

---

# 11. Cumulative Effects

## 11.1. Introduction

- 11.1.1. This chapter presents the assessment of cumulative effects associated with the Proposed Scheme, which is described in detail in Chapter 4: The Proposed Scheme.
- 11.1.2. The assessment reported in this chapter considers two forms of cumulative impact comprising:
- In-combination effects: the combined effect of the Proposed Scheme together with other reasonably foreseeable developments (taking into consideration effects at the site preparation and earthworks, construction and operational phases).
  - Effect interactions: the combined or synergistic effects caused by the combination of several effects on a particular receptor (taking into consideration effects at the site preparation and earthworks, construction and operational phases), which may collectively cause a more significant effect than individually. A theoretical example is the combination of disturbance from dust, noise, vibration, artificial light, human presence and visual intrusion on sensitive fauna (e.g. certain bat species) adjacent to a construction site.
- 11.1.3. The assessments as reported in Chapters 7 to 10 have, where relevant, already taken into account the potential for cumulative impacts within a specific topic assessment as a result of a number of different activities affecting a single receptor. This cumulative impact assessment does not consider cumulative in-topic impacts.

## 11.2. Approach and Methodology

### Approach

- 11.2.1. [European Commission \(EC\) guidelines \(European Communities, 1999\)](#) define ‘cumulative impacts’ as *“Impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project”*. This chapter therefore includes consideration of both the impacts of the Proposed Scheme on receptors, and the impacts of other ‘reasonably foreseeable’ projects in line with the EC guidelines.
- 11.2.2. Based on [Design Manual for Roads and Bridges \(DMRB\) Volume 11, Section 2, Part 4 LA 104 ‘Environmental assessment and monitoring’](#) (LA 104), the cumulative assessment has assessed cumulative effects which include those from:
1. a single project (e.g. numerous different effects impacting a single receptor) (Effects Interactions); and
  2. different projects (together with the project being assessed) (In-combination Effects).
- 11.2.3. The guidance provided in LA 104 has been primarily used to inform the approach to this assessment; however, other relevant guidance has been drawn on where appropriate. This includes The [Planning Circular 1/2017: The Town and Country Planning \(Environmental Impact Assessment\) \(Scotland\) Regulations 2017](#) (Scottish Government 2017) and The Scottish Government’s [Planning Advice Note \(PAN\) 1/2013 ‘Environmental Impact Assessment’](#) which states *“The assessment of cumulative impacts provides an important opportunity to consider and address the impacts of development as a whole and is likely to be facilitated by effective co-ordination of specialist inputs”*.
- 11.2.4. No comments were received from the A83 Environment Steering Group (ESG) on the cumulative methodology included in the EIA Scoping Report.

## Study Area

- 11.2.5. A 1km Study Area has been established due to the scale of the Proposed Scheme and other topic assessment zones of influence, and can be seen in Volume 3, Figure 1.2 Environmental Features. 1km corresponds to the maximum extent of Study Areas used for the EIA Report. A Habitat Regulations Appraisal has been completed which includes a 6km Study Area for European Sites designated for eagle species can be found in in Medium-Term Solution Report to Inform Habitats Regulations Appraisal (Transport Scotland, 2024). The HRA concluded there were no significant effects in combination effects. Therefore, this 1km Study Area can be regarded as the Zone of Influence of the Proposed Scheme together with other projects as defined by LA 104.
- 11.2.6. Consideration has been given to other projects which were included in a review of the [Argyll and Bute Council Planning Portal](#), the [Energy Consents Unit, Argyll and Bute Local Development Plan 2](#), [LLTNP Local Development Plan: Action Programme](#), the [LLTNP Planning Portal](#) and other [Transport Scotland projects](#) being progressed on the Trunk Road Network. The study area for this review encompasses the A83 between Tarbert and Inverary, and the route of the wider diversion should the A83 and the Old Military Road (OMR) be closed i.e. the A819 / A85 / A82 between Inverary and Tarbet.

## Significance Criteria

- 11.2.7. The criteria outlined in Table 11.1 below has been used to determine the significance of a single project and different projects cumulative effects. Where cumulative effects were identified, the nature of these combined impacts were considered e.g. duration (temporary or permanent), extent, frequency and sensitivity of the receptor, and the significance determined using professional judgement.

