

**A9 Cromarty Bridge  
10-Year Marine Licence Programme of  
Works**

**F565 Habitats Regulations Appraisal  
Proforma**

**February 2025**



**experience that delivers**



A9 Cromarty Bridge 10-Year Marine Licence HRA Proforma	
Document:	Form 565 Habitats Regulations Appraisal Proforma
Issue:	#1
Related to:	All Contracts



## Document Control Sheet

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<b>Scheme Designer</b>	David Quickfall

## Document Approvals

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## Appraisal in relation to regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 as amended (Habitats Regulations Appraisal)

(Or, where relevant, under regulation 61 of The Conservation of Habitats and Species Regulations 2010 as amended, or regulation 25 of The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 as amended)

### European Site Details

#### Name of European Site(s) Potentially Affected

The following European sites are located within 2km of A9 Cromarty Bridge and may be affected by works.

1. Cromarty Firth Special Protection Area (SPA)
2. Cromarty Firth Ramsar

The following European sites are located between 5-20km from A9 Cromarty Bridge and may have connectivity with the area of works.

3. Conon Islands Special Area of Conservation (SAC)
4. Inner Moray Firth SPA
5. Inner Moray Firth Ramsar
6. Moray Firth SAC

In addition, the following European sites were identified within 20km of A9 Cromarty Bridge but were scoped out of further assessment as no pathway to effect was identified due to the nature of the qualifying features and distance from the area of works.

- Novar SPA
- Monadh Mor SAC
- Dam Wood SAC
- Loch Ussie SAC
- Ben Wyvis SAC
- Ben Wyvis SPA
- Moray Firth SPA
- Moniack Gorge SAC
- Loch Achnacloich SAC
- Morangie Forest SPA

#### Name of Component SSSI, if Relevant

The following component Sites of Special Scientific Interest (SSSI) are located within 4km of A9 Cromarty Bridge and may be affected by works. Details of qualifying features and conservation status were accessed on 11-12/09/2023 from NatureScot (NS) SiteLink ([Sitelink - Home \(nature.scot\)](https://www.nature.scot/)).

1. Cromarty Firth SSSI is designated for the following qualifying features:
  - Bar-tailed godwit (*Limosa lapponica*), non-breeding – favourable maintained, last assessed in February 2009
  - Red-breasted merganser (*Mergus serrator*), non-breeding – favourable maintained, last assessed in February 2000
  - Redshank (*Tringa totanus*), non-breeding – favourable maintained, last assessed in February 2009
  - Whooper swan (*Cygnus cygnus*) – unfavourable no change, last assessed in February 2001
  - Wigeon (*Anas penelope*) – favourable maintained, last assessed in February 2009
  - Mudflats – favourable maintained, last assessed in September 2008

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- Saltmarsh – unfavourable no change (management measures are in place that should, in time, improve the feature to favourable condition (unfavourable recovering due to management)), last assessed in August 2001
  - Sandflats – favourable maintained, last assessed in September 2008
- 2. Lower River Conon SSSI is designated for the following qualifying features:**
- Open water transition fen (includes swamp) – favourable maintained, last assessed in August 2010
  - Saltmarsh – favourable maintained, last assessed in August 2010
  - Wet woodland – unfavourable no change, last assessed in August 2009
- 3. Munloch Bay SSSI is designated for the following qualifying features:**
- Greylag goose (*Anser anser*), non-breeding – favourable maintained, last assessed in February 2004
  - Wigeon, non-breeding – favourable maintained, last assessed in February 2010
  - Mudflats – favourable maintained, last assessed in September 2008
  - Saltmarsh – favourable maintained, last assessed in June 2010
- 4. Beaully Firth SSSI is designated for the following qualifying features:**
- Goosander (*Mergus merganser*), non-breeding – unfavourable no change, last assessed in February 2004
  - Greylag goose, non-breeding – favourable maintained, last assessed in February 2004
  - Red-breasted merganser, non-breeding – unfavourable no change, last assessed in February 2004
  - Saltmarsh – favourable maintained, last assessed in June 2010
  - Vascular plant assemblage – favourable maintained, last assessed in August 2007

In addition, the following SSSIs were identified within 20km of A9 Cromarty Bridge but were scoped out of further assessment as no pathway to effect was identified due to the nature of the qualifying features and distance from the area of works.

- Drummondreach SSSI
- Dam Wood SSSI
- Monadh Mor SSSI
- Allt nan Caorach SSSI
- Roskill SSSI
- Loch Ussie SSSI
- Braelangwell Wood SSSI
- Ben Wyvis SSSI
- Alness River Valley SSSI
- Loch Achnacloich SSSI
- The Dens SSSI
- Carn Gorm SSSI
- Rosemarkie to Shandwick Coast SSSI
- Kinrive-Strathrory SSSI
- Torvean Landforms SSSI
- Moniach Gorge SSSI
- Struie Channels SSSI
- Whiteness Head SSSI
- Ardersier Glacial Deposits SSSI

### European Site(s) Qualifying Interest(s) and Whether Priority or Non-Priority

Details of qualifying features and conservation status are listed for each of the European Sites noted above and were accessed on 11-12/09/2023 from NS SiteLink. Priority qualifying features are denoted below by (\*).

- 1. Cromarty Firth SPA ([Sitelink - Home \(nature.scot\)](#)):**
- Bar-tailed godwit, non-breeding – favourable maintained, last assessed in February 2000

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- Common tern (*Sterna hirundo*), breeding – unfavourable declining, last assessed in June 2000
- Curlew (*Numenius arquata*), non-breeding – favourable maintained, last assessed in February 2009
- Dunlin (*Calidris alpina alpina*), non-breeding – favourable maintained, last assessed in February 2001
- Greylag goose, non-breeding – favourable maintained, last assessed in November 2001
- Knot, non-breeding – favourable maintained, last assessed in February 2000
- Osprey (*Pandion haliaetus*), breeding – favourable maintained, last assessed in October 2004
- Oystercatcher (*Haematopus ostralegus*), non-breeding, favourable maintained, last assessed in February 2001
- Pintail (*Anas acuta*), non-breeding – favourable maintained, last assessed in February 2000
- Red-breasted merganser, non-breeding – favourable maintained, last assessed in February 2000
- Redshank, non-breeding – favourable maintained, last assessed in February 2009
- Scaup (*Aythya marila*), non-breeding – unfavourable no change, last assessed in February 2000
- Whooper swan, non-breeding – unfavourable no change, last assessed in February 2010
- Wigeon, non-breeding – favourable maintained, last assessed in February 2000
- Waterfowl assemblage, non-breeding – favourable maintained, last assessed in February 2009

### 2. Cromarty Firth Ramsar ([Sitelink - Home \(nature.scot\)](#)):

- Bar-tailed godwit, non-breeding – favourable maintained, last assessed in February 2001
- Greylag goose, non-breeding – favourable maintained, last assessed in November 2001
- Waterfowl assemblage, non-breeding – favourable maintained, last assessed in February 2000
- Intertidal mudflats and sandflats – favourable maintained, last assessed in September 2008
- Additional interest features included on the Ramsar citation sheet and for which the SPA or SSSI (Cromarty Firth or Lower River Conon) conservation status has been used:
  - Common tern, breeding – unfavourable declining, last assessed in June 2000
  - Curlew, non-breeding – favourable maintained, last assessed in February 2009
  - Dunlin, non-breeding – favourable maintained, last assessed in February 2001
  - Knot, non-breeding – favourable maintained, last assessed in February 2001
  - Osprey, foraging/breeding – favourable maintained, last assessed in October 2004
  - Oystercatcher, non-breeding – favourable maintained, last assessed in February 2001
  - Pintail, non-breeding – favourable maintained, last assessed in February 2000
  - Red-breasted merganser, non-breeding – favourable maintained, last assessed in February 2000
  - Redshank, non-breeding – favourable maintained, last assessed in February 2009
  - Scaup, non-breeding – unfavourable no change, last assessed in February 2000
  - Whooper swan, non-breeding – unfavourable no change, last assessed in February 2010
  - Wigeon, non-breeding – favourable maintained, last assessed in February 2009
  - Estuarine alder woodland – unfavourable declining, last assessed in August 2002
  - Open water transition fen – favourable maintained, last assessed in August 2002
  - Saltmarsh – unfavourable recovering, last assessed in August 2001

### 3. Conon Islands SAC ([Sitelink - Home \(nature.scot\)](#)):

- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion alvae*)\* – unfavourable no change, last assessed in August 2009

### 4. Inner Moray Firth SPA ([Sitelink - Home \(nature.scot\)](#)):

- Bar-tailed godwit, non-breeding – favourable maintained, last assessed in February 2001
- Common tern, breeding – unfavourable no change, last assessed in June 2000
- Cormorant, non-breeding – unfavourable no change, last assessed in February 2001
- Curlew, non-breeding – favourable maintained, last assessed in February 2001
- Goldeneye (*Bucephala clangula*), non-breeding – favourable maintained, last assessed in February 2001
- Goosander (*Mergus merganser*), non-breeding – unfavourable no change, last assessed in February 2001
- Greylag goose, non-breeding – favourable maintained, last assessed in December 2001
- Osprey, breeding – favourable maintained, last assessed in June 2003
- Oystercatcher, non-breeding – favourable maintained, last assessed in February 2001

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- Red-breasted merganser, non-breeding – unfavourable no change, last assessed in February 2001
- Redshank, non-breeding – favourable maintained, last assessed in February 2001
- Scaup, non-breeding – favourable maintained, last assessed in February 2001
- Teal (*Anas crecca*), non-breeding – favourable maintained, last assessed in February 2001
- Wigeon, non-breeding – favourable maintained, last assessed in February 2001
- Waterfowl assemblage, non-breeding – favourable maintained, last assessed in December 2001.

### 5. Inner Moray Firth Ramsar ([Sitelink - Home \(nature.scot\)](#)):

- Bar-tailed godwit, non-breeding – favourable maintained, last assessed in February 2001
- Greylag goose, nonbreeding – favourable maintained, last assessed in December 2001
- Red-breasted merganser, non-breeding – unfavourable no change, last assessed in February 2001
- Redshank, non-breeding – favourable maintained, last assessed in February 2001
- Waterfowl assemblage, non-breeding – favourable maintained, last assessed in December 2001
- Intertidal mudflats and sandflats – favourable maintained, last assessed in September 2008
- Saltmarsh – favourable maintained, last assessed in August 2010
- Sand dunes – unfavourable no change, last assessed in September 2015
- Shingle – favourable declining, last assessed in September 2015
- Additional interest features included on the Ramsar citation sheet and for which the SPA conservation status has been used:
  - Common tern, breeding – unfavourable no change, last assessed in June 2000
  - Cormorant, non-breeding – unfavourable no change, last assessed in February 2001
  - Curlew, non-breeding – favourable maintained, last assessed in February 2001
  - Goldeneye, non-breeding – favourable maintained, last assessed in February 2001
  - Goosander, non-breeding – unfavourable no change, last assessed in February 2001
  - Osprey, foraging/breeding – favourable maintained, last assessed in June 2003
  - Oystercatcher, non-breeding – favourable maintained, last assessed in February 2001
  - Scaup, non-breeding – favourable maintained, last assessed in February 2001
  - Teal, non-breeding – favourable maintained, last assessed in February 2001
  - Wigeon, non-breeding – favourable maintained, last assessed in February 2001

### 6. Moray Firth SAC ([Sitelink - Home \(nature.scot\)](#)):

- Bottlenose dolphin (*Tursiops truncatus*) – favourable maintained, last assessed in September 2016
- Subtidal sandbanks – favourable maintained, last assessed in August 2004

## Conservation Objectives for Qualifying Species

The following conservation objectives are taken from supporting documents (i.e., 'Conservation Objectives' and/or 'Conservation Advice Package') for the below European site, accessed from SiteLink on 13/09/2023:

### 1. Cromarty Firth SPA:

1. To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
2. To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function, and supporting processes of habitats supporting the species
  - No significant disturbance of the species

### 2. Cromarty Firth Ramsar:

- As there are no specific conservation objectives or management measures for the Cromarty Firth Ramsar site, this assessment will consider the qualifying features of the Cromarty Firth Ramsar site against the conservation objectives for the Cromarty Firth SPA (listed above).

### 3. Conon Islands SAC:

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1. To ensure that the qualifying feature of Conon Islands SAC is in favourable condition and makes an appropriate contribution to achieving favourable conservation status.
2. To ensure that the integrity of Conon Islands SAC is restored by meeting objectives 2a, 2b, and 2c for the qualifying feature.
  - 2a: Maintain the extent and distribution of the habitat within the site
  - 2b: Restore the structure, function, and supporting processes of the habitat.
  - 2c: Restore the distribution and viability of typical species of the habitat.

#### 4. Inner Moray Firth SPA:

1. To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
2. To ensure for the qualifying species that the following are maintained in the long term:
  - Population of the species as a viable component of the site
  - Distribution of the species within site
  - Distribution and extent of habitats supporting the species
  - Structure, function, and supporting processes of habitats supporting the species
  - No significant disturbance of the species

#### 5. Inner Moray Firth Ramsar:

- As there are no specific conservation objectives or management measures for the Inner Moray Firth Ramsar site, this assessment will consider the qualifying features of the Inner Moray Firth Ramsar site against the conservation objectives for the Inner Moray Firth SPA (listed above).

#### 6. Moray Firth SAC:

1. To ensure that the qualifying feature of Moray Firth SAC are in favourable condition and make an appropriate contribution to achieving favourable conservation status.
2. To ensure that the integrity of Moray Firth SAC is maintained or restored in the context of environmental changes by meeting objectives 2a, 2b, and 2c for each qualifying feature.
  - For subtidal sandbanks:
    - 2a: Maintain/restore the extent and distribution of the habitat within the site.
    - 2b: Maintain/restore the structure and function of the habitat and the supporting environment on which it relies.
    - 2c: Maintain/restore the distribution and viability of typical species of the habitat.
  - For bottlenose dolphin:
    - 2a: The population of bottlenose dolphin is a viable component of the site.
    - 2b: The distribution of bottlenose dolphin throughout the site is maintained by avoiding significant disturbance.
    - 2c: The supporting habitats and processes relevant to bottlenose dolphin and the availability of prey for bottlenose dolphin are maintained.



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## Stage 1: What is the Plan or Project?

### Proposal Title

A9 Cromarty Bridge 10-Year Marine Licence Programme of Works

### Name of Competent Authority

Transport Scotland, Marine Directorate

### Name of Consultee

NS – Nathan Mclaughlan (**Appendix A**).

### Details of Proposal (Including Location, Timing and Methods)

#### General Information

This Habitat Regulations Appraisal (HRA) aims to cover various ‘Schemes’ and ‘Routine Maintenance Activities’ programmed over the next ten years on the A9 Cromarty Bridge, which has connectivity with the above European Sites. The centre point of the A9 Cromarty Bridge is located approximately at National Grid Reference (NGR) NH 58952 61227 and spans the Cromarty Firth waterbody north of Inverness (Figure 1).

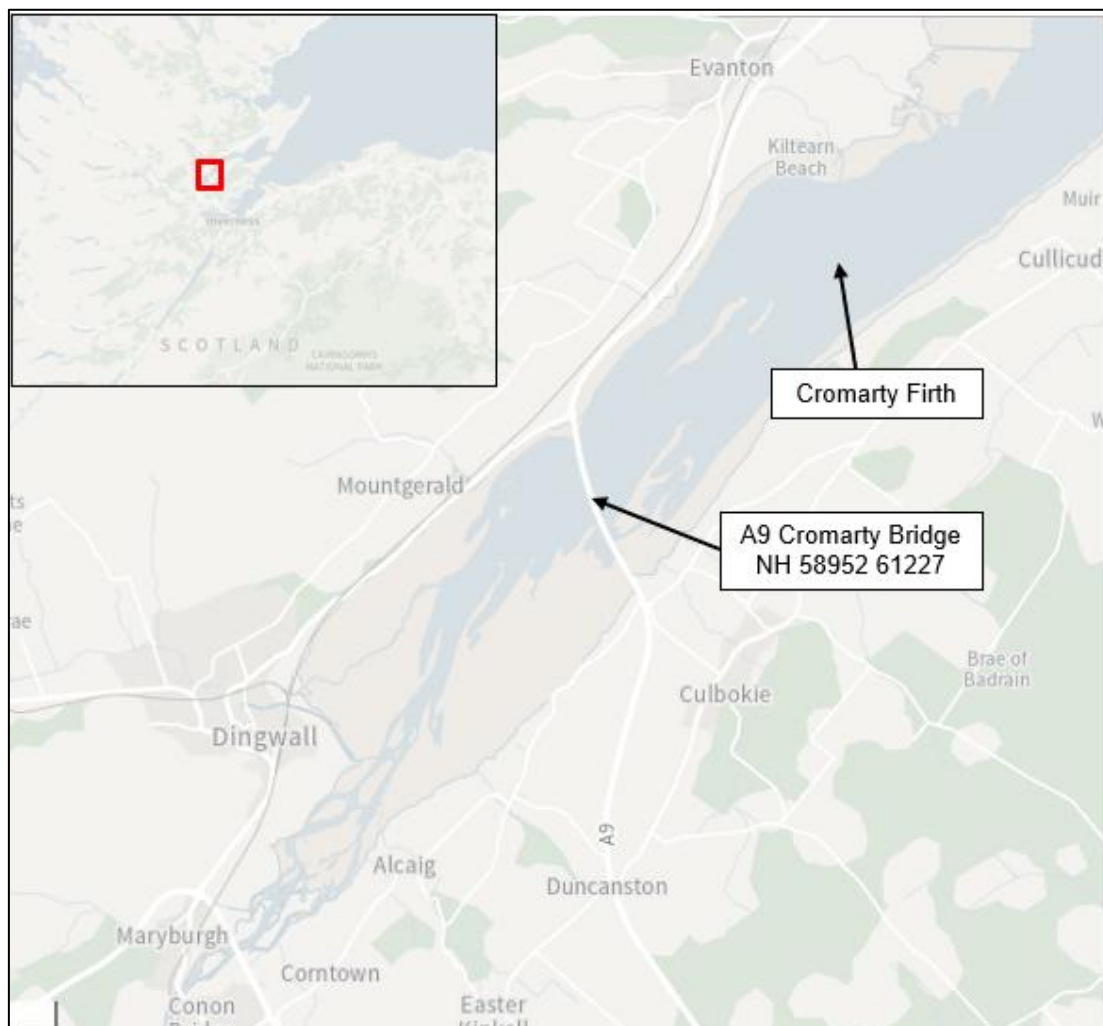


Figure 1. Location of A9 Cromarty Bridge. Inset map shows location in the north of Scotland. Source: NS [Sitelink](#)

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The proposed maintenance activities are broken down into 'scheme' and 'routine maintenance' works. Schemes are specific projects that are planned and will be required at some point over the next 10 years, whilst routine maintenance works are carried out regularly and may be required at any time (likely more than once) over the next 10 years. The routine maintenance activities are not necessarily planned but may be identified as required during regular inspections over the next 10 years.

