

A83 Medium Term Strategy  
Options Assessment  
Option Fact Sheet

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| Option Name       | Long Term Scheme (LTS) – Debris Flow Shelter and Short Viaduct   |
| Brief Description | <p>This option is similar to '<i>Option 5: Long Term Scheme (LTS) – Debris Flow Shelter</i>' at the eastern and western ends of the route, but with some differences in the central length which is located along the western slopes of the glen.</p> <p>On the western slopes of the glen, the alignment generally follows the existing forestry access track corridor for approximately 600m, and would be protected by a debris flow shelter. It then deviates away from the slopes on a length of viaduct for approximately 500m, which bypasses an area of notable geohazard concern by avoiding the need for cutting into the slopes. At each pier along the 500m length of viaduct, it has been assumed that a deflector structure would be provided in order to divert landslide and/or other debris flow material away from the piers. Thereafter, the alignment moves back into the hillside and continues to generally follow the existing forestry access track corridor for a further approximately 300m, again protected by a length of debris flow shelter. Otherwise the description of this option is similar to '<i>Option 5: Long Term Scheme (LTS) – Debris Flow Shelter</i>'.</p> <p>The maximum gradient of this option is approximately 5.35% as it passes along the western slopes of the glen.</p> <p>Overall, this option is approximately 4.3 km long, measured between the two points at which it tie into the A83 Trunk Road.</p> |
| Option Pros       | <p>The key positive elements of this option are listed below:</p> <ul style="list-style-type: none"> <li>• This option could be implementable as a phased approach with a medium term solution.</li> <li>• This option effectively bypasses the main landslide/debris flow hazard area on the eastern side of the Glen and is operationally comparable to the A83 Trunk Road with two-way traffic over its entire length.</li> <li>• This option provides protection from geohazards in the form of a Debris Flow Shelter and short length of viaduct which covers the length of the route which passes along the western slopes of the glen.</li> <li>• This option does not require cutting into the hillside through a potential relict landslide feature as it is bypassed by viaduct.</li> <li>• A significant length of this option lies within Scottish Ministers land.</li> </ul>  |
| Option Cons       | <p>The key negative elements of this option are listed below:</p> <ul style="list-style-type: none"> <li>• Construction of the interfaces between the debris flow shelter and the short length of viaduct will be particularly complex. Provision of a debris flow shelter which facilitates appropriate management of existing watercourses and debris flows as they cross the route will require complex design and construction.</li> <li>• The viaduct piers will likely require protection from geohazards through the provision of deflector structure upslope of every pier location.</li> </ul>  |

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|                                | <ul style="list-style-type: none"> <li>• Significant maintenance programme for upkeep of debris flow shelter and viaduct pier deflector structures is anticipated.</li> <li>• The need for third party land cannot be ruled out, such as at the connections to the A83 Trunk Road at the east end and B828 Glen Mhor local road at the west end.</li> </ul>  |
| Time to Implementation         | An outline programme should be developed as part of DMRB Stage 2, should the Green Option be selected as the preferred route.  |
| Outline Construction Programme | It is estimated that the construction of this option would extend over a period of 44 months to 50 months.   |
| Scheme Costs                   | Costs for the LTS Green option will be prepared as part of the DMRB Stage 2 report.  |
| Caveats Identified             | <p>The caveats associated with the above data at this stage are identified as following:</p> <ul style="list-style-type: none"> <li>• It has been assumed that deflector structures are required for all piers of the viaduct.</li> <li>• There is limited available information on the underlying ground conditions and the general slope conditions along the western side of Glen Croe. Accordingly, the geotechnical solutions and geohazard mitigation proposed have been based on various assumptions and is subject to change pending further data collection, assessment and design development. This may have significant bearing on the estimated cost generated.</li> <li>• Rock slope stabilisation measures have not been proposed at this stage but may be required. Such measures are likely to be of relatively low cost when compared with other elements associated with construction of this option and are therefore assumed to be covered within optimism bias allowances within the estimated cost.</li> </ul> |