The Highland Council
Comhairle na Gàidhealtachd

Corran Ferry
Infrastructure Improvement Scheme

Environmental Impact Assessment Report
Volume 1
Non-Technical Summary
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Contents

1 Introduction

This Environmental Impact Assessment Report has been produced to support the planning permission application and construction and dredging marine licence applications and for the Highland Councils Corran Ferry Infrastructure Improvement Scheme (CFIIS). The CFIIS will involve the construction of new infrastructure in the village of Ardgour, and just north of the 'Corran' settlement in the region of Nether Lochaber, to introduce a new electric ferry service with the aim of improving facilities for users and operators of the Corran Ferry.

The planning permission application is submitted under the Town and Country Planning (Scotland) Act 1997 (as amended) to The Highland Council Planning department. The marine licence application submissions are to the Marine Directorate – Licensing and Operations Team in line with the Marine (Scotland) Act 2010, as amended. The Environmental Impact Assessment Report has been produced to meet the requirements of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017, as amended, and the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017, as amended.

This Non-technical Summary outlines the main findings of the Environmental Impact Assessment Report. The Environmental Impact Assessment Report consists of four volumes:

- Volume 1: Non-technical Summary;
- Volume 2: Main Assessment;
- Volume 3: Appendices; and
- Volume 4: Drawings.

The sections of this Non-technical Summary mirror the chapters included within the Main Assessment provided in Volume 2.

Copies of the full Environmental Impact Assessment Report are available to view in the Fort William Service Point and Registry Office, Charles Kennedy Building, Achintore Road, Fort William, PH33 6RQ. The building is open between 9:30am and 12:30pm, Monday to Friday.

Electronic copies of the full planning permissions and marine licence application documents can be downloaded from the Highland Council's Corran ferry website at https://www.highland.gov.uk/info/20028/corran_ferry_project/1070/corran_ferry_infrastructure_improvement_scheme.

Hardcopies of the Environmental Impact Assessment Report can also be obtained by emailing corranferryproject@highland.gov.uk. A copy can be provided at a cost of £600 plus postage, if required.

If you would like to provide feedback regarding the planning permission and marine licence applications, then this should be given directly to the Highland Council Planning Department or the Marine Directorate (as appropriate) as per the advertised routes.

2 Project Description

2.1 Location

The CFIIS is located at the Corran Narrows, the narrowest point of Loch Linnhe, which is approximately seven miles south-west of Fort William, in the west of Scotland. On the west side of the Corran Narrows is the settlement and community of Ardgour. On the eastern side, is a small settlement within the community catchment of Nether Lochaber, hereafter referred to as 'Corran'.

2.2 The Corran Ferry

The Corran Ferry service carries passengers and vehicles across the Corran Narrows between the settlements at Corran and Ardgour. Although a short crossing of approximately 420 metres between slipways, the service provides an essential connection for the western peninsular communities to and from Lochaber and the Ardnamurchan peninsula, as well as for those on the Isle of Mull via the Fishnish – Lochaline route.

THC owns, operates and funds the Corran Ferry service, which is the busiest single vessel operated route in Scotland. The ferry operates regular frequent transits, 361 days of the year. The alternative route is a 40-mile road journey between Ardgour and Corran via Fort William around Loch Linnhe and Loch Eil.

The Corran service currently operates with one of two compatible, though ageing, vessels; the *Motor Vessel* (*MV) Maid of Glencoul* and the *MV Corran*, both fitted with quarter-point loading vehicle ramps.

2.3 Project Need

The Corran Ferry service is experiencing challenges to the current service, imposed by the existing vessels and infrastructure. The current vessels are ageing, with the *MV Corran* (the primary service vessel), at 24 years old, has an anticipated life expectancy of approximately 10 years (to 2035), with ongoing servicing. The *MV Maid of Glencoul*, is utilised as a relief vessel when the *MV Corran* is out of service, and is 49 years old, operating well beyond her original design life and is in urgent need of replacement. When the ferry service is suspended or not operating, the alternative road diversion can add two hours to the journey time and is height restricted to 3.6 metres due to a rail bridge.

When the *MV Corran* is away for maintenance or repairs, the relief vessel, *MV Maid of Glencoul*, is in operation alone and has a significantly smaller vehicle capacity, as well as more onerous height and weight restrictions which limit ferry access to the peninsula for some larger vehicles. Subsequently, a new, fit-for-purpose vessel is urgently required to ensure continued operation of the Corran Ferry service.

Marshalling areas on both sides of the crossing are too small to accommodate peak demand queueing. This increases road safety and network performance risks. These risks are greater on the Nether Lochaber side of the Narrows, where peak traffic may ultimately back up out onto the A82 trunk road. Additionally, the existing junction at Corran of the A861 with the A82 is sub-optimal in that it is located close to a bend with restricted sight lines and lacks suitable turning, deceleration or acceleration arrangements.

The current slipways, which support the existing quarter-point loading vessels, have no shelter and are susceptible to the impact of the extreme environmental conditions (i.e., wave and tidal currents) in the Corran Narrows. There are no other quarter-point loading vessels operating in Scotland and the current infrastructure does not suitably cater for the more common 'straight-through', roll-on roll-off ('ro-ro') vessel boarding and offloading arrangement due to the unique gradient of the existing slipways. Furthermore, without an overnight berthing structure, the existing ferry vessels currently overnight on 'swing' moorings, requiring and out-dated vessel-to-vessel transfer of crew at the start and end of the operating day.

Lastly, the Corran Ferry service is the only major vehicle ferry service operated by THC. The Corran Ferry must therefore function as a standalone service with intrinsic built-in resilience.

2.4 Consideration of Alternatives

THC considered various conceptual options to ensure there was an ongoing transport link across the Corran Narrows. Initial focus was centred on how best to provide access across the Narrows. The conceptual options considered were:

- Do Nothing;
- Fixed Link; and
- Ferry.

A 'Do Nothing' was considered based on common practice but was discounted early. The ferry service would be at risk of an increase in frequency and duration of periods where the ferry service is suspended due to breakdowns and repairs of the ageing vessels. This would progressively reduce the resilience of the service and ultimately culminate in the failure of the vessels. The transport link provided by the Corran Ferry service is essential to maintaining communities of the Ardnamurchan peninsula.

A fixed link was also discounted citing that the design, planning, securing of funds and construction timelines for a fixed link meant that it could not be delivered in a timely manner. There remains an aspiration from THC for a fixed link across the Corran Narrows in the future and as such, in considering ferry options it has been ensured that, they do not preclude future fixed link options.

On the basis that any fixed link type crossing was highly unlikely to be completed within the required timescale, a new ferry service was considered in earnest, with an electric powered vessel cited as necessary to fulfil The Highland Councils net zero targets. A strategic decision was made was to carry forward a new ferry and infrastructure proposal that would cater for operation of the more common straight-through, 'ro-ro' vessel design, further enhancing durability by facilitating interchangeability with other similar vessels operating within Scotland.

Optioneering on infrastructure designs and scheme layouts was then carried out for both the Ardgour and Nether Lochaber sides of the Narrows. Preferred designs were carried forward having taken into account environmental conditions and sensitivity, constructability, costs and feedback from stakeholder consultation. Subsequently, the proposal reflects the outcome of years' worth of investigation to understand environmental considerations, technical constraints and potential user requirements.

2.5 Project Components

The CFIIS development will occur in the marine, terrestrial and intertidal areas with two sides to the development; the Ardgour side and the Nether Lochaber (Corran) side.

Construction of the infrastructure will be facilitated by removal of de-energised sub-sea cabling, demolition of the small, existing pier at Ardgour, land reclamation, dredging activities and the establishment of temporary construction compounds.

