

# 10. Cultural Heritage

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# 10. Cultural Heritage

## 10.1 Abstract

- 10.1.1 This chapter considers the potential effects of the Proposed Development on cultural heritage (historic environment sites and features, archaeology and built heritage), hereafter referred to as ‘heritage assets’. The chapter details the results of a desk-based assessment and site visit, using information provided in 2012 by Historic Scotland (HS) (now Historic Environment Scotland (HES)) and Dumfries and Galloway Council (DGC).
- 10.1.2 The assessment was conducted in accordance with the Chartered Institute for ‘Archaeologists ‘Code of Conduct’ (CIfA 2014a) and ‘Standard and Guidance for Historic Environment Desk-based Assessment’ (CIfA 2014b).
- 10.1.3 Should the Proposed Development not be consented, the “do-nothing scenario” will apply to the current baseline environment, in that the Applicant will construct the Consented Development. The Consented Development was environmentally assessed and consented in 2015 and the assessment is reported within the Sandy Knowe Wind Farm Environmental Statement (2015).
- 10.1.4 This chapter outlines the potential archaeological effects of the Proposed Development and an assessment is provided based on the value of the receptor and the magnitude of the impact giving the significance of the effect. Where appropriate, mitigation measures to enhance, prevent, minimise or control identified archaeological effects are presented. These include both design mitigation (such as the positioning of the turbines, routing of access tracks and the siting of other infrastructure elements away from archaeological receptors) and construction mitigation (such as the appointment of an Archaeological Clerk of Works and the implementation of a Written Scheme(s) of Investigation). Following the implementation of the mitigation measures there would be no significant residual effects on archaeological receptors.
- 10.1.5 **The predicted residual significant effects for the Proposed Development are exactly the same as those which would arise from the ‘do-nothing scenario’, which would result in the implementation of the Consented Development.**
- 10.1.6 The EIA Regulations, at Schedule 4, require the EIA Report to provide a  
*“description of the likely significant effects of the development on the environment resulting from, inter alia:*  
  
*... (e) the cumulation of effects with other existing and/or approved development, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;”*
- 10.1.7 **In this regard, the Proposed Development would be indiscernible from the Consented Development.**

## 10.2 Legislation, Policy and Guidelines

- 10.2.1 The primary planning policy and guidance for the Historic Environment comprises the Historic Environment Scotland Policy Statement (HESPS) (2016) (HES 2016a);, Scottish

Planning Policy (SPP) (The Scottish Government 2014), Planning Advice Note 2/2011 (PAN 2) (2011) (Scottish Government 2011) at the national level, and, at the regional and local level, Dumfries and Galloway Local Development Plan (LDP) (Dumfries and Galloway Council 2014). Details of applicable planning policies are set out in Chapter 5.

### ***Legislation***

10.2.2 Legislation relevant to this assessment includes:

- Ancient Monuments and Archaeological Areas Act 1979 (1979 Act);
- Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 (1997 Act);
- Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013; and,
- Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

### ***Policy***

10.2.3 Primary Planning Policy at the national level comprises:

- National Planning Framework for Scotland 3 (NPF3) (2014);
- Scottish Planning Policy (SPP) (2014); and,
- Historic Environment Scotland Policy Statement (HESPS) (2016a).

### ***Regional and Local Policy***

#### **Dumfries and Galloway Local Development Plan (LDP) (2014)**

10.2.4 The Dumfries and Galloway Local Development Plan (LDP) was adopted in September 2014. The plan provides the planning framework for Dumfries and Galloway and replaced the Dumfries and Galloway Structure Plan (1999) and Nithsdale Local Plan (2006).

10.2.5 The LDP policies which are relevant to this chapter are:

- Policy IN1: Renewable Energy;
- Policy HE1: Listed Buildings;
- Policy HE2: Conservation Areas;
- Policy HE3: Archaeology;
- Policy HE4: Archaeologically Sensitive Areas; and
- Policy HE6: Gardens and Designed Landscapes.

### ***Relevant Guidance***

#### **Local Development Plan Supplementary Guidance**

10.2.6 The LDP includes Supplementary Guidance (SG) on the Historic Built Environment (2017) which sets out detailed guidance in support of the policies of the adopted Local Development Plan. It provides steps to follow which are necessary to find a balance between preservation and change. These steps are set out in table form on page 13 of the SG.

- 10.2.7 Archaeology and built heritage are also factors (Settlement and Archaeology) considered in the LDP SG 'Part 1 Wind Energy Development Management Considerations Appendix 'C' Dumfries and Galloway Landscape Capacity Study' (2017).

