42 Visual

This section presents an assessment of the impacts on the visual amenity of the Fastlink section of the proposed scheme.

The area between Stonehaven and Cleanhill Junction is predominantly open farmland with some areas of higher ground. Views are generally open across the flatter areas although the undulating landform and areas of woodland cover provide some screening.

Built receptors (mainly dwellings) are scattered or clustered in small settlements throughout the area, with the larger settlement of Stonehaven at the southern end of the study area. Outdoor receptors such as roads, pedestrian, equestrian and cycle routes are distributed throughout the area with the outdoor recreation spaces concentrated in Stonehaven.

Proposed drystone walls and grading out of earthworks slopes will help to reduce visual impacts after completion of the scheme. In addition, woodland and scrub planting will reduce the initial visual impacts as the vegetation matures.

Fifteen years after opening, residual impacts are assessed as severe and substantial where the proposed scheme is located in close proximity to receptors in rural locations. Impacts for the majority of more distant receptors would be slight.

42.1 Introduction

- 42.1.1 This chapter presents an assessment of the visual impacts of the proposed scheme on the visual amenity of the study area on completion and during operation of the proposed scheme.
- 42.1.2 The General Context Map (Figure 42.1) provides a guide to the layout of the visual assessment mapping. Figures 42.2a-c show the scheme at 1:25,000 scale, illustrating impacts on outdoor sites and distant built receptors. Figures 42.3a-f show the proposed scheme at 1:10,000 scale, illustrating the visual impact on built receptors.
- 42.1.3 The assessment determines the degree of anticipated change to the character of views and visual amenity that would result from the proposed scheme, as viewed from buildings, major and well-used minor roads, outdoor recreational spaces, Rights of Way, footpaths, cycleways and equestrian routes (collectively referred to as receptors).
- 42.1.4 The visual impacts of the proposed scheme on the receptors within the study area are assessed for the operational phase of the scheme. Impacts during scheme construction are addressed in Chapter 48 (Disruption due to Construction). Landscape measures to mitigate potentially adverse visual impacts are taken into account in the visual assessment. These are described in Chapter 41 (Landscape) and illustrated on Figures 41.5a-k.
- 42.1.5 Mitigation measures to reduce the potentially adverse visual impacts are identified and taken into account for winter, year of scheme opening (2012) when earthworks mitigation (e.g. false cuttings) and other built screening elements such as fences and walls are in place but before new planting has become established. The scheme impacts are also assessed for the summer, 15 years after the scheme opening (2027) when mitigation is anticipated to be fully effective as planting will have become established. The former is intended to represent the 'worst case scenario' and the latter the 'best case scenario' for permanent impacts.
- 42.1.6 For the purposes of visual assessment of the proposed scheme, the study area starts just north of Stonehaven at chainage 0 then continues to Cleanhill Junction just south of the Dee Valley at chainage 11500. A dividing line at Cleanhill Junction between the Fastlink and the Southern Leg sections of the proposed scheme is indicated on Figure 42.2c. Where a receptor occurs south of the dividing line and is assessed in this chapter, but would also be affected by elements of the Southern Leg section of the proposed scheme, the information is reported in this chapter.

42.2 Approach and Methods

Study Area

42.2.1 The indicative study area for the visual assessment was informed by desk and site study. The theoretical visual envelope map, shown on Figure 42.4a-c, assisted the identification of potential receptors by highlighting areas to check on site to confirm which receptors would be likely to have views of the proposed scheme, subject to the surrounding topography, buildings and woodland.

Guidance and Approach

- 42.2.2 The visual assessment follows guidance provided in DMRB (Volume 11, Section 3, Part 5) and the 'Landscape and Visual Assessment Supplementary Guidance', issued by the Scottish Executive in 2002, with reference to Guidelines for Landscape and Visual Impact Assessment (Institute of Environmental Management and Assessment: IEMA; 2002).
- 42.2.3 With regard to landscape mitigation, reference was also made to the Scottish Executive policy document titled 'Cost Effective Landscapes: Learning from Nature' (CEL:LfN) (Scottish Office, 1998) and 'Planning Advice Note (PAN) 58: Environmental Impact Assessment' (Scottish Executive, 1998).
- 42.2.4 The assessment has been carried out through:
 - review of proposed scheme design to ascertain the likely visually intrusive elements of the proposals;
 - field studies to assess the likely impact of the proposals upon receptors; and
 - visual envelope mapping (VEM) to assist identification of areas from which views may be gained.

Visual Envelope Mapping

- 42.2.5 Computer generated theoretical VEMs were prepared to show areas from which views of the road, vehicles, structures and lighting may potentially be visible. The VEM extends to 5km from the proposed scheme to ensure that any potential for visual change beyond the expected 3km limit of discernible impacts would be identified.
- 42.2.6 Digital ordnance survey contour mapping at 5m intervals was used to create a ground model and the visual barriers of buildings and trees were added to allow the VEMs to be generated. Buildings were ascribed a height of 6m and existing woodland a height of 12m.
- 42.2.7 The VEMs were prepared to illustrate anticipated views during the day and at night time taking into account the anticipated impact of scheme lighting in the winter year of opening and in the summer 15 years after completion. To allow comparison between the extents of day and night visibility of the proposed scheme, the Winter Year of Opening day and night VEMs have been combined and are shown on Figures 42.4a-c in contrasting colours, and the Summer 15 years following completion day and night VEMs have been combined and are shown on Figures 42.5a-c in contrasting colours.

