assessment if appropriate, to ensure long-term adverse effects on groundwater from dewatering are minimised.	DMRB Stage 2, DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	SEPA	
Groundwater dependent terrestrial ecosystems (GWDTE) will be identified through a review of habitat information in conjunction with ecology surveys to be undertaken at DMRB Stages 2 and 3. Further assessment should be undertaken to improve understanding of the hydrogeological context of habitats.	DMRB Stage 2, DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	SEPA NatureScot	
Site specific flood risk assessments should be undertaken in accordance with DMRB, SEPA and other relevant guidance, as more localised detail becomes available at each relevant design stage.	DMRB Stage 2, DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	Argyll and Bute Council SEPA Monitoring requirements to be agreed with regulator.	
Seek to avoid new infrastructure in the functional floodplain. Where unavoidable, new infrastructure should be restricted to the shortest practical	DMRB Stage 2, DMRB Stage 3	Designer	Argyll and Bute Council	

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	Progress (to be completed at future stages)
crossing, avoiding extensive construction within the functional floodplain and providing adequate compensatory flood storage areas where appropriate.		To be monitored by Transport Scotland during subsequent DMRB stages.	SEPA Monitoring requirements to be agreed with regulator.	
Design of watercourse crossings should seek to cause no increase in flood risk to sensitive receptors and should improve upon the current situation where culverts have not been identified to have sufficient capacity for the design event.	DMRB Stage 2, DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	Argyll and Bute Council SEPA Monitoring requirements to be agreed with regulator.	
Structures may require ongoing inspection and maintenance to prevent blockages. The design would seek to eliminate the need for operational interventions where possible. Requirements of monitoring to be determined at DMRB Stage 2 and 3.	Operation	BEAR	n/a Monitoring requirements to be agreed with regulator.	
Pre and post construction water quality monitoring may be required, where deemed necessary at further design stages. Requirements of monitoring to be determined at DMRB Stage 2 and 3.	Pre-construction, Operation	SEPA	SEPA Threshold triggers to be outlined at later design stages if monitoring is deemed necessary.	
During and post construction geomorphological monitoring may be undertaken where deemed necessary at further design stages. Requirements of monitoring to be determined at DMRB Stage 2 and 3.	Construction, Operation	SEPA	SEPA Monitoring requirements to be agreed with regulator.	
Soils				

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	Progress (to be completed at future stages)
Peat and carbon-rich soils surveys should be undertaken during design development to inform baseline conditions and design development should seek to reduce the overall land-take of soils and peat and avoid soil sealing where possible.	DMRB Stage 2, DMRB Stage 3, Detailed Design	Designer To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	n/a	
Where soils or peat are unavoidably disturbed, mitigation should be considered which reduces organic matter loss, contamination, erosion risk, compaction/structural degradation and soil biodiversity is maintained.	DMRB Stage 2, DMRB Stage 3, Detailed Design, Construction	Designer & Contractor	n/a	
Design development should avoid areas of nationally important peat (Class 1 and 2) and limit loss of and disturbance to non-priority peat (Class 3, 4 and 5) and carbon-rich soils as far as practicable. Design development should limit indirect impacts on peat, for example a change in drainage, and mitigation should be developed.	DMRB Stage 2, DMRB Stage 3, Detailed Design	Designer	n/a	
Where areas of non-priority peat or carbon-rich soils cannot be avoided, mitigation measures should be considered where possible to safeguard peat and carbon-rich soils and measures should be detailed within a Peat Management Plan.	DMRB Stage 2, DMRB Stage 3, Detailed Design, Construction	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Consultation with Argyll and Bute Council, LLTNPA and NatureScot. Compliance with the Peat Management Plan should be monitored by a suitably qualified and experienced person	
Opportunities for peat habitat restoration, enhancement and creation should be explored where feasible and detailed within a Peat Management Plan.	DMRB Stage 2, DMRB Stage 3	Designer & Contractor To be monitored by Transport Scotland during subsequent	Consultation with Argyll and Bute Council, LLTNPA and 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	Progress (to be completed at future stages)
		DMRB stages and by contractor during construction.	Compliance with the Peat Management Plan should be monitored by a suitably qualified and experienced person.	
Design development should aim to limit excavation and disturbance to the geology as far as practicable through, for example, optimising the cut/fill balance and re-use of site-won materials.	DMRB Stage 2, DMRB Stage 3, Detailed Design	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	n/a	
Design development should seek to avoid sites designated for their geological interest i.e. Geological Conservation Review (GCR) sites, where feasible.	DMRB Stage 2, DMRB Stage 3, Detailed Design	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	n/a	
Cultural Heritage				
Seek to develop road alignments that avoid direct impacts on cultural heritage resources or their setting, where feasible.	DMRB Stage 2 DMRB Stage 3 Construction	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during construction.	Argyll and Bute Council (Listed Buildings)	

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	Progress (to be completed at future stages)
Develop cultural heritage design objectives for the project in accordance with national, regional and local policies, priorities and objectives3. The cultural heritage design objectives should: consider undesignated cultural heritage resources in addition to designated resources; consider enhancement opportunities, such as improving sustainable access arrangements. The cultural heritage design objectives should be included in the design and CEMPs.	DMRB Stage 2 DMRB Stage 3 Construction	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during construction.	Argyll and Bute Council, Historic Environment Scotland, Transport Scotland (as Overseeing Organisation)	
Landscape and Visual Amenity				
Develop a landscape strategy and design objectives which will help to integrate the road with the surrounding landscape and mitigate effects of the project, 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 including 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 with cognisance of landscape setting, and avoiding or reducing woodland loss.	DMRB Stage 2 DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	Consultation with ESG	

3 In accordance with DMRB LA 106 – Cultural heritage assessment. (Highways England *et al*.., 2020c)

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	Progress (to be completed at future stages)
Recognise, respect and protect the special landscape qualities of the National Park evident in the corridor and seek to avoid significant adverse effects on them 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 project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Consultation with LLTNPA, NatureScot	
Minimise the loss of existing vegetation wherever practicable and in particular retain mature trees and woodland and ancient woodland. 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 quantity and 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, to balance out the loss of structure and function provided by mature trees.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Consultation with ESG	
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 to be in keeping with the local environment and avoid or reduce adverse 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.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Consultation with ESG, Architecture & Design Scotland	
Ensure any the design of SuDS features considers opportunities for multi-functionality and delivers amenity and biodiversity benefits as well as attenuation and treatment. Mitigate adverse landscape and visual effects by integrating with surrounding topography, using natural characteristics in	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor	Consultation with LLTNPA, NatureScot, SEPA	

