

EC DIRECTIVE 2011/92/EU (as amended)

ROADS (SCOTLAND) ACT 1984 (Environmental Impact Assessment)  
Regulations 2017 (as amended)

## RECORD OF DETERMINATION

**Name of Project:**

A78 Waterside Hotel to Garden Centre

**Location:**

The works are located within a semi-rural coastal setting between Seamill and Ardrossan, North Ayrshire, and have the following National Grid References:

- Scheme Start: NS 20709 46171
- Scheme End: NS 21952 44519

The length of the scheme is approx. 2km, with a total working area of approx. 18,750m<sup>2</sup> (1.85ha).

**Description of Project:**

The works are required to renew worn and damaged road surfacing present within the scheme extents of the A78, on both north and southbound carriageways. The southbound right hand turning lane and layby within the scheme extents will also be re-surfaced in conjunction with these works. The works aim to address carriageway defects, including widespread fretting and cracking.

The works will involve replacement of the existing surface with an inlay treatment using TS2010 Surface throughout the length of the scheme. Inlay treatment will be applied to depths of between 40mm and 240mm, with AC32 base and AC20 binder utilised in areas of deeper treatment

The works are programmed for summer 2020. Site working hours will be between 09:00 and 17:00.

Traffic management (TM) for the works will involve single lane closures, facilitated by temporary traffic lights and a convoy system.

Please see Appendix 1 for a Location Plan and Scheme Extents drawing.

**Description of Local Environment:**

The following baseline descriptions have been numbered to follow the appropriate DMRB chapters for environmental assessment and do not reflect a ranking of sensitivity.

1. Population and Human Health

**Description of Local Environment:**

The A78 at this location falls within a semi-rural coastal setting. Residential properties exist within proximity to the scheme extents, with the closest located approx. 10m from the northbound carriageway.

The A78 is a main route connecting Irvine and Greenock. In 2018, the vehicle count per day was 5,166, with an 11% average of Heavy Goods Vehicles (HGVs).

As the scheme is located in a semi-rural environment, baseline noise conditions at this location are predominantly influenced by vehicle traffic from the A78 carriageway.

Core Path TT10 (Ayrshire Coastal Path)<sup>1</sup>, a combined foot way and cycle way, travels adjacent to the A78 northbound carriageway for the full extent of the scheme, at a distance of less than 5m.

Several accesses are located within the scheme extent, which give access to residential and commercial properties, farmland and car parking provisions.

The scheme is not located within close proximity to any CNMAs declared by North Ayrshire Council.

**2. Biodiversity**

The works are located in a semi-rural coastal setting. Seamill and Ardrossan coastal water body is located to the west, and low lying farmland located to the east.

A desktop study using SNH's Sitelink<sup>2</sup> online interactive map has not identified any International/European designated sites within 2km of the works, or any nationally/locally designated sites within 300m of the works.

Scotland TranServ's Invasive Non-native Species (INNS) Database has not highlighted any INNS growths within, or within proximity to, the planned works area.

Field Survey

A protected mammal species survey was undertaken by the Environmental and Sustainability Team on the 17<sup>th</sup> February 2020, to determine the requirement for protected mammal species licensing, prior to construction, under the Wildlife and Countryside Act 1981, the Nature Conservation (Scotland) Act 2004, the Conservation (Natural Habitats, &c.) Regulations 1994, and Wildlife and Natural Environment (Scotland) Act 2011.

The scheme is located adjacent to the Seamill and Ardrossan coastline. Gourock Burn, a freshwater system, is present within the scheme extents, making the area local to the works a suitable habitat for otters. Gourock Burn and the coastline directly west of the A78 carriageway were surveyed for otter.

This survey identified no signs evidencing otter activity throughout the scheme extents at this time. No protected resting places, including holts, were identified within the study area. Gourock Burn was surveyed for the presence of any such structure but none were identified.

