6. Socio-Economics, Tourism and Recreation, and Land Use 1

6. Socio-Economics, Tourism and Recreation, and Land Use

6.1. Non-Technical Summary

6.1.1. In terms of Socio-Economics, the potential effects on population, health, employment and economy, tourism and recreation and land use as a result of the proposed variation to the Limekiln Wind Farm Section 36C variation application (hereafter referred to as the 'Revised Consented Development') have been considered.

6.1.2. It is estimated that the capital cost of constructing the proposed variation to the Consented Development could equate to investment estimated to be up to between £103m and £158.7m. During the construction phase, the Revised Consented Development could directly support up to 137.7 Full Time Equivalent (FTE) local jobs, and up to 413.9 FTE jobs within Scotland for the duration of the construction phase (about 18 months). During its operational phase, employment related to operations and maintenance for the Revised Consented Development could directly support up to 93.4 FTE jobs, of which up to 39.3 FTE jobs could be local and up to 54.1 FTE jobs would be likely to be within Scotland. Other employment is likely to be supported or generated through induced and indirect economic and employment effects throughout all phases of the Revised Consented Development. Details of how the figures stated above have been calculated are set out in Chapter 6 (Socio-Economics) of the EIA Report.

6.1.3. The construction, operational and decommissioning effects as a result of the Revised Consented Development, whether individually or cumulatively, are not predicted to result in significant effects in an EIA context on land use, tourism, or recreational receptors. During construction and decommissioning, public access within the Revised Consented Development would be subject to short term temporary restrictions (e.g., for health and safety reasons), however once operational, there would be no significant effects.

6.1.4. In addition to the economic benefits during the construction, operation and decommissioning phases, the proposed community benefit fund and shared/community ownership of the Revised Consented Development would result in significant local level benefit. The Revised Consented Development would make an annual payment of £5,000 (index-linked) per MW over the life time of the project Furthermore, 10% of the Revised Consented Development would be open to community/shared ownership investment. For the 88.2MW scheme this would mean an annual payment of over £441,000 per annum for the local community to invest in local projects and priorities, which would equate to £17.6M during the 40-year operational period.

6.1.5. There are no significant effects predicted in an EIA context for population, health or tourism and recreation from the construction, operation, and decommissioning phases of the Revised Consented Development.

6.2. Introduction

6.2.1. This chapter of the EIA Report assesses the likely significant effects of the Revised Consented Development with respect to Socio-Economics, Land Use, Tourism and Recreation. The Revised Consented Development is now up to 21 turbines with a likely installed capacity of 4.2MW each, meaning 88.2MW in total.

6.2.2. The chapter should be read in conjunction with the development description provided in **Chapter 4 (Project Description)** and with respect to relevant parts of other chapters, **Chapter 9: Landscape and Visual Impact**, **Chapter 10 (Cultural Heritage)**, **Chapter 11 (Ecology)**, and **Chapter 13 (Hydrology and Hydrogeology)** where common receptors have been considered and where there is an overlap or relationship between the assessments of effects.

6.2.3. This chapter describes the assessment methodology that has been adopted, the overall baseline conditions taking account of the baseline information previously set out in the 2012 and 2016 Environmental Statements (See **Appendix 6.A** for Consented Development 2016 Chapter 6 - Socio Economics). An assessment of the effects of the Revised Consented Development is then presented, followed by details of the mitigation measures required to avoid, minimise, or compensate for any significant adverse effects identified. The chapter concludes with a summary of residual effects and an evaluation of their significance following the incorporation of any identified mitigation measures.

6.2.4. The Revised Consented Development may result in socio-economic effects at the regional level (Highland Council), for example, in relation to economic development, and also at the local level (Revised Consented Development and Ward level), principally affecting those who live in or visit the surrounding area. The potential effects resulting from the construction/decommissioning and operation of the Revised Consented Development are:

- Direct effects on economic activity during operation (e.g., business rates payable by the wind farm operator);
- Indirect and induced effects on economic activity at a regional and local level (e.g., supply chain, land rental, multiplier effects, economic stimulus generated from the expenditure of additional employment income) during construction and to a lesser extent, decommissioning;
- Direct effects on employment levels (e.g., construction workers) during construction, and to a lesser extent, operation and then decommissioning;
- Direct effects on land use within the Revised Consented Development (e.g., loss of agricultural land, core paths) during construction, operation and decommissioning; and
- Indirect effects on recreational use and tourism related business during construction, operation, and decommissioning.

6.2.5. It is also pertinent to note that from a socio-economic context, the Revised Consented Development would contribute to the alleviation of the adverse consequences of climate change, through providing an alternative and renewable source of energy that does not involve the emission of greenhouse gases during operation. Such beneficial effects cannot readily be ascribed to particular individuals or groups, nor the scale of the benefit readily considered other than simply in terms of the amount of power generation and total level of emissions avoided. The contribution of

renewable energy that provides a net supply of power to the electricity distribution system is considered to be a benefit. The Revised Consented Development would similarly make a beneficial contribution to energy security by reducing the dependence on imported fossil fuels. A comparison of the Summary of Conclusions from previous applications is included in **Table 6.1**.

Table 6.1 Summary of Conclusions – Previous Applications

2012 ES (24 Turbine Layout)	2016 ES (24 Turbine Layout)	2017 Supplementary Information (21 Turbine Layout - Consented Development)	2021 Section 36C Application (21 Turbine Layout with amended access tracks – Revised Consented Development)
A slight beneficial effect on the economy in the local area, Highlands and in the wider Scottish Economy during the construction phase and the operational phase. Moderate beneficial economic on tourism businesses during the construction phase and a slight beneficial effect in the Highlands from tourism during the construction phase. Moderate beneficial effect on the local area due to community benefit funding.	A slight beneficial effect on the economy in the local area, Highlands and in the wider Scottish Economy during the construction phase and the operational phase. Moderate beneficial economic on tourism businesses during the construction phase and a slight beneficial effect in the Highlands from tourism during the construction phase. Moderate beneficial effect on the local area due to community benefit funding.	The reduced number of turbines and associated reduction in crane pad and access track generally reduces the level of impact overall. Consideration has been given to the cumulative impact resulting from the proposed Drum Hollistan Wind Farm and it is not found to result in any significant cumulative effects. The conclusion reached within Chapter 6: Socio-economics of the 2016 EIA Report, that there would be no significant adverse or beneficial effects, therefore remained valid following the amendment of the Original Layout.	Significant beneficial economic effect at a Council ward level during construction and as a result of the community benefit fund (during operation). Residual economic effects during operation and decommissioning would be beneficial, but not significant at a regional and national level. The Revised Consented Development would not result in any adverse significant effects on identified tourism receptors or on receptors (on top of those identified in the landscape and visual impact assessment) or on land use. There would not be any significant residual effects on population or health. The proposed community benefit fund and shared/community ownership of the Revised Consented Development would result in significant local level benefit.

6.2.6.

6.3. Legislation, Policy and Guidance

Legislative Context

6.3.1. The Revised Consented Development is being submitted to the Scottish Government for consideration under Section 36C of the Electricity Act 1989 (as amended) given that it would have a generating capacity in excess of 50MW.

Climate Change Context

6.3.2. **Chapter 8 (Climate Change and Carbon Balance)** sets out renewable energy policy and climate change context, including the international, national and Scotland context and targets.

Planning Policy Context

6.3.3. **Chapter 5 (Policy Context)** sets out the planning policy context for the Revised Consented Development. This is largely the same as that set out in the 2016 Environmental Statement, and the 2017 Supplementary Information. The main difference is that the Scottish Government have started work on National Planning Framework (NPF) 4, which once adopted, will replace NPF3. A summary of the current progress on NPF4 is set out below.

Technical Guidance

6.3.4. There are no specific guidelines or requirements for socio-economic assessment either set out by the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 or in any other statutory or advisory guidance regarding the preparation of EIAs.

6.4. Assessment Methodology and Significance Criteria

Scoping Response and Consultation

6.4.1. Throughout the scoping process, and subsequently during the ongoing EIA process, relevant organisations were contacted with regards to the Revised Consented Development. **Table 6.2** outlines the consultation responses received in relation to socio-economics, tourism and recreation and land-use.

Table 6.2Scoping Response

Consultee	Issues Raised	Response	Where Addressed in This Chapter
The Highland Council	Socio-Economic, Recreation and Tourism: The EIAR should estimate who may be affected by the development, in all or in part, which may require individual households to be identified, local communities or a wider socio economic groupings such as tourists and tourist related businesses, recreational groups, economically active, etc. The application should include relevant economic information connected with the project, including the potential number of jobs, and economic activity associated with the procurement, construction, operation and decommissioning of the development.	Comments noted.	These points are addressed throughout this chapter.
	Estimations of who may be affected by the development, in all or in part, which may require individual households to be identified, local communities or a wider socio economic groupings such as tourists and tourist related businesses, recreational groups, economically active, etc should be included. The application should include relevant economic information connected with the project, including the potential number of jobs, and economic activity associated with the procurement, construction, operation and decommissioning of the development. In this regard wind farm development experience in this location should be used to help set the basis of likely impact. This should set out the impact on the regional and local economy, not just the national economy. Any mitigation proposed should also address impacts on the regional and local economy.	Comments noted.	These points are addressed throughout this chapter.
	The site is on land with access rights provided by the Land Reform Scotland Act. The potential impact on and mitigation for public access should be assessed incorporating core paths, public rights of way, long distance routes, other paths, and wider access rights across the site. There are core paths and public rights of way in	Comments noted.	Effects on public access are assessed in **section 6.9.23**

Consultee	Issues Raised	Response	Where Addressed in This Chapter
	this area which are likely to be affected during the construction and operational phases. Other forms of mitigation will include the accommodation and management of public access across the site in order to minimise any potential negative impacts and maximise benefits to outdoor access. For example, all existing paths like core paths, public rights of way Long Distance Routes and trails like the North Coast 500 and National Cycle Network should be accommodated before, during and after construction and any damage done to their surfaces be protected and/or repaired at regular intervals throughout an extended construction period and reinstated on or by completion of the project to the satisfaction of those managing those routes. The application should be accompanied by an Access Management Plan and consider the requirement for any stopping up orders.	Comments noted. Comments noted.	Direct effects on public access are assessed in **section 6.9.23** The Applicant would be agreeable to accepting a condition of any consent granted to produce an Access Management Plan.

