

## 21 Summary of Significant Residual Impacts

### 21.1 Introduction

- 21.1.1 This chapter summarises the significant residual impacts (Tables 21.1 to 21.9) that have been identified due to construction and operation of the proposed scheme. These residual impacts comprise those which remain significant after incorporating the mitigation measures as provided in Chapters 7 to 16 and 20 (where applicable).
- 21.1.2 Residual impacts identified in Tables 21.1 to 21.9 are generally defined as significant when they are assessed to be moderate or greater in significance and are considered adverse, unless otherwise stated. Non-significant residual impacts are given within the foregoing chapters of this Environmental Impact Assessment Report (EIAR) and are not summarised within this chapter.
- 21.1.3 Within this EIAR, significant impacts are identified according to the methodology provided for each environmental topic within Chapters 7 to 17 and Chapter 19. Impacts are adverse unless stated otherwise.
- 21.1.4 According to the Design Manual for Roads and Bridges (DMRB) guidance, impacts on driver stress are assessed using a three-point scale and embodied carbon associated with material resources is assessed using a magnitude rather than assigning significance. Driver stress and material resources are assessed in Chapter 16 (People and Communities – All Travellers) and Chapter 17 (Materials) respectively.
- 21.1.5 The assessment of environmental parameters has found that there are no significant adverse residual impacts to the following topics as a result of the proposed scheme:
- Chapter 7 (Air Quality);
  - Chapter 12 (Geology, Soils, Contaminated Land and Groundwater); and
  - Chapter 17 (Materials).
- 21.1.6 Chapter 18 (Policies and Plans) does not assess significance and is therefore not summarised in this chapter. Full details of the proposed scheme's compliance with relevant policies and plans is outlined in Chapter 18.

**Table 21.1: Summary of Significant Residual Impacts – Noise and Vibration (Chapter 8)**

Residual Impact	Residual Impact Significance
<b>Operation</b>	
<p><i>Do-Minimum Scenario in the Baseline Year vs. Do-Something Scenario in the Baseline Year (Short-term Assessment)</i></p> <p>The short-term assessment indicates that there are 11 Noise Sensitive Receptors (NSRs) which are considered to have a residual significant noise impact. These are:</p> <ul style="list-style-type: none"> <li>Ten dwellings on Castlehill Court (Nos. 5 to 12, 12A and 14), to the south of the proposed scheme; and</li> <li>Drumossie Cottage on the B9177 and beside B9006 Culloden Road, to the south of the proposed scheme.</li> </ul> <p>Culloden House Care Home, which is under construction at the time of writing, is considered to have a residual significant noise impact in the short-term.</p> <p><i>Do-Minimum Scenario in the Baseline Year vs. Do-Something Scenario in the Future Assessment Year (Long-Term Assessment)</i></p> <p>The daytime noise levels at ground floor level and night-time noise levels at ground and first floor levels in the long-term assessment indicate that there is one NSR which is predicted to experience a significant residual noise impact:</p> <ul style="list-style-type: none"> <li>Drumossie Cottage on the B9177 and beside Culloden Road, to the south of the proposed scheme.</li> </ul>	Slight/Moderate*

\* In relation to the assessment of noise and vibration (refer to Chapter 8), impacts were considered to be 'significant' where the significance of impact was assessed to be Slight/Moderate adverse or higher and where the predicted absolute noise level exceeds 59.5dB LA10,18h at ground floor level. For night-time noise levels impacts were considered to be 'significant' where the significance of impact was assessed to be Slight/Moderate adverse or higher significance and where the predicted absolute noise level exceeds 55.0dB L<sub>night</sub>, outside at ground and/or first floor level

