Appendix 8.9:

Cumulative Assessment with Lorg Wind Farm 132kV Grid Connection

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Appendix 8.9 Cumulative Assessment with Lorg Wind Farm 132 kV Grid Connection

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1.1. Introduction

1.1.1. This Appendix addresses the potential cumulative effects of the Lorg Grid Connection arising from the Proposed Varied Development set out within the Landscape and Visual Impact Assessment (LVIA) Chapter (**Volume 1, Chapter 8** of the Environmental Impact Assessment [EIA] Report).

1.2. Methodology

1.2.1. Taking into account the relevant policy and guidance, and assessment criteria, a cumulative assessment is presented below which details the cumulative effects of the Proposed Varied Development and the Lorg Grid Connection upon:

- Individual landscape features and elements;
- Landscape character;
- Specific views; and
- People who view the landscape.

1.2.2. This assessment considers the potential for significant cumulative effects to occur from the addition of the Proposed Varied Development into a landscape where the Lorg Grid Connection is already present alongside other operational wind development. However, should cumulative Scenario 1 (all consented developments are operational) or Scenario 2 (all consented and in planning schemes are operational) be considered, the same conclusions would continue to apply.

Baseline Conditions

1.2.3. In relation to the perceptibility of the Lorg Grid Connection, the EIA Report for the Proposed 132kV Grid Connection to Lorg and Longburn Wind Farms (November 2025) prepared on behalf of SP Energy Networks, sets out the extent of its landscape and visual study area. Paragraph 7.6.2 of the EIA Report states:

'*Research on the perceptibility of wood pole overhead lines has shown that they may be visible from up to 6 km and are likely to be noticeably visible from up to about 1.5 km. For the purpose of this assessment, ZTV mapping was run at both 6 km and 2 km from the proposed route alignment to identify potential visibility of the scheme. ZTVs were prepared using Digital Terrain Modelling (DTM) data, which represents a bare earth condition and does not account for intervening built form and vegetation. In line with the ZTV and following the initial Site survey, it was confirmed that the Proposed Development was only considered likely to appear as a notable feature within views from approximately 1.5 km from the proposed scheme. The Study Area was therefore revised to 2 km to align with the likely visibility of the scheme to present a worst-case scenario.*'

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1.2.4. In considering the nature of the grid connection and the above likelihood that significant effects for the grid connection in its own right would be unlikely beyond distances of 1.5 km, this distance has been used as a parameter within which to assess potential likelihood for significant cumulative effects arising from the inclusion of the Shepherds' Rig Wind Farm into a baseline where the Lorg Grid Connection is present. It is considered that there would be no potential for significant cumulative effects beyond 1.5 km of the Lorg Grid Connection route, and therefore any landscape or visual receptors beyond 1.5 km have not been considered further within this assessment.

1.2.5. With reference to landscape character areas, those across which the 1.5 km offset from the route of the Lorg Grid Connection extents are as follows:

- AU 21: Southern Uplands (Carsphairn area);
- AU 22: Southern Uplands with Forest;
- AU 24: Rugged Granite Uplands (Rhinns of Kells area);
- AU 4: Narrow Valleys (Ken area); and
- AU 9: Upper Dale (Upper Glenkens area).

1.2.6. Of these, significant effects for the Shepherds' Rig Wind Farm were assessed for the following character areas and extents:

- AU 21: Southern Uplands (Carsphairn area) up to 5 km;
- AU 22: Southern Uplands with Forest (Ken area) up to 5 km;
- AU 4: Narrow Valleys (Ken area) up to 5 km; and
- AU 9: Upper Dale (Upper Glenkens area) up to 5 km.

1.2.7. Where there is overlap in the extent of identified effects and the 1.5 km offset from the route of the Lorg Grid Connection and areas within which a significant effect of the Proposed Varied Development, these have been considered as part of this assessment.

1.2.8. The 1.5 km offset from the Lorg Grid Connection does not extend to the majority of viewpoint locations set out in the LVIA Chapter. The following viewpoints within 1.5 km from the Lorg Grid Connection, from where it may be 'noticeably visible', have been considered further within this assessment:

- Viewpoint 1 - Stroanfreggan Bridge (B729);
- Viewpoint 2 – Stroanfreggan Craig;
- Viewpoint 6 – Head of Ken Valley; and
- Viewpoint 15 - Craig of Knockgray.

