A836 Naver Bridge Replacement Scheme

Marine Licence Supporting Statement

November 2021

FAIRHURST

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Marine Licence Supporting Statement

1.0 Introduction

1.1. Fairhurst have been appointed by The Highland Council Infrastructure, Environment and Economy Service (THC) to prepare a Supporting Statement for a construction marine licence application for the A836 Naver Bridge Replacement Scheme ("the Proposed Scheme").

1.2. Overall, the Proposed Scheme comprises:

- Approximately 450m of new carriageway including verge widening & tie-ins to A836;
- 65m bridge (comprising a prestressed and reinforced concrete composite beam and slab structure with three spans); and
- New Lay-by, Bus turning area & private accesses.

1.2 As part of the application, Fairhurst have prepared this Marine Licence Supporting Statement, which covers the following:

- Background to the Proposed Scheme
- Site and Surroundings;
- Proposed Scheme;
- Marine Planning Policy and Guidance;
- Marine Licencing Considerations; and
- Conclusions.

1.3 This Supporting Statement sets out all of the relevant material considerations that should be taken into account by the Marine Scotland, in the determination of the marine licence application. Fairhurst consider that all material considerations have been addressed within the Maine Licence Supporting Statement and all additional information required for determining the application has been provided within the submitted drawings and other application documents.

2.0 Background to Scheme

2.1 The A836 road begins at the South end of the Dornoch Bridge and ends at John o'Groats, passing through Lairg, Tongue and Thurso. Naver Bridge carries the Tongue to Bettyhill section of the A836 over the River Naver at Bettyhill. It forms part of the North Coast 500 tourist route. It is a mix of single carriageway and single track with passing places. The east approach to the bridge is single carriageway and the west approach is single track with passing places, and the bridge itself is single track with no verges.

2.2 The existing structure is a three span wrought iron through girder bridge with a total length of approximately 62m. The substructure comprises stone masonry abutments which are situated within the River Naver. The bridge superstructure is in a poor condition and is considered to be of an age and structural type that any refurbishment scheme would be extensive and costly.

2.3 The bridge is narrow with only room for a single traffic lane and no provision for cyclists or pedestrians. The approach alignment is poor, particularly from the East, which coupled with the through girders means that forward visibility is substandard. The poor alignment combined with the poor condition of the structure means that a full replacement and realignment of the structure and approach roads is required. As part of this replacement scheme the existing bridge would need to be demolished.

Photograph 2.1. Photograph demonstrating the narrowness of the existing A836 Naver Bridge

3.0 Site and Surroundings

3.1 The application site lies to the south east of the small hamlet Invernaver and to the south of the small village of Bettyhill.

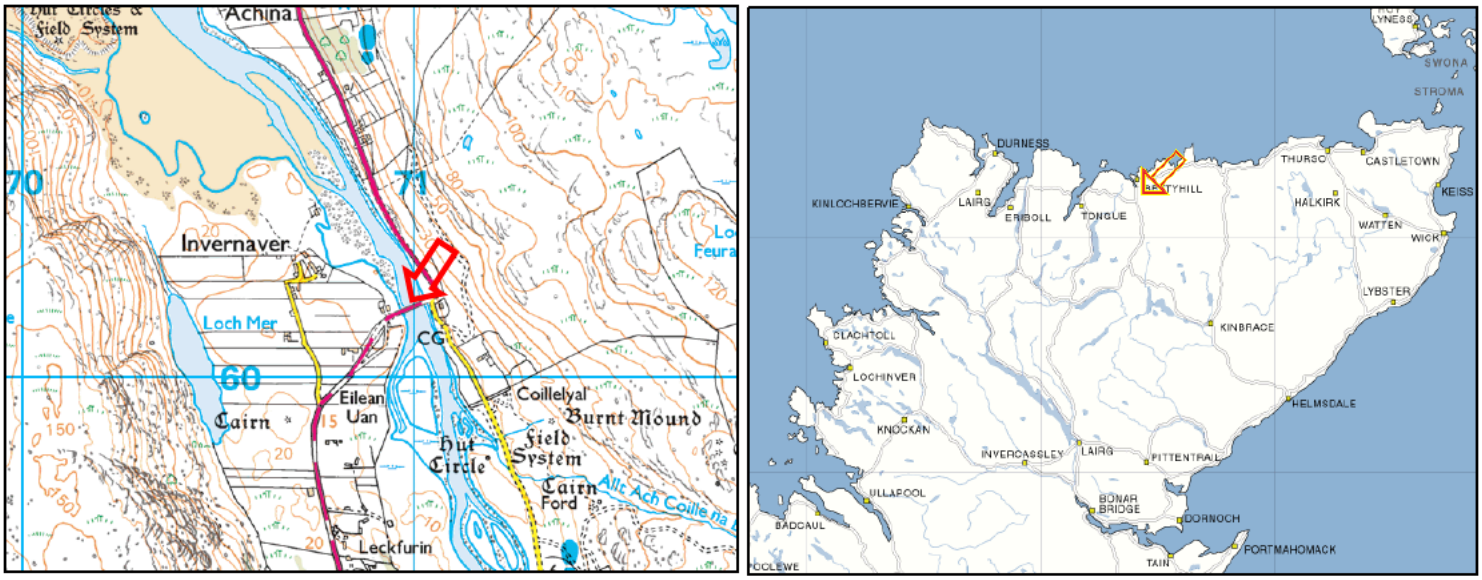

Figure 3.1 – Location of Proposed Scheme

3.2 The application site boundary (site extents) is shown on the accompanying 'Site Plan' drawing (Drawing Number 140891-FAI-NAV-DR-C-0004 – Rev 1) and extends to an area of approximately 2.5 hectares.

3.3 The application site spans the River Naver, via the existing A836 Naver Bridge and includes land on both sides of the river. The A836 road begins at the South end of the Dornoch Bridge and ends at John O'Groats, passing through Lairg, Tongue and Thurso. Naver Bridge carries the Tongue to Bettyhill section of the A836 over the River Naver at Bettyhill. It forms part of the North Coast 500 tourist route. It is a mix of single carriageway and single track with passing places. The east approach to the bridge is single carriageway and the west approach is single track with passing places, and the bridge itself is single track with no verges.

3.4 Following a review of the Scottish Environment Protection Agency (SEPA) Flood Maps, areas at the western and eastern ends of the bridge are indicated as being at risk from flooding in the low, medium and high probability fluvial events. The low probability event includes a large extent to the west downstream of the bridge. An area of pluvial flooding is indicated to the west of the bridge in the high, medium and low

probabilities. Further information can be found within the accompanying Flood Risk Assessment (FRA) (October 2021).

3.5 In terms of ecological environmentally designated sites, according to the Magic Map Application, the span of the application site (to the south of the existing bridge) overlaps with the boundary of the River Naver Special Area of Conservation (SAC). The qualifying features of the designation are both the Atlantic salmon and freshwater pearl mussel population. The River Naver, along with the River Borgie, represents the northernmost part of the freshwater pearl mussels range in the UK. The designation also covers the River Naver's major tributary, the Mallart River.

3.6 The Invernaver SAC is situated approximately 250m west of the application site boundary from the nearest point. The Invernaver SAC is designated for a range of habitats, including these Annex 1 habitats are Atlantic decalcified fixed dunes (Calluno – Ulicetea), coastal dunes with juniper Juniperus spp. thickets, and fixed dunes with herbaceous vegetation (grey dunes). Other qualifying interests include alkaline fens, alpine and boreal heaths, alpine and subalpine calcareous grasslands, dunes with creeping willow, and shifting dunes with marram grasses.