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	Progress (to be completed at future stages)
design and planting with native aquatic and terrestrial species suitable to local context to provide wildlife habitat and visual interest.		during detailed design and construction.		
Take account of local species composition, forest and woodland strategies, climate change adaptation and biosecurity threats when developing planting proposals.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Consultation with ESG	
Develop planting and landscape proposals that integrate with surrounding landscape and secure positive effects for biodiversity. Maintain and where feasible 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 project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Consultation with ESG	
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 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 project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Consultation with ESG	
Consider the dark skies and perceived wildness of the local landscape and seek to avoid significant effects on them.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor	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	Progress (to be completed at future stages)
		during detailed design and construction.		
Provide screen planting of the project, where appropriate, for nearby residential receptors which takes account of different seasons and times of day.	Throughout the project lifecycle	Designer & Contractor To be monitored by Transport Scotland during subsequent DMRB stages and by contractor during detailed design and construction.	Consultation with ESG	
Type 1 Cumulative Effects (Cumulative effects on a single resource/receptor that can arise as the result of an accumulation of impacts of the project across multiple topics)				
Population receptors The alignment of the preferred route option to be developed with cognisance of potential cumulative effects - from changes in noise and vibration, air quality, visual, access, tourism and recreation - on population receptors, and should seek to avoid and reduce these where possible.	Throughout the project lifecycle	Designer To be monitored by Transport Scotland throughout project lifecycle.	Consultation with ESG members, if required	
Woodland / forestry, peat, National Park Monitoring potential cumulative effects on receptors/resources identified in the SEA throughout design development and adjusting design/mitigation measures accordingly.	Throughout the project lifecycle	Designer To be monitored by Transport Scotland throughout project lifecycle.	Consultation with ESG members, if required	
Species of conservation interest and habitats Potential cumulative effects on the species of conservation interest and habitats should be assessed in more depth by ecologists at DMRB Stages 2 and 3 with cognisance of the principle of securing positive effects for biodiversity and national goals in relation to biodiversity.	DMRB Stage 2, DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	Consultation with ESG members, if required	

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	Progress (to be completed at future stages)
Natural Capital Ensure that natural capital and ecosystem services are assessed at each key project stage and measured against the scheme objective TPO5, and ensure that appropriate mitigation and enhancement is incorporated.	Throughout the project lifecycle	Designer To be monitored by Transport Scotland throughout project lifecycle.	Consultation with ESG members, if required	
Type 2 Cumulative Effects (Cumulative effects on an SEA topic that can arise from the combined effects of plans or projects)				
Climatic Factors A review of lessons learned and good practice across the industry in relation to decarbonisation of construction is recommended, including appropriate training sessions.	Throughout the project lifecycle	Designer To be monitored by Transport Scotland throughout project lifecycle.	Collaboration between Transport Scotland project managers	
Population and Human Health Transport Scotland to consider timing of A82 construction in relation to disruption to road users due to A83 A Joint Traffic Management Plan will be required for any emergency situations if the A82 and A83 construction periods coincide	Pre-construction Construction	Designer & Contractor To be monitored by Transport Scotland during procurement and by the contractor during construction.	Collaboration between A83 project and A82 Tarbet to Inverarnan contractors	
Material Assets A review of lessons learned and good practice across the industry in relation to decarbonisation of construction, including sustainable sourcing of materials and reducing waste, is recommended, including appropriate training sessions.	Throughout the project lifecycle	Designer To be monitored by Transport Scotland throughout project lifecycle.	Collaboration between Transport Scotland project managers	
Biodiversity	DMRB Stage 2 DMRB Stage 3	Designer	Consultation with NatureScot, and LLTNPA where relevant	

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	Progress (to be completed at future stages)
Further assessment is required at subsequent DMRB stages to determine extent of potential cumulative effects on the biodiversity from A83 project, A82 Tarbet to Inverarnan, and projects within the route corridor (medium-term solutions and Rest and Be Thankful improvements). Cognisance of the principle of securing positive effects for biodiversity and national goals in relation to biodiversity to be considered at all stages of the A83 project lifecycle. Further study to be undertaken in consultation with NatureScot and LLTNPA where relevant, to identify and quantify cumulative effects on species of conservation interest and habitat loss, where possible, as a result of major Transport Scotland infrastructure projects. Appropriate mitigation and monitoring measures would then be proposed to target significant effects on specific species/habitats.		To be monitored by Transport Scotland during subsequent DMRB stages.		
Soils Further assessment is required at subsequent DMRB stages to determine extent of potential cumulative effects on soils from A83 project, A82 Tarbet to Inverarnan, and projects within the route corridor (OMR and Rest and Be Thankful improvements).	DMRB Stage 2 DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	n/a	
Landscape and Visual Amenity Further assessment is required at subsequent DMRB stages to determine extent of potential cumulative effects on landscape receptors from the A83 project, A82 Tarbet to Inverarnan, and projects within the route corridor (medium-term solutions and Rest and Be Thankful improvements).	DMRB Stage 2 DMRB Stage 3	Designer To be monitored by Transport Scotland during subsequent DMRB stages.	n/a	

6. Future Environmental Assessment

6.1 Coordination of Medium and Long-Term Project Solutions

6.1.1 The medium-term solutions for corridor 1 described in Section 1.2 (Medium-Term Solutions) are being developed with due consideration of the potential long-term solutions to improve the resilience of the A83. The development of all options is also discussed at the ongoing regular ESG meetings. This coordinated development and liaison with the ESG reflects an overall project approach that seeks to avoid rather than mitigate any potential cumulative environmental effects.