**Table 11.1 - Determining Significance of Cumulative Effects**

Significance	Criteria of Cumulative Effects
Significant	Where the combined impacts of the Proposed Scheme or cumulative effects of the Proposed Scheme in association with other development upon an individual or collection of environmental receptors could potentially be significant (positive or negative). Effects at this level could be material in the decision-making process.
Not Significant	Where the combined impacts of the Proposed Scheme or cumulative effects of the Proposed in association with other development upon an individual or collection of environmental receptors would be likely to be not significant. Effects at this level would be unlikely to be material in the decision-making process.

### Assessing Effect Interactions

- 11.2.8. Multiple impacts on a single receptor due to the Proposed Scheme could be both beneficial and adverse and could occur during the construction or operation all residual effects (i.e. after mitigation) have been considered within this assessment based on the assessments reported in Chapters 7 to 10 of this EIA Report. This is because multiple effects have the potential to lead to a significant combined effect. The assessment has focussed on the receptor and considered its capacity to accommodate changes likely to occur (based on professional judgement) because of the Proposed Scheme.

### Step 1: Reviewing Residual Impacts

- 11.2.9. While all effects as a result of the Proposed Scheme have been included, the assessment pays particular attention to the impacts summarised in Chapter 13: Summary of Residual Effects, which includes residual effects predicted to remain as significant after application of any proposed mitigation, as these generally have the greatest potential to contribute to a significant cumulative impact. A review of these residual effects from the individual topic assessments was undertaken and, using professional judgement, the potential for interaction with other topic areas was identified.

### Step 2: Identification of Cumulative Effects

- 11.2.10. Where the same sensitive receptor is identified in relation to two or more individual topics, professional judgement was used to determine where multiple impacts combined to result in a cumulative effect

### Step 3: Identification of Significant Cumulative Effects

- 11.2.11. Where cumulative effects were identified, the nature of these combined impacts were considered e.g. duration (temporary or permanent), extent, frequency and sensitivity of the receptor, and the significance determined using professional judgement. It is possible to have multiple significant residual impacts which in combination do not constitute an additional significant cumulative effect. However, it is also acknowledged that there is potential that multiple non-significant impacts in combination could result in a significant cumulative effect. Therefore, where information was available, non-significant residual impacts reported in the individual assessments of this EIA Report were also reviewed. Impacts of negligible or neutral significance were excluded from the assessment as by definition they are inconsequential.
- 11.2.12. The cumulative effects were assessed against the significance criteria outlined in Table 11.1 and professional judgement was used to determine whether or not the effects were considered to be significant.

---

## Assessing In-combination Effects

### Step 1: Identification of 'Reasonably Foreseeable' Developments

- 11.2.13. The Study Area was defined as up to 3km from the Proposed Scheme for the purposes of identification of 'reasonably foreseeable' developments.
- 11.2.14. DMRB LA 104 sets out the assessment of cumulative effects should report on: (i.e. 'reasonably foreseeable'):
- roads projects which have been confirmed for delivery over a similar timeframe;
  - other development projects with valid planning permissions or consent orders, and for which EIA is a requirement;
  - proposals in adopted development plans with a clear identified programme for delivery.
- 11.2.15. A review of planning applications submitted but not yet determined and other major developments beyond those that are 'committed' was undertaken to ascertain whether any should also be justifiably included in the assessment, by virtue of their scale, location or timing.

### Step 2: Potential for Significant Cumulative Effects

- 11.2.16. An initial screening of developments was undertaken using professional judgement to 'scope out' any developments that were not considered likely to have in combination significant cumulative impacts to allow the assessment to focus on those that may potentially result in significant cumulative impacts in combination with the Proposed Scheme.
- 11.2.17. This involved a review of the developments based on their location, type or status of development and a review of relevant environmental information included within planning applications and published environmental assessments. This allowed the assessment to focus on those 'reasonably foreseeable' developments that may potentially result in significant cumulative effects in combination with the proposed scheme.