Figure 3.2 - Illustration of the proposed scheme in relation to the River Naver SAC & Invernaver SAC three Annex 1 priority habitats.

3.7 The Invernaver Site of Special Scientific Interest (SSSI) is situated circa 200m west of the application site boundary from the nearest point. The Invernaver SSSI is designated for its exceptional coastal geomorphology and habitats that include sand dune, saltmarsh, upland habitats, and associated botanical interest. The SSSI has also designated for the following Annex 1 species: Atlantic salmon, freshwater pearl mussel, and otter. The Invernaver SSSI overlaps with parts of the Invernaver SAC, River Borgie SAC, River Borgie SSSI, and Aird Torrisdale SSSI.

3.8 In terms of cultural heritage, according to the Historic Environment Scotland (HES) website, there are two Scheduled Monuments within approximately 1km of the application site:

- Invernaver, cairns, cists, hut circles & field system – circa 1 km to the North West; and
- Achcoillenaborgie, broch, Strathnaver – circa 0.8 km to the South East.

3.9 The surrounding area has not been subject to recent marine developments. According to the online Marine Scotland Planning Register, there is no evidence of any other projects in the locality of relevance or that are currently being developed.

4.0 The Proposed Scheme

4.1 This section of the Supporting Statement sets out the proposed development, which is the subject of the Marine Licence Application.

4.2 The existing structure is a three span wrought iron through girder bridge with a total length of approximately 62m. The substructure comprises stone masonry abutments that are situated within the River Naver. The bridge superstructure is in a poor condition and is considered to be of an age and structural type that any refurbishment scheme would be extensive and costly.

4.3 The bridge is narrow with only room for a single traffic lane and no provision for cyclists or pedestrians. The approach alignment is poor, particularly from the East, which coupled with the through girders means that forward visibility is substandard. The poor alignment combined with the poor condition of the structure means that a full replacement and realignment of the structure and approach roads is considered the most appropriate option. As part of this scheme, the existing bridge would need to be demolished. It is anticipated that the superstructure could be lifted from the supports before being partially dismantled and removed from the site.

4.4 The Proposed Scheme comprises over 450m of new carriageway and a 65m three span bridge. The new structure is situated to the south of the existing bridge over the River Naver, one mile south of Bettyhill.

4.5 The Proposed Scheme will involve the realignment of the existing carriageway and the provision of a new bridge crossing which aims to provide a more compliant road geometry and visibility, which will lead to a safer section of road. The proposed 65m structure comprises a prestressed and reinforced concrete composite beam and slab structure with three spans. Span length and support locations have been optimised with careful consideration of road alignment options and the effect of the bridge on the hydrology of the River Naver.

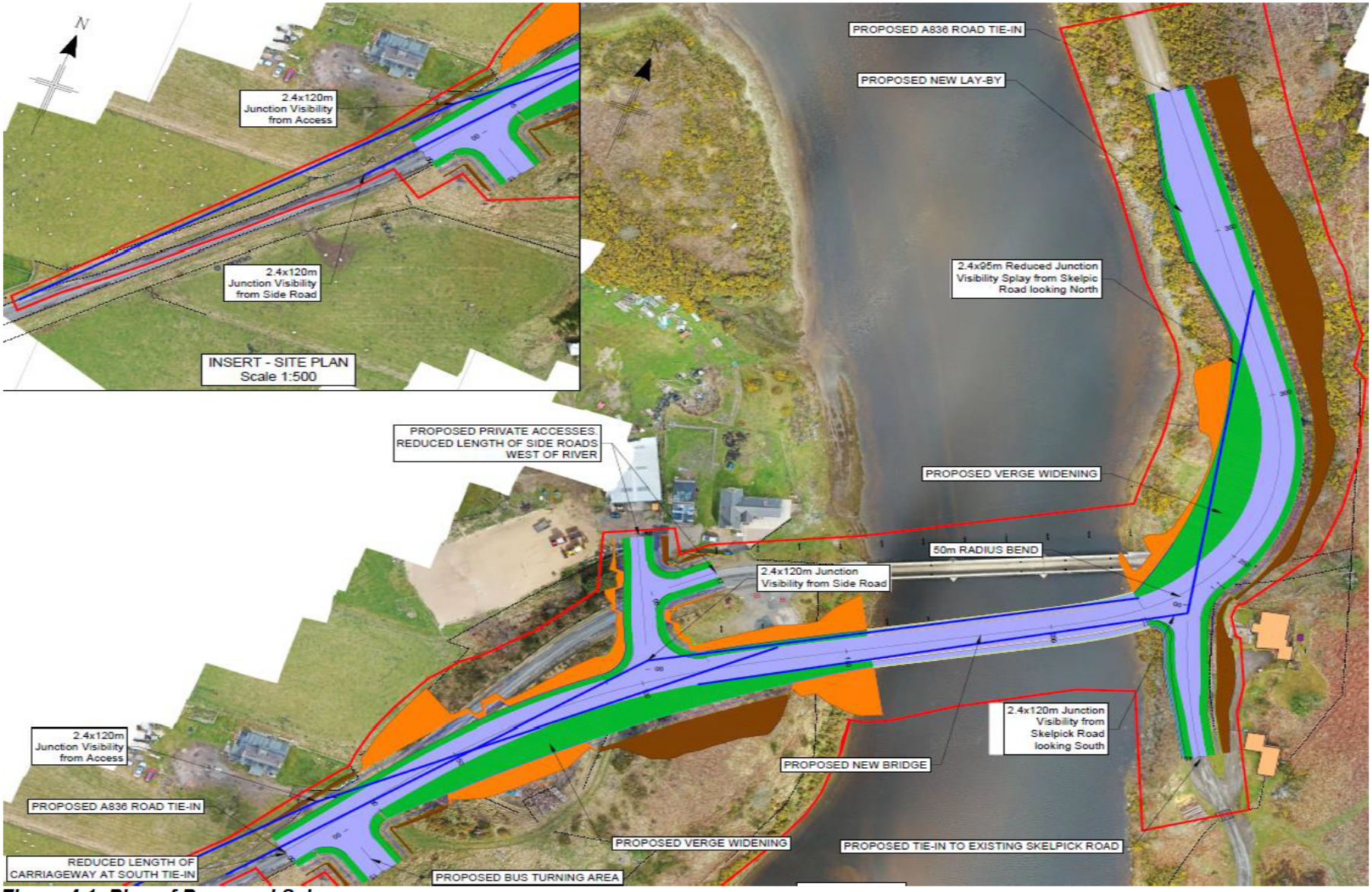

Figure 4.1: Plan of Proposed Scheme

Design Development

4.6 THC produced a preliminary Design Report (June 2009) and this considered 5 road alignment options. The report concluded that road alignment option 3 provided the best compromise between the numerous constraints associated with the project. Alignment option 3 was located upstream of the existing bridge and crossed the river with an approximate skew of 15 degrees and with a 50m radius bend on the east approach.

4.7 For the bridge design, the report considered 4 different span arrangements and a similar number of construction forms applicable to the associated span arrangements. The report concluded that a 2 span steel/concrete composite structure provided the best compromise for the numerous constraints associated with the project.