**Table 21.2: Summary of Significant Residual Impacts – Landscape (Chapter 9)**

Residual Impact	Residual Impact Significance	
	Winter Year of Opening	Summer (+ 15 years)
<b>Operation</b>		
The significance of residual impact upon the Enclosed Farmed Landscapes Local Landscape Character Area (LLCA) would be Moderate/Substantial in the winter year of opening. This is due to the proposed scheme affecting the positive qualities of tranquillity and disrupting the landscape pattern through the introduction of a major development into a landscape that is, at present, relatively undeveloped in character. This impact would reduce to Moderate by the summer 15 years after opening, when the mitigation planting would have integrated the earthworks into the surrounding landscape. However, it should be noted that the majority of this LLCA is allocated for development in the adopted local development plan, which if implemented, would alter the existing character.	Moderate/Substantial	Moderate
The significance of residual impact upon the Inverness Campus (Mixed-Use) LLCA would be Moderate in the winter year of opening due to the introduction of the roads, earthworks, structures and lighting on the edges of the LLCA. This would reduce to Slight by the summer 15 years after opening, when the mitigation planting would have become established and assisted in screening the views of traffic and embankments.	Moderate	Slight (not significant)

**Table 21.3: Summary of Significant Residual Impacts – Visual (Chapter 10)**

Residual Impact	Residual Impact Significance	
	Winter Year of Opening	Summer (+ 15 years)
<b>Operation</b>		
<p>Views from 82 individual properties (built receptors) (approximately 12%) and at six outdoor receptor locations (33%) would be significantly affected (Moderate impact or greater) during the winter of the year of opening of the proposed scheme.</p> <p>By the summer, 15 years after the proposed scheme opening, establishment of landscape mitigation measures would reduce the total number of built receptors affected by significant adverse Impacts to 38 (6%) and two (11%) for outdoor receptors. These include:</p> <ul style="list-style-type: none"> <li>• Receptor 32: 5 to 7, 9 to 11 Cradlehall Meadows;</li> <li>• Receptor 33: 1 to 4 Cradlehall Meadows;</li> <li>• Receptor 34: 8 Cradlehall Meadows;</li> <li>• Receptor 35: 12 to 16 Cradlehall Meadows;</li> <li>• Receptor 36: 2 to 10 Cradlehall Farm Drive;</li> <li>• Receptor 40: Ashton Farm Cottages;</li> <li>• Receptor 41: Ashton Farmhouse;</li> <li>• Receptor 46: Annfield, Goodwood, The Stables (1 and 2) and Galloway Lodge (Group of properties in Resaurie);</li> <li>• Receptor 47: Rockyle, The Birches and an Unnamed property (Group of properties in Resaurie); and</li> <li>• Receptor 48: Aira, No. 3, 3a, 4 and 5 Caulfield Road North, Ashville and Cornriggs (Group of properties in Resaurie).</li> <li>• Receptor O7: Core path IN08.10 (A96 Aberdeen - Inverness Trunk Road to Caulfield Road North by Ashton Farm)</li> <li>• Receptor O17: Local path from Inverness Campus access road and roundabout to Drumrosach Footbridge</li> </ul>	Moderate to Substantial	Moderate

**Table 21.4: Summary of Significant Residual Impacts – Ecology and Nature Conservation (Chapter 11)**

Residual Impact	Residual Impact Significance
<b>Operation</b>	
Temporary significant impact due to loss and fragmentation of foraging and commuting habitat for bats, and suitable habitat for breeding birds. Once landscape and ecological planting has established no significant residual impacts are predicted.	Significant (temporary, short-term)

**Table 21.5: Summary of Significant Residual Impacts – Road Drainage and Water Environment (Chapter 13)**

Residual Impact	Residual Impact Significance
<b>Operation</b>	
<p>In relation to hydrology and flood risk, adverse impacts of Large to Very Large significance are reported for Beechwood Burn (SW03), Scretan Burn (SW04), tributary of Scretan Burn (SWF05) and Cairnlaw Burn (SWF08), due to localised increases in flood depths occurring within the CPO for the proposed scheme. These increases occur as a result of flood mitigation measures aimed at avoiding increases in flood risk outwith the CPO. A neutral impact on flood risk is reported on land and receptors outwith the CPO for the proposed scheme.</p>	Large to Very Large
<p>In relation to hydrology and flood risk, beneficial impacts of Large to Very Large significance are reported for Scretan Burn (SWF04), tributary of Scretan Burn (SWF05) and Cairnlaw Burn (SWF08) due to reductions in peak flood depth during the design flood event. The largest beneficial impact of the proposed scheme is the reduction of flood risk to the Inverness Campus for the design flood event from Scretan Burn.</p>	Large to Very Large (beneficial)