**Planning Advice Note (PAN) 2/2011: Planning and Archaeology (2011)**

- 10.2.8 PAN2/2011 advises that, in determining planning applications, planning authorities should take into account the relative importance of archaeological sites (para 5). It also notes that in determining planning applications that may impact on archaeological features or their setting, planning authorities may on occasion have to balance the benefits of development against the importance of archaeological features (para 6). The desirability of preserving a monument (whether scheduled or not) is a material consideration and the objective should be to assure the protection and enhancement of monuments by preservation in situ, in an appropriate setting. When preservation in situ is not possible, recording and / or excavation followed by analysis and publication of the results may be an acceptable alternative (para 14).

**Managing Change in the Historic Environment: Setting (2016)**

- 10.2.9 Historic Environment Scotland's guidance document, 'Managing Change in the Historic Environment: Setting' (HES 2016b), notes that:

*“Setting can be important to the way in which historic structures or places are understood, appreciated and experienced. It can often be integral to a historic asset’s cultural significance.”*

*“Setting often extends beyond the property boundary or ‘curtilage’ of an individual historic asset into a broader landscape context”.*

- 10.2.10 The guidance also advises that:

*“If proposed development is likely to affect the setting of a key historic asset, an objective written assessment should be prepared by the applicant to inform the decision-making process. The conclusions should take into account the significance of the asset and its setting and attempt to quantify the extent of any impact. The methodology and level of information should be tailored to the circumstances of each case”.*

## 10.3 Consultation

- 10.3.1 Table 10.1 provides summaries of consultation responses, on cultural heritage matters, received from Historic Environment Scotland and Dumfries and Galloway Council to the 2015 Planning Application and the scoping report for the current application.

**Table 10.1 – Issues Identified During Consultation**

Consultee	Consultation Response	Applicant Action
Historic Scotland Formal Response to 2015 Planning Application (11.08.2015)	Historic Scotland does not object to the proposed development. They are content with the methodology used for the assessment and concur with the assessment of impacts within their remit.	The same methodology used in the 2015 application is used in this EIA Report.
Historic Environment Scotland Scoping Response to 2017 Scoping Report (24.05.2017)	Would expect any ES produced to contain a full appreciation of the historic environment assets	The Chapter contains an assessment of all historic environment

Consultee	Consultation Response	Applicant Action
	potentially affected and the likely impacts on their site and setting.	assets and the potential impacts.
Dumfries and Galloway Council Archaeologist (16.02.2016) Formal Response to 2015 Planning Application	DGC confirmed that the methodology used is suitable. Consider that with regards to LDP policy HE3 significant adverse effects remain with respect to St Connel's Church. Request that conditions relating to a Written Scheme of Investigation with the respect to undiscovered archaeological features and archaeological fencing for known archaeological features are applied to the consent.	The same methodology used in the 2015 application is used in this EIA Report. The Applicant is in agreement with the implementation of the conditions.
Dumfries and Galloway Council Archaeologist Scoping Response to 2017 Scoping Report (01.06.2017)	The existing baseline was described in Chapter 10 of the original ES for the Consented Development, and there have been no significant changes subsequently. The archaeology service has accepted that the significant indirect effect noted above does not meet the threshold to warrant objection. It is agreed that direct effects on assets during the construction phase should be the focus of the cultural heritage ES, and that no additional effects to those covered in the previous EIA are anticipated.	This EIA Report chapter has considered the same baseline as the Consented Development Environmental Statement.

## 10.4 Assessment Methodology

### **Study Area**

- 10.4.1 The potential for direct effects upon heritage assets has been considered within the Proposed Development site, as illustrated on Figure 10.1.
- 10.4.2 The consideration of effects upon the setting of heritage assets uses a 10 km radius study area (extending from the outermost turbines of the Proposed Development). No specific assets beyond 10 km were identified, either by statutory consultees, or through preliminary assessment of the 35 km ZTV as requiring consideration in the assessment. Figure 10.2 shows the Proposed Development, together with its zone of theoretical visibility (ZTV), and the location of heritage assets within the 10 km radius which have a theoretical view of the turbines. A list of these heritage assets is provided in Appendix 10.2.
- 10.4.3 The consideration of potential cumulative effects upon the settings of heritage assets also uses the 10 km radius study area.

### **Desk Study**

- 10.4.4 A number of information sources were consulted as part of the desk-based assessment work. These include:

- Details of the locations and extents of Scheduled Monuments, Listed Buildings, Conservation Areas, Inventory status Gardens and Designed Landscapes and Inventory status Historic Battlefields in GIS were downloaded from the Historic Scotland Spatial Data Warehouse (Historic Scotland 2015).
- Dumfries and Galloway Council Historic Environment Record.
- The National Record of the Historic Environment (NRHE) Database – Canmore (HES2016c).
- Ordnance Survey maps and other historical maps held by the Map Library of the National Library of Scotland.
- Modern vertical aerial photographic imagery available on-line (GoogleEarth™ and Bing™).
- Relevant bibliographic references (the 2012 Section 36 Application and Addendum and the 2015 planning application) and online historic resources (Robertson 1791-99, Richardson 1834-45) were consulted to provide background and historic information.
- The online Historic Land-Use Assessment Data for Scotland (HLAMap) (HES 2016d), was consulted for information on the historic land use character of the site.
- The Scottish Palaeoecological Archive Database (SPAD) (Coles et al 1998), which records the distribution of known sites across Scotland, was consulted for information on sites with palaeoenvironmental potential within or adjacent to the site.