The development comprises the following main components, construction of which will be completed whilst existing ferry operations remain undisrupted:

New infrastructure on the Ardgour side:

- **Slipway**: A new slipway will be constructed to accommodate straight-through vessels;
- **Slipway access**: Access to the new slipway from the existing marshalling area will be created via a feeder lane;
- **Localised road improvements**: An area of the A861, between the proposed overnight berthing structure and the proposed new slipway, will be formalised into a single carriageway road (two lanes).
- **Parking**: Car parking spaces will be formalised on the seaward side of the A861 (sign-posted as designated for residents and ferry crew only);
- **Footpath**: A dedicated footpath will be constructed on the seaward side of the A861 and the area and along the front of the Inn at Ardgour;
- **Bicycle and pedestrian shelters**: Two prefabricated waiting shelters will be erected adjacent to the new slipway;
- **Overnight berthing structure**: An overnight berthing structure will be constructed extending from the Ardgour shorefront, outside the existing Ferry Office, providing a dedicated berth for two ferry vessels;
- **Associated services**: Power (including charging of the new electric vessel), lighting, water and drainage will be provided; and
- **Temporary diesel infrastructure (if required)**: Temporary diesel infrastructure may be required to span any potential time period where the electric vessel is delivered in advance of sufficient available capacity within the grid network for charging the vessel. If required, a temporary, 'silenced' diesel generator and a double skinned fuel tank will be installed in the field area behind Ardgour. Both will be removed once grid connection for vessel charging is available.

New infrastructure on the Nether Lochaber side:

- **Slipway**: A new slipway will be constructed to accommodate straight-through vessels;
- **Breakwater alignment structure**: A breakwater will be installed to protect the vessel from the tide and wave conditions when on the slipway;
- **A new marshalling area**: New marshalling lanes with additional capacity for queuing vehicles, dedicated entrance and exit lanes and bus stop, will be constructed;
- **Access road and junction**: An access road will connect the marshalling lanes to the A82 trunk road, including a new road junction;
- **Public car parking**: A car park area will be constructed near the marshalling area, providing 24 spaces including two electric vehicle charging units and two disabled parking spaces;

- **Purser's kiosk**: A small, prefabricated cabin, will be installed to provide shelter and storage for ferry staff;
- **Toilet Facility**: A new toilet block will be installed which will provide male, female, and accessible toilets, baby change benches and a changing places facility, with shower and powered hoist. Each end of the building will include a covered area for pedestrian shelter, seating and wall-mounted external plug facilities for electric bicycle charging;
- **A bicycle shelter**: A separate bicycle shelter with bicycle racks will be included;
- **Shared-use path**: A shared-use path (footway/cycleway for pedestrians and wheeled access), will connect to the existing path (which is part of the national cycle network), on the west side of the A82 near the north-bound bus stop, just south of Corran. A set of concrete steps will be installed between the marshalling area and the new shared-use path to provide a short-cut between the shared use path and the new marshalling area; and
- **Associated services**: Power, lighting, water and drainage will be provided.

2.6 Construction

The construction phase will include the following elements required for the project:

- Establishment of temporary construction compounds;
- Removal of sub-sea cable sections;
- Demolition of the small pier at Ardgour;
- Groundworks (potentially including blasting);
- Land reclamation;
- Road and path surfacing;
- Culvert installation;
- Sheet piling for the overnight berthing structure and Ardgour slipway;
- Dredging activities (potentially including rock breaking and/or marine blasting);
- Dredge disposal;
- Rock placement;
- Concrete works;
- Steelworks;
- Construction of buildings and shelters;
- Installation of services and drainage; and
- Reinstatement.

2.7 Operations

The proposed new electric vessel and associated infrastructure constructed for the CFIIS will work in combination to increase ferry service capacity and resilience. The main activities associated with the ferry service will not change due to the CFIIS. The following activities will be very similar to what they are currently, although their location will change:

- Vessels transit between the slipways on Nether Lochaber and Ardgour sides of the Narrows on a timetable or in shuttle-mode at peak times;
- Vehicle, passenger and cyclist loading to vessels via the slipways;
- Vehicle, passenger and cyclist access and use of the slipways and marshalling areas;
- Day-to-day vessel and infrastructure maintenance, including monitoring inspections, servicing, diesel refuelling and wash-downs; and

- The marshalling area, ferry office building and storage building at Ardgour will continue to be utilised (i.e., no change in location).

The CFIIS will introduce the following changes to operations:

- The ferry service route will lengthen slightly from approximately 420 metres to an estimated 550m;
- Maintenance dredge and disposal activities may be required to maintain water depths in the medium/long term;
- New electric vessel as duty vessel and the MV Corran as stand-by vessel will have an increased vehicle capacity compared to the existing arrangement; and
- New slipways will facilitate the potential for access by additional vessel types (i.e., straight through boarding arrangements) increasing service resilience.

On the Ardgour side:

- Vessels will be berthed on the overnight berthing structure when not in use, as opposed to moored on the off-shore swing moorings, eliminating the need for vessel-to-vessel transfers of personnel via a small crew-transfer boat;
- The proposed new electric vessel will be charged at the overnight berthing structure via the electrical network (potentially utilising temporary diesel-powered infrastructure in the short-term, pending any necessary upgrades to the existing power network).

On the Nether Lochaber side:

- Access to the Nether Lochaber ferry infrastructure will be via a new road junction with the A82, improving the approach and access to the Nether Lochaber slipway and new facilities for all vehicles compared to the existing junction;
- Marshalling lane capacity will be considerably increased, minimising impacts during peak periods and their potential to impact the adjacent A82 trunk road network; and
- Additional facilities will be provided including a changing places facility, parking, new cycle shelter and EV charging units.

3 Methodology

3.1 Assessment Methodology

To determine likely significant effects and possible environmental impacts that may occur due to the construction of the CFIIS, and subsequent operations of the Corran Ferry an Environmental Impact Assessment was necessary. A key aspect of the Environmental Impact Assessment process is to influence and improve design through iteration, by incorporating environmental considerations. The siting and design of the CFIIS has been influenced by topics identified through the Environmental Impact Assessment process, including seabed topography, wave and current conditions, potential visual and noise impacts and ecological considerations.

Throughout the design process environmental specialists and appropriate topic experts have been involved to better inform decision making. Subsequently, the proposed infrastructure design avoids or minimises negative impacts wherever practicable, whilst also aiming to maximise positive effects. As such, there are inherent design features, embedded in the

proposal, which are assumed to be in place when conducting the initial impact assessment for each environmental topic.

A methodical and robust assessment of environmental impacts has been used across all chapters of the Environmental Impact Assessment Report, with topic-specific variations incorporated as required. The methodology considers a receptor's value or sensitivities, the magnitude and likelihood of the impact, and through a matrix-based approach, whether the impact is significant. If the impact is above a defined threshold, then it is deemed to be significant, additional mitigation measures are put in place where possible to reduce potential adverse environmental effects. Mitigation to minimise non-significant effects has also been identified in line with best practice.

3.2 Consultation

Consultation with a diverse range of stakeholders has been a key part of the design development and Environmental Impact Assessment process. Since 2022 Pre-Application Consultation has been conducted for the planning and marine elements of the project, with three rounds undertaken over two years. Further direct engagement with specific stakeholders was completed throughout the formal scoping process. Where specific consultation has been undertaken to inform Environmental Impact Assessment considerations, these have been discussed in the topic specific chapters of this Environmental Impact Assessment Report.

3.3 Cumulative Impacts

In an Environmental Impact Assessment, it is necessary to consider the potential for significant environmental impacts or effects of a proposal together with those of other approved projects. As such, a review of planned developments in the local area was conducted in order to identify projects with the potential of generating cumulative impacts with the CFIIS.

Four projects were identified as requiring consideration:

- Glen Gour Hydro Scheme;
- Siting of seven Holiday Pods at Inchree;
- Hunterston Construction Yard Upgrades; and
- Govan Land Reclamation.

These projects were identified as having the potential to give rise to cumulative impacts with regard to one or more environmental topics. An assessment to understand the resultant cumulative effects alongside the CFIIS, and any required mitigation, is presented in the relevant technical chapters.

4 Legislation and Policy

Within an Environmental Impact Assessment, there are a number of key statutory requirements which require consideration, as well as national, regional and local planning policies. Those most relevant to CFIIS are outlined below.

4.1 Legislative Framework

Construction of the proposed CFIIS will fall under two main legislative acts, the Town and Country Planning (Scotland) Act 1997, as amended for terrestrial components, and the Marine (Scotland) Act 2010, as amended, for marine works. Compliance with underpinning regulations is also required. An Environmental Impact Assessment has been produced to support both the marine and terrestrial regulations and associated applications.