---

### Step 3: Review of Cumulative Effects

- 11.2.18. A systematic, topic by topic assessment was then carried out on those developments retained following the initial screening, judged as ‘reasonably foreseeable’ to consider the potential different projects cumulative impacts. Professional judgement and the criteria set out in Table 11.1 above were used in conjunction to determine whether the effects were considered to be significant.

#### Limitations to Assessment

- 11.2.19. The cumulative effects assessment has relied on available information about ‘reasonably foreseeable’ developments at the time of writing, though this information is often limited in its detail to quantify cumulative effects precisely. Consequently, professional judgment was applied where necessary to qualitatively assess the likelihood of environmental impacts on receptors that may also be influenced by the proposed scheme.

## 11.3. Potential Cumulative Impacts

### Effects Interactions Cumulative Impacts

- 11.3.1. Throughout the EIA Report, each discipline chapter has identified potential and residual impacts occurring at specific locations (receptor/resource) and where relevant, reference has been made between chapters where there may be the accumulation of impacts. Table 11.2 identifies and describes key areas along the Proposed Scheme where multidisciplinary cumulative impacts are particularly evident for the construction phase, in order to provide a concise and clear identification of the accumulation of different types of impact on the same receptor/resource. Only topics scoped into the EIA have been discussed.

## Construction

**Table 11-2 Effects Interactions Cumulative Effects - Construction**

Receptor	Summary of Residual Significant Impacts with Potential for Interaction	Cumulative Effect
Private Farm Holding (Farm Holding No.1)	<p>Farm Holding No.1 would experience a total, permanent loss of land equating to c.8.5ha (9.55% of the land holding), classed as a moderate adverse residual effect.</p> <p>A moderate adverse residual effect is also anticipated due to severance issues for the farm, owing to increased traffic utilising the OMR during the construction of improvements to the OMR.</p> <p>There would be a moderate adverse effect on the Upland Glens Landscape Character Type and on the Special Landscape Quality of tranquillity and famous through routes for the landscape resulting from the increased activity during construction.</p>	Significant



Receptor	Summary of Residual Significant Impacts with Potential for Interaction	Cumulative Effect
Users of the OMR	<p>During construction of the Proposed Scheme walkers, cyclists and horse-riders who use the OMR would be required to be convoyed through the construction area. This would result in a temporary impact to the amenity of the journey during the estimated one-year construction period of the OMR Improvements and is categorised as a moderate adverse residual effect.</p> <p>There are also severance issues for the forestry holding owing to increased traffic utilising the OMR during the construction of improvements to the OMR. These have been assessed to have a slight adverse residual effect.</p> <p>There would be a very large adverse effect on visual receptors (users of the OMR) during construction resulting from the changes in close proximity views due to construction activity and a moderate adverse effect on the Special Landscape Quality (SLQ) of famous through routes and tranquillity during the construction period due to the effect of construction activity on the experience of the OMR in its role as an historic through route albeit for a very limited extent of the OMR.</p>	Significant

---

## Operation

- 11.3.2. Table 11-3 identifies and describes key areas along the Proposed Scheme where multidisciplinary cumulative impacts are particularly evident for the operation phase, in order to provide a concise and clear identification of the accumulation of different types of impact on the same receptor/resource. Only topics scoped into the EIA have been discussed here.

**Table 11-3 Effects Interactions Cumulative Effects - Operation**

Receptor	Summary of Residual Significant Impacts with Potential for Interaction	Cumulative Effect
Private Farm Holding (Farm Holding No.1)	<p>Anticipated operational access and viability issues as a result of new field boundaries and changes to OMR resulting in a moderate adverse residual effect. Alongside this a slight adverse impact is identified due to severance issues at the farm holding relating to operational fencing around minor watercourse / field boundaries used as informal drinking supply for livestock.</p> <p>However, improved access through provision of layby at agricultural buildings associated with the farm holding are anticipated to be a slight beneficial residual effect. Following this there is a minor beneficial residual impact on health and wellbeing associated with improved amenity / access with direct access to the private farm house from the OMR.</p> <p>During operation, there would be a slight adverse effect resulting from the changes to the OMR affecting the Upland Glens Landscape Character Type and the SLQ of 'famous through routes' and 'tranquillity'.</p>	Significant