4.8 Fairhurst produced an Options Appraisal report, (June 2021). This report reviewed the preferred road alignment as identified in THC report and developed this into alignment 3D. A further option was also considered with the bridge north and downstream of the existing bridge. Option 3D was identified as the preferred alignment by reducing the skew and overall bridge length along with a number of other improvements when compared to option 3. This was accepted by THC and has been taken forward to detailed design. The Fairhurst report considered 3 different span arrangements for the bridge and 3 different construction formats. The report identified a single span steel through arch as the best solution which addressed the numerous constraints associated with the project, including programming restrictions. THC on reviewing the report and previously stipulated restraints identified the 3 span integral precast beam structure as their preferred option, this is being developed in detail.

4.9 Geologically the site is defined by main faults that dissect the site. The main fault (known as the Invernaver Fault) runs north-north-west – south-south-east and dissects the east abutment of the existing bridge. A further fault bifurcates off this approximately 50m north of the existing bridge structure and this then runs north-east. To the east of this fault and to the north of the smaller NE-SW trending fault is the Bettyhill Formation. However, to the south of the smaller NE-SW trending fault and east of the Invernaver fault is the Neoproterozoic Loch Coire Formation. All of the rocks underlying the site belong to the Moine Supergroup. The complex fault formations in the area of the bridge may result in significantly varying rock head levels along the bridge and this will be

determined by the planned Ground Investigation work. The rock head levels will significantly influence the type of foundations employed and could vary from a deep piled solution in the west to spread foundations at the east. Possible differential movements of the foundations and movements of the road embankments will be fully considered in the design of the bridge and roadworks.

New Bridge Construction Methodology

4.10 The proposed methodology for the new bridge construction is detailed within the 'Bridge Construction Methodology Report' (Document No: 140891-FAI-NAV-RP-S-0001), which has been prepared by Fairhurst to accompany this marine license application. The construction sequence is split into two parts, the demolition of the existing bridge and the construction of the new bridge with the appropriate supporting infrastructure.

Removal of Existing Bridge

4.11 The removal of the existing bridge could consist of the following sequence of operation, although could be adapted to suit the contractor's needs:

1. Install crane platform behind the existing west abutment.
2. Remove surfacing or concrete to the top of transverse wrought iron beams.
3. Install scaffolding below bridge deck to catch debris from deck concrete and brickwork removal.
4. Break out all concrete and brickwork.
5. Remove scaffold.
6. Cut main beam steelwork at pier locations.
7. Using a suitably sized crane lift steelwork out in girder pairs with transverse beams in place.
8. Alternatively, install restraints to allow transverse beams to be removed and main girders to be lifted out individually.
9. From the river banks dismantle abutment masonry and remove from site, store stones as instructed for future use.
10. Using a barge or pontoon system dismantle pier masonry to riverbed level.
11. Dress riverbanks to finished profile and install rock armour as detailed.

Construction of Replacement Bridge

4.12 This marine licence application consists of two proposed methodologies for the construction of the replacement bridge, which will allow a contractor to have a degree of greater flexibility to construct the design. Further detailed design will be undertaken once a contractor is appointed and therefore, there should be allowances within the marine license to ensure that all construction considerations are accounted for.

4.13 Section 3.0 of the Bridge Construction Methodology Report' (Document No: 140891-FAI-NAV-RP-S-0001) includes two options for the new bridge construction methodology, which can be adapted to suit a particular Contractor's programme and resources. Refer to Appendix A of the report for the accompanying Construction Sequence drawings.

4.14 The main difference between the two options is how access is gained to the western side of the river to allow for works to be undertaken. Option 1 proposes to excavate the west bank, allowing for the installation of a rock bund over the west side of the River Naver, then installing clean quarried rock or river gravel for access to the west pier location. The rock bund will then be utilised to allow the piling rig to install piles at and anti-scour sheet piles to be installed at the west pier. Option 2 proposes to install a temporary piled jetty over the same area as Option 1 and utilise it for the piling rig and anti-scour sheet piles.

4.15 The remainder of the construction sequence for both Option 1 and 2 will then follow the same methodology as detailed in Section 3.0 of the Bridge Construction Methodology Report (October 2021).

4.16 The below section will outline other construction considerations that have been included within this application.

Temporary Works

4.17 Temporary works areas have been identified as being necessary to enable construction; however, it is considered that such areas will not be permanently lost to the Proposed Scheme, and would be suitable for restoration to conditions that enable recovery post-completion.

4.18 It should be noted that although the approach adopted identifies 'permanent' works areas, 'temporary' works areas and additional land areas for mitigation, for the purposes of clarity, all land identified as 'necessary for the safe construction and operation of the scheme' would be considered for permanent land take and purchase under the Roads (Scotland) Act 1984.

4.19 It should also be noted that, whilst consideration of typical construction works activities has informed a temporary works boundary for assessment, in order to enable the Principal Contractor flexibility of use at the construction stage, no specific temporary land uses are defined.

Site Access

4.20 The only road available to access the site is the A836 via the A9 and Thurso to the east. Approaching the site from the west is unlikely to be viable due to the nature of the A836 in this direction. The A836 must be open to traffic at all times unless specifically agreed with The Highland Council and closures for a few minutes may only be possible.

Access to Property and Non-Motorised User Routes

4.21 During construction, suitable access to property and NMU routes shall be maintained by the Contractor; however, during certain construction operations, temporary closures or diversions may be required.

Watercourse Diversions

4.22 The Proposed Scheme will result in a modification to an existing of watercourse on the east side. This will take place in stages depending on the road construction arrangement and in some cases, a temporary watercourse diversion will be required to enable completion of permanent diversion works. Land required for such diversion works has been considered within the assessment boundaries.

Temporary SuDS and Access Tracks

4.23 A principal concern raised by SEPA through the ESG was ensuring the provision of sufficient land for construction stage sediment controls, i.e. temporary SuDS such as

settlement lagoons. Land required for such features has been considered within the assessment boundaries, typically in proximity to the larger area of earthworks on the west side.

Temporary Works Fencing

4.24 Temporary stock proof fencing will be erected, prior to construction works, where considered appropriate by the contractor. Typically, the aim is to delineate the works site and minimise risk of larger mammals (e.g. deer, sheep, horses or cattle) and people wandering into an active works area. Temporary works fencing does not present a significant barrier for smaller mammals.

Piling

4.25 The west abutments and piers will be supported on a pile arrangement and sheet piling to resist the effects of scour at all bridge supports. Piling will be restricted outside of any ecological migratory periods.

Traffic Management Phasing

4.26 The Proposed Scheme permanently realigns the A836 to the south of its present location and improves the road geometry as far as practical. The A361 and the minor road to the east of the River Naver will have to operate under a single lane traffic light system during a number of key construction phases including but not exclusively the following stages:

- Temporary works access/ egress points on the west and east sides of the River Naver.
- During construction of the re-aligned tie-ins on the west and east sides of the River Naver.
- During construction of the new layby on the east side
- During construction of the bus terminus on the west side
- During construction of the access to the properties on the west side
- During the installation of the east span bridge beams with a crane located on the east side between the A836 and the minor road.

Construction Stage Lighting

4.27 Temporary lighting may be required where working in normal working hours but in low light levels or if night time working is necessary, to minimise traffic disruption on the A836. Temporary traffic management measures may require lighting for safety reasons. Temporary lighting may also be required for security and safety reasons at the Contractor's compounds during morning and evening working hours in winter. The Contractor will develop a detailed construction lighting plan and method statement, to ensure that lighting is managed appropriately, in consultation with THC.