Pre-application Consultation is a requirement to support a planning consent application and marine construction licence application for developments that meet certain criteria. The Pre-application Consultation process is established to ensure effective stakeholder and community consultation. For the CFIIS, three Pre-application Consultation events were conducted, the outcome of which informed some design aspects of the project.

Under the Scottish Crown Estate Act 2019, the Crown Estate Scotland owns the Scottish territorial seabed out to 12 nautical miles. Crown Estate Scotland issues licences, leases, and consents for various marine works. Authorisation from Crown Estate Scotland will be required for the sub-sea cable removal works, dredging and re-use of spoil, construction of marine infrastructure and land reclamation. A lease agreement will then follow for the structures that have been constructed.

The CFIIS includes the installation of a new small foul water treatment package plant to manage foul water drainage associated with the public toilet and changing rooms facility. Discharge to Loch Linnhe will be via an outfall, this will require a licence from Scottish Environment Protection Agency under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). A separate licence application will be submitted for this prior to the toilets becoming operational.

4.2 Policy Context

4.2.1 Planning Policy

The development planning system in Scotland, which provides the framework for considering planning applications, is made up of the following main documents:

- The National Planning Framework 4; and
- Local Development Plans;
    - Specific to the CFIIS is the Highland-wide Local Development Plan and the West Highland and Islands Local Development Plan.

The National Planning Framework 4 sets out the strategy for long-term development within Scotland. It was published in February 2023 and sets out the strategy for development for the next 20 years (Scottish Government, 2023).

The CFIIS aligns to National Planning Framework 4 and Highland-wide Local Development Plan policies. Additionally, the Corran crossing is specifically outlined in the West Highland Local Development Plan for 'improved ferry connection'.

The Scottish Government is aiming to reduce greenhouse gas emissions (set out in the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019). The creation of facilities to run an electric ferry at Corran contribute towards a reduction in emissions.

4.2.2 National Marine plan

The Scottish National Marine Plan lays out the Scottish Ministers' policies for the sustainable development of Scotland's seas and provides General Planning Principles, most of which apply to the proposed CFIIS. In addition, the National Marine Plan lays out sector specific objectives and policies for shipping, ports, harbours and ferries (Scottish Government, 2015). The relevant policies have been reviewed, and it has been identified that the CFIIS meets the General Planning Principle requirements and contributes towards achieving relevant sector specific policies and objectives.

5 Landscape and Visual

A Landscape and Visual Impact Assessment has been undertaken for the proposed development which considers the predicted effects on the landscape, which, in the context of this assessment, also includes effects on seascape character. The assessment includes consideration of effects upon designated landscapes and visual effects upon residents as well as users of roads and recreational routes, which include tourists. Landscape and visual effects during the construction phase are not anticipated to be any greater than during the operational phase and therefore only effects from the permanent components of the scheme are assessed.

The implementation of the development will introduce additional built form and infrastructure. This is concluded to result a significant effect to the local landscapes and seascape at the Ardour and Nether Lochaber shores of the Corran Narrows, as well as for people in the settlements of Ardgour and Corran, or utilising and local recreational routes and roads. An assessment from various viewpoints with views of the Corran Narrows concluded that there will be significant visual effects at most viewpoints, due to the prominence of the CFIIS in coastal views. No significant effects as a result of the proposed development will occur in relation to designated landscapes.

The CFIIS was carefully planned to retain the integrity of the interface between the settlement and coastline. Whilst the effects will be significant locally to the site, and for visual receptors in local views to the proposed development, it is considered that the change is appropriate to the setting and will be accommodated in this open, diverse coastal landscape.

Landscaping to include a new native woodland belt to the east of the Nether Lochaber marshalling area and careful selection of colour and materials in the infrastructure will further assist in the accommodation of the new structures from a visual and landscape perspective.

6 In-Air Noise and Vibration

Environmental, or community noise, is a broad term that encompasses noise emitted from many sources, including road, rail and air traffic, industry, construction, public work and neighbourhood noise. Also considered are possible impacts from vibration during the construction phase, and road traffic noise during the operational phase. All these sources potentially contribute adversely to the overall noise environment.

Baseline sound level monitoring was undertaken at five locations. The noise monitoring equipment was measuring continuously for the whole two week survey period at each location,

with subjective observations being made at the beginning and end of the survey. This provided a detailed understanding of existing noise levels in the vicinity of the CFIIS project.

Modelling was used to predict noise levels for both the construction and operational phases of the CFIIS, including vibrations from construction works which may arise. The assessment for the construction phase modelled 15 monthly scenarios representing anticipated construction activities underway in each month. Each scenario simulates the likely overlap of tasks that would occur throughout the construction period and represents the anticipated 'noisiest' activities that will occur.

The closest noise-sensitive receptors were considered, on the assumption that if noise levels are within acceptable levels at the closest receptors, then it is reasonable to assume they will also be acceptable at more distant locations.

It is recognised that the construction works in Ardgour are located immediately in front of residential and businesses properties. The assessment of construction noise levels during the daytime on weekdays at Ardgour could give rise to significant effects for numerous receptors. The construction noise levels at all assessed locations during evening, weekend and night-time was found to have minor and non-significant effects.

The works on the Nether Lochaber side of the Narrows are located away from the residential properties of Corran, hence only one noise receptor was predicted to be significantly affected.

The noise impact associated with construction traffic, including light vehicles and heavy goods vehicles, was found to negligible/minor and non-significant effect on both sides of the narrows similarly there were no significant effects relating to vibration during construction.

The noise modelling assumed that all plant is operating concurrently in full operational mode, to provide a worst-case scenario. In reality, only a proportion of the plant may operate for a limited period, hence actual noise levels are expected to be lower than those predicted by the modelling process.

The assessment of operational noise levels has considered the normal functioning of the new ferry and the temporary operational situation at Ardgour, where a diesel generator may be used to begin with. For all modelled assessment scenarios at Nether Lochaber and Ardgour, the sound levels for the permanent operational situation are predicted to be below the Background Sound Levels. For the temporary operational situation at Ardgour no adverse impacts at the closest receptors during the night are predicted. For all other receptors the sound levels are expected to be below the Background Sound Levels. Collectively the effect of operational traffic noise on all receptors is predicted to be minor, though levels are expected to be slightly higher at the Ardgour Inn than currently experienced.

To reduce the effect of construction noise on residents a Community Liaison Officer will be employed, who will be responsible for maintaining two-way communications, specifically providing updates on upcoming construction activities and the associated noise sources. Further mitigation in the form of noise barriers are proposed for small noisy items of plant such as generators.

7 Underwater Noise

Underwater noise will be generated during the construction works associated with the CFIIS at both the Ardgour side and the Nether Lochaber side of the Corran Narrows. Marine construction activities such as impact piling (if required), vibropiling, rock breaking and blasting (if required) can give rise to underwater noise at levels that have the potential to cause disturbance and injury to marine mammals and fish if present in the immediate vicinity of works. Modelling was undertaken to predicted noise levels associated with various activities, to inform the assessment of effects on marine mammals, fish (wild and farmed) in Loch Linnhe. The effects of underwater noise on these receptors and associated mitigation are discussed in Sections 12, 13 and 18 respectively.

8 Air Quality

The potential impacts of fugitive dust emissions associated with the construction phase of the CFIIS have been assessed. It was identified during the scoping process that only earthworks and trackout warrant assessment for potential significant effects in terms of dust emissions. Trackout is dirt, mud, or other debris tracked onto a paved public roadway by a vehicle leaving a construction site. Elevated concentrations of dust in the air can affect human health and can also drop out of the air onto surfaces, which can cause nuisance and soiling, for example dropping out on cars and windows.

Each of the Main Development Sites and the Construction Compound Sites have been considered individually in terms of air quality for earthworks. Trackout assessment areas were determined to cover both the Main Development Site and Construction Compound Site of each side of the Narrows.

The impact assessment methodology utilised is based on the Institute of Air Quality Management Guidance on the Assessment of Dust from Demolition and Construction (Institute of Air Quality Management, 2024). A desk study was undertaken to identify dust sensitive receptors and to inform the characteristics of the existing baseline conditions. Receptors of dust soiling and human health impacts in the vicinity of the CFIIS are comprised of residential and commercial properties, including car parks, on either side of the Corran Narrows. The users of the A82 trunk road were also considered as receptors.