VEM - Winter Year of Opening (Day)

42.2.8 The theoretical visibility of points taken at a height of 4m (to represent the height of an HGV) above the centreline of the proposed carriageway of the road at 200m intervals was determined using Key Terra-Firma software. The outputs from this exercise were 'proposed-ground' VEMs, and represent the worst-case scenario. Although they incorporate the screening effects of the existing landscape (e.g. woodland and landform) and those of the proposed earthworks (e.g. false cuttings) which would be in place during winter, year of scheme opening (see Figures 42.4a-c), they do not take account of any screening effect of planting proposed as part of landscape mitigation

VEM - Winter Year of Opening (Night)

42.2.9 The theoretical visibility of points taken at lighting column positions with an assumed column height of 12m above the proposed ground model level was determined using LSS software. The outputs from this exercise were 'proposed-ground' VEMs, and represent the worst-case scenario. Although they incorporate the screening effects of the existing landscape (e.g. woodland and landform) and those of proposed earthworks (e.g. false cuttings) which would be in place during winter, year of scheme opening (see Figures 42.4a-c), they do not take account of any screening effect of planting proposed as part of landscape mitigation.

VEM – Summer 15 Years following completion (Day)

42.2.10 The theoretical visibility of points taken at a height of 4m (to represent the height of an HGV) above the centreline of the proposed carriageway of the road at 200m intervals was determined using LSS software. The outputs from this exercise included proposed areas of planting, which were ascribed heights ranging from 6m to 10m, depending on planting type, to represent the best-case scenario of all proposed mitigation planting being in place during the summer, 15 years after opening (see Figures 42.5a-c).

VEM – Summer 15 Years following completion (Night)

42.2.11 The theoretical visibility of points taken at lighting column positions with an assumed column height of 12m above the proposed ground model level was determined using LSS software. The outputs from this exercise included proposed areas of planting, which were ascribed heights ranging from 6m to 10m, depending on planting type, to represent the best-case scenario of all proposed mitigation planting being in place during the summer, 15 years after opening (see Figures 42.5a-c).

Visual Impact Assessment

- 42.2.12 The assessment considers both built and outdoor receptors. Built receptors are identified as dwellings, workplaces and recreational buildings. Outdoor receptors are identified as major and well-used minor roads, outdoor recreational spaces, Rights of Way (ROW), footpaths, cycleways and equestrian routes (in accordance with information received from Aberdeen City and Aberdeenshire Council Access Officers). Built and outdoor receptors identified within the study area, and which would gain views of the proposed scheme, were assessed by teams of two or more landscape architects in the field using a standard checklist. Impacts on listed buildings and other sites of archaeological importance are addressed in Chapter 43 (Cultural Heritage).
- 42.2.13 Photographs from a number of key viewpoints and key receptor locations as shown on Figure 41.7 are shown in the photomontage and wireline photographs provided in Figures 41.8a-g. These images were developed as part of the mitigation design and taken into account as part of the assessment process.
- 42.2.14 The significance of visual impacts was determined through consideration of both the sensitivity of the visual receptors and the predicted magnitude of change as a result of the proposed scheme.

Sensitivity of Receptors

- 42.2.15 The sensitivity of visual receptors to changes in their views was evaluated in accordance with the criteria provided in Table 42.1, based on the following factors:
 - nature and context of the viewpoint;
 - expectations of users/receptors; and
 - importance* and value of the view to the receptor.

* In the case of building receptors 'importance' relates principally to the number and type (where known) of windows/rooms looking towards the view.

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Table 42.1 – Sensitivity of Visual Receptor

Sensitivity	Criteria
High	Receptors where the changed view is of high value and importance and/or where the receptor would notice any change to visual amenity by reason of the nature of use and their expectations (generally only remote dwellings situated to take advantage of panoramic scenic views or outdoor receptors where the view is important to users will be considered to be of high sensitivity).
Medium	Receptors where the changed view is incidental but not critical to amenity and/or the nature of the view is not a primary consideration of the users (the majority of dwellings have been assessed as being of medium sensitivity, as well as outdoor receptors where users are likely to spend time outside of participation in their activity looking at the view and industrial receptors that have offices with windows that take advantage of views).
Low	Receptors where the changed view is unimportant/irrelevant and/or users are not sensitive to change (the majority of industrial receptors are considered to be of low sensitivity unless they have a significant number of windows, which may raise their sensitivity to low/medium; outdoor receptors where users are unlikely to consider the views an important element of their usage of the site will generally be assessed to be of low sensitivity).