Waste Management

4.28 The construction of the Proposed Scheme is likely to produce a range of waste types and it is envisaged that the majority of waste arising from the Proposed Scheme will be re-used on-site, or at an appropriately licensed or registered exempt site elsewhere, or segregated and sent for recycling or recovery at a materials recovery facility. Construction site-works activities will therefore include waste management activities, such as transport, processing, and final disposal. Chapter 18, Materials provides more details.

Construction Programme

4.29 The Proposed Scheme has an anticipated construction programme of approximately 24 months and this considers the environmental restrictions associated with Salmon migration working restrictions. It is considered that the following approximate timescales will apply:

- Construction of new bridge and re-aligned road – 20 months
- Demolition of existing Bridge – 4 months

4.0 Marine Planning Policy and Guidance

4.1 Scottish Parliament legislate in relation to activities affecting the marine environment in Scotland's inshore waters, except for reserved matters. These are governed by the Marine (Scotland) Act 2010, an Act of the Scottish Parliament. All of the procedural requirements of this Act are contained within the Scottish National Marine Plan.

4.1 There is a tiered approach to developing marine planning in Scotland, which involves consideration of the following elements:

- UK Marine Policy Statement (MPS);
- Scottish National Marine Plan (SNMP); and
- Regional Marine Plans.

UK Marine Policy Statement (MPS)

4.2 The MPS is the Framework for preparing Marine Plans and making decisions affecting the marine environment. The MPS states that decisions must be made in accordance with the Marine and Coastal Access Act 2009 unless relevant considerations indicate otherwise, and must be in accordance with the MPS.

4.3 The UK vision for the marine environment is for 'clean, healthy, safe, productive and biologically diverse oceans and seas'. There are a number of UK high-level marine objectives which set out the broad outcomes for the marine area and reflect the principles of sustainable development. The objectives include:

- Achieving a sustainable marine economy;
- Ensuring a strong, healthy and just society;
- Living within environmental limits;
- Promoting good governance; and
- Using sound science responsibly.

4.4 The MPS states that 'properly planned developments in the marine area can provide environmental and social benefits as well as drive economic development. The marine planning system will help to promote these benefits in contributing to the achievement

of sustainable development. There will therefore be a presumption in favour of sustainable development in the marine planning system.

4.5 'Box 1' of the MPS outlines the following for achieving a sustainable marine economy

- Infrastructure is in place to support and promote safe, profitable and efficient marine businesses;
- The marine environment and its resources are used to maximise sustainable activity, prosperity and opportunities for all, now and in the future;
- Marine businesses are taking long-term strategic decisions and managing risks effectively. They are competitive and operating efficiently; and
- Marine businesses are acting in a way which respects environmental limits and is socially responsible. This is rewarded in the marketplace

4.6 The MPS states that halting and, if possible, a reversal of biodiversity loss should be an aim of decisions in the marine environment. The MPS also states that noise resulting from proposed activities can have an adverse effect on biodiversity as well as people. Its impact should be considered and managed appropriately. The general acceptance of biodiversity's essential role in enhancing the quality of life, with its conservation becoming a natural consideration in all relevant public, private and nongovernmental decisions and policies. The MPS also requires the measures for achieving good environmental status to include spatial measures for biodiversity protection.

4.7 The MPS states that as a general principle, development should aim to avoid harm to marine ecology, biodiversity and geological conservation interests (including geological and morphological features), including through location, mitigation and consideration of reasonable alternatives. Where significant harm cannot be avoided, then appropriate compensatory measures should be sought. Additional requirements apply in relation to developments affecting Natura 2000 sites.

4.8 The MPS states, in terms of seascape, that the effects of activities and developments in the marine and coastal area on the landscape, including seascape will vary on a case by case basis according to the type of activity, its location and its setting. Although the Proposed Scheme will introduce a larger infrastructure element into the landscape, it will not be alien in nature to the existing baseline, in the longer term. Although the extent of the replacement bridge, including the associated highway works might result

in minor changes in land cover, the size of any limited cuttings and earthworks required have been designed accordingly to blend with the local landform/ landcover. Landscape and Seascape considerations are discussed further in Section 5 of this Statement.

4.9 Coastal erosion and flood risk should also be considered in accordance with the MPS, which states 'development will need to be safe over its planned lifetime and not cause or exacerbate flood and coastal erosion risk elsewhere'. Existing terrestrial planning and management policies for coastal development under which inappropriate development should be avoided in areas of highest vulnerability to coastal change and flooding. The development will need to be safe over its planned lifetime and not cause or exacerbate flood and coastal erosion risk elsewhere. Authorities should not consider development, which may affect areas at high risk and probability of coastal change unless the impacts upon it can be managed. Marine plan authorities should seek to minimise and mitigate any geomorphological changes that an activity or development will have on coastal processes, including sediment movement.

4.10 For ecological water quality and resources, the MPS states that, Developments and other activities at the coast and at sea can have adverse effects on transitional waters, coastal waters and marine waters. During the construction, operation and decommissioning phases of developments, there can be increased demand for water, discharges to water and adverse ecological effects resulting from physical modifications to the water environment. There may also be an increased risk of spills and leaks of pollutants into the water environment and the likelihood of transmission of invasive non-native species, for example through construction equipment, and their impacts on ecological water quality need to be considered.

4.11 The MPS states that the cumulative impact of the development along with other developments within the area should be considered. Marine Planning should provide for continued, as well as new, uses and developments in appropriate locations. This includes considering who potential impacts of activities will be managed, such as cumulative effects. Close working across plan boundaries will enable the marine plan authority to take account of the cumulative effects of activities at plan boundaries. The consideration of cumulative effects alongside other evidence may enable limits or targets for the area to be determined.

4.12 The MPS places great weight on understanding the impacts and effects of climate change, as it is key to maintaining a healthy environment. This will influence how we use and value our coasts and seas both now and in the future. Adaptation, including in the marine environment, is necessary to deal with the potential impacts of these changes, which are already in train. Sea level rises, increased flooding and coastal erosion will lead to increased vulnerability for development and significant change along parts of the UK coast. Adapting to the impacts of climate change will also be a priority for terrestrial planning on the coast. Marine planning will need to be compatible with these impacts. This will include ensuring inappropriate types of development are not permitted in those areas most vulnerable to coastal change, or to flooding from coastal waters, while also improving resilience of existing developments to long-term climate change.

4.13 The MPS states that the historic environment includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged. Those elements of the historic environment – buildings, monuments, sites or landscapes – that have been positively identified as holding a degree of significance meriting consideration are called 'heritage assets'. Marine activities have the potential to result in adverse effects on the historic environment both directly and indirectly, including damage to or destruction of heritage assets. The more significant the asset, the greater should be the presumption in favour of its conservation. Substantial loss or harm to designated assets should be exceptional, and should not be permitted unless it can be demonstrated that the harm or loss is necessary in order to deliver social, economic or environmental benefits that outweigh the harm or loss

Scottish National Marine Plan (SNMP)

4.14 The SNMP sets out the strategic policies for the sustainable development of Scotland's marine resources. The plan covers both Scottish inshore waters (out to 12 nautical miles) and offshore waters (12 to 200 nautical miles). The SNMP must be taken into account during the marine licensing process and provides guidance over what specific aspects of a proposed development / use has to be considered, in order to reach a balanced view on whether an individual project should be consented. The following policies have been assessed against the development due to their relevance:

4.15 Policy GEN 1 'General planning principles' of the SNMP states that: *"There is a presumption in favour of sustainable development and use of the marine environment when consistent with the policies and objectives of this Plan"*. Development and use of the marine area should be consistent with the SNMP, as it will help activity and businesses to grow while ensuring activities are undertaken in a sustainable manner that protects and enhances Scotland's natural and historic marine environment. It will also provide greater certainty as to how proposals relating to the marine environment will be considered by planning and consenting authorities.

