

A75 Springholm
19/SW/0901/017

Trunk Road Maintenance Environmental and Sustainability Considerations

August 2019

This environmental review has been undertaken in accordance with the Contract¹, Volume 11 of the DMRB², EIA Regulations³ and The Roads (Scotland) Act 1984 (as amended). Completion of this Environment & Sustainability Report provides evidence that Scotland TranServ have taken into consideration all contractual and legislative requirements related to the environment for this maintenance activity.

This scheme is “as of rights” (estimated bid value less than £350,000) under the Contract¹.

The review identifies, describes and assesses the effects on environmental factors. This scheme is not considered to be a ‘relevant project’ in accordance with the EIA Regulations or to have the potential to cause significant effects to the environment.

The environmental information contained within this report is considered current and valid for 12 months from issue date.

Scheme Manager

Scheme Manager (Key Scotland TranServ Stakeholder)
redacted

Record of Issue

Rev	Status	Author	Check	Authorised	Comments
1.0	Final	redacted redacted 11(2) 12/08/2019	redacted redacted 11(2) 12/08/2019	redacted redacted 11(2) 14/08/2019	Issued August 2019

¹ 4th Generation Term Contract for Management and Maintenance of the Scottish Trunk Road Network, South West Unit
² Design Manual for Roads and Bridges
³ Environmental Impact Assessment (Scotland) Regulations 1999 (as amended)

Summary of Environmental Considerations

Specific Environmental Considerations

- Several accesses (many of which lead to residential properties) are present within the scheme extents.
- Footpaths are present throughout the scheme extents on both sides of the carriageway.
- Bus stops are located throughout the scheme extents on both the north and southbound carriageway.
- Spottes Burn is channelled directly under the A75 carriageway towards the southern scheme extent.
- Recent protected species roadkill recorded in 2019.

Design Considerations

Environmental Opportunities/ Enhancements

LED lighting units have an estimated 58% energy saving when compared to high pressure sodium lanterns, reducing the carbon footprint of the road lighting.

LED lanterns provide excellent uniformity which is a critical requirement for road lighting. Lighting spill and obtrusive light is also kept to a minimum by utilising the correct optic setting.

Lifecycle Considerations

LED units have a design life of approximately 25 years and will reduce the number of maintenance visits required when compared with high pressure sodium lanterns.

High pressure sodium lanterns will be partially recycled.

LED luminaries contain no toxic materials and are 100% recyclable upon reaching the end of the design life.

Construction Considerations

Pre-start Notifications

Dumfries & Galloway Council Environmental Health Noise Team will be notified in advance of the upcoming night works (undertaken by the Environmental and Sustainability Team).

Operative Briefings

In addition to best practice, Guidance for Pollution Prevention (SEPA) and Risk Control Measures (detailed within the Contract Specific Environmental Risk Assessment), the following site specific measures are advised:

- If required, local access will be granted by site operatives as well as ensuring that there is safe passage for pedestrians of all abilities.
- If required, alternate bus stop provisions will be provided.
- The following measures should be adhered to when working in close proximity to residential properties:
 - Avoid idling plant or vehicles.
 - Avoid shouting or extraneous noise on site.
- Spill kits must be available on site at all times.

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- Site operatives should remain vigilant for protected species during the works. If a protected species is seen within proximity to the works area, all works should stop until the animal has moved on. Any sightings should be reported to the E&S Team.

If alternative protective measures are preferred by the operations team or contractor then this should be discussed with or reviewed by the Environmental and Sustainability Team. This is to ensure that measures provide adequate protection to the features identified in accordance with environmental laws.

Contact the E&S Team for further advice if significant alterations are made to the design or construction methodology from what was considered in the assessment (this includes changes such as day works changed to night time working, scheme delayed by more than a month or a week for vegetation works and use of drilling/ percussive plant introduced).

Contractor Method Statements, Risk Assessments or other environmental documentation may also require review by the E&S Team prior to the start of works.

For further advice or support please contact:

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Overview of Scheme

Requirement for Works and Description of Scheme

The works are required to replace the existing high pressure sodium luminaries with LED (light emitting diode) luminaries on the lighting columns situated adjacent to the A75 carriageway.