Study Area

6.4.2. The Study Area for tourism and recreation relates to the area within the zone of theoretical visibility (ZTV) considered in **Chapter 9: Landscape and Visual Impact Assessment,** with the population and economic baseline focused on the Thurso and Northwest Caithness ward within which the Site is situated and for The Highlands as a whole. For health, the study area was The Highlands as a whole. For economy and employment, the Study Area included the Speyside Glenlivet ward, The Highlands as a whole and, where relevant, at a national level for Scotland.

6.4.3. The data sources that have been used in the preparation of this socio-economic assessment are referenced in the acronyms & references section at the end of this chapter.

Desk Study

6.4.4. Socio-economic baseline information was set out in the 2012 and 2016 Environmental Statements and is not reproduced here (see **Appendix 6.A**). Where any updates have been made to the baseline information, the assessment uses standard socio-economic and demographic data from publicly available datasets. Updated information on the renewable energy industry and population has been set out in this assessment.

Assessment Limitations

6.4.5. No site-specific survey work has been undertaken by the Applicant for this socio-economic assessment.

Assessment Methodology and Significance Criteria

6.4.6. This socio-economic assessment takes account of generic project-wide approach to the assessment methodology set out in **Chapter 3 (Approach to Preparing the Environmental Impact Assessment Report)** and then follows the approach set out in the Scoping Report submitted on 9th March 2021 (**Appendix 3.A**) and conforms with the subsequent Scoping Opinion issued by Scottish Ministers (11th May 2021) (**Appendix 3.B**). In doing so, it takes into consideration associated consultation responses from statutory and other consultees.

6.4.7. The Revised Consented Development has the potential to generate a range of socio-economic effects (including effects on tourism, recreational and economic). The method adopted for this assessment draws on publicly available information and is based upon the approach set out in Morris and Therivel[i] (2009). This is:

- Establishing the baseline to determine the existing socio-economic characteristics of the site and its surrounding area (receptors);
- Defining receptor sensitivity to wind farm development where possible;
- Identifying the potential change that the receptor would experience as a result of a Revised Consented Development, with consideration given to its magnitude, temporal scope (e.g., short/long term, temporary/permanent) and valency (i.e., adverse/beneficial);
- Identifying the significance of potential socio-economic effects;
- Identifying mitigation measures where significant adverse effects are predicted; and

- Identifying any residual effects after mitigation.

6.4.8. Predicted economic and employment effects can be quantified using the guidance set out in a report by O'Herlihy and Co Ltd (2006)[ii] to Scottish Enterprise and a separate report by Renewable UK (2015)[iii]. This includes consideration of effects during construction, operation, and decommissioning. This guidance has been used together with updated datasets, though recognising that the geographic distribution of economic effects is project specific.

6.4.9. The guidance used to assess effects on recreational activities (including public outdoor access) accords with guidance contained within Appendix 5 of 'A handbook on environmental impact assessment'[iv] (SNH, 2014). In particular, the assessment of potential impacts on physical access considers any changes to existing access arrangements during the construction, operation, and decommissioning phases of the Revised Consented Development.

6.4.10. The tourism assessment component of this chapter follows the standards set out in the recommendations of the Moffat Report[v] (2008) and the assessment of predicted effects on leisure and tourism receptors takes account of the findings detailed in **Chapter 9 (Landscape and Visual)**, and **Chapter 10 (Cultural Heritage)**.

Assessment of Significance

6.4.11. Where possible, guidance has been used to establish the potential effects of the Revised Consented Development. Where there is no prescribed guidance, professional judgement based on previous experience of wind farm development has been used. **Table 6.3** below sets out the matrix for identifying significant effects. Major effects are significant in EIA terms, moderate effects are probably significant in EIA terms and minor / negligible effects are not significant in EIA terms. The criteria used to determine sensitivity and magnitude of change are set out below **Table 6.3**.

Table 6.3 Significance Evaluation Matrix

		Magnitude of Change			
		Very High	High	Medium	Low
Sensitivity/Importance/Value	**Very High**	Major (**significant**)	Major (**significant**)	Moderate (Probably significant)	Minor (Not significant)
	High	Major (**significant**)	Major (**significant**)	Moderate (Probably significant)	Minor (Not significant)
	Medium	Major (**significant**)	Major (**significant**)	Moderate (Probably significant)	Minor (Not significant)
	Low	Moderate (Probably significant)	Moderate (Probably significant)	Minor (Not significant)	Negligible (Not significant)

Employment Impacts

6.4.12. The employment impacts within the Study Area are defined in terms of Full Time Equivalent (FTE) jobs[vi] associated with predicted capital expenditure. The assessment has therefore focussed on the following impact categories:

- Direct economic impacts: jobs and capital spend that are wholly or largely related to construction, decommissioning, and operation and maintenance of a development;
- Indirect economic impacts (positive and negative): jobs and capital spend generated in the economy of the Study Area in the chain of suppliers of goods and services to the direct activities;
- Induced economic impacts: jobs and capital spend created by direct and indirect employees' spending in the Study Area or in the wider economy; and
- Wider economic (catalytic) impacts (positive and negative): employment and income generated in the economy related to the construction and operation of the Revised Consented Development. This includes the effects on inward investment, elsewhere within the construction sector (e.g., as a result of worker supply) and on other sectors of the economy.

6.4.13. For employment effects, the availability of labour and skills is critical in accommodating the demands, needs and requirements of the Revised Consented Development. Adequate labour and skills capacity results in a low sensitivity, while limited labour and skills capacity results in a high sensitivity. For the economy the sensitivity is determined by the resilience or otherwise of the economy and land use by the number of land uses on the Revised Consented Development. Sensitivity criteria in terms of employment, economy and land use are shown in **Table 6.4** below.

Table 6.4 Employment, Economy, and Land Use Sensitivity

Sensitivity	Definition
Very High	Employment – Where there is the requirement for very technical specialist input, which is difficult to source at a national level and/or there is very low labour or skills at a local level. Economy – Where the economy is very sensitive to financial change. Land Use – Where the site has many (more than 10) different land use types (i.e., agriculture, fishing, recreation, residential, employment).
High	Employment -– Where there is some requirement for technical specialist input, which is difficult to source at a national level and /, or where there is limited labour or skills available at the local level. Ward of Thurso and Northwest Caithness. Economy – Where the economy is sensitive to financial change. Land Use – Where the Revised Consented Development has multiple (7-10) different land use types.
Medium	Employment – Where there is limited requirement for very technical specialist input, which is difficult to source at a national level, and /or where there are some constraints to the availability of labour or skills at the local level. Economy – Where the economy is resilient to change. Land Use – Where the site has several (5-7) different land use types.
Low	Employment -– Where there no requirement for technical specialist input, and / or where there is a readily available labour force and skills. Economy – Where the economy is very resilient to financial change

Sensitivity	Definition
	Land Use – Where the site has few (less than 5) different land uses.

6.4.14. The magnitude of potential changes on socio-economic receptors will be assessed as defined in **Tables 6.5**, **6.7** and **6.9** below. In the case of economy, employment, and land use effects, this is based on participants within the labour force; the level of occupational skills available, the resilience of the economy in the Study Area and the number of land uses on the site as set out in **Table 6.4** above.

Table 6.5 Employment, Economy, and Land Use Magnitude of Change

Magnitude of Change	Definition
Very High	Changes as a result of the Revised Consented Development are of national scale.
High	Changes as a result of the Revised Consented Development that are of greater than local scale or which exceeds recognised standards.
Medium	Noticeable changes as a result of the Revised Consented Development.
Low	Slight changes as a result of the Revised Consented Development that may not be perceptible or are within the normal seasonal/annual variation range.

Health

6.4.15. During the construction of the Revised Consented Development there would be a sizeable influx of construction workers into the area surrounding the site. This could put pressure on health services and facilities in the area surrounding the site. There could also be other health impacts from the Revised Consented Development during operation, from other issues including noise, shadow flicker, blade breakage and accidents. The main factors considered relevant when defining the sensitivity of receptors relating to health are outlined in **Table 6.6** below.

Table 6.6 Health Sensitivity

Sensitivity	Definition
Very High	Where health facilities are at capacity.
High	Where there is a low / limited availability of health facilities.
Medium	Where there is a constrained availability of health facilities.
Low	Where there are readily available health facilities.

6.4.16. The magnitude of change is gauged by estimating the level of change on the receptor as a result of Revised Consented Development. The magnitude of change is evaluated in line with the criteria below in **Table 6.7** below.

Table 6.7 Health Magnitude of Change

Magnitude of Change	Definition
Very High	Changes as a result of the Revised Consented Development are of national scale.
High	Changes as a result of the Revised Consented Development that are of greater than local scale or which exceeds recognised standards.

Medium	Noticeable changes at a local scale as a result of the Revised Consented Development.
Low	Slight changes as a result of the Revised Consented Development that may not be perceptible or are within the normal seasonal/annual variation range

Tourism and Recreation

6.4.17. Tourism and recreational behaviour would only be detrimentally affected where the Revised Consented Development either changes the visitor/user pattern in terms of numbers, and /or their patterns of expenditure for the worse. As such, opportunities for tourist and visitor expenditure, any potential variation in expenditure or visitor numbers, and consequent effects on turnover or employment are of key importance.

6.4.18. Recreational behaviour would be affected where a development potentially leads to a change in recreational habits or activities. Factors which might lead to change in recreational behaviour include loss, closure, or diversion of access routes; obstructing access routes; enhancing access; reduction in amenity or intrusion; enhancement in amenity; and changes in setting and context of the recreational resource[vii].