1.2.9. In relation to those residential properties within 2 km of the Shepherds' Rig Wind Farm included as part of **Appendix 8.6 Residential Visual Amenity Assessment** (RVAA), the following are located within 1.5 km of the Lorg Grid Connection and therefore considered within this assessment:

- Marbrack (1);
- Marbrack Cottage (2);
- Stroanpatrick (9);
- Craigengillan (10);
- Craigengillan Cottage (11); and
- Strahanna Farm and River Ken Cottage (14).

1.2.10. In relation to other visual receptors, the following are either wholly or partly within 1.5 km of the Lorg Grid Connection route (as shown on **Figure 8.19**) and have therefore been considered further as part of the assessment:

- Corlae and Craigythorn residential properties within 2-5km of the site;
- Southern Upland Way;
- Core Path 182;
- Local Rights of Way including DS15, DS16 and DS17;
- B729; and
- Lorg Road.

1.2.11. The Proposed Varied Development lies partly within the Galloway Hills Regional Scenic Area (RSA), with most of the western part of the Lorg Grid Connection lying within the same RSA, therefore, it is considered further by the assessment.

1.3. Assessment of Cumulative Effects

Landscape Character

1.3.1. The Proposed Varied Development, the Lorg Grid Connection and local character areas are shown at **Figures 8.15 and 8.16**.

1.3.2. The Proposed Varied Development, in combination with the Lorg Grid Connection would serve to further reinforce the presence of built vertical elements within the surrounding landscape, in particular to the west, east and north-east of the Proposed Varied Development, where the Lorg Grid Connection extends into the surrounding landscape beyond the site. The 'H' design of the vertical Trident wood poles of Lorg Grid Connection 'typically 13 m above ground, with a range of 10 m and 20 m' (Lorg and Longburn Windfarms Grid Connection Scoping Report, para 3.1.5) are of a scale comparable to trees, whereas the Proposed Varied Development, at 220 m in height to blade tip, would appear as distinctly different elements in the landscape, of differing form, scale, composition and extent. Given these factors, it is considered that the greater part of effects upon landscape character would continue to arise from the Proposed Varied Development, notwithstanding the presence of the Lorg Grid connection also being within the landscape. It is acknowledged that there may be some locations within the 1.5 km grid corridor from where there could be a perception of an increase in energy development and infrastructure from a combination of both the grid connection and the Proposed Varied Development (or any other cumulative wind farm schemes which may be visible in the wider landscape); however, the extent to which this combination would occur, would be restricted to instances where both the Proposed Varied Development and Lorg Grid Connection are visible at close quarters. In such instances, however, the influence upon character which arises from the Proposed Varied Development, which is already significant, would comprise the greater effect.

1.3.3. For the reasons set out above, within a radius of up to 5 km from the Proposed Varied Development, the overall effects upon landscape character, in combination with the Lorg Grid Connection, would not give rise to additional cumulative effects over and above those significant effects identified as a result of the Proposed Varied Development. By virtue of the scale and nature of the Proposed Varied Development within the distances over which the Lorg Grid Connection could also be noticeably visible, the Proposed Varied Development would have the greater influence upon the surrounding landscape character and therefore, the following significant effects upon landscape character remain:

- AU 22: Southern Uplands with Forest – Ken area, up to 5 km to the east and north-west of the Proposed Varied Development;
- AU 4 Narrow Wooded Valleys – Ken area, up to 5 km from the Proposed Varied Development;
- AU 9: Upper Dale – Glenkens area, up to 5 km from the Proposed Varied Development; and

- AU 21: Southern Uplands – Carsphairn area, up to 5 km from the Proposed Varied Development.

1.3.4. Beyond the above areas, all effects of the Proposed Varied Development upon landscape character as set out in the LVIA Chapter are unchanged and not significant. In isolated locations where the Lorg Grid Connection is present, additional effects upon landscape character are likely to occur over and above that assessed as a result of the Proposed Varied Development. However, these locations are likely to be limited in nature due to the linear nature of the Lorg Grid Connection and would be a result of the effects of the Lorg Grid Connection itself, rather than that of the Proposed Varied Development.

Representative Viewpoints

1.3.5. The Proposed Varied Development the Lorg Grid Connection and assessment viewpoints are shown at **Figure 8.19**.

1.3.6. **Table 8.9.1** sets out the assessment from each representative viewpoint as set out within the **Appendix 8.5 Viewpoint Assessment**, not including those excluded from this assessment, as set out above. Commentary is provided in relation to potential cumulative effects as a result of the Proposed Varied Development seen in conjunction with the Lorg Grid Connection.