6.1.2 In addition to the requirements for each SEA topic listed in Sections 6.2 and 6.3, the EIA of the medium-term solutions will involve a cumulative assessment of the potential environmental impacts of the medium-term solutions and the possible route options for the Access to Argyll and Bute (A83) project. The Medium-Term Solutions EIAR will also include a final mitigation / monitoring framework.

6.1.3 The long-term solutions will also need to incorporate the environmental mitigation and enhancement measures that will be included in the Medium-Term Solutions EIAR, given the decision on the long-term solutions and design of that scheme comes later.

6.2 Requirements for DMRB Stage 2

Climatic Factors

6.2.1 The design of the project should seek to minimise material usage and the need for earthworks.

6.2.2 The choice of materials used to construct the project should consider where it can implement sustainably sourced and low carbon materials.

6.2.3 Consideration should also be given to the location of suppliers to minimise transportation distances, subject to any procurement limitations.

6.2.4 Opportunities for offsetting should be considered where appropriate to contribute towards the national legislative target of achieving net zero emissions.

6.2.5 The design of the project should seek to avoid areas of nationally important peat (Class 1 and 2) where possible. Indirect impacts of the design on peat (for example a change in drainage) should be considered and mitigated.

6.2.6 The design of the project should seek to avoid areas of existing and future forestry to preserve carbon sequestration woodland.

Air Quality

6.2.7 Integration of green infrastructure should be explored in project design (e.g. at the Rest and Be Thankful parking facilities).

Population and Human Health

6.2.8 A communications strategy should be implemented to keep local communities informed of the progress of the project and to provide channels for input/complaints/enquiries (e.g. telephone helpline, website, email, postal address etc).

6.2.9 Early consultation with key stakeholders and active travel groups should be undertaken to develop active travel proposals to complement the project.

6.2.10 Design should aim for the protection and enhancement of green and open spaces.

6.2.11 The project should comply with the Equalities Act 2010, and consider mitigation and enhancements for protected characteristic groups in the project design, including the design of linkages to walking and cycling routes and core path networks.

6.2.12 The design should plan for the future capacity of the active travel network.

6.2.13 Any permanent diversion of NMU routes should be designed to provide the same or improved standard of pathway.

Material Assets

6.2.14 The choice of materials used to construct the preferred route should consider where it can implement sustainably sourced and low carbon materials. Consideration should also be given to the location of suppliers to minimise transportation distances. This information should be included in design and CEMPs.

6.2.15 A waste management strategy should be produced, and the waste hierarchy followed.

6.2.16 The loss of woodland should be replaced through tailored planting mitigation.

Biodiversity

6.2.17 Where feasible, the project should avoid sites designated for their biological interest, particularly sites of international and national importance.

6.2.18 The design of the project should seek to minimise overall land-take to reduce potential adverse impacts to biodiversity.

6.2.19 The project should seek to ensure permeability for wildlife. This could include, where appropriate, the provision of mammal crossings or fish passage through culverts.

6.2.20 The principle of securing positive effects for biodiversity should be adopted, to ensure compliance with government policy, DMRB guidance and that functional ecosystems are maintained.

Water Environment

6.2.21 The design of the project should be undertaken in line with best practice and relevant guidance, considering the requirements of The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) and in consultation with SEPA.

6.2.22 Effective SuDS should be incorporated to avoid or reduce impacts on water quality, informed by landscape and ecology specialists, such that SuDS features deliver other enhancement benefits where feasible.

6.2.23 Channel modifications, in-channel works and temporary/ permanent structures should seek to limit effects on channel hydromorphology and be designed in accordance with appropriate standards and best practice. Where practicable efforts should seek to improve the current situation for surface water bodies with existing morphological pressures.

6.2.24 Hydrogeology and geotechnical surveys should be undertaken to determine groundwater levels within the vicinity of the project. In excavation areas confirmed to intercept groundwater, potential effects should be assessed at later design stages.

6.2.25 Design of tunnels should include a dewatering assessment if appropriate, to ensure long-term adverse effects on groundwater from dewatering are minimised.

6.2.26 GWTDE will be identified through a review of habitat information in conjunction with ecology surveys to be conducted at DMRB Stages 2 and 3. This will improve understanding of the hydrogeological context of habitats.

6.2.27 Site specific flood risk assessments should be undertaken in accordance with DMRB and other relevant guidance, as more localised detail becomes available at each relevant design stage.

6.2.28 The design should seek to avoid new infrastructure in the functional floodplain. Where unavoidable, new infrastructure should be restricted to the shortest practical crossing, avoiding extensive construction within the functional floodplain and providing adequate compensatory flood storage areas where appropriate.

6.2.29 Design of watercourse crossings should seek to cause no increase in flood risk to sensitive receptors and should improve upon the current situation where culverts have not been identified to have sufficient capacity for the design event.

Soils

6.2.30 Peat and carbon-rich soils surveys should be undertaken during design development to inform baseline conditions and design development should seek to reduce the overall land-take of soils and peat and avoid soil sealing where possible.

6.2.31 Where soils or peat are unavoidably disturbed, mitigation should be considered which reduces organic matter loss, contamination, erosion risk, compaction/structural degradation and soil biodiversity is maintained.

6.2.32 Design development should avoid areas of nationally important peat (Class 1 and 2) and limit loss of and disturbance to non-priority peat (Class 3, 4 and 5) and carbon-rich soils as far as practicable. Design development should limit indirect impacts on peat, for example a change in drainage, and mitigation should be developed.

6.2.33 Where areas of non-priority peat or carbon-rich soils cannot be avoided, mitigation measures should be considered where possible to safeguard peat and carbon-rich soils and measures should be detailed within a Peat Management Plan.

6.2.34 Opportunities for peat habitat restoration, enhancement and creation should be explored where feasible and detailed within a Peat Management Plan.

6.2.35 Design development should aim to limit excavation and disturbance to the geology as far as practicable through, for example, optimising the cut/fill balance and re-use of site-won materials.

6.2.36 Design development should seek to avoid sites designated for their geological interest i.e. Geological Conservation Review (GCR) sites, where feasible.

Cultural Heritage

6.2.37 Road alignments should seek to avoid direct impacts on cultural heritage resources or their setting, where feasible.