6.4.19. The potential effect on recreational users is likely to be a factor of the proximity of the site, the resource in terms of usage and the type of resource, the visibility of the Revised Consented Development, and any diversion of recreational routes due to its presence.

6.4.20. The main factors considered relevant when defining the sensitivity of receptors relating to recreation and tourism are outlined in **Table 6.8** below.

Table 6.8 Tourism and Recreation Sensitivity

Sensitivity	Definition
Very High	Where the receptor or resource is defined as being of National status or has high visitor numbers (in excess of 50,000 visitors or more per annum).
High	Where the receptor or resource is defined as being National status or has high visitor numbers (in excess of 25,000 visitors or more per annum and up to 49,999).
Medium	Where the receptor or resource is defined as being of regional status or has medium visitors' numbers (10,000-24,999 visitors per annum).
Low	Where the receptor or resource is defined as being of local status or low visitor numbers (less than 10,000 visitors per annum).

6.4.21. The magnitude of change is gauged by estimating the level of change on the receptor as a result of Revised Consented Development. The magnitude of change is evaluated in line with the criteria below in **Table 6.9** below.

Table 6.9 Tourism and Recreation Magnitude of Change

Magnitude of Change	Definition
Very High	Where the extent of changes on receptors (activities, resources, or businesses) is very large scale and a very large number of people and or activities would be affected.

High	Where the extent of changes on receptors (activities, resources, or businesses) is large scale and a large number of people or activities would be affected.
Medium	Where the extent of changes on receptors is small in scale, but a large number of people or activities would be affected; or alternatively where the extent of changes on activities, resources and/or businesses is large in scale but only a small number of people or activities would be affected.
Low	Where the extent of changes on receptors is small in scale and would only affect a small number of people or activities; or where the site would be unlikely to be visible (as it would be obscured by topography or woodland, etc) or would be at a considerable distance from receptors.

6.4.22. In line with standard EIA practice, and taking into account professional judgement, the sensitivity of receptors, as defined in **Table 6.4, Table 6.6 and Table 6.8**, are generally considered against the magnitude of change (**Table 6.5, Table 6.7,** and **Table 6.9**) to determine the significance of resultant effects as set out in **Table 6.3** above. In the case of the injection of money into the economy resulting from the capital investment however, the assessment of significance is effectively based on the magnitude of change in monetary terms, with a large magnitude of change being considered to result in a significant effect.

6.4.23. Based on the approach summarised in **Table 6.3** above, effects that would result in a change identified as major or moderate are considered to be significant in terms of the EIA Regulations and this assessment.

6.4.24. With regards to sensitivity and taking account of the tables above, the ward level is generally considered to be of high sensitivity to change – Thurso and Northwest Caithness ward covers a small geographical area and therefore any changes would be very noticeable and would be likely to have a large effect. The regional level is considered to be of medium sensitivity to change – The Highlands covers a larger geographical area than a ward, so any changes would be less noticeable and therefore it is considered to be of lower sensitivity to change than the ward level. At the national level, Scotland as a whole is considered to be of Low sensitivity to change – it covers a larger geographical area again, and any changes would generally be less noticeable and therefore it is considered to be of lower sensitivity to change than the ward of Thurso and Northwest Caithness and The Highlands.

6.5. Baseline Conditions

6.5.1. Baseline information was set out previously in the 2012 and 2016 Environmental Statements and is not reproduced here. Where any updated baseline information has been identified, this is presented below.

Renewable Energy Industry

Manufacturing & Supply Chain

6.5.2. There was a large-scale wind turbine manufacturing plant located at Machrihanish near Campbeltown. The Wind Towers (Scotland) Ltd facility at Machrihanish employed approximately 130 workers. This was taken over by South Korean firm CS Wind, and the site at Machrihanish is now mothballed.

Population

6.5.3. In 2019, the population of the Highlands stood at 235,800[viii]. Of the population aged 16-64 there were slightly fewer males (71,000) than females (72,700).

6.5.4. The most recent population projections for the Highlands show that if current trends continue, the population is expected to rise to 255,835 in 2035 which is a 15% increase from the population in 2010. **Table 6.10** below shows the projected population increase up to 2037 which projects that there would be a higher increase in the male population compared to the female population, with a total overall increase in the population of 8.6%.

Table 6.10 The Highlands Predicted Population Increase to 2037

Gender	2012	2022	2037	% Change 2012 to 2037
Males	114,030	119,836	124,063	9.3
Females	118,880	123,923	128,272	7.9
Total	232,910	243,758	252,875	8.6

6.5.5. Population data at the ward level is available from Scottish Neighbourhood Statistics. The site is located within the Thurso and Northwest Caithness ward. The population of this ward in 2018 was 12,531[ix], a decrease from the population of 12,840 at the time of the 2011 census.

Tourism and Recreation

Tourism Receptors

6.5.6. **Chapter 9 (Landscape and Visual)** has not identified any tourism receptors with potential to be significantly affected by the Revised Consented Development.

Recreation

Recreational Routes

6.5.7. **Chapter 9 (Landscape and Visual)** has considered the following recreational routes within 40km of the site that are overlapped by the blade tip zone of theoretical visibility (ZTV) for the Landscape and Visual assessment study area with potential to be significantly affected by the Revised Consented Development:

- National Cycle Route 1; and
- North Coast 500.

Core Paths

6.5.8. **Chapter 9 (Landscape and Visual)** has identified a number of core paths within 40km of the site that are overlapped by the blade tip zone of theoretical visibility (ZTV) for the Landscape and Visual assessment study area with potential to be significantly affected by the Revised Consented Development:

- Core Path CA11.02 Achvarasdal Woodland;
- Core Path CA11.03 Limekiln Forest;
- Core Path CA11.04 Sandside Head;

- Core Path CA11.05 Achins/ Helshetter/ CA11.09 Borlum Circuit;
- Core Path CA11.06 Reay Roadside Link;
- Core Path CA11.07 Reay Golf Course via St Mary's Cottage;
- Core Path CA11.08 Reay Golf Course via Clubhouse;
- Core Path CA11.09 – Borlum Circuit; and
- Core Path CA11.10 - Achvarasdal East Drive.

6.6. Future Baseline

6.6.1. Taking account of the baseline information set out in the previous Environmental Statements and the additional information acquired for this assessment, there is no indication that the baseline is in the process of any significant transitions and would be expected to remain largely as described above, without the Revised Consented Development taking place.

6.6.2. However, in April 2019 the Scottish Government declared a climate change emergency, which instigated a commitment to enforcing stronger climate change proposals and targets whilst delivering support to the transition to a low carbon economy. Scotland has also set a legally binding net zero targets of all greenhouse gases by 2045. The future baseline with respect to climate change and addressing the climate emergency would therefore be different from today.

6.7. Design Evolution

6.7.1. As detailed within **Chapter 3 (Approach to Preparing the Environmental Impact Assessment Report)**, the design of the Revised Consented Development has fully taken account of all known technical and environmental constraints within the site and has sought to minimise predicted landscape and visual effects (see **Chapter 9 Landscape and Visual**).

6.7.2. Given that adverse visual effects have the potential to result in adverse effects on the attractiveness or tourism potential of some receptors, and that the scale of the Revised Consented Development largely determines predicted economic and employment effects, the design process has indirectly taken account of potential socio-economic, tourism and recreation effects.

6.8. Scope of the Assessment

6.8.1. The scope of the proposed assessment is cognisant of The Electricity Works (Environmental Impact Assessment) (Scotland) Amendment Regulations December 2017 which make it clear that for a variation application relating to an EIA development, further assessment required to inform the application should only consider the impacts of the proposed variation itself and how those differ from those previously identified in the relevant EIA report or ES.

Spatial Scope

6.8.2. The spatial scope of this assessment covers the site, together with the surrounding area as described under the 'Study Area' in **Section 6.4.2**.

Temporal Scope

6.8.3. The temporal scope of this assessment is consistent with the period over which the Revised Consented Development would be carried out and therefore covers the construction and operational periods which would be approximately 18 months and 40 years respectively. Decommissioning is also considered, although this would only take place at the end of the 40-year operating period, unless an extension to the operating period was subsequently granted.

Potential Receptors

6.8.4. The scope of assessment set out in the Scoping Report focused on considering the effects of the Revised Consented Development on employment and the economy. This includes the employment opportunities for local suppliers with relevant construction and maintenance experience during the construction and operational phases of the Revised Consented Development.

6.8.5. With regards to tourism and recreation the Scoping Report set out that if the conclusions of the landscape and visual (see **Chapter 9, Landscape and Visual**) and cultural heritage (see **Chapter 10 Cultural Heritage**) assessments suggest that the Revised Consented Development would result in a significant increase in the magnitude of change experienced by tourism and recreation receptors, further socio-economic assessment relating to these receptors would be undertaken.

6.8.6. Consideration has also been given to the health effects of the Revised Consented Development.

6.8.7. The following areas have been scoped out of the socio-economic, tourism and recreational assessment in this chapter, either during the scoping stage or through the EIA process:

- Effects on the amenity of local residents and the local community due to **Traffic (Chapter 7)**, **Noise (Chapter 8)**, and **Landscape and Visual Impact (Chapter 9)** as these are considered in the relevant EIA Report chapter as noted;
- Demographic effects due to the relatively short construction period (approximately 18 months). As any local demographic changes would be temporary, and potentially very limited assuming some construction work is undertaken by local employees, it is predicted that there would be no discernible effects at local, regional and national levels;
- Health effects during the operation of the Revised Consented Development as this would only involve occasional maintenance visits from workers, with no groundworks anticipated (that could generate dust for example). The reduction in greenhouse gas emissions as a result of energy being generated by a renewable resource, which is generally considered to result in beneficial effects on health, is considered in **Chapter 8 Climate Change and Carbon Balance**;
- The only tourism and recreational receptors considered and assessed in the chapter are those for which **Chapter 9 (Landscape and Visual) and Chapter 10 (Cultural Heritage)** have identified significant adverse effects;
- Effects on tourism during the construction period (approximately 18 months) – significant effects are unlikely given the temporary nature of this activity and the fact that much of the construction work (excluding the short term turbine erection which is considered as part of the operational effect) would only be visible from within the site boundary or relatively close to it;

- Effects on public access. There would be a minor improvement in relation to public access as it is no longer intended to close Core Path CA11.03 Limekiln Forest for use as the main access track. All other effects on public are scoped out on the basis that the turbine locations would remain the same as those for the Consented Development and therefore there would be no additional effects on land use beyond those previously considered; and
- Effects on land use. There would be a minor improvement in relation to public access as it is no longer intended to close Core Path CA11.03 Limekiln Forest for use as the main access track. All other effects on land use are scoped out on the basis that the turbine locations would remain the same as those for the Consented Development and therefore there would be no additional effects on land use beyond those previously considered.