Table 8.9.1 - Representative Viewpoints Cumulative Assessment Proposed Varied Development and Lorg Grid Connection – Comparison with Consented Development

Name / Receptor	Consented Development				Proposed Varied Development		
	Sensitivity	Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
1. Stroanfreggan Bridge (B729)	High	High	**Major**	**Significant**	High	**Major**	**Significant**
	The Lorg Grid Connection is unlikely to be visible from this location due to intervening landform in the foreground, including the peak of Stroanfreggan Craig (294 m AOD). Therefore, no cumulative effects are predicted as a result of the Proposed Varied Development and Lorg Grid Connection.						
2. Stroanfreggan Craig	High	High	**Major**	**Significant**	Very high	**Major**	**Significant**
	Although the Lorg Grid Connection would be visible in the Water of Ken valley in the foreground, the significant effect as a result of the Proposed Varied Development would remain unchanged whereby the proposed turbines would appear materially more visible than that of the comparatively low-level Grid Connection.						
6. Head of Ken Valley	High	Medium to high	**Major / moderate**	**Significant**	Medium to high	**Major / moderate**	**Significant**
	The Lorg Grid Connection would be visible in the foreground to the east of the road. The significant effect as a result of the Proposed Varied Development would remain unchanged, although the effect may be lessened slightly by the closer presence of the Grid Connection infrastructure already within the baseline.						
15. Craig of Knockgray	High	High	**Major**	**Significant**	High	**Major**	**Significant**
	The Lorg Grid Connection would be visible in the foreground below the elevated viewpoint. The significant effect as a result of the Proposed Varied Development would remain unchanged although the effect may be lessened slightly by the closer presence of the Grid Connection infrastructure already within the baseline.						

1.3.7. In summary, the Proposed Varied Development in combination with the Lorg Grid Connection, would not bring about any additional cumulative effects from the viewpoints set out in **Table 8.9.1**, over and above those already assessed for the Proposed Varied Development in its own right. It should be noted however, that the presence of the Grid Connection within the baseline of some views, may slightly reduce the degree to which the Proposed Varied Development would change the view by virtue of the closer presence of the Grid Connection infrastructure to the viewpoint, however not to such a degree that a change of effect would result.

Visual Receptor Groups

1.3.8. The Proposed Varied Development, the Lorg Grid Connection and visual receptor groups are shown at **Figure 8.19**.

1.3.9. **Table 8.9.2** sets out the assessment from each representative visual receptor as contained within the main LVIA Chapter within 1.5 km of the Lorg Grid Connection, with a commentary provided in relation to any cumulative effects as a result of the Proposed Varied Development seen in conjunction with it.

Table 8.9.2 - Visual Receptor Cumulative Assessment of Proposed Varied Development and Lorg Grid Connection – Comparison with Consented Development

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
Corlae and Craigythorn residential properties	High	Medium to high (curtilage)	**Major / moderate**	**Significant**	Medium (property) Medium to high (curtilage)	**Moderate** (property) **Major** (curtilage)	**Significant**
	Although the Lorg Grid Connection would be visible in the foreground view from the properties, the significant effect as a result of the Proposed Varied Development would remain unchanged, although the effect may be lessened slightly by the closer presence of the Grid Connection infrastructure already within the baseline.						
Southern Upland Way (heading south)	High	Medium to high	**Major / moderate**	**Significant**	High (for 1.7 km on Manquhill Hill) Medium to high (for 3.7 km from Black Hill to Benbrack)	**Major** (for 1.7 km) **Major / moderate** (for 3.7 km)	**Significant**
	Although the Lorg Grid Connection would be visible in the Water of Ken valley in the foreground, the significant effect as a result of the Proposed Varied Development would remain unchanged whereby the proposed turbines would appear materially more visible than that of the comparatively low-level Grid Connection.						
Southern Upland Way (heading north)	High	Medium to high	**Major / moderate**	**Significant**	Medium (for 2.8 km from Corseglass to Butterhole Bridge)	**Moderate**	**Significant**
	Although the Lorg Grid Connection would be visible crossing the Water of Ken valley in the distance, the significant effect as a result of the Proposed Varied Development would remain unchanged whereby the proposed turbines would appear materially more visible than that of the comparatively low-level Grid Connection.						