The proposed activities are as follows:

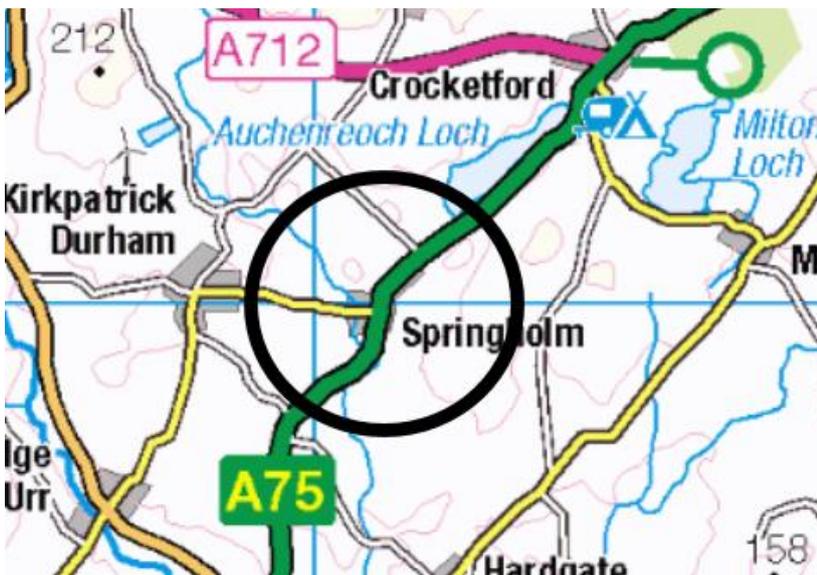
- Works will be undertaken from a mobile elevated working platform.
- High pressure sodium lanterns will be unscrewed and removed using an allen key.
- LED units will be installed.

Scheme Location

The works are located on the A75 carriageway within Springholm, Dumfries & Galloway. The works have the following National Grid References:

- Scheme Start: NX 81114 70722
- Scheme End: NX 80568 69522

Figure 1 Scheme Location

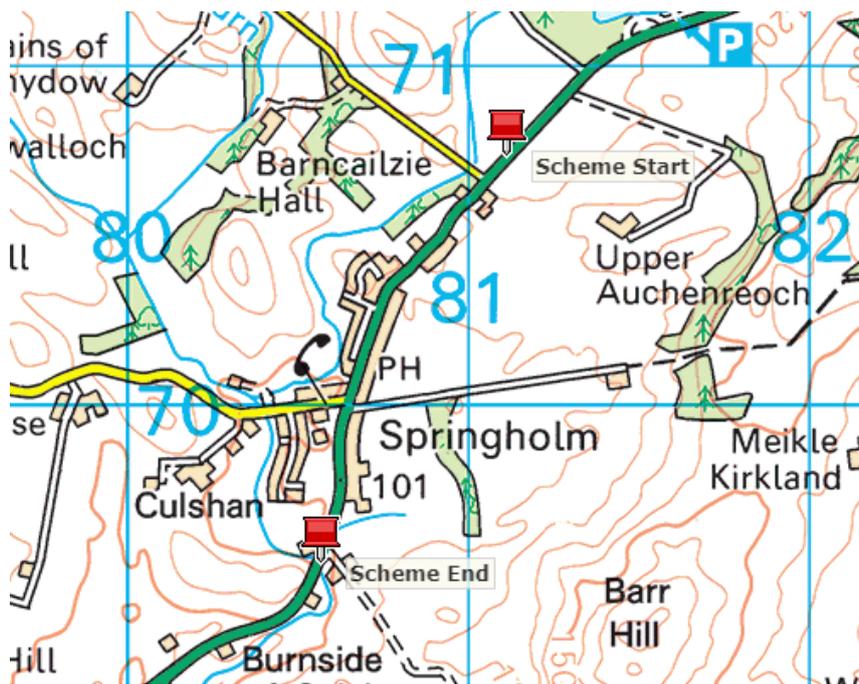


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Figure 2 Scheme Extents



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Timing of Works

The works are programmed to take place during September 2019 for the duration of three nights, operating between the hours of 22:00 – 06:00.

Traffic Management

Traffic management is expected to consist of single lane closures facilitated by temporary traffic signals or Stop/Go boards. The carriageway will remain open throughout the works.