The largest area of earthworks and the largest number of vehicle movements required for the CFIIS construction are associated with the Nether Lochaber Main Development Site. In the absence of mitigation, earthworks and trackout at the Nether Lochaber side were determined to have potentially significant effects on dust soiling, human health and users of the A82 trunk road. On the Ardgour side, potential impacts from both earthworks and trackout were assessed as non-significant.

Mitigation will be implemented to reduce impacts from dust across all construction areas at the CFIIS. The creation of a Dust Management Plan will detail mitigation measures to reduce dust emissions from earthworks and trackout. Mitigation measures such as the provision of wheel cleaning facilities will be utilised to ensure that vehicles leaving the Nether Lochaber Main Development site do not track out mud or dust onto the A82. Other measures include minimising the time that soil is exposed, dampening materials likely to give rise to dust and covering of construction vehicles which are transporting potentially dusty materials on public roads. Frequent visual monitoring will be conducted to monitor dust and the effectiveness of

mitigation. Road sweepers will be employed where necessary to remove any trackout occurring, promptly.

A planning application for seven holiday pods had been submitted near the Inchree junction, across the A82 from the Nether Lochaber Construction Compound site. Potential cumulative dust emissions assuming both projects are constructed at the same time were considered, it did not increase the magnitude of impacts anticipated in this area. In addition, dust effects on the seven holiday pods were considered in event that they are built first. No significant effects on them were identified.

With the inclusion of mitigation, all potentially significant impacts associated with dust and air quality will be reduced to minor and non-significant.

9 Coastal Processes and Flooding

The potential impacts of the CFIIS on coastal processes and flooding were assessed. Coastal processes have been modelled to identify changes as a result of construction of the new infrastructure. A Flood Risk Assessment and a Drainage Impact Assessment were also carried out to provide a comprehensive understanding of the effects on coastal processes, flood risks, and drainage.

The coastal process modelling was used to assist the design of the alignment structure and ensure the new ferry can berth safely out of the strong tidal currents within the Corran Narrows. It identified only small changes in current speeds and patterns, which are unlikely to affect any other users of Loch Linnhe.

It was recognised that Ardgour, and parts of Nether Lochaber, are low lying and at risk from coastal flooding especially when accounting for the potential impact of sea level rise related to climate change. The design of the infrastructure is such that all new infrastructure is water compatible. Importantly, the proposed works so not increase the current flood risk on existing properties and infrastructure in the area. The design also includes appropriate drainage to ensure no change in the risk of surface water flooding.

The chapter concludes that no significant adverse effects are anticipated, and no additional mitigation measures are required. The design of the CFIIS incorporates effective strategies to manage flood risks and minimise impacts on coastal processes. The assessment concludes that there will be no deterioration to the Loch Linnhe North water body.

10 Biodiversity

The CFIIS includes elements in the terrestrial and marine environments, hence it could interact with a range of ecological receptors. The various receptor groups are considered in Sections 11 to 14. Legislation, policy and assessment methodologies are similar for all ecological receptors, hence have been presented in the Environmental Impact Assessment Report in one overarching chapter. In addition, there is a need to consider designated sites and habitats at a strategic level.

A Habitats Regulations Appraisal supporting document has been produced to identify likely significant effect to species and habitats associated with European Sites. This is to ensure compliance with the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). Where it is thought there could be likely significant effect on a qualifying interest, the

supporting document considers the potential for effects on the conservation objectives of the designated site, taking into account the assessment completed in the various ecological chapters. No effects on the conservation objectives of any designated site are predicted. However, it is up to the competent authorities, in this case, The Highland Council and Marine Directorate - Licensing Operations Team to undertake Appropriate Assessments to confirm this is the case.

Policy three of the Fourth National Planning Framework sets out an intention to protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks. As such, a Biodiversity Condition Assessment Report has been produced to present the baseline condition and identify the number of biodiversity units that will be removed for the construction of the CFIIS.

The Highland Council has committed to providing 19.05 of area habitat units and 0.11 of watercourse habitat units to provide 10% Biodiversity Enhancement based on the existing metric. Once offsite land has been confirmed (post-planning permission application submission), the project will submit a Biodiversity Enhancement Assessment Report, outlining how the required biodiversity units will be created, utilising an appropriate metric. A Habitat Management Plan will also be provided to detail how the enhancement will be achieved.

11 Terrestrial Ecology and Ornithology

As part of the proposed CFIIS an Ecological Impact Assessment was undertaken to assess the impacts of the construction and operational phases on terrestrial ecology and ornithology. CFIIS requires the removal of woodland on the Nether Lochaber side of the Corran Narrows, and loss of small areas of land that could be utilised by various species on the Ardgour side.

To understand what species were present within and around the proposed construction area extensive survey works have been undertaken. Field surveys identified the potential presence of otter, pine marten, native bluebell and bats, all of which are protected species and were considered in the impact assessment. Ornithological species located in the area and hence at risk of impacts from the construction of the CFIIS were identified primarily through desk-based study and supplemented by a breeding bird survey. Habitats identified during surveying were considered in the baseline as were invasive non-native species.

Otter are regularly seen in the area, the works are unlikely to impact upon any otter resting places, but they may be disturbed by construction activities, including the presence of people, in-air and underwater noise. Otters have large ranges, hence localised disturbance is unlikely to be significant. Mitigation is however, proposed to prevent injury to otters, including pausing activities, if an otter comes closer than 30m, in addition the marine mammal protocols described in Section 12, will apply to otter to ensure they are not harmed by underwater noise.

No signs of pine marten were recorded during surveys and camera traps were only triggered once by pine marten, suggesting that the construction areas are of limited value to this species and hence they are unlikely to be affected by the CFIIS.

Native bluebell and potential amphibians and/or reptiles (herptile) hibernacula were located within the proposed Nether Lochaber marshalling area, these will be translocated to a suitable location nearby prior to construction works commencing.

Guillemot have been known to nest on the small pier, which will be removed as part of the CFIIS project. Nesting boxes will be installed on the new overnight structure to provide an alternative nesting site.

Four species of bat were identified utilising the woodland in Nether Lochaber: common pipistrelle, soprano pipistrelle, brown long-eared bat and Myotis sp. Bat were identified during surveys of the woodland foraging; any roost features present are likely only used by individual bats. The intent is to fell trees outwith the bird breeding season and active bat season, to minimise disturbance of both species. The removal of trees will be under the supervision of a licenced bat worker, to ensure that not harm is inadvertently caused during felling activities.

Multiple invasive non-native species have been identified within the construction areas, an initial Integrated Weed Management Plan which will be updated prior to the construction phase to take account of the most recent surveys will be implemented. This will prevent the spread of non-native species and ensure that any waste arisings from their management is appropriately handled and sentenced.

There are two developments occurring in the local area which were identified as having the potential to cause cumulative effects on receptors. The Glen Gour Hydro Scheme will disturb nesting golden eagle, though the CFIIS is not expected to increase this impact as the area immediately around Corran is not suitable habitat for golden eagle. The development at Inchree for new short-term let pods includes requirements for habitat restoration and creation, resulting in a positive change. Combined with the assumed impacts of the CFIIS, no negative cumulative effects are anticipated.

Where potential effects on terrestrial ecology and ornithology have been identified, appropriate mitigation has been identified for implementation, the details of which are provided in the Construction Environmental Management Document in the form of Species Protection Plans. Following an assessment of the residual effects based on the recommended mitigation measures, no terrestrial or ornithological receptor will be subject to an impact higher than minor: non-significant.

12 Marine Mammals

The CFIIS could have impacts on marine mammal receptors including species present around the proposed development and relevant designated sites. A comprehensive desktop study of the current scientific literature was conducted in order to identify which marine mammal receptors may be affected by the CFIIS. Sites of importance relevant to the CFIIS include Eileanan Agus Sgeiran Lios Mór Special Area of Conservation, East End of Sound of Mull haul-out site and the Inner Hebrides and the Minches Special Area of Conservation. It was established that the marine mammal species most likely to be present in the development area include harbour seal, short-beaked common dolphin and harbour porpoise with occasional sightings of minke whale in the area. It was determined that grey seals were highly unlikely to be in the vicinity of the CFIIS.