6.2.38 Cultural heritage design objectives should be developed for the project in accordance with national, regional and local policies, priorities and objectives. The cultural heritage design objectives should:

- consider undesignated cultural heritage resources in addition to designated resources;
- consider enhancement opportunities, such as improving sustainable access arrangements; and
- be included in the design and CEMPs.

Landscape and Visual Amenity

6.2.39 Develop a landscape strategy and design objectives which will help to integrate the road with the surrounding landscape and mitigate effects of the project, 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 including 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 with cognisance of landscape setting, and avoiding or reducing woodland loss.

6.2.40 Recognise, respect and protect the special landscape qualities of the National Park evident in the corridor and seek to avoid significant adverse effects on them 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.

6.2.41 Minimise the loss of existing vegetation wherever practicable and in particular retain mature trees and woodland as well as ancient woodland. 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.

6.2.42 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 to be in keeping with the local environment and avoid or reduce adverse 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.

6.2.43 Ensure any the design of SuDS features considers opportunities for multi-functionality and delivers amenity and biodiversity benefits as well as attenuation and treatment. Mitigate adverse 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.

6.2.44 Take account of local species composition, forest and woodland strategies, climate change adaptation and biosecurity threats when developing planting proposals.

6.2.45 Develop planting and landscape proposals that integrate with surrounding landscape and secure positive effects for biodiversity. Maintain and where feasible enhance ecological and landscape connectivity and minimise fragmentation. Consider and contribute towards local and strategic biodiversity priorities through planting proposals. Ensure long term management.

6.2.46 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 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.

6.2.47 Consider the dark skies and perceived wildness of the local landscape and seek to avoid significant effects on them.

6.2.48 Provide screen planting of the project, where appropriate, for nearby residential receptors which takes account of different seasons and times of day.

Type 1 Cumulative Effects

6.2.49 Type 1 cumulative effects are effects on a single resource/receptor as the result of an accumulation of impacts of the project across multiple environmental topics (e.g. visual, noise and air quality effects on a single receptor).

Population Receptors

6.2.50 The alignment of the preferred route option to be developed with cognisance of the potential for cumulative effects - from changes in noise and vibration, air quality, visual, access, tourism and recreation - on population receptors and should seek to avoid and reduce these where possible.

Woodland / Forestry / Peat / National Park

6.2.51 Monitoring potential cumulative effects on receptors/resources identified in the SEA throughout design development and adjusting design/mitigation measures accordingly.

Species of Conservation Interest and Habitats

6.2.52 Potential cumulative effects on the species of conservation interest and habitats should be assessed in more depth by ecologists at DMRB Stages 2 and 3 with cognisance of the principle of securing positive effects for biodiversity and national goals in relation to biodiversity.

Natural Capital

6.2.53 Ensure that natural capital and ecosystem services are assessed at each key project stage and measured against the scheme objective TPO5, and ensure that appropriate mitigation and enhancement is incorporated.

Type 2 Cumulative Effects

6.2.54 Type 2 cumulative effects are the combined effects of multiple plans or projects on a particular SEA topic (e.g. additive biodiversity affects from different developments).

Climatic Factors

6.2.55 A review of lessons learned and good practice across the industry in relation to decarbonisation of construction is recommended, including appropriate training sessions.

Material Assets

6.2.56 A review of lessons learned and good practice across the industry in relation in relation to decarbonisation of construction, including sustainable sourcing of materials and reducing waste, is recommended, including appropriate training sessions.

Biodiversity

6.2.57 Further assessment is required at subsequent DMRB stages to determine extent of potential cumulative effects on the biodiversity from A83 project, A82 Tarbet to Inverarnan, and projects within the route corridor (medium-term solutions and Rest and Be Thankful improvements).

6.2.58 Cognisance of the principle of securing positive effects for biodiversity and national goals in relation to biodiversity to be considered at all stages of the A83 project lifecycle.

6.2.59 Further study to be undertaken in consultation with NatureScot and LLTNPA where relevant, to identify and quantify cumulative effects on species of conservation interest and habitat loss, where possible, as a result of major Transport Scotland infrastructure projects. Appropriate mitigation and monitoring measures would then be proposed to target significant effects on specific species/habitats.

Soils

6.2.60 Further assessment is required at subsequent DMRB stages to determine extent of potential cumulative effects on soils from A83 project, A82 Tarbet to Inverarnan, and projects within the route corridor (medium-term solutions and Rest and Be Thankful improvements).

Landscape and Visual Amenity

6.2.61 Further assessment is required at subsequent DMRB stages to determine extent of potential cumulative effects on landscape receptors from the A83 project, A82 Tarbet to Inverarnan, and projects within the route corridor (medium-term solutions and Rest and Be Thankful improvements).

6.3 Requirements for DMRB Stage 3

Climatic Factors

6.3.1 The design of the project should seek to minimise material usage and the need for earthworks.

6.3.2 The choice of materials used to construct the project should consider where it can implement sustainably sourced and low carbon materials.

6.3.3 Consideration should also be given to the location of suppliers to minimise transportation distances, subject to any procurement limitations.

6.3.4 Opportunities for offsetting should be considered where appropriate to contribute towards the national legislative target of achieving net zero emissions.

6.3.5 The design of the project should seek to avoid areas of nationally important peat (Class 1 and 2) where possible. Indirect impacts of the design on peat (for example a change in drainage) should be considered and mitigated.

6.3.6 The design of the project should seek to avoid areas of existing and future forestry to preserve carbon sequestration woodland.

Air Quality

6.3.7 Explore integration of green infrastructure in project design (for example at the Rest and Be Thankful parking facilities).

Population and Human Health

6.3.8 Implementation of a communications strategy to keep local communities informed of the progress of the project and to provide channels for input/complaints/enquiries (e.g. telephone helpline, website, email, postal address etc).

6.3.9 Early consultation with key stakeholders and active travel groups in order to develop active travel proposals to complement the project.

6.3.10 Design for the protection / enhancement of green and open spaces.

6.3.11 Ensure the project complies with the Equalities Act 2010, and considers mitigation and enhancements for protected characteristic groups in the project design, including the design of linkages to walking and cycling routes and core path networks.