Environmental Review

Considerations	Relevant Aspects/ Impacts	Specific Measures (in addition to RCMs)
Population and Human Health		
<p>Local population considerations including:</p> <ul style="list-style-type: none"> Core Paths, footways, cycleways, bridleways or community facilities.⁴ Traffic management impacts and restrictions. 	<p>The scheme extends along the A75 for approximately 1.4km. Several accesses (many of which lead to residential properties) are present within the scheme extents.</p> <p>Footpaths are present throughout the scheme extents on both sides of the carriageway.</p> <p>Bus stops are located throughout the scheme extents on both the west and eastbound carriageway.</p> <p>Given the mobile nature of the works and the late night programming, the impact to community facilities is considered to be negligible.</p>	<p>If required, local access will be granted by site operatives as well as ensuring that there is safe passage for pedestrians of all abilities.</p> <p>If required, alternate bus stop provisions will be provided.</p>
<p>Local human health considerations including:</p> <ul style="list-style-type: none"> Residential or sensitive properties within 100m of works (e.g. schools, libraries, aged persons' homes or hospitals). Scheme (or diversion route) within a Candidate Noise Management Area (CNMA) or Candidate Quiet Area (CQA).⁵⁶ 	<p>As the works are located within an urbanised setting, multiple residential properties are located within proximity to the works. The closest properties are situated adjacent to the carriageway.</p> <p>The works are not located within a CNMA.</p> <p>Works are passive in nature, and will likely only operate within close proximity of properties for a limited time. As a result, negligible impact is predicted.</p>	<p>Dumfries and Galloway Council will be notified in advance of night time works.</p> <p>The following measures should be adhered to when working in close proximity to residential properties:</p> <ul style="list-style-type: none"> Avoid idling plant or vehicles Avoid shouting or extraneous noise on site

⁴ <http://www.sustrans.org.uk/ncn/map> (Accessed on 12/08/2019)

⁵ <http://www.scottishnoisemapping.org/downloads/sea/round-2/Glasgow%20Road%20CNMA%20Maps.pdf> (Glasgow Agglomeration) (N/A)

⁶ <http://www.scottishnoisemapping.org/downloads/sea/round-2/Major%20Road%20Maps.pdf> (Accessed on 12/08/2019)

Considerations	Relevant Aspects/ Impacts	Specific Measures (in addition to RCMs)
Opportunities for amenity and/or health enhancement.	Good and efficient lighting is essential to health, well-being and productivity. LED lighting casts even and directional light, which reduces light pollution and reduces sky glow. It also reduces the light entering into properties which may otherwise disturb sleep.	
Biodiversity		
<p>Local considerations including:</p> <ul style="list-style-type: none"> • Features of ecological or landscape value within 100m of the works⁷⁸⁹ (e.g. watercourses, habitats favoured by protected species and designated or important natural heritage sites) • Connectivity with Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar designated sites.¹⁰ • Injurious weeds, invasive plants or plant diseases. • Animal roadkill 	<p>The works are located along a semi-rural stretch of the A75 carriageway that passes through the village of Springholm. Residential properties are located immediately adjacent to the carriageway, with large areas of agricultural land dominating the surrounding environment. Minor areas of woodland are present within the wider area.</p> <p>No locally or nationally designated sites have been highlighted within proximity to the works.</p> <p>The Scotland TranServ Animal Roadkill Database (2000 – 2019) has identified three badger <i>Meles meles</i> and one otter <i>Lutra lutra</i>. The most recent roadkill was recorded in 2019.</p> <p>No invasive non-native plant species have been identified within proximity to the works.</p> <p>The NBN Atlas (2009 -2019) has highlighted historical records of the protected species red squirrel <i>Sciurus vulgaris</i> within 2km of the works.</p> <p>Providing the works operate in accordance with Scotland TranServ's RCMs and SEPA's GPPs, no impact is predicted on the surrounding biodiversity.</p>	<p>Site operatives should remain vigilant for protected species during the works. If a protected species is seen within proximity to the works area, all works should stop until the animal has moved on. Any sightings should be reported to the E&S Team.</p>

⁷ <https://gateway.snh.gov.uk/sitelink/searchmap.jsp> (Accessed on 12/08/2019)

⁸ <http://gis.sepa.org.uk/rbmap/> (Accessed on 12/08/2019)

⁹ <https://data.nbn.org.uk/imt/#4-11.546,53.083,4.274,57.870> (Accessed on 12/08/2019)

¹⁰ <https://gateway.snh.gov.uk/sitelink/searchmap.jsp> (Accessed on 12/08/2019)

Considerations	Relevant Aspects/ Impacts	Specific Measures (in addition to RCMs)
Opportunities for biodiversity enhancement.	This assessment has not identified any opportunities for biodiversity enhancements that could be undertaken in conjunction with these works.	
Land		
Local considerations including: <ul style="list-style-type: none"> Land purchase or land ownership for access 	The works will be undertaken within the existing trunk road boundary and will not impinge upon adjacent land. No private land access is required as part of the works.	N/A
Soil		
Local considerations including: <ul style="list-style-type: none"> Soil type and potential vulnerabilities. 	The National Soil Map of Scotland ¹¹ has identified the surrounding local soils to consist primarily of brown earths. No soil works will be undertaken as part of the scheme extents.	N/A
Water		
Local considerations including: <ul style="list-style-type: none"> Water quality Flood risk of area¹² 	Spottes Burn ¹³ is channelled directly below the A75 carriageway towards the southern scheme extent. SEPA has classified this water body as having an overall status of bad, an ecological status of bad and a chemical status of pass. SEPA's Flood Maps have highlighted an area of river flooding associated with Spottes Burn. Given that the carriageway is elevated, the risk of river flooding impacting the works is minimal, however care should still be taken in adverse weather conditions.	Spill kits must be available on site at all times.
Opportunities for water environment/ drainage enhancement	This assessment has not identified any opportunities for water environment / drainage enhancements that could be undertaken in conjunction with these works.	
Air		