As discussed in Section 7 certain construction techniques can generate underwater noise at levels which could cause injury or disturbance to marine mammals. The piles required to construct the overnight berthing structure are sheet piles, which do not require high energy piling techniques and hence their installation is relatively quiet in marine construction terms. Noise levels associated with piling are expected to reduce quickly. The species most sensitive

to the noise arising are harbour porpoise, they would need to stay within 450m of the piling works for 3 hours to suffer an injury. This is highly unlikely as mammals will move away from noise sources.

Rock breaking could give rise to injury to marine mammals close to the works. A Rock Breaking and Piling Marine Mammal Protocol is proposed whereby an observer ensures there are no marine mammals in the vicinity of the works prior to commencement, is proposed as mitigation. This will ensure that no marine mammals are injured or disturbed by rock breaking or piling.

The preference is to rip or break rock where required. If this is ineffective, there maybe a need to utilising blasting techniques. Not only do they give rise to high levels of underwater noise, but they also occur suddenly, marine mammals do not have the opportunity to move away from the noise source, and hence, could be harmed. Prior to any blasting being undertaken a specific marine mammal protocol will be developed detailing the mitigation to be employed. It will include the use of a bubble curtain, which acts like a noise barrier, reducing noise levels, this will be coupled with the use of acoustic deterrents which will encourage animals to move out of the area, and both visual and acoustic monitoring to ensure the affected area is clear of marine mammals prior to blasting.

In addition, the disposal of dredge spoil associated with construction or maintenance dredges (if required), could cause the risk of injury to marine mammals or basking shark; if they are below the vessel when it discharges the spoil. Although this is highly unlikely it is prudent to have an observer to check to ensure that there are no marine mammals or basking shark are in the vicinity of the dredge vessel when it is disposing of spoil. With this precaution in place, it is highly unlikely that a marine mammals or basking shark would be harmed.

All vessels involved in the construction works will comply with the Scottish Marine Wildlife Code Watching Code, to minimise disturbance to marine mammals. Taking into account the specific mitigation measures the effects on marine mammals associated with the project are assessed as negligible, non-significant.

A review was undertaken assessing the impacts of cumulative effects with other developments being carried out in the area with the potential for overlap during construction and operational phases. The mitigation in place during the CFIIS removes the risk of injury and disturbance, therefore no cumulative effects are predicted.

13 Fish and Shellfish Ecology

Three species of fish were identified as having the potential to be affected by the CFIIS construction phase: Atlantic salmon, sea trout and European eel. Each of these species is diadromous, meaning that they migrate between the sea and freshwater during their lifecycle.

Atlantic salmon and sea trout both begin their lifecycle in freshwater, only travelling to the sea once they mature. The populations of both species have experienced declines throughout the west coast of Scotland, including rivers north of the Corran Narrows. Fish migrating to or from these rivers will pass the CFIIS Development Site.

European eel begin their lifecycle in the marine environment and migrate to freshwater where they grow to full size, before travelling back to sea to spawn. The species is listed as Critically Endangered according to the International Union for Conservation of Nature, and while their

presence on the west coast of Scotland is poorly understood, there are records of them in rivers which feed into Loch Linnhe.

Fish are less sensitive to noise than marine mammals, hence the only construction activity giving rise to underwater noise levels that could impact fish is blasting, if required to remove rock. The installation of a bubble curtain around the blast area will reduce noise levels and the impact zone mortality and mortal injury in all species of fish to less than 30m. Considering the disturbance in the water associated with preparations for blasting, it is highly unlikely that fish will be within 30m of the blast in large numbers. Hence, with the bubble curtain in place for blasting (if it is required) there are no significant effects on fish species predicted.

14 Benthic Ecology

The CFIIS development will involve the construction of marine infrastructure and subsequently potential impacts on the benthic ecology have been assessed. Subtidal and intertidal surveys were undertaken to understand the benthic (seabed) habitats and species present in the Corran Narrows.

Marine development during the CFIIS construction, will result in permanent loss of a portion of the benthic habitat. Benthic habitats assessed for habitat changes are determined to be of national (Annex I reef), regional (kelp and macroalgae Priority Marine Features) and low local value. Whilst there will be a loss of these habitats within the construction footprint, it will be limited to a small area compared to the wider region where the same Priority Marine Features are commonly widespread. Therefore, the localised nature of the habitat loss resulted in the impact being assessed as permanent but low, and the effect will be minor and non-significant.

Construction works have the potential to cause disturbance of the seabed including localised releases of fines and increased sedimentation into the water column. The seabed of the Narrows is comprised of largely coarse sands and gravels with some cobbles and silty sands on the Ardgour side, and predominantly bedrock on the Nether Lochaber side. This means that any material suspended in the water column would likely drop out of suspension quickly and so it is not anticipated that these will disperse and settle on benthic habitats except in a very localised area. There is a known seagrass bed 800m north of the proposed development. The assessment determined mobilisation of sediments associated with the CFIIS will not cause an increase in turbidity at the seagrass bed location, or otherwise affect the seagrass bed at this distance.

All vessels associated with CFIIS construction will adhere to appropriate and relevant biosecurity protocols which will minimise the risk of introduction of marine invasive non-native species.

Habitat changes associated with CFIIS in its operational phase are expected to occur due to the presence of new infrastructure and maintenance dredging (if required). As in the construction phase, the localised nature of the habitat loss leads will have a low impact on benthic communities, which will be non-significant.

During infrequent maintenance dredging (if required), sedimentation effects could occur in the same way they would during the initial capital dredging, and will be similarly localised, resulting in low impacts. Adherence to biosecurity measures will likewise substantially reduce

or eliminate the risk of introduction or spread of marine invasive non-native species from vessel movements during the operational phase.

In summary, no significant effects on benthic ecology due the proposed development have been identified.

15 Archaeology and Cultural Heritage

An archaeological and cultural heritage assessment was undertaken to identify and mitigate the likely significant effects of the CFIIS on the historic and cultural environment. A baseline assessment identified 19 known heritage assets at Ardgour:

- Four Category C designated heritage assets (i.e., the Inn at Ardgour/ Ardgour Hotel, Corran Point Lighthouse, cottage and a storage building),
- Four non-designated assets (i.e., the Ardgour slipway, Corran Ferry Cottages, the small pier at Ardgour and Royal Marine Battery); and
- One non-designated marine heritage asset.

Eight known heritage assets were identified in the Nether Lochaber study area, all of which are non-designated.

Nine designated heritage assets were identified within 2km of the CFIIS; one Scheduled Monument, one Garden and Designed Landscape, three Category B Listed Buildings and four Category C Listed Buildings.

The proposed development is determined to result in direct impacts upon two assets, Assets 28 and 63; located on the Ardgour side of the Narrows. Asset 28 is the existing small pier built at the former historic location of a pier built in the early 19th century. Asset 63 is a boat maintenance/breaking area. In order to mitigation impacts to these assets during construction works, a Written Scheme of Investigation will be prepared for the CFIIS that will consider the requirement for an Archaeological Watching Brief and/or archaeological recording prior to works in the vicinity of these assets.

While the overall potential for encountering finds or remains of a marine heritage nature has been identified by this assessment as low, there remains a possibility that hitherto unknown remains are located on the seabed or buried beneath the sands and gravels on the Ardgour side of the Narrows. Accordingly, a Protocol of Archaeological Discoveries and Written Scheme of Investigation (as a minimum) will be produced prior to the commencement of dredging and construction works. These documents will provide a methodology for the examination and identification of any finds or remains retrieved from the marine archaeological environment and thus their preservation by record.

Potential effects during the construction and operational phase include the effects on the settings of heritage assets. The setting effects of the construction phase was assessed for three Category C listed buildings, finding that the resulting effect was minor, reversible and non-significant, and no further mitigation is required. Th assessment determined no significant effects on archaeological or cultural heritage assets will occur as a result of the CFIIS in either construction or operations.

