

ACHANY EXTENSION WIND FARM

Additional Information
Volume 1: Main Report

April 2022



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Achany Extension Wind Farm: Additional Information

Volume 1: Main Report

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Preface

SSE Generation Limited (“the Applicant”) is proposing to construct an extension to the operational Achany Wind Farm, approximately 4.5 kilometres (km) north of the village of Rosehall and 11km west-north-west of Lairg.

The Applicant submitted an application in July 2021 to the Scottish Ministers under Section 36 of the Electricity Act 1989 for consent, together with a direction under section 57(2) of the Town and Country Planning (Scotland) Act 1997 for deemed planning permission to be granted, to construct and operate an extension to the operational Achany Wind Farm to maximise the renewable electricity generation potential at the site. The proposed wind farm, called ‘Achany Extension Wind Farm’ and referred to hereafter as ‘the Proposed Development’, is located on the adjoining land to the north-west of the operational Achany Wind Farm. The application sought consent for a generating station consisting of a wind farm with up to 20 Wind Turbine Generators (WTGs) with a maximum tip height of up to 149.9m, supported by ancillary development.

Since submission of the application, changes have been made to the layout of the Proposed Development following a consultation response from The Highland Council, which includes removing two turbines (Turbine 10 and 20), and associated infrastructure.

The Applicant has prepared this report with respect to the changes, where relevant, to matters dealt with in the EIA Report (July 2021). This has been done in the expectation that Ministers will treat the report as Additional Information under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations). The purpose of the additional information is to demonstrate the nature and extent of any change in the assessment of environmental impacts that would result from the proposed changes, or record where there is no change.

This report is to supplement the information already provided in the Achany Extension Wind Farm EIA Report (July 2021), and therefore should be read alongside the EIA Report.

This report is available for viewing online at <https://www.sserenewables.com/achanyextension/> or on the Scottish Government Energy Consents website at www.energyconsents.scot.

Copies of the report may be obtained from SSE Generation Limited (contact: SSE Renewables, FAO Karen Anderson, 1 Waterloo Street, Glasgow, G2 6AY or via email at karen.anderson@sse.com) at a charge of £25 for a hard copy, or on electronic USB or DVD free of charge.

Any representations in respect of the additional information may be submitted via the Energy Consents Unit website at www.energyconsents.scot/Register.aspx; by email to The Scottish Government, Energy Consents Unit mailbox at representations@gov.scot or by post, to The Scottish Government, Energy Consents Unit, 4th Floor, 5 Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU, identifying the proposal and specifying the grounds of representation.

Representations should be dated, clearly stating the name of the project (in block capitals), full return email and postal address of those making representations. Representations sent by email to representations@gov.scot will receive acknowledgement.

All representations should be received not later than the date falling 30 days from the date of the last published notice, although Ministers may consider representations received after this date. Additional information which is submitted by the Applicant will be subject to further public notice in this manner, and representations to such information will be accepted as per this notice.

1. Introduction

1.1 Background

- 1.1.1 The Applicant, SSE Generation Limited, is proposing to construct an extension to the operational Achany Wind Farm, located on the adjoining land to the north-west of the operational Achany Wind Farm, approximately 4.5 kilometres (km) north of the village of Rosehall and 11km west-north-west of Lairg, as shown on Figure 1.1: Location Plan.
- 1.1.2 The Applicant submitted an application in July 2021 to the Scottish Ministers under Section 36 of the Electricity Act 1989 for consent, together with a direction under section 57(2) of the Town and Country Planning (Scotland) Act 1997 for deemed planning permission to be granted, to construct and operate an extension to the operational Achany Wind Farm to maximise the renewable electricity generation potential at the site. The proposed wind farm, called ‘Achany Extension Wind Farm’ and referred to hereafter as ‘the Proposed Development’, is located on the adjoining land to the north-west of the operational Achany Wind Farm. The application sought consent for a generating station consisting of a wind farm with up to 20 Wind Turbine Generators (WTGs) with a maximum tip height of up to 149.9m, supported by ancillary development.
- 1.1.3 On consideration of the application the relevant planning authority, The Highland Council, raised no objection subject to removal of two turbines (Turbine 10 and Turbine 20) and associated infrastructure from the application.
- 1.1.4 These changes were accepted by the Applicant.
- 1.1.5 The Applicant has prepared this report with respect to the changes, where relevant, to matters dealt with in the EIA Report (July 2021). This has been done in the expectation that Ministers will treat the report as Additional Information under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations). The purpose of the additional information is to demonstrate the nature and extent of any change in the assessment of environmental impacts that would result from the proposed changes, or record where there is no change.
- 1.1.6 This report has been prepared to provide the additional information requested to demonstrate the nature and extent of any change in the assessment of environmental impacts that would result from the changes to the layout (as detailed in Chapter 2 of this report), or record where there is no change. This review of the assessment contained in the EIA Report (July 2021) has been provided in respect of each of the environmental topics that were assessed in the EIA Report (July 2021) and takes account of any consequential changes or additional changes to the layout and associated infrastructure.
- 1.1.7 This report comprises four volumes, as follows:
- Volume 1: Additional Information – Main Report
 - Volume 2: Figures
 - Volume 3: Visualisation Pack
 - Volume 4: Appendices

2. Revision to the Proposed Development

2.1.1 The revised layout of the Proposed Development is shown on Figure 2.1 (a to d): The Revised Layout.

2.1.2 Table 2.1 provides a summary of where the removal of T10 and T20 has resulted in changes between the 20 Turbine layout presented in the EIA Report (July 2021) and the revised 18 Turbine layout now proposed. These changes are shown on Figure 2.2: The Revised Layout - Proposed Changes.