A summary of the proposed maintenance works (schemes and routine maintenance activities) is given below:

### Schemes:

- Phase 3 bridge refurbishment
- Phase 4 bridge refurbishment
- Advanced electrical supply

### Routine Maintenance:

- Scour repairs
- Expansion joint replacement
- Concrete repairs
- Cathodic protection system repair and maintenance
- Drainage cleaning
- Bird guano removal
- Resurfacing operations
- Parapet repair
- Ancillary highway item repair
- Inspections and surveys

Further information on each scheme or activity can be viewed in the supporting document 'A9 Cromarty Bridge 10 Year Programme of Works', which provides a detailed description of all the proposed maintenance works, including mitigation measures and access requirements where relevant. Although some larger schemes may have a duration of several months, most smaller schemes and routine maintenance works would have much shorter durations. Schemes and routine maintenance activities may take place at any time of year and may entail works during the day, at night, or both. Refer to Table 1 below for a summary of these details. All maintenance works on the bridge would be temporary and it should be noted that large schemes would not be carried out concurrently due to budget and network access constraints. Most works would be completed from the bridge deck, although some (e.g., scour repairs, Phase 3 and 4 refurbishment works, cathodic protection works) would include some in-water works and/or access below the bridge deck.

Table 1. Details of works including location on the bridge, access requirements, duration, seasonality, and timing

Works Type	Works	Area of Works	Access	Duration (estimate)	Season	Timing (Day/Night)
Scheme	Phase 3 bridge refurbishment	<p>Piers 8, 9, and 10 above and below deck.</p> <p>A site compound will be required (location to be confirmed) with provision for a floating pontoon jetty to provide boat access to the bridge. It will be constructed out of view of Arduillie Point where possible (e.g., west of the bridge's north abutment).</p> <p>Provision for a temporary mooring point to be established adjacent to the bridge's north abutment on the west side.</p>	Deck access and scaffolding/access platform for below deck access. Jack-up barges required for water and below-deck access. Barges/ work boats to transport staff and equipment to jack-up barges. Mobile access platform also required for pier access at MLWS (raised and lowered with tide).	6 months	Any	Either, up to 7 days/week. 24-hour access required.
Scheme	Phase 4 bridge refurbishment	<p>Piers 11, 12, and 13 above and below deck.</p> <p>Site compound, pontoon jetty, and temporary mooring point required as per Phase 3 works.</p>	Access requirements the same as for Phase 3 works.	6 months	Any	Either, up to 7 days/week. 24-hour access required.

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Scheme	Advanced electrical supply	Northern end of the bridge (Pier 37 to north abutment) on the western bridge deck cantilever.	Temporary access/working platform and/or underbridge unit for below-deck access	1 month	September to March	Either, up to 7 days/week
Routine	Scour repairs	Bridge piers in the southern and/or central sections of the bridge. Works on the seabed to 10m radius of pier pile caps. Maximum of 6 piers per year would receive scour repairs (if required).	Jack-up barges to provide access for in-water works. Temporary access/mooring point on west side of north abutment for small work boats/barges.	4 months	Any; Temporary access point on north abutment installed September to March	Either, up to 7 days/week
Routine	Expansion joint replacement	Carriageway above north and south abutments and at each of 67 piers along length of bridge.	Deck access	1 week	Any	Either, up to 7 days/week
Routine	Concrete repairs	Above and below the bridge deck, all spans. Large repairs will require hydro-demolition.	Deck access. Scaffolding or underbridge unit for below-deck access as required.	1 month (small repairs) 3 months (large repairs)	Any	Either, up to 7 days/week
Routine	Cathodic protection system repair and maintenance	All spans, below deck, on bridge deck cantilever, crossheads, and piers	Underbridge unit for below-deck access	1 month	Any	Either, up to 7 days/week
Routine	Drainage cleaning	Gullies on bridge deck	Deck access	1 day	Any	Either
Routine	Bird guano removal	All bearing shelves on piers and abutments	Underbridge unit or temporary working platform for below-deck access	1 week	Any	Either, up to 7 days/week
Routine	Resurfacing maintenance	Carriageway and footpaths on all spans	Deck access	1-4 weeks	Any; September to March only for works within tern exclusion zone	Either, up to 7 days/week
Routine	Parapet repair	Bridge footpaths, all spans	Deck access	1 week	Any	Either, up to 7 days/week
Routine	Ancillary highway item repair	Bridge deck throughout structure	Deck access; temporary access platform may be required.	3 days	Any	Either, up to 7 days/week
Routine	Inspections and surveys	Entire structure and foundations on seabed	Deck access; scaffolding or underbridge unit for below-deck access; roped access; drones; barges and small boats; dive surveys.	1 week	Any	Either, up to 7 days/week

BEAR Scotland follow good practice guidance produced by the Scottish Environment Protection Agency (SEPA) as standard for works in or near water to reduce the risk of water pollution as much as possible. These measures will ensure that any potential pollutants, including fine sediments and materials required for the works in or near water, will not enter the water environment and travel downstream during the works. These measures and working practices would be in place regardless of the presence of nearby designated sites and therefore are not considered to be mitigation. All relevant pollution controls and other good practice measures will be detailed in the Site Environmental Management Plan (SEMP) for each scheme and adhered to on site. Refer to **Appendix B** for details of these good practice measures.

The majority of works would be carried out following the good practice measures outlined in **Appendix B** and in the attached Programme of Works document. However, please note that this HRA is not intended to cover the proposed activities if the scope of works is beyond what has been described below for each activity. In these cases, additional consultation with NS will be carried out and a separate HRA Proforma will be produced specific to those works.

### Activity-specific methods

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Details on methods and specific working practices for each of the above maintenance activities is provided in the supporting document 'A9 Cromarty Bridge 10 Year Programme of Works'; however, some proposed methods for access and/or works beneath the bridge deck or within the Cromarty Firth are highlighted below.

All activities are highly localised and will take place within the immediate vicinity of the trunk road and bridge structure. All maintenance works will be temporary and are unlikely to be carried out simultaneously with any other maintenance works due to traffic management restrictions and budget constraints within individual financial years.

### Access from the water or below the bridge deck

Various access requirements may be required to facilitate some of the above activities, particularly for in-water works and/or works below the bridge deck (e.g., scour repairs, Phase 3 and Phase 4 bridge refurbishment, cathodic protection repairs). Types of access may include (but are not limited to) the following:

- Lorry-mounted mobile elevated working platform (MEWP) with underbridge capabilities (underbridge unit).
- Temporary fixed working platforms (e.g., scaffolding) which may be suspended from the bridge or footed on the ground below.
- Temporary mobile working platforms (e.g., floating pontoon)
- Jack-up barges.
- Small boats/barges for transport of staff and materials to jack-up barges.
- Temporary floating pontoon jetty with temporary mooring point adjacent to the north abutment.

In line with health and safety requirements, any work being carried out beneath the bridge will require an adequate working platform and edge protection to prevent any workers or materials from falling. In line with good practice, this platform and edge protection containment will be achieved by the attachment of either debris netting or thickened sheets to prevent materials falling from the platform. Where an underbridge unit is required, the vehicle basket will be positioned beneath the working area to contain any construction materials or pollutants.

In-water works and some works to the bridge piers (e.g., scour repairs, cathodic protection works) will require access via jack-up barges beneath the bridge. Additionally, small boats or barges will be required to transport site staff and construction materials to jack-up barges at the work site. A temporary floating pontoon jetty may be installed adjacent to the north bridge abutment to provide access to transport boats, as there is a lack of local access points for marine vessels in the area. The floating pontoon jetty would be a temporary arrangement during construction works and would be removed once works are completed. In line with good practice, strict containment measures will be in place on any barges or boats to prevent pollution incidents in the marine environment.

### Hydro-demolition

The Phase 3 and 4 refurbishment schemes and larger concrete repair works will require the use of hydro-demolition whereas smaller repairs will likely be done using hand tools. Where access from the water or below the deck is required for hydro-demolition works, the containment measures described above for 'Access from the water or below the deck' would apply. In addition, the floor of the platform will be layered with materials (e.g., Terram and Visquine layers) to fully contain the water and debris produced during hydro-demolition. Concrete fragments that land on the access system floor during large or small repair works will be collected, taken to the surface of the bridge, and removed from site by licensed waste carriers.

For works on the deck of the bridge, debris netting or sheeting will be applied around the working area to prevent materials and/or hydro-demolition water from entering the water environment. Material will be collected in the same manner as described above and removed from the site by licensed waste carriers.

Wastewater generated from hydro-demolition works is considered to be a trade effluent and is required to either be collected and removed off-site for disposal under appropriate permits/authorisation or discharged on site with appropriate consents in place from SEPA to comply with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR Regulations). For some hydro-demolition works at A9 Cromarty Bridge, the appointed subcontractor may be responsible for obtaining appropriate consents or authorisation to discharge or otherwise dispose of wastewater. Wastewater to be discharged must be captured and treated (e.g., via a Siltbuster or similar equipment) to reduce pH and suspended solids to an acceptable level. Typically, a pH value between 5-9

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and a suspended solids value between 80-100mg/l is considered acceptable for discharge. The volume and rate of discharge will be agreed with SEPA and would determine the level of authorisation required to permit the discharge. Discharging to a location on land will be planned where possible and will be the preferred option over discharging to the marine environment. Authorisation will be sought from SEPA to permit discharge of wastewater as required on a scheme-by-scheme basis as required and no discharges will take place until the appropriate authorisation is secured.

The Phase 3 bridge refurbishment works were originally planned to be completed in 2022 (before subsequently being delayed) and a CAR simple licence was granted by SEPA to permit discharge of treated wastewater from hydro-demolition works to the marine environment. SEPA has confirmed that the CAR licence will remain valid to permit discharge of treated wastewater during Phase 3 refurbishment works and all conditions of the licence will be adhered to. A similar licence will be secured for Phase 4 works.

### Removal of asbestos material

The waterproofing layer on the bridge deck is required to be removed during Phase 3 and 4 refurbishment works and is known to contain Chrysotile asbestos material within a bitumen matrix. This type of asbestos material is non-friable and is bound within a bitumen matrix. Consequently, it is highly unlikely that asbestos material will break away or become particulate matter. Licensed contractors will use small hand tools to remove the waterproofing layer, which will be removed from site by a licensed special waste carrier. Small amounts of water will be sprayed (e.g., during use of hand tools) to suppress any dust created during removal of the waterproofing layer. This and any other material produced during asbestos removal will be collected and removed from site as special waste.

### Scour repair

Scour repair works are not currently planned in the next 10 years but may be required if scour damage to the bridge piers is found during inspections or surveys. Working methods and mitigation are expected to follow those carried out during previous scour repairs on several piers near the northern end of the bridge. It is anticipated that the scour repair activity will encompass works on the pier bases and will require use of jack-up barges with excavators positioned on the barges. The seabed around the pier bases would be excavated and side-cast to be reused once rock armour has been installed. Clean, imported granular material would be placed under and around the pier pile caps to fill small voids. Weighted geotextile would then be positioned by divers, with clean rock armour installed by excavators on top of the geotextile. The excavated seabed material would then be replaced on top of the rock armour. Scour repairs would take place along one side of the bridge first before jack-up barges would move to the other side of the bridge and repeat the above steps on the alternate side.

To ensure no contaminants are brought into contact with the marine environment, all rock armour and equipment will be washed and cleaned prior to immersion in any waterbodies to ensure that no contaminants or invasive species are introduced to the water environment.

### Additional Considerations

This is an iterative document and will be subject to periodic review or when there are any relevant changes to the method of works or qualifying features of any of the designated sites. Any changes or updates will be documented in the Document Control section on the cover page of this document.

This document does not negate the need to consult with the Marine Directorate, and any subsequent licence conditions will be adhered to throughout construction. This document does not negate the requirement to consult with other statutory consultees such as local District Salmon Fishery Boards (DSFB)/Trusts and SEPA. Any subsequent advice and/or consents will be followed during works.

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## Stage 2: Is the Plan or Project Directly Connected with or Necessary to Site Management for Nature Conservation?

### Connection to Site Management

This test is to identify and remove from further assessment those proposals which are clearly necessary to, or of value to, or inevitable as part of, management of the site for its qualifying interests. For the majority of proposals competent authorities deal with the answer to stage 2 will be 'no'. However, where it is thought this could be applicable the following points should be considered:

- I. Has the effect on all qualifying interests been considered?
- II. Is the proposal part of a fully assessed and agreed management plan? If not, then further consideration or supporting information will be required.
- III. Is there a clear rationale to justify the connection with the conservation objectives?
- IV. If there is a clear connection with the conservation objectives will any benefits arising from the proposal outweigh any negative effects?
- V. Have any alternative methods of implementing the proposal been explored, including building in any relevant mitigation, to demonstrate that this is the least damaging option?
- VI. Give a Yes / No conclusion in terms of whether the plan or project is considered directly connected with or necessary to site management for nature conservation.

If Yes for all elements of a plan or project, for all the European site qualifying interests (preferably as part of a fully assessed and agreed management plan), then consent can be issued. The rationale should be detailed below, and no further appraisal is required (no need to proceed to stage 3 or 4).

If No for one or more European site qualifying interests then proceed to stage 3.

If a plan has multiple elements (e.g., a range of policies or management objectives), elements of the plan considered directly connected with or necessary to site management for nature conservation should be discussed below and a rationale given for this conclusion. No further appraisal is then required for those elements. All other elements of the plan must proceed to stage 3.

None of the activities covered by this document are directly connected with or necessary to the management of any of the above designated sites for the purpose of nature conservation. Therefore, further assessment is required.

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# Stage 3: Is the Plan or Project (Either Alone or in Combination with Other Plans or Projects) Likely to Have a Significant Effect on the Site?

### Assessment for LSE

The test of Likely Significant Effect (LSE) is a simple screening stage to determine whether or not an appropriate assessment is required. Each qualifying interest must be considered in relation to their conservation objectives. The following points should be considered:

- I. Briefly indicate which qualifying interest could be affected by the proposal and how; if none, provide a brief justification for this decision, and then proceed to v), otherwise continue:
- II. consider whether there is connectivity between the proposal and each of the qualifying interests i.e. are there processes or pathways by which the proposal may influence the site's interests? Conclude no LSE only if there is no connection, or it is obvious that the proposal will not undermine the conservation objectives despite a connection. The potential for negative effects on the qualifying interests may be immediately obvious, in which case conclude likely significant effect and move straight to the next step.
- III. consider the nature, scale, location, longevity, and reversibility of effects.
- IV. consider whether the proposal contributes to cumulative or incremental impacts in combination with other plans or projects completed, underway or proposed.
- V. Where the impacts of a proposal are the same for different qualifying interests these can be considered together however a clear conclusion should be given for each interest.
- VI. give Yes / No conclusion for each interest.

If Yes, or in cases of doubt, continue to stage 4.

If No for all features, a consent can be given and recorded below. There is no need to then proceed to stage 4.

Remember if mitigation is required to prevent there being an effect on qualifying interests, then LSE must be concluded, and an appropriate assessment (stage 4) must be conducted. Further guidance on the handling of mitigation can be found as part of the European site Casework Guidance.

Below is an assessment of the potential for Likely Significant Effects (LSE) of the maintenance activities on the qualifying features of the following designated sites:

1. **Cromarty Firth SPA and Cromarty Firth Ramsar** – within/adjacent to area of works
  - o Cromarty Firth SSSI (all features)
  - o Lower River Conon SSSI (open water transition fen, saltmarsh)
2. **Conon Islands SAC** – 5.5km southwest of works
  - o Lower River Conon SSSI (wet woodland)
3. **Inner Moray Firth SPA and Inner Moray Firth Ramsar** – 9.1km southeast of works
  - o Munlochy Bay SSSI (all features)
  - o Beaully Firth SSSI (all features)
4. **Moray Firth SAC** – 11.8km from area of works

Although SSSIs are not subject to HRA, we have included an assessment of potential effects on four component SSSIs within the assessments of the relevant European Sites below for completeness.

Where a European Site overlaps with a Ramsar Site and both are designated for the same or related features, these have been grouped into one assessment for brevity as the potential effects of works will be the same.

If the scope of works is beyond what has been detailed in Stage 1 for each activity, additional consultation with NS will be carried out and a separate HRA Proforma will be produced specific to those works.

Assessment of the potential effects of the proposed maintenance activities has been carried out below. Qualifying features for each site have been grouped where possible for brevity.