Magnitude of Visual Change

- 42.2.16 Evaluation of the magnitude of visual change affecting receptors was carried out by considering the scale of change in the view due to the addition or loss of features, change in character and the amount/extent of the view affected.
- 42.2.17 The main elements taken into account in the evaluation of magnitude of change included:
 - the extent of the receptor's available view affected by the development (including the distance from the scheme;
 - the angle of view relative to the main activity of the receptor; and
 - the level of integration or contrast created by the road and its associated elements within the view.
- 42.2.18 The criteria used to determine the magnitude of visual change are shown in Table 42. 2.

Table 42.2 – Magnitude of Visual Change

Magnitude	Criteria						
High	Where the proposed scheme or elements of the scheme would dominate the view and fundamentally change its character and components.						
Medium	Where the proposed scheme or elements of the scheme would be noticeable in the view, affecting its character and altering some of its components and features.						
Low	Where the proposed scheme or elements of the scheme would be only a minor element of the overall view that are likely to be missed by the casual observer and/or scarcely appreciated.						

Significance of Impact

42.2.19 Tables 42.3 and 42.4 were used to help determine the thresholds of adverse or beneficial impact significance using a matrix of sensitivity and magnitude. It should be noted, however, that this is only a framework to aid consistency of reporting and provide an initial indication of the likely impact arising from the assessment of magnitude and sensitivity. Given that the significance levels of Negligible/Slight/Moderate/Substantial and Severe represent levels on a continuum or continuous gradation, application of the framework also required professional judgment and awareness of the relative balance of importance between sensitivity and magnitude.

Table 42.3 – Visual Impact Significance Crite	eria
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Magnitude	Sensitivity								
	High Medium Low								
High	Severe	Substantial	Moderate						
Medium	Substantial	Moderate	Slight						
Low	Moderate	Slight	Negligible						

Table 42.4 – Visual Impact Significance

Impact	Criteria					
Negligible	No noticeable deterioration or improvement in the existing view					
Negligible to Slight adverse/beneficial	Where the changed view is unimportant and/or users are not sensitive to change and the proposed scheme or elements of the scheme would be only very minor elements of the overall view that are likely to be missed by the casual observer and scarcely appreciated.					
Slight adverse/ Beneficial	Where the changed view is unimportant and/or users are not sensitive to change and the proposed scheme or elements of the scheme would be only minor elements of the overall view.					
Slight to Moderate adverse/beneficial	Where the changed view is unimportant and/or users are not sensitive to change and the proposed scheme or elements of the scheme would be noticeable in the view, affecting its character and altering some of its components and features; or					
	Where the changed view is not critical to amenity and/or the nature of the view is not a primary consideration of the users and the proposed scheme or elements of the scheme would be only minor elements of the overall view.					
Moderate Adverse/ Beneficial	Where the changed view is not critical to amenity and/or the nature of the view is not a primary consideration of the users and the proposed scheme or elements of the scheme would be clearly noticeable in the view, affecting its character and altering some of its components and features; or					
	Where the changed view is of high value and importance and/or where the receptor would notice change to visual amenity by reason of the nature of use and their expectations, but the proposed scheme or elements of the scheme would be only minor elements of the overall view; or					
	Where the changed view is unimportant and/or users are not sensitive to change and the receptor would notice change to visual amenity by reason of the nature of use and their expectations and the proposed scheme or elements of the scheme would dominate the view fundamentally changing its character and components.					
Moderate to Substantial Adverse/Beneficial	Where the changed view is not critical to amenity and/or the nature of the view is not a primary consideration of the users and the proposed scheme or elements of the scheme would dominate the view fundamentally changing its character and components; or					
	Where the changed view is of high value and importance and/or where the receptor would notice change to visual amenity by reason of the nature of use and the proposed scheme or elements of the scheme would be clearly noticeable in the view, affecting its character and altering some of its components and features					
Substantial Adverse/ Beneficial	Where the changed view is of high value and importance and/or where the receptor would notice change to visual amenity by reason of the nature of use and their expectations and the proposed scheme or elements of the scheme would dominate the view fundamentally changing its character and components.					
Severe Adverse	Where the changed view is of very high value and importance and where the receptor would notice change to visual amenity by reason of the nature of use and their expectations and the proposed scheme or elements of the scheme would dominate the view and fundamentally change its character and components.					

42.2.20 For the purposes of this assessment, impacts of moderate or greater are considered to be significant such that they should be mitigated where possible, as this is the level at which changes would be clearly perceived.

Limitations to Assessment

42.2.21 This assessment has been undertaken on the scheme design of May 2007. With regard to the assessment of visual impacts in accordance with DMRB, no limitations to this assessment were identified.