Table 2.1: Summary of changes between the 20 Turbine Proposed Development and the 18 Turbine Revised Layout

Infrastructure Element	20 Turbine Layout (EIA Report, July 2021)	18 Turbine Revised Layout (February 2022)	Summary of Changes
No. of Turbines	20	18	Removal of two turbines
Tip Height	Up to 149.9m	Up to 149.9m	No change
Rotor Diameter	Indicative diameter of 136m	Indicative diameter of 136m	No change
Hub Height	Indicative hub height of 86m	Indicative hub height of 86m	No change
Access Track Length	Approx. 17.3km	Approx. 16.6km	A reduction in track length of approx. 0.7km associated with the removal of T10 and T20.
Turbine Foundations and Hardstandings	Temporary Land Use (m ²) 12086.49 Permanent Land Use (m ²) 36023.89	Temporary Land Use (m ²) 10877.84 Permanent Land Use (m ²) 32421.5	Reduction in Temporary Land Use (m ²) 1208.65 Reduction in Permanent Land Use (m ²) 3602.39
Borrow Pits	Comprising both new and the reworking of a borrow pit used previously for Achany Wind Farm.	Comprising both new and the reworking of a borrow pit used previously for Achany Wind Farm.	No change
Substation and Operations Building	Requirement for a new on-site substation and operations building.	Requirement for a new on-site substation and operations building.	No change
Temporary Construction Compounds, including concrete batching plant area	Requirement for temporary construction compounds, laydown areas and concrete batching plant.	Requirement for temporary construction compounds, laydown areas and concrete batching plant.	No change
Permanent Met Masts/LiDAR	A single permanent Light Detection and Ranging (LiDAR) station would be	A single permanent Light Detection and Ranging (LiDAR) station would be	No change

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2.1.3 The application boundary, as illustrated on Figure 2.1: The Revised Layout, would not change as a result of the revisions.

2.1.4 The turbine locations for the 18 Turbine Revised Layout are unchanged from those presented in the EIA Report (July 2021), albeit Turbines 10 and 20 are now removed. This is shown in Table 2.2, with the two turbines to be removed scored out. Turbine numbering has been retained and corresponds to the numbering which was presented in the EIA Report – Volume 2, Chapter 3: Description of Development (July 2021) and as shown in Table 2.2.

Table 2.2: Turbine Grid References

Turbine Number	Grid Reference	Turbine Number	Grid Reference
1	245164 911083	11	246722 909421
2	244595 910950	12	246915 908855
3	245618 910922	13	246390 909004
4	245980 910740	14	245810 909163
5	244768 910506	15	246334 908448
6	246023 910241	16	245756 908237
7	245495 910095	17	246564 907472
8	244872 910018	18	247025 907297
9	245597 909695	19	246838 906821
10	246198 909516	20	247468 906810

2.1.5 Turbine positions (and track routes) could be microsited up to 50m where appropriate, in order to avoid or minimise environmental or engineering constraints identified during pre-construction ground investigation, or construction phase excavation works. In consultation responses received by SEPA (dated 3rd September 2021), comments were made with respect to micrositing infrastructure at T8 and T19 as presented in the EIA Report (July 2021). This is accepted by the Applicant and can be achieved within the 50m micrositing allowance without any change to the assessment of effects.

3. Landscape and Visual

3.1 Introduction

3.1.1 The purpose of the additional information presented in this Chapter is to provide an understanding of how the Landscape and Visual Effects arising from the 18 Turbine Revised Layout compare with those described for the 20 Turbine Proposed Development layout, as assessed in Volume 2, Chapter 7: Landscape and Visual Amenity of the EIA Report (July 2021).

3.1.2 This assessment is supported by the figures listed in Table 3.1.

Table 3.1: Supporting Figures

Figure 3.1: Revised Layout ZTV and Viewpoint Plan
Figure 3.2.1 – 3.2.2: Wireline from VP1 A836 above the Crask Inn (Revised Layout)
Figure 3.3.1 – 3.3.2: Wireline from VP2 A836 bridge by Dalnessie entrance (Revised Layout)
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Figure 3.9.1 – 3.9.2: Wireline from VP8 A838 Junction (Revised Layout)
Figure 3.10.1 – 3.10.2: Wireline from VP9 Achnairn caravan and camping site entrance (Revised Layout)
Figure 3.11.1 – 3.11.2: Wireline from VP10 Ben More Assynt (Revised Layout)
Figure 3.12.1 – 3.12.2: Wireline from VP11 Glencassley road to south of Castle (Revised Layout)
Figure 3.13.1 – 3.13.2: Wireline from VP12 Glencassley road by Langwell Hill (Revised Layout)
Figure 3.14.1 – 3.14.2: Wireline from VP13 Ben Klibreck (Revised Layout)
Figure 3.15.1 – 3.15.2: Wireline from VP14 A838 near West Shinness (Revised Layout)
Figure 3.16.1 – 3.16.2: Wireline from VP15 B9176, Struie Viewpoint (Revised Layout)
Figure 3.17.1 – 3.17.2: Wireline from VP16 Minor road at Inveroykel forest access (Revised Layout)
Figure 3.18.1 – 3.18.2: Wireline from VP17 A836 at Allt na Fearnà (Revised Layout)
Figure 3.19.1 – 3.19.2: Wireline from VP18 Carn Chuinneag (Revised Layout)
Figure 3.20.1 – 3.20.2: Wireline from VP19 Seana Bhràigh (Revised Layout)
Figure 3.21.1 – 3.21.2: Wireline from VP20 Cul Mòr (Revised Layout)
Figure 3.22.1 – 3.22.2: Wireline from VP21 Meall an Aonaich (Revised Layout)

3.1.3 Further visualisation information in accordance with The Highland Council (THC) guidelines ‘*Visualisation Standards for Wind Energy Developments*’ (THC, 2016) is also provided within a ‘Visualisation Pack’ (see Volume 3) for six viewpoints identified by THC.

Assessment Scope

Visual Assessment Review

- 3.1.4 The 18 Turbine Revised Layout incorporates the removal of two turbines (T10 and T20) and associated track infrastructure, which has the potential to change the effects assessed and presented in Volume 2, Chapter 7: Landscape and Visual Amenity of the EIA Report (July 2021). A brief summary of potential changes to each of the 21 representative viewpoints considered in the EIA Report (July 2021) is provided in Section 3.2 of this report. This approach was confirmed in December 2022, following review of a proposed scope prepared by the Applicant and agreed with THC and the Energy Consents Unit (ECU). The review of viewpoints is also followed by a summary of potential changes to effects on settlement and route based visual receptors and cumulative effects.
- 3.1.5 The review is supported by the Figures detailed in Table 3.1, and a viewpoint pack featuring visualisations for six selected viewpoints, as described in paragraph 3.1.3.

Landscape Assessment Review

- 3.1.6 Consideration of potential changes to effects on Landscape Character Types (LCTs) and designated and protected landscapes has been undertaken and is summarised in Section 3.3 of this report. The review and interpretation of viewpoints undertaken for the Visual Assessment Review forms the basis of the Landscape Assessment Review aided by the updated ZTV for the Revised Layout (see Figure 3.1).