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## 1. Cromarty Firth SPA and Cromarty Firth Ramsar

***Includes assessment of features of Cromarty Firth SSSI (all features) and Lower River Conon SSSI (open water transition fen, saltmarsh) for completeness.***

The Cromarty Firth is a large, narrow estuary that extends for approximately 30km from the mouth of the River Conon northeast to where it joins the wider Moray Firth at Cromarty. The Cromarty Firth SPA encompasses both coasts of the Cromarty Firth, including extensive areas of intertidal flats, which are the largest in the Moray Firth. The intertidal habitats present in the Cromarty Firth support a wide variety of marine invertebrates, which in turn support nationally and internationally important numbers of wintering wildfowl and wading birds. The Cromarty Firth SPA overlaps with the Cromarty Firth Ramsar site, the Cromarty Firth SSSI, and part of the Lower River Conon SSSI.

The A9 Cromarty Bridge spans the Cromarty Firth approximately 5km north of Dingwall and lies adjacent to the SPA on both the northern and southern shores.

### Assessment against the conservation objectives for breeding common tern and osprey

Common terns are summer visitors to the UK that feed primarily on fish and, in Scotland, typically breed in coastal areas between April and July, leaving in late summer to head south for the winter (Goodship and Furness 2022, British Trust for Ornithology (BTO) 2024a). The SPA/Ramsar are known to support common tern populations of European importance, which breed and forage within the SPA/Ramsar. Arduilie Point, which is adjacent to the northern end of A9 Cromarty Bridge, is known to support a breeding colony of terns and there is a tern nesting platform located approximately 1.75km northeast of Arduilie Point. Common terns are sensitive to recreation and disturbance.

Osprey are also summer visitors to the UK that feed primarily on fish and generally nest in trees or on artificial platforms near fresh water (Goodship and Furness 2022). The SPA/Ramsar are known to support osprey populations of European importance, which regularly forage within the SPA/Ramsar. The Citation for the SPA noted that between 2008 and 2012, there was a five-year mean of up to 25 osprey territories within foraging range of the SPA/Ramsar and one breeding pair recorded within the SPA boundary (NS 2018). No negative pressures for osprey are noted in the site documents for Cromarty Firth SPA or Ramsar; however, osprey are expected to be sensitive to certain types of disturbance.

As there is a known tern breeding colony adjacent to the A9 Cromarty Bridge, and potential for breeding or foraging osprey to be present within the vicinity of proposed works on A9 Cromarty Bridge, **proposed works may result in LSE on breeding or foraging common terns and osprey within the SPA/Ramsar. These features are assessed further in Stage 4.**

### Assessment against the conservation objectives for overwintering birds

*Includes assessment of overwintering birds in Cromarty Firth SSSI for completeness.*

The Cromarty Firth SPA/Ramsar and component SSSI support a range of overwintering wader and wildfowl species which are known to forage and roost within the designated site boundaries. The majority of the overwintering bird species are noted to be sensitive to recreation and disturbance. No negative pressures for greylag geese or whooper swan were noted in the site documents for Cromarty Firth SPA or Ramsar; however, they are expected to be sensitive to certain types of disturbance.

As populations of overwintering birds are likely to be present within the vicinity of proposed works at A9 Cromarty Bridge, **proposed works may result in LSE on overwintering or foraging birds within the SPA/Ramsar/SSSI. These features are assessed further in Stage 4.**

### Assessment against the conservation objectives for Ramsar qualifying habitats

*Includes assessment of qualifying habitats (mudflats, sandflats, saltmarsh, open water transition fen) in Cromarty Firth SSSI and Lower River Conon SSSI for completeness.*

The qualifying habitats of Cromarty Firth Ramsar include intertidal mudflats and sandflats, open water transition fen, and saltmarsh, which provide foraging and breeding habitat for the qualifying bird species of the SPA/Ramsar. (Estuarine alder woodland is included in the assessment for Conon Islands SAC below). Similarly, the qualifying habitats of Cromarty Firth SSSI and Lower River Conon SSSI also provide supporting habitats for the qualifying birds species. Some areas of habitat are unlikely to be directly affected by works; however, there is potential for coastal or



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marine habitats to be affected directly (e.g., if intertidal access and/or scour works are required) or indirectly (e.g., via pollution incidents). **Therefore, proposed works may result in LSE on these habitat features within the SPA/Ramsar. These features are assessed further in Stage 4.**

### Conclusion

Due to the proximity of works at A9 Cromarty Bridge to the Cromarty Firth SPA/Ramsar/SSSI designated sites, there is potential for works to result in LSE on all qualifying features within these sites. Further assessment of all qualifying features of these sites has been undertaken in Stage 4, including an assessment of cumulative and in-combination effects.

## 2. Conon Islands SAC

***Includes assessment of wet woodland feature of Lower River Conon SSSI and estuarine alder woodland feature of Cromarty Firth Ramsar for completeness.***

The Conon Islands SAC is comprised of several discrete areas along the River Conon between the settlements of Contin and Dingwall. The Lower River Conon SSSI overlaps with the SAC but extends further northeast into the Cromarty Firth than the SAC. The SAC supports the Annex I habitat ‘alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion alvae*)’ which is a priority habitat on the Habitats Directive. This alluvial woodland habitat dominated by alder and willow is fragmented and occurs in discrete strips or tree lines within the SAC/SSSI. This has resulted from historic clearance of alluvial woodland to make room for agricultural fields, which are often found adjacent to Conon Islands SAC/SSSI (NS 2020). The qualifying feature ‘alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion alvae*)’ is subject to periodic inundation and depends on a high water table, wet conditions, and hydrological variation common to floodplains (NS 2020, Joint Nature Conservation Committee (JNCC) 2024a). It is sensitive to invasive species and water management. The Cromarty Firth Ramsar feature ‘estuarine alder woodland’ occurs at the mouth of the River Conon and is assumed to be the same or associated with the qualifying woodland of the Conon Islands SAC.

The A9 Cromarty Bridge is located approximately 5.5km northeast of the SAC at the nearest point and approximately 3.2km northeast of the SSSI at the nearest point. The bridge is located downstream of both designated sites. However, the SSSI extends further into the Cromarty Firth to encompass some intertidal habitats, which have been considered within the assessment for the Cromarty Firth SPA/Ramsar above. It is included here to assess the potential effects on the qualifying feature wet woodland, which is assumed to be present within overlapping areas of Conon Islands SAC. Therefore, we have assumed that this feature would be located approximately 5.5km from the bridge at the nearest point (i.e., within the SAC boundary).

### Assessment against the conservation objectives for qualifying woodland habitats

The risk of direct effects (e.g., habitat loss, mortality of typical species) and indirect effects (e.g., pollution, spread of invasive species) on the qualifying habitat as a result of proposed works at A9 Cromarty Bridge are considered below.

#### Risk of direct effects

None of the proposed maintenance activities at A9 Cromarty Bridge would entail works within the boundaries of the SAC or SSSI or area of qualifying woodland habitat within the Ramsar site. All proposed works would be highly localised to the A9 Cromarty Bridge and immediate surroundings; therefore, any works would be located over 5km (straight-line distance) from the nearest point of the SAC. Due to this distance, no direct effects (e.g., habitat loss, mortality of typical species due to construction activities or vehicles) on the qualifying woodland habitat or its typical species within the SAC/Ramsar/SSSI would result from the proposed maintenance activities.

#### Risk of indirect effects

The A9 Cromarty Bridge is located over 5km (straight-line distance) from the SAC; therefore, there is very limited hydrological connectivity between the SAC/SSSI and estuarine woodland within the Ramsar site and the area of works within the Cromarty Firth. Consequently, there is limited potential for works to result in indirect effects on the qualifying woodland habitat and its typical species as a result of pollution, even for activities with in-water elements or access requirements. None of the works involve activities that would result in changes to the water levels, tides, or other hydrological processes in the Cromarty Firth and therefore will not affect any water management activities within Conon Islands SAC or Lower River Conon SSSI. The standard and activity-specific working practices noted in Stage 1 and Appendix B include robust containment measures to prevent pollution events for all works, including in-water works or access and those using methods such as hydro-demolition. These working practices also include provisions to reduce the risk of transporting invasive species during works, such as washing equipment or vehicles

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prior to moving between water bodies. These, in combination with standard containment measures, are expected to significantly reduce the risk of transporting invasive species within or around the Cromarty Firth. Therefore, the risk of indirect effects on the qualifying woodland habitat of the SAC/SSSI and Ramsar as a result of pollution or spread of invasive species during proposed works at A9 Cromarty Bridge is considered to be low.

#### Cumulative and in-combination effects

Although the proposed activities would be highly localised to the A9 Cromarty Bridge and immediate vicinity, the timing of works over the next 10 years has not yet been confirmed. The proposed works in the 10-year programme also range from very minor reactive maintenance activities that could take one or two days to complete to larger planned schemes that could take several months to complete, and which may not take place for several more years. Consequently, it is not practicable at this time to search for other plans or projects that may have cumulative or in-combination effects until individual maintenance schemes are designed and submitted for environmental assessment. A search will be undertaken for other plans and projects that could have cumulative or in-combination effects in the vicinity of the proposed maintenance works on a case-by-case basis once individual maintenance schemes are designed and submitted for environmental assessment. If there is potential for effects, additional consultation will be carried out with NS. However, considering the nature and scale of each of the maintenance activities and the distance between the qualifying woodland habitat within the SAC/Ramsar/SSSI and the A9 Cromarty Bridge, there is likely to be extremely limited potential for significant cumulative or in-combination effects due to other plans or projects.

The potential for cumulative or in-combination effects resulting from multiple activities carried out by BEAR Scotland is also limited due to the minor and localised scale of most proposed maintenance activities. Although some minor cyclic maintenance could be carried out during or close to the timing of a larger scheme, any planned larger schemes at A9 Cromarty Bridge or other major trunk road bridges (e.g., A9 Kessock Bridge, A9 Dornoch Bridge) would not be carried out concurrently or within the same financial year due to budget limitations and required lead-in time for tendering and mobilisation, which reduces the risk of significant cumulative or in-combination effects due to disturbance on and around the bridge. In addition, BEAR Scotland programme all proposed works in line with appropriate guidance and contractual requirements to take into account existing and future planned works on the trunk roads with a view to limiting any cumulative effects relating to traffic management. As a result of this approach, disturbance in localised areas due to construction noise and activities is also limited.

Overall, due to the nature and scale of the proposed activities and the limited potential for overlap of any activities during the 10-year programme, it is unlikely that any of the proposed maintenance activities would result in significant cumulative or in-combination effects on the qualifying woodland features of the Conan Islands SAC, Cromarty Firth Ramsar, and component SSSI.

#### Conclusion

Considering the distance between the works and the SAC and woodland feature of the Ramsar site and with the above measures in place to reduce the risk of pollution and spread of invasive species, **no LSE, either alone or in combination with other project, have been identified on the qualifying woodland habitat of Conan Islands SAC or Cromarty Firth Ramsar as a result of the proposed maintenance activities and all conservation objectives for this feature will be met. This feature is not considered further.**

Similarly, no significant negative impacts have been identified on the qualifying wet woodland habitat of Lower River Conan SSSI and this feature is not considered further.

### **3. Inner Moray Firth SPA and Inner Moray Firth Ramsar**

***Includes assessment of all features for Beaully Firth SSSI and Munloch Bay SSSI for completeness.***

The Inner Moray Firth SPA/Ramsar sites overlap and are located approximately 9.1 km from the A9 Cromarty Bridge at the nearest point (straight-line distance). The sites are comprised of several discrete areas within the Beaully and Inverness Firths, including both shores at the head of the Beaully Firth, Munloch Bay, Longman Bay, and Castle Stuart Bay within the Inverness Firth, and Whiteness Head at the mouth of the Inverness Firth. All of these areas are designated as SSSIs. The Inner Moray Firth SPA/Ramsar sites encompass a variety of coastal and wetland habitat types that support large populations of several wader and wildfowl species. Munloch Bay SSSI is located approximately 9.1 km southeast of A9 Cromarty Bridge and Beaully Firth SSSI is located approximately 10.9 km south of A9 Cromarty Bridge. Only these two SSSIs are considered in this assessment as they are within the foraging distance for greylag geese, which is a qualifying feature of both SSSIs as well as the SPA and Ramsar.

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### Assessment against the conservation objectives for breeding common tern and osprey

Common terns are summer visitors to the UK that feed primarily on fish and, in Scotland, typically breed in coastal areas between April and July, leaving in late summer to head south for the winter (Goodship and Furness 2022, British Trust for Ornithology (BTO) 2024a). Osprey are also summer visitors to the UK that feed primarily on fish and generally nest in trees or on artificial platforms near fresh water (Goodship and Furness 2022). The SPA/Ramsar are known to support osprey and common tern populations of European importance, which regularly forage within the SPA/Ramsar. The risk of direct effects (e.g., mortality during construction, habitat loss) and indirect effects (e.g., pollution, disturbance) on breeding common tern and osprey as a result of proposed works at A9 Cromarty Bridge are considered below.

#### *Risk of direct effects*

No works will take place within the boundaries of the SPA/Ramsar; therefore, works will not result in any loss of supporting habitats for osprey or common terns within the SPA/Ramsar. Due to the distance between these sites and the area of works, the risk of injury or mortality of these species during construction is considered to be negligible.

#### *Risk of indirect effects*

Pollution during works at the A9 Cromarty Bridge could potentially affect supporting habitats or food resources of breeding common terns and osprey within the SPA/Ramsar. However, although the shortest distance between the Inner Moray Firth SPA/Ramsar and A9 Cromarty Bridge is 9.1km, this is a straight-line distance over land. The distance between connected waterways is significantly greater, as water would need to travel a much further distance from the bridge around the Black Isle peninsula and into the Inverness and Beaully Firths. Due to this highly limited hydrological connectivity between the area of works and the SPA/Ramsar, the risk of effects on breeding common terns and osprey within the SPA/Ramsar as a result of pollution from works on the A9 Cromarty Bridge is considered to be negligible.

Although the SPA/Ramsar is located 9.1km (straight-line distance) from the A9 Cromarty Bridge, common terns and osprey associated with the Inner Moray Firth SPA/Ramsar may commute or forage in the Cromarty Firth near the area of works. As recreation and disturbance are noted pressures for common terns and osprey within the SPA/Ramsar, proposed works at A9 Cromarty Bridge could result in disturbance of these species. NS recommends a disturbance buffer of 200-400m for common tern during the breeding season and a disturbance buffer of 350-750m for osprey during the breeding season (Goodship and Furness 2022). These distances are significantly less than the closest distance between the A9 Cromarty Bridge and the Inner Moray Firth SPA/Ramsar, so disturbance of common terns or osprey nesting in the Inner Moray Firth SPA/Ramsar will not occur. Common terns and osprey that may forage in the vicinity of works are unlikely to be significantly disturbed by works at A9 Cromarty Bridge, as the area of works would only affect a small area of the potential foraging habitat within the Cromarty Firth and there is ample alternative foraging habitat in other parts of the Cromarty Firth that would be available outside the disturbance distance for these species. There is also plenty of suitable foraging habitat for common terns and osprey within the Inner Moray Firth SPA/Ramsar boundary outwith the direct works area which they would be more likely to use. Therefore, the risk of indirect effects on these species as a result of disturbance from works at A9 Cromarty Bridge is considered to be negligible.

### Assessment against the conservation objectives for overwintering birds

*Includes assessment of overwintering birds in Beaully Firth SSSI and Munloch Bay SSSI for completeness.*

The Inner Moray Firth SPA/Ramsar and component SSSIs support a range of overwintering wader and wildfowl species. These species are highly mobile and may be present within proximity of the A9 Cromarty Bridge. Therefore, the risk of direct effects (e.g., mortality, habitat loss) and indirect effects (pollution of supporting habitats, disturbance) on overwintering birds within the SPA/Ramsar/SSSIs as a result of proposed works are considered below.

#### *Risk of direct effects*

No works will take place within the boundaries of the SPA/Ramsar or SSSIs; therefore, works will not result in any loss of supporting habitats for overwintering birds within the SPA/Ramsar/SSSIs. Due to the distance between these sites and the area of works, the risk of injury or mortality of these species during construction is considered to be negligible.

#### *Risk of indirect effects*

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Pollution during works at the A9 Cromarty Bridge could potentially affect supporting habitats or food resources of overwintering birds within the SPA/Ramsar/SSSIs. However, although the shortest distance between the Inner Moray Firth SPA/Ramsar and A9 Cromarty Bridge is 9.1km, this is a straight-line distance over land. The distance between connected waterways is significantly greater, as water would need to travel a much further distance from the bridge around the Black Isle peninsula and into the Inverness and Beaulie Firths. Due to this highly limited hydrological connectivity between the area of works and the SPA/Ramsar, the risk of effects on overwintering birds within the SPA/Ramsar/SSSIs as a result of pollution from works on the A9 Cromarty Bridge is considered to be negligible.

The SPA/Ramsar and nearest SSSI (Munlochy Bay) are located 9.1km (straight-line distance) from the A9 Cromarty Bridge. NS's recommended disturbance buffers during the non-breeding season for ten of the twelve non-breeding qualifying bird species (including greylag geese) are less than the distance between the Moray Firth SPA/Ramsar and A9 Cromarty Bridge (Goodship and Furness 2022). No information on disturbance distances was available for the other two species (red-breasted merganser, cormorant) but it is expected that they would have comparable disturbance distances to similar species. Of the twelve overwintering bird species, only greylag geese and potentially cormorant have a foraging range that could come within disturbance distance of the working area at A9 Cromarty Bridge. Therefore, individuals of those species that are associated with the Inner Moray Firth SPA/Ramsar/SSSIs may have potential to use parts of the Cromarty Firth (NS 2016a; Fijn et al 2022). The rest of the species in this group are more likely to be present in or near the Inner Moray Firth SPA/Ramsar/SSSIs and individuals associated with the Inner Moray Firth sites are unlikely to use the Cromarty Firth. Therefore, for the majority of overwintering bird species, there is no connectivity between the area of works and the Inner Moray Firth SPA/Ramsar/SSSIs and there is no pathway to effect via disturbance.