4.16 Policy GEN 2 'Economic benefit' of the SNMP states "Sustainable development and use which provides economic benefit to Scottish communities is encouraged when consistent with the objectives and policies of the Plan". The economic benefit of proposed development and use should be considered carefully and taken into account, appropriately and proportionately, in marine decision-making. Particular consideration should be given to opportunities that aim to provide benefit to communities.

4.17 Policy GEN 3 'Social benefit' of the SNMP states, *"Sustainable development and use which provides social benefits is encouraged when consistent with the objectives and policies of the Plan*". According to the SNP, social benefits include those directly associated with economic growth such as increased wealth, improved quality of life and community regeneration. However, benefits of an intrinsic nature such as health and wellbeing associated with the natural and historic environment, a choice of location and lifestyle, sport and recreation are important. Social benefits apply not only to coastal communities but also to those who travel to and use the marine and coastal environment for employment or leisure.

4.18 Policy GEN 5 'Climate change' of the SNMP states, *"Marine planners and decision makers must act in the way best calculated to mitigate, and adapt to, climate change"*. It is considered that that developers and users should have sufficient regard to the impacts of a changing climate and, where appropriate, provide effective adaptation to its predicted effects.

4.19 Policy GEN 6 'Historic environment' of the SNMP states, *"Development and use of the marine environment should protect and, where appropriate, enhance heritage assets in a manner proportionate to their significance"*. Furthermore, the SNMP states, "*Marine planning should help to ensure that future marine activities and developments*

can be carried out in a way that respects the marine historic environment and the setting of important coastal heritage assets. It can also help to increase the social and economic contribution of the heritage assets, for example by encouraging opportunities for public access".

4.20 Policy GEN 7 'Landscape/seascape' of the SNMP states that *Marine planners and decision makers should ensure that development and use of the marine environment take seascape, landscape and visual impacts into account". Proposal should have regard to the qualities of the location in question, including any designation. More generally, the siting and design of a development should take account of the local landscape/seascape character and quality. Potential effects on landscapes and seascapes, including cumulative effects should be considered and developers should seek to minimise adverse impacts through careful planning and design, considering the services which the natural environment is providing and maximising the potential for enhancement.*

4.21 Policy GEN 8 'Coastal process and flooding' of the SNMP states that *"Developments and activities in the marine environment should be resilient to coastal change and flooding, and not have unacceptable adverse impact on coastal processes or contribute to coastal flooding".* Furthermore, proposals should also ensure that *"activities and developments will be resilient to risks from coastal change and flooding over their lifetime, and will not have an unacceptable impact on coastal change. They should seek to ensure that any geomorphological changes that an activity or development bring about in coastal processes, including sediment movement and wave patterns, are minimised and mitigated, bearing in mind the potential impact on commercial interests such as fisheries and conservation of the natural environment and key coastal heritage sites. Developments, which may affect areas at high risk and increase the probability of coastal change, should not be permitted unless the impacts upon the area can be managed effectively".*

4.22 Policy GEN 9 'Natural heritage': of the SNMP states, *"Development and use of the marine environment must:*

(a) Comply with legal requirements for protected areas and protected species.

(b) Not result in significant impact on the national status of Priority Marine Features.

(c) Protect and, where appropriate, enhance the health of the marine area.

Sites designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) make up the Natura 2000 network of protected areas. Any plan or project likely to have a significant effect on these sites, which is not directly connected with or necessary to their conservation management, must be subject to an 'appropriate assessment' of their implications for the site in view of its conservation objectives. Such plans or proposals may only be approved if the competent authority has ascertained by means of an 'appropriate assessment' that there will be no adverse effect on the integrity of the site".

4.23 Furthermore, Policy GEN 9 states, "*The presence (or potential presence) of a legally protected species is an important consideration. If there is evidence to suggest that a protected species is present or may be affected by a proposed development, steps must be taken to establish their presence. The level of protection afforded by legislation must be factored into the planning and design of the development and any impacts must be fully considered prior to the determination of the application".*

4.24 Policy GEN 12 'Water quality and resource' of the SNMP states that *"Developments and activities should not result in a deterioration of the quality of waters to which the Water Framework Directive, Marine Strategy Framework Directive or other related directives apply".*

4.25 Policy GEN 15 'Planning alignment' of the SNMP states that*; "Marine and terrestrial plans should align to support marine and land based components required by development and seek to facilitate appropriate access to the shore and sea".*

4.26 Policy GEN 17 ''Fairness' of the SNMP states, *"all marine interests will be treated with fairness and in a transparent manner when decisions are being made in the marine environment". The marine planning system therefore operates in the long-term public interest. Marine planning has a role to play balancing competing demands for marine resources and resolution of planning issues will not be able to satisfy all interests all of the time".*

4.27 Policy GEN 19 Sound evidence of the SNMP states, *"Decision making in the marine environment will be based on sound scientific and socio–economic evidence. New social, economic, environmental, and historic information will continue to improve*

knowledge of the marine environment and the potential impacts and benefits of its use".

4.28 Policy GEN 21 'Cumulative impacts' of the SNMP states *"Cumulative impacts affecting the ecosystem of the marine plan area should be addressed in decision making and plan implementation. Planning authorities and decision makers will consider the potential cumulative impact of activities and, using best available techniques, whether:*

1. *the cumulative impact of activities, either by themselves over time or in conjunction with others, outweigh the benefits;*
2. *a series of low impact activities would have a significant cumulative impact which outweigh the benefit;*
3. *an activity may preclude the use of the same area/resource for another potentially beneficial activity".*

4.29 Policy REC & TOURISM 1 of the SNMP states, *"Opportunities to promote sustainable development of marine recreation and tourism should be supported".* Furthermore, Policy REC & TOURISM 4 of the SNMP states "*Marine and terrestrial planners, marine decision makers and developers should give consideration to the facility requirements of marine recreation and tourism activities, including a focus on support for participation and development in sport. Co-operation and sharing infrastructure and/or facilities, where appropriate, with complementary sectors should be supported as should provision of low carbon transport options".*

Regional Marine Plans

4.30 Eleven Scottish Marine Regions have been created covering sea areas extending out to 12 nautical miles. Regional marine plans are to be developed by Marine Planning Partnerships, allowing more local ownership and decision making about specific issues within their area.

4.31 The Scottish Marine Regions Order 2015 outlines the boundaries of the Regional Marine Plans. According to the Marine Scotland Planning Maps Register, the application site is located within the North Coast Marine Planning Region. However, at the time of writing, there has not been a Regional Marine Plan developed for the North Coast area.

4.32 According to the SNMP, regional plans will take some time to develop. The first Marine Planning Partnerships to be established will be Shetland and Clyde. In the interim period, the Marine Policy Statement and the National Marine Plan will apply Therefore, the North Coast Marine Planning Region will not be considered further.