Receptor	Summary of Residual Significant Impacts with Potential for Interaction	Cumulative Effect
Users of the OMR	<p>Improved access provisions along OMR result in a slight beneficial residual effect. There is a minor beneficial impact associated with improved informal Walking Cycling and Horse Riding (WCH) route on the OMR on health and wellbeing to Laigh Glencroe with direct access from the OMR. There is a slight beneficial effect due to provision of an improved WCH route on the OMR. Following this there is a minor beneficial residual impact on health and wellbeing associated with improved informal WCH route on the OMR.</p> <p>During operation, there would be a moderate adverse effect on users of the OMR resulting from close proximity changes to the view and a slight adverse effect on the SLQ 'famous through routes' and 'tranquillity' as the experience will be slightly affected.</p>	Not significant.

### In-combination Effects Screening

11.3.3. As discussed in Section 11.2, the identification of reasonably foreseeable developments within the study area was undertaken in August 2024 and the screening assessment is set out in Table 11.4 below.

**Table 11-4 Reasonably Foreseeable Developments Screening Assessment**

Ref No.	Development Description	Screening Assessment
A83 Landslide Protection Works	Ongoing by Transport Scotland's Operating Company on the existing A83. The works are being progressed to provide resilience measures for the A83 combined with the rockfall and retentions measures.	The landslide protection works do not meet the criteria defined in DMRB LA 104 as a confirmed road project or a project subject to EIA. The works are classed as operational maintenance works and it is predicted that no in-combination impacts would occur and the development is screened out of further assessment. The on-going work to provide resilience measures for the A83 are emergency works and it cannot be determined when these operations will occur and whether they will overlap with the MTS works.
A83 Rest and Be Thankful Long-Term Solution (LTS)	<p>The purpose of the LTS is to protect the road users from debris flows, landslides and other such events. A structure known as a debris flow shelter (DFS) will be installed to cover a section of the road considered to be at higher risk. The Proposed Scheme will include a catch pit on the uphill side of the debris flow shelter structure to channel landslip material, allowing it to be dealt with safely and efficiently, without adversely impacting the road user or downstream slope.</p> <p>An improved junction between the A83 and the B828 Glenmore local road will be provided as well as changes to the existing bus stop and turning area and new access to the Rest and Be Thankful Viewpoint car park. A new active travel link has also been incorporated into the scheme to link the Rest and Be Thankful car park to the forest trails to the south.</p>	<p>Consent will also be sought under the <a href="#">Roads (Scotland) Act 1984</a> for the LTS, separate to the MTS. The draft Orders for the LTS will be accompanied by an EIA Report detailing the environmental assessment work undertaken.</p> <p>The LTS scheme includes the same OMR and geotechnical interventions included in the MTS (as detailed in Chapter 4: The Proposed Scheme, and as assessed in Chapter 7 to 10 of this EIA Report). Their inclusion in the LTS EIA Report is focused on reducing disruption to road users and providing a safe and more resilient temporary diversion route when the A83 is closed.</p> <p>On the basis of the potential for cumulative impacts, the LTS is scoped into cumulative assessment, and potential in-combination effects will be further assessed in Table 11-5 and Table 11-6.</p>