Although greylag geese and possibly cormorant associated with Inner Moray Firth SPA/Ramsar may forage within the Cromarty Firth, they are unlikely to be significantly disturbed by works at A9 Cromarty Bridge, as the area of works would only affect a small area of the potential foraging habitat within the Cromarty Firth. There is also ample alternative foraging habitat in other parts of the Cromarty Firth that would be available outside the disturbance distance for these species. The Inner Moray Firth SPA/Ramsar/SSSIs support plentiful foraging habitat which foraging geese and cormorants associated with those sites would be more likely to use. Therefore, the risk of indirect effects on these species as a result of disturbance from works at A9 Cromarty Bridge is considered to be negligible.

### Assessment against the conservation objectives for qualifying habitats

*Includes assessment of qualifying habitats (mudflats, saltmarsh, vascular plant assemblage) in Beaulie Firth SSSI and Munlochy Bay SSSI for completeness.*

The qualifying habitats for Inner Moray Firth Ramsar include marine habitats (intertidal mudflats and sandflats) and coastal habitats (saltmarsh, sand dunes, shingle). The two component SSSIs are also designated for some of these habitats, which likely provide supporting habitat for the qualifying bird species within Inner Moray Firth SPA/Ramsar and the two SSSIs. No negative pressures have been noted for intertidal mudflats and sandflats. However, negative pressures including invasive species, recreation/disturbance, and over- or under-grazing have been noted for the coastal habitats. The only one of these pressures that could be affected by proposed works is the spread of invasive species. The risk of direct effects (e.g., habitat loss, mortality of typical species) and indirect effects (e.g., pollution, spread of invasive species) on the qualifying habitats as a result of proposed works at A9 Cromarty Bridge are considered below.

#### *Risk of direct effects*

As noted, the distance between the SPA/Ramsar/SSSIs and the area of works at A9 Cromarty Bridge is over 9km via straight-line distance. None of the proposed maintenance activities at A9 Cromarty Bridge would entail works within the boundaries of these sites and there is no connectivity between the area of works and the qualifying habitats. Due to the distance from the bridge and lack of connectivity, no direct effects (e.g., habitat loss, mortality of typical species due to construction activities or vehicles) on the qualifying habitat or its typical species within the SPA/Ramsar/SSSIs will result from the proposed maintenance activities.

#### *Risk of indirect effects*

The A9 Cromarty Bridge is located over 9km (straight-line distance) from the SPA/Ramsar and nearest SSSI (Munlochy Bay); therefore, there is very limited hydrological connectivity between these sites and the area of works within the Cromarty Firth. Consequently, there is limited potential for works to result in indirect effects on the qualifying habitats and their typical species as a result of pollution, even for activities with in-water elements or access requirements. The standard and activity-specific working practices noted in Stage 1 and Appendix B include robust

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containment measures to prevent pollution events for all works, including in-water works or access and those using methods such as hydro-demolition. These working practices also include provisions to reduce the risk of transporting invasive species during works, such as washing equipment or vehicles prior to moving between water bodies. These, in combination with standard containment measures, are expected to significantly reduce the risk of transporting invasive species within or around the Cromarty Firth and therefore to the wider marine environment (e.g., Inner Moray Firth). Therefore, the risk of indirect effects on the qualifying habitats of the SPA/Ramsar/SSSIs as a result of pollution or spread of invasive species during proposed works at A9 Cromarty Bridge is considered to be low.

### Cumulative and in-combination effects

Although the proposed activities would be highly localised to the A9 Cromarty Bridge and immediate vicinity, the timing of works over the next 10 years has not yet been confirmed. The proposed works in the 10-year programme also range from very minor reactive maintenance activities that could take one or two days to complete to larger planned schemes that could take several months to complete, and which may not take place for several more years. Consequently, it is not practicable at this time to search for other plans or projects that may have cumulative or in-combination effects until individual maintenance schemes are designed and submitted for environmental assessment. As noted above, a search will be undertaken for other plans and projects that could have cumulative or in-combination effects in the vicinity of the proposed maintenance works on a case-by-case basis once individual maintenance schemes are designed and submitted for environmental assessment. If there is potential for these effects, additional consultation will be carried out with NS. However, considering the nature and scale of each of the maintenance activities and the distance between the Inner Moray Firth SPA/Ramsar/SSSIs and the A9 Cromarty Bridge, there is likely to be extremely limited potential for significant cumulative or in-combination effects due to other plans or projects.

The potential for cumulative or in-combination effects resulting from multiple activities carried out by BEAR is also limited due to the minor and localised scale of most proposed maintenance activities. Although some minor cyclic maintenance could be carried out during or close to the timing of a larger scheme, any planned larger schemes at A9 Cromarty Bridge or other major trunk road bridges (e.g., A9 Kessock Bridge, A9 Dornoch Bridge) would not be carried out concurrently or within the same financial year due to budget limitations and required lead-in time for tendering and mobilisation, which reduces the risk of significant cumulative or in-combination effects due to disturbance on and around the bridge. In addition, BEAR Scotland programme all proposed works in line with appropriate guidance and contractual requirements to take into account existing and future planned works on the trunk roads with a view to limiting any cumulative effects relating to traffic management. As a result of this approach, disturbance in localised areas due to construction noise and activities is also limited.

Overall, due to the nature and scale of the proposed activities, the distance between the area of works and the designated sites, and the limited potential for overlap of any activities during the 10-year programme, it is highly unlikely that any of the proposed maintenance activities would result in significant cumulative or in-combination effects on the qualifying features of the Inner Moray Firth SPA/Ramsar and component SSSIs.

### Conclusion:

Taking into account the considerable distance between the area of works at A9 Cromarty Bridge and the Inner Moray Firth SPA/Ramsar alongside the good working practices for pollution control as noted in Stage 1 and Appendix B, **no LSE, either alone or in combination with other projects, have been identified on any of the qualifying features of the Inner Moray Firth SPA or Inner Moray Firth Ramsar as a result of the proposed activities and all conservation objectives for these features will be met. These features are not considered further.**

Similarly, no significant negative impacts have been identified on any of the qualifying features of the Beaully Firth SSSI or Munloch Bay SSSI as a result of the proposed works and these features are not considered further.

## 4. Moray Firth SAC

The eastern boundary of the Moray Firth SAC extends from a line drawn from Helmsdale southeast to Lossiemouth. The site extends southwest to the Inner Moray Firth (including part of the Beaully Firth) just west of Inverness. The SAC includes parts of the Beaully Firth and Dornoch Firth but excludes the Cromarty Firth except for where it joins the wider Moray Firth near the tip of the Black Isle.

The SAC is designated for the Annex I habitat 'sandbanks which are slightly covered by sea water all the time' and for bottlenose dolphin, which is a priority marine feature.

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The A9 Cromarty Bridge is located approximately 11.8km north of the SAC at the nearest point (Beaully Firth) via straight-line distance and approximately 18km west of the SAC at the point where the SAC meets the Cromarty Firth (the closest point of hydrological connectivity).

### Assessment against the conservation objectives for bottlenose dolphin

Bottlenose dolphins are wide-ranging cetaceans (and a European Protected Species) that inhabit the coastal waters along Scotland's coast. There is a highly mobile population of bottlenose dolphins along the east coast of Scotland that has been well studied via photographic mark-recapture surveys for the past several decades and is estimated to be comprised of approximately 224 dolphins (NS 2021, Arso Civil et al. 2021). Site condition monitoring and a review of available survey data carried out in 2014-2016 suggested that an average of 103 dolphins use the Moray Firth SAC between May and September each year, although this number is likely to have increased since 2016 (Cheney et al. 2018, Arso Civil et al. 2021).

Bottlenose dolphins can be sensitive to four main pressures that can affect their survival and distribution across the site (NS 2021), including:

- Entanglement of bottlenose dolphins in fishing gear.
- Death or injury of bottlenose dolphins due to collisions (predominantly with fast-moving vessels and tidal turbines).
- Disturbance from underwater noise.
- Contaminants (e.g., through effects on water quality and bioaccumulation of contaminants in prey species of bottlenose dolphins).

The proposed works at A9 Cromarty Bridge do not entail any fishing. However, some works would require the use of vessels which could result in collisions with bottlenose dolphins and create underwater noise. All works have potential to result in pollution of the marine environment, which may affect bottlenose dolphins and/or their prey species as they are highly mobile and may use areas near A9 Cromarty Bridge. Consequently, the proposed works could contribute to some of the above pressures, which could in turn affect the survival and distribution of bottlenose dolphins within the SAC. Therefore, **LSE on bottlenose dolphins as a result of proposed works cannot be ruled out, and this feature is considered further in Stage 4.**

### Assessment against the conservation objectives for subtidal sandbanks

Subtidal sandbank habitat consists of sandy sediments that are generally found at depths of less than 20m below chart datum but may include channels or other areas greater than 20m deep (JNCC 2024b). Within the Moray Firth SAC, the most extensive areas of subtidal sandbanks are found just east of Inverness, just east of the Dornoch Firth, and along the coast between Findhorn and Lossiemouth (NS 2021). Subtidal sandbanks are sensitive to physical disturbance or changes in water quality and have a low resilience to the introduction or spread of invasive non-native species (NS 2021). The risk of direct effects (e.g., habitat loss, mortality of typical species) and indirect effects (e.g., pollution, spread of invasive species) on the qualifying habitats as a result of proposed works at A9 Cromarty Bridge are considered below.

#### *Risk of direct effects*

As noted, the distance between the SAC and the area of works at A9 Cromarty Bridge is over 11km via straight-line distance. None of the proposed maintenance activities at A9 Cromarty Bridge would entail works within the boundaries of the SAC and there is no connectivity between the area of works and the non-mobile qualifying habitat. Due to the distance from the bridge and lack of connectivity, no direct effects (e.g., habitat loss, mortality of typical species due to construction activities or vehicles) on the qualifying habitat or its typical species within the SAC will result from the proposed maintenance activities.

#### *Risk of indirect effects*

The A9 Cromarty Bridge is located over 11km (straight-line distance) from the SAC and over 18km to the nearest point of hydrological connectivity; therefore, the pathway to effect for pollution via hydrological connectivity is very limited. Consequently, there is limited potential for works to result in indirect effects on the qualifying habitat and its typical species as a result of pollution, even for activities with in-water elements or access requirements. None of the works involve activities that would result in changes to the water levels, tides, or other hydrological processes in the Cromarty Firth and therefore will not affect any water management activities within the Moray Firth SAC. The standard

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and activity-specific working practices noted in Stage 1 and Appendix B include robust containment measures to prevent pollution events for all works, including in-water works or access and those using methods such as hydro-demolition. The risk of significant effects on subtidal sandbanks in the SAC is further reduced by the distance between the SAC and the working area on the A9 Cromarty Bridge, which is likely to dilute any spills or loss of containment resulting in pollution events prior to materials reaching the SAC habitat. The standard and activity-specific working practices noted in Stage 1 and Appendix B also include provisions to reduce the risk of transporting invasive species during works, such as washing equipment or vehicles prior to moving between water bodies. These, in combination with standard containment measures, are expected to significantly reduce the risk of transporting invasive species within or around the Cromarty Firth and therefore to the wider marine environment (e.g., Moray Firth). Therefore, the risk of indirect effects on the qualifying habitat of the SAC as a result of pollution or spread of invasive species during proposed works at A9 Cromarty Bridge is considered to be low.

### Cumulative and in-combination effects – subtidal sandbanks

Although the proposed activities would be highly localised to the A9 Cromarty Bridge and immediate vicinity, the timing of works over the next 10 years has not yet been confirmed. The proposed works in the 10-year programme also range from very minor reactive maintenance activities that could take one or two days to complete to larger planned schemes that could take several months to complete, and which may not take place for several more years. Consequently, it is not practicable at this time to search for other plans or projects that may have cumulative or in-combination effects until individual maintenance schemes are designed and submitted for environmental assessment. As noted above, a search will be undertaken for other plans and projects that could have cumulative or in-combination effects in the vicinity of the proposed maintenance works on a case-by-case basis once individual maintenance schemes are designed and submitted for environmental assessment. If there is potential for these effects, additional consultation will be carried out with NS. However, considering the nature and scale of each of the maintenance activities and the distance between the Moray Firth SAC and the A9 Cromarty Bridge, there is likely to be extremely limited potential for significant cumulative or in-combination effects due to other plans or projects.

The potential for cumulative or in-combination effects resulting from multiple activities carried out by BEAR is also limited due to the minor and localised scale of most proposed maintenance activities. Although some minor cyclic maintenance could be carried out during or close to the timing of a larger scheme, any planned larger schemes at A9 Cromarty Bridge or other major trunk road bridges (e.g., A9 Kessock Bridge, A9 Dornoch Bridge) would not be carried out concurrently or within the same financial year due to budget limitations and required lead-in time for tendering and mobilisation, which reduces the risk of significant cumulative or in-combination effects due to disturbance on and around the bridge. In addition, BEAR Scotland programme all proposed works in line with appropriate guidance and contractual requirements to take into account existing and future planned works on the trunk roads with a view to limiting any cumulative effects relating to traffic management. As a result of this approach, disturbance in localised areas due to construction noise and activities is also limited.

Overall, due to the nature and scale of the proposed activities, the distance between the area of works and the SAC, and the limited potential for overlap of any activities during the 10-year programme, it is highly unlikely that any of the proposed maintenance activities would result in significant cumulative or in-combination effects on the qualifying feature subtidal sandbanks within the Moray Firth SAC.

An assessment of cumulative and in-combination effects on bottlenose dolphin is included in Stage 4.

### Conclusion:

Taking into account the considerable distance between the area of works at A9 Cromarty Bridge and the Moray Firth SAC alongside the good working practices for pollution control as noted in Stage 1 and Appendix B, **no LSE, either alone or in combination with other projects, are expected on the qualifying habitat feature subtidal sandbanks within the Moray Firth SAC as a result of the proposed activities and all conservation objectives for this feature will be met. This feature is not considered further.**

**Due to the high mobility of bottlenose dolphins and nature of some of the proposed works, LSE on bottlenose dolphins cannot be ruled out at this stage and this feature is considered further in Stage 4.**

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## Stage 4: Undertake an Appropriate Assessment of the Implications for the Site in View of its Conservation Objectives

### Appropriate Assessment

It is the responsibility of the competent authority to carry out the appropriate assessment. The competent authority must consult SNH (NatureScot) on the appropriate assessment. NatureScot can provide advice on what issues should be considered in the appropriate assessment, what information is required to carry out the assessment, in some circumstances carry out an appraisal to inform an appropriate assessment and/or provide comments on an assessment carried out.

An 'appropriate assessment' consists of two parts: a scientific, reasoned appraisal (stage 4) and a conclusion (stage 5). Consider the proposed plan/project, its impact on the qualifying interests assessed against their conservation objectives and take account of any possible in combination effects with other plans or projects.

The following points should be considered:

- I. Describe for each qualifying interest the potential impacts of the proposal detailing which aspects or effects of the proposal could impact upon them and their conservation objectives.
- II. Evaluate the potential impacts, e.g., whether short/long term, reversible or irreversible, and in relation to the proportion/importance of the interest affected, and the overall effect on the site's conservation objectives. This should be in sufficient detail to ensure all impacts have been considered and sufficiently appraised. Record if additional survey information or specialist advice has been obtained.
- III. Each conservation objective should be considered, and a decision reached as to whether the proposal will affect achievement of this objective i.e., whether the conservation objective will be undermined if the proposal is consented to. Restore objectives may have been set where qualifying features of a site are in an unfavourable condition. In such cases the appropriate assessment should consider whether the plan or project would prevent the qualifying feature from being able to be restored.

The assessment in Stage 3 concluded that the proposed 10-year programme of works at A9 Cromarty Bridge would not result in LSE on the following qualifying features:

- Conon Islands SAC
  - Alder woodland on floodplains
- Cromarty Firth Ramsar
  - Estuarine alder woodland
- Inner Moray Firth SPA
  - Breeding populations of the following bird species:
    - Common tern
    - Osprey
  - Non-breeding (overwintering) populations of the following bird species:
    - Bar-tailed godwit
    - Cormorant
    - Goldeneye
    - Goosander
    - Greylag goose
    - Oystercatcher
    - Red-breasted merganser
    - Redshank
    - Scaup
    - Teal
    - Wigeon
    - Waterfowl assemblage
- Inner Moray Firth Ramsar



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- All of the above bird species listed under Inner Moray Firth SPA
- Intertidal mudflats and sandflats
- Saltmarsh
- Sand dunes
- Shingle
- Moray Firth SAC
  - Subtidal sandbanks

The assessment in Stage 3 could not rule out LSE on the following qualifying features as a result of proposed works at A9 Cromarty Bridge. These features are considered further below and have been grouped where possible for brevity. As the Cromarty Firth SPA and Ramsar overlap and are designated for the same bird species, these sites have been grouped into one assessment for brevity as the potential effects of works will be the same.