5.0 Marine Licencing Considerations

5.1 The Scottish Government has a commitment to sustainable development and supports the five guiding principles that underpinned the UK's 2005 sustainable development strategy. The SNMP reflects this by stating achieving a sustainable economy, promoting good governance and using sound science responsibly are essential to the creation and maintenance of a strong, healthy and just society capable of living within environmental limits. Aligned with this is the MPS' view that 'properly planned developments in the marine area can provide environmental and social benefits, as well as drive economic development.

5.2 Accordingly, Fairhurst have considered the acceptability of the proposed development in relation to the following matters:

- Principle of Development
- Biodiversity;
- Water Quality;
- Flood Risk;
- Noise; and
- Landscape / Seascape.

Principle of Development

5.3 The Proposed Scheme will replace an existing vehicular bridge, which as described in Section 2.0 of this Marine Licence Supporting Statement as is in poor condition and has operational constraints.

5.4 In addition to the new bridge crossing, which is subject to this Marine Licence application, the Proposed Scheme introduces the realignment of the existing carriageway to provide a more compliant road geometry and visibility which will lead to a safer section of road.

5.5 As the Proposed Scheme aims to replace and improve some key infrastructure linking the A836 to Bettyhill, it is considered that it will support Bettyhill as a tourist destination on the NC500 tourist route. The Proposed Scheme, by improving connectivity will result in a positive contribution to sustainable rural economic growth and will help

support the wider area as a tourist destination by improving its associated infrastructure.

5.6 The principle of the new bridge crossing is already established through the existing bridge, as within planning policy compliance review, the principle of the Proposed Scheme is assessed through Policy GEN1 of the SNMP and policies within Section 12 'REC & TOURISM' of the SNMP.

5.7 It is therefore considered that the Proposed Scheme is acceptable in all other material aspects, including how the development relates to the surrounding countryside and landscape character and its environment, as well potential visual amenity impacts, and natural heritage (as discussed in more detail below). The principle of the Proposed Scheme is therefore considered to be acceptable and is compliant with the Scottish national marine planning policies, guidance and strategies.

Biodiversity

5.8 The span of the application site overlaps with the boundary of the River Naver Special Area of Conservation (SAC). The qualifying features of the designation are both the Atlantic Salmon and freshwater pearl mussel population. The Invernaver SAC is situated approximately 250m west of the application site boundary from the nearest point. The Invernaver Site of Special Scientific Interest (SSSI) is also situated circa 200m west of the application site boundary from the nearest point.

5.9 The accompanying Ecological Impact Assessment (EcIA) (October 2021) to this marine licence application records the findings of the field survey work and notes the following recordings of protected and notable species within the application site and study area[1]:

5.10 *Migratory Fish* –River Naver is of International importance for populations of migratory Atlantic salmon which are a qualifying feature of the River Naver SAC. The site also supports migratory sea trout. An aquatic ecology assessment has also been undertaken to inform the EcIA process, which concurred with advice from River Naver Fisheries that the primary period for upstream Salmon migration being between May -

[1] The EcIA report (October 2021) clarifies that typically the study area extended to a minimum of 100m of the proposed permanent footprint of the works but was extended where necessary in relation to, for example. Statutory designated sites.

August a critical function of the Naver within the study area with the whole SAC population passing the bridge location;

Bats - Within the study area, the existing bridge structure and a range of domestic properties are not expected to be affected by proposals that support bat roost potential. No bats were recorded roosting within the bridge during either survey undertaken in 2021. However, there was a good level of activity relating to foraging and commuting common pipistrelle. The existing bridge structure itself is therefore considered to represent a feature for commuting bats;

Otter - The study area is highly suitable for otters. Some evidence of otter has been confirmed to date within the study area. A regular otter sprainting site is also located on the east bank of the river approximately 200m downstream of the existing bridge;

Freshwater Pearl Mussels – are known to be present within the River Naver and are a qualifying feature of the River Naver SAC. However, given the tidal/brackish nature of the River Naver where it flows through the site, it is considered unlikely that the species is present within the study area due to fluctuating levels of salinity with each tide;

Reptiles – there is a suitable array of structured habitats to support reptiles such as common lizard and adder and a single common lizard was observed a short distance upstream of the existing bridge structure;

Water Vole - no field signs for water vole have been detected to date and the River Naver is of limited suitability due to the tidal range;

Badger – are confirmed present within the desk study and that a very active latrine was recorded >150m outside the study area confirming their presence;

Breeding & Non-Breeding Birds –38 species are considered likely or confirmed to be breeding within and surrounding the study area to date. A wide range of non - breeding birds are reported within the ecological desk study;

Terrestrial Invertebrates – A range of notable invertebrate species are recorded from the wider study area. Specifically high numbers of records of greater yellow bumble

bee and moss carder bee were reported with many likely arising from the Invernaver SSSI; and

BAP and Other Species - Hedgehogs are recorded within desk study information received to date. Habitats on site, such as the woodland, scrub, and grassland habitats, are considered suitable for the species, offering commuting, foraging, and sheltering opportunities.

5.11 The EcIA records that the Proposed Scheme "*will result in an effect of habitat loss comprising 32m^2 (0.0032 ha) representing 0.0003% of the overall River Naver SAC. Bridge abutments may encroach to a small degree into the upper intertidal limits of the SAC. A further 765m^2 ha of the SAC will be subject to some level of shading as a result of the installation of the new bridge deck. In accordance with relevant guidance and a precautionary principal this effect will be recorded as a Likely Significant Effect (LSE) under the habitat's regulations".*

5.12 The EcIA report also advises that the temporary works described in the accompanying Construction Method Statement (October 2021) "*will also result in additional loss of SAC habitat in the short term where working platforms are proposed to be used to facilitate construction of the piers".*

5.13 The Habitats Regulations require that where LSE are identified, these require a further Appropriate Assessment (AA) in accordance with the regulations to determine whether such potential effects would result in an Adverse Effect on Site Integrity (AESI). The ecological assessment has therefore considered the potential effects of habitat loss for the qualifying features of the River Naver SAC.

5.14 The EcIA report confirms that further to a review of the potential impact of habitat loss based on the description of the distribution of spawning and mussel bed sites occurring primarily in the upper freshwater elements of the River Naver "*the impact of habitat loss itself is not likely to result in an adverse effect on the integrity of the site".* The report also concludes that "*the presence of permanent structures in channel will not impede or prevent the ability of qualifying features to move up or downstream in the long term. As such habitat loss represents a minor adverse effect on a feature of international importance and will not be significant. Furthermore the effect of minor permanent*

habitat loss will not result in adverse effects on site integrity (AESI) on the River Naver SAC".

5.15 The construction phase of the Proposed Scheme has the potential for temporary habitat loss within the SAC boundary, as a result of the construction of temporary working platform structures to enable construction. Further details of this are presented in the outline Construction Method Statement (October 2021). The EcIA considers this and concludes that "*additional temporary habitat loss would…not result in adverse effects on site integrity so long as temporary instream structures do not result in a barrier effect on the movement of Atlantic Salmon between the sea and spawning areas. This concept is considered further in relation to barrier effects, however temporary habitat loss in its own right is not expected to result in adverse effects on site integrity".*

5.16 The extent of other habitat loss is also considered in the EcIA and is "*likely to be very limited, and in some areas (for example cut slopes on the eastern approach) are likely to be re-instated over time. The impact of habitat loss (outside designated sites) will at worst impact receptors which are important at a regional level and will be small scale and minor. These are not expected to be significant beyond the site level, however a range of additional mitigation measures are identified to ensure that this is the case".*

5.17 The EcIA report records the findings of an aquatic assessment in relation to potential barrier effects preventing upstream and downstream migration of migratory fish (including disturbance of fish) and states that "*due to the potential for new permanent and temporary in stream structures to impact movement of fish in accordance with relevant guidance and a precautionary principal this effect will be recorded as a Likely Significant Effect LSE under the habitat's regulations".*

5.18 The EcIA report notes that "*in the absence of mitigation, and due to the potential for in stream structures and percussive works, the construction stage could result in short term (temporary) adverse effects which could ultimately compromise the integrity of the site, the effect of short term barriers to Salmon movement could result in longer term impacts on overall population dynamics potentially compromising the conservation objectives of the site".* However, additional mitigation and avoidance measures required as a result of these impacts are provided within the EcIA report.