Ref No.	Development Description	Screening Assessment
A82 Tarbet to Inverarnan	<p>The A82 trunk road forms a strategic link in Scotland’s transport network, connecting the Highlands and Islands to Glasgow and the Central Belt. The proposed 17km scheme, which begins south of the village of Tarbet and ends just to the north of Inverarnan, has been designed, for the most part, to follow the route of the existing A82 carriageway.</p> <p>The Proposed Scheme includes:</p> <ul style="list-style-type: none"> <li>▪ A 7.3m wide carriageway, with 1m paved hard strips next to both sides of the road</li> <li>▪ A shared path on the lochside.</li> <li>▪ Improved alignment and forward visibility.</li> <li>▪ Vehicle laybys</li> <li>▪ Larger watercourse crossings, new drainage channels, road embankments and cuttings to improve resilience to storm events.</li> </ul>	<p>Full road closures will also be required during the construction of some aspects of the works. During these closures, road users will be required to follow the local diversion route, which will include a section of the A83 between Tarbet and Inveraray.</p> <p>The A82 between Tarbet and Tyndrum also provides a local diversion route during A83 closures at the Rest and Be Thankful.</p> <p>Having consideration for the A83 route to Argyll and Bute for impacts on the surrounding road network, Transport Scotland have confirmed that construction work will not take place on the A82 Tarbet to Inverarnan scheme at the same time as the works to avoid both routes being disrupted simultaneously.</p> <p>Given the distance from the scheme, in relation to the MTS there is not considered an in-combination impact that would occur and the A82 Tarbet to Inverarnan is screened out of further assessment. Given the distance from the scheme (c. eight miles), in relation to the MTS there is not considered an in-combination impact that would occur and the A82 Tarbet to Inverarnan is screened out of further assessment.</p>

### In-combination Effects Assessment

- 11.3.4. As discussed in Section 11.2, the identification of reasonably foreseen developments within the study area was undertaken in August 2024 and the screening assessment is set out in Table 11.4 above.
- 11.3.5. Alongside the development of the MTS, a Long-Term Solution (LTS) is also being developed, and whilst this includes the OMR interventions detailed within the MTS Proposed Scheme and reported in the MTS EIA Report, the interventions serve different purposes. The purpose of the MTS is to construct an emergency diversion lane for the A83 trunk road at the Rest and Be Thankful by improving and widening the OMR, including constructing landslip protection measures above and below the A83 trunk road. Through the introduction of these interventions, improvements will be made to safety, operational capacity and resilience, and reduce journey times during period of debris flow risk. There will also be an increase in the operational capacity of the OMR which is achieved by the road widening and bend improvements for vehicle tracking to improve journey times and journey time reliability for the route. The construction period is anticipated to last for 1 year, with an opening year of 2026.
- 11.3.6. Whereas, for the LTS the purpose of the Proposed Scheme is to protect and improve the resilience of the A83 trunk road at the Rest and Be Thankful through the provisions of a debris flow shelter, road upgrades, junction improvements and by establishing a temporary diversion route for the A83 trunk road at Rest and Be Thankful, Argyll and Bute by improving and widening the OMR, including constructing landslip protection measures above and below the A83.
- 11.3.7. Table 11.5 and Table 11.6 present the assessment of the MTS scheme in-combination with the LTS scheme for those topics which have been scoped in to the MTS EIA as it is considered that if the MTS has no impact or a negligible impact alone then it would not contribute to a cumulative effect with another scheme. No significant impacts were identified during the assessment, and as a result table 11.5 and 11.6 present a summary to demonstrate this.

---

11.3.8. The EIA Report for the LTS was not published at the point at which this assessment was undertaken and as a result the cumulative effects reported below are based upon the emerging findings of the EIA works.