- Cromarty Firth SPA
  - Breeding populations of the following bird species:
    - Common tern
    - Osprey
  - Non-breeding (overwintering) populations of the following bird species:
    - Bar-tailed godwit
    - Dunlin
    - Curlew
    - Greylag goose
    - Knot
    - Oystercatcher
    - Pintail
    - Red-breasted merganser
    - Redshank
    - Scaup
    - Whooper swan
    - Waterfowl assemblage
- Cromarty Firth Ramsar
  - All of the above bird species listed under Cromarty Firth SPA
  - Intertidal mudflats and sandflats
  - Open water transition fen
  - Saltmarsh
- Moray Firth SAC
  - Bottlenose dolphin

### 1. Cromarty Firth SPA/Ramsar

#### Breeding common terns and osprey

As noted above, the A9 Cromarty Bridge spans the Cromarty Firth and lies adjacent to the Cromarty Firth SPA/Ramsar on both the northern and southern shores of the firth. These sites are designated for breeding populations of common tern and osprey. Osprey are known to regularly breed and forage within the SPA/Ramsar and breeding tern colonies are known to be present at Arduilie Point, which is adjacent to the northern end of A9 Cromarty Bridge, and on a tern nesting platform located approximately 1.75km northeast of Arduilie Point. Due to the proximity of the bridge to these designated sites and a requirement to undertake certain schemes and routine maintenance activities during the breeding season for terns and osprey, there is a risk of works affecting breeding common terns and osprey both directly due to mortality or habitat loss and indirectly due to disturbance and pollution during construction.

*Risk of mortality/injury or habitat loss due to construction*

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All of the proposed works at A9 Cromarty Bridge will be highly localised to the immediate vicinity of the bridge. Several of the proposed activities will be restricted to the bridge deck within the A9 carriageway and will not entail any works or access within the SPA/Ramsar boundary. Several others may require access below the deck via an underbridge unit or scaffolding which is likely to be suspended from the bridge. There are only a few proposed schemes that would require in-water works or access (i.e., Phase 3 and 4 refurbishment works, scour repairs, cathodic protection works), which would take place within the SPA/Ramsar boundary but would likewise be highly localised to the area around the A9 Cromarty Bridge. The bridge lies relatively low on the water and does not have high towers or poles that may present an obstacle to commuting or foraging birds in the area. Osprey and terns in the area will likely be accustomed to the presence of the bridge and movement of vehicles on the bridge and likely already avoid the bridge in their usual flight paths for commuting and foraging. BEAR Scotland collects and records reports of roadkill incidents but does not hold any roadkill records of common terns or osprey in the database, which includes records from 2013-2024. Although some of the proposed works will entail the use of scaffolding, jack-up barges with machinery, or an underbridge unit, none of these would require installation of structures significantly higher than the bridge itself. In addition, the highly localised nature of all works reduces the risk that osprey or terns would collide with any machinery or equipment on the bridge. Therefore, the risk of mortality or injury to terns or osprey as a result of proposed works is considered to be low.

Osprey tend to nest in trees or on artificial platforms near freshwater (Goodship and Furness 2022) and are not expected to nest on the bridge or within working areas near the bridge. However, there is potential for osprey nests to be present in trees along the coast of the Cromarty Firth, potentially in areas that may be used as a site compound for Phase 3 and 4 refurbishment works. Site compound locations have not yet been confirmed, so it is not known at this stage if any tree felling would be required to facilitate a site compound. Once further details are confirmed, pre-construction osprey surveys will be programmed and undertaken to identify any osprey nests within working areas. If nests are identified and would be affected by any works (including site compound areas), additional consultation would be carried out with NS to agree suitable mitigation measures. These may include seasonal constraints on working to avoid the osprey breeding season, a requirement not to fell any trees with osprey nests present, and/or installation of compensatory nesting habitat such as an artificial nesting platform. With the use of pre-construction surveys and additional mitigation measures if osprey nests will be affected by works, the risk of significant effects on breeding osprey as a result of habitat loss is considered to be low.

Common terns are known to nest at Arduillie Point, which is adjacent to the northern abutment of A9 Cromarty Bridge. However, no works or access will take place on or across Arduillie Point; therefore, no direct loss of breeding habitat is expected to occur as a result of the proposed works. The next closest tern nesting area to the bridge is a dedicated nesting raft located approximately 1.75km northeast of the bridge, which terns are known to use. Therefore, the breeding colony at Arduillie Point is at highest risk of being affected by works at A9 Cromarty Bridge. However, Arduillie Point has been categorised as a restricted area and no works or access across Arduillie Point will be permitted during works. With this restriction in place, the risk of significant effects on breeding terns in the SPA/Ramsar due to loss of breeding habitat at Arduillie Point is considered to be low.

### *Risk of disturbance*

Although disturbance tolerance can vary among osprey, NS recommends a disturbance buffer of 350-750m for osprey during the breeding season (Goodship and Furness 2022). Osprey are considered to occupy core ranges of 10km on average and can regularly forage up to 20km (NS 2016a). Although there is some evidence to suggest that terns can become habituated to certain types of human disturbance, NS recommends a disturbance buffer of 200-400m for common tern during the breeding season (Goodship and Furness 2022). Therefore, there is a risk that works on A9 Cromarty Bridge could result in disturbance to breeding or foraging osprey and/or common terns associated with the SPA/Ramsar due to increased presence of vehicles, plant, personnel, and lighting on the bridge during works.

Most of the proposed works will take place on or below the A9 Cromarty Bridge deck where there is already an existing level of activity, noise, and light from traffic throughout the year and at all hours. Some research on common and Arctic terns has suggested that they may tolerate or become habituated to pedestrians, motorboats, and drones (Nisbet 2000, Chabot et al. 2015, Syrova et al. 2020, Goodship and Furness 2022). Osprey and terns in the vicinity of A9 Cromarty Bridge are likely to be accustomed to existing levels of traffic and activity on the bridge and most proposed works (i.e., routine maintenance activities and smaller schemes) are unlikely to significantly differ from baseline levels of traffic noise, light, and activity on the bridge. Although an increase in baseline noise level is expected during works for some larger schemes, any increase in noise will be temporary, intermittent, of short duration, and localised to the trunk road. Some works may require access or lighting outside of the carriageway (e.g.,

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below the deck); however, these works will be highly localised and will generally last for one month or less (with the exception of a small number of larger schemes). Full containment/encapsulation will be required for hydro-demolition, which will provide some visual and acoustic screening between the working area and SPA/Ramsar. Additionally, there is ample alternative habitat for breeding and foraging terns and osprey within the SPA/Ramsar and wider Moray Firth area that will remain available outside of the working area and of the disturbance buffers for these species. Working hours are dependent on several factors (e.g., network restrictions on traffic management) and may entail daytime works, overnight works, or a combination of both. Certain activities included in Phase 3 and 4 refurbishment works will require 24-hour access and will likely require short periods of extended working hours (e.g., over weekends to reduce impacts of road closures on vehicular travellers). However, the following measures will be in place to reduce the effects of disturbance on breeding or foraging osprey or terns in the vicinity of the bridge:

- Pre-construction osprey surveys and consultation with the Highland Raptor Study Group will be carried out prior to larger schemes with longer durations (e.g., Phase 3 and 4 refurbishment works, scour repairs, large concrete repairs) to identify any osprey nests within disturbance buffers of works.
- If any are identified, additional consultation will be carried out with NS to agree suitable mitigation measures to reduce the risk of disturbance to breeding osprey, such as:
  - Seasonal constraints on works to avoid the osprey breeding season.
  - Timing restrictions on works to reduce the risk of effects during the breeding season.
  - Use of acoustic barriers within working areas or at site compound locations.
- The 'Birds' Toolbox Talk will be included in the SEMP and provided to all site staff prior to works commencing.
- Any artificial lighting required during night works or periods of low light levels will be directed at the area of works as far as is safe and reasonably practicable. Light spillage will be reduced as much as possible (e.g., via use of shades).
- The best practice means, as defined in Section 72 of the Control of Pollution Act 1974 and BS5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites will always be employed to reduce noise produced during works as much as possible.
- A daily cessation of noisy works (e.g., hydro-demolition) will be planned during construction to allow a quiet period each day.
- Plant, machinery and equipment fitted with effective silencers where available will be utilised for the works. Where fitted, and where permitted under Health and Safety requirements, white noise reversing alarms will be utilised during construction.
- Where possible, inherently quiet plant will be selected for construction works. Where appropriate, pumps and generators will be sound-reduced models with fitted, lined, and sealed acoustic covers.
- All plant will be operated in such a way that minimises noise emissions and be switched off when not in use.
- All ancillary plant such as generators will be positioned so as to cause minimum noise disturbance. Where deemed necessary, acoustic screens will be utilised.
- For larger schemes with longer durations (e.g., Phase 3 and 4 refurbishment works, scour works, large concrete repairs), an Ecological Clerk of Works (ECoW) will attend site regularly during works to monitor sensitive ecological receptors (e.g., breeding osprey and terns) and mitigation measures to reduce impacts.

As the known breeding colony of terns at Ardullie Point lies within the disturbance buffer for breeding common terns advised by NS (Goodship and Furness 2022), there is a higher risk of proposed works resulting in impacts on this breeding tern colony due to its location adjacent to the northern abutment of the bridge. Consequently, additional consideration has been given to potential effects of disturbance on this particular breeding colony of terns within the SPA/Ramsar.

During a previous scour repair scheme on the bridge, BEAR Scotland commissioned Highland Ecology and Development (HED) Ltd to undertake weekly monitoring of the terns at Ardullie Point during late February to July 2022. Tern monitoring was continued from April to July 2023 at Ardullie Point and also at the tern nesting raft 1.75km northeast of the bridge. Weekly monitoring was repeated at both locations from April to September 2024. The monitoring showed that terns arrived at Ardullie Point in May during all three years and abandoned Ardullie Point by mid-July 2022, late June 2023, and early July 2024. Nesting behaviour was recorded by a few pairs in 2022 and 2023, but no nesting behaviour was noted in 2024. One chick was observed twice in 2022 but is thought to have died. No chicks were observed in 2023 or 2024. The peak number of terns at Ardullie Point declined from 98 in June 2022 to 25 in May 2023 and 16 in May 2024. A peak count of 35 terns was recorded at the nesting raft in July 2023

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and 30 terns in August 2024 and adults were observed carrying food to the raft, suggesting that young were present in nests, although no chicks were directly observed. Results suggest that the terns did not breed successfully at Ardullie Point during the past three years, but breeding may have been more successful at the nesting raft. No major works have taken place at A9 Cromarty Bridge from April 2022-present; therefore, the decline in the number of breeding terns at Ardullie Point during this period is assumed to be influenced by factors other than anthropogenic activity at the bridge (e.g., climate variability, flooding, bird flu, resource availability). Results also suggest that May-July is the core breeding period at Ardullie Point, as no terns have been observed in April during the past three years.

Disturbance from construction activities has been identified as the likeliest source of LSE on breeding common terns at Ardullie Point, particularly for activities requiring in-water works or access and/or for activities at the northern end of the bridge within 200-400m of the breeding tern colony at Ardullie Point. NS has previously advised BEAR Scotland to adhere to an exclusion zone of 250m around Ardullie Point during the tern breeding season (April to July inclusive, unless otherwise agreed with NS), which covers approximately 100m of the bridge from the northern abutment. No works on the bridge are permitted within the tern exclusion zone during the tern breeding season (April to July inclusive, unless otherwise agreed with NS), although as noted above, no terns have been observed at Ardullie Point in April for the last three years. Although scour repairs would require in-water works and access and therefore may carry a higher risk of LSE on breeding terns at Ardullie Point, scour repairs are not currently planned to be carried out and are unlikely to be required on piers at the northern end of the bridge (within 400m of Ardullie Point), as scour repairs were carried out on several of these piers in recent years. Phase 3 and 4 refurbishment works will also require in-water works and access, but are planned to be completed on piers 8-13, which are located at the southern end of the bridge over 1km from Ardullie Point. However, a site compound will be required for Phase 3 and 4 works with the location yet to be confirmed. A floating pontoon jetty may also be required to provide access via small work boats from the shore to working areas. Where possible, the site compound and floating jetty will be located at least 250m from and out of sight of Ardullie Point (e.g., west of the northern bridge abutment) so that the breeding tern colony is screened from view of the site compound. If this is not possible, additional measures (e.g., barrier or screens) may be required to provide visual and/or acoustic buffers between the site compound and Ardullie Point. Once a site compound location is confirmed, any additional measures will be discussed and agreed with NS if required to ensure that the risk of disturbance effects on the tern colony at Ardullie Point is low. A temporary mooring point may also be required at the northern bridge abutment, which would be established between September and March (i.e., outside of the tern breeding season) to reduce the risk of disturbance to terns. Following a site meeting between BEAR Scotland and NS in May 2021 prior to a previous scour repair scheme, NS agreed to permit the use of small access boats year-round from the northwest corner of the bridge, as this point is screened from the tern colony (Nathan McLaughlan, 26/05/2021 – included in Appendix A). The same method may be required to provide appropriate access for proposed works on the 10-year Programme for A9 Cromarty Bridge where required.

In addition to the measures noted above to reduce disturbance effects on both terns and osprey and the good practice measures noted in Stage 1 to reduce, the following measures will be in place to reduce the risk of disturbance to breeding common terns at Ardullie Point during proposed works at A9 Cromarty Bridge:

- No works or access are permitted on or across Ardullie Point.
- The site compound and floating jetty will be located at least 250m from and out of sight of Ardullie Point where possible. If this is not possible, additional measures (e.g., screens or barriers) will be discussed and agreed with NS to ensure that sufficient visual/acoustic buffers are in place between the site compound and Ardullie Point and that the risk of disturbance effects on the tern colony is low.
- If a temporary mooring point is required at the northern abutment, this will be installed on the west side of the abutment outside of the tern breeding season (April to July inclusive, unless otherwise agreed with NS).
- During the tern breeding period (1st April to 31st July inclusive, unless otherwise agreed with NS), boat traffic at the northern end of A9 Cromarty Bridge may only take access to the working area from the west side of the bridge, which is screened from view of the tern colony.

There is a risk of disturbance to breeding terns and osprey as a result of the proposed 10-year programme of works at A9 Cromarty Bridge, particularly for the breeding tern colony at Ardullie Point and for certain activities that will require in-water works or access and/or will entail noisy works at night. However, with the above measures in place to reduce the effects of noise, lighting, and presence of construction equipment and staff, the risk of significant disturbance to breeding terns and osprey within the SPA/Ramsar is considered to be low.

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**Risk of pollution**

For all of the proposed maintenance activities, there is potential for indirect effects on breeding terns and osprey, their supporting habitats, and prey species as a result of pollution from construction activities or from discharge of water used in hydro-demolition. However, the standard working practices listed in Stage 1 and Appendix B include robust containment measures to prevent pollution events for both in-water works or access and other works. Furthermore, additional measures will be in place to ensure that water used in hydro-demolition is captured, appropriately treated to reduce pH and suspended solids, and removed or (where required) discharged under an appropriate authorisation from SEPA. The volume and rate of discharge will be agreed with SEPA and would determine the level of authorisation required to permit discharge. Treatment of water prior to discharge will be carried out with appropriate values for pH and suspended solids stipulated in the SEMP. Typically, a pH value between 5-9 and a suspended solids value between 80-100mg/l is considered acceptable for discharge. Discharging to a location on land will be planned where possible and will be the preferred option over discharging directly to the marine environment. Authorisation will be sought from SEPA to permit discharge of wastewater as required on a scheme-by-scheme basis as required and no discharges will take place until the appropriate authorisation is secured. As noted in Stage 1, a CAR simple licence has been issued by SEPA to permit discharge of treated hydro-demolition water to the marine environment during Phase 3 refurbishment works and all conditions of this licence will be adhered to during works.

None of the proposed works involve activities that would result in changes to the water levels, tides, or other hydrological processes in the Cromarty Firth. The proposed works in the 10-year programme will be highly localised and adhere to standard good practice for pollution prevention; therefore, no significant effects on fish within the Cromarty Firth SPA/Ramsar (i.e., prey for osprey and terns) have been identified.

With these measures in place during works, the risk of indirect effects on breeding osprey and terns and their supporting habitats and prey species as a result of pollution is limited.

**Overwintering birds**

*Includes assessment of overwintering bird species in Cromarty Firth SSSI for completeness*

As noted above, the A9 Cromarty Bridge spans the Cromarty Firth and lies adjacent to the Cromarty Firth SPA/Ramsar/SSSI on both the northern and southern shores of the firth. These sites are designated for several species of overwintering (non-breeding) waders and wildfowl. Due to the proximity of the bridge to these designated sites and the requirement to undertake certain schemes and routine maintenance activities during the overwintering period (October to March) for the qualifying non-breeding bird species, there is a risk of works affecting these qualifying features both directly due to mortality/injury during construction or habitat loss and indirectly due to disturbance and pollution during construction.

**Risk of mortality/injury or habitat loss due to construction**

All of the proposed works at A9 Cromarty Bridge will be highly localised to the immediate vicinity of the bridge. Several of the proposed activities will be restricted to the bridge deck within the A9 carriageway and will not entail any works or access within the SPA/Ramsar/SSSI boundary. Several others may require access below the deck via an underbridge unit or scaffolding which is likely to be suspended from the bridge. There are only a few proposed schemes that would require in-water works or access (i.e., Phase 3 and 4 refurbishment works, scour repairs, cathodic protection works), which would take place within the SPA/Ramsar/SSSI boundary but would likewise be highly localised to the area around the A9 Cromarty Bridge. The bridge lies relatively low on the water and does not have high towers or poles that may present an obstacle to commuting or foraging birds in the area. Overwintering bird species in the area will likely be accustomed to the presence of the bridge and movement of vehicles on the bridge and likely already avoid the bridge in their usual flight paths for commuting and foraging. BEAR Scotland collects and records reports of roadkill incidents but does not hold any roadkill records of the qualifying non-breeding bird species in the database, which includes records from 2013-2024. Although some of the proposed works will entail the use of scaffolding, jack-up barges with machinery, or an underbridge unit, none of these would require installation of structures significantly higher than the bridge itself. In addition, the highly localised nature of all works reduces the risk that overwintering birds would collide with any machinery or equipment on the bridge. Therefore, the risk of mortality or injury to overwintering birds within the SPA/Ramsar/SSSI as a result of proposed works is considered to be low.