3.2 Visual Assessment Review

Comparison of Visual Effects for Representative Viewpoints

- 3.2.1 In terms of assessing any potential change to visual effects, the relevant design change of the Revised Layout is the removal of two turbines from the 20 turbine layout presented in the EIA Report (July 2021) along with short sections of track and hardstanding associated with these two turbines alone.
- 3.2.2 A review of the implications arising from the removal of these two turbines for each representative viewpoint is provided in Table 3.2. The effect ratings used are as described in the methodology for the Visual Assessment in the EIA Report (July 2021) (Volume 2, Chapter 7, Section 7.9).

Table 3.2: Comparison of Visual Effects for Representative Viewpoints

Viewpoint	Effect Rating in EIA Report (20 turbine layout)	Potential Changes to Visual Effects	Effect Rating for Revised Layout (18 turbine layout)	Change to Effect Rating
VP1: A836 above the Crask Inn (Figure 3.2.1 – 3.2.2)	Minor (not significant)	Removal of T20 from the EIA Report (July 2021) Layout would reduce the horizontal spread of the wind farm creating a bigger gap between it and the existing Achany and Rosehall turbines. T10 is situated in the middle of the EIA Report (July 2021) Layout and comprises the most elevated turbine seen from this location, sitting over a higher part of the skyline. Its removal would therefore reduce the elevation slightly. It is not considered that these small compositional changes would change the level of visual effect as wind turbines would remain perceptible.	Minor (not significant)	No Change
VP2: A836 bridge by Dalnessie entrance (Figure 3.3.1 – 3.3.2)	Minor – Moderate (not significant)	Removal of T10 would result in the number of more noticeable visible turbines being reduced by one. However, remaining turbines would continue to be noticeable, though contained by neighbouring landform. Removal of T20 as a small tip over the horizon would comprise a barely noticeable change. This VP is representative of passing views obtained by road users who would be mobile with a constantly changing view and it is unlikely that changes to reflect one static VP on this road would alter how the wind farm would be perceived when compared to the EIA Report (July 2021) Layout. There would therefore be no change to the level of effect.	Minor – Moderate (not significant)	No Change
VP3: Saval (Figure 3.4.1 – 3.4.2)	Minor (not significant)	T10 comprises the turbine which protrudes most above the ridgeline when seen from this location although other nearby turbines would continue to have similar visibility. As a small tip, the removal of T20 would be barely noticeable. All turbines for both the EIA Report (July 2021) Layout and Revised Layout would be outwith the main focus of the view. Whilst the number of visible turbines would be slightly reduced, there would be no change to the level of effect.	Minor (not significant)	No Change

Viewpoint	Effect Rating in EIA Report (20 turbine layout)	Potential Changes to Visual Effects	Effect Rating for Revised Layout (18 turbine layout)	Change to Effect Rating
VP4: Rhilochan (Figure 3.5.1 – 3.5.2)	Negligible (not significant)	This VP lies over 27 km from the nearest part of the Proposed Development with T10 being around 29 km away. Whilst T10 comprises one of the more elevated turbines seen from this location, given the distance involved, it is not considered that its removal would lead to any noticeable change in the perceptibility of the wind farm compared to the EIA Report (July 2021) Layout. As a small tip, removal of T20 would make no perceptible difference to the view. There would be no change to the level of effect.	Negligible	No Change
VP5: Ben Hee (Figure 3.6.1 – 3.6.2)	Minor (not significant)	T10, located within the centre of the wind farm, is one of a number of turbines which stand slightly clearer of the ridgeline. Its removal would slightly reduce turbine overlap when seen from this VP but would not noticeably affect the appearance and perceptibility of the windfarm in the landscape, at the distance involved (22.9 km). T20 stands as a slight outlier, appearing higher than other turbines and its removal would slightly reduce horizontal spread. Removal of these two turbines is not anticipated to very noticeably alter the appearance and perceptibility of the wind farm in the landscape compared to the EIA Report (July 2021) Layout, at the distance involved and therefore, there would be no difference to the level of effect.	Minor (not significant)	No Change

Viewpoint	Effect Rating in EIA Report (20 turbine layout)	Potential Changes to Visual Effects	Effect Rating for Revised Layout (18 turbine layout)	Change to Effect Rating
VP6: Rosehall (Figure 3.7.1 – 3.7.2)	Moderate (significant)	The removal of T20 would move turbines slightly further into the peripheral view of receptors represented by this VP which would lead to a small improvement. The removal of T10 would reduce the numbers of turbines visible compared to the EIA Report (July 2021) Layout, but would lead to little perceptible change in visual effect because other remaining turbines would appear more noticeable. Overall, there would be a small but perceptible improvement for visual receptors from the removal of T20 but this would not alter the level of effect which would still occur in relation to the remaining turbines.	Moderate (significant)	No Change
VP7: High Road (Figure 3.8.1 – 3.8.2)	Minor (not significant)	The removal of T10 would take out the only turbine where a tower would be perceived from this VP. However, turbines with a greater degree of visibility are already visible at the existing Achany Wind Farm. T20 comprises a barely noticeable tip from this VP and its removal would therefore be barely perceptible. The visual effect for this VP and representative receptors is already minimal and whilst one of the more visible turbines would be removed, this would not change the level of effect from that reported in the EIA Report (July 2021).	Minor (not significant)	No Change
VP8: A836 - A838 Junction (Figure 3.9.1 – 3.9.2)	Minor (not significant)	T10 is the most perceptible turbine seen from this VP but the effect on the VP is relatively limited. Removal of this turbine would lead to fewer turbines being visible when compared to the layout presented in the EIA Report (July 2021). However, representative receptors for this VP are travellers on the road who would experience changing views and therefore the change to this static VP would be unlikely to affect the overall perceptibility of the wind farm by these receptors. It is therefore considered that the level of effect would not be changed.	Minor (not significant)	No Change