**Table 11-5 In-Combination Assessment with the LTS - Construction**

Topic	Medium Term Solution Summary of Residual Impacts	Long Term Solution Summary of Residual Impacts	Commentary and significance
Landscape	Moderate adverse effect on the Upland Glen Landscape Character Type and SLQ of 'tranquillity' and 'famous through routes'. Slight adverse residual impacts are expected for LLTNP, Highland Summits LCT, Argyll Coastal Route and for all other SLQ's considered in the assessment.	Very large adverse effect on the Upland Glens Landscape Character Type (LCT), and moderate adverse effect on the LLTNP and the Highland Summits LCT due to the construction activity associated with the new elements. There would also be a very large adverse effect to the Special Landscape Quality (SLQ) Tranquillity, Famous Through Routes and Dramatic Pass Rest and Be Thankful. A moderate adverse effect to all other SLQs considered in the assessment.	The assessment presented in the LTS EIA Report accounts for the OMR interventions which comprise the MTS and as such it is considered that there would not be any in-combination effects. The LTS assessment accounts for the landscape impacts and effects reported for the MTS in isolation.
Visual Effects	Very large adverse residual effect on visual receptors (users of the OMR). A large adverse impact is anticipated on Rest and Be Thankful and Ben Donich. A moderate adverse residual effect is anticipated on users of the forestry path, B828 and Beinn an Lochain.  SLQ: Famous through routes is anticipated to experience a large adverse effect. A slight adverse effect is anticipated on all other SLQs considered in the assessment.	A large adverse effect on views experienced by visual receptors (people) from the Forestry Path, B828, Glen Croe Farm, and Beinn an Lochain as a result of the construction activity in very close proximity. There would be a very large adverse effect on visual receptors from users of the OMR, the Rest and Be Thankful car park, and from Ben Donich. There would be a moderate adverse effect from the layby next to Loch Restil and the layby to the north of Loch Restil, alongside the sequential views of the area.	The assessment presented in the LTS EIA Report accounts for the OMR interventions which comprise the MTS and as such it is considered that there would not be any in-combination effects. The LTS assessment accounts for the visual impacts and effects reported for the MTS in isolation.
Geology, Soils and Groundwater	Other than Groundwater Dependent Terrestrial Ecosystems (GWDTE), all other geology, soils and groundwater sub-topics were agreed to be scoped out.  There is a slight adverse effect to GWDTE, however no residual significant effects are predicted for GWDTE in relation to potential impacts of construction.	A slight adverse residual effect as a result of groundwater pollution from construction, alongside a slight adverse effect to peat and soils, and change to groundwater aquifers during construction.  There is also a slight adverse impact due to loss or changes to GWDTE.  Overall, there are no significant residual effects identified.	The assessment presented in the LTS EIA Report accounts for the OMR interventions which comprise the MTS and as such it is considered that there would not be any in-combination effects. The LTS assessment accounts for the geology, soils and groundwater impacts and effects reported for the MTS in isolation.

Topic	Medium Term Solution Summary of Residual Impacts	Long Term Solution Summary of Residual Impacts	Commentary and significance
Population and human health	<p>Moderate adverse effect due to permanent land loss and severance issues for Farm Holding no.1. Moderate adverse impact as users of the OMR would be required to be convoyed through the construction area resulting in a temporary impact to the amenity of the journey.</p> <p>Slight adverse residual effects due to disruption to access for the residential property with direct OMR access. Minor adverse effects to WCH routes due to the amenity (impacts being noise, air quality and visual).</p>	<p>Moderate adverse effect to Farm Holding No.1 due to land take and viability issues with some remaining land parcels, alongside severance issues disrupting access and or viability of agricultural buildings.</p> <p>Moderate adverse residual effect to the OMR WCH route users whilst a convoy system is required, alongside an adverse impact to safety as well as amenity (related impacts being noise, air quality and visual). A very large adverse residual effect to two walking routes has also been noted. A large adverse effect has been identified on the Rest and Be Thankful viewpoint, due to disruption, temporary closure, changes to access, viability and amenity impacts.</p> <p>A minor adverse residual effect is anticipated for a number of other Routes.</p>	<p>The assessment presented in the LTS EIA Report accounts for the OMR interventions which comprise the MTS and as such it is considered that there would not be any in-combination effects. The LTS assessment accounts for the impacts and effects relating to Population and Human Health receptors which are reported for the MTS in isolation.</p>