There is potential for overwintering birds to be present along the coast of the Cromarty Firth within proximity of A9 Cromarty Bridge. The majority of proposed works will be restricted to the bridge and will not require shoreline access



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and therefore will not result in any loss of habitat for overwintering bird species within the SPA/Ramsar/SSSI. The few schemes that will require separate site compounds and/or in-water access carry a minor risk of temporary loss of habitat for overwintering bird species. Site compound locations have not yet been confirmed, but it is not expected that any site compounds would be located within shoreline habitat that would be used by overwintering birds within the SPA/Ramsar/SSSI. The floating jetty required for Phase 3 and 4 refurbishment works would likely occupy a very small area of the shoreline habitat, potentially to the west of the bridge on the northern shore of the firth. However, this would be a temporary structure in place during construction for these schemes and would be removed following completion of each scheme. Any damage to the foreshore would be reinstated as required. In addition, the very small area occupied by the floating jetty would represent a tiny fraction of the available roosting and foraging habitat for the qualifying species within the entirety of the SPA/Ramsar/SSSI. However, prior to larger schemes with longer durations that may commence or extend into the overwintering period, surveys will be programmed and undertaken to identify any evident roosting areas for the qualifying non-breeding bird species within working areas. If any are identified and would be affected by any works (including site compound areas), additional consultation would be carried out with NS to agree suitable mitigation measures. These may include seasonal or constraints on working to avoid the overwintering period, a requirement to avoid construction site compounds or other features within or near confirmed roost sites, and/or use of visual/acoustic barriers between working areas and roost sites. With the use of surveys and additional mitigation measures if roost sites will be affected by works, the risk of significant effects on overwintering birds as a result of habitat loss within the SPA/Ramsar/SSSI is considered to be low.

### *Risk of disturbance*

NS recommends the following disturbance buffers for the qualifying non-breeding bird species of the SPA/Ramsar/SSSI during the non-breeding season (Goodship and Furness 2022):

- Bar-tailed godwit: 200-300m
- Curlew: 200-650m
- Dunlin: 150-300m
- Greylag goose: 200-600m
- Knot: 100-300m
- Oystercatcher: 150-300m
- Pintail: 100-200m
- Red-breasted merganser: N/a
- Redshank: 200-300m
- Scaup: 150-450m (estimate for greater scaup)
- Whooper swan: 200-600m
- Wigeon: 200-500m

These species are known to use the Cromarty Firth and are likely to be present within the vicinity of A9 Cromarty Bridge during the overwintering period (October to March), potentially within the above disturbance buffers for each species. Therefore, there is a risk that works on A9 Cromarty Bridge could result in disturbance to overwintering birds associated with the SPA/Ramsar/SSSI due to increased presence of vehicles, plant, personnel, and lighting on the bridge during works.

Most of the proposed works will take place on or below the A9 Cromarty Bridge deck where there is already an existing level of activity, noise, and light from traffic throughout the year and at all hours. Overwintering birds in the vicinity of A9 Cromarty Bridge are likely to be accustomed to existing levels of traffic and activity on the bridge and most proposed works (i.e., routine maintenance activities and smaller schemes) are unlikely to significantly differ from baseline levels of traffic noise, light, and activity on the bridge. Although an increase in baseline noise level is expected during works for some larger schemes, any increase in noise will be temporary, intermittent, of short duration, and localised to the trunk road. Some works may require access or lighting outside of the carriageway (e.g., below the deck); however, these works will be highly localised and will generally last for one month or less (with the exception of a small number of larger schemes). Full containment/encapsulation will be required for hydro-demolition which will provide some visual and acoustic screening between the working area and SPA/Ramsar/SSSI. Additionally, there is ample alternative roosting and foraging habitat for overwintering birds within the SPA/Ramsar/SSSI and wider Moray Firth area that will remain available outside of the working area and of the disturbance buffers for these species. Working hours are dependent on several factors (e.g., network restrictions on traffic management) and may entail daytime works, overnight works, or a combination of both. Certain activities

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included in Phase 3 and 4 refurbishment works will require 24-hour access and will likely require short periods of extended working hours (e.g., over weekends to reduce impacts of road closures on vehicular travellers). However, the following measures will be in place to reduce the effects of disturbance on overwintering birds in the vicinity of the bridge:

- Pre-construction surveys will be carried out prior to larger schemes with longer durations (e.g., Phase 3 and 4 refurbishment works, scour repairs, large concrete repairs) to identify any evident roosting areas for overwintering birds within disturbance buffers of works.
- If any are identified, additional consultation will be carried out with NS to agree suitable mitigation measures to reduce the risk of disturbance to overwintering birds, such as:
  - Seasonal constraints on works to avoid the overwintering period.
  - Timing restrictions on works to reduce the risk of effects during the overwintering period.
  - Use of visual and/or acoustic barriers within working areas or at site compound locations.
- The 'Birds' Toolbox Talk will be included in the SEMP and provided to all site staff prior to works commencing.
- Access to intertidal areas and mudflats in Cromarty Firth SPA/Ramsar/SSSI must be avoided during cold weather when seven or more consecutive days of freezing conditions have been recorded, which can leave overwintering birds more vulnerable to disturbance.
- Any artificial lighting required during night works or periods of low light levels will be directed at the area of works as far as is safe and reasonably practicable. Light spillage will be reduced as much as possible (e.g., via use of shades).
- The best practice means, as defined in Section 72 of the Control of Pollution Act 1974 and BS5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites will always be employed to reduce noise produced during works as much as possible.
- A daily cessation of noisy works (e.g., hydro-demolition) will be planned during construction to allow a quiet period each day.
- Plant, machinery and equipment fitted with effective silencers where available will be utilised for the works. Where fitted, and where permitted under Health and Safety requirements, white noise reversing alarms will be utilised during construction.
- Where possible, inherently quiet plant will be selected for construction works. Where appropriate, pumps and generators will be sound-reduced models with fitted, lined, and sealed acoustic covers.
- All plant will be operated in such a way that minimises noise emissions and be switched off when not in use.
- For larger schemes with longer durations (e.g., Phase 3 and 4 refurbishment works, scour works, large concrete repairs), an ECoW will attend site regularly during works to monitor sensitive ecological receptors (e.g., overwintering birds) and mitigation measures to reduce impacts.

There is a risk of disturbance to overwintering birds as a result of the proposed 10-year programme of works at A9 Cromarty Bridge, particularly for certain activities that will require in-water works or access via shoreline habitat and/or will entail noisy works at night. However, with the above measures in place to reduce the effects of noise, lighting, and presence of construction equipment and staff, the risk of significant disturbance to overwintering birds within the SPA/Ramsar/SSSI is considered to be low.

### *Risk of pollution*

For all of the proposed maintenance activities, there is potential for indirect effects on overwintering birds, their supporting habitats, and prey species as a result of pollution from construction activities or from discharge of water used in hydro-demolition. However, the standard working practices listed in Stage 1 and Appendix B include robust containment measures to prevent pollution events for both in-water works or access and other works. Furthermore, additional measures will be in place to ensure that water used in hydro-demolition is captured, appropriately treated to reduce pH and suspended solids, and removed or (where required) discharged under an appropriate authorisation from SEPA. The volume and rate of discharge will be agreed with SEPA and would determine the level of authorisation required to permit discharge. Treatment of water prior to discharge will be carried out with appropriate values for pH and suspended solids stipulated in the SEMP. Typically, a pH value between 5-9 and a suspended solids value between 80-100mg/l is considered acceptable for discharge. Discharging to a location on land will be planned where possible and will be the preferred option over discharging to the marine environment. Authorisation will be sought from SEPA to permit discharge of wastewater as required on a scheme-by-scheme basis as required and no discharges will take place until the appropriate authorisation is secured. As noted in Stage 1, a CAR simple

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licence has been issued by SEPA to permit discharge of treated hydro-demolition water to the marine environment during Phase 3 refurbishment works and all conditions of this licence will be adhered to during works.

None of the proposed works involve activities that would result in changes to the water levels, tides, or other hydrological processes in the Cromarty Firth. The proposed works in the 10-year programme will be highly localised and adhere to standard good practice for pollution prevention; therefore, no significant effects on fish or invertebrates within the Cromarty Firth SPA/Ramsar (i.e., prey for overwintering birds) have been identified.

With these measures in place during works, the risk of indirect effects on overwintering birds and their supporting habitats and prey species as a result of pollution is limited.

**Qualifying Ramsar habitats**

*Includes assessment of qualifying habitats (mudflats, sandflats, saltmarsh, open water transition fen) in Cromarty Firth SSSI and Lower River Conon SSSI for completeness.*

As noted in Stage 3 above, the qualifying habitats of Cromarty Firth Ramsar include intertidal mudflats and sandflats, open water transition fen, and saltmarsh, which provide foraging and breeding habitat for the qualifying bird species of the SPA/Ramsar. Similarly, the qualifying habitats of Cromarty Firth SSSI and Lower River Conon SSSI also provide supporting habitats for the qualifying birds species. Some areas of habitat are unlikely to be directly affected by works; however, there is potential for coastal or marine habitats to be affected directly (e.g., if intertidal access and/or scour works are required) or indirectly (e.g., via pollution incidents).

*Risk of habitat loss or damage*

According to the [National Marine Plan Interactive](#), the nearest area of saltmarsh habitat to the bridge is located approximately 1.7km southwest of the bridge along the southern shore of Cromarty Firth (Figure 2). Additional areas of saltmarsh are present further west in Dingwall Bay and at the mouth of the River Conon, and further northeast of the bridge near Evanton and Alness. The nearest areas of intertidal mudflats and sandflats are located approximately 2.7km southwest of the bridge in Dingwall Bay, with additional areas present northeast of the bridge at Alness Bay (Figure 2; [National Marine Plan Interactive](#)). Open water transition fen habitat is present near the mouth of the River Conon, approximately 5km from A9 Cromarty Bridge (NS 2022).



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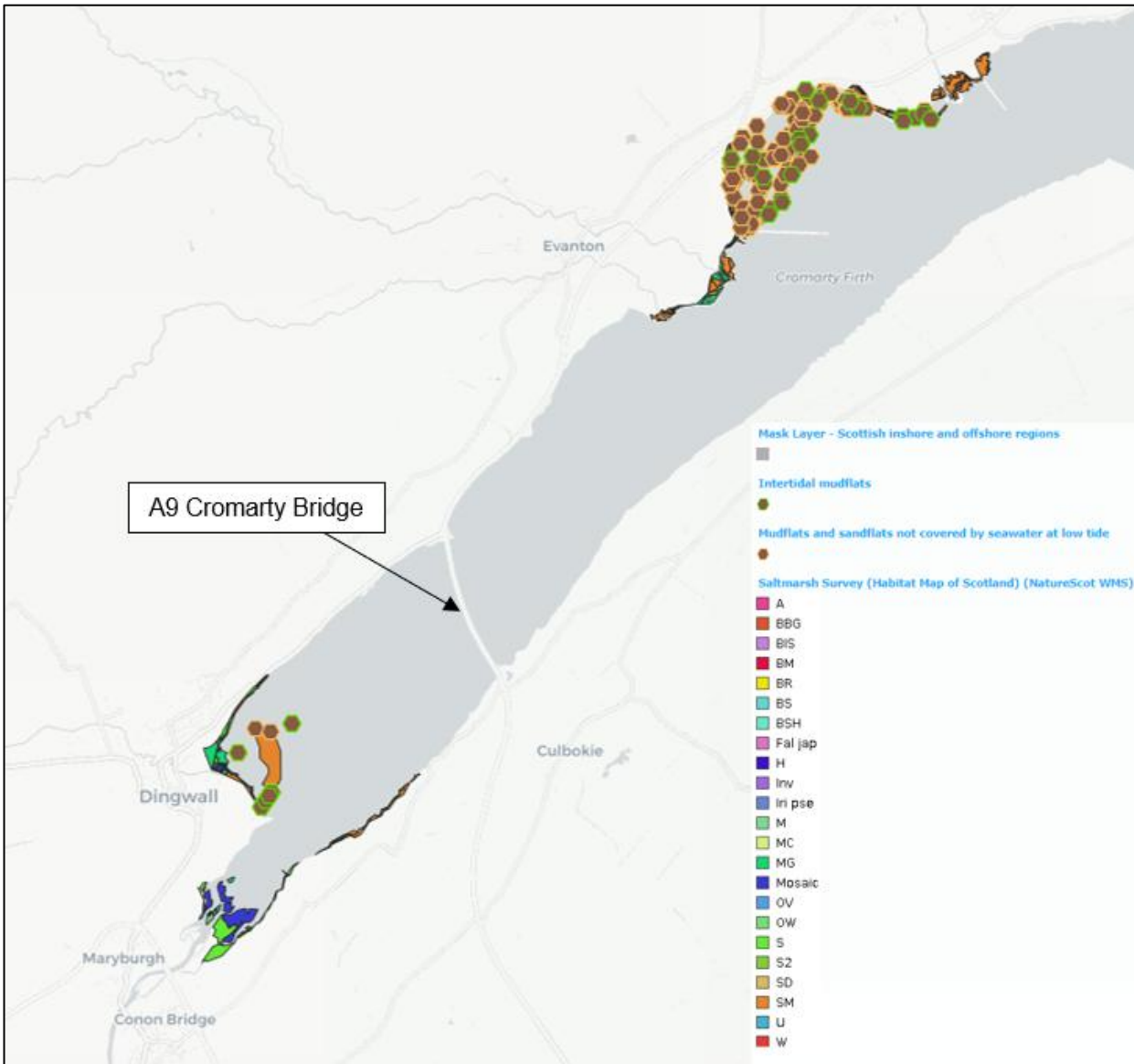


Figure 2. Map showing locations of qualifying habitats within Cromarty Firth Ramsar site in relation to A9 Cromarty Bridge. Source: [National Marine Plan Interactive](#).

None of the qualifying habitats appear to be present in the immediate vicinity of A9 Cromarty Bridge, where proposed works would take place. Even if any qualifying habitats are present and have not been recorded on the National Marine Plan Interactive map, the majority of proposed works will not require in-water works or shoreline access. Phase 3 and 4 refurbishment works and scour repair works will require the use of jack-up barges at piers 8-13 (and any other piers identified to require scour repair works). Scour works would also entail excavation of the seabed. However, the areas of excavation for scour repairs would be highly localised around the bridge piers, most of which are located in the middle of the firth away from intertidal habitat areas. Similarly, jack-up barges utilising stabilising legs would be situated at the pier locations during works in highly localised areas. Piers 8-13 are located approximately 150-280m north of the southern bridge abutment near the edge of Ramsar boundary where the water depth begins to increase. Therefore, this area is likely to be marginal for supporting the qualifying intertidal habitats (if present). The few schemes that will require in-water or shoreline access carry a minor risk of affecting qualifying habitats along the shore or in intertidal areas. The floating jetty required for Phase 3 and 4 refurbishment works would likely occupy a very small area of the shoreline and intertidal habitat west of the bridge on the northern shore of the firth. However, this would be a temporary structure in place during construction for these schemes and would be removed following completion of each scheme. Any damage to the foreshore would be reinstated as required. In addition, the very small area occupied by the floating jetty would represent a tiny fraction of the overall intertidal

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habitat within the SPA/Ramsar/SSSI. Therefore, upon detailed review, the risk of significant damage or loss of qualifying habitats within the SPA/Ramsar/SSSI as a result of proposed works is considered to be low.

### *Risk of pollution*

For all of the proposed maintenance activities, there is potential for indirect effects on the qualifying habitats and their typical species as a result of pollution from construction activities or from discharge of water used in hydro-demolition. However, the standard working practices listed in Stage 1 and Appendix B include robust containment measures to prevent pollution events for both in-water works or access and other works. Furthermore, additional measures will be in place to ensure that water used in hydro-demolition is captured, appropriately treated to reduce pH and suspended solids, and removed or (where required) discharged under an appropriate authorisation from SEPA. The volume and rate of discharge will be agreed with SEPA and would determine the level of authorisation required to permit discharge. Treatment of water prior to discharge will be carried out with appropriate values for pH and suspended solids stipulated in the SEMP. Typically, a pH value between 5-9 and a suspended solids value between 80-100mg/l is considered acceptable for discharge. Discharging to a location on land will be planned where possible and will be the preferred option over discharging to the marine environment. Authorisation will be sought from SEPA to permit discharge of wastewater as required on a scheme-by-scheme basis as required and no discharges will take place until the appropriate authorisation is secured. As noted in Stage 1, a CAR simple licence has been issued by SEPA to permit discharge of treated hydro-demolition water to the marine environment during Phase 3 refurbishment works and all conditions of this licence will be adhered to during works.

With these measures in place during works, the risk of indirect effects on the qualifying habitats and their typical species as a result of pollution is limited.

### Cumulative and in-combination effects

Although the proposed activities would be highly localised to the A9 Cromarty Bridge and immediate vicinity, the timing of works over the next 10 years has not yet been confirmed. The proposed works in the 10-year programme also range from very minor reactive maintenance activities that could take one or two days to complete to larger planned schemes that could take several months to complete, and which may not take place for several more years. Consequently, it is not practicable at this time to search for other plans or projects that may have cumulative or in-combination effects until individual maintenance schemes are designed and submitted for environmental assessment. However, as part of the environmental assessment for each scheme, a search will be undertaken for other plans and projects that could have cumulative or in-combination effects in the vicinity of the proposed maintenance works. If there is potential for these effects, additional consultation will be carried out with NS. However, considering the nature and scale of each of the maintenance activities, there is likely to be limited potential for significant cumulative or in-combination effects due to other plans or projects.