6.3.12 Plan for the future capacity of the active travel network.

6.3.13 Design any permanent diversion in NMU routes to provide the same or improved standard of pathway.

Material Assets

6.3.14 The choice of materials used to construct the preferred route should consider where it can implement sustainably sourced and low carbon materials. Consideration should also be given to the location of suppliers to minimise transportation distances. This information should be included in design and CEMPs.

6.3.15 Produce a waste management strategy and ensure that the waste hierarchy is followed.

6.3.16 The loss of woodland should be replaced through tailored planting mitigation.

Biodiversity

6.3.17 Where feasible, the project should avoid sites designated for their biological interest, particularly sites of international and national importance.

6.3.18 Should the project require the loss of habitat from an internationally or nationally designated site, bespoke mitigation or compensation could be required. The specific details would be prepared at DMRB Stage 3.

6.3.19 The design of the project should seek to minimise overall land-take to reduce adverse impacts to biodiversity.

6.3.20 The project should seek to ensure permeability for wildlife. This could include, where appropriate, the provision of mammal crossings or fish passage through culverts.

6.3.21 The principle of securing positive effects for biodiversity should be adopted, to ensure compliance with government policy, DMRB guidance and that functional ecosystems are maintained. A monitoring approach to be developed at DMRB Stage 3, but could include Biodiversity Metric 2.

6.3.22 The loss of woodland and other notable habitats should be replaced through tailored planting mitigation to ensure contiguousness of woodland. The specific details would be prepared at DMRB Stage 3, and any planting/regrowth would be monitored.

6.3.23 A CEMP should be developed. This should include a Biosecurity Plan, an Ecological Management Plan and Species Management Plans as required.

6.3.24 Schedule construction activities to reduce disturbance to species of conservation interest where practicable (e.g. seasonal restrictions or avoidance of works during the hours of darkness). Compliance would be monitored by an Ecological Clerk of Works (ECoW) for the duration of works.

Water Environment

6.3.25 The design of the project should be undertaken in line with best practice and relevant guidance, considering the requirements of The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) and in consultation with SEPA.

6.3.26 Incorporate effective SuDS to avoid or reduce impacts on water quality, informed by landscape and ecology specialists, such that SuDS features deliver other enhancement benefits where feasible.

6.3.27 Channel modifications, in-channel works and temporary/ permanent structures should seek to limit effects on channel hydromorphology and be designed in accordance with appropriate standards and best practice. Where practicable efforts should seek to improve the current situation for surface water bodies with existing morphological pressures.

6.3.28 Hydrogeology and geotechnical surveys should be undertaken to determine groundwater levels within the vicinity of the project. In excavation areas confirmed to intercept groundwater, potential effects should be assessed at later design stages.

6.3.29 Design of tunnels should include a dewatering assessment if appropriate, to ensure long-term adverse effects on groundwater from dewatering are minimised.

6.3.30 Where potential GWTDE have been identified through a review of habitat information in conjunction with ecologists at DMRB Stage 2 and 3, should be undertaken to improve understanding of hydrogeological context of habitats.

6.3.31 Site specific flood risk assessments should be undertaken in accordance with DMRB and other relevant guidance, as more localised detail becomes available at each relevant design stage.

6.3.32 Seek to avoid new infrastructure in the functional floodplain. Where unavoidable, new infrastructure should be restricted to the shortest practical crossing, avoiding extensive construction within the functional floodplain and providing adequate compensatory flood storage areas where appropriate.

6.3.33 Design of watercourse crossings should seek to cause no increase in flood risk to sensitive receptors and should improve upon the current situation where culverts have not been identified to have sufficient capacity for the design event.

Soils

6.3.34 Peat and carbon-rich soils surveys should be undertaken during design development to inform baseline conditions and design development should seek to reduce the overall land-take of soils and peat and avoid soil sealing where possible.

6.3.35 Where soils or peat are unavoidably disturbed, mitigation should be considered which reduces organic matter loss, contamination, erosion risk, compaction/structural degradation and soil biodiversity is maintained.

6.3.36 Design development should avoid areas of nationally important peat (Class 1 and 2) and limit loss of and disturbance to non-priority peat (Class 3, 4 and 5) and carbon-rich soils as far as practicable. Design development should limit indirect impacts on peat, for example a change in drainage, and mitigation should be developed.

6.3.37 Where areas of non-priority peat or carbon-rich soils cannot be avoided, mitigation measures should be considered where possible to safeguard peat and carbon-rich soils and measures should be detailed within a Peat Management Plan.

6.3.38 Opportunities for peat habitat restoration, enhancement and creation should be explored where feasible and detailed within a Peat Management Plan.

6.3.39 Design development should aim to limit excavation and disturbance to the geology as far as practicable through, for example, optimising the cut/fill balance and re-use of site-won materials.

6.3.40 Design development should seek to avoid sites designated for their geological interest i.e. Geological Conservation Review (GCR) sites, where feasible.

Cultural Heritage

6.3.41 Seek to develop road alignments that avoid direct impacts on cultural heritage resources or their setting, where feasible.

6.3.42 Develop cultural heritage design objectives for the project in accordance with national, regional and local policies, priorities and objectives. The cultural heritage design objectives should:

- consider undesignated cultural heritage resources in addition to designated resources;
- consider enhancement opportunities, such as improving sustainable access arrangements; and
- be included in the design and CEMPs.

Landscape and Visual Amenity

6.3.43 Develop a landscape strategy and design objectives which will help to integrate the road with the surrounding landscape and mitigate effects of the project, 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 including 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 with cognisance of landscape setting, and avoiding or reducing woodland loss.

6.3.44 Recognise, respect and protect the special landscape qualities of the National Park evident in the corridor and seek to avoid significant adverse effects on them 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.

6.3.45 Minimise the loss of existing vegetation wherever practicable and in particular retain mature trees and woodland as well as ancient woodland. 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.

6.3.46 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 to be in keeping with the local environment and avoid or reduce adverse 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.

6.3.47 Ensure any the design of SuDS features considers opportunities for multi-functionality and delivers amenity and biodiversity benefits as well as attenuation and treatment. Mitigate adverse 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.

6.3.48 Take account of local species composition, forest and woodland strategies, climate change adaptation and biosecurity threats when developing planting proposals.