### **Site Visit**

- 10.4.5 The Proposed Development site was subject to a detailed walk-over survey in 2012 as part of a cultural heritage assessment undertaken for the Section 36 Application (2012) and the results from this study are still valid.
- 10.4.6 An additional site visit to the Project Area was undertaken by CFA Archaeology Ltd (CFA) on 27<sup>th</sup> May 2015. That site visit focused on heritage assets most likely to receive significant effects on their settings (i.e. those closest to the Proposed Development) and those considered on preliminary analysis to be most sensitive to changes to their settings. The aim of the site visit was to:
- assess the character and sensitivity of the settings of cultural heritage assets within 10 km of the Proposed Development that are indicated by the ZTV to have theoretical views of the turbines; and
  - assess the effects of the Proposed Development on those settings.
- 10.4.7 Assets identified through consultations as requiring assessment of the effect of the Proposed Development on their settings were all visited, as far as public access allowed.
- 10.4.8 The results from the 2015 survey are still valid and no additional site visits have been carried out for this current application.
- 10.4.9 No intrusive archaeological interventions have been carried out as part of this assessment.

## Assessment of Potential Effect Significance

### Importance of Heritage Assets

- 10.4.10 The importance of heritage assets reflects the policy protection given to them in SPP and HESPS. Table 10.2 summarises the relative importance of heritage assets relevant to the assessment.

**Table 10.2 – Relative Importance of Heritage Assets**

Heritage Importance	Definition/Criteria
National/International	Assets of national or greater importance, including: Scheduled Monuments, and sites proposed for scheduling; Category A Listed Buildings. Heritage assets classified as being of 'national' importance in the Dumfries and Galloway Council HER
Regional	Assets of regional importance, including: Archaeological sites and areas of distinctive regional importance; Category B Listed Buildings; Conservation Areas; Archaeologically Sensitive Areas (ASA); and Non-Inventory designed landscapes (NIDL) identified in the Dumfries and Galloway Council HER
Local	Assets of local importance, including: Archaeological sites of local importance; Category C Listed Buildings; Unlisted buildings and townscapes with local (vernacular) characteristics.
Lesser	Assets of little or no importance, including: Sites of former archaeological features; Artefact find-spots; Unlisted buildings of minor historic or architectural interest; Poorly preserved examples of particularly types of features.

### Assessment of Direct Effects

- 10.4.11 Criteria for assessing the magnitude of direct impacts, which measures the degree of change to the baseline condition of a feature that will result from the construction activities of the development, are presented in Table 10.3.

**Table 10.3 – Magnitude of Direct Effects**

Level of Magnitude	Definition/Criteria
High	A major impact fundamentally changing the baseline condition of the heritage asset, leading to total or major alteration of character.
Medium	A moderate impact changing the baseline condition of the heritage asset materially but not fundamentally, leading to partial alteration of character.
Low	Minor detectable impacts which do not alter the baseline condition of the heritage asset materially.
Negligible	A very slight and barely distinguishable change from baseline conditions.

- 10.4.12 Table 4.2 (Chapter 4: Approach to EIA) provides a guide to the relationship between the 'sensitivity of an identified receptor' and the anticipated 'magnitude of an impact'. It is, however, acknowledged in Chapter 4 that professional judgement is equally important in verifying the suitability of this guiding 'formula' to the assessment of the significance of each individual effect. For Cultural Heritage, the importance of individual assets as defined in Table 10.2 is used in the place of 'sensitivity of receptor'. The parameters set out in Table 4.2

have therefore been adopted but amended to suit the requirements for assessment of effects (direct and on setting) for Cultural Heritage assets.

10.4.13 The cultural heritage importance of the asset defined in Table 10.2 and the magnitude of the predicted impact (Table 10.3) are used along with professional judgement to inform the assessment of the likely significance of the direct effect. Table 10.4 summarises the criteria for assigning significance of a direct effect. For consistency, the ‘significance levels,’ set out in Table 4.2, have been adopted for the Cultural Heritage assessment. Professional judgement has been employed to provide the stated level of significance provided in the text and appendices.

**Table 10.4 – Matrix for assessing Significance of Direct Effects**

Heritage Importance of Asset ▼	Magnitude of Impact ►			
	High	Medium	Low	Negligible
National / International	Major	Major	Moderate	Minor
Regional	Major	Moderate	Minor	Negligible
Local	Moderate	Minor	Negligible	Negligible
Lesser	Minor	Negligible	Negligible	Negligible

10.4.14 In the assessment that follows, Major and moderate effects are considered to be ‘significant’ in the context of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (Electricity Works Regulations 2017). Minor and negligible effects are ‘not significant’.

