

## Transport Scotland

### EC DIRECTIVE 2011/92/EU AS AMENDED ROADS (SCOTLAND) ACT 1984 AS AMENDED RECORD OF DETERMINATION

#### RECORD OF DETERMINATION

**Name of Project:**

**Forth Road Bridge SSUDA Phase 4a & b**

**Location:**

**Forth Road Bridge; NGR 312547, 680173**

**Description of Project:**

This scheme is phase 4a and 4b of the SSUDA contract which has involved various phases of strengthening and refurbishment of the SSUDA walkways. Phase 4a will cover panel points 35 to 38 north while 4b will take place between 38 and 40 on the north side span, over an area of approximately 0.05 hectares. The works will comprise of the following:

- Installation of scaffold and debris netting,
- Removal of existing SSUDA steelwork members and walkway flooring,
- Disposal of steel mesh walkway flooring, corroded/failed steelwork members and fixings,
- Refurbishment of remaining steelwork members by cleaning and re-galvanising (off site),
- Installation of refurbished steelwork members and new replacement steelwork members,
- Installation of new strengthening steelwork (additional to current configuration),
- Installation of new glass-reinforced polymer (GRP) flooring,
- Removal of scaffold and debris netting.

The materials and equipment required for the project includes:

- Glass-reinforced polymer,
- Steel members and fixings,
- HERAS fencing,
- Polymer barriers and signs,
- Polymer netting and fixings,
- Galvanised steel wire rope and fixings,
- Steel Scaffolding and wooden boards.

The Equipment required for the project includes:

- Hand tools
- Electrical task lighting,
- Pick-ups and site delivery,
- MEWP/Under-bridge unit.

These works are anticipated to start in March 2020 and will take place over weekdays during the day. The works are anticipated to last for nine weeks.

**Project Procurement:**

Term Contract for Management and Maintenance of the Scottish Trunk Road Network – Forth Road Bridge Unit.

## Transport Scotland

### Description of Local Environment:

#### Population and human health (air quality, climate, noise and community):

There are no Air Quality Management Areas (AQMA) within 300m of the works locations and no air quality monitoring within 300m of the works locations.

Background concentrations of air pollutants for the extent of the scheme can be modelled using the air pollutant data from DEFRA. The modelled background concentrations for 2020 are as follows:

- Nitrogen dioxide (NO<sub>2</sub>): 14.56µg/m<sup>3</sup>,
- Nitrogen oxide (NO<sub>x</sub>): 12.00µg/m<sup>3</sup>,
- Particulate Matter (PM<sub>10</sub>): 10.56µg/m<sup>3</sup>.

These values are all within the legal limits set out in the Air Quality Standards (Scotland) Regulations 2010, and the policy objectives outlined in the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007.

There are no hospitals, residential properties, schools or nurseries within 300m of the scheme extents. The Firth of Forth Special Protection Area (SPA) and Long Craig Island Site of Special Scientific Interest (SSSI) is approximately 130m north east of the scheme.

The Annual Average Daily Traffic (AADT) in 2018 was 643 (I.D. 90005), comprising of:

- 123 Pedal cycles,
- 15 Two wheeled motor vehicles,
- 179 Cars and taxis.
- 325 Busses and coaches,
- 119 Light goods vehicles and
- Five Heavy goods vehicles.

As of September 2017, all other traffic has used the new Queensferry Crossing.

The day and night modelled noise level (L<sub>den</sub>) for the carriageway along the route of the scheme ranges from 75dB up to 80dB whereas the night only modelled noise level (L<sub>night</sub>) ranges between 60dB and 70dB.

The National Cycle Network route 1 crosses the Forth Road Bridge using the footway and cycleway adjacent to the southbound carriageway. Access will be temporarily restricted due to the works but through-access will be maintained.

There are no bridleways, bus stops or core paths located within or accessed via the scheme extents. No private residencies or businesses are directly accessed from within the scheme extents, nor will access to any of these properties be restricted as a result of the scheme.

#### Landscape:

The scheme is located on the northern half of the Forth Road Bridge in the Edinburgh City Council region. The area surrounding the scheme is the firth of Forth with the north bank of the Forth estuary approximately 360m north of the scheme. The works are due to take place on an entirely man-made structure in the Firth of Forth. The sole use of the Forth Road Bridge is as transport infrastructure.