6.8.8. Sections **6.9.2** – **6.9.25** describe the potential effects on the economy, employment and industry, health, tourism, and recreation that could arise as a result of the construction, operation and decommissioning of the Revised Consented Development. Cumulative effects that could occur are discussed in Section **6.10**.

6.8.9. Mitigation and enhancement measures are described in Section **6.11** with residual effects set out in Section **6.12** below.

Likely Significant Effects

6.8.10. It should be noted that the inclusion of effects in Sections **6.9.2-6.9.25** does not imply that residual effects would be significant, only that potential effects have been considered. Furthermore, it is only where a given socio-economic receptor is considered to be of medium, high, or very high sensitivity that detailed assessment is required as, depending on the magnitude of a given effect, it is only for these categories that a significant effect under the EIA Regulations can occur.

6.8.11. The socio-economic receptors that have been taken forward for assessment are summarised as follows:

- Employment and economy;
- Tourism and Recreation;
- Health; and
- Land Use.

6.9. Identification and the Evaluation of Key Effects

6.9.1. The predicted construction, operation, and decommissioning effects of the Revised Consented Development on the socio-economic receptors taken forward in this assessment are considered in further detail in the sections below.

Assessment of Effects: Economic, Employment and Land Use – Construction, Operation and Decommissioning Effects

Predicted Effects and their Significance

6.9.2. As noted in Section **6.4.12**, where effects cannot be quantified, the assessment of significance is undertaken using professional judgement and experience. This is considered to be the case for economic effects resulting from the capital investment

made in constructing, operating, and decommissioning a wind farm where the assessment of significance is effectively based on the magnitude of change in monetary terms. The construction works associated with the Revised Consented Development has the potential to generate a range of economic benefits for local businesses as it is anticipated that a reasonable proportion of the cost of the civil, electrical and grid connection work would be spent in Scotland, and locally in the area of the Highlands surrounding the site.

Economic, Employment and Land Use Effects – Construction and Decommissioning

Economic Effects

6.9.3. **Table 6.11** below sets out the Indicative Construction and Decommissioning Requirements for the Revised Consented Development.

Table 6.11: Indicative Construction and Decommissioning Requirements

Required Services	Details
Accommodation	Workers would require the use of local accommodation.
Local amenities	All workers during the construction period of the Revised Consented Development would require food, drink, and other provisions, bringing trade to the local area.
The Site security	Throughout the construction of the Revised Consented Development and its decommissioning, security workers from the local area would be required to protect assets and ensure compliance with CDM Regulations.
Abnormal Load (turbines) and Crane Haulage	Specialist haulage contractors would be required to deliver turbine components and cranes to the site during the construction period for the Revised Consented Development.
Road construction	New access tracks would be required for the Revised Consented Development. A local supplier may be required for road surfacing.
Balance of Plant construction	Infrastructure including temporary construction compounds and borrow pits would be required for construction of the Revised Consented Development. This work would be undertaken by civil engineering contractors.
Substation detailed design and construction	Specialist contractors would be required to design and construct an extension building for the on-site control building and substation, which would house all electrical and communications equipment for the Revised Consented Development.
Turbine foundation detailed design and construction	The final design of the foundations depends on the ground conditions and exact turbine specifications.
Turbine manufacture	The turbine manufacturer and manufacturing location is still to be confirmed.
Turbine erection	Once transported to the site, all turbines would be erected into position by specialist contractors likely to be available within Scotland.

Required Services	Details
Landscaping	Post construction landscaping works may be undertaken by a local contractor.
Electrical switchgear design & installation	The Revised Consented Development requires the design and on-site installation of complex electrical systems and cabling.
Power transmission design	All electricity transmission cabling would need to be designed by a specialist company.
Fencers	Temporary construction fencing, and any permanent fencing required, may be installed by local contractors.
Fuel supplies and delivery	Machinery used during construction would require fuel supplies provided by a local distributor.
Construction materials supply and delivery	Materials for the construction phase would be sourced from local suppliers where possible including bricks, mortar, cement, concrete, stone, wood, steel, cabling, electricity poles etc.
Sub-contractors	Electrical fitters, carpenters, painters & decorators, plumbers may be required during the construction phase for various tasks.

6.9.4. The Review of the Generation Costs and Deployment Potential of Renewable Energy Technologies in the UK report[x] (DECC, 2011) estimates the total capital cost of a wind farm greater than 5MW constructed in 2015 to be between £1.17m and £1.80m per MW installed. On the basis of twenty one turbines with a power output of 88.2MW, using DECC's figures from 2011, the capital cost of the Revised Consented Development is estimated to be up to between £103m and £158.7m[xi].

6.9.5. The Renewable UK report 2015 found that the weighted average construction cost per MW was £1.32m, with the majority of case study projects spending within 15% of this figure. On this basis, with approximately 88.2MW of installed capacity, the construction phase of the Revised Consented Development (including turbine manufacture) could result in construction expenditure of up to £116m.

6.9.6. The Generation Costs and Deployment Potential of Renewable Energy Technologies in the UK (2011) report[xii], the Renewable UK (RUK) report[xiii] (2015) and the O'Herlihy report (2006) all recognise the importance of the capital spend during construction. The economic impact assessment set out within the O'Herlihy report (2006) splits construction spend by turbine manufacturing and construction and installations costs. The O'Herlihy report (2006) identifies that approximately 65% of the total capital spend for a proposed wind farm relates to the cost of manufacturing wind turbines, with the remaining 35% related to onsite construction (balance of plant) and installation work. The RUK Report (2015) supports this analysis as it calculates that turbine manufacturing accounts for 64.4% of total capital expenditure, balance of plant contracts account for 28.6% and grid connections account for 7.1%.

6.9.7. Using the expenditure distribution profile from the O'Herlihy report (2006) and figures from The Generation Costs and Deployment Potential of Renewable Energy Technologies in the UK (2011) report, the manufacturing of the turbines for the Revised Consented Development could generate capital expenditure of up to £75.4m.

Using the latest available figures from the BiGGAR Report (2015)[xiv], the manufacturing of the turbines could result in capital expenditure of up to approximately £74.7m, the balance of plant construction phase could result in capital expenditure of up to approximately £33.1m and grid connection work could result in capital expenditure of up to approximately £8.2m[xv].

6.9.8. The RUK (2015) report states that 12% of the total construction costs of an onshore wind farm (i.e., including turbine manufacturing, balance of plant and grid connection) are typically spent locally (Highlands), 36% spent in the Region/Nation (Scotland) and 47% spent within the UK. For the Revised Consented Development this results in a range of between £12.4m (12% of £103m) and £19m (12% of £158.7m) being spent locally and a range of between £37m (36% of £103m) and £57.1m (36% of £158.7m) spent within Scotland. Considering this, and taking account of the presence of required facilities, amenities, construction materials and labour skills, it is reasonable to predict that a large proportion of 'local' spend would be in the Highlands.

Accommodation

6.9.9. Employment associated with the construction of the Revised Consented Development would be likely to increase occupancy in nearby hotels and other short-term accommodation, as well as increasing trade in local hospitality establishments. There are a number of accommodation places in the wider area surrounding the site which could provide places to stay for construction workers during the construction of the Revised Consented Development. There could be a significant number of hotel bookings during the construction phase, subject to the exact number of construction workers and the length of stay which would have a beneficial economic effect.

6.9.10. Taking account of the sensitivity criteria described in paragraph 6.4.24 above the Thurso and Northwest Caithness Ward is considered to be of High sensitivity to economic change. There would be a high magnitude of change from the capital expenditure associated with construction of the Revised Consented Development. Major beneficial economic effects would therefore be associated with construction which is considered to be a significant economic effect.

6.9.11. The Highland Council area is considered to be of Medium sensitivity to change. There would be a medium magnitude of change from the capital expenditure associated with construction of the Revised Consented Development. Moderate beneficial economic effects would therefore be associated with construction which is considered to be a probably significant economic effect.

6.9.12. Scotland as a whole is considered of low sensitivity to change. There would be a low level of change from the capital expenditure associated with construction of the Revised Consented Development. Negligible beneficial economic effects would therefore be associated with construction which is considered to be a not significant economic effect.

6.9.13. The potential job creation outlined above may help to attract workers back to the Highlands from elsewhere in Scotland, the wider UK or other places who had moved away for employment. This could stimulate further economic benefits through demand for housing or other infrastructure. It is however not possible to predict the scale of any such benefits as this would depend upon how many workers returned.

Wind Farm Decommissioning

6.9.14. The cost of decommissioning a wind farm in over 40 years' time is difficult to estimate at this point in time, however wind farm decommissioning bonds are available which are designed to provide a financial security to local authorities and/or land owners for the decommissioning and reclamation of a wind farm development, should the wind farm operator go out of business. These are based upon estimated costs for site restoration (leaving tracks in situ) and have had a value in the order of £15,000 per MW for other wind farms. This which would amount to a minimum of £1.3M for the 88.2MW Revised Consented Development.