5.19 Once operational, it is considered that the new bridge structure itself is not likely to result in a barrier effect which could result in an adverse effect on the integrity of the River Naver SAC and its qualifying features.

5.20 The ecological assessment considers the potential for pollution impacts and on aquatic receptors and states that the impact "*will vary depending on the nature of the event, the pollutants involved, the timing of the event and the volume of any pollutants involved. Pollution is recognised as a LSE in relation to impacts on the River Naver SAC and without specific detail of the degree of potential pollution in simple terms needs to be acknowledged as having the potential (in absence of mitigation) to result in adverse effect on site integrity of the SAC in relation to both freshwater pearl mussel and Atlantic salmon*".

5.21 The EcIA report lists a series of additional mitigation measures to minimise risk associated with potential pollution, all of which would need to be finalised by the appointed contractor in the development and finalisation of a final CEMP. Importantly, the EcIA report concludes that "*it is anticipated that with careful implementation of additional mitigation measures that Adverse effects on site integrity AESI in relation to the River Naver SAC can be avoided*".

5.22 The potential for pollution of the aquatic environment during operation has also been recognised. The accompanying Drainage Assessment (October 2021) identifies a range of measures which are proposed to be implemented which ensure that discharges from the proposed scheme meet required standards. In the existing situation there is no treatment of road run off and where no increase in traffic is expected as a direct result of bridge replacement the drainage strategy will ensure that no deterioration in water quality occurs during operation as a result of the proposed scheme.

5.23 The EcIA considers the disturbance or harm to the following protected and notable species:

Otter – possible construction stage disturbance but considered to be minor and not significant;

Breeding Birds – potential for construction stage disturbance, which would be short term and localised and considered to be a minor impact on an assemblage of local importance;

Reptiles – potential for reptile species to be directly impacted by harm or disturbance during construction – mitigation measures will be required to remain compliant with the requirements of the Wildlife and Countryside Act (1981) as amended in Scotland in relation to Reptiles;

Bats – The existing bridge is actively used as a commuting route by common pipistrelle bats returning to roost from foraging grounds. However, it is considered that the bat movements will be able to adapt to use the new bridge crossing (if necessary) to disperse between roost sites and feeding areas.

5.24 In terms of mitigation, a Construction Environmental Management Plan (CEMP), proportionate to the scale of the development, could be produced to demonstrate that construction works will be carried out in a manner to help reduce potential adverse impacts on natural heritage receptors during the construction phase of the Proposed Scheme. A draft CEMP has been provided in support of the application to help illustrate to THC the environmental measures, which will be considered suitable during the construction phase.

5.25 A number of additional mitigation measures are listed in the EcIA to help minimise potential ecological impacts. In addition to these specific additional mitigation, it is also anticipated that for the key period of the main construction works an Ecological Clerk of Works (ECoW) will be appointed to monitor the implementation of mitigation and any change to the status of species present on site. It is also anticipated that for all works stages a detailed CEMP will be prepared in order to control potential effects such as pollution.

5.26 When considering the marine environment, it is important to highlight that migratory fish have been identified as a key ecological feature. The ECIA suggests that *"In stream works (including construction and demolition) will be programmed to be undertaken outside the peak upstream (May – August inclusive) and where possible downstream (Mar - May) migration period for Atlantic salmon. This will prevent disruption and temporary barriers to movement. While these are peak timings for fish movement the*

assessment acknowledges that movement may occur at any time and a range of other relevant controls will be implemented to minimise impacts on fish species".

5.27 To conclude biodiversity matters, it is considered that with the proposed mitigation measures in place, there will not be any adverse impacts on any designated sites, designated species or protected species within the vicinity of the proposed development.

Water Quality

5.28 GEN 12 (Water quality and resource) of the SNMP states that developments and activities should not result in a deterioration of the quality of waters Marine Strategy Framework Directive or other related Directives apply.

5.29 It is considered that any pollution event or sedimentation occurring as a result of the works, particularly during the in-river works, could result in adverse changes to water quality.

5.30 A draft Construction Environmental Management Plan (October 2021) (CEMP) has been prepared by Fairhurst to accompany this marine license application, which sets out the methods of best practice construction methods and construction management processes by which construction will be managed to avoid, minimise and mitigate any adverse effects, including on the water environment. As previously mentioned within the Biodiversity section, the main impact on quality of the water environment could result in:

- Populations of SAC fish species being killed as a result of toxic shock form changes to pH relating to the release of cementitious materials;
- Toxic effects of hydrocarbons on fish and other aquatic fauna; and
- Excess sediment and turbidity affecting fish health and ability to migrate either upstream of downstream.

5.31 The protection of the water environment is imperative due to the status of the River Naver as a Special Area of Conservation SAC, designated for important populations of Atlantic Salmon and Freshwater Pearl mussels.

5.32 Therefore, the draft CEMP includes a range of considerations within Section 7, which the contractor will have to abide by prior to and during works being undertaken. These measures include items such as construction stage sediment controls; provision of wheel washing facilities and vehicle wash-down areas; strict control of wastewater; suitable oil and fuel storage; and sewage use management.

5.33 Furthermore, the in stream works will require the installation of sheet piles around the perimeter of the pier foundations and to 3 sides of the abutment foundations. Within the cofferdams formed by the sheet piles the load bearing piling system will be installed, the type of piles employed is dependent on the results of the Ground Investigation work which is currently being undertaken. The abutments and piers are to be constructed from insitu concrete. The pouring of concrete in such areas creates a potential risk to the health of fish which may be present within the estuary at the time of works. To facilitate the construction of the bridge rock bunds within the river may be employed. The provision of sheet piled areas for piers and abutments and associated rock bunds will contain concrete and limit risks of concrete entering the water. To further manage these risks the construction of the Proposed Scheme will also apply the following measures:

- The contractor will implement water quality monitoring throughout the construction phase. Throughout the in stream works the exact location of 'sondes' may vary according to the location of works being progressed. Sondes will be deployed which will ideally provide 'live data' submitted through telemetry as a minimum on water turbidity, water pH, water temperature conductivity. The availability of live data on key parameters will allow remedial measures to be implemented where necessary should issues arise;
- The Engineer will prepare Risk Assessments for the scheme as a whole and will in particular highlight the risks associated with using wet concrete in a river environment, These Risk Assessments will be provided to the contractor as part of the Pre-construction Information package; and
- The contractor will prepare their own detailed Risk Assessments and develop appropriate Method Statements in accordance with their Quality Management procedures. No work shall proceed without appropriate method statements being in place.