42.3 Baseline Conditions

- 42.3.1 The 'Guidelines for Landscape and Visual Impact Assessment' (IEMA, 2002), states 'landscape and visual assessments are separate, although linked, procedures. The landscape baseline, its analysis and the assessment of landscape effects all contribute to the baseline for visual assessment studies'. The visual context and baseline description of the study area is therefore incorporated to a considerable extent in Chapter 41 (Landscape) and in supporting Appendix A41.
- 42.3.2 Baseline visual conditions within the Fastlink section of the proposed scheme are summarised below:

Megray (approximate ch0 -1300)

- 42.3.3 The two coastal hills provide an important landscape backdrop for Stonehaven and have open views south and east across the farmland to overlook the settlement and harbour of Stonehaven and the North Sea. Views to the north are contained by this hillside topography and woodland at Megray Wood, and to the west by a belt of broadleaf woodland, which screens the former Ury House estate boundary beside the B979 road, running north to meet the edge of Megray Wood.
- 42.3.4 The generally exposed nature of the area is compounded by disturbance from the busy B979 road through the area and the heavily trafficked A90(T) to the south.
- 42.3.5 There is scattered settlement, mainly associated with the former Ury House estate

Kempstone (approximate ch1300 - 3200)

- 42.3.6 This small cluster of hills, dominated by Kempstone Hill, marks the south edge of the upland plateau around Red Moss.
- 42.3.7 The surrounding topography and density of the woodland provide some shelter and enclosure on lower ground but the area generally feels exposed due to the proximity of the coast and the open hillside that allows filtered views out over the surrounding areas to the north from Kempstone Hill across the low-lying farmland and the Burn of Muchalls valley and eastwards to the coast.
- 42.3.8 There are a few scattered farms and isolated dwellings across the character area, with no significant clusters of dwellings and visual intrusion from the busy B979, which provides the primary route through the area and the heavily trafficked A90(T) located to the east, close to the coast.

Muchalls (approximate ch3200 - 6300)

- 42.3.9 This rural, elevated plateau, midway between Stonehaven and the River Dee, which features in views from Cookney, feels remote and peaceful, as the majority of views are contained by ridges to the north and west and Kempstone Hill to the south, with limited views towards the coast from the eastern section of the area.
- 42.3.10 Vegetation tends to be in the form of broadleaved shelterbelts and copses of trees at field corners or around farmsteads, with several of the copses providing distinctive focal points within the area.
- 42.3.11 There are scattered dwellings but no significant built development within the area.

Burn of Muchalls (approximate ch4500 - 4900)

- 42.3.12 This shallow, agricultural valley, around the Burn of Muchalls between Cookney and the A90(T), is open and undulating, becoming more tightly enclosed by steeper, sweeping slopes midway, near Montgatehead.
- 42.3.13 Pityot Wood and the trees around the settlement at Bridge of Muchalls frame views of the valley from the A90(T) and occasional hedgerows and shelterbelt trees help to screen properties and define the minor road that crosses the valley near Burnside particularly a copse of mature conifers near the dwelling at Burnside.
- 42.3.14 There are scattered dwellings and farms adjacent to the road that runs along the northern side of the valley and a small cluster of properties at Bridge of Muchalls, adjacent to the junction with the A90(T).
- 42.3.15 The area is predominantly open, unspoilt and peaceful, with impacts from the A90(T) becoming screened as the valley changes direction. Open, scenic views along the valley are available from some roads, including the southbound A90(T) and high surrounding ground.

Stranog (approximate ch6300 - 10300)

- 42.3.16 This curving ridgeline of nine hills, south of the River Dee, provides a contrasting backdrop to views from the west across relatively flat farmland and offers extensive views over the relatively flat surrounding land towards the Dee Valley to the north and the North Sea to the east, particularly from the steep north and south facing slopes of Stranog Hill and the hill at the southern end of the ridge, upon which the small community of Cookney is built.
- 42.3.17 A belt of woodland that extends out from the birch woodland covering Red Moss across the lower slopes of the ridge around West Stoneyhill, provides visual enclosure and localised shelter to some of the scattered properties, but their impact is limited, with the majority of the area remaining open and exposed in nature.
- 42.3.18 Settlement is generally limited to isolated farms and dwellings accessed by a network of minor roads and the general absence of significant development ensures that the area remains remote and peaceful.
- 42.3.19 There are scattered farms and dwellings across area with a small settlement at Cookney.

Blaikiewell (approximate ch10300 - ch11500)

- 42.3.20 Views within this relatively flat plateau, which is overlooked from surrounding high ground, are limited by Stranog Hill to the south and the woodlands of Oldman Wood and Cleanhill Wood to the north, but there are extensive and panoramic views west across this open, rural area to the Grampian Mountains.
- 42.3.21 Small, scattered stands of mixed woodland provide screening for isolated farms and small clusters of properties adjacent to the roads, with the most significant blocks around the clusters of properties at Burnside, Blaikiewell and Invercrynoch.

42.4 Potential Impacts

- 42.4.1 Potential visual impacts arising from the elements of the proposed scheme and the changes that may affect the visual amenity of receptors within the study area, from Winter Year of Opening onwards, are identified as follows:
 - Alteration of views and visual distraction from the landmarks of the area due to the introduction of new elements, including road surface, noise barriers and bunds, drainage treatment and detention ponds, minor overbridges, underpass, culverts, signage, lighting and the presence and movement of vehicles, into an essentially rural landscape;
 - Increased presence of artificial lighting during the hours of darkness on sections of the proposed scheme with permanent street lighting (i.e. junctions), lit gantries and signs, particularly at the major junctions with the A90(T) at Stonehaven and the Southern Leg at Cleanhill, with additional impacts from vehicle headlights on unlit sections of the proposed scheme across open countryside and from temporary lighting during maintenance works;
 - Changed appearance of landform due to new rock cuttings and soft cuttings and embankments adjacent to the road and bridges; and
 - Alteration to vegetation patterns and field patterns through tree loss and stripping of groundcover vegetation and topsoil, followed by reinstatement and new planting.
- 42.4.2 Visual impacts taking mitigation into account are assessed in detail within Section 42.6 (Residual Impacts).