### ***Assessment of Effects on Setting (Operational Impacts)***

10.4.15 Historic Environment Scotland’s guidance document, 'Managing Change in the Historic Environment: Setting' (HES 2016), recommends that there are three stages in assessing the impact of a development on the setting of a historic asset or place:

- Stage 1: identify the historic assets that might be affected by the proposed development;
- Stage 2: define and analyse the setting by establishing how the surroundings contribute to the ways in which the historic asset or place is understood, appreciated and experienced; and,
- Stage 3: evaluate the potential impact of the proposed changes on the setting, and the extent to which any negative impacts can be mitigated.

10.4.16 Following this approach, the assessment adopts a four stage approach:

- identification of the characteristics of the setting of the asset;
- assessment of the sensitivity of that setting;
- identification of how the presence of the proposed wind farm would affect that setting (magnitude of impact); and,
- assessment of the significance of the effect.

10.4.17 The turbine blade tip height ZTV for the Proposed Development was used to identify those heritage assets from which there would be theoretical visibility of one or more of the proposed wind turbines.

10.4.18 Scheduled Monuments, Category A and B Listed Buildings, Conservation Areas, Inventory Gardens and Designed Landscapes and Inventory Historic Battlefields, where present within the blade tip height ZTV and within 10 km of the proposed development, are included in the assessment. Category C Listed Buildings, heritage assets designated as ‘national’ important in the HER and NIDLs, within the blade tip height ZTV and within 5 km of the outermost turbines, are also included in the assessment. These assets are included in the tabulated assessment in Appendices 10.2 and 10.3 and they are shown on Figure 10.2. All assets of negligible sensitivity are excluded from assessment for effects on their settings.

**Criteria for Assessing Sensitivity of Setting**

10.4.19 Sensitivity of setting has been assessed by considering two factors:

- the relative weight which statute and policy attach to the asset and its setting (sensitivity of asset) (Table 10.2); and
- the degree to which the baseline setting contributes to the understanding and / or appreciation, and hence value, of the asset (Table 10.5).

**Table 10.5 – Contribution of Setting to Understanding and Appreciation of Asset**

<b>Contribution of Setting</b>	<b>Definition/Criteria</b>
High	A setting which makes a strong positive contribution to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of a receptor. E.g. a prominent topographic location; surroundings that include related monuments in close association; surroundings that are believed to be little changed from those when the receptor was created.
Moderate	A setting which makes some positive contribution to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of a receptor. E.g. surroundings that complement the siting and appearance of a receptor, such as the presence of a feature of the rural past within a more recent farming landscape containing little or no urban or industrial development.
Low	A setting which makes little positive contribution to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of a receptor. E.g. where surroundings only partially complement the siting and appearance of a receptor, such as the presence of a feature of the rural past within a partly urbanised or industrialised landscape.
Negligible	A setting which does not contribute positively to the understanding and/or appreciation of the siting and/or historical/archaeological/architectural context of a receptor. E.g. immediate surroundings, such as of a commercial coniferous single species woodland or industrial development, that are not relevant to understanding the context of the receptor.

10.4.20 These two sets of criteria (Tables 10.2 and 10.5) are combined to assess the overall sensitivity of a setting, as set out in Table 10.6.

**Table 10.6 – Sensitivity of Setting of an Asset**

Importance of Asset ▼	Contribution to Setting ►			
	High	Moderate	Low	Negligible
National / International	High	Medium	Medium	Low
Regional	Medium	Medium	Low	Low
Local	Medium	Low	Low	Low

**Identification of Magnitude of Impact on Setting**

10.4.21 Where it has been determined that the setting of an asset is such that there is no potential for it to be affected by the presence of the Proposed Development (including all assets of lesser cultural heritage importance) the asset is not considered further in the assessment. For the remaining assets, the magnitude of impact on setting was assessed according to the thresholds set out in Table 10.7.

**Table 10.7 – Magnitude of Impact on Setting**

Level Of Magnitude	Definition/Criteria
High	Fundamental material impacts obviously changing the surroundings of a receptor, such that its baseline setting is substantially or totally altered.
Medium	Effects discernibly changing the surroundings of a receptor, such that its baseline setting is partly and materially altered.
Low	Slight, but detectable impacts that do not materially alter the baseline setting of the receptor.
Imperceptible	A very slight and barely distinguishable change from baseline conditions.

**Assessment of Significance of Effect on Setting**

10.4.22 The significance of an effect on setting depends on both the magnitude of impact and the sensitivity of the setting of the asset. Table 10.8 presents the matrix that has been used, together with professional judgement, to inform the determination of the significance of effects on setting.

