

A83 Medium Term Strategy  
Options Assessment  
Option Fact Sheet

Option Name	Long Term Scheme (LTS) – Phased Approach - MTS offline either end plus Debris Flow Shelter / Short Viaduct in middle in Phase 1, then upgrade each end in Phase 2.
Brief Description	<p>This option considers a two phase scenario. For Phase 1 of this scenario, a debris flow shelter, to provide protection from geohazards, with a full S2 carriageway cross-section would be constructed over approximately 2,000m on the western slope, and a short length of viaduct over approximately 500m on the western slopes of the glen, similar to that described in Option 6. 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. At either end the eastern and western tie-ins would be constructed similar to the MTS as described in Option 3.</p> <p>Phase 2 would be the upgrade of the eastern and western ends to the LTS scheme standard, through construction of two new viaducts and associated approach works to reflect that described in LTS Option 6. The two MTS tie-ins constructed for Phase 1 would be removed as they are no longer required.</p> <p>The completed LTS scheme would be Option 6 LTS with Debris Flow Shelter / short viaduct in the middle.</p>
Option Pros	<p>The key positive elements of this option are listed below:</p> <ul style="list-style-type: none"> <li>• This option allows for the MTS to form part of a phased approach to the completion of the LTS.</li> <li>• This option would involve lower cost initially, delaying the longer construction times and higher expenditure associated with the LTS at the east and west ends which include viaducts.</li> <li>• This option would delay impact on third party land associated with the LTS until the second construction stage.</li> <li>• As construction of the majority of the length of the debris flow shelter would proceed during the initial phase of works, any closures of the route to traffic during Phase 2 would be limited.</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>• Protection against landslides would be provided by the length of debris flow shelter that can be constructed in the initial stage of works, from completion of that initial stage of works</li> </ul>
Option Cons	<p>The key negative elements of this option are listed below:</p> <ul style="list-style-type: none"> <li>• It may not be possible to construct the additional lengths of debris flow shelter required at either end during Phase 2 and therefore alternative forms of geohazard mitigation may be required.</li> <li>• Upon completion of the eastern and western tie ins for the LTS there would be a length of redundant road that would need to be removed and disposed of unless it can be reused and also land either reinstated, if possible, or appropriate landscaping treatments provided.</li> <li>• Construction of the interface between the MTS and LTS may require closure of the route as a whole for a period of time with</li> </ul>

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	<p>the OMR being used as the diversion route. Other construction activities may require single lane traffic through sections of the route under traffic management.</p> <ul style="list-style-type: none"> <li>• 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> <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	The initial phase of construction would take approximately 44-50 months to construct. The removal of the MTS tie-ins and completion of LTS Option 6 would take approximately 30-36 months.
Scheme Costs	We would expect costs to be higher for a phased approach in comparison to constructing the LTS Green Option due to multiple site mobilisation / demobilisations and also work to remove redundant elements of the MTS during the LTS phase. 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>• 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> <li>• The overall cost will depend on the timing of the conversion from the MTS to LTS with construction inflation increasing the cost of the conversion the longer the MTS remains in place.</li> </ul>