42.5 Mitigation

Landscape Mitigation of Visual Impacts

- 42.5.1 As mitigation of adverse landscape and visual impacts are closely related and inter-dependent, visual impacts will be mitigated by the iterative approach to design of the proposed scheme and the specific landscape mitigation measures summarised in Chapter 41 (Landscape), described in Appendix A41.1 (Detailed Landscape Mitigation Proposals) and illustrated in Landscape Figures 41.5a-k. All identified mitigation measures are taken into account in the visual impact assessment. Landscape proposals that may offer visual mitigation are summarised below, with their application as specific mitigation measures for individual receptors provided in the tables in Appendices A42.1 and A42.2.
 - Mitigation planting to screen views and reflect and reinforce the character of the existing landscape, including individual trees, tree lines and areas of woodland (e.g. scrub, riparian, broadleaved, mixed);
 - Drystone walling to reflect and reinforce the existing landscape pattern;
 - Earthworks, including provision of false cuttings to screen or restrict views of the road; and
 - Sensitive grading of all disturbed areas including embankments to improve integration with the surrounding landform and to allow the potential to return some areas of land to agricultural use.
- 42.5.2 Cross-sections indicating the relationship between the proposed scheme and key visual receptors, together with mitigation proposals, are shown on Figures 41.6a-j.

Lighting

42.5.3 The introduction of artificial lighting from road lighting and other fixtures might create or contribute to light pollution in the form of sky glow, glare and/or light trespass/spill. It is therefore beneficial to minimise these potential adverse effects on landscape character and protect views of dark skies in rural areas.

- 42.5.4 Where lighting is essential, it has been incorporated as part of the proposed scheme design such that the effect on the night sky is minimised; seeking to reduce or avoid excessive, unnecessary and obtrusive lighting by appropriate selection, location and arrangement of lighting elements to achieve the necessary safety standards of useful light, while minimising intrusiveness in the form of spillage, glare and reflection.
- 42.5.5 It is acknowledged that the orange sky glow over settlement is predominantly caused by the refraction of light radiating from low-pressure sodium street lighting, commonly installed in the 1970's, on droplets of water or particles of pollution in the atmosphere. In order to limit light pollution from the proposed street lights and other fixtures, modern high-pressure sodium, shallow bowl luminaries will be utilised on the AWPR. This form of lighting, known as Full Cut Off lighting, directs light of appropriate strength where it is needed and controls the unwanted dispersion of obtrusive artificial light by eliminating the emission of light upwards. This choice of luminaire also enables maximum spacing between lighting columns and ensures that the minimum amount of lighting is used, without compromising safety.
- 42.5.6 Consideration has also been given to meeting light mitigation requirements by installing passive lighting in the form of reflective road markings and signage wherever possible.

Structures

42.5.7 The design of structures such as bridges along the length of the route has been informed by a combination of specialist aesthetic advice, design workshops and consultation with Architecture & Design Scotland.

42.6 Residual Impacts

General

- 42.6.1 The visual envelope (Figures 42.4a-c and 42.5a-c) will reflect the route of the proposed scheme, with longer range visual impacts generally contained by topography, woodland and settlement across the area. The Hill of Megray, Kempstone Hill, Hill of Allochie, the ridge of higher ground between Cookney and Stranog Hill and the higher ground at Cleanhill all help restrict views of the proposed scheme from built and outdoor receptors. Visibility of the proposed scheme would also be reduced where the road alignment is in cutting, for example at Hill of Megray, Cookney and Stranog Hill, and where there are significant areas of existing woodland such as at Megray Wood, Fishermyre, Red Moss, Oldman Wood, Cleanhill Wood and Craigingles Wood. In some instances, visual impact on receptors with views along the proposed scheme and cuttings in prominent landform would still be significant.
- 42.6.2 Visual impacts from new lighting on the proposed scheme are anticipated to be restricted to receptors located in the vicinity of the proposed junction at the Stonehaven A90(T) where lighting is proposed. Also the introduction of lighting at Cleanhill Junction into an otherwise unlit area is likely to contribute significantly to the impact assessment within this location. The presence of headlights from vehicles traveling at night will introduce lighting to the previously unlit rural landscapes between Stonehaven and Cleanhill Junction.
- 42.6.3 When assessing magnitude and sensitivity, the impact of road lighting and headlights were taken into account, so that the level of impact significance determined for each of the receptors affected encompasses all elements of the proposed scheme. These factors also influenced the design of mitigation measures for the proposed scheme.
- 42.6.4 The visual impact assessment for each building receptor or cluster of receptors and each outdoor receptor is presented together with details of proposed mitigation measures as tables in Appendix A42.1 for Built Receptors and Appendix A42.2 for Outdoor Receptors. This information is summarised in Table 42.5 to show the total number of receptors affected by different degrees of impact in the winter year of scheme opening and the residual impact in summer 15 years later.