6.9.15. Taking account of the sensitivity criteria described in paragraph 6.4.24 above the Thurso and Northwest Caithness Ward is considered to be of High sensitivity to economic change. There would be a high magnitude of change from the capital expenditure associated with decommissioning of the Revised Consented Development. Major beneficial economic effects would therefore be associated with decommissioning which is considered to be a significant economic effect.

6.9.16. The Highland Council area is considered to be of Medium sensitivity to change. There would be a low magnitude of change from the capital expenditure associated with decommissioning of the Revised Consented Development. Minor beneficial economic effects would therefore be associated with decommissioning which is considered to be a not significant economic effect.

6.9.17. Scotland as a whole is considered of low sensitivity to change. There would be a low level of change from the capital expenditure associated with decommissioning of the Revised Consented Development. Negligible beneficial economic effects would therefore be associated with decommissioning which is considered to be a not significant economic effect.

Employment Effects

6.9.18. The RUK (2015) report in Table 6: GVA and Employment Ratios (Construction Phase) estimates that the weighted average shows there is one employee per £137,942 in turnover. If replicated during the construction of the Revised Consented Development this could result in local employment across The Highland Council ranging from up to 89.9 FTE (£12.4m ÷ £137,942) to 137.7 FTE (£19m[xvi] ÷ £137,942), and Scottish level employment ranging between up to 268.2 FTE (£37m ÷ £137,942) and 413.9 FTE (£57.1m ÷ £137,942) throughout the construction period.[xvii]

6.9.19. In addition to the predicted employment levels calculated above, it is expected that further employment would be sustained or created through induced and indirect economic effects. This would be likely to occur through the supply chain and the impact of wages and salaries on the local economy including increased hotel occupancy rates. However, the extent of these indirect and induced employment effects cannot accurately be determined until individual contractors are appointed, which would only take place after any consent for the Revised Consented Development is granted.

6.9.20. Taking account of the sensitivity criteria described in paragraph 6.4.24 above the Thurso and Northwest Caithness Ward is considered to be of High sensitivity to employment change. There would be a high magnitude of change from the

employment associated with construction of the Revised Consented Development. Major beneficial economic effects would therefore be associated with decommissioning which is considered to be a significant economic effect' albeit that this would be for a short term period of time.

6.9.21. The Highland Council area is considered to be of Medium sensitivity to change. There would be a low magnitude of change from the employment with construction of the Revised Consented Development. Minor beneficial employment effects would therefore be associated with decommissioning which is considered to be a not significant employment effect.

6.9.22. Scotland as a whole is considered of low sensitivity to change. There would be a low level of change from the employment associated with construction of the Revised Consented Development. Negligible beneficial employment effects would therefore be associated with decommissioning which is considered to be a not significant employment effect.

Land Use

6.9.23. In terms of land use change, there would be a minor improvement in relation to public access as it is no longer intended to close Core Path CA11.03 Limekiln Forest for use as the main access track. Apart from this minor beneficial and not significant land use effect, the turbine locations would remain the same as those for the Consented Development and therefore there would be no additional effects on land use beyond those previously considered.

Economic, Employment and Land Use Effects – Operation

Economics Effects

6.9.24. The RUK report (2015) estimates the level of operational investment for a wind farm of greater than 5MW to be between £23,000 and £130,000 per year per MW installed. The report explains that the large differential in this cost range is due to differences in the size of developments, land contracts and whether or not turbines were still under warranty across the case study projects examined. The weighted average cost was £59,867 per MW installed per annum.

6.9.25. On this basis the Revised Consented Development has the potential to generate between £2.03M and £11.5M[xviii] each year during its operational life. Therefore, over the 40-year period of operation, the Revised Consented Development is predicted to generate total operations and maintenance expenditure of between £81.2M and £460M. Using the weighted average operations and maintenance cost of £59,867 per MW installed per annum quoted within the RUK (2015) report, this would generate up to around £5.2M[xix] of operations and maintenance expenditure per annum throughout the operational life of the Revised Consented Development, or £208M in total over the 40 year lifespan of the Revised Consented Development.

6.9.26. In terms of the geographical distribution of operations and maintenance expenditure, the Renewable UK (RUK) report (2015) states that 42% of expenditure occurs locally and 58% is within the region/nation. Therefore, it is predicted that the Revised Consented Development could result in between £852,600 and £4.8M of local annual operations and maintenance expenditure (between £34M and £192M over the 40 year lifespan of the Revised Consented Development) and between £1.1M and £6.6M

of annual operations and maintenance expenditure (between £44M and £264M over the 40 year lifespan of the Revised Consented Development) within Scotland. It should however be noted that the RUK report identifies that operating costs vary throughout the life of a wind farm, with costs noticeably increasing from the baseline position after five years due to increased maintenance requirements.

6.9.27. Wind farms are liable for business rates. The Scottish Assessors Association highlights that for a scheme with an installed capacity of 70MW and over of electricity mainly for sale to consumers the cost per MW is £250,000 and this would equate to £22m of business rates. This is considered to be a long term and beneficial effect.

6.9.28. Taking account of the sensitivity criteria described in paragraph 6.4.24 above the Thurso and Northwest Caithness Ward is considered to be of High sensitivity to economic change. There would be a high magnitude of change from the operational investment associated with operation of the Revised Consented Development. Major beneficial economic effects would therefore be associated with operation which is considered to be a significant economic effect.

6.9.29. The Highland Council area is considered to be of Medium sensitivity to change. There would be a low magnitude of change from the operational investment associated with operation of the Revised Consented Development. Minor beneficial economic effects would therefore be associated with operation which is considered to be a not significant economic effect.

6.9.30. Scotland as a whole is considered to be of low sensitivity to change. There would be a low level of change from the operational investment associated with operation of the Revised Consented Development. Negligible beneficial economic effects would therefore be associated with operation which is considered to be a not significant economic effect.

Long Term Operation and Maintenance (O&M)

6.9.31. Following construction of the Revised Consented Development, it would enter into a 40 year operational period. During this phase of the project's life cycle, the Operations and Maintenance (O&M) contracts would deliver the planned routine and scheduled maintenance of the wind turbines, the statutory inspections and servicing and also high voltage management and maintenance.

6.9.32. The O&M workstream would result in direct spend in the local area per annum and creation of some direct full-time skilled jobs for the local area. There would also be additional ancillary local spend and job creation through the use of the local supply chain. This may include, but not be limited to, elements such as accommodation, fuel, vehicle and plant hire, routine maintenance and winter maintenance of the wind farm tracks for the Revised Consented Development and habitat management. The operation of the Revised Consented Development would result in permanent on-site staff, and other temporary staff visiting the site for maintenance and repair work. It is anticipated that monthly maintenance work would be undertaken by two people. No significant effects are predicted

Accommodation

6.9.33. Operations and maintenance activities would be likely to increase occupancy in nearby hotels and other short-term accommodation, as well as increasing trade in

local hospitality establishments, throughout the operational phase of the Revised Consented Development. However, it is not likely to result in an overwhelming influx of local accommodation or hospitality bookings at a particular point in time and therefore no significant effects are predicted.

Employment Effects

6.9.34. There would be potential for both national and local employment for the maintenance of the Revised Consented Development. The RUK (2015) report estimates (Table 9: GVA and Employment Ratios (Operations and Maintenance) that average total turnover per employee during the operational phase of a wind farm is £121,935. If replicated during the operational phase of the Revised Consented Development, this could result in total employment ranging from up to 18.8 FTE (£2.3M ÷ £121,935[xx]) and 94.3 FTE (£11.5M ÷ £121,395) per annum.

6.9.35. In terms of the geographical distribution of predicted operations and maintenance employment:

- Local annual operations and maintenance expenditure (within THC area) could create up to between 6.9 FTE (£852,600 ÷ £121,935) and 39.3[xxi] FTE (£4.8m ÷ £121,935) jobs per annum in THC area during the operational phase of the Revised Consented Development. The location and duration of all jobs would depend upon specific operations and maintenance requirements; and
- National annual operations and maintenance expenditure (within Scotland) could create up to between 9 FTE (£1.1M ÷ £121,935) and 54.1[xxii] FTE (£6.6m ÷ £121,935) jobs per annum in Scotland during the operational phase of the Revised Consented Development. The location and duration of all jobs would depend upon specific operations and maintenance requirements.

6.9.36. In summary, the Revised Consented Development is predicted to generate operations and maintenance related employment ranging between 6.9 FTE – 39.3 FTE jobs in THC area and 9 – 54.1 FTE within Scotland.

6.9.37. Taking account of the sensitivity criteria described in paragraph 6.4.24 above the Thurso and Northwest Caithness Ward is considered to be of High sensitivity to employment change. There would be a low magnitude of change from the employment associated with operation and maintenance of the Revised Consented Development. Minor employment effects would therefore be associated with operation and maintenance which is considered to be a not significant employment effect.

6.9.38. The Highland Council area is considered to be of Medium sensitivity to change. There would be a low magnitude of change from the employment with construction of the Revised Consented Development. Minor beneficial employment effects would therefore be associated with operation and maintenance which is considered to be a not significant employment effect.

6.9.39. Scotland as a whole is considered of low sensitivity to change. There would be a low level of change from the employment associated with operation of the Revised Consented Development. Negligible beneficial employment effects would therefore

be associated with operation and maintenance which is considered to be a not significant employment effect.

6.9.40. **Table 6.12** summarises the significance of the beneficial economy, employment, and land use effects. No adverse effects have been identified.