**Table 21.6: Summary of Significant Residual Impacts – Cultural Heritage (Chapter 14)**

Residual Impact	Residual Impact Significance
<b>Construction and Operation</b>	
<p>The loss of integrity of the setting of the Scheduled Monument (Asset 14) and Stratton Possible Hut Circles 1 (Asset 45) as a result of the proposed scheme results in a Moderate residual impact for these assets.</p> <p>The proposed scheme would also spatially sever the following archaeological remains from other prehistoric remains in the study area resulting in a Moderate residual impact:</p> <ul style="list-style-type: none"> <li>• Ashton Farm Possible Pits 1 (Asset 49);</li> <li>• Ashton Farm Possible Settlement Activity 1 (Asset 50);</li> <li>• Ashton Farm Pits 1 (Asset 55);</li> <li>• Beechwood Farm Possible Settlement Activity 3 (Asset 63);</li> <li>• Ashton Farm Possible Settlement Activity 6 (Asset 72);</li> <li>• Ashton Farm Possible Settlement Activity 7 (Asset 78);</li> <li>• Ashton Farm Possible Pits 3 (Asset 83); and</li> <li>• Beechwood Farm Possible Enclosure 3 (Asset 91)).</li> </ul>	Moderate

**Table 21.7: Summary of Significant Residual Impacts – People and Communities: Community and Private Assets (Chapter 15)**

Residual Impact	Residual Impact Significance
<b>Community Severance</b>	
Moderate Beneficial relief from existing severance for pedestrians (both non-vulnerable and vulnerable groups) accessing community facilities and services due to a reduction in traffic flow along C1036 Tower Road.	Moderate (Beneficial)
Residual impacts of Moderate significance arising from new severance associated with the proposed scheme for users of NCN 1 accessing Cradelhall and Inverness College UHI when travelling from the west and east, respectively.	Moderate
Due to an at-grade crossing with predicted traffic flows of over 8,000 AADT users of Core Path IN08.10 linking local communities of Smithton and Cradlehall to Inverness Business and Retail Park are expected to experience residual impacts of Moderate significance.	Moderate
<b>Agricultural and Sporting Interests</b>	
Significant residual impacts for K&C Munro Ashton Suffolks are anticipated as a result of the proposed scheme. These impacts arise from a combination of land-take (19% of total farmed area from eight fields); severance of two fields; creation of some unproductive field shapes and sizes; loss of boundary features and seven gated accesses; and disruption to drainage systems.	Substantial
<b>Arboriculture</b>	
The full impacts of the proposed scheme on arboriculture features would not be fully known until the construction phase. Taking a precautionary approach it is assessed that 31 individual and grouped tree features are considered to have significant residual impacts as a result of the construction of the proposed scheme.	Moderate

**Table 21.8: Summary of Significant Residual Impacts – People and Communities: All Travellers (NMUs) (Chapter 16)**

Residual Impact	Residual Impact Significance
<b>Construction</b>	
Significant residual impacts are anticipated for eight NMU routes (Core Path IN08.10 and Local Paths 1, 2, 3, 4, 5 and 8 and NCN 1/LP11) from a change in amenity value and for six NMU routes (Core Path IN08.10 and Local Paths 2, 4, 5 and 8 and NCN 1/LP11) from changes in journey lengths during construction of the proposed scheme. However, these impacts will be temporary in nature during the construction phase.	Moderate to Substantial
<b>Operation</b>	
Significant residual impacts (Moderate) are anticipated for three NMU routes (IN08.10, LP2 and LP5). This takes into account the Moderate/Substantial impacts for NMUs using LP5 as a result of an increase in journey length due to severance and diversion, and the Moderate impacts on amenity value for NMUs using paths IN08.10, LP2 and LP5 due to the closer proximity of the proposed scheme and subsequent noise and visual impacts.	Moderate