Viewpoint	Effect Rating in EIA Report (20 turbine layout)	Potential Changes to Visual Effects	Effect Rating for Revised Layout (18 turbine layout)	Change to Effect Rating
VP9: Achnairn caravan & camp site entrance (Figure 3.10.1 – 3.10.2)	Moderate (significant)	The removal of T10 would take away one of a group of turbines appearing on a lower point of the skyline between two hills. This would slightly reduce the perceived size of this turbine group but other turbines would remain equally noticeable. Removal of T20 would also result in the removal of a small isolated tip over a higher part of the skyline As other turbines would continue to be noticeable in the view, the level of effect would not be changed from that reported in the EIA Report (July 2021).	Moderate (significant)	No Change
VP10: Ben More Assynt (Figure 3.11.1 – 3.11.2)	Minor – Moderate (not significant)	The removal of T10 and T20 would reduce the number of turbines visible, but would not alter the horizontal spread. These turbines would sit a little higher than some other turbines and this may be perceived in the view depending on the weather conditions. The removal of these turbines would slightly reduce turbine density but would be unlikely to lead to a noticeable change in the perceptibility and presence of the wind farm within the view when compared to the EIA Report (July 2021) Layout. It is therefore considered that the level of effect would not be altered.	Minor – Moderate (not significant)	No Change
VP11: Glencassley road to south of Castle (Figure 3.12.1 – 3.12.2)	Moderate (significant)	The removal of T20 would remove one of two more prominent turbines seen from this VP. This may slightly reduce the influence of turbines on the view, compared to the EIA Report (July 2021) Layout, but given the prominence of the remaining turbine and other tips would not change the level of effect.	Moderate (significant)	No Change
VP12: Glencassley road by Langwell Hill (Figure 3.13.1 – 3.13.2)	Moderate (significant)	Removal of T10 would reduce the number of turbines visible from this VP by one. However, this is not one of the most prominent turbines within this view which features other turbines at closer proximity. Therefore, the level of the effect would not be changed from that reported in the EIA Report (July 2021).	Moderate (significant)	No Change

Viewpoint	Effect Rating in EIA Report (20 turbine layout)	Potential Changes to Visual Effects	Effect Rating for Revised Layout (18 turbine layout)	Change to Effect Rating
VP13: Ben Klibreck (Figure 3.14.1 – 3.14.2)	Minor – Moderate (not significant)	The removal of T20 would reduce the horizontal spread of the Proposed Development in this view, but would increase the gap between it and the Achany / Rosehall cluster of existing turbines, potentially leading to the Proposed Development appearing more isolated from the other wind farm developed landscapes. T10 comprises a slightly higher turbine within the composition when seen from this VP and its removal of T10 would reduce the number of turbines visible. However, at over 22 km from the Proposed Development, the remaining turbines would continue to have similar perceptibility and presence within the view to the layout presented in the EIA Report (July 2021) and therefore the level of effect would not be changed.	Minor – Moderate (not significant)	No Change
VP14: A838 near West Shinness (Figure 3.15.1 – 3.15.2)	Moderate (significant)	The removal of T10 from this view would remove one of the more noticeable turbines. However, whilst one less turbine would be visible, other turbines would remain equally noticeable in the view to the layout presented in the EIA Report (July 2021) and the effect rating would therefore not be changed.	Moderate (significant)	No Change
VP15: B9176 Struie Viewpoint (Figure 3.16.1 – 3.16.2)	Negligible (not significant)	All of the turbines seen from this location would be set to the rear of the existing Achany and Rosehall turbines. The existing situation involves numerous overlapping turbines. At 27.5 km distant it is considered that the proposed turbines would lead to an imperceptible change in the view. The level of effect would therefore not be changed by the removal of any turbines.	Negligible (not significant)	No Change

Viewpoint	Effect Rating in EIA Report (20 turbine layout)	Potential Changes to Visual Effects	Effect Rating for Revised Layout (18 turbine layout)	Change to Effect Rating
VP16: Minor road at Inveroykel forest access (Figure 3.17.1 – 3.17.2)	Minor – Moderate (not significant)	The removal of T20 would reduce the horizontal spread of the wind farm and create a more cohesive grouping when seen from this location. T10 comprises a slightly more elevated turbine, compared to other neighbouring turbines but is less prominent than other, closer turbines. Its removal would slightly reduce the number of turbines visible and turbine density. As remaining turbines would continue to appear equally noticeable, within a context of the existing, prominent Achany and Rosehall turbines, the level of effect would not be changed from that reported in the EIA Report (July 2021).	Minor – Moderate (not significant)	No Change
VP17: A836 at Allt na Fearná (Figure 3.18.1 – 3.18.2)	Negligible	Neither of the turbines to be removed from the layout would be visible from this VP and therefore the effect would not be changed.	Negligible	No Change
VP18: Carn Chuinneag (Figure 3.19.1 – 3.19.2)	Minor (not significant)	The removal of T20 would slightly reduce the horizontal spread of the Proposed Development turbines seen from this VP. T10 would appear in the centre of the wind farm and although slightly more elevated than some other, surrounding turbines would not stack or overlap with any other turbines. Other than that, fewer turbines would be visible, at the distance involved (over 23 km) it is not considered that its removal would lead to a perceptible change. As the Revised Layout would continue to have similar perceptibility and presence in the landscape to the layout presented in the EIA Report (July 2021), there would be no change to the level of effect.	Minor (not significant)	No Change

Viewpoint	Effect Rating in EIA Report (20 turbine layout)	Potential Changes to Visual Effects	Effect Rating for Revised Layout (18 turbine layout)	Change to Effect Rating
VP19: Seana Braigh (Figure 3.20.1 – 3.20.2)	Minor (not significant)	The removal of T20 would slightly reduce the horizontal spread of turbines. T10 would appear within the centre of the group of turbines when seen from this VP, at a slightly higher elevation than some neighbouring turbines but at around 28 km away its removal is not anticipated to lead to a very perceptible change. As the Revised Layout would continue to have similar perceptibility and presence in the landscape to the layout presented in the EIA Report (July 2021), there would be no change to the level of effect.	Minor (not significant)	No Change
VP20: Cul Mor (Figure 3.21.1 – 3.21.2)	Negligible	At over 28 km from the Proposed Development, turbines would have limited perceptibility in the view from this VP. It is not considered that the removal of turbines T10 and T20 would result in any perceptible change to the level of effect compared to that for the EIA Report (July 2021) Layout, as remaining turbines would continue to have a similar presence in the view.	Negligible	No Change
VP21: Meall an Aonaich (Figure 3.22.1 – 3.22.2)	Moderate (significant)	From this VP both T20 and T10 sit to the rear of, and slightly more elevated than some other turbines. However, remaining turbines are closer to the VP and would appear equally noticeable. The removal of T10 could draw slightly greater attention to alignment and clustering of other turbines. Therefore, whilst slightly fewer turbines may be visible, no change is anticipated to the effect on the view compared to that reported in the EIA Report (July 2021).	Moderate (significant)	No Change

Summary of effects of turbine removal on VPs

- 3.2.3 The review of each VP in relation to the changes arising from the Revised Layout has established that there would be some changes to the appearance of the wind farm from some VPs, such as slightly reduced horizontal spread, and removal of some turbines which are slightly more noticeable from some VPs. However, this would not lead to any change in the allocated visual effects rating to any VP, and would therefore not lead to any change in the presence of significant effects.