### Description of Local Environment:

#### Cultural Heritage and material assets:

Located within 300m of the scheme there are the following historically designated sites:

- The Forth Road Bridge: Grade A listed structure (LB47778 Edinburgh; LB49165 Fife).
- North Queensferry, Railway Pier including associated goods yard: Grade B listed structure (LB3863)
- North Queensferry Conservation Area.

#### Biodiversity:

The Firth of Forth Ramsar site, SPA and SSSI is located 250m east. The Long Craig Island SSSI, which is also part of the Forth Islands SPA, is located approximately 130m north east of the scheme extent.

A selection of Annex I species with high populations highlighted in the Firth of Forth Ramsar and SPA citations include the following:

- Pink-footed Goose *Anser brachyrhynchus*
- Common Redshank *Tringa tetanus*
- Red Knot *Calidris canutus*
- Common Goldeneye *Bucephala clangula*
- Bar-tailed Godwit *Limosa lapponica*.

On passage the area regularly supports Sandwich Tern *Sterna sandvicensis*. The following species are all identified as priority species for the surrounding habitats in the Fife Local Biodiversity Action Plan (LBAP):

- Great Crested Newt *Triturus cristatus*
- Water Vole *Arvicola amphibius*
- Corn Bunting *Emberiza calandra*
- Brown Long-eared Bat *Plecotus auritus*
- Common Pipistrelle *Pipistrellus pipistrellus*
- Daubenton's Bat *Myotis daubentonii*
- Nathusius Pipistrelle *Pipistrellus nathusii*
- Natterer's Bat *Myotis nattereri*
- Soprano Pipistrelle *Pipistrellus pygmaeus*
- Aspen *Populus tremula*
- Bluebell *Hyacinthoides non-scripta*
- Red Squirrel *Sciurus vulgaris*

As the works will take place on an entirely man-made structure it is not expected that any non-native invasive species will be present.

#### Water Environment & Drainage:

The Forth Road Bridge spans the Firth of Forth at the location of the Lower Forth Estuary transitional waterbody (SEPA ID 200435). In 2017 the overall condition of this waterbody was classified as good. As the scheme lies over a transitional waterbody, there is no groundwater data available.

There is no likelihood of flooding on the man-made structure due to its height above Mean High Water Springs (MHWS). However, the area around the Firth of Forth is subject to varying likelihoods of coastal flooding risks.

## Transport Scotland

### Description of Local Environment:

#### Waste:

Waste will be created in the form of removal of plastics, metals and wood.

#### Sustainability:

Waste is being minimised by refurbishing existing structurally-sound steel members. Steel waste is therefore limited to that out with contract specification - steel mesh walkway flooring, corroded/failed steelwork members and all current fixings. Estimated 96% reuse.

#### Climate Change:

Fuel will be required for transport to and from the scheme which will lead to greenhouse gas emissions. Any release of greenhouse gas emissions can contribute to climate change. The project is unlikely to be affected by the impacts of climate change, other than increasing likelihood of extreme weather events leading to issues with work taking place on site.

### Description of the main environmental impacts of the project and proposed mitigation:

#### Population and human health (air quality, climate, noise and community):

Increases in dust and emissions from plant and machinery are likely to cause deterioration in air quality within the local area. These impacts will last for the duration of the works only. No temporary carriageway closures are planned, therefore no temporary effects on the volume of carriageway traffic is predicted.

There will be temporary increases in noise levels in the area resulting from the works. This may cause disturbance to local wildlife and residents. However, any increases in noise levels will be intermittent and will last only for the duration of the works.

The works will provide a permanent improvement for workers accessing the structure for maintenance and inspections.

#### Mitigation:

- Best Practicable Means and Best Practice Guidelines of reducing dust and emissions should be followed as outlined in the Guidance on the assessment of dust from demolition and construction (2014) published by the IAQM, which includes the following mitigation relevant to this scheme:
  - Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods; and
  - Ensure all vehicles switch off engines when stationary; there should be no idling vehicles.
  - All plant and fuel-requiring equipment utilised during construction should be well maintained in order to minimise emissions.
- Best practicable means of noise control, as described within BS 5228-1 and -2:2009+A1:2014 'Code of Practice for Noise and Vibration Control on Construction and Open Site', should be implemented in order to minimise the risk of disturbance. The following measures are relevant to the scheme:
  - Avoid unnecessary revving of engines and switch off equipment when not in use;
  - Use rubber linings in, for example, chutes and dumpers to reduce impact noise;
  - Minimise drop height of materials.