**Table 21.9: Summary of Significant Cumulative Impacts (Chapter 19)**

Residual Impact	Residual Impact Significance
<b>Construction</b>	
<p><b>Type 2 Cumulative Impacts</b> Potential for significant cumulative construction impacts for properties at Inshes Holdings (receptors 6, 15 to 17 – refer to Chapter 10: Visual) on the basis that construction of the proposed scheme at the Inshes Overbridge is undertaken concurrently with the Inshes Junction Improvement – Phase 2 works in this area. These potential impacts should be taken into account in the development of the construction programme for both schemes.</p>	Significant (Potential)*
<b>Operation</b>	
<p><b>Type 2 Cumulative Impacts</b></p> <p><u>Visual Impacts</u> Potential for Ashton Farm development (LA08 (IN83: Ashton Farm and adjoining land)) to contribute to significant adverse visual impacts of the proposed scheme for properties along U1058 Caufield Road North (receptors 46 to 48 – refer to Chapter 10: Visual). The significance of impacts would need to be further considered as part of the detailed design and mitigation proposals for the Ashton Farm development. Potential for significant cumulative visual impacts for properties at Inshes Holdings (receptors 6, 15 to 17 – refer to Chapter 10: Visual) when considering the Inshes Junction Improvement – Phase 2 scheme. The significance of impacts would need to be further considered as part of the detailed design and mitigation proposals for this scheme.</p> <p><u>Landscape</u> Potential for significant cumulative impacts on the Enclosed Farmed Landscapes LLCA when considering PA15 (Stratton) and LA08 (IN83: Ashton Farm and adjoining land). The overall cumulative significance of this impact would need to be further considered as part of the detailed design and mitigation proposals for the phases (further phases) of these developments as they come forward to be implemented.</p> <p><u>Loss of Prime Agricultural Land</u> Potential for significant cumulative impacts expected in relation to the loss of prime agricultural land in conjunction with PA11 (Centre for Health Sciences), LA03 (IN81: Inverness Campus), PA14 (HM Prison), PA15 (Stratton) and LA08 (IN83 Ashton Farm and adjoining land). The overall cumulative significance of this impact would need to be further considered further as part of the detailed design and mitigation proposals for the phases (further phases) of these developments as they come forward to be implemented.</p>	

Residual Impact	Residual Impact Significance
<p><b>Operation</b></p> <p><u>Agricultural Land Interests</u> Potential for significant cumulative impacts due to land-take from the proposed scheme and LA08 (IN83: Ashton Farm and adjoining land) for the following agricultural land interests; Seafield Park Partnerships, Ashton Farm (K&amp;C Munro, Ashton Suffolks) and Ashton Farm East (refer to Chapter 15: People and Communities – Community and Private Assets). The significance of cumulative impacts would need to be further considered as part of the detailed design and mitigation proposals for the Ashton Farm development as it comes forward to be implemented.</p> <p><u>Fragmentation of Badger Habitat</u> Potential for significant cumulative impact in relation to the fragmentation of badger habitat due to PA11 (Centre for Health Sciences), LA03 (IN81: Inverness Campus), PA15 (Stratton), PA14 (HM Prison) and LA08 (IN83: Ashton Farm and adjoining land). The potential for cumulative impact mainly relates to LA08 and the overall cumulative significance of this would need to be further considered as part of the detailed design and mitigation proposals for the phases (further phases) of these developments as they come forward to be implemented.</p> <p><u>Cultural Heritage</u> Potential for significant cumulative impact through further severance of assets from other prehistoric archaeological remains and further loss to the integrity of the setting of the Scheduled Monument (Asset 14) and Stratton Possible Hut Circles (Asset 45). The potential for cumulative impacts mainly relates to LA08 and the overall cumulative significance of impact would need to be further considered as part of the detailed design and mitigation proposals for this development as it comes forward to be implemented.</p>	<p>Significant (Potential)*</p>

*\*The Type 2 cumulative impacts noted in Table 21.9 are mainly related to the planned urban expansion at Inverness East as established in the IMFLDP and Inverness East Development Brief. These impacts are considered to represent a 'potential' for a cumulative impact, and the significance of these would need to be considered further as part of the detailed design and mitigation proposals for the phases (further phases) of developments as they come forward to be implemented, in particular for LA08 (IN83: Ashton Farm and adjoining land).*