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
Core Path 182 (heading north)	High	High	**Major**	**Significant**	Medium to high for 0.4 km (north of Heathery Wood)	**Major / moderate**	**Significant**
	Although the footpath would approach the route of Lorg Grid Connection to within close proximity, where it would appear prominent, the significant effect as a result of the Proposed Varied Development would remain unchanged, although the effect may be lessened slightly by the closer presence of the Grid Connection infrastructure already within the baseline.						
Local Right of Way DS15	High	High	**Major**	**Significant**	High	**Major**	**Significant**
	Although the footpath would cross the route of Lorg Grid Connection where it would appear prominent, the significant effect as a result of the Proposed Varied Development would remain unchanged, although the effect may be lessened slightly by the closer presence of the Grid Connection infrastructure already within the baseline.						
Local Right of Way DS16 (heading south)	High	High	**Major**	**Significant**	High	**Major**	**Significant**
	Although the Lorg Grid Connection would be visible in the Water of Ken valley in the foreground where the path is not within coniferous woodland, the significant effect as a result of the Proposed Varied Development would remain unchanged.						
Local Right of Way DS17 (heading north)	High	High	**Major**	**Significant**	High for 1.4 km (south of plantation on Auchrae Hill to SUW)	**Major**	**Significant**
	Although the Lorg Grid Connection would be visible in the Water of Ken valley in the foreground where the path is not within coniferous woodland, the significant effect as a result of the Proposed Varied Development would remain unchanged.						

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
B729 (heading west)	High	High	**Major**	**Significant**	High (for 3.7 km from Guttery Glen, Vp 3 to Smittons Bridge Vp 4) Medium (for 3.0 km from Fingland Hill to Carroch Hill)	**Major** (for 3.7 km) **Moderate** (for 3.0 km)	**Significant**
	Most of the road is beyond 1.5km of the Lorg Grid Connection, however, the Grid Connection infrastructure would be visible from locations to the south-east of the site. The significant effect as a result of the Proposed Varied Development would however remain unchanged.						
B729 (heading east)	High	High	**Major**	**Significant**	Medium (for 0.4 km at Scar Knowe)	**Moderate**	**Significant**
	The significant effect as a result of the Proposed Varied Development would remain unchanged as it is anticipated that the Lorg Grid Connection would not be visible from this from this section of road.						
Lorg Road (heading north)	High	High to very high	**Major**	**Significant**	Very high (within 1 km) High (1 - 3.7 km)	**Major**	**Significant**
	Although the Lorg Grid Connection would appear visible in the Water of Ken valley in the foreground, the significant effect as a result of the Proposed Varied Development would remain unchanged.						

Name / Receptor	Sensitivity	Consented Development			Proposed Varied Development		
		Magnitude of Change	Level of Effect	Significance	Magnitude of Change	Level of Effect	Significance
Lorg Road (heading south)	High	High to very high	**Major**	**Significant**	Very high (within 1 km) High (1 - 3.7 km) Medium to high (between Holm of Dalquahairn and Corlae) Medium (south of Dodd Hill)	**Major** (within 3.7 km) **Major / moderate** (between Holm of Dalquahairn and Corlae) **Moderate** (south of Dodd Hill)	**Significant**
	Although the Lorg Grid Connection would appear visible in the Water of Ken valley in the foreground, the significant effect as a result of the Proposed Varied Development would remain unchanged.						

1.3.10. In summary, the Proposed Varied Development in combination with the Lorg Grid Connection, would not bring about any additional cumulative effects from the visual receptors set out in **Table 8.9.2**, that have not already been brought about by the Proposed Varied Development in its own right.

Residential Visual Amenity Properties

1.3.11. The Proposed Varied Development, the Lorg Grid Connection and the residential visual amenity study area are shown at **Figure 8.6.18**.

1.3.12. **Table 8.9.3** sets out the assessment from each residential property within the RVAA within 1.5 km of the Lorg Grid Connection, with a commentary provided in relation to any cumulative effects which may arise as a result of the Proposed Varied Development seen in conjunction with it.