Other Visual Effects

Settlement and Route Based Visual Receptors

- 3.2.4 The Revised Layout would lead to a reduction in the number of visible turbines seen from some settlement and route based receptors, and in some cases would remove one of the more noticeable turbines affecting views. This would typically affect views obtained from around Shinness and Achnairn (removal of T10 from the view) and Rosehall (removal of T20 from the view). However, this is not anticipated to lead to any changed effects ratings for visual receptors in these areas, either because of the continued presence of other equally visible turbines, or the peripheral nature of the Proposed Development within existing views. There would therefore be no changes to the effects ratings for these visual receptors reported in Chapter 7 of the EIA Report (July 2021).

Cumulative Effects

- 3.2.5 As no changes to visual effects ratings for VPs (non-cumulative) are anticipated, it is also concluded that there would be no changes to cumulative effects reported in the EIA Report (July 2021). As the Proposed Development would continue to have a similar presence within the view from all VPs, it is not considered that there would be any change to how this would be perceived within the cumulative baseline.

3.3 Landscape Assessment Review

- 3.3.1 It is not considered that there would be any changes to landscape effects from the Revised Layout in comparison to the layout presented in the EIA Report (July 2021) as the Proposed Development would continue to occupy a similar footprint and have a similar scale and appearance within the wider landscape. There would be no changes to the effects reported in the EIA Report (July 2021) on the Assynt – Coigach National Scenic Area (NSA) or Wild Land Area (WLA) 34 – Reay – Cassley because the turbines removed are further from these sensitive landscapes than other remaining turbines. There would be similarly no changes to the cumulative landscape effects reported in the EIA Report (July 2021).

3.4 Conclusions

- 3.4.1 Whilst the 18 turbine Revised Layout may lead to some perceptible changes in views in comparison with the 20 turbine layout presented in the EIA Report (July 2021), there would be no changes to the effects ratings identified and reported in Chapter 7 (Volume 2) of the EIA Report (July 2021). There would therefore be no changes to the number and distribution of significant landscape and visual, and cumulative landscape and visual effects for the Proposed Development.

4. Ecology

- 4.1.1 Chapter 9 of the EIA Report (July 2021) established a baseline for the site and assessed in detail the potential for likely significant effects on Important Ecological Features (IEFs) resulting from the construction, operation and decommissioning of the 20 Turbine Proposed Development. This assessment considers any changes to the significance of impacts as a result of the proposed reduction in turbines and associated infrastructure of the Revised Layout.
- 4.1.2 The ecological assessment documented within Chapter 9 of the EIA Report (July 2021) concluded that, following the implementation of proposed mitigation and good practice measures such as an outline Habitat Management Plan, which seeks to restore and enhance blanket bog habitat, and a Deer Management Plan, **no significant residual effects** are predicted.
- 4.1.3 The proposed removal of 2 turbines as part of the Revised Layout would have a beneficial effect to a number of the IEFs identified within the EIA Report (July 2021). These include:
- A reduction in habitat loss through a decrease in turbine numbers, the associated bases and hard standings and the linking tracks required to access these;
 - An opportunity for an increase in early phase habitat reinstatement in areas in proximity to the Caithness and Sutherland Peatlands Special Area of Conservation (SAC) due to the location of the removed turbines in proximity to the boundary with the Natura 2000 site;
 - A reduced risk of pollution and sedimentation events during the construction phase which may have an adverse effect on aquatic receptors; and
 - Reduced operational effects and risk to bat species present in the wider area from collision with turbines or from barotrauma.
- 4.1.4 In summary, the reduction in turbine numbers for the Revised Layout would have only beneficial effects on the IEFs identified in Volume 2, Chapter 9 of the EIA Report (July 2021). No additional adverse effects from the removal of these turbines have been identified and the mitigation previously proposed is deemed sufficiently robust to continue to reduce all potential residual effects to IEFs to non-significant.

5. Ornithology

5.1.1 Chapter 9 of the EIA Report (July 2021) established a baseline for the site and assessed in detail the potential for likely significant effects on Important Ornithological Features (IOFs) resulting from the construction, operation and decommissioning of the 20 Turbine Proposed Development. This assessment considers any changes to the significance of impacts as a result of the proposed reduction in turbines and associated infrastructure of the Revised Layout.

5.1.2 The ornithological assessment documented within Chapter 9 of the EIA Report (July 2021) concluded that, following the implementation of proposed mitigation and good practice measures such as an outline Habitat Management Plan, which seeks to restore and enhance blanket bog habitat, including to benefit breeding moorland birds away from the turbine array, **no significant residual effects** are predicted.

5.1.3 In order to assess the effects of the Revised Layout on ornithological receptors, consideration was given to the implications of the changes (removal of two turbines and associated wind farm tracks removal) during construction, operation and decommissioning.

Construction

5.1.4 With two fewer turbines and the associated hardstandings and access tracks, the extent of the development footprint would be reduced. This would lower the extent of permanent habitat loss and correspondingly increase the area available for habitat restoration. The effect would therefore be positive for birds, given reduced land take.

5.1.5 The extent of construction activity would also be reduced in the centre and south-east corner of the site.

5.1.6 As a result of these changes, the risk of construction disturbance effects to breeding birds would be reduced spatially and temporally, compared to the 20 Turbine Proposed Development. The species for which this reduction is greatest is golden plover, with minor benefits also to dunlin and greenshank. The Revised Layout has no implications for disturbance risk to divers, raptors, black grouse or wildfowl.