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42.6.5 The results of the visual impact assessment are summarized below and illustrated on Figures 42.2a-c (Buildings and Outdoor Sites), Figures 42.3a-f (Buildings). The summaries are organized using the landscape types/areas shown on Figures 41.2a-b.

Built receptors

42.6.6 The following descriptions summarise the results of the visual impact assessment and highlight the predicted residual impacts on prominent dwellings and settlement areas. For detailed information on all assessed built receptors refer to Appendix A42.1 (Built Receptors).

Megray (approximate ch0 - 1300)

- 42.6.7 Due to their relatively close proximity to the proposed scheme, receptors 27, 28 and 29, in the Megray area, would have a view of the proposed scheme as it climbs the Hill of Megray in cutting. The road cutting will reduce the visibility of the scheme to an extent but the impacts would be Substantial in winter year of opening. In summer 15 years after opening the impacts will remain significant due to the close proximity of the proposed scheme.
- 42.6.8 Megray Hill is prominent in views from areas of Stonehaven, particularly the northern edge of the town, the higher western and southern edges and the lower seafront area, which has an open view across Stonehaven Bay towards the proposed scheme. The majority of built receptors in Stonehaven would have non-significant impacts ranging from Negligible to Slight/Moderate in winter year of opening, and reducing further after 15 years. There are several receptors 1229, 1230, 1116, 1126, 1227, 25 and 26 which would have significant impacts of Moderate and above in winter year of opening. All of these will reduce to non-significant after 15 years.
- 42.6.9 There are a few properties located on the higher ground lying to the south of Stonehaven which are likely to gain views of the proposed scheme in the Megray area. Receptors 1210 and 1211 would have significant impacts in winter year of opening with Moderate to Substantial adverse impacts, reducing to Moderate in summer 15 years after opening. To the west of Stonehaven, a group of receptors known as Toux Cottages (receptor 1214) would have a significant impact of Moderate in winter year of opening reducing to Slight after 15 years. Several other properties in this area to the south and west of Stonehaven would have non-significant impacts in both winter year of opening and after 15 years (receptors 1212, 1209, 1217, 1213, 1215, 1216).

Kempstone (approximate ch1300 - 3200)

- 42.6.10 In the Kempstone area, the proposed scheme emerges from Limpet Wood and crosses Limpet Burn on embankment before continuing at grade and on embankment. Despite the proposed scheme being almost 10m above existing ground level in places it would only have a significant visual impact on receptor groups 30, 31 and 34, which are in close proximity to it. In summer after 15 years, the impacts at receptor groups 31 and 34 would be Moderate to Substantial therefore still significant, and receptor group 30 would reduce to Slight adverse impact therefore non-significant.
- 42.6.11 Receptors 32, 33, and 35, which are located further from the proposed scheme, are all affected by non-significant visual impacts of Slight in winter year of opening reducing to Slight to Negligible after 15 years.

Muchalls (approximate ch3200 - 6300)

42.6.12 The Muchalls area is generally open with woodland cover limited to small copses. The proposed scheme would cut through the open landscape mainly at grade or on embankment, which in the generally open landscape, would result in wider spread impacts. The landform is rolling in areas, which restricts views to an extent, but the impact of the proposed scheme would tend to be significant in winter year of opening, ranging from Substantial to Moderate/Substantial adverse impact for receptors 208, 209, 210, 211, 36, 37, 39, 40, 43, 45, 47, 60, 61, 225, 1339, 207, 1345, 1340, 213, 44, 1329, 1332 and 1221. By summer 15 years after opening, the impacts for the

majority of these receptors are expected to reduce slightly, ranging from Slight/Moderate to Substantial.

- 42.6.13 Due to their proximity to the proposed scheme there are a few receptors in this area which would receive significant impacts in both winter year of opening and after 15 years. Receptors 58 and 1330 are Severe adverse and receptor 56 is Substantial/Severe adverse impact in winter year of opening and after 15 years these receptors would receive Substantial adverse impacts.
- 42.6.14 Several receptors, 38, 41, 1222 and 59, located to the east of the study area, would be affected by non-significant impacts, both in winter year of opening and in 15 years time.
- 42.6.15 To the west of the proposed scheme receptors 212, 214, 1220, 1334, 1335, 1336, 1341, 1338, 1337, 48, 1218 and 1219, due to their higher level and/or their orientation, would have distant views of the proposed scheme as it crosses the relatively flat, open landscape. These receptors would receive Moderate to Slight impacts in winter year of opening, reducing to Slight or Negligible in summer after 15 years.