6.3.49 Develop planting and landscape proposals that integrate with surrounding landscape and secure positive effects for biodiversity. Maintain and where feasible enhance ecological and landscape connectivity and minimise fragmentation. Consider and contribute towards local and strategic biodiversity priorities through planting proposals. Ensure long term management.

6.3.50 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 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.

6.3.51 Consider the dark skies and perceived wildness of the local landscape and seek to avoid significant effects on them.

6.3.52 Provide screen planting of the project, where appropriate, for nearby residential receptors which takes account of different seasons and times of day.

Type 1 Cumulative Effects

6.3.53 As explained previously, Type 1 cumulative effects are effects on a single resource/receptor as the result of an accumulation of impacts of the project across multiple topics.

Population Receptors

6.3.54 The alignment of the preferred route option to be developed with cognisance of the potential for cumulative effects - from changes in noise and vibration, air quality, visual, access, tourism and recreation - on population receptors and should seek to avoid and reduce these where possible.

Woodland / Forestry / Peat / National Park

6.3.55 Monitoring potential cumulative effects on receptors/resources identified in the SEA throughout design development and adjusting design/mitigation measures accordingly.

6.3.56 Species of Conservation Interest and Habitats

6.3.57 Potential cumulative effects on the species of conservation interest and habitats should be assessed in more depth by ecologists at DMRB Stages 2 and 3 with cognisance of the principle of securing positive effects for biodiversity and national goals in relation to biodiversity.

Natural Capital

6.3.58 Ensure that natural capital and ecosystem services are assessed at each key project stage and measured against the scheme objective TPO5, and ensure that appropriate mitigation and enhancement is incorporated.

Type 2 Cumulative Effects

6.3.59 Type 2 cumulative effects are the combined effects of multiple plans or projects on a particular SEA topic.

Climatic Factors

6.3.60 A review of lessons learned and good practice across the industry in relation to decarbonisation of construction is recommended, including appropriate training sessions

Material Assets

6.3.61 A review of lessons learned and good practice across the industry in relation in relation to decarbonisation of construction, including sustainable sourcing of materials and reducing waste, is recommended, including appropriate training sessions.

Biodiversity

6.3.62 Further assessment is required at subsequent DMRB stages to determine extent of potential cumulative effects on the biodiversity from A83 project, A82 Tarbet to Inverarnan, and projects within the route corridor (medium-term solutions and Rest and Be Thankful improvements).

6.3.63 Cognisance of the principle of securing positive effects for biodiversity and national goals in relation to biodiversity to be considered at all stages of the A83 project lifecycle.

6.3.64 Further study to be undertaken in consultation with NatureScot and LLTNPA where relevant, to identify and quantify cumulative effects on species of conservation interest and habitat loss, where possible, as a result of major Transport Scotland infrastructure projects. Appropriate mitigation and monitoring measures would then be proposed to target significant effects on specific species/habitats.

Soils

6.3.65 Further assessment is required at subsequent DMRB stages to determine extent of potential cumulative effects on soils from A83 project, A82 Tarbet to Inverarnan, and projects within the route corridor (medium-term solutions and Rest and Be Thankful improvements).

Landscape and Visual Amenity

6.3.66 Further assessment is required at subsequent DMRB stages to determine extent of potential cumulative effects on landscape receptors from the A83 project, A82 Tarbet to Inverarnan, and projects within the route corridor (medium-term solutions and Rest and Be Thankful improvements).

7. Concluding Statements

7.1 How did the SEA make a difference to the Access to Argyll and Bute (A83)

7.1.1 The SEA influenced the retention of corridor 1 as the preferred corridor, instead of any of the 14 other route corridors, most of which had significant environmental constraints.

7.1.2 At the Environmental Report stage, the SEA identified the significant environmental effects that could potentially arise as a result of project implementation. A draft framework of mitigation, enhancement and monitoring measures was included in the Environmental Report for public consultation. This has been included in Section 5 (SEA Monitoring Framework) of this Post Adoption Statement. At the Environmental Report stage, the SEA highlighted the most significant environmental issues associated with the five possible route options in corridor 1. Environmental constraints influenced the alignment and development of the possible route options within corridor 1.

7.1.3 A significant consideration in the development of the possible route options was to try and reduce the visual impacts, particularly as corridor 1 is within a scenic glen that sits within the National Park boundary. This Post Adoption Statement has described how each of the possible route options has been influenced by environmental constraints.

7.1.4 The Environmental Report recommended that any of the five possible route options taken forward to DMRB Stage 2 should undergo further assessment, including field surveys where required, in order to explore the environmental effects and mitigation measures associated with each possible route option in more detail.

7.1.5 Ecological and topographical surveys undertaken throughout 2021 and 2022 continue to inform any sensitive environmental receptors and any mitigation measures required. Environmental surveys will continue to influence the project route option selection process as well as the alignment of the preferred route options for the medium and long term.

7.2 How did the SEA secure effective stakeholder consultation?

7.2.1 Stakeholder consultation for the SEA has occurred at each project stage, with the SEA Screening Report, Scoping Report, Environmental Report and this Post Adoption Statement all being placed on Transport Scotland's website, available for public comment. A notice relating to the Environmental Report consultation was also placed in the Argyll Advertiser. The Environmental Report, including a digital non-technical summary, is available here: https://www.transport.gov.scot/publication/strategic-environmental-assessment-a83-access-to-argyll-and-bute/

7.2.2 As the digital SEA non-technical summary is interactive, with many photos, maps and links to further information and reports, it has aided the consultation process.

7.2.3 All SEA documents will also be available on Scotland's SEA Gateway website: https://www.gov.scot/policies/environmental-assessment/strategic-environmental-assessment-sea/

7.2.4 An interactive project StoryMap has been developed by the Jacobs/AECOM digital team and is available to view online: https://storymaps.arcgis.com/stories/5c9aa6c915854ff78341a77910c68da4. The StoryMap sits within Transport Scotland's Access to Argyll and Bute (A83) website to give visitors an insight into the work that has been undertaken by various teams including engineers, planners, and environmental specialists to inform the preferred corridor option selection. The StoryMap will continue to support stakeholder engagement as work on the project progresses through subsequent stages.