**Table 10.8 – Significance of Effect on Setting**

Magnitude of Impact ▼	Sensitivity of Setting ►		
	High	Medium	Low
High	Major	Moderate	Minor
Medium	Moderate	Moderate	Minor
Low	Minor	Minor	Negligible
Imperceptible	Negligible	Negligible	Negligible

10.4.23 In the assessment that follows, Major and moderate effects are considered to be ‘significant’ in the context of the Electricity Works Regulations 2017. Minor and negligible effects are ‘not significant’.

**Requirements for Mitigation**

10.4.24 Schedule 4 section 7 of the Electricity Works Regulations 2017 state measures should be included in the EIA Report that are envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.

10.4.25 PAN 1/2013 (Revision 1.0) (Scottish Government 2013) describes mitigation as a hierarchy of measures: prevention, reduction, compensatory (offset) measures. Prevention and

reduction measures can be achieved through design, whilst compensatory measures offset effects that have not been prevented or reduced.

- 10.4.26 The emphasis in Scottish Government Planning Advice Note (PAN) 2/2011: Planning and Archaeology (PAN2) is the preservation of important remains in situ where practicable and by record where preservation is not possible. The mitigation measures presented below therefore take account of this planning guidance and provide various options for protection or recording and ensuring that, where practical, surviving assets are preserved intact to retain the present historic elements of the landscape.
- 10.4.27 Detailed mitigation proposals in respect of potential effects on cultural heritage assets (direct effects and effects on setting) are set out below (Section 10.8).

### ***Assessment of Residual Effect Significance***

- 10.4.28 The assessment of the significance of residual effects (direct and effects on setting) takes into account the proposed mitigation measures. Whilst prevention and reduction measures can provide mitigation that will remove or reduce the significance of a potential effect, offset measures do not reduce the level of significance; they can, however, provide compensation for adverse effects.

### ***Cumulative Assessment***

- 10.4.29 The assessment of cumulative effects on cultural heritage is based upon consideration of the effects of the Proposed Development on the settings of assets within 10 km of the site in addition to the likely effects of other operational, consented and proposed wind energy developments (at the application stage). The assessment takes into account the relative scale (i.e. size and number of turbines), of the various developments, their distance from the affected asset, and the potential degree of visibility from the assets of the various developments. Sites which at the scoping stage are not included in the cumulative assessment, due to the lack of detailed information regarding them. The criteria adopted above (Section 10.4.15 – 10.4.23) in respect of effects on setting were employed to determine the magnitude and significance of the predicted cumulative effects.

### ***Limitations to Assessment***

- 10.4.30 Assessment of the significance of direct effects on historic environment features identified within the Proposed Development site is derived from information on their baseline condition gathered during field survey carried out in 2012 for the Section 36 Application.
- 10.4.31 No World Heritage Sites, Inventory Gardens and Designed Landscapes, or Inventory Historic Battlefields are present within the 10 km study area and these have been scoped out of further assessment. Effects on the settings of assets beyond 10 km are excluded as none beyond that distance have been identified by examination of the ZTV where an effect on its setting could be considered to be potentially significant. Neither Historic Scotland (now Historic Environment Scotland) nor Dumfries and Galloway Council identified any particular heritage assets beyond 10 km as requiring inclusion in the assessment for effects on setting for the 2012 Section 36 application and it is an assumption of the assessment that follows that that advice remains valid.

## 10.5 Baseline Conditions

### ***Heritage Assets within the Proposed Development Site***

- 10.5.1 Eleven heritage assets have been identified within the Proposed Development site. The locations and extents of these are shown on Figure 10.1 and Appendix 10.1 provides detailed gazetteer information on their character and baseline condition. Numbers in brackets and in bold, in the following sections, refer to asset numbers shown on Figure 10.1 and listed in Appendix 10.1.

#### **Prehistoric**

- 10.5.2 The HER records that a Bronze Age adze (**10**) (ancient wood working tool) was discovered at Librymoor Plantation in 1928. The area in which the find was made has been disturbed by opencast mining in the 1980s/90s and there is no potential for buried remains associated with this find to survive in the area. The artefact does not remain *in situ* and the find-spot is considered to be of lesser heritage importance.