## Transport Scotland

### Description of the main environmental impacts of the project and proposed mitigation:

#### **Cultural Heritage:**

There will be limited impacts on the cultural heritage or material assets on the FRB as the works are upgrading and strengthening, and a like for like replacement wherever possible. Consultations have been undertaken with the City of Edinburgh Council with regards to Listed Building Consent. All maintenance work concerned with the Forth Road Bridge has consent with the stipulation it is like for like replacement of features. Correspondence is attached in Appendix A.

#### **Biodiversity:**

It is likely that machinery as part of the work processes will lead to a slight increase in noise and vibration in the area surrounding the work. This could potentially disturb local wildlife.

#### *Mitigation:*

- Amey's Environmental Team must be contacted to allow consideration of potential environmental effects if:
  - Unplanned works are undertaken out with the scheme position boundaries.
  - There is a change to the programme and/or method of working.
  - If contractors become aware of any protected species during the works, the works must stop and the environment team notified immediately.
  - If any active or possibly active bird nests are found on the bridge structure where the works are scheduled to take place, works should cease until a member of the Environment Team can attend site to complete a nesting bird survey.
- Effects from noise should be kept to a minimum through the use of appropriate mufflers and silencers fitted to machinery. All exhaust silencers should be checked at regular intervals to ensure efficiency.

#### **Materials and waste:**

Materials used will include steelwork and the installation of glass reinforced polymer flooring. Waste will be created in the form of Metals, plastics and wood.

#### *Mitigation:*

It is Amey policy to reuse or recycle as much waste as practicable. All waste must be transported by a suitably licenced contractor and must be accompanied by correctly completed waste transfer notes. Any waste produced by the site will be removed at the end of the work shift to reduce the amount of waste on site.

#### **Risk of Disasters:**

There are no areas along the Forth Road Bridge which have a high risk of surface water flooding. The scheme will contribute to Greenhouse Gas emissions due to the production and transportation of construction materials, and the use of fuel to power plant and machinery.

### **Extent of EIA work undertaken and details of consultation:**

A scoping assessment has been undertaken, supplemented by:

- Amey Environmental Scoping Assessment
- Amey Habitats Regulations (Assessment of Implications on European Sites) Screening. This determined that no adverse effects on the Firth of Forth SPA or the Forth Islands SPA as a result of the maintenance works are predicted with the proposed mitigation in place.
- Marine Scotland Licence.

### **Statement of case in support of a Determination that a formal EIA and Environmental Statement is not required:**

This is a relevant project falling within Annex II that:

- Is located on the Forth Road Bridge with the extent of works passes directly over the Firth of Forth Ramsar site, SPA and SSSI, and is within 2km of the Forth Islands Ramsar site and SPA

The project has been subject to screening using the Annex III criteria to determine whether a formal Environmental Impact Assessment is required under the Roads (Scotland) Act 1984 as amended. Screening using Annex III criteria, reference to consultations undertaken, and review of available information has identified that a statutory EIA is not required.

The project will not have significant effects on the environment by virtue of factors such as:

#### *Characteristics of the scheme:*

- Works are contained within/on an exclusively man-made structure.
- A Marine Licence has been obtained for all maintenance works on the Forth Road Bridge. Marine Scotland undertook consultation with SNH who considered no significant impacts with mitigation implemented.

#### *Location of the scheme:*

- The works are located on the Forth Road Bridge, which passes directly over the Firth of Forth RAMSAR Site, SPA, and SSSI. A habitats regulation appraisal was undertaken and concluded that no adverse impacts are expected with the appropriate mitigation in place

#### *Characteristics of potential impacts of the scheme:*

- With proposed mitigation there will be no significant adverse impacts to any ecologically designated sites.

### **File references of supporting documentation:**

- Edinburgh City Planning Department Correspondence (Included as Appendix A)
- Amey Habitats Regulations (Assessment of Implications on European Sites) Screening.
- Marine Scotland Licence.