<sup>1</sup> <https://www.north-ayrshire.gov.uk/Documents/CorporateServices/LegalProtective/LocalDevelopmentPlan/CorePathsPlanMap19.pdf> (Accessed 24/02/2020)

<sup>2</sup> <https://gateway.snh.gov.uk/sitelink/searchmap.jsp> (Accessed 24/02/2019)

<b>Description of Local Environment:</b>	
3.	<p><b>Land</b></p> <p>The works will be restricted to the existing carriageway and will not require any access to private land out with the existing trunk road boundary.</p>
4.	<p><b>Soil</b></p> <p>A desktop study using the National Soil Map of Scotland<sup>3</sup> identifies local soils to consist of brown earths.</p>
5.	<p><b>Water</b></p> <p>A desktop study using SEPA's River Basin Management Plan Interactive Map<sup>4</sup> has identified Seamill and Ardrossan coastal water body approx. 20m west of the carriageway for the full extent of the scheme. SEPA has classified this coastal water body with an overall water quality status of good, and an ecological status of good<sup>5</sup>.</p> <p>Gourock burn and several issues (all unclassified by SEPA) flow below the A78 carriageway within the scheme extents.</p>
6.	<p><b>Air</b></p> <p>The A78 is a main route connecting towns within North Ayrshire, and giving further access to Inverclyde. As such, air quality is affected by the daily use of the carriageway by road vehicle users. North Ayrshire Council has not declared any Air Quality Management Areas (AQMAs).</p>
7.	<p><b>Climate</b></p> <p>The Climate Change (Scotland) Act sets out the target and vision set by the Scottish Government for tackling and responding to climate change. The Act includes a target of reducing CO2 emissions by 80% before 2050 (from the baseline year 1990). In May 2019 the Scottish Government announced a climate emergency in Scotland, and lodged amendments to the Climate Change Bill to set a legally binding target of net-zero greenhouse gas emissions by 2045 at the latest.</p> <p>Scotland TranServ, working on behalf of Transport Scotland, undertake carbon monitoring. Emissions from our activities are recorded using Transport Scotland's Carbon Management System.</p> <p>In addition, Scotland TranServ undertakes resource efficiency activities to manage and reduce emissions contributing to climate change. Actions and considerations for this scheme are detailed in 8 Material Assets below.</p>

<sup>3</sup> [http://map.environment.gov.scot/Soil\\_maps/?layer=1](http://map.environment.gov.scot/Soil_maps/?layer=1) (Accessed 24/02/2020)

<sup>4</sup> <http://map.environment.scotland.gov.uk/seweb/map.htm?menutype=0&layers=2> (Accessed 24/02/2020)

<sup>5</sup> <https://www.sepa.org.uk/data-visualisation/water-classification-hub/> (Accessed 24/02/2020)

**Description of Local Environment:**

8. Material Assets

Key Materials Required for Activities

Activity	Material Required	Origin/ Content
Site Construction	<ul style="list-style-type: none"> <li>• TS2010 Surface</li> <li>• AC32 base</li> <li>• AC20 binder</li> <li>• Road Paint/studs</li> </ul>	<p>A proportion of reclaimed asphalt pavement (RAP) is used in asphalt production. Typical RAP values for base and binder are 10% - 15% with up to 10% in surface course.</p> <p>TS2010 Surface Course allows a wider array of aggregate sources to be considered when compared to typical SMA. As a result the use of TS2010 will reduce the usage of imported aggregates, and increase the use of a wider range of sustainable aggregate sources<sup>6</sup>.</p>

Note: All materials will be procured in accordance with Balfour Beatty Sustainable Procurement Policy<sup>7</sup>.

Key Waste Arising from Activities

Activity	Waste Arising	Disposal/ Regulation
Site construction	<ul style="list-style-type: none"> <li>• Road planings</li> <li>• Coal tar contaminated road planings</li> </ul>	<p>Core samples taken within the scheme extents show a presence of coal tar at several locations throughout the scheme. Several cores tested show tar presence.</p> <p>Due to treatment depth and confirmed presence of coal tar, removal of material will be controlled to segregate contaminated waste from uncontaminated material. This will maximise recovery of suitable materials and ensure the appropriate disposal of contaminated waste at an appropriate off site facility.</p> <p>SEPA will be notified of special waste movement in advance and consignment requirements adhered to.</p> <p>Road planings not contaminated with coal tar will be fully recycled in accordance with Guidance on the Production for Fully Recovered Asphalt Road Planings.</p>

<sup>6</sup> Transport Scotland TS2010 Surface Course Specification and Guidance Issue 04, 2018 (as amended)