Operation

5.1.7 The potential effects on birds from the Revised Layout during operation are:

- Displacement due to the presence of turbines or other wind farm infrastructure;
- Barrier effects, if the presence of the turbines prevents movement across previously used airspace;
- Collision with turbines when birds are in flight; and
- Disturbance from staff, vehicles or other activities during operation or operational maintenance.

5.1.8 The number of breeding territories within potential displacement distances is limited, with low risk of displacement in any case at the distances involved between territory centres and T10 and T20. Specifically, there were up to one dunlin and two one golden plover territories recorded within approximately 500m of these turbines in any one year (from 2019 and 2020 breeding bird survey data). The reduction in the development footprint would result in a lower displacement risk to these birds.

- 5.1.9 No significant barrier effects were predicted in the EIA Report (July 2021) from the 20 Turbine Proposed Development. The removal of two turbines is not therefore predicted to result in any change to this predicted outcome.
- 5.1.10 Collision Risk Modelling was not considered necessary to be re-run in order to assess the predicted collision rates with two fewer turbines. This is because having fewer turbines either does not affect collision risk (where there were no 'at risk' flights associated with these turbines), or the collision risk is lower if there were 'at risk' flights within these turbines' airspace. The SPA/Ramsar site qualifying species where fewer 'at risk' flights would result from removal of the two turbines are golden eagle, golden plover and greenshank. For non-SPA/Ramsar site qualifying species there would be fewer 'at risk' flights for osprey and non-breeding whooper swan, greylag and pink-footed geese.
- 5.1.11 Finally, the risk of disturbance to breeding or foraging birds from operational activity and maintenance would be reduced, given the smaller infrastructure footprint.

Decommissioning

- 5.1.12 As with the previous ornithological assessment, it is considered that effects from decommissioning on ornithological receptors would be comparable to the construction phase. These are considered above (see paras. 5.1.4 to 5.1.6), and the same reduction in effects would be predicted.

6. Hydrology

- 6.1.1 Chapter 10: Hydrology and Hydrogeology of the EIA Report (July 2021) established a baseline for the site. It also assessed in detail the potential for likely significant effects on water receptors resulting from the construction, operation and decommissioning of the proposed 20 turbine development. This assessment considers any changes to the significance of impacts as a result of the proposed reduction in turbines and associated infrastructure of the Revised Layout.
- 6.1.2 Field surveys were carried out in November 2020 to inform the EIA Report (July 2021) and remain valid for the Revised Layout.
- 6.1.3 Removal of turbines T10 and T20 and their associated tracks will result in no change to the effects on hydrology and hydrogeology, nor will it have any effect on the groundwater dependent terrestrial ecosystems (GWDTEs) identified in the EIA Report (July 2021).
- 6.1.4 The removal of turbine T10 and T20 and associated tracks will not change the number of watercourse crossings required.
- 6.1.5 In summary, the Revised Layout will not change the findings of the EIA Report (July 2021), which concluded there would be no residual significant effects on hydrology and hydrogeology.

7. Geology and Carbon Balance

- 7.1.1 Chapter 11: Geology and Carbon Balance of the EIA Report (July 2021) established a baseline assessment of the potential effects on soil, rock and carbon receptors resulting from the construction, operation and decommissioning of the proposed 20 turbine development. This assessment considers any changes to the significance of impacts as a result of the proposed reduction in turbines and associated infrastructure of the Revised Layout.
- 7.1.2 A preliminary interpretation of ground conditions on site was undertaken to inform the EIA Report (July 2021). This remains valid for the Revised Layout.
- 7.1.3 The Revised Layout will not change the findings of the EIA Report (July 2021) which found no residual significant effects on geology and carbon materials on site.

Borrow Pit Assessment

- 7.1.4 The removal of two turbines and associated track reduces the aggregate requirements from site borrow pits by approximately 3,400m³. Technical Appendix 11.1 of the EIA Report (July 2021) comprised a borrow pit assessment report that identified five potential borrow pit locations and their indicative dimensions, and preliminary assess the volumes of rock that could be won from each borrow pit. The results of the assessment concluded that, subject to a ground investigation being carried out to determine the suitability and extent of rock at each borrow pit location, there was sufficient quantities of rock available and it is likely that not all five borrow pit locations would be required. The conclusions and recommendations of Technical Appendix 11.1 of the EIA Report (July 2021) remain.

Peat Slide Risk Assessment

- 7.1.5 Additional updates to the Peat Slide Risk Assessment (PSRA) have been prepared in response to comments made by Ironside Farrar in the Peat Landslide Hazard Risk Assessment Stage 1 Checking Report, dated February 2022, as included within Volume 4: Appendix A of this report. The overarching aim of the Stage 1 Checking Report is to assess the adequacy of the PSRA and ensure that it follows appropriate guidelines as set out by the Scottish Government. The changes made to address the recommendations outlined within the Stage 1 - Checking Report are summarised in paragraphs 7.1.6 to 7.1.13 below.
- 7.1.6 The interpretation of the site geomorphology remains unchanged but a geomorphological map has been referenced within Figures 11.2.9a and 11.2.9b of Volume 4: Appendix A to illustrate site features.
- 7.1.7 LIDAR survey data has been utilised to inform the likelihood of peat instability when considering slope angles to calculating peat stability.
- 7.1.8 Ironside Farrar requested further information to be included within the submitted PSRA, including:
- A Geomorphological Map of the Site;
 - The use of additional factors when calculating the likelihood of a peat landslide;
 - The inclusion of a consequence assessment for the site; and
 - The inclusion of a risk assessment where risk is calculated by Risk = Likelihood X Consequence.