7.2.5 Stakeholder engagement via the ESG has occurred since the project inception and will continue throughout the project lifecycle. This has included regular meetings and the submission of the draft Scoping Report and Environmental Report to the ESG for their feedback. Feedback from the ESG has influenced the scheme objectives, the SEA scope and methodology. It has helped focus the SEA on the most pertinent environmental issues to be considered and data to use.

7.3 How were environmental issues highlighted early and avoided or minimised?

7.3.1 At the initial Preliminary Assessment stage, the SEA influenced the retention of corridor 1 as the preferred corridor, instead of any of the 14 other route corridors, most of which had a significant level of environmental constraints. The most significant environmental issues associated with the Argyll and Bute region were described in the SEA Scoping Report. The environmental assessment component of the Preliminary Assessment, included as Appendix D (Route Corridor Options Baseline and Assessment) of the Environmental Report, described all the significant environmental constraints associated with each of the 15 route corridors. This baseline and constraints assessment was based on GIS mapping of the 15 route corridors and environmental receptors (the Project Mapper GIS tool).

7.3.2 The formation of the ESG, and early engagement with its members from October 2020 onwards, highlighted some key environmental constraints and opportunities that were subsequently incorporated into the project and SEA. This included influencing the scheme objectives and SEA objectives and also allowed the specialist and local knowledge of ESG members to feed into the SEA, particularly in relation to forestry, biodiversity, amenity and landscape assessment. GIS data received from the ESG was also used for constraints mapping used for the project and SEA. This enabled a more comprehensive environmental assessment and subsequently a more robust mitigation, enhancement and monitoring framework. Regular meetings with the ESG have been held throughout the project and are continuing through DMRB Stages 2 and 3.

8. Glossary of Terms

Term	Definition
Ancient Woodland	Areas of land that appear as wooded on maps dated pre-1750 (in Scotland) and are considered likely to have been continuously wooded from this date.
Ancient Woodland Inventory	Aims to list all probable ancient semi-natural woodlands on a county basis together with those woodlands in other ancient categories of lesser woodland nature conservation interest.
Assessment	An umbrella term for description, analysis, and evaluation.
Authority area	The area administered by a local authority for example, District Council, City Council or Unitary Authority.
Baseline	The existing conditions which form the basis or start point of the environmental assessment
Biodiversity	Biological diversity, or richness of living organisms present in representative communities and populations.
Community severance	The separation of communities from facilities and services used within their community.
Consultation Authorities	Refers to the three statutory Consultation Authorities in Scotland: Historic Environment Scotland, NatureScot and the Scottish Environment Protection Agency
Core Path	A right of way designated by a Local Authority as being of importance to maintain access and leisure provision.
Cultural heritage resources	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest
Culvert	A metal, wooden, plastic, or concrete conduit through which surface water can flow under or across roads.
Cumulative effects	Scottish SEA Guidance (2013) states that 'Cumulative effects can be considered in terms of synergistic effects, additive impacts and secondary effects.' For the purposes of this SEA, the term 'cumulative effects' also encompasses synergistic effects Secondary effects
Earthworks	Works created through the moving of quantities of soil or unformed rock.
Ecological Clerk of Works (ECoW)	A qualified ecologist who supervises construction sites, ensuring that ecological impacts are avoided or reduced and that the law relating to protected species etc. is complied with.
Ecological receptors	Living organisms, habitats, or natural resources that could be impacted by the construction or operation of the project.
Ecosystem	A biological community of organisms interacting with one another and their physical environment.
Effect	The result of change or changes on specific environmental resources or receptors.
Environmental Impact Assessment (EIA)	The process by which information about the environmental effects of a project is evaluated and mitigation measures are identified.
Environmental Report	An Environmental Report presents the findings of the SEA undertaken for a project
Environmental Steering Group	Stakeholder consultation group for the Access to Argyll and Bute (A83) project which meets regularly to discuss environmental issues relevant to the SEA and PES.
European Site	Otherwise known as 'Natura 2000' sites. These include Special Areas of Conservation (SACs) designated under the Habitats Directive (92/43/EEC) and Special Protection Areas (SPAs) designated under the Birds Directive (2009/147/EEC). In addition, Candidate and Possible SACs, Potential SPAs and Ramsar wetlands (designated under the Convention on Wetlands of International Importance) should be included in appraisals as they are afforded the same level of protection as European sites under domestic policy. Natura 2000 sites are designated due to the presence of specific habitats and species of internationally important biodiversity value, otherwise known as 'qualifying interest features.'
Floodplain	Land adjacent to a river, which is subject to regular flooding.
Flora	Referring to plants of a particular region or habitat.
Footprint	The geographical extent of an ecological impact.