#### **Medieval**

- 10.5.3 Fragments of an earthen bank (**6a-b**) are recorded crossing land at the northern edge of the Proposed Development site. The bank is known as 'The Deil's Dyke' and was first recorded by Galloway antiquary Joseph Train in the 1840s (cited in Graham 1951). It has been suggested that the dyke was a Pictish defensive structure that ran from Beoch to Knockreach, across the breadth of Dumfries and Galloway.
- 10.5.4 Graham (1948-49) records that the earthworks that make up what is recorded as the 'Deil's Dyke' show no common constructional features and some appear to be of no great age. Instead, Graham argues that the earthwork remains are not those of a once continuous dyke that transverses the whole breadth of Galloway, but are instead individual 'march-dykes/head-dykes' (agricultural boundaries) marking the boundaries between neighbouring farms. Excavations carried out in 1981 (Barber 1981) on sections of the dyke at Kirkconnel (**6b**) recorded that here the bank had been constructed by stripping turves and underlying soil either side of the dyke, and piling this up to form a bank approximately 2 m high. Two sherds of 12<sup>th</sup> century pottery were recovered from the core of the bank, during the excavation, suggesting that at least this section is possibly of early medieval date. However, evidence from other sections of the dyke suggest that some of the structure may have earlier prehistoric origins (Barber 1981) as dating evidence from the original ground surface under the bank showed it to be from some time in the late Iron Age (Barber 1981).
- 10.5.5 The section of bank (**6b**) at Librymoor Plantation has been removed by open cast coal mine carried out in 1980s/90s. In light of the potential prehistoric date for sections of the dyke the remaining part of the Deil's Dyke surviving at Nether Cairn is assessed as being potentially of regional importance.

#### **Post-medieval Agrarian Features**

- 10.5.6 Two Y-shaped sheep shelters (**2** and **5**) and two circular sheepfolds (**3** and **7**) are depicted on the Ordnance Survey 1<sup>st</sup> and 2<sup>nd</sup> Edition maps (1860 and 1900) within the Proposed Development site. These structures are all visible on modern aerial photographs within areas of rough pasture. In addition, two additional sheepfolds (**4** and **8**) are visible on modern aerial photographs; neither is depicted on the 1<sup>st</sup> and 2<sup>nd</sup> Edition maps suggesting that they

are of relatively recent date. The sheep shelters and sheepfolds are all minor 19<sup>th</sup>-20<sup>th</sup> century agricultural features and area considered to be of lesser heritage importance.

### **20<sup>th</sup> Century Mining Works**

- 10.5.7 The coal authority (The Coal Authority 2011) records the presence of several former mine shafts (**1** and **9**), at Nether Cairn and Libry Moor respectively. Mining in these areas was closed in 1942 and the shafts were in-filled and the land-reinstated as pasture. The mine shafts at Libry Moor have since been removed during opencast coal mining carried out in this area in the 1980s/90s and no longer survive. The shafts are considered to be of lesser heritage importance.

### **Archaeological Potential of the Proposed Development Site**

- 10.5.8 The HLAmap records that the area is open moorland/rough pasture to the south of Kirkconnel at 270 m-290 m AOD and surrounded by commercial forestry plantation at Polnagrie Hill, Libry Moor and Wham Rig. Part of the Site at Libry Moor has been recently been planted with commercial forestry following the closure of the former opencast coal mining operations.
- 10.5.9 The Dumfries and Galloway Wind Farm Landscape Capacity Study (Anderson 2011) records that the Proposed Development straddles two landscape character types: Unit 9 - Upper Dale, Upper Nithsdale and Unit 19a - Southern Uplands Nith Forest, Ken. Unit 9 is characterised by post-improvement (19<sup>th</sup>-20<sup>th</sup> century) fields within the valley floor which are edged by higher hills utilised for rough grazing; whilst Unit 19a is characterised as forestry with very little evidence of relict land-use.
- 10.5.10 Few upstanding heritage assets are present within the Proposed Development site, the bulk of those recorded are 19<sup>th</sup>/20<sup>th</sup> century agrarian features, such as sheepfolds and sheep shelters. No prehistoric or medieval features have been identified within the Proposed Development site.
- 10.5.11 A small number of find-spots of prehistoric date and early historic period are recorded in the wider surrounding area, including:
- a middle Bronze Age flanged adze (edge tool for wood working) (NMRS Ref: NS71SW 5) recovered during drainage works in the 1920s at Libry Plantation, approximately 600 m north of the Proposed Development;
  - a hammer stone (NMRS Ref: NS71SW 2), probably of early prehistoric date, uncovered near to Kello Burn in the late 1800s, approximately 1.5 km to the east; and,
  - a cinerary urn and associated human remains (NMRS Ref: NS71W 2) of probable Roman date uncovered on the southern edge of Kirkconnel in 1841 during road works.
- 10.5.12 A possible Roman fortlet and temporary camp (NMRS Ref: NS71SW 11) has been identified to the north of Kirkconnel at Bankhead, around 2.5 km from the Proposed Development site.
- 10.5.13 Later settlement is recorded on General Roy's Military Survey Map of Scotland (1747-55) at Kirkconnel and Sanquhar both of which have medieval origins. The remains of St Connel's Church (**MDG75**), of late-12<sup>th</sup>/early-13<sup>th</sup> century construction, but retaining earlier 9<sup>th</sup> century remains, survives today just north of Kirkconnel, approximately 3 km to the north of the Proposed Development, and the ruins of the late 14<sup>th</sup> century Sanquhar Castle (**687**) are present on the outskirts of Sanquhar (7 km away).