5.34 It is therefore considered that with the proposed mitigation measures and best working practise in place, there will not be any adverse water quality impacts on any designated species or protected species as a result of the proposed works. This is considered to be in accordance with Policy GEN 12 (Water quality and resource) of the SNMP.

Flood Risk

5.35 As explained in the accompanying Flood Risk Assessment (FRA) (October 2021) a review of the Scottish Environment Protection Agency (SEPA) Flood Maps, shows that areas at the western and eastern ends of the bridge are indicated as being at risk from flooding in the low, medium and high probability fluvial events. The low probability event includes a large extent to the west downstream of the bridge. An area of pluvial flooding is indicated to the west of the bridge in the high, medium and low probabilities.

5.36 The FRA (October 2021) concludes that provided the old bridge is fully removed, the construction of the new bridge will not have a detrimental impact on water levels in the River Naver, or increase risk to receptors identified upstream or downstream of the proposed bridge. The proposed bridge should have a minimum soffit level of 5.990mAOD to provide sufficient freeboard above the 200yr flooding event with account for climate change. As the deck level will be set at least 1.5m above the minimum soffit level, waves from the very extreme events will pose little risk to the operation of the structure.

5.37 Residual flood risk from other sources, including overland flow, sewer flooding, and groundwater flooding, can be mitigated by ensuring road drainage is designed to an appropriate standard, and road surfaces are profiled to route flow towards drainage infrastructure. With this mitigation in place flood risk from other sources is considered to be low.

5.38 In terms of drainage, the accompanying Drainage Assessment (October 2021) explains the space constraints that prevent the inclusion of open SUDS features such as swales or detention basins. The report also describes alternative SUDS that have been considered, including First Defense and Downstream Defender vortex separators and a linear filter trench, which require less space for the construction.

5.39 The space constraints are particularly severe on the east side of the river where there is no room for open or buried underground attenuation storage and so the flow from the proposed catchment will be unrestricted. It is proposed that end of line treatment is provided by a combination of the First Defense and Downstream Defender vortex separators.

5.40 The constraints are less severe on the west side of the river but still restricted such that end of line treatment using the First Defense and Downstream Defender vortex separators is promoted. A separate linear filter trench is also promoted as end of line treatment for draining a localised low point at the side road access to the private dwelling and agricultural yard.

5.41 The Drainage Assessment (October 2021) also highlights the strategy for dealing with exceedance flows for the rainfall events up to the 200 year return period.

5.42 The Proposed Scheme is deemed acceptable in terms of the policy requirements outlined above, to be in accordance with Policy GEN 8 'Coastal process and flooding' of the SNMP.

Noise

5.43 The construction period has the potential to result in increased noise levels for those receptors closest to the Proposed Scheme, particularly during the noisier activities such as earthworks and road construction. The preferred approach for controlling construction noise and vibration is to reduce levels at source where possible, but with due regard to practicality. Sometimes a greater noise level may be acceptable if the overall construction time, and therefore length of disruption, is reduced. These mitigation measures and cconstruction best practices will be adopted to ensure that noise emissions are kept to a minimum will be put in place during construction to reduce impacts.

5.44 The Draft CEMP (October 2021) also provides details on the proposed noise management measures that the contractor is likely to commit to. The Applicant and the appointed Contractor shall take reasonable steps to minimise any noise disruption to adjacent receptors during the construction phase. Where it is necessary to carry out

noisy activities, they will be undertaken away from sensitive receptors where possible and advanced notice would be provided to neighbouring properties.

5.45 Mitigation measures may include the following provisions, which should be tied to the CEMP:

- Ensure all processes are in place to minimise noise before works begin and should ensure Best Practicable Means (BPM) are being achieved throughout the construction programme;
- Ensure that modern plant is used, complying with the latest European Commission noise emission requirements;
- Selection of inherently quiet plant where possible;
- Use of hoarding around the work site perimeter, where practicable, to assist in the screening of noise generation from low-level sources by removing line-of sight to the existing sensitive receptors (ESRs);
- Hydraulic techniques for breaking to be used in preference to percussive techniques where practical;
- Use of rotary bored rather driven piling techniques, where appropriate;
- Off-site pre-fabrication to be used, where practical;
- All plant and equipment to be used for the works to be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use;
- Plant to be certified to meet relevant current legislation as defined by BS 5228 standards;
- All Contractors to be made familiar with current legislation and the guidance in BS 5228 (Parts 1 and 2), which should form a prerequisite of their appointment;
- Loading and unloading of vehicles, dismantling of site equipment such as scaffolding or moving equipment or materials around the site to be conducted in such a manner as to minimise noise generation and where practical to be conducted away from existing sensitive receptors;
- Careful consideration should be given to planning construction traffic haul routes within the Site and along local roads close to existing sensitive receptors, so as to minimise reversing movements and to minimise the number of construction vehicles during peak traffic flows on local roads; and

- Noise complaints should be reported to the Contractor and immediately investigated.

5.46 Once the Proposed Scheme is constructed and in operation, it is considered that as the Proposed Scheme will not have any additional significant noise impacts, as in comparison with the existing baseline. All possible impacts will be related to the Proposed Scheme will be as a result of the temporary works and will mitigated accordantly, as mentioned above.

5.47 It is therefore considered that the Proposed Scheme is acceptable from a noise perspective, and is in accordance with the SNMP and national marine planning policy.

Landscape and Seascape

5.48 There are few terrestrial visual receptors surrounding the application site, due to it being sparsely populated and mainly rural in nature. In relation to landscape character, the application site is situated within the Strath – Caithness & Sutherland Landscape Character Type (LCT, Reference no. 142) as identified via the map based National Landscape Character Assessment on the NatureScot website. This LCT is characterised by linear spaces, with open floors typically containing a river or loch. Although, the application site does not fall within any national landscape designations.

5.49 Although the Proposed Scheme will introduce a larger infrastructure element into the landscape, it will not be alien in nature to the existing baseline, in the longer term. Although the extent of the replacement bridge, including the associated highway works might result in minor changes in land cover, the size of any limited cuttings and earthworks required have been designed accordingly to blend with the local land/ river form. Mitigation is provided in the Landscape Planting and Seeding Plan' Drawing number; 0001 Revision 01), and outlines various measures including for example the need for the replacement seeding and the delivery of habitat elements.

5.50 Due to the existing context of the application site (in relation to the existing bridge) and A836 road, and the size and scale of the Proposed Scheme, alongside the proposed landscape design, it is considered that there will be minimal visual impact. This development is deemed acceptable in terms of the SNMP and national marine planning policy.

6.0 Conclusion

6.1 Fairhurst have been appointed on behalf of THC to produce a Marine Licence Supporting Statement to accompany a construction marine licence application.

6.2 Fairhurst considers that the Proposed Scheme will introduce an improved element of infrastructure, replacing an existing vehicular bridge in poor condition with operational constraints. In addition to the new bridge crossing, the Proposed Scheme introduces the realignment of the existing carriageway to provide a more compliant road geometry and visibility which will lead to a safer section of road. In relation to active travel, the Proposed Scheme includes a northbound and southbound footway across the proposed new bridge, improving connectivity.

6.3 This Marine Licence Supporting Statement has identified a number of supporting factors and benefits to be derived from granting marine licences for the proposals. This Statement also explains that, with appropriate mitigation, the proposed development will not result in any adverse impacts on the marine environment.

6.4 As such, Fairhurst considers that the principle of development is acceptable and the development is in accordance with policies of the MPS and the SNMP.

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