Term	Definition
Freshwater	Bodies of water such as ponds, lakes, rivers and streams containing low concentrations of dissolved salts and other total dissolved solids.
Geomorphology	The branch of geology concerned with the structure, origin and development of topographical features of the earth's crust.
Groundwater	Water below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Habitat	Term most accurately meaning the place in which a species lives, but also used to describe plant communities or agglomerations of plant communities, as used, for example in a Phase 1 Habitat Survey.
Habitat fragmentation	Describes the breaking up of an organism's preferred environment/habitat. Occurs naturally through geological processes that alter the layout of the physical environment over long periods of time, or through human activities, such as land conversion.
Habitats Regulations Appraisal (HRA)	Under the Habitats Regulations, all competent authorities must consider whether any plan or project will have a 'likely significant effect' on a European site. If so, they must carry out carry out an 'appropriate assessment' (AA). This is known as Habitats Regulations Appraisal (HRA).
Habitats Directive	EC Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.
Hydrogeology	Branch of geology dealing with occurrence, distribution, and effect of groundwater.
Hydrological	The exchange of water between the atmosphere, the land and the oceans.
Land Capability for Forestry (LCF)	Land Capability for Forestry (LCF) describes the potential for land to grow trees based on a number of factors including soil, climate and topography. The seven classes of LCF range from Class F1 (land with excellent flexibility for the growth and management of tree crops) to Class F7 (land unsuitable for producing tree crops.)
Landscape	Human perception of the land, conditioned by knowledge and identity with a place.
Land-take	Acquired land which is necessary to construct the project and associated infrastructure and to undertake the essential environmental mitigation measures.
Listed Building	Building included on the list of buildings of special architectural or historic interest and afforded statutory protection under the 'Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997' and other planning legislation. Classified categories A-C.
Local Landscape Character Area (LLCA)	An area outlined as having distinct characteristics based on landscape features. Derived from regional landscape studies available from NatureScot.
Mitigation	Measure to avoid, reduce or offset potential adverse impacts.
Natural Capital	Natural Capital can be defined as the world's stocks of natural assets which include geology, soil, air, water and all living things. It is from this natural capital that humans derive a wide range of services, often called ecosystem services, which make human life possible.
Non-motorised users	Pedestrians, cyclists and equestrians.
Notable species	Species which are below Red Data Book species in terms of threat status.
Open space	Any land laid out as public parks or used for the purpose of public recreation, or land which is a disused burial ground.
Phase 1 Habitat Survey	This identifies the different habitats that are contained within or make up a site, and the key plant species for each of those habitat types.
Phase 2 Habitat Survey	A detailed specialist survey or phytosociological (plant community) study of a habitat within a site. It may utilise analysis of sample vegetation plots (quadrats) following the UK National Vegetation Classification.
Positive Effects for Biodiversity	Within the context of the Planning Act, "securing positive effects for biodiversity" are the actions that leave biodiversity in a better state. The scope of potential interventions is wide ranging in type and scale, and what is appropriate will vary from site to site (NatureScot, 2020). Examples from NatureScot (2020) are: • The restoration or enhancement of existing habitats and their future management: • The creation of new habitats and their future management • The enlargement of, or improving the connectivity of, existing habitats and networks

Term	Definition
	• Providing for particular species or species groups (such as 'swift bricks', badger tunnels, bee banks, wildflower meadows, trees and hedgerows) • Integration of any of the above components into development as a nature-based solution (such as SuDs, green roofs, flood mitigation, shade and shelter) • Enhancing understanding and awareness, and providing access to nature
Potential Effect	The effect on an aspect of the environment that may occur in the absence of mitigation.
Preliminary Assessment	An initial assessment considering 15 route corridors that emerged from the STPR2 and A83 consultations, with the objective of identifying if corridors can be removed from further consideration at this stage.
Preliminary Engineering Support Services (PES)	Design Manual for Roads and Bridges (DMRB) Stage 1 Assessment to identify a preferred corridor for access to Argyll and Bute.
Receptor	In this context, an element that is susceptible to being affected (either directly or indirectly) by the project. Examples include habitats, species, people, properties, landscape, archaeological remains etc.
Retention Pond	A wet area for temporarily storing water which delays its flow downstream. Includes some water quality benefits. Usually part of SuDS (drainage design).
Runoff	Water that flows over the ground surface to the drainage system. This occurs if the ground is impermeable or if permeable ground is saturated.
Scoping Report	Scoping Reports provide sufficient information about the potential environmental effects to allow the Consultation Authorities to provide an informed view regarding the environmental topics to be included in the SEA. Scoping Reports also provide a proposed methodology to be used for assessing potential environmental effects.
Secondary effects	Secondary or indirect effects are effects that are not a direct result of the plan but occur away from the original effect or as a result of a complex pathway.
Semi-natural woodland	Woodland that does not obviously originate from planting. The distribution of species will generally reflect the variations in the site and the soil. Planted trees must account for less than 30% of the canopy composition.
Sites of Special Scientific Interest (SSSI)	Designated areas of national importance. The aim of the SSSI network is to maintain an adequate representation of all natural and semi-natural habitats and native species in the UK. The site network is protected under the provisions of Sections 28 and 19 of the Wildlife and Countryside Act 1981 as well as the Amendment Act 1985 and the Environmental Protection Act 1990.
Special Area of Conservation (SAC)	An area designated under the EC Habitats Directive to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
Special Protection Area (SPA)	An area designated under the Wild Birds Directive (Directive 74/409/EEC) to protect important bird habitats.
Stakeholder	A person or group that has an investment, share or interest in something.
Strategic Environmental Assessment (SEA)	The process by which information about the environmental effects of proposed plans, policies and programmes are evaluated.
Strategic Transport Project Review (STPR)	A two-year review of the Scottish transport network being undertaken by Transport Scotland. It aims to identify and prioritise road, rail and other interventions of national significance, which will be taken forward to improve the network. Through selecting which transport projects of national significance should be progressed, the STPR would also affect regional and local transport networks.
Sustainable Drainage Systems (SuDS)	SUDS, or sustainable drainage systems are a sequence of water management practices and facilities designed to drain surface water in a manner that will provide a more sustainable approach than what has been the conventional practice of routing run-off through a pipe to a watercourse.
Synergistic effects	Synergistic effects interact to produce a total effect greater than the sum of the individual effects.
Water quality	The chemical and biological status of various parameters within the water column and their interactions, for example dissolved oxygen, indicator metals such as dissolved copper, or suspended solids (the movement of which is determined by hydrological process and forms geomorphological landforms).

9. List of Acronyms and Abbreviations

Acronym	Definition
APQ	Areas of Panoramic Quality
AWI	Ancient Woodland Inventory
BNG	Biodiversity Net Gain
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
EqIA	Equalities Impact Assessment
ESG	Environmental Steering Group
GCR	Geological Conservation Areas
GWDTE	Groundwater Dependent Terrestrial Ecosystems
GIS	Geographic Information Systems
HES	Historic Environment Scotland
HRA	Habitats Regulations Appraisal
LCA	Landscape Character Assessment
LCF	Land Capability for Forestry
LCT	Landscape Character Type
LLTNPA	Loch Lomond and The Trossachs National Park Authority
NMU	Non-motorised users
NTS2	National Transport Strategy 2
PES	Preliminary Engineering Support Services
PPS	Plans, Policies, Strategies
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SEPA	Scottish Environment Protection Agency
SNCB	Statutory Nature Conservation Body
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
STAG	Scottish Transport Appraisal Guidance
STPR2	Strategic Transport Projects Review 2
SuDS	Sustainable Drainage Systems
WFD	Water Framework Directive
WLA	Wild Land Areas

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