16 Traffic, Transport and Access

The CFIIS has been specifically designed to provide a betterment to the existing situation. On the Ardgour side there will be pedestrian and cyclist provisions, as well as road widening along the A861 in the vicinity of the upgraded slipway.

On the Nether Lochaber side, there is an improved junction arrangement and marshalling facilities which will provide a significant beneficial effect for users of the ferry and the existing users of the A82(T). The new junction arrangement and marshalling area will remove the existing issue whereby vehicles back up on to the A82 (T) carriageway, during peak periods resulting in improved overall safety of road users. In addition, the relocation of the proposed CFIIS which is currently accessed from the A861 on the Nether Lochaber side will provide a beneficial effect to the residents and businesses at this location given that vehicular traffic currently accessing the ferry at this location will do so directly from the new junction at the A82 (T).

The construction CFIIS will lead to a temporary increase in traffic volumes on the roads. During the peak construction period of the proposed CFIIS, per day it is estimated that there will be 122 Heavy Goods Vehicle (HGV) movements (61 inbound trips and 61 outbound trips), of which 108 HGV movements (54 inbound trips and 54 outbound trips) would be associated with the construction of the Nether Lochaber side of the Narrows and 14 HGV movements (7 inbound trips and 7 outbound trips) would be associated with the construction of the Ardgour side of the Narrows. In addition to this, a total of 50 cars or light goods vehicle movements (25 inbound trips and 25 outbound trips) would be associated with construction staff movements. The effect of these movements on the local road network were considered and found to be non-significant. The bulk of the movements being on the trunk road (A82 (T)) which is designed for and has sufficient capacity for the HGV movements predicted during the construction works. It was noted the HGV movements on North Corran as a residential street are unusual and need to be appropriately managed.

A Construction Traffic Management Plan is proposed to minimise impacts associated with the construction works including a voluntary speed limit of 15mph for construction vehicles utilising North Corran.

17 Navigation

The potential navigation impacts of the CFIIS associated with the project have been considered as 'risks' rather than as a significance assessment as no significant impacts on navigation are anticipated from either the construction or operational phases. Full details of navigational risks and identified controls (i.e., mitigation) are outlined in the CFIIS Navigation Risk Assessment (Appendix Q.1).

Loch Linnhe is part of the navigational channel that, linked by the Caledonian Canal, forms a passage through northern Scotland from one side of the country to the other. The restricted nature of Loch Linnhe, and especially the Corran Narrows, brings all types and sizes of vessels into relatively close proximity. The CFIIS design from the project onset has considered minimising intrusion to the navigational channel as far as practicable.

Navigational risks relevant to the CFIIS were assessed through a hazard identification workshop with relevant stakeholders. Hazards to navigation and marine operations were

identified and associated hazard risks were identified, all in accordance with the latest guidance. Through the navigational risk assessment, current risk controls were considered, and new risk controls were identified. With the implementation of these controls, all hazard scenarios were assessed to be both tolerable and as low as reasonably practicable.

Construction controls will be implemented prior to CFIIS work commencing and controls for the operational phase will be in place prior to ferry operation taking place on the newly constructed infrastructure. Hence, residual impacts to navigation associated with the CFIIS are therefore determined to be non-significant in both construction and operational phases.

18 Socio-economics

The Corran Ferry service provides a vital transport connection for local communities, tourists, goods and services to and from the Ardnamurchan peninsula. Recognising this importance, the requirement for a sustained and resilient service is one of the main drivers for the CFIIS. In contrast, ageing vessels and a lack of vessel interchangeability on the existing infrastructure is a risk to the socio-economic conditions of peninsula communities, whose sustainability is dependent on a reliable transport connection.

Access across the Corran Narrows, via the current Corran Ferry service, will be maintained throughout the construction phase. As such, there will be no impact to the socio-economic landscape for businesses or local communities from this aspect of the CFIIS construction.

Construction effects of the CFIIS were considered specifically with regard to impacts on the operations of for Mowi's Linnhe fish farm. The only impact identified on fish receptors which may be associated with the proposed CFIIS construction was underwater noise emissions. Though penned fish cannot move away from underwater noise, effects experienced by Atlantic salmon at the Linnhe fish farm, as attributed to underwater noise associated with the CFIIS construction, are determined to be temporary and non-significant. Furthermore, any disturbance response reactions are not expected to impact the fish in terms of their value and quality as a product. Monitoring during piling activities and marine blasting (if blasting is required) is proposed to verify that there are no unacceptable adverse impacts to the product of the fish farm.

When considering the construction effects in-combination, the Ardgour community and local businesses (specifically, the Inn at Ardgour and the Nomad Café) can be expected to experience the additive nuisance effects of noise, traffic, lighting and disruption to views attributed to proximity to the construction site. Whilst impacts will be relatively short-term (approximately 18 months for the construction phase), in combination, these effects and the resulting disturbance and nuisance could have significant social effects to a small community. For the Inn at Ardgour and Nomad Café, these in-combination effects may decrease visitor experience, increase the risk of guest complaints and potential result in a decline in custom, occupancy or repeat bookings.

Good communications and managing guest expectations will go a long way in reducing these impacts. This will be facilitated through the implementation of a suitable communication strategy. With this mitigation, the social effects of these impacts acting in-combination will be reduced to non-significant.

For the community of Corran and Nether Lochaber, in-combination effects will also be associated with the additive nuisance effects of noise, traffic, lighting and traffic management from their proximity to construction activities. As the main construction works are located north of the Corran settlement, is it expected that some nuisance may be experienced, but this will be minimal.

During the operational phase, the CFIIS will provide benefit for local communities (Ardgour, those of the Ardnamurchan peninsula, Mull and Nether Lochaber) through the provision of new public facilities, including pedestrian and bicycle shelters, as well as electric bicycle charging outlets, new toilets and a changing places facility across the Narrows. The proposal will also facilitate the introduction of a brand new electric vessel onto the service and allow for vessel interchangeability.

Improvements to marshalling and access areas, especially on the Nether Lochaber side, will improve road safety and service user experience. An improved junction on the A82 will benefit all users who travel through this junction (whether or not they utilise the Corran Ferry). By ensuring continuity of the ferry service, the CFIIS will maintain the connectivity of National Cycle Network Route 78 and the active travel network across the Corran Narrows. New public access to views of the loch and glen from the new parking and marshalling area at the Nether Lochaber side can similarly be appreciated by any who visit.

For the community of Nether Lochaber, noise and traffic associated with the ferry service will have been diverted out of the settlement, improving the sense of tranquillity and reducing severance effects.

Peninsula communities (including Ardgour and those on the Isle of Mull), will benefit from the continuity and improvement of the Corran Ferry service as an essential transport connection, which is determined to result in a positive socio-economic effect. The CFIIS will support the sustainability of these rural communities, ensuring they have continued access to economic opportunities such as tourism, and also access employment, education, medical and other services. When compared to the baseline under a 'do nothing' scenario, which is expected to result in increased disruptions to the ferry service, the CFIIS is determined to have positive and significant social effects for these communities over its lifetime.

No significant effects on accommodation/housing or education and training are predicted during the construction or operational phases attributed to the CFIIS.

19 Materials and Waste

The types and quantities of materials needed to build the CFIIS are identified. These include metals, concrete, aggregate, rock, timber, plastics, and synthetics. There is an environmental lifecycle cost (the environmental cost of a product or service throughout its entire life, including the environmental costs of raw materials, production, use, and disposal, as well as wider environmental effects like pollution and resource depletion) associated with all of these materials. To minimise the environmental lifecycle cost of materials usage, the design has aimed to reduce the volume of materials required. Material usage is, however, unavoidable. Appropriate selection and sourcing of materials is used to minimise effects. Materials with higher recycled content and sourced locally are preferred. This is in line with The Highland Council's Community Benefit Policy on Procurement which aims to maximise the social, economic and environmental benefits of sourcing materials locally.

The expected waste types arising during the construction works have been identified. They include vegetation from tree felling, dredge spoil, excavation arisings, and demolition waste. The proposed strategies for handling these wastes align with the waste hierarchy, prioritising reduction, reuse, and recycling to minimise landfill use. No environmentally significant materials and waste issues were identified.