<sup>7</sup> [http://www.balfourbeatty.com/media/164249/sustainability\\_procurement\\_policy\\_june\\_2016.pdf](http://www.balfourbeatty.com/media/164249/sustainability_procurement_policy_june_2016.pdf) (Accessed 24/02/2020)

<b>Description of Local Environment:</b>	
9.	<p><b>Cultural Heritage</b></p> <p>A desktop study using PastMap<sup>8</sup> has identified Boydston Braes Motte, a Scheduled Monument, located approximately 150m east of the carriageway.</p>
10.	<p><b>Landscape</b></p> <p>The A78 within the scheme extents does not fall within any designation for landscape quality or character. Seamill and Ardrossan coastal water body is located to the west, and low lying farmland is located to the south.</p>
11.	<p><b>Vulnerability of the Project to Risks</b></p> <p>According to the Indicative River &amp; Coastal Flood Map<sup>9</sup> by SEPA, areas of the A78 carriageway have been identified as being at risk of surface water flooding within the scheme extents. The wider area is subjected to coastal flooding.</p>

<b>Description of the main environmental impacts of the project and proposed mitigation:</b>	
<p>The following environmental impacts have been numbered to follow the appropriate DMRB chapters for environmental assessment and do not reflect a ranking of impact severity. Construction and operational impacts, including impact on Policies and Plans, are covered within each environmental topic heading where applicable.</p>	
1.	<p><b>Population and Human Health</b></p> <p>1.1 <b>Impacts</b></p> <ul style="list-style-type: none"> <li>• Given the day time programming of the works, impact to residential properties in close proximity is considered negligible.</li> <li>• Traffic management will involve single lane closures facilitated by temporary traffic lights/convoy system. Given the day time programming of the works, impact to traffic is considered slight.</li> <li>• Local accesses may be obstructed during the works;</li> <li>• Core Path TT10 (Ayrshire Coastal Path) may be impacted by the works;</li> <li>• TS2010 will afford benefits of a reduction in mid to high frequencies of traffic noise and a reduction in ground vibrations. As a result, ambient noise levels may decrease post construction<sup>10</sup>;</li> <li>• Routine maintenance works and associated levels of disruptions, are expected to reduce, due to the superior durability characteristic of TS2010.</li> </ul> <p>1.2 <b>Mitigation</b></p> <ul style="list-style-type: none"> <li>• If blocked by the works, operatives will grant entry to and from accesses when required.</li> </ul>

<sup>8</sup> <https://pastmap.org.uk/map> (Accessed 24/02/2020)

<sup>9</sup> <http://map.sepa.org.uk/floodmap/map.htm> (Accessed 24/02/2020)

<sup>10</sup> Transport Scotland TS2010 Specification and Guidance Issue 03, October 2015 (as amended)

<p><b>Description of the main environmental impacts of the project and proposed mitigation:</b></p>	
<ul style="list-style-type: none"> <li>If footways will be impacted by the works, operatives will have measures in place to allow pedestrians of all abilities to safely pass by the works.</li> </ul> <p>It has been determined that the proposed project will not have direct or indirect significant effects to population and human health.</p>	
2.	<p>Biodiversity</p> <p>2.1 Impacts</p> <ul style="list-style-type: none"> <li>Due to daytime programming (and thus no requirement for additional lighting), no impact is predicted to nocturnal protected species identified nearby;</li> <li>Potential for protected species (otters) to be active in this area, however no direct or indirect impact is foreseen given the lack of evidence present.</li> </ul> <p>2.2 Mitigation</p> <ul style="list-style-type: none"> <li>Operatives will remain vigilant for potential presence of protected species. Upon sighting a protected animal, work will be temporarily suspended until it has moved on. All sightings will be reported to the Scotland TranServ E&amp;S team and Nature Scot where necessary.</li> </ul> <p>It has been determined that the proposed project will not have direct or indirect significant effects to biodiversity.</p>
3.	<p>Land</p> <p>On site work activities will be confined within the existing carriageway boundary, and will not require any access over private or community land.</p> <p>It has been determined that the proposed project will not have direct or indirect significant effects to land or land use.</p>
4.	<p>Soil</p> <p>The works are confined to the carriageway, and no areas of soil will be disturbed. As such, no impact to soils is predicted.</p> <p>It has been determined that the proposed project will not have direct or indirect significant effects to local soils.</p>
5.	<p>Water</p> <p>5.1 Impacts</p> <ul style="list-style-type: none"> <li>Surface water flooding may impact the scheme extent delaying the works;</li> <li>There is potential for fuel/chemical spillages through the operation of resurfacing and use of various machinery and vehicles, which may affect the water environment if not effectively controlled. Spillages, leaks or seepages of fuel or oils from plant can be hazardous to the waterbodies in proximity to the scheme;</li> <li>Construction works could give rise to fine sediments which may enter nearby drainage which, if allowed to enter into the watercourse unchecked, could cause pollution.</li> </ul> <p>5.2 Mitigation</p> <ul style="list-style-type: none"> <li>SEPA Guidance for Pollution Prevention (GPPs) will be followed;</li> </ul>