Burn of Muchalls (approximate ch4500 - 4900)

- 42.6.16 The proposed scheme would cross this small scale, narrow valley approximately 9m above the existing level. This would result in properties 42 and 46, one east and one west of the proposed scheme being affected by Substantial adverse impacts in winter year of opening and remaining significant in summer after 15 years.
- 42.6.17 Existing woodland in the valley would help to reduce visual impacts on those properties which are slightly farther away from the proposed scheme, resulting in non-significant impacts.

Stranog (approximate ch6300 - 10300)

- 42.6.18 The ridge of higher ground between Cookney and Stranog Hill would restrict the view of the proposed scheme from receptors west of the ridge.
- 42.6.19 Receptors 57, 62, 216, 63, 217, 65, 218, 219, 66, 70, 65, 67, 215, 1223, 1224, 1333, 1326 and 64, to the east of the ridge, are mainly in close proximity to the proposed scheme and would be affected by significant impacts, ranging from Severe to Moderate in winter year of opening, and from Severe to Slight/Moderate in summer after 15 years.
- 42.6.20 Located approximately 2km from the proposed scheme but with existing views across the open area, receptors 1327 and 1328 would receive Moderate and Slight/Moderate adverse impacts in winter year of opening which reduce to Slight, therefore non-significant, after 15 years.

Blaikiewell (approximate ch10300 - Cleanhill Junction ch11500)

42.6.21 As the proposed scheme crosses this relatively flat, open plateau, it is on embankment up to 9m in height, increasing its visibility from all directions. As a result, the impacts on built receptors 18, 220, 68, 69 and 20 would be significant, ranging from Severe to Substantial, reducing marginally to range from Substantial/Severe to Moderate/Substantial in summer 15 years after opening. These impacts take into account views of the Southern Leg as it approaches Cleanhill Junction, although the views from properties in this area are generally of the Fastlink section of the proposed scheme only. Visual impacts associated with the Southern Leg section of the proposed scheme are described in Chapter 27 (Visual).

Outdoor receptors

42.6.22 The following descriptions summarise the results of the visual impact assessment and highlight the predicted residual impacts on prominent outdoor receptors. For detailed information on all assessed outdoor receptors refer to Appendix A42.2 (Outdoor Receptors).

Megray (approximate ch0 - 1300)

- 42.6.23 The proposed scheme would be visible from several footpaths, and outdoor public spaces in the Hill of Megray and Stonehaven area. In winter year of opening, the outdoor areas at Stonehaven harbour (O1020), beach (O1021) and Fetteresso cemetery (O1030) would have impacts of Moderate adverse as they have existing views of the Megray Hill area. These impacts will reduce to Slight and therefore non-significant after 15 years. The impacts on Cowie Park, O72, and Mackie Academy playing fields, O73, in Stonehaven would not be significant in winter year of opening. Views from the railway, RW70 and RW71 would be limited to the section between Fetteresso and the existing B979 road junction at Megray, with impacts of Moderate in winter year of opening, reducing to Slight in summer after 15 years.
- 42.6.24 Combined footpath, cycleway and B979 road, receptors R/C35, F/C36, R/C37 and R/C1029 in the Megray Hill area would receive significant visual impacts, ranging from Severe to Moderate in winter year of opening, reducing to Substantial and Moderate in summer after 15 years.
- 42.6.25 The A90, receptor R1028, which is located around the west and north extents of Stonehaven would only view the proposed scheme for short stretch around the existing B979 junction area, and the impact would be Substantial at the time of the scheme opening reducing to Moderate after 15 years.
- 42.6.26 The higher ground to the south of Stonehaven allows panoramic views across Stonehaven Bay and the War Memorial, receptor O1023, would receive significant adverse impacts on views towards Megray Hill and the proposed scheme. The impacts would be Substantial adverse in winter year of opening, reducing to Moderate/Substantial after 15 years. The footpath leading from the War Memorial down into Stonehaven, receptor F1060, would also receive a significant impact of Moderate adverse in winter year of opening reducing to Slight/Moderate, therefore nonsignificant, after 15 years.
- 42.6.27 The remaining outdoor receptors in the Stonehaven and surrounding area would either have no view of the proposed scheme or receive non-significant impacts in winter year of opening.

Kempstone (approximate ch1300 - 3200)

42.6.28 Receptors R/C29, R/C38 and F1034 in the Kempstone area, would be affected by significant impacts in winter year of opening ranging from Severe to Moderate adverse impacts. After 15 years, the impacts would remain significant for R/C29 and F1034, which are in close proximity to the proposed scheme.

Muchalls (approximate ch3200 - 6300)

- 42.6.29 In the area of Muchalls, to the south of the Burn of Muchalls valley, the network of cycle, pedestrian and equestrian routes, namely R/C/E26, R/C/E32, R/C/E33, R/E41, E77, F74, E76 and R/E78, would receive significant impacts due to their proximity to the proposed scheme, which crosses a relatively flat expanse of land on embankment and at grade. Their impacts range from Severe to Moderate in winter year of opening, remaining significant for most of them in summer after 15 years, but visual impacts on routes R/C/E26 and E76 will reduce to non-significant after 15 years.
- 42.6.30 North of the Burn of Muchalls valley the impacts on cycle, pedestrian, equestrian routes and roads, such as receptors R/C/E23, R/C/E24, R/C/E42, R/C/E43, R/F/C108, R/C/E75 and F/E22 would be significant in winter year of opening, ranging from Severe to Moderate adverse impact. In summer

after 15 years the impact would generally have reduced but would still remain significant, ranging from Substantial to Moderate except for receptors F/E22 and R/C/E75 which will not be affected by significant impacts after 15 years.