20 Climate Change

The greenhouse gas emissions associated with the CFIIS have been quantified using a whole lifecycle approach. This approach considers emissions from all phases of the project and encapsulates emissions attributable to the materials required for the construction of the project, along with emissions associated with operational activities. The total emissions are presented as carbon dioxide equivalent, a standard unit used to measure and compare the impact of different greenhouse gases on global warming. To meet climate change goals, the Scottish Government have set a target of achieving net zero by 2045.

The construction of the CFIIS is estimated to produce 13,608 tonnes of carbon dioxide equivalent. The replacement of the existing diesel ferry with the new electric vessel (once fully operational) will reduce operational carbon dioxide equivalent by at least 93 percent from 1,042 tonnes per year to 69.3 tonnes per year. As a result, the project will be carbon neutral by 2044. This calculation has not taken account of the carbon cost of the new ferry. This is because a new ferry, with a similar magnitude carbon cost, is a necessity in order to ensure the future reliability of the Corran Ferry Service. Additionally, the installation of electric car and bicycle charging facilities at the Nether Lochaber marshalling area will contribute to the wider move towards low carbon transport.

It is therefore concluded, that the CFIIS will have a beneficial impact on greenhouse gas emissions by reducing the carbon footprint of the Corran Ferry Service. The savings will allow the project to be carbon neutral by 2044, well within the operation lifespan. Beyond this time, further savings will increase the beneficial impact of the project.

21 Schedule of Mitigation

Mitigation measures which have been identified throughout the Environmental Impact Assessment Report, are collated to form the Schedule of Mitigation. These are further broken down into mitigation for construction and operations.

Construction mitigation measures include mitigation identified for topics such as geology, land and soil, and water quality, which were not specifically considered in the Environmental Impact Assessment Report. Mitigation measures for these topics were originally identified during the scoping process for the Environmental Impact Assessment Report and their implementation will ensure effects are minimised.

As to how mitigation measures will be implemented, this will be detailed in the Construction Environmental Management Document, to be used during the planning and implementation of the construction phase by the construction contractor. The Construction Environmental Management Document can also be updated as and when necessary. A key inclusion within the Construction Environmental Management Document, is the requirement for use of appropriately trained and experienced staff, to ensure mitigation measures are effectively implemented. This will include an Environmental Clerk of Works (ECoW) whose role it is to

provide onsite supervision to ensure the environmental mitigation measures are implemented appropriately and are working effectively, they will also provide advice as issues arise.

Operational mitigation measures will be incorporated into existing management systems, as required, to ensure that they are implemented appropriately.

22 Conclusion

The design and proposal for the CFIIS has developed over a number of years, taking into account the requirements of the Corran Ferry service, technical constraints, community and stakeholder consultation responses and environmental sensitivities of the area.

Access across the Corran Narrows, via the current Corran Ferry service, will be maintained throughout the construction phase, enabling locals and visitors to continue to access essential services beyond the peninsula. In its operational phases, the CFIIS will facilitate the introduction of a new electric vessel proposed by THC, with the MV Corran acting as the relief vessel.

The chapters in the Environmental Impact Assessment Report have assessed potential impacts that may arise during the construction and operational phase of the project. Cumulative impacts were also considered.

Mitigation measures have been identified for those adverse impacts deemed to be significant, as well as best practice measures, to minimise the overall environmental effects of the proposed development. Significant effects identified throughout the assessment and the appropriate mitigation to reduce these impacts have been collated and are presented in Table 22.1.

Adverse environmental impacts associated with construction and operational scenarios of the CFIIS can be mitigated to non-significant levels with two exceptions; in-air noise during the construction phase, and landscape and visual impacts during the operational phase. In-air noise effects will be managed as well as practicable through effective communications with the local community. With regard to landscape and visual effects, the proposed development was carefully planned to retain the integrity of the interface between the settlement and coastline. Whilst the effects will be significant locally, it is considered that the change is appropriate to the setting and will be accommodated in this open, diverse coastal landscape.

The new electric vessel and the new infrastructure constructed for the CFIIS will work in combination to increase ferry service capacity and resilience while improving user experience of this essential transport connection. The CFIIS will support the sustainability of rural communities on the Ardnamurchan peninsula, ensuring they have continued access to employment, education, medical and other essential services, as well as economic opportunities (i.e., from tourism). When compared to the baseline under a 'do nothing' scenario, which is expected to result in increased disruptions to the ferry service, it is considered the CFIIS will provide very significant public benefit for these communities over its lifetime.

Table 22.1: Summary of Significant Effects in the Absence of Mitigation. All effects are classified as 'adverse significant' unless it is stated that they have a positive or beneficial impact magnitude.

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
Construction							
Noise from construction activities	NAL16-24	High	Moderate	Moderate: Significant	The following mitigation measures will be followed to reduce in-air noise impacts: • A communication strategy as outlined in in Chapter 18: Socio-economics will be developed; • Where access and space restrictions allow, temporary noise barriers will be installed as appropriate around small items of plant; and • Good practice noise control and management as detailed in BS 5288 will be followed.	Minor	Minor: Non-significant
Noise from construction activities	NAL10-11, NAL20-21	High	Major	Major: Significant		Minor	Minor: Non-significant
Noise from construction activities	NAL02-09, NAL12, NAL15	High	Major	Major: Significant		Major	Major: Significant
Dust Soiling from Earthworks	Nether Lochaber Development Site Earthworks Receptors.	High	Medium	Moderate: Significant	Implementation of Dust Management Plan which includes: • Exposed areas of soil will be re-vegetated to stabilise the soil or surfaced as soon as is reasonably practicable; • Materials with potential to give rise to dust which are not required on-site will be removed as soon as is practicable; • Appropriate planning to minimise the number of times material is moved and the time material is stored;	Small	Minor: Non-significant
Human Health Impacts from Earthworks	Nether Lochaber Development Site Earthworks Receptors	Medium	Medium	Moderate: Significant		Small	Minor: Non-significant

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
					• Stockpiles of soils and/or aggregate will be limited to 3-6 metres in height and stored in appropriate locations to minimise becoming windblown; • Exposed soils will be bladed where appropriate to prevent wind whipping; • Consideration will be given to covering materials to stockpiled for a longer period of time, to prevent wind whipping; and • Materials likely to give rise to dust will be kept moist.		
Dust or Mud on road from Earthworks (Junction Creation)	Users of A82 (T)	Medium	Medium	Moderate: Significant	Implementation of a Dust Management Plan including: • Earthworks mitigation (see above); • During the creation of the junction adjoining the Nether Lochaber Development Site and the A82(T), a road sweeper will be deployed to keep the road free of mud/dust during these works; and • A road sweeper will be deployed on the the A82(T) to remove any tracked-out material as required. Dry sweeping will be avoided, where reasonably practicable.	Small	Minor: Non-significant
Dust Soiling from Trackout	Nether Lochaber Side	Medium	Large	Moderate: Significant	Implementation of a Dust Management Plan including:	Small	Minor: Non-significant

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
	of the Corran Narrows Trackout Receptors				• Construction vehicles entering and leaving the site with materials which could give rise to dust will be covered; • Sealed surfaced vehicle routes on-site will be installed as soon as practicable; • A maximum speed limit of 10mph will be imposed on the Main Works areas as well as Construction Compounds. This will be appropriately signposted across all site areas; • The movement of dusty material, such as soils, rocks, sands and gravel, will be appropriately planned to minimise the number of times dust emitting material is moved; • A mechanism to minimise trackout onto the A82(T) from the Nether Lochaber Development Site will be implemented. This is likely to include wheel washing or rumble strips, at least until sealed surface access is established; • During the creation of the junction adjoining the Nether Lochaber Development Site and the A82(T), a road sweeper will be deployed to		
Human Health Impacts from Earthworks	Nether Lochaber Side of the Corran Narrows Trackout Receptors	Medium	Large	Moderate: Significant		Small	Minor: Non-significant