Table 6.12 Summary of Significance of Beneficial Economy, Employment and Land Use Effects

Receptor and Summary of Predicted Effects	Sensitivity/ Importance/ Value of Receptor[1]	Magnitude of Change[2]	Significance[3]	Summary Rationale
Economic (Construction and Decommissioning)				There would be considerable spend at the local level from the capital cost of the construction of the Revised Consented Development. Up to £19m could be spent locally and up to £57.1m spent within Scotland. The economic effects generated by the decommissioning of the Revised Consented Development cannot be accurately estimated at this point but a bond for the restoration of the site could amount to £1.3m.
	High	High	Significant	This level of investment is considered to represent a high magnitude of economic change on a high sensitivity receptor (Ward) and thus a major and significant beneficial economic effect.
	Medium	Medium	Probably Significant	This level of investment is considered to represent a medium magnitude of change on a medium sensitivity receptor (The Highlands) and thus a moderate and probably significant beneficial economic effect.
	Low	Low	Not Significant	This level of investment is considered to represent a low magnitude of change on a low sensitivity receptor (Scotland) and thus a negligible and not significant beneficial economic effect.
Employment (Construction and Decommissioning)				The Revised Consented Development is predicted to generate construction related employment ranging between up to 137.7 FTE within The Highlands and up to 413.9 FTE within Scotland.
	High	High	Significant	This level of employment is considered to represent a high magnitude of employment change on a high sensitivity receptor (Ward) and thus a major and significant beneficial employment effect.

Receptor and Summary of Predicted Effects	Sensitivity/ Importance/ Value of Receptor[1]	Magnitude of Change[2]	Significance[3]	Summary Rationale
	Medium	Low	Not Significant	This level of employment is considered to represent a low magnitude of employment change on a medium sensitivity receptor (The Highlands) and thus a minor and not significant beneficial employment effect.
	Low	Low	Not Significant	This level of employment is considered to represent a low magnitude of employment change on a low sensitivity receptor (Scotland) and thus a negligible and not significant beneficial employment effect.
Economy (Operation)				The Revised Consented Development is predicted to result in up to £192m operations and maintenance expenditure within The Highlands and up to £264m of operations and maintenance expenditure within Scotland over the 40 year lifespan of the Revised Consented Development.
	High	High	Significant	This level of expenditure is considered to represent a high magnitude of economic change on a high sensitivity receptor (Ward) and thus a major and significant beneficial economic effect.
	Medium	Medium	Probably significant	This level of expenditure is considered to represent a medium magnitude of economic change on a medium sensitivity receptor (The Highlands) and thus a moderate and probably significant beneficial economic effect.
	Low	Medium	Not significant	This level of expenditure is considered to represent a low magnitude of economic change on a low sensitivity receptor (Scotland) and thus a negligible **and not significant** beneficial economic effect.

Receptor and Summary of Predicted Effects	Sensitivity/ Importance/ Value of Receptor[1]	Magnitude of Change[2]	Significance[3]	Summary Rationale
Employment (Operation)				The Revised Consented Development is predicted to generate up to 39.3 FTE within The Highlands and up to 54.1 FTE within Scotland.
	High	Low	Not Significant	This level of employment is considered to represent a low magnitude of employment change on a high sensitivity receptor (Ward) and thus a minor and not significant beneficial employment effect.
	Medium	Low	Not Significant	This level of employment is considered to represent a low magnitude of employment change on a medium sensitivity receptor (The Highlands) and thus a minor and not significant beneficial employment effect.
	Low	Low	Not Significant	This level of employment is considered to represent a low magnitude of employment change on a low sensitivity receptor (Scotland) and thus a negligible and not significant beneficial employment effect.
Land Use (Construction, Operation and Decommissioning)	High at Ward, Medium for The Highlands and Low at National.	Low	Not significant	The site is considered to be of Low sensitivity to land use change (overall less than five land uses are undertaken on site). There would be a minor improvement in relation to public access as it is no longer intended to close Core Path CA11.03 Limekiln Forest for use as the main access track. This minor improvement is considered to represent a low magnitude of land use change across all receptors (Ward, The Highlands and Nationally) and thus a minor and not significant beneficial land use effect.

1. The sensitivity/importance/value of a receptor is defined using the criteria set out in **Sections 6.4.13-6.4.24** above and is defined as low, medium, high, and very high.
2. The magnitude of change on a receptor resulting from activities relating to the development is defined using the criteria set out in **Tables 6.3, 6.5, 6.7** and **6.9** above and is defined as low, medium, high, and very high.
3. The significance of the environmental effects is based on the combination of the sensitivity/importance/value of a receptor and the magnitude of change and is expressed as major (significant), moderate (likely significant) or minor/negligible (likely not significant), subject to the evaluation methodology outlined in **Sections 6.4.13-6.4.24**.

Assessment of Effects: Tourism and Recreation Construction, Operation and Decommissioning Effects

Predicted Effects and Their Significance

Recreation Construction and Decommissioning Effects

6.9.41. There would be a minor improvement in relation to public access as it is no longer intended to close Core Path CA11.03 Limekiln Forest for use as the main access track for construction works. Recreational access for this Core Path would therefore be maintained.

6.9.42. The construction of the Revised Consented Development would not generate any additional direct effects on recreational pursuits within the site given that the turbine locations and associated infrastructure is not moving. On this basis no further consideration is given to direct effects on recreational pursuits from construction and decommissioning.

Tourism and Recreation – Operational Effects

Tourism Effects

6.9.43. The Revised Consented Development has the potential to indirectly affect tourism and recreational activities outwith the site during its operational phase through generating landscape and visual effects at tourism destinations, areas/routes where recreational pursuits are undertaken, and communication routes regularly frequented by tourists.

6.9.44. Owing to the expected minimal level of maintenance activity required, **Chapter 7 (Traffic and Transportation)** concludes that traffic associated with the operational phase of the Revised Consented Development would not result in any significant traffic or transport related effects which could potentially generate wider socio-economic tourism or recreational effects.

6.9.45. **Chapter 9 (Landscape and Visual)** has not identified any local tourist attractions/receptors where there would be the potential for significant effects. On this basis no tourist attractions/receptors are assessed here.

6.9.46. **Chapter 10 (Cultural Heritage)** has considered potential effects from the Revised Consented Development on heritage assets. Effects on three scheduled monuments (SM90078, SM476 & SM441) have been identified for the operational phase of the Revised Consented Development. The cultural heritage assessment concludes that there would be no greater than a Minor level of adverse effect on the setting of these assets.

6.9.47. Overall, the cultural heritage assessment concludes that there would be no significant adverse effects upon cultural heritage as a result of the Revised Consented Development. In turn it is therefore considered that there would be no significant tourism or recreational effects on cultural heritage assets and therefore no further consideration is given to cultural heritage in this assessment.

Recreation – Operational Effects

6.1.1 During the operational phase of the Revised Consented Development, the public would have unrestricted access to the site under the general 'right to roam' enshrined

in the Land Reform (Scotland) Act 2003. Temporary public access restrictions would only apply if it is necessary to undertake intensive maintenance or upgrading to on-site infrastructure including turbines and access tracks, in accordance with the CDM Regulations 2015.

Visual Effects on Views from Recreational Routes

6.9.48. **Table 6.13** below assesses the recreational effects on those Core Paths and recreational routes which **Chapter 9 (Landscape and Visual)** has identified as having the potential to experience significant visual effects. There are nine Core Paths and parts of two recreational routes which have the potential to experience significant effects:

- Core Path CA11.02 Achvarasdal Woodland;
- Core Path CA11.03 Limekiln Forest;
- Core Path CA11.04 Sandside Head;
- Core Path CA11.05 Achins/ Helshetter/ CA11.09 Borlum Circuit;
- Core Path CA11.06 Reay Roadside Link;
- Core Path CA11.07 Reay Golf Course via St Mary's Cottage;
- Core Path CA11.08 Reay Golf Course via Clubhouse;
- Core Path CA11.09 – Borlum Circuit;
- Core Path CA11.10 - Achvarasdal East Drive;
- National Cycle Route 1; and
- North Coast 500.

Table 6.13 Summary of Significance of Core Paths and Recreational Routes Effects

Core Paths and Recreational Routes				
Receptor Name	**Sensitivity/ Importance/ Value of Receptor[1]**	**Magnitude of Change[2]**	**Significance[3]**	**Assessment**
Core Path CA11.02 Achvarasdal Woodland / CA11.10 – Achvarasdal East Drive	Low	Low	Negligible and Not Significant	This is a local level Core Path used by local people for recreational activities including walking and dog walking. As these are local level routes, they are considered to have low sensitivity. The landscape and visual assessment concludes that the effect of the Revised Consented Development on the views from CA11.02 would be not significant for the majority of its length, with the exception of the western path that accesses Achvarasdal Farm where the effects will be significant. During the construction phase, the effects on all sections of both paths would be not significant. The recreation magnitude of change to these Core Paths is considered to be Low therefore the level of effect is Negligible and not significant as it is not considered that the presence of turbines would deter people from using this recreational route or affect their enjoyment of the route, which is further supported by various public attitude surveys which confirm that wind farms do not deter visitors to an area.
Core Path CA11.03 Limekiln Forest	Low	Low	Negligible and Not Significant	This is a local level Core Path used by local people for recreational activities including walking and dog walking. As this is a local level route it is considered to have low sensitivity. The landscape and visual assessment concludes that the effect of the construction and operational phases of the Revised Consented Development on the core path would be significant.

Core Paths and Recreational Routes				
Receptor Name	**Sensitivity/ Importance/ Value of Receptor[1]**	**Magnitude of Change[2]**	**Significance[3]**	**Assessment**
				During the construction phase, the effects would be not significant. The recreation magnitude of change to this Core Path is considered to be Low therefore the level of effect is Negligible and not significant as it is not considered that the presence of turbines would deter people from using this recreational route or affect their enjoyment of this route, which is further supported by various public attitude surveys which confirm that wind farms do not deter visitors to an area.
Core Path CA11.04 Sandside Head	Low	Low	Negligible and likely Not Significant	This is a local level Core Path used by local people for recreational activities including walking and dog walking. As this is a local level route it is considered to have low sensitivity. The landscape and visual assessment concludes that the visual effect of the Revised Consented Development for users would be significant during the operational phase. During the construction phase, the effects on all sections of these paths would be not significant. The recreation magnitude of change to these Core Paths is considered to be Low therefore the level of effect is Negligible and not significant as it is not considered that the presence of turbines would deter people from using this recreational route or affect their enjoyment of the route, which is further supported by various public attitude surveys which confirm that wind farms do not deter visitors to an area.