Table 8.9.3 RVAA Properties Cumulative Assessment of Proposed Varied Development and Lorg Grid Connection – Comparison with Consented Development

Name / Receptor	Magnitude of change	Sensitivity	Consented Development			Proposed Varied Development			
			Worst case effect	Significance	Overbearing	Magnitude of change	Worst case effect	Significance	Overbearing
1. Marbrack	Property	High	Moderate	Not significant	No	Very low to low	Moderate / minor	Not significant	No
	Access	Medium	Moderate	Not significant	No	Medium	Moderate	Not significant	No
	The Lorg Grid Connection would be seen from the property crossing the adjacent landscape; however, the assessment of the Proposed Varied Development would remain unchanged.								
2. Marbrack Cottage	Property	High	Moderate	Not significant	No	Low to medium	Moderate	Not significant	No
	Access	Medium	Moderate	Not significant	No	Medium	Moderate	Not significant	No

Name / Receptor	Magnitude of change	Sensitivity	Consented Development			Proposed Varied Development			
			Worst case effect	Significance	Overbearing	Magnitude of change	Worst case effect	Significance	Overbearing
	The Lorg Grid Connection would be seen from the property crossing the adjacent landscape; however, the assessment of the Proposed Varied Development would remain unchanged.								
9.Stroanpatrick	Property	High	Moderate from first floor bedroom	Not significant	No	Medium	Moderate	Not significant	No

Name / Receptor	Magnitude of change	Sensitivity	Consented Development			Proposed Varied Development			
			Worst case effect	Significance	Overbearing	Magnitude of change	Worst case effect	Significance	Overbearing
	Access	Medium	Moderate when approaching and leaving the property	Not significant	No	Medium to high	**Moderate**	**Significant**	No
	The Lorg Grid Connection is unlikely to be visible from this location due to intervening landform in the foreground. Therefore, no cumulative effects are predicted as a result of the Proposed Varied Development.								
10.Craigengillan	Property	High	**Major / moderate** from north west-facing windows (presumed living space)	**Significant**	No	Medium	**Moderate*[1]**	**Significant**	No
	Access	Medium	Moderate / minor	Not significant	No	Low to medium	Moderate / minor*[2]	Not significant	No
	The Lorg Grid Connection is likely to be prominent in the Water of Ken valley, however, the assessment of the Proposed Varied Development would remain unchanged.								
11.Craigengillan Cottage	Property	High	Moderate	Not significant	No	Low	Moderate / minor*[1]	Not significant	No
	Access	Medium	Moderate	Not significant	No	Low to medium	Moderate*[2]	Not significant	No

Name / Receptor	Magnitude of change	Sensitivity	Consented Development			Proposed Varied Development			
			Worst case effect	Significance	Overbearing	Magnitude of change	Worst case effect	Significance	Overbearing
	The Lorg Grid Connection is likely to be prominent in the Water of Ken valley, however, the assessment of the Proposed Varied Development would remain unchanged.								
13.Strahanna Farm and River Ken Cottage	Property	High	**Major / moderate** from living space and garden	**Significant**	No	Medium	**Moderate*3**	**Significant**	No
	Access	Medium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	The Lorg Grid Connection is likely to be prominent in the Water of Ken valley, however, the assessment of the Proposed Varied Development would remain unchanged.								

*1 increasing to **major significant** following felling of woodland

*2 increasing to moderate not significant following felling of woodland

*3 increasing to **major/moderate significant** following felling of woodland

1.3.13. In summary, the Proposed Varied Development in combination with the Lorg Grid Connection, would not bring about any additional cumulative effects that have not already been brought about by the Proposed Varied Development in its own right.

Mitigation

1.3.14. No specific mitigation measures have been considered as part of this assessment.

Summary

1.3.15. The Lorg Grid Connection includes infrastructure, which would introduce to the baseline landscape, a series of vertical elements across the site, and, extending beyond it to the west, south-east and north-east, where it may be visible in combination with the Proposed Varied Development. However, by virtue of the size and relative scale of the Proposed Varied Development, it is not assessed that the effects previously set out within the main LVIA Chapter would be altered by the addition of the Lorg Grid Connection to a baseline that includes the Proposed Varied Development.

Statement of Significance

1.3.16. Effects on landscape character and visual amenity associated with the Proposed Varied Development in combination with the Lorg Grid Connection are considered to be not significant over and above those effects which have been set out in the main LVIA chapter.

References

SP Energy Networks (2025). *Lorg Wind Farm Grid Connection Environmental Impact Assessment Report*. Available at: https://www.energyconsents.scot/ApplicationDetails.aspx?cr=ECU00001789&T=0 Accessed on: 29 June 2026.

Abbreviations

Abbreviations	Definition
EIA	*Environmental Impact Assessment*
LVIA	*Landscape and Visual Impact Assessment*