42.6.31 As the B979, receptors R78 and R1035, passes through the Muchalls area, the landscape becomes flatter and more open, allowing views of the proposed scheme. Impacts would range from Moderate/Substantial to Slight/Moderate in winter year of opening. By summer after 15 years impacts range from Moderate to Slight/Moderate. Once the route approaches the Netherley area, views of the proposed scheme cease. A Right of Way, receptor F79, which runs from the B979 past South Hilton Farm, would receive non-significant impacts of Slight/Moderate adverse in winter year of opening, remaining non-significant after 15 years.

Burn of Muchalls (approximate ch4500 - 4900)

42.6.32 Views to the proposed scheme would be possible from sections of cycle, pedestrian, equestrian routes, R/C/E25, R/C/E26 and F74, as they cross the Burn of Muchalls valley. Although views would be restricted in sections by vegetation and landform, the impacts would range from Substantial to Moderate in winter year of opening, with R25 and F74 reducing to Moderate after 15 years, and R26 reducing to Slight and therefore non-significant after 15 years.

Stranog (approximate ch6300 - 10300)

- 42.6.33 The ridge of higher ground between Cookney and Stranog Hill would help to screen views of the proposed scheme from outdoor receptors on the western side of the ridge.
- 42.6.34 To the east of the ridge there are outdoor routes which would receive significant impacts, ranging from Severe to Moderate for receptors R/C9, R/C/E20, R/C80, R/C12, R/C10, E100, E/R101, E102, E103, R/E99, R/F/C81, E1036, E1037, R1083, R/C/E15, R/C/E16, R/C/E17 and R/C/E19, in the winter year of opening, as determined by topography and vegetation along each route.
- 42.6.35 There are several receptors in this area which would receive non-significant impacts of Slight in winter year of opening, R/E1080, R/C11 and R1082.

Blaikiewell (approximate ch10300 - Cleanhill Junction ch11500)

42.6.36 Due to the open nature of the area with the proposed scheme on embankment there are several outdoor routes in this area, R/F/C82, R/F104 and F1038, which would receive significant impacts ranging from Substantial/Severe to Substantial, reducing after 15 years to range from Moderate/Substantial to Substantial. The impact assessment for both R/F/C82 and F1038 takes into account the visual impact of the Southern Leg section of the proposed scheme, as well as the Fastlink section.

42.7 Overview

- 42.7.1 The proposed scheme would follow a route through predominantly open farmland and undulating hills, resulting in a range of visual impacts for a total of approximately 444 built receptors and 138 outdoor receptors. Approximately 273 built receptors and approximately 37 outdoor receptors are affected by non-significant impacts in the winter of the year of opening.
- 42.7.2 Overall, 171 built receptors and 101 outdoor receptors would be affected by significant (Moderate or greater) adverse impacts in winter year of opening, when mitigation measures such as drystone walls and grading out of embankment and cutting slopes have been completed but proposed planting does not provide effective screening. By summer 15 years after opening, mixed/broadleaf, riparian and scrub woodland will have become established. This reduces the total number of built receptors affected by significant adverse impacts to 77. For outdoor receptors, the total will have reduced to 83.

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Table 42.5 – Visual Impacts Summary Table

Receptor Type	Severe Adverse		Severe/Substantial Adverse		Substantial Adverse		Substantial/Moderate Adverse		Moderate Adverse		Moderate/Slight Adverse		Slight Adverse	
	Winter Year of Opening (2012)	Summer 15 Years after Opening (2027)	Winter Year of Opening (2012)	Summer 15 Years after Opening (2027)										
Number of Built Receptors and % of Total Total = 444	8	2 0.5%	16 3.6%	10 2.2%	39 8.8%	30 6.8%	21 4.7%	7 1.6%	87 19.6%	28 6.3%	100 22.5%	48 10.8%	123 27.7%	168 37.8%
Number of Outdoor Receptors and % of Total Total = 138	29 21.0%	0	1 0.7%	0	41 29.7%	25 18.1%	10 7.3%	22 15.9%	20 14.5%	36 26.1%	8 5.8%	8 5.8%	19 13.8%	22 15.9%

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Receptor Type	Slight/Neg Adverse	ligible	Negligible			
	Winter Year of Opening (2012)	Summer 15 Years after Opening (2027)	Winter Year of Opening (2012)	Summer 15 Years after Opening (2027)		
Number of Built Receptors and % of Total	48 10.8%	67 15.1%	2 0.5%	84 18.9%		
Total = 444 Number of Outdoor Receptors and % of Total	5	6	5	19		
Total = 138						