Core Paths and Recreational Routes				
Receptor Name	**Sensitivity/ Importance/ Value of Receptor[1]**	**Magnitude of Change[2]**	**Significance[3]**	**Assessment**
Core Path CA11.05 Achins/ Helshetter/ CA11.09 Borlum Circuit	Low	Low	Negligible and likely Not Significant	These are local level Core Paths used by local people for recreational activities including walking and dog walking. As these are local level routes, they are considered to have low sensitivity. The landscape and visual assessment concludes that the visual effect of the Revised Consented Development for users would be significant during the operational and construction phase. The recreation magnitude of change to these Core Paths is considered to be Low therefore the level of effect is Negligible and not significant as it is not considered that the presence of turbines would deter people from using these recreational routes or affect their enjoyment of using these routes, which is further supported by various public attitude surveys which confirm that wind farms do not deter visitors to an area.
CA 11.06 Reay Roadside Link / CA 11.07 – Reay Golf Course via Mary's Cottage / CA 11.08 – Reay Golf Course via Clubhouse	Low	Low	Negligible and likely Not Significant	These are local level Core Paths used by local people for recreational activities including walking and dog walking. As these are local level routes, they are considered to have low sensitivity. The landscape and visual assessment concludes that the visual effect of the Revised Consented Development for users would be significant during the operational phase. During the construction phase, the effects on these paths will be not significant. The recreation magnitude of change to this core path is considered to be Low therefore the level of effect is Negligible and not significant as it is not considered that the presence of turbines would deter people from using this recreational route or affect their enjoyment of using these routes, which is

Core Paths and Recreational Routes				
Receptor Name	**Sensitivity/ Importance/ Value of Receptor[1]**	**Magnitude of Change[2]**	**Significance[3]**	**Assessment**
				further supported by various public attitude surveys which confirm that wind farms do not deter visitors to an area.
National Cycle Route 1 – Eastbound and Westbound	High	Low	Negligible and likely Not Significant	This is part of the National Cycle Network, running from Dover to Shetland and is used by cyclists both locally and those who have travelled from elsewhere. As this is a national route it is considered to have high sensitivity. The landscape and visual assessment concludes that the visual effect of the Revised Consented Development for users would be significant whilst travelling westbound on the section between Drum Hollistan and Achvarasdal and significant whilst travelling eastbound on the section between the access road to Bardnaheigh and Reay. Views of cyclists on the remaining west and east-bound sections would be not significant. The recreation magnitude of change to this route is considered to be Low therefore the level of effect is Minor and not significant as it is not considered that the presence of turbines would deter people from using this recreational route or affect their enjoyment of the route, which is further supported by various public attitude surveys which confirm that wind farms do not deter visitors to an area.
North Coast 500 Eastbound and Westbound	High	Low	Negligible and likely Not Significant	The North Coast 500 is a 516-mile scenic route around the north coast of Scotland, starting and ending at Inverness Castle and is used by tourists as well as local people. As this is a national route it is considered to have high sensitivity. The landscape and visual assessment concludes that the visual effect of the Revised Consented Development for users on the North Coast 500 eastbound would be significant between

Core Paths and Recreational Routes				
Receptor Name	**Sensitivity/ Importance/ Value of Receptor[1]**	**Magnitude of Change[2]**	**Significance[3]**	**Assessment**
				Drum Hollistan and Reay Church and then not significant for the remaining parts. For the North Coast 500 westbound, the landscape and visual assessment concludes that the visual effect of the Revised Consented Development for users would be significant between Dounreay and Reay Church and then not significant for the remaining parts. The recreation magnitude of change to this route is considered to be Low therefore the level of effect is Negligible and not significant as it is not considered that the presence of turbines would deter people from using this recreational route or enjoying its scenic qualities as they travel along it, which is further supported by the various public attitude surveys previously detailed in this chapter which confirm that wind farms do not deter visitors to an area.

1. The sensitivity/importance/value of a receptor is defined using the criteria set out in **Sections 6.4.13-6.4.24** above and is defined as low, medium, high, and very high.
2. The magnitude of change on a receptor resulting from activities relating to the development is defined using the criteria set out in **Tables 6.3, 6.5, 6.7** and **6.9** above and is defined as low, medium, high, and very high.
3. The significance of the environmental effects is based on the combination of the sensitivity/importance/value of a receptor and the magnitude of change and is expressed as major (significant), moderate (likely significant) or minor/negligible (likely not significant), subject to the evaluation methodology outlined in **Sections 6.4.13-6.4.24**.

6.9.49. **Chapter 9 (Landscape and Visual)** concludes in summary, that there would be significant visual effects on parts of the views from nine Core Paths, and two recreational routes. Whilst there would be a significant effect on views from these routes, viewing towards the Revised Consented Development, there would be no significant adverse effects on the overall walking or travelling experience on these routes and the recreational magnitude of change is considered to be low and not significant. This is because it is not considered that the presence of turbines would deter people from using these Core Paths and recreational routes, which is further supported by various public attitude surveys which confirm that wind farms do not deter visitors to an area.

6.9.50. **Chapter 9 (Ecology)** and **13 (Hydrology and Hydrogeology)** of the EIA Report concludes that with the adoption of recommended embedded and additional mitigation measures, the operation of the Revised Consented Development would not result in any residual significant effects on water levels, flow, and quality on and off the Revised Consented Development. As a result, no adverse effects are predicted for any water related recreational activities (e.g., canoeing, fishing, kayaking, etc.) that may be undertaken on any of the local watercourses.

6.9.51. In relation to operational effects on recreational receptors, recreational activities undertaken within the site (walking, dog walking, cycling, and shooting) would be able to continue unimpeded and so the overall predicted operational level of effect on recreation is considered to be negligible and therefore would not result in a likely significant environmental effect.

Assessment of Effects: Health- Construction, Operation and Decommissioning Effects

Predicted Effects and Their Significance

Construction and Decommissioning Effects

6.9.52. The construction of the Revised Consented Development would result in an influx of construction workers into the local area surrounding the site. Population movement (albeit that it would be temporary associated with construction workers arriving during the construction phase of the Revised Consented Development) could change patterns of need and demand for health services. This has the potential to affect existing health facilities and services in the area surrounding the site and more widely for the Highlands. These facilities are considered to be of a Low sensitivity as there are several facilities located in the local area with no indication that they are constrained.

6.9.53. There is a good provision of medical facilities in the area surrounding the site, with no indication that any of these are under-resourced or at capacity. It is considered that the increase in migrant construction workers would result in a Medium magnitude of change, which is considered to result in a minor effect that would not result in a likely significant environmental effect.

Decommissioning Effects

6.9.54. The health effects from decommissioning of the Revised Consented Development are predicted to be the same or less than its construction effects. Therefore, the decommissioning effects are not assessed here any further.

Table 6.14 Summary of Significance of Health Effects

Receptor and Summary of Predicted Effects	Sensitivity/ Importance/ Value of Receptor[1]	Magnitude of Change[2]	Significance[3]	Summary Rationale
Health – Health Facilities	Low	Low	Negligible and Likely not significant	There would be an influx of construction workers into the area for the construction phase of the Revised Consented Development which could put pressure on the existing health services in the area surrounding the site to the detriment of the existing population. However, there is no indication that the existing facilities are under any significant pressures. It is therefore considered that any effects in relation to health facilities from construction workers would be Negligible and likely not significant.
Health – Population (Climate Change)	High	N/A	N/A (Not quantifiable)	The contribution of renewable energy that provides a net supply of power to the electricity distribution system is considered to be a health benefit as it would help to reduce greenhouse gas emissions and therefore potentially directly benefit residents in the Highlands and the UK as a whole. Whilst this benefit cannot be readily quantified, it is nevertheless considered to be important.

1. The sensitivity/importance/value of a receptor is defined using the criteria set out in **Sections 6.4.13-6.4.24** above and is defined as low, medium, high and very high.
2. The magnitude of change on a receptor resulting from activities relating to the development is defined using the criteria set out in **Tables 6.3, 6.5, 6.7** and **6.9** above and is defined as low, medium, high and very high.
3. The significance of the environmental effects is based on the combination of the sensitivity/importance/value of a receptor and the magnitude of change and is expressed as major (significant), moderate (likely significant) or minor/negligible (likely not significant), subject to the evaluation methodology outlined in **Sections 6.4.13-6.4.24**.

6.10. Cumulative Effects

6.10.1. Consideration has been given as to whether any of the socio-economic receptors that have been taken forward for assessment in this chapter are likely to be subject to cumulative socio-economic effects in combination with other developments. Other developments in the Highlands that have been considered for any cumulative effects have been identified in **Chapter 9**.

Population

6.10.2. No cumulative effects on population are predicted which require any further assessment.

Health

6.10.3. No cumulative effects on health are predicted which require any further assessment.

Economy and Employment

6.10.4. **Figure 9.17** illustrates proposed and existing cumulative wind farm schemes within 40km of the Revised Consented Development. There are a number of wind farms which are 20+km away and so it is considered unlikely that any of these wind farms would give rise to cumulative socio-economic effects. However, there are a number of wind farms in close proximity to the site and it is considered that all phases of these schemes have the potential to give rise to cumulative socio-economic effects. Within a 10km radius these include Baillie and Forss 1 and 2 to the north, and Ackron and Drum Hollistan 2 to the west.

6.10.5. Considering the Revised Consented Development together with existing wind farms nearby, this is likely to generate a beneficial effect for the local economy as a result of local employment and local expenditure throughout all phases of wind farm developments. Given the scale of impacts predicted for the Revised Consented Development alone, it is considered that there is the potential for significant beneficial effect on the local economy (Ward and The Highlands) when considered specifically in combination with other existing or wind farms within the planning system, in particular with the Consented Development which is immediately adjacent to the Revised Consented Development. The cumulative impact at a national (Scotland) level represents a Low magnitude of change, which would not result in a likely significant economic effect.