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

- Debris and dust generated through the works will be prevented from entering nearby drains;
  - Roads will be brushed or scraped to reduce dust and debris deposits, and material collected will be disposed of appropriately;
  - Materials/waste will be stored in designated areas, isolated completely from surface water drains.
- Weather reports will be monitored prior to and during the works with all construction activities temporarily halting in the event of adverse weather/ flooding event. The works will only continue when it is deemed safe to do so and run-off/ drainage can be adequately controlled to prevent pollution;
- Visual pollution inspections of the working site will be conducted in frequency, and increased during periods of heavy rain or wind;
- Spill kits will be replenished, visible and readily available at all times during construction activities.

It has been determined that the proposed project will not have direct or indirect significant effects to the local water environment.

6. Air

6.1 Impacts

- The use of vehicles and plant with engine exhausts may temporarily affect local air quality;
- On site construction activities carry a potential to produce airborne particulate matter that may have a slight impact on local air quality levels.

6.2 Mitigation

- Plant and vehicles shall be switched off when not in use;
- All vehicle and plant will be serviced in accordance with manufacturing and legal specification.

It has been determined that the proposed project will not have direct or indirect significant effects to local air quality.

7. Climate

7.1 Impacts

- Greenhouse gas emissions will be emitted through the use of machinery, vehicles, transport and manufacture of materials used.

7.2 Mitigation

- Where possible, local suppliers will be used as far as reasonably practicable to reduce travel time and greenhouse gas emitted as part of the works;
- Materials containing recycled and virgin materials will be utilised as far as practicable to reduce the impacts associated with exploration and production from virgin resources.

It has been determined that the proposed project will not have direct or indirect significant effects to climate.

8. Material Assets

8.1 Impacts

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

- Greenhouse gas emissions generated by material production and transporting to and from site;
- Coal tar bound planings will arise from the works, and disposal at a landfill able to accept this contaminated material will be undertaken. Recycling of this material is currently being trialled at suitable sites in Scotland, however until a regulatory position to manage associated risks has been issued by SEPA, widespread recycling is not yet available.
- Due to treatment depth and confirmed presence of coal tar, removal of material will be controlled to segregate contaminated waste from uncontaminated material. This will maximise recovery of suitable materials and ensure the appropriate disposal of contaminated waste at an appropriate off site facility.
- SEPA will be notified of special waste movement in advance and consignment requirements adhered to.

8.2 Mitigation

- Materials will be locally sourced and derived from recycled, secondary or re-used origin as far as practicable within the design specifications to reduce natural resource depletion.
- TS2010 SMA allows a wider array of aggregate sources to be considered when compared to typical SMA, resulting in reduced use of imported aggregates, and an increased use of a wider range of sustainable aggregate sources<sup>11</sup>.
- A proportion of reclaimed asphalt pavement (RAP) is used in asphalt production. Typical RAP values for base and binder are 10% -15% with up to 10% in surface course.
- Waste will follow the hierarchy and be reduced, reused and recycled where possible.
- Road planings generated will be recovered by a licenced contractor for reuse and / or recycled in accordance with the criteria stipulated within SEPA document 'Guidance on the Production of Fully Recoverable Asphalt Road Planings'.

Circular Economy

The design life for the TS2010 SMA surfacing is considered to be around 20 years. This will reduce the requirements of maintenance to this section of road in future.

It has been determined that the proposed project will not have direct or indirect significant effects to material asset sources.

9. Cultural Heritage

Work activities will be restricted to the carriageway and involve like-for-like replacement, and as such will not impact the feature of cultural heritage identified.