- 10.5.14 Several farmsteads (or ‘fermtouns’) and associated open fields are depicted on Roy’s Military Survey Map (1747-55) along the River Nith to either side of Kirkconnel. Amongst these are ‘Crockroy’, ‘Rigg’ and ‘Drumbuie’, all of which survive today; the evidence demonstrating that this area was well settled and cultivated by the mid-18<sup>th</sup> century. The Proposed Development area itself is, however, shown as open moorland on Roy’s map and this land-use continues on the Ordnance Survey 1<sup>st</sup> and 2<sup>nd</sup> Edition maps (1860 and 1900). Today, much of the site continues in use as moorland and rough pasture, utilised predominantly for grazing, and has undergone little modification since the 18<sup>th</sup> century. Opencast coal mining (see Figure 10.1 for extent; The Coal Authority 2011) was carried out at Libry Moor in the 1980s/1990s; following closure the land was reinstated and largely planted with commercial forestry. The areas of opencast mining are consequently have no further archaeological potential.
- 10.5.15 Taking into account the present historic environment record, both within the Proposed Development site and in the immediate vicinity, and the predominantly pastoral use of the Site, it is considered that the potential for finding hitherto undiscovered remains of archaeological significance is low-medium. However, given the limited land-take required by the separate elements of the Proposed Development, the probability of encountering unknown buried remains during the course of the construction work is judged to be low.

#### **Heritage Assets within the Wider Landscape**

- 10.5.16 The blade tip height ZTV (Figure 10.2) indicates that within 5 km of the Proposed Development there are four Category B Listed Buildings, three Category C Listed Buildings and four NSR Sites that have predicted visibility of the proposed turbines. One of these heritage assets, Deil’s Dyke (**11; MDG11235 & MDG 11247**) lies partially within the Proposed Development site (across the western site access track).
- 10.5.17 An additional three Scheduled Monuments, one Category A Listed Building, 22 Category B Listed Buildings and one Conservation Area are between 5 km and 10 km of the Proposed Development and are predicted to have visibility of one or more turbines.
- 10.5.18 The majority of the heritage assets from which there is theoretical visibility of the proposed turbines are located in the village of Sanquhar and it is probable that the Proposed Development will be largely or entirely screened from view from these assets by the surrounding built environment. Relatively few heritage assets stand in isolated, rural locations where wide landscape views are possible.

## **10.6 Assessment of Do-Nothing Scenario**

- 10.6.1 Should the Proposed Development not be consented, the “do-nothing scenario” will apply to the current baseline environment, in that the Applicant will construct the Consented Development.
- 10.6.2 The Consented Development was environmentally assessed and consented in 2015 and the assessment is reported within the Sandy Knowe Wind Farm Environmental Statement (2015).

## 10.7 Assessment of Proposed Development Potential Effects

### **Construction**

- 10.7.1 The assessment of potential construction effects has been carried out with reference to the Proposed Development layout and the cultural heritage constraints shown on Figure 10.1.
- 10.7.2 Any ground breaking activities associated with the construction of the Proposed Development (such as those required for turbine bases and crane hard-standings, access tracks, borrow pits, temporary compound, etc.) have the potential to disturb or destroy features of cultural heritage interest. Other construction activities, such as vehicle movements, soil and overburden storage and landscaping also have the potential to cause direct permanent and irreversible effects on the cultural heritage.

### **Potential Direct (Construction) Effects**

- 10.7.3 One potential direct effect is predicted: on the remains of the Deil's Dyke (6a), which is crossed by the route of the western site access track through Nether Cairn. The dyke is assessed as being of regional heritage importance.
- 10.7.4 Only a small part of the dyke will be directly affected by the Proposed Development and construction works will not affect the majority of the dyke remains. It is therefore considered that the direct impact on the Deil's Dyke as a whole, resulting from construction of the access track, will be of low magnitude, resulting in an effect of **minor** significance.
- 10.7.5 Where the dyke is crossed by the access track the remains would receive a direct impact of medium magnitude (affecting part of the remains and leading to a partial change of its character). The effect would be of **moderate** significance but could be offset through mitigation (see below).