Recreation & Tourism

6.10.6. There is the potential for cumulative landscape and visual related effects on tourism, recreation, and the amenity value of the local area. Details of the cumulative visual effects are set out in **Chapter 9 (Landscape and Visual)**. The L&V chapter concludes with respect to cumulative effects that there would be significant cumulative visual effects on the westbound section of the NC500 between Dounreay to Reay, on the westbound section of NCR1 between Bardnaheigh access to Reay and on Core Path CA11.10– Achvarasdal East Drive. However, it is not considered that there would any significant recreational effects on these routes or the Core Path as the presence of turbines does not deter people from visiting an area, as demonstrated by various public attitude surveys.

6.10.7. It is not considered that there would be any cumulative effects on tourism as no tourism attractions / receptors were identified in **Chapter 9 (Landscape and Visual)** as having the potential for any significant effects.

6.10.8. With plans for Core Path improvements as part of the Revised Consented Development (as set out in **section 6.11** below), there would be beneficial cumulative recreational effects.

Land Use

6.10.9. Aside from the recreational improvements mentioned above (which form part of the land use of the site) no other cumulative land use effects are predicted which require any further assessment.

6.11. Mitigation Measures

Access Management Plan

6.11.1. An Access Management Plan would be produced prior to commencement of development which would set out how public access would be managed during construction.

6.12. Community Benefits

Community Benefit Fund

6.12.1. The Applicant has pledged to provide local community funding which would be delivered during the operational phase of the Revised Consented Development. In accordance with the Scottish Government's Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments document[xxiii] (2013, revised in 2015 for factual accuracy), this funding aims to ensure that local communities share the socio-economic benefits which would be generated from the Revised Consented Development. As of April 2019, a total of £18,520,483[xxiv] of funding from wind farms has been made available to communities to support a diverse range of activity to improve the daily lives of people across Scotland.

6.12.2. The Revised Consented Development would make an annual payment of £5,000 (index-linked) per operational MW over the lifetime of the project. A 88.2 MW scheme would mean an annual payment of over £441,000 per annum for the local community to invest in local projects and priorities. This would equate to £17.6M during the 40 year operational period.

6.12.3. There would be greater economic impact where the funds are invested in local economic activity (for example business support) rather than on community-based activities (e.g. playgrounds and parks).

Community/Shared Ownership

6.12.4. As with the Consented Development, Infinergy intend to offer up to 10% of the project in the form of Community/Shared Ownership. This would most likely be via a 'shared revenue' model. Potential returns over the lifetime of the Revised Consented Development would help any organisations involved to have a secure source of funding over the 40 year lifetime of the Revised Consented Development.

6.12.5. Returns would be dependent upon a range of inputs including energy price, turbine pricing, inflation, support mechanisms for the Revised Consented Development and cost of debt financing, all of which would be subject to regular and market changes in the run to the operational phase. Infinergy would seek to de-risk any investment proposal as much as possible in order to safeguard community funds, seeking financial investment at the point of operation but would hope to offer a return in the region of 7% per annum.

6.13. Residual Effects

6.13.1. The assessments presented in this chapter demonstrate that the Revised Consented Development would potentially result in likely **significant** temporary, beneficial local (Council ward) level socio-economic effects during construction and as a result of the community benefit fund and shared/community ownership of the Revised Consented Development.

6.13.2. The Revised Consented Development would not result in any adverse significant effects on tourism receptors as **Chapter 9 (Landscape and Visual)** did not identify any receptors where there was potential for significant effects. There would be some significant visual effects on recreation receptors locally in terms of nine Core Paths, National Cycle Route 1 and the North Coast 500. However, it is considered that in terms of recreation, this would not result in a likely significant environmental effect as the recreation magnitude of change would be low as it is considered that the presence of wind turbines does not deter visitors from visiting an area. This is supported by opinion polls on wind farms that show that the presence of wind turbine development visible from recreational facilities would not influence visitor's behaviour.

6.13.3. The Revised Consented Development would not result in any adverse significant effects on heritage receptors.

6.13.4. There would be no residual effects on health.

6.14. Summary

6.14.1. The assessment presented in this chapter demonstrates that the Revised Consented Development would result in a beneficial significant economic effect at a Council ward level during construction and as a result of the community benefit fund (during operation). Residual economic effects during operation and decommissioning would be beneficial, but not significant at a regional and national level. The Revised Consented Development would not result in any adverse significant effects on identified tourism receptors or on receptors (on top of those identified in the landscape and visual impact assessment) or on land use. There would not be any significant residual effects on population or health.

Comparison Between The Revised Consented Development and the Consented Development

6.14.2. The significant effects identified for the Revised Consented Development are the same as those identified for the Consented Development, i.e., that there would be a significant beneficial economic and employment effects at the local (Ward) level.

6.15. References

Studies / Websites

O'Herlihy and Co Ltd (2006). Windfarm Construction: Economic Impact Appraisal. Glasgow: Scottish Enterprise. Available at: http://www.scottish-enterprise.com/~/media/SE/Resources/Documents/Sectors/Energy/energy-renewables-reports/windfarm-construction-appraisal.pdf.

O'Herlihy & Co. For Scottish Renewables (2013). Employment in Renewable Energy in Scotland. Available at: http://www.scottishrenewables.com/media/uploads/hidden_links/web_employment_in_renewable_energy_in_scotland_2013.pdf.

Renewable UK (2015) Onshore Wind: Economic Impacts in 2014. Available at: https://cdn.ymaws.com/www.renewableuk.com/resource/resmgr/publications/reports/onshore_economic_benefits_re.pdf

Government Publications

Scottish Government. (2014a) National Planning Framework 4. Edinburgh: Scottish Government. Available at: http://www.scotland.gov.uk/Publications/2014/06/3539.

[i] Glasson J, Therival R and Chadwi A, Introduction to Environmental Impact Assessment Third Edition (2005) Available at: (http://site.iugaza.edu.ps/sghabayen/files/2013/02/John_Glasson_Riki_Therivel_Andrew_Chadwick_IntBookos.org_.pdf [Accessed May 2021]
[ii] Renewable UK Onshore Wind Direct & Wider Economic Impacts (2012) Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/48359/5229-onshore-wind-direct--wider-economic-impacts.pdf [Accessed May 2021]
[iii] Renewable UK Onshore Wind: Economic Impacts in 2014 (2015) Available at: https://cdn.ymaws.com/www.renewableuk.com/resource/resmgr/publications/reports/onshore_economic_benefits_re.pdf [Accessed May 2021]
[iv] Scottish Natural Heritage Environmental Impact Assessment Handbook V5 (2018) Available at: https://www.nature.scot/handbook-environmental-impact-assessment-guidance-competent-authorities-consultees-and-others [Accessed May 2021]
[v] Glasgow Caledonian University and Moffat Centre The Economic Impacts of Wind Farms on Scottish Tourism (2008) Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/research-and-analysis/2008/03/economic-impacts-wind-farms-scottish-tourism/documents/0057316-pdf/0057316-pdf/govscot%3Adocument/0057316.pdf [Accessed May 2021]
[vi] Full Time Equivalent (FTE) jobs are not officially defined in the UK but are usually considered to be jobs which involve a minimum of 35 hours work per week.
[vii] Scottish Natural Heritage Handbook Appendix 5 Table 2 Available at: http://www.snh.org.uk/pdfs/publications/heritagemanagement/EIA.pdf [Accessed May 2021]
[viii] BiGGAR Economics for Renewable UK. (2015) Onshore Wind: Economic Impacts in 2014 for Renewable UK (The BiGGAR Report 2015)
[ix] Figures from Scottish Neighbourhood Statistics Available at: https://statistics.gov.scot/atlas/resource?uri=http%3A%2F%2Fstatistics.gov.scot%2Fid%2Fstatistical-geography%2FS13002995&collection-uri=http%3A%2F%2Fstatistics.gov.scot%2Fdef%2Ffoi%2Fcollection%2Fpostcodes&offset=0&limit=386 [Accessed May 2021]
[x] Arup on behalf of DECC: Review of Generation Costs and Deployment Potential of Renewable Energy Technologies in the UK (2011). Available at:

https://www.gov.uk/government/publications/review-of-the-generation-costs-and-deployment-potential-of-renewable-electricity-technologies-in-the-uk-study-report-by-arup [Accessed May 2021].

[xi] Figures rounded to 2 decimal places.

[xii] The Generation Costs and Deployment Potential of Renewable Energy Technologies in the UK Report (2011). Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/147863/3237-cons-ro-banding-arup-report.pdf [Accessed May 2021].

[xiii] Renewable UK Onshore Wind Economics Report (2015). Available via: https://cdn.ymaws.com/www.renewableuk.com/resource/resmgr/publications/reports/onshore_economic_benefits_re.pdf [Accessed May 2021]

[xiv] BiGGAR Economics for Renewable UK. (2015) Onshore Wind: Economic Impacts in 2014 for Renewable UK;

[xv] All figures rounded to 1 decimal place.

[xvi] The £12.4m and £19m figures relate to the estimated percentage of capital cost spent locally.

[xvii] It is acknowledged that these calculations do not provide a breakdown of predicted turbine manufacture, balance of plant and grid connection employment split across local, regional (Scotland) and UK geographies, however providing such statistics would involve more complicated analysis which would be of limited value, especially given that the location of all contractors would not be confirmed until after any consent is granted for the Revised Consented Development by The Highland Council.

[xviii] Figures rounded to 1 decimal place.

[xix] £59,867 x 88.2MW = £5,280,269 per annum.

[xx] See section 6.9.27

[xxi] Figures rounded to 1 decimal place.

[xxii] Figures rounded to 1 decimal place.

[xxiii] Scottish Government's Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments. Available at https://www2.gov.scot/resource/0043/00438782.pdf (accessed May 2021)

[xxiv] Figure from https://www.gov.scot/publications/scottish-government-good-practice-principles-community-benefits-onshore-renewable-energy-developments/ (accessed May 2021)