- 7.1.9 Based on these comments, the PSRA, contained within Volume 4: Appendix A of this report, has been updated. This does not negatively impact the overall assessment of peat stability on site but gives a more detailed analysis of peat stability.
- 7.1.10 Four factors have now been considered within the PSRA, contained within Volume 4: Appendix A of this report, when calculating the likelihood of peat instability. They include; peat depth, slope angle, slope breaks and the hydrological condition of peat. Another factor to influence peat stability includes the underlying geology which cannot be assessed prior to an intrusive ground investigation. Observations made on site would suggest that a thin veneer of mineral soil over bedrock is anticipated. In the meantime, the hydrological conditions of the site and slope breaks have been considered to help develop an understanding of peat stability. The PSRA is a live document and will be further updated as and when new information is made available that can influence the assessment of peat stability.
- 7.1.11 The consequence of peat destabilising has also been included within the PSRA, contained within Volume 4: Appendix A of this report, which considers the scale and exposure of any peat failures. This assessment was not previously considered as the likelihood of peat instability across most of the site is “negligible”. A consequence assessment has since been included to understand the consequence of any peat slides, even though peat instability is deemed to be very unlikely.
- 7.1.12 The overall risk of peat instability is then calculated by multiplying the likelihood and consequence rating together at all probe locations which provides a more accurate interpretation of peat stability across the site. The incorporation of the new LIDAR data has allowed a more robust assessment of slope angle and slope breaks. This has caused a slight overall reduction in risk to negligible risk of peat instability.
- 7.1.13 The PSRA data chart appended to the end of the PSRA, contained within Volume 4: Appendix A of this report, has been updated to show the inclusions of other variables when considering the overall risk of peat instability. In summary, the overall risk of peat instability across the site is negligible.

Peat Management Plan

- 7.1.14 The removal of two turbines from site has an overall reduction in the volume of peat to be excavated from site and a balance for re-use of peat remains. Technical Appendix 11.3 of the EIA Report (July 2021) comprised a Stage 1 Peat Management Plan demonstrating the extent and characteristics of peat across the site have been investigated, excavations in peat have been minimised wherever practicable, and excavation and subsequent management of peat has been considered. The Stage 1 Peat Management Plan comprised results of four phases of peat probing, including two phases of high resolution probing for all main infrastructure. The results of the Stage 1 Peat Management Plan concluded that a balance could be achieved between excavated peat during construction, and its subsequent reuse for reinstatement purposes. The conclusions and recommendations of Technical Appendix 11.3 of the EIA Report (July 2021) remain.

Carbon Calculator

- 7.1.15 Technical Appendix 11.4 of the EIA Report (July 2021) included an assessment of the carbon impact of the Proposed Development, carried out using the SEPA Carbon Calculator Tool v1.6.01. The assessment concluded that the project would have an expected payback time of 3.2 years compared to grid-mix electricity generation, and even greater savings (and faster payback) when compared to fossil fuel-mix electricity and coal-fired electricity. An updated Carbon Calculator has been submitted for the Revised Layout showing that the removal of two turbines also results in an

expected payback time of 3.2 years compared to grid-mix electricity generation. The Carbon Calculator is included in Appendix B, and the online document reference number is: UIRC-LUK8-7CN3.

8. Cultural Heritage

8.1.1 Chapter 12 of the EIA Report (July 2021) established the historic environment baseline for the Site and assessed the potential for direct and setting effects on cultural heritage receptors which might result from the construction, operation and decommissioning of the 20 Turbine Proposed Development. This assessment considers changes to significance of effects as a result of as a result of the proposed reduction in turbines and associated infrastructure of the Revised Layout. The assessment assumes that the additional mitigation and enhancement measures outlined in Chapter 12, Section 12.8 and Technical Appendix 3.1 (Outline Construction Environmental Management Plan) of the EIA Report (July 2021) will be undertaken.

Construction

8.1.2 There have been no changes to the historic environment baseline within the Site boundary since the production of the EIA Report (July 2021) and no significant residual construction effects were predicted therein.

8.1.3 The removal of Turbine 10 and Turbine 20 and associated access track would not change the predicted negligible, and not significant, level of effect on the remains of boundaries/fence lines at Assets 51 and 52 (see Chapter 12, Section 12.7 of the EIA Report (July 2021)) as there are no proposed changes to the Proposed Development where these impacts would occur.

8.1.4 Chapter 12 of the EIA Report (July 2021) noted that there was some potential for hitherto unknown buried archaeological remains to survive on Site. The removal of two turbines and an associated portion of access track would result in the amount of ground breaking within the Site being reduced, and thus the potential for impacting upon any surviving buried archaeological remains would also be somewhat reduced. Mitigation measures set out in Chapter 12, Section 12.8 and Technical Appendix 3.1 of the EIA Report (July 2021) would allow for the identification of any such remains and allow for impacts upon them to be avoided or allow for them to be suitably recorded prior to removal. As such no significant residual direct effects are anticipated during construction. Therefore, there is no material change to the conclusion of Chapter 12 of the EIA Report (July 2021) where construction effects are concerned.

Operation

8.1.5 Direct effects upon any previously unknown archaeological remains which may be present on the Site would cease with the completion of the groundworks stage of construction and there would be no direct effects during the operational phase of the Proposed Development. This is unchanged from the conclusion of Chapter 12 of the EIA Report (July 2021) where direct effects are concerned.

8.1.6 Operational effects include the potential for impacts upon the setting of designated heritage assets within the 5km and 10km study areas set out in Chapter 12 of the EIA Report (July 2021). All designated heritage assets within the study areas and within the ZTV were subject to detailed assessment (see Table 12.7 in Chapter 12 of the EIA Report (July 2021)). All have been re-assessed as part of this assessment in light of the Revised Layout.

8.1.7 Examination of the revised ZTV for this assessment has found that Invershin Farm, settlement and burnt mound (Asset 21) and Creag Innse Chomhraig, hut circles (Asset 41) will now lie outwith the ZTV and no turbines will be visible from them. Chapter 12 of the EIA Report (July 2021) predicted negligible, and not significant, level effects upon the setting of these assets. Based on the Revised Layout, there would be no effects on the setting of these assets.

- 8.1.8 For many of the other designated assets brought forward for assessment (see Table 12.7 in Chapter 12 of the EIA Report (July 2021)) there would be a reduction in the number of turbines visible from them. However, the reduction would not be such that it would reduce the magnitude of impact or levels of effect predicted in Chapter 12 of the EIA Report (July 2021). This is also true for the moderate and significant effects predicted for Dail Langwell, broch (Asset 45); as whilst the number of turbines visible would be reduced by two, Turbine 10 would have been located behind other turbines, and Turbine 20 would only have been visible as an extreme blade tip. As such their removal would not change the level of effect.

Additional Mitigation

- 8.1.9 Mitigation proposals as outlined in Chapter 12, Section 12.8 and Technical Appendix 3.1 of the EIA Report (July 2021) remain valid and no additional mitigation measures are proposed.