The potential for cumulative or in-combination effects resulting from multiple activities carried out by BEAR is also limited due to the minor and localised scale of most proposed maintenance activities. Although some minor cyclic maintenance could be carried out during or close to the timing of a larger scheme, any planned larger schemes at A9 Cromarty Bridge or other major trunk road bridges (e.g., A9 Kessock Bridge, A9 Dornoch Bridge) would not be carried out concurrently or within the same financial year due to budget limitations and required lead-in time for tendering and mobilisation, which reduces the risk of significant cumulative or in-combination effects due to disturbance on and around the bridge. In addition, BEAR Scotland programme all proposed works in line with appropriate guidance and contractual requirements to take into account existing and future planned works on the trunk roads with a view to limiting any cumulative effects relating to traffic management. As a result of this approach, disturbance in localised areas due to construction noise and activities is also limited.

Overall, due to the nature and scale of the proposed activities and the limited potential for overlap of any activities during the 10-year programme, it is unlikely that any of the proposed maintenance activities would result in significant cumulative or in-combination effects on any of the qualifying features within the Cromarty Firth SPA/Ramsar/SSSI.

### Conclusion

Upon detailed review, the risk of significant effects on the qualifying habitats of the Cromarty Firth Ramsar is considered to be low, but some schemes and/or routine maintenance activities proposed in the 10-year programme of works at A9 Cromarty Bridge may result in LSE on the qualifying bird species of the SPA/Ramsar, particularly as a result of disturbance during construction. **However, with the above measures in place alongside robust containment measures, these works are not expected to result in AESI for the Cromarty Firth SPA or Ramsar, and all conservation objectives for the qualifying bird species will be met.**

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Similarly, with the above measures in place, no significant negative impacts have been identified on the qualifying features of Cromarty Firth SSSI or Lower River Conon SSSI a result of proposed works.

## 2. Moray Firth SAC

### Bottlenose dolphin

As noted above, the Moray Firth SAC is designated for bottlenose dolphin and is located approximately 18km from the A9 Cromarty Bridge at the nearest point of hydrological connectivity that could be used by dolphins.

Although the proposed works at A9 Cromarty Bridge will not include fishing or use of nets (which could entangle dolphins), some works will require the use of vessels and all works have potential to result in pollution of the marine environment. Therefore, there is a risk of direct impacts on dolphins due to collision with construction vessels and a risk of indirect impacts on dolphins due to disturbance (e.g., underwater noise, loss of foraging habitat), and pollution.

#### *Risk of collision*

None of the proposed maintenance activities would entail works within the boundaries of the SAC. All proposed works would be highly localised to the A9 Cromarty Bridge and immediate surroundings; therefore, any works would be located over 18km (straight-line distance) from the nearest connected point of the SAC. Only a small number of proposed works (e.g., scour works, Phase 3 and 4 refurbishment works, cathodic protection), would require in-water works or access, which carry the highest risk of direct impacts to dolphins (e.g., via entanglement with equipment and/or collisions with vessels). Small access boats and jack-up barges will be required for some of these works, although it is not anticipated that any in-water works will require equipment such as netting or lines that could present a higher risk of entanglement to dolphins. Most of the proposed works would take place on the bridge or by using below-deck access (e.g., scaffolding or underbridge unit). Therefore, the risk of construction vessels colliding with bottlenose dolphins is negligible for most proposed works.

Even for works that will require in-water works or access, dolphin survey results during site condition monitoring of the Moray Firth SAC in 2014-2016 suggest that the risk of encountering dolphins near the A9 Cromarty Bridge is low (Cheney et al. 2018, Hague et al. 2020). During the 124 photographic surveys completed in the Sutors area near the village of Cromarty at the mouth of the Cromarty Firth between May-September from 2011 to 2016, the probability of encountering bottlenose dolphins was 79% on average (Cheney et al. 2018). Survey effort for these surveys extended to approximately 5km west of Cromarty Harbour in 2016 (approximately 16.5km from the bridge); however, bottlenose dolphins were only encountered approximately 2.5km west of Cromarty Harbour, with none recorded further west in the Cromarty Firth during surveys (Cheney et al. 2018, Hague et al. 2020). Passive acoustic monitoring was also undertaken at the Sutors between 2011-2016 which showed a peak in the number of hours dolphins were detected per day during May-July; however, dolphins were detected on almost all days between April and December (albeit for fewer hours per day in non-summer months), which suggests that this area near the village of Cromarty is used year-round by dolphins in the SAC (Cheney et al. 2018). The results of these site condition monitoring surveys suggest that bottlenose dolphins occur more frequently in the wider Moray Firth east of the Black Isle and are therefore unlikely to be encountered near A9 Cromarty Bridge (approximately 18km from Cromarty), which reduces the risk of direct impacts on dolphins such as entanglement or collisions due to works. However, it is still possible that dolphins may occasionally forage or commute in more western parts of the Cromarty Firth closer to the bridge. Therefore, any boats or vessels required will launch from local points where possible to limit travel distances. The Phase 3 and 4 refurbishment schemes are expected to take approximately six months to complete, during which time the jack-up barges will be stationed at the area of works (Piers 8-10 for Phase 3, Piers 11-13 for Phase 4), only moving small distances between these piers as required. Similar methods for jack-up barges would be followed for scour works if any are required to limit movement of vessels and reduce the risk of collision with any dolphins in the area. Where the use of boats or other vessels is required to carry out works, all vessels operating during works will adhere to the general principles in the 'Scottish Marine Wildlife Watching Code' and 'A Guide to Best Practice for Watching Marine Wildlife' (NS 2016b, NS 2017), including the following measures:

- Vessels will not approach any marine wildlife.
- Vessels will maintain a safe distance (at least 50m, preferably more) from any marine wildlife passing through the area of works and/or access routes.
- Vessels will avoid sudden unpredictable changes in speed, direction, and engine noise.

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- Vessels will not cut off an animal or group of animals by moving across their path and will not approach them from behind.

With these measures in place, and as bottlenose dolphins are highly mobile, it is expected that they would easily be able to avoid any vessels used for works. Therefore, upon detailed review, the risk of construction vessels colliding with bottlenose dolphins within the SAC is considered to be low.

### *Risk of disturbance*

The majority of proposed works on A9 Cromarty Bridge do not entail in-water works or access and therefore will not result in significant underwater noise that could cause disturbance to bottlenose dolphins. The Phase 3 and 4 refurbishment works, cathodic protection scheme, scour works, and some cyclic inspections will likely produce some underwater noise due to the use of barges or other boats, but none of these in-water works are anticipated to entail activities that would create impulsive noise (e.g., pile driving, explosions) that can be detrimental to hearing in dolphins (Southall et al. 2019). Scour works and the use of vessels such as jack-up barges and access boats would create temporary, localised, non-impulsive underwater noise in the vicinity of A9 Cromarty Bridge. However, as noted above, dolphin survey results during site condition monitoring of the Moray Firth SAC in 2014-2016 suggest that bottlenose dolphins associated with the Moray Firth SAC do not tend to occur near the A9 Cromarty Bridge (Cheney et al. 2018, Hague et al. 2020).

Dolphins associated with the Moray Firth SAC fall into the coastal ecotype population, which occurs in inshore waters over the continental shelf in areas with high boat traffic levels (New et al. 2013, Hague et al. 2020). These dolphins are likely to be habituated to existing levels of noise and activity due to boat traffic within the Cromarty Firth and wider Moray Firth. The proposed maintenance activities at A9 Cromarty Bridge are unlikely to result in significantly higher levels of noise than baseline levels. New et al. (2013) studied the effects of anthropogenic disturbance on this population of bottlenose dolphins by modelling and comparing the effects of current boat traffic levels at the time to a six-fold increase in boat traffic around Nigg at the mouth of the Cromarty Firth. The study concluded that the simulated increase in vessel traffic did not result in any changes to the size of dolphin groups, their spatial distribution, or activity budgets within the Moray Firth, as the dolphins could avoid more heavily trafficked areas and utilise alternative undisturbed areas of the Firth (New et al. 2013). Pirotta et al. (2015) also simulated the effects of increased boat traffic and dredging activities on dolphins in the Moray Firth and found no significant effect of these activities on calf survival. The simulated sites of dredging activities and increased boat traffic in the study by Pirotta et al. (2015) were located at Invergordon, Nigg, and Ardersier; as the A9 Cromarty Bridge is located even further west than the westernmost of these sites (Invergordon), any effects on dolphins in the Moray Firth as a result of increased boat traffic or in-water works are likely to be similar or even less significant than those modelled in the study. The results of these studies suggest that localised increases in disturbance due to increased boat traffic and/or dredging activities do not affect the overall viability of the dolphin population or survival rates of calves over the longer term. As the potential disturbance sources from proposed in-water works at A9 Cromarty Bridge are similar to those investigated by these studies, any short-term effects of disturbance on dolphins in the Moray Firth are likewise not expected to have a significant detrimental effect on the bottlenose dolphin population within the Moray Firth SAC.

The A9 Cromarty Bridge is located outside of the Moray Firth SAC and none of the works involve activities that would result in changes to the water levels, tides, or other hydrological processes in the Cromarty Firth. Therefore, the proposed maintenance activities would not result in direct loss of habitat for bottlenose dolphin or their prey species within the SAC. In-water works may temporarily reduce available foraging areas, but the area around A9 Cromarty Bridge is likely sub-optimal for foraging dolphins, which are highly mobile and would have abundant habitat of higher foraging quality available in the wider Moray Firth (New et al. 2013, Pirotta et al. 2015). Previous consultation undertaken with the Cromarty DSFB regarding proposed scour works at A9 Cromarty Bridge did not highlight any concerns in regard to fish, as the works were highly localised and appropriate pollution prevention measures were in place. The proposed works in the 10-year programme would similarly be highly localised and adhere to standard good practice for pollution prevention; therefore, no significant effects on fish within Cromarty Firth (i.e., prey for bottlenose dolphins) have been identified.

Upon detailed review, the works are considered to carry limited potential to result in significant underwater noise or impacts on foraging habitat for bottlenose dolphins within the Moray Firth SAC. In addition, considering that bottlenose dolphins are highly mobile and capable of moving to undisturbed areas of the SAC, the risk of significant disturbance on bottlenose dolphins as a result of the proposed works is considered to be low.

### *Risk of pollution*

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Dolphins and their prey species are highly mobile. Therefore, there is potential for indirect effects on dolphins, their supporting habitats, and prey species as a result of pollution from construction activities or from discharge of water used in hydro-demolition. However, the standard working practices listed in Stage 1 and Appendix B include robust containment measures to prevent pollution events for both in-water works or access and other works. Furthermore, additional measures will be in place to ensure that water used in hydro-demolition is captured, appropriately treated to reduce pH and suspended solids, and removed or (where required) discharged under an appropriate authorisation from SEPA. The volume and rate of discharge will be agreed with SEPA and would determine the level of authorisation required to permit discharge. Treatment of water prior to discharge will be carried out with appropriate values for pH and suspended solids stipulated in the SEMP. Typically, a pH value between 5-9 and a suspended solids value between 80-100mg/l is considered acceptable for discharge. Discharging to a location on land will be planned where possible and will be the preferred option over discharging to the marine environment. Authorisation will be sought from SEPA to permit discharge of wastewater as required on a scheme-by-scheme basis as required and no discharges will take place until the appropriate authorisation is secured. As noted in Stage 1, a CAR simple licence has been issued by SEPA to permit discharge of treated hydro-demolition water to the marine environment during Phase 3 refurbishment works and all conditions of this licence will be adhered to during works.

None of the proposed works involve activities that would result in changes to the water levels, tides, or other hydrological processes in the Cromarty Firth. The proposed works in the 10-year programme will be highly localised and adhere to standard good practice for pollution prevention; therefore, no significant effects on fish within the Moray Firth SAC (i.e., prey for bottlenose dolphins) have been identified.

With these measures in place during works, the risk of indirect effects on bottlenose dolphins and their supporting habitats and prey species as a result of pollution is limited.

### Cumulative and in-combination effects

Although the proposed activities would be highly localised to the A9 Cromarty Bridge and immediate vicinity, the timing of works over the next 10 years has not yet been confirmed. The proposed works in the 10-year programme also range from very minor reactive maintenance activities that could take one or two days to complete to larger planned schemes that could take several months to complete, and which may not take place for several more years. Consequently, it is not practicable at this time to search for other plans or projects that may have cumulative or in-combination effects until individual maintenance schemes are designed and submitted for environmental assessment. As noted above, a search will be undertaken for other plans and projects that could have cumulative or in-combination effects in the vicinity of the proposed maintenance works on a case-by-case basis once individual maintenance schemes are designed and submitted for environmental assessment. If there is potential for these effects, additional consultation will be carried out with NS. However, considering the nature and scale of each of the maintenance activities and the distance between the Moray Firth SAC and the A9 Cromarty Bridge, there is likely to be extremely limited potential for significant cumulative or in-combination effects due to other plans or projects.

The potential for cumulative or in-combination effects resulting from multiple activities carried out by BEAR is also limited due to the minor and localised scale of most proposed maintenance activities. Although some minor cyclic maintenance could be carried out during or close to the timing of a larger scheme, any planned larger schemes would not be carried out concurrently or within the same financial year due to budget limitations and required lead-in time for tendering and mobilisation, which reduces the risk of significant cumulative or in-combination effects due to disturbance on and around the bridge. In addition, BEAR Scotland programme all proposed works in line with appropriate guidance and contractual requirements to take into account existing and future planned works on the trunk roads with a view to limiting any cumulative effects relating to traffic management. As a result of this approach, disturbance in localised areas due to construction noise and activities is also limited.

Overall, due to the nature and scale of the proposed activities, the distance between the area of works and the SAC, and the limited potential for overlap of any activities during the 10-year programme, it is highly unlikely that any of the proposed maintenance activities would result in significant cumulative or in-combination effects on the qualifying feature bottlenose dolphin within the Moray Firth SAC.

### Conclusion

Upon detailed review, the majority of proposed works at A9 Cromarty Bridge over the next 10 years have limited potential to result in LSE on bottlenose dolphins within the SAC. A few activities carry a higher risk of impacting bottlenose dolphins due to collisions with vessels or disturbance, and all activities have potential to result in pollution. **However, with the above measures in place alongside robust containment measures, these works are not**

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expected to result in AESI for the Moray Firth SAC, and all conservation objectives for bottlenose dolphins with the SAC will be met.

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## Stage 5: Can it be Ascertained that the Proposal Will Not Adversely Affect the Integrity of the Site?

### Assessment for AESI

In the light of the appraisal, ascertain whether the proposal will not adversely affect the integrity of the site. Conclusions should be reached beyond reasonable scientific doubt. If more than one SAC and/or SPA is involved, give separate conclusions. If mitigation or modifications are required, detail these below.

LSE could not be ruled out for the following qualifying features:

- Cromarty Firth SPA
  - Breeding populations of the following bird species:
    - Common tern
    - Osprey
  - Non-breeding (overwintering) populations of the following bird species:
    - Bar-tailed godwit
    - Dunlin
    - Curlew
    - Greylag goose
    - Knot
    - Oystercatcher
    - Pintail
    - Red-breasted merganser
    - Redshank
    - Scaup
    - Whooper swan
    - Waterfowl assemblage
- Cromarty Firth Ramsar
  - All of the above bird species listed under Cromarty Firth SPA
  - Intertidal mudflats and sandflats
  - Open water transition fen
  - Saltmarsh
- Moray Firth SAC
  - Bottlenose dolphin

However, with the measures outlined in Stage 4 in place, alongside the proper application of the standard working practices and measures described in Stage 1 and Appendix B, **it is concluded that the works will not result in AESI for the above designated sites**, either alone or in combination with other plans or projects.

Similarly, with the proper application of the standard working practices and measures described in Stage 1 and Appendix B, it is concluded that the proposed maintenance activities **would not result in LSE and therefore would also not result in AESI on the following qualifying features:**

- Conon Islands SAC
  - Alder woodland on floodplains
- Cromarty Firth Ramsar
  - Estuarine alder woodland
- Inner Moray Firth SPA
  - Breeding populations of the following bird species:
    - Common tern
    - Osprey
  - Non-breeding (overwintering) populations of the following bird species:

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- Bar-tailed godwit
- Cormorant
- Goldeneye
- Goosander
- Greylag goose
- Oystercatcher
- Red-breasted merganser
- Redshank
- Scaup
- Teal
- Wigeon
- Waterfowl assemblage
- Inner Moray Firth Ramsar
  - All of the above bird species listed under Inner Moray Firth SPA
  - Intertidal mudflats and sandflats
  - Saltmarsh
  - Sand dunes
  - Shingle
- Moray Firth SAC
  - Subtidal sandbanks



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## Modifications Required to Ensure Adverse Effects are Avoided and Reasons for These

### Required Modifications

Only list those modifications (i.e., further mitigation) that have been identified as being required to prevent there being an adverse effect on site integrity.

Do not include mitigation that has already been planned in the plan/project or best practice that is already being followed unless you believe these should be added as conditions to the permission given.