It has been determined that the proposed project will not have direct or indirect significant effects to features of cultural heritage.

10. Landscape

Views of, and from, the road will be temporarily affected during construction due to the presence of works, traffic management and plant. As the works are operating on a like-for-like basis, no permanent changes to landscape features are predicted.

<sup>11</sup>[http://www.transport.gov.scot/system/files/uploaded\\_content/documents/tsc\\_basic\\_pages/Transport/TSIA%2035-15%20%2B%20TS2010%20Ver03%20%28Oct%202015%29.pdf](http://www.transport.gov.scot/system/files/uploaded_content/documents/tsc_basic_pages/Transport/TSIA%2035-15%20%2B%20TS2010%20Ver03%20%28Oct%202015%29.pdf) (Accessed 24/02/2020)



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

It has been determined that the proposed project will not have direct or indirect significant effects to local landscape.

11. Vulnerability of the Project to Risks

As the works will be limited to the like-for-like replacement of the carriageway pavement, there is no change to the vulnerability of the road to the risk or severity of major accidents / disasters.

It has been determined that the proposed project will not have direct or indirect significant effects to the potential risk of the road or surrounding area.

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

The following environmental parameters have been considered within this Record of Determination:

- Population and Human Health
- Biodiversity
- Land
- Soil
- Water
- Air
- Climate
- Material Assets
- Cultural Heritage
- Landscape

The following statutory organisations have been consulted:

- N/A

The following environmental surveys / reviews have been undertaken:

- A design Initial Environmental Review of the scheme, undertaken by the Environmental and Sustainability Team at Scotland TranServ issued February 2020.
- A site survey, undertaken on the 17<sup>th</sup> of February 2020, for the presence of any protected species or invasive non-native species, under the Wildlife and Countryside Act 1981, the Nature Conservation (Scotland) Act 2004, the Conservation (Natural Habitats, &c.) Regulations 1994, Wildlife and Natural Environment (Scotland) Act 2011 and Protection of Badgers Act 1992.

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

The works are considered to constitute a relevant project falling within Annex II as referred to in the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended), since they exceed 1 hectare in area.

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 there is no need for a full EIA.

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

*Characteristics of the scheme:*

- Construction activities will involve the milling and replacement of the defective carriageway surface via 40mm and 240mm inlay, over an approximate 2km stretch of the A78 carriageway.
- The total area of works is approximately 18,750m<sup>2</sup> (1.85ha).
- Virgin materials will be required for the scheme construction, however the sustainable design chosen will minimise materials required and the levels of wastes generated. The use of TS2010 will reduce the use of imported aggregates and increase the use of a wider range of sustainable aggregate sources, as resurfacing material will contain a percentage of recycled material content where practicable.
- A proportion of reclaimed asphalt pavement (RAP) is used in asphalt production. Typical RAP values for base and binder are up to 10% in surface course.
- Road planings arising from the scheme not contaminated with coal tar will be recycled and reused as a material, reducing waste generated from construction works requiring landfill. The use of TS2010 will reduce the use of imported aggregates and increase the use of a wider range of sustainable aggregate sources.
- Contaminated planings will be disposed to an appropriately licenced facility.
- The design option (replacing the defective surfacing) conveys sustainability benefits by significantly reducing the quantity of maintenance interventions required at the location over approximately 20 years.

*Location of the scheme:*

- The scheme is located in a coastal environment, however will be confined within the existing carriageway boundaries.
- The scheme will be confined within the existing carriageway boundaries and as a result will not require any land take and will not alter any local land uses.
- The scheme is not located in proximity to any locally or nationally designated sites.
- The A78 within the scheme extents does not fall within any designation for landscape quality or character.

*Characteristics of potential impacts of the scheme:*

- As the works will be limited to the like-for-like replacement of the carriageway surface, there is no change to the vulnerability of the road to the risk or severity of major accidents or disasters that would impact on the environment.
- No significant residual impacts are predicted. Disruption due to construction activities is not expected to be significant and will be mitigated as far as is reasonably practicable.
- The successful completion of the scheme will afford benefits to road users.
- The use of TS2010 road surfacing will afford the benefits of a reduction in mid to high frequencies of traffic noise and a reduction in ground vibrations. As a result, ambient noise levels should decrease post construction.

APPENDIX 1 : SCHEME LOCATION AND EXTENTS