Assessment of Cumulative Effects

- 8.1.10 The cumulative effects identified in Chapter 12, Section 12.10 of the EIA Report (July 2021) remain valid when considering the proposed removal of Turbine 10 and Turbine 20. There would be no change in the levels of cumulative effect predicted as a result of the removal of these turbines.

Comparison of Effects

- 8.1.11 The removal of Turbine 10 and Turbine 20, and an associated portion of access track, would result in less ground breaking within the Site. Two assets (Assets 21 and 41) would no longer be intervisible with the Proposed Development and as such there would be no impact upon their settings. Overall there would be a reduction in the number of turbines visible from assets considered under operational and cumulative effects in Chapter 12 of the EIA Report (July 2021). However, that reduction is not such that there would be a material change to the magnitude of impact and levels of effect as predicted in Chapter 12 of the EIA Report (July 2021). A moderate and significant operational effect upon the setting of Dail Langwell, broch (Asset 45) would remain.

9. Traffic and Transport

- 9.1.1 The removal of two turbines (Turbine 10 and 20) and associated infrastructure of the Revised Layout would result in a slight decrease in construction phase traffic, in comparison to the Proposed Development assessed within Chapter 13 of the EIA Report (July 2021). This slight decrease will not materially change the Roads and Traffic Impact Assessment as assessed in Chapter 13 of the EIA Report (July 2021). No update to this assessment is therefore considered necessary.

10. Socio-economics, Recreation and Tourism

- 10.1.1 The Socio-economics, Recreation and Tourism Chapter (Chapter 14) of the EIA Report (July 2021) established a baseline for the site and assessed in detail the potential for likely significant effects on socio-economic, tourism and recreation receptors resulting from the construction and operation of the 20 turbine Proposed Development.
- 10.1.2 This assessment considers any changes to the significance of impacts assessed in Chapter 14 of the EIA Report (July 2021) as a result of the proposed changes associated with the Revised Layout. This includes a reduction of two turbines (from 20 turbines to 18 turbines), adjusting the estimated MW output from 80MW to 76MW, and increasing the construction value from £80 million to £96 million.
- 10.1.3 It should be noted that although the total number of Wind Turbine Generators (WTGs) has reduced by two, the cost of WTGs has increased over the period from submission of the EIA Report (July 2021).
- 10.1.4 The figures for the 18 turbine Revised Layout were derived using the same methodology as presented in Chapter 14 of the EIA Report (July 2021). Table 10.1 summarises the changes from the 20 turbine Proposed Development to the 18 turbine Revised Layout.

Table 10.1: Summary of Changes

Construction	20 Turbines		18 Turbines		% Change	
	Highland	Scotland	Highland	Scotland	Highland	Scotland
Capital Expenditure	9.60	28.80	11.76	35.28	+23%	+23%
Job Years	104.42	368.51	127.94	451.42	+23%	+22%
GVA (£ million)	5.91	22.18	7.25	27.17	+23%	+22%
Total Wages (£ million)	1.29	6.73	1.58	8.24	+22%	+22%
Operation	20 Turbines		18 Turbines		% Change	
	Highland	Scotland	Highland	Scotland	Highland	Scotland
FTE	25.22	48.41	23.59	45.99	-6%	-5%
GVA (£ million)	1.43	2.15	1.35	2.04	-6%	-5%
Total Wages (£ million)	0.32	0.94	0.31	0.89	-3%	-5%
50-year Operation	20 Turbines		18 Turbines		% Change	
	Highland	Scotland	Highland	Scotland	Highland	Scotland
FTE	1,261	2,420.4	1,197.5	2,299.5	-5%	-5%
GVA (£ million)	71.5	107.4	67.5	102.0	-6%	-5%

- 10.1.5 The changes do not affect the significance of the effects predicted in Chapter 14 of the EIA Report (July 2021). The construction related impacts are in fact around 22% to 23% higher, suggesting greater economic (in GVA and jobs) effects as a result of the increased capital expenditure. The maximum reduction in magnitude of any operational impact is 6%. For the operational impacts, these small reductions in the magnitude of impact will not change that assessment of significance.
- 10.1.6 As noted previously, the construction impacts have increased because of the increased cost in procuring WTGs since the submission of the EIA Report (July 2021). The operational impacts have reduced slightly as result of fewer WTGs and a lower estimated output.
- 10.1.7 Tourism and recreation impact, which were assessed as negligible and not significant in Chapter 14 of the EIA Report (July 2021), remain so.

11. Noise

- 11.1.1 Chapter 15: Noise, of the EIA Report (July 2021) concluded that the operation of the 20 Turbine Proposed Development would not result in any residual significant effects in terms of noise. The removal of two turbines is predicted to reduce the overall noise associated with the 18 Turbine Proposed Development, and as such the conclusions of Chapter 15 of the EIA Report (July 2021) remain unchanged.
- 11.1.2 Predicted cumulative noise remains below total ETSU-R-97 limits² as detailed in Chapter 15 of the EIA Report (July 2021).
- 11.1.3 The previously adopted and agreed limit of 35dB, $L_{A90,10min}$ at the closest Noise Sensitive Receptors (NSR's) would ensure noise is suitably controlled at all NSRs, within the vicinity of the Proposed Development. This remains the case with the removal of two turbines.

12. Aviation

- 12.1.1 Chapter 16: Aviation, of the EIA Report (July 2021) concluded that the operation of the 20 Turbine Proposed Development would not result in any significant residual effects on military or civil aviation interests. The removal of 2 turbines is predicted to reduce the overall potential for effect, and as such the conclusions of Chapter 16 of the EIA Report (July 2021) remain unchanged.

13. Other Issues

- 13.1.1 Chapter 17: Other Issues, of the EIA Report (July 2021), considered the potential for the Proposed Development to result in effects on telecommunications, TV, radio links, shadow flicker, ice throw, air quality, climate change¹, population and human health, and risk of major accidents or disasters. No significant effects were predicted. The removal of two turbines and associated infrastructure (the Revised Layout), would not result in a change to these assessment findings.

¹ As noted in Chapter 7 of this report, a revised Carbon Calculator has been submitted for the Revised Layout showing that the removal of two turbines does not alter the overall carbon payback time. The Carbon Calculator document reference number is: UIRC-LUK8-7CN3.

14. Schedule of Mitigation

- 14.1.1 The Schedule of Mitigation remains unchanged from Chapter 18: Schedule of Mitigation of the EIA Report (July 2021).