Following detailed review, the below measures to reduce the effects of noise, artificial lighting, and pollution from works are considered suitable to ensure that the works do not result in AESI on Cromarty Firth SPA, Cromarty Firth Ramsar, and Moray Firth SAC:

### Cromarty Firth SPA/Ramsar – breeding and overwintering birds, intertidal habitats

- Pre-construction surveys (e.g., for osprey or overwintering birds) and consultation with the Highland Raptor Study Group will be carried out prior to larger schemes with longer durations (e.g., greater than 1 month) to identify any nests or roost sites that may be affected by proposed works.
- Pre-construction bird surveys will be timetabled into project plans as required to allow sufficient time to identify any active nests or roost sites and install appropriate mitigation prior to works commencing (if required), which will be agreed with NS and may include:
  - Seasonal constraints on works to avoid the breeding season and/or overwintering period.
  - Timing restrictions on works to reduce the risk of effects during the bird breeding season and/or overwintering period.
  - Use of visual and/or acoustic barriers within working areas or at site compound locations.
  - Restrictions on tree felling if osprey nests present.
  - Installation of compensatory nesting habitat for osprey such as an artificial nesting platform.
- No works or access are permitted on or across Arduillie Point.
- No works on the bridge are permitted within 250m of Arduillie Point during the tern breeding season (April to July inclusive, unless otherwise agreed with NS). Any deviation from this must be agreed with NS.
- The site compound and floating jetty will be located at least 250m from and out of sight of Arduillie Point where possible. If this is not possible, additional measures (e.g., screens or barriers) will be discussed and agreed with NS to ensure that sufficient visual/acoustic buffers are in place between the site compound and Arduillie Point.
- If a temporary mooring point is required at the northern abutment, this will be installed on the west side of the abutment outside of the tern breeding season (April to July inclusive, unless otherwise agreed with NS).
- During the tern breeding period (1st April to 31st July inclusive, unless otherwise agreed with NS), boat traffic at the northern end of A9 Cromarty Bridge may only take access to the working area from the west side of the bridge, which is screened from view of the tern colony.
- Access to intertidal areas and mudflats in Cromarty Firth SPA/Ramsar/SSSI must be avoided during cold weather when seven or more consecutive days of freezing conditions have been recorded, which can leave overwintering birds more vulnerable to disturbance.
- The 'Birds' Toolbox Talk will be included in the SEMP and provided to all site staff prior to works commencing.
- Any artificial lighting required during night works or periods of low light levels will be directed at the area of works as far as is safe and reasonably practicable. Light spillage will be reduced as much as possible (e.g., via use of shades).
- The best practice means, as defined in Section 72 of the Control of Pollution Act 1974 and BS5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites will always be employed to reduce noise produced during works as much as possible.
- A daily cessation of noisy works (e.g., hydro-demolition) will be planned during construction to allow a quiet period each day.

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- Plant, machinery and equipment fitted with effective silencers where available will be utilised for the works. Where fitted, and where permitted under Health and Safety requirements, white noise reversing alarms will be utilised during construction.
- Where possible, inherently quiet plant will be selected for construction works. Where appropriate, pumps and generators will be sound-reduced models with fitted, lined, and sealed acoustic covers.
- All plant will be operated in such a way that minimises noise emissions and be switched off when not in use.
- All ancillary plant such as generators will be positioned so as to cause minimum noise disturbance. Where deemed necessary, acoustic screens will be utilised.
- For larger schemes with longer durations (e.g., Phase 3 and 4 refurbishment works, scour works, large concrete repairs), an ECoW will attend site regularly during works to monitor sensitive ecological receptors (e.g., breeding and overwintering birds) and mitigation measures to reduce impacts.
- If discharge of water used for hydro-demolition is required, an appropriate level of authorisation must be secured from SEPA prior to any discharge of water and all conditions of the authorisation must be adhered to during works.
- Hydro-demolition water must be appropriately treated (e.g., via Siltbuster) prior to discharge to reduce pH and suspended solids to acceptable levels (typical values are 5-9 for pH and 80-100mg/l for suspended solids).

### Moray Firth SAC – bottlenose dolphins

- Boats/barges to be launched from local ports where possible to limit travel distances
- Where the use of boats or other vessels is required to carry out works, all vessels operating during works will adhere to the general principles in the 'Scottish Marine Wildlife Watching Code' and 'A Guide to Best Practice for Watching Marine Wildlife' (NS 2017), including the following measures:
  - Vessels will not approach any marine wildlife.
  - Vessels will maintain a safe distance (at least 50m, preferably more) from any marine wildlife passing through the area of works and/or access routes.
  - Vessels will avoid sudden unpredictable changes in speed, direction, and engine noise.
  - Vessels will not cut off an animal or group of animals by moving across their path and will not approach them from behind.
- If discharge of water used for hydro-demolition is required, an appropriate level of authorisation must be secured from SEPA prior to any discharge of water and all conditions of the authorisation must be adhered to during works.
- Hydro-demolition water must be appropriately treated (e.g., via Siltbuster) prior to discharge to reduce pH and suspended solids to acceptable levels (typical values are 5-9 for pH and 80-100mg/l for suspended solids).

## Advice Sought

### Consultation

Include here details of, or clear reference to, any advice sought. If an appropriate assessment has been carried out NatureScot must be consulted.

Due to the proximity of A9 Cromarty Bridge to several designated sites, advice on potential impacts of works was sought from NS to inform this assessment.

Nathan McLaughlan, Operations Officer at NS, provided comment via email (received 29/11/2023) on the proposed scheme and routine maintenance works for A9 Cromarty Bridge and potential impacts of works on the nearby designated sites. In addition, Nathan McLaughlan provided advice to BEAR Scotland in May 2021 regarding a previous scour repair scheme. This advice has informed our assessment which will be submitted to Marine Directorate in support of a 10-year marine licence application. A copy of this consultation is included in Appendix A.

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## Conclusion in Relation to Plan or Project

### Conclusion

In view of the appraisal above select the appropriate response position and whether the plan or project can be consented/approved/undertaken. Note: this conclusion is just in relation to effects on a European site. There may be impacts to other natural heritage interests that also need to be considered.

This HRA has been undertaken to assess the potential effects of a 10-year programme of works at A9 Cromarty Bridge (described in Stage 1) on the qualifying features of the below European Sites, and has **concluded that the proposed activities will not result in LSE on the qualifying features of Conon Islands SAC, Inner Moray Firth SPA, or Inner Moray Firth Ramsar. Similarly, the proposed activities will not result in LSE on the qualifying feature subtidal sandbanks within Moray Firth SAC or the qualifying feature estuarine alder woodland within Cromarty Firth Ramsar. Although LSE on the qualifying feature bottlenose dolphin within Moray Firth SAC and the qualifying features of Cromarty Firth SPA and Ramsar could not be ruled out, it has been concluded that the proposed works will not result in AESI on these features provided that the above mitigation measures are in place.**

The assessment has considered standard working practices to comply with relevant legislation (as described in Stage 1 and Appendix B) in the above conclusion. While these standard working practices will benefit the qualifying features of the above sites, these working practices and measures are not being undertaken specifically for the qualifying interests. Instead, these working practices are required to comply with The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended).

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## Appendix A - Consultation

Pre-application consultation with NatureScot prior to submission of 10-year marine licence application for A9 Cromarty Bridge:

**From:** Carolyn Gillen <[CGillen@bearsotland.co.uk](mailto:CGillen@bearsotland.co.uk)>  
**Sent:** Tuesday, November 14, 2023 2:49 PM  
**To:** David Patterson <[David.Patterson@nature.scot](mailto:David.Patterson@nature.scot)>  
**Cc:** Peter Wrigley <[PWrigley@bearsotland.co.uk](mailto:PWrigley@bearsotland.co.uk)>; NW Environment <[NWEnvironment@bearsotland.co.uk](mailto:NWEnvironment@bearsotland.co.uk)>  
**Subject:** A9 Cromarty Bridge - HRA scoping consultation for 10-year programme of works

Hi David,

BEAR Scotland hold several 5-year marine licences (MLs) for major bridges on the NW trunk road network that will be expiring soon. We are currently working on applications for new long-term MLs that will be valid for 10 years, including one for A9 Cromarty Bridge. I am assuming that you are still the Area Officer for the Cromarty Firth, but if not, please let me know who would be best to contact.

Although we have a valid ML for A9 Cromarty Bridge that was issued last year, some works planned over the next 10 years are not covered, so we have decided to submit a new application to cover a range of planned schemes as well as routine/cyclic maintenance that may be required between 2024-2034. The attached 'Appendix C Supporting Information – A9 Cromarty Bridge' document includes details of works that may take place on the bridge within the next 10 years. As part of the ML application, I am working on a new HRA to assess potential impacts of the 10-year programme of works on nearby designated sites.

I have undertaken a scoping exercise to identify sites that may be impacted by works on the bridge. The attached 'A9 Cromarty 10YR ML HRA scoping notes – for NS' document includes a high-level assessment of potential connectivity and impacts for designated sites within 20km of A9 Cromarty Bridge. The 20km distance is primarily to capture sites with greylag geese or other species that can travel large distances to forage, etc., and that may use the Cromarty Firth. I have started writing an HRA Proforma, but as there are so many sites to consider, I wanted to confirm which ones should receive further assessment in the HRA Proforma before I get too far along.

I would very much appreciate if you could review the attached documents and advise whether you agree with my summary of sites to include in the HRA Proforma (Table 3 in the document)? At the moment, I am expecting that the Cromarty Firth SPA/Ramsar sites will require Appropriate Assessment, but Likely Significant Effects (LSE) are not expected on the other scoped-in European sites (and no significant negative impacts on the component SSSIs) due to a variety of reasons, such as distance from works, nature and mobility of the qualifying features, and availability of alternative suitable habitat. However, I would be happy to discuss further if you disagree or suggest any changes on sites to be scoped in or out of the HRA Proforma.

Please get in touch with any questions or if you need more information on anything.

Many thanks,  
 Carolyn

**Carolyn Gillen** BSc(Hons) MS MCIEEM  
 Environmental Scheme Delivery Manager | BEAR Scotland | North West Unit  
 Telephone: **IRed** | [www.bearsotland.com](http://www.bearsotland.com)



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RE: A9 Cromarty Bridge - HRA scoping - 10-year programme of works

Nathan McLaughlan <Nathan.Mclaughlan@nature.scot>  
To Carolyn Gillen

Reply Reply All Forward

Wed 29/11/2023 15:08

Hi Carolyn

Thank you for sending through the information relating to HRA scoping for works on the Cromarty Bridge over the next 10 years. We agree with the list of sites you have proposed. Happy to discuss further if it would be helpful and feel free to contact me if you have any questions.

Kind regards,

Nathan

**Nathan McLaughlan | Operations Officer – Central Highland**  
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**From:** Carolyn Gillen <CGillen@bearsotland.co.uk>  
**Sent:** Wednesday, November 15, 2023 1:08 PM  
**To:** David Patterson <David.Patterson@nature.scot>  
**Cc:** Nathan McLaughlan <Nathan.Mclaughlan@nature.scot>  
**Subject:** RE: A9 Cromarty Bridge - HRA scoping - 10-year programme of works

Hi David,

Thanks for letting me know that you've moved back to the Dornoch Firth area. We have just started looking at the requirements to renew our long-term marine licence for A9 Dornoch Bridge as well, so I'm sure we'll be in touch with you for that one in due course.

Nathan – I hope you don't mind looking at the information for the A9 Cromarty Bridge HRA. Please let me know if you have any questions.

Kind regards,  
Carolyn

**From:** David Patterson <David.Patterson@nature.scot>  
**Sent:** Wednesday, November 15, 2023 9:08 AM  
**To:** Carolyn Gillen <CGillen@bearsotland.co.uk>  
**Cc:** Nathan McLaughlan <Nathan.Mclaughlan@nature.scot>  
**Subject:** A9 Cromarty Bridge - HRA scoping - 10-year programme of works

Dear Carolyn,

Thanks very much for getting in touch and good to hear from you.

I have now migrated north again, responding to operations from the Dornoch Firth (bridge) north. Therefore, my colleague Nathan McLaughlan should be able to respond to your query, all being well. Hopefully, I am not speaking out of turn to suggest that Nathan will get back to you in due course on your query – thank you both.

With best wishes,

David.

**David Patterson | Operations Officer – North / Central Highland Areas**  
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t: 01463 701 693.  
Please note, I normally work Mon-Thurs only

Previous consultation response from Nathan McLaughlan regarding access from the north abutment during the tern breeding season. Consultation was undertaken in May 2021 during a previous scour repair scheme.

RE: A9 Cromarty Bridge

Nathan McLaughlan <Nathan.Mclaughlan@nature.scot>  
To Eddie Douglas

Reply Reply All Forward

Wed 26/05/2021 09:55

You forwarded this message on 26/05/2021 15:29.

Hi Eddie

Following our discussion on site I can confirm that the limit of only working on 6 piers was not set by NatureScot and we have no objections to this being changed, provided it is discussed and agreed with Marine Scotland.

We are happy for access to be taken year round from the location we discussed on site, as I agree this is screened from the nesting area.

We cannot, however, conclude that works within 250m of the tern colony would not have an 'Adverse Effect on Site Integrity'. Given the location of the colony, and the bridge design, this equates to approximately 100m of piers, and a restriction on works for a small part of the year. I appreciate what you've said on site regarding the weather, overrunning of works, budgets etc, however we feel there are ways to work around these issues.

Happy to discuss this further.

Kind regards,

Nathan

**Nathan McLaughlan | Area Officer, South Highland**  
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## A9 Cromarty Bridge 10-Year Marine Licence HRA Proforma

Document:	Form 565 Habitats Regulations Appraisal Proforma
Issue:	#1
Related to:	All Contracts



## Appendix B – Standard Good Practice Measures

### Standard working practices for works in or near water

Works will be undertaken within the marine environment and as such are generally not subject to authorisation under The Water Environment (Controlled Activities) (Scotland) Regulations (CAR) 2011 (as amended). However, BEAR Scotland follow good practice guidance (including but not limited to the below list) as standard for works in or near water to reduce the risk of water pollution as much as possible:

- Engineering in the Water Environment Good Practice Guide. Temporary Construction Methods WAT-SG-29 (SEPA, 2009).
- Engineering in the Water Environment Good Practice Guide. River Crossings WAT-SG-25 (SEPA, 2010).
- SEPA Guidance for Pollution Prevention (GPP) 1: Understanding your environmental responsibilities – good environmental practices (NetRegs, 2021).
- SEPA GPP 5: Works and maintenance in or near water (NetRegs, 2018).
- SEPA GPP 21: Pollution incident response planning (NetRegs 2021).
- SEPA General Binding Rule (GBR) 6: Construction and maintenance of a minor bridge over a river, burn or ditch; (or removal) of a temporary bridge over a river, burn or ditch that has a bed width of less than 5m; or of a surface water drainage system outfall which discharges into a river, burn or ditch (SEPA, 2024).
- SEPA GBR 9: Operating any vehicle, plant or other equipment (machinery) in or near any surface water or wetland for the purpose of undertaking any other GBR activity or for the purpose of maintaining an existing man-made structure in or near any surface water or wetland (SEPA, 2024).
- SEPA GBR 10(a): The discharge of water run-off from a surface water drainage system to the water environment from buildings, roads other than waterbound roads, yards, or any other built development constructed before 1 April 2007, with the exception of motorways and trunk road where any one outfall serves a length of road greater than 1 km and the footprint of the road or its associated infrastructure is enlarged or otherwise altered on or after 1 April 2007 (SEPA, 2024).
- SEPA GBR 10(b): The discharge of water run-off from a surface water drainage system to the water environment from buildings, roads other than waterbound roads, yards, or any other built development constructed on or after 1 April 2007, with the exception of run-off from motorways and trunk roads where any one outfall serves a length of road greater than 1 km (SEPA, 2024).

Specific working practices outlined in the aforementioned guidance that must be adhered to include, but are not limited to:

- All reasonable steps must be taken to prevent silt from entering the waterbody (GPP 5).
- Plant and wheel washing to be carried out in a designated area of hardstanding at least 10m away from any waterbody or surface water drain. Where possible, washing will take place prior to moving vehicles/equipment to different water bodies to reduce the risk of transporting invasive aquatic plants or other species (GPP 5 and GBR 9).
- Refuelling must take place at least 10m away from any surface water. Appropriate containment measures (e.g., drip trays, funnels, plant nappies, bunding) must be in place to reduce the risk of spills (GPP 5, GBR 9).
- Biodegradable hydraulic oils should be used for vehicles and plant where possible (GPP 5).
- Dust, debris and contaminated water will be appropriately contained to reduce the risk of pollution (GPP 5).
- Development of a pollution incidence response plan is required (GPP 21).
- The works must not prevent the free passage of migratory fish (GBR 6).
- All reasonable steps must be taken to ensure that the discharge does not result in pollution of the water environment (GBR 10(b)).

### Additional standard working practices

In addition to the standard working practices and measures described above, the following good practice and management measures will be adopted by the successful contractor for each of the above activities:



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- Where required (e.g., to comply with protected species legislation), relevant ecological surveys will be carried out prior to works, particularly for proposed in-water works or larger schemes. If surveys identify the requirement for protected species licencing, additional consultation with NS will be carried out and licences will be sought where required.
- The site supervisor will give appropriate toolbox talks prior to work commencing. These talks will highlight any sensitive features, including the designated sites and their qualifying features.
- The contractor will be required to produce a contingency plan for dealing with spills or environmental incidents on site. Spill kits must be present on site, quickly accessible, and all staff trained in their use.
- All spills must be logged and reported. In the event of any spills into the water environment, all works must stop and the incident be reported to the project manager and the BEAR Scotland Environmental Team. SEPA (and where required, the Marine Directorate) must be informed of any such incident as soon as possible, and within 24 hours at the latest. The local DSFB must also be informed of any incidents as soon as possible.
- Any waste generated will be removed from site and either recycled or disposed of in compliance with Waste Management Regulations.

The above measures will ensure that any potential pollutants, including fine sediments and materials required for works in or near water, will not enter the water environment during works. In addition, these measures will reduce the risk of transporting invasive aquatic species such as Himalayan balsam (*Impatiens glandulifera*) which may be found on the shoreline, and carpet sea squirt (*Didemnum vexillum*) within the marine environment. All relevant pollution controls and other good practice measures will be detailed in the SEMP for each scheme and adhered to on site.