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
					keep the road free of mud/dust during these works; • A road sweeper will be deployed on the access routes, the A82(T) and A861 to remove any tracked-out material as required. Dry sweeping will be avoided, where reasonably practicable; • Damping down of routes within construction areas will be conducted when required; and • Qualitative visual dust monitoring will be undertaken throughout the works and inform the need to implement dust supressing techniques, such as road sweeping.		
Dust or Mud on road from trackout	Users of A82 (T)	Medium	Medium	Moderate: Significant	Implementation of a Dust Management Plan including: • Trackout mitigation (see above); • During the creation of the junction adjoining the Nether Lochaber Development Site and the A82(T), a road sweeper will be deployed to keep the road free of mud/dust during these works; and • A road sweeper will be deployed on the the A82(T) to remove any tracked-out material as required. Dry	Small	Minor: Non-significant

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
					sweeping will be avoided, where reasonably practicable.		
Disturbance	Otter	International	Low	Moderate: Significant	Otter will be subject to marine mammal protocols for piling, rock breaking and blasting.	Negligible	Minor: Non-significant
Accidental Destruction or Abandonment of Breeding Sites	All Ornithologcal Receptors	Low local to International	Medium	Moderate to Major: Significant	• All tree works will be undertaken outwith the breeding bird season (March to August inclusive); • The nest site for black guillemot located on the pier in Ardgour will be excluded when not in use; • At the start of the breeding season, a toolbox talk will be delivered to the relevant construction operatives, to ensure they are aware of the protection afforded to all nests and what to do if they find a nest; • Ongoing checks for breeding birds and nests will be carried out throughout the breeding season; and • In the instance that a bird's nest is identified, an exclusion zone will be installed.	Negligible	Negligible to Minor: Non-significant
Accidental Physical Injury or Mortality	Bat	Regional	Medium	Moderate: Significant	• A licenced bat worker will supervise the removal of the woodland and pruning of trees where there is a potential for roosting bats; and • All tree works will be undertaken outwith the bat active season (March	Negligible	Minor: Non-significant

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
					to October inclusive). If any tree works are required to be undertaken within the bat active season, these will be under the approval and supervision of a licensed bat worker.		
Accidental Physical Injury or Mortality	Otter	International	Low	Moderate: Significant	• If otter(s) approach closer than 30 metres to ongoing works, either on land or within the marine environment, then works should cease until such time that the otter(s) has moved further than 30 metres away from works; and • Steps to prevent entrapment, including covering excavations or providing escape ramps from excavations when the site is non-operational (nights and Sundays), will be employed.	Negligible	Minor: Non-significant
Accidental Spread of Highly Pathogenic Avian Influenza	Ornithological Receptors of National to Interantional Value	National to International	Temporary, Negative, Medium	Moderate to Major: Significant	In the event of a Highly Pathogenic Avian Influenza outbreak, ornithological Species Protection Plans will be amended to include measures to reduce the risk of spread.	Negligible	Minor: Non-significant
Accidental Spread and Introduction of Invasive Non-Native Species	Terrestrial habitats			Significant	Invasive Non-Native Species, specifically terrestrial weed species, will be managed during the construction through an initial Integrated Weed Management Plan which will be updated prior to the construction phase.		Non-significant

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
Injury due to underwater noise from rock breaking using single strike ($L_{p,pk}$) peak criteria	All marine mammal receptors including designated sites	All International except for East End of Sound of Mull haul-out site (National)	Low	Moderate: Significant	Rock Breaking and Piling Marine Mammal Protocol.	Negligible; No Change	Negligible: Non-significant
Injury/Disturbance due to underwater noise from blasting	All marine mammal receptors including designated sites	All International except for East End of Sound of Mull haul-out site (National)	Medium-term, Reversible	Major: Significant	Blasting Marine Mammal Protocol	Negligible, Short-term, Reversible	Negligible: Non-significant
Physical injury due to dredge disposal at sea	All marine mammal/ basking shark receptors including designated sites	All International except for East End of Sound of Mull haul-out site and Sea of the Hebrides Marine Protected Area (National)	Low, Short-term	Moderate: Significant	Dredged Spoil Disposal Marine Mammal Protocol.	Negligible, No Change	Negligible: Non-significant

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
Injury/Disturbance from underwater noise due to blasting	Atlantic salmon	International	Low	Moderate: Significant	Bubble curtain deployed appropriately with consideration of the proximity of the source.	Negligible	Minor: Non-significant
Impacts to Businesses: In-combination Effects	Inn at Ardgour/ Nomad Café			Significant	Develop and implement a Communication Strategy.		Non-significant
Social Effects: In-combination Effects	Ardgour			Significant	Develop and implement a Communication Strategy.		Non-significant
Operations							
Landscape effects on Settlements	Ardgour/North Corran	High	Substantial	Major: Significant	No further mitigation proposed.	Substantial	Major: Significant
	Corran Nether Lochaber (North Corran Bheag)	High	Substantial	Major: Significant	No further mitigation proposed.	Substantial	Major: Significant
Visual effects on Travellers/Cyclists	A82/NCR78 and A861/NCR78	High	Locally Substantial	Major: Significant	No further mitigation proposed.	Locally Substantial	Major: Significant
Visual effects on Road Users	A82/NCR78 and A861/NCR78	Medium	Locally Substantial	Major/ Moderate: Significant	No further mitigation proposed.	Locally Substantial	Major/ Moderate: Significant

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
Visual effects on Visitors/Travellers	Viewpoint 2, Nether Lochaber Ferry Terminal	High	Moderate	Major/ Moderate: Significant	No further mitigation proposed.	Moderate	Major/ Moderate: Significant
	Viewpoint 3, Ardgour Ferry Terminal	High	Substantial	Major: Significant	No further mitigation proposed.	Substantial	Major: Significant
Visual effects on Visitors/Residents	Viewpoint 4, Ardgour	High	Substantial	Major: Significant	No further mitigation proposed.	Substantial	Major: Significant
Visual effects on Visitors/Cyclists	Viewpoint 5, A861, North of Ardgour	High	Moderate	Major/ Moderate: Significant	No further mitigation proposed.	Moderate	Major/ Moderate: Significant
Visual effects on Visitors/Travellers	Viewpoint 6, Beside Proposed Slipway on Eastern Shore	High	Moderate	Major/ Moderate: Significant	No further mitigation proposed.	Moderate	Major/ Moderate: Significant
Visual effects on Visitors	Viewpoint 7, North of Lochaber Ferry Terminal	High	Substantial	Major: Significant	No further mitigation proposed.	Substantial	Major: Significant
Habitat Modification	Bluebell	National	Medium	Moderate: Significant	Where feasible, British bluebell that will be lost due to construction will be translocated to an appropriate area outwith the construction site, under supervision of an appropriately competent and experienced ecologist.	Negligible	Minor: Non-significant

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
Physical injury due to dredge disposal at sea	All marine mammal receptors including designated sites	All International except for East End of Sound of Mull haul-out site (National)	Low; Short-term	Moderate: Significant	Dredged Spoil Disposal Marine Mammal Protocol.	Negligible, No Change	Negligible: Non-significant
Severance Driver Delay& Road Safety	A82 (T) RoadUsers	Low	Negligible	Beneficial: Non-signifcant	The new junction on to the A82 (T) is an improvement on the existing juction as it provides improved sightlines and separates turning traffic from through traffic more effectively. In addition, the apprioriately sized marshalling area, will minimise the risk of vehicles backing up onto the road during peak periods.		Positive: Significant
Fear and Intimidation & Road Safety	Ferry Users	High	Negligible	Beneficial: Non-signifcant	Improvements on the Ardgour and Nether Lochaber sides with regard to marshalling, shared use paths, formalised footways, parking and facilities, including shelter areas will benefit ferry users.		Positive: Significant
Impacts to Businesses: In-combination Effects	Inn at Ardgour/ Nomad Café			Positive: Significant	No further mitgation required.		Positive: Significant
Social Effects	Ardgour and Ardnamurchan			Positive: Significant	No further mitgation required.		Positive: Significant

Nature of Impact	Receptor	Receptor Sensitivity	Impact Magnitude	Significance (Absence of Secondary Mitigation)	Mitigation Summary	Residual Impact Magnitude	Significance of Residual Effect
	Peninsula Communities (Including Mull)						

Key

	Significant Effect

23 References

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24 Glossary

Acronym	Definition
CFIIS	Corran Ferry Infrastructure Improvement Scheme