¹¹ http://map.environment.gov.scot/Soil_maps/?layer=1 (Accessed on 12/08/2019)

¹² http://www.sepa.org.uk/flooding/flood_maps.aspx (Accessed on 12/08/2019)

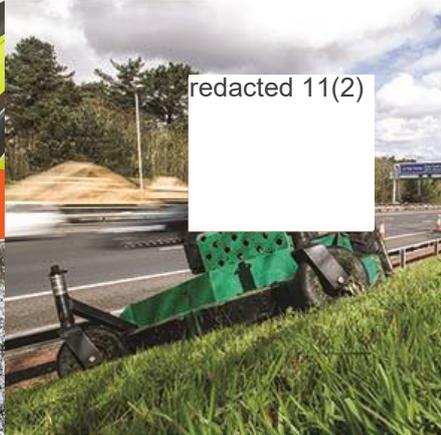
¹³ <http://apps.sepa.org.uk/wbody/2012/10588.pdf> (Accessed on 12/08/2019)

Considerations	Relevant Aspects/ Impacts	Specific Measures (in addition to RCMs)
Local considerations including: <ul style="list-style-type: none"> Air Quality Management Areas (AQMA)¹⁴ 	No Air Quality Management Areas have been declared by Dumfries and Galloway.	N/A
Climate		
Materials will be obtained locally and operatives deployed from the local depot where possible to reduce haulage and scheme associated journeys. All vehicles and plant are maintained to a high standard to reduce operational emissions as far as possible and switched off when not in use. Schemes undertaken on behalf of Transport Scotland are included within the emissions accounting Carbon Management System reported on an annual basis. This estimates emissions based on the principal distance and materials used.		
Opportunities for climate impact reduction.	LED lighting units have an estimated 58% energy saving when compared to high pressure sodium lanterns, reducing the carbon footprint of the road lighting.	
Vulnerability of scheme to climate change.	Given the nature of the works, the works have been assessed as not being likely to increase the vulnerability of the road to climate change.	
Material Assets		
Scheme considerations including: <ul style="list-style-type: none"> Material resources required Origin of materials Waste arising Recovery/disposal of waste Contaminated waste (special waste) 	<u>Materials</u> <ul style="list-style-type: none"> LED Units Fixings <u>Waste</u> <ul style="list-style-type: none"> High Pressure Sodium Lanterns <ul style="list-style-type: none"> Partially recycled and disposed 	In accordance with Schedule 5 part 8 of the contract documents, materials and waste used by operations is recorded and reported on a monthly basis. All procurement is undertaken in accordance with the Balfour Beatty Sustainable Procurement Policy.
Opportunities for material/ waste reduction and lifecycle considerations	LED luminaries contain no toxic materials (e.g. mercury, lead or heavy metals) and emit no UV radiation, therefore the lack of hazardous materials results in 100% of components becoming available for reprocessing at the end of their life.	
Cultural Heritage		
Local considerations including: <ul style="list-style-type: none"> Features of archaeological or historic value within 100m of the works.¹⁵ (e.g. designated or important historic heritage sites) Architectural features. 	PastMap has identified four listed buildings located approximately 90m south of the scheme extents. As the works will be limited to the replacement of luminaries on existing lighting columns, no impact is	N/A

¹⁴ <http://www.scottishairquality.co.uk/laqm/aqma> (Accessed on 12/08/2019)

¹⁵ <http://pastmap.org.uk/> (Accessed on 12/08/2019)

Considerations	Relevant Aspects/ Impacts	Specific Measures (in addition to RCMs)
<ul style="list-style-type: none"> Setting of archaeological, historical or architectural features. 	predicted on the surrounding features of cultural heritage.	
Opportunities for cultural heritage enhancement.	This assessment has not identified any opportunities for cultural heritage enhancements that could be undertaken in conjunction with the proposed works.	
Landscape		
Local considerations including: <ul style="list-style-type: none"> Areas of designated landscape value Tree Preservation Order (TPO) 	No designated landscape features have been highlighted within proximity to the works.	N/A
Opportunities for landscape enhancement.	The areas in proximity to the replaced lighting may benefit from reduced light spill as a result of a switch to directional LED lamps.	



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