**Table 11-6 Reasonably Foreseeable Developments Screening Assessment Operation**

Topic	Medium Term Solution Summary of Residual Impacts	Long Term Solution Summary of Residual Impacts	Commentary and significance
Landscape	Slight adverse residual effects have been identified for LLTNP, Upland Glen LCT, and all SLQs assessed.  No significant effects identified for landscape receptors.	Moderate adverse residual effects for Upland Glens LCT, and SLQ: Dramatic Pass Rest and Be Thankful. Large adverse residual effect for SLQ Famous Through Routes.	The assessment presented in the LTS EIA Report accounts for the OMR interventions which comprise the MTS and as such it is considered that there would not be any in-combination effects. The LTS assessment accounts for the landscape impacts and effects reported for the MTS in isolation.
Visual Effects	A moderate adverse impact is anticipated for users of the OMR, Rest and Be Thankful, Ben Donich. A slight adverse impact is anticipated on users of the Forestry Path, B282 and Beinn an Lochain. The SLQ: Famous through roads is also anticipated to experience slight adverse effects. A neutral residual effect is anticipated for all other SLQs.	Moderate adverse for users of Forestry Path, B828, Beinn an Lochain and Glen Croe Farm. Large adverse residual effect for the OMR, Rest and Be Thankful and Ben Donich users and for sequential views.	The assessment presented in the LTS EIA Report accounts for the OMR interventions which comprise the MTS and as such it is considered that there would not be any in-combination effects. The LTS assessment accounts for the landscape impacts and effects reported for the MTS in isolation.
Geology, Soils and Groundwater	Other than GWDTE, all other geology, soils and groundwater sub-topics were agreed to be scoped out.  There is a slight adverse effect to GWDTE, however no residual significant effects are predicted for GWDTE in relation to potential impacts of operation.	A slight adverse effect due to loss or change to GWDTE and change to groundwater aquifers and groundwater during construction. A slight beneficial residual effect as a result of reduced groundwater pollution from routine run off and accidental spillages.  Overall, there are no significant residual effects identified.	The assessment presented in the LTS EIA Report accounts for the OMR interventions which comprise the MTS and as such it is considered that there would not be any in-combination effects. The LTS assessment accounts for the geology, soils and groundwater impacts and effects reported for the MTS in isolation.

Topic	Medium Term Solution Summary of Residual Impacts	Long Term Solution Summary of Residual Impacts	Commentary and significance
Population and Human Health	<p>A slight beneficial impact is anticipated due to improved access provision along the OMR, and improved access to agricultural buildings associated with Farm Holding No.1. A minor beneficial effect is anticipated to health and wellbeing from amenity and access improvements. A moderate adverse effect is anticipated due to operational access and viability issues as a result of new field boundaries and changes to OMR. A slight adverse impact is anticipated due to severance issues at the farm holding relating to operational fencing around minor watercourse / field boundaries used as informal drinking supply for livestock.</p>	<p>Moderate beneficial impacts on community assets due to improved access, safer and more reliable journeys along the A83 alongside health and wellbeing benefits, and potential impacts on education and training opportunities.</p> <p>Moderate adverse residual effects to the Farm Holding No.1 due to anticipated operational access and viability issues as a result of new field boundaries and loss of OMR ownership.</p> <p>A moderate beneficial residual effect is noted to WCH routes due to improved access, safer and more reliable journeys along the A83, and provision of an active travel link from the Rest and Be Thankful car park and Viewpoint to the forestry track west of the OMR would create a moderate beneficial residual effect.</p>	<p>The assessment presented in the LTS EIA Report accounts for the OMR interventions which comprise the MTS and as such it is considered that there would not be any in-combination effects. The LTS assessment accounts for the population and human health impacts and effects reported for the MTS in isolation.</p>

## 11.4. Conclusions

- 11.4.1. A number of receptors have been identified and assessed as part of this cumulative assessment. Potential cumulative impacts of the Proposed Scheme have been identified for effect interactions at both the construction and operation stage of the Proposed Scheme. During construction a moderate adverse cumulative effect to the private farm holding is anticipated due to land loss and severance and to tranquillity. For users of the OMR during construction a moderate adverse cumulative effect due to amenity disruption (including visual amenity) and to the experience of SLQs to users of the OMR during the construction period.
- 11.4.2. Although the assessment for effect interactions on specific receptors is considered to be significant, it is not anticipated to result in a greater significance of effect than individual topic assessments and therefore, the mitigation and monitoring identified in the individual topic assessments (chapters 7 - 10) and the Schedule of Environmental Commitments (Chapter 12) is considered appropriate. It is however noted that the mitigation referenced would not reduce the identified cumulative effects to non-significant levels during either the construction or operation of the Proposed Scheme.
- 11.4.3. For in-combination cumulative effects, the LTS was scoped in and potential in-combination effects assessed. The assessment presented in the LTS EIA Report accounts for the OMR interventions which comprise the MTS and as such it is considered that there would not be any significant in-combination effects.