### **Operation**

- 10.7.6 The presence of features of the Proposed Development may have indirect effects on the setting of heritage assets in the wider landscape. In particular, there is potential for the turbines to be present in important views of, and from, Scheduled Monuments, Listed Buildings and Conservation Areas in the vicinity of the Proposed Development.
- 10.7.7 Heritage assets with statutory designations of national or regional importance (Scheduled Monuments, Category A and B Listed Buildings, Conservation Areas, Inventory Gardens and Designed Landscapes and Inventory Historic Battlefields) within 10 km of the outermost turbines of the Proposed Development and having theoretical visibility of one or more turbine, based on the blade tip height ZTV, were identified using ArcGIS analysis of data derived from Historic Scotland's data download facility.
- 10.7.8 Identification of Category C Listed Buildings where settings could be affected was restricted to those within 5 km of the Proposed Development as these are buildings (and other structures) that are generally minor vernacular building types of the local historic environment, with localised geographical settings.
- 10.7.9 In addition to those assets identified through the above analysis, heritage assets identified in the DGC HER as of national importance and Archaeological Sensitive Areas and Non-Inventory Designed Landscapes (designated by DGC as of regional importance) within 5 km

of the outermost proposed turbines, have been taken into account in the tabulated assessment.

- 10.7.10 The baseline setting of each relevant asset or related group of assets has been characterised on a case-by-case basis. The characterisation of the setting of an asset is based upon its properties and location, and takes into account the factors identified in the guidance issued by Historic Scotland (Managing Change 2016).
- 10.7.11 Appendices 10.2 and 10.3 provide tabulated summary assessments on a site by site basis, of the predicted effects on the settings of assets within 10 km of the Proposed Development where the blade tip height ZTV indicates that there will be theoretical views of one or more turbines. The table also contains cross reference, where applicable, to the relevant cultural heritage photomontage and/or to an appropriate visualisation provided in the LVIA.
- 10.7.12 The assessment of significance of effect has been based on the analysis of the blade tip height ZTV, taking into account the distance of the assessed asset from the Proposed Development, the number of blade tips potentially visible and the present baseline setting of each asset (which includes the operational Hare Hill Wind Farm). The ZTV model is however based on bare-earth surface topography and takes no account of obstructions to intervisibility caused by existing forestry and other vegetation or buildings and other man-made features. Therefore, professional judgement has been used to assess the significance of effects informed by the ZTV, photomontages and site visits.
- 10.7.13 Assets highlighted by statutory consultees in their responses to the Section 36 Application (2012) and the Section 36 Addendum (2013) as considered to have the most sensitive settings (Table 10.1) have been assessed using photomontages (Figures 10.4.4 and 10.5.4) and 360° degree cumulative wirelines. A list of those cultural heritage assets for which visualisations have been provided is given below (Table 10.9).

**Table 10.9 – List of Cultural Heritage Visualisations**

Figure Number	Asset Name (Index No / HER Ref)	Monument Status	Predicted Significance of Effect	Distance to the nearest turbine (km)
Figure 10.4.1-4	Crichton Peel and Sanquhar Castle ( <b>687</b> )	Scheduled Monument	Minor	7.6 east (T23)
Figure 10.5.1-4	Sanquhar Parish Church (40538)	Category B Listed Building	Minor	7 east (T23)
Figure 10.6.1-4	Old St Connel's Church and Graveyard ( <b>MDG75</b> )	NSR Site	Minor	4.6 north-east (T01)

**Potential Setting (Indirect/Operational) Effects**

Crichton Peel and Sanquhar Castle (**687**) (Figure 10.4.1-4)

- 10.7.14 Crichton Peel and Sanquhar Castle, a 13<sup>th</sup> century fortification with later 19<sup>th</sup> century restoration, stands on the edge of Sanquhar on a slightly elevated position within an improved pasture field just west of Castlebank Cottage and the derelict Castlemains Farmstead and the ruins are currently surrounded by a high wire fence for safety reasons. The castle is bounded on the west by the River Nith and to the north by Townfoot Burn. The main views from the castle are focused north-west and south-east along the River Nith valley; although these views are partly screened by trees along Townfoot Burn, around Castlebank Cottage, and a modern housing estate, on the edge of Sanquhar, to the north and north-east of the castle. Views out take in the wider rural farming landscape that

surrounds the castle and the built up edges of Sanquhar. Due to the relatively low-lying location of the castle, the vegetation and trees around part of the castle, and the surrounding buildings (Castlebank Cottage and Castlemains Farmstead) it is best appreciated at close quarters. It does not constitute an obvious feature in the wider area, being most visible only in the local landscape when approaching Sanquhar from the south-east along the A76 public road.

- 10.7.15 The castle has a high social value as a locally important archaeological feature and, as a monument of the medieval period, it has a high archaeological interest and potential as a recreational/educational resource. The nearby modern housing development detracts somewhat from the setting of the monument, but otherwise the rural character of the landscape surrounding the castle is largely sympathetic to the appreciation and understanding of the castle and its setting. Crichton Peel and Sanquhar Castle is a monument of national heritage importance and its current setting is assessed as being of medium sensitivity.
- 10.7.16 The Proposed Development will be visible in distant views (Figure 10.4.4), around 7.6 km, to the west-north-west of the castle, seen along with the operational Hare Hill Wind Farm which will be visible beyond the Proposed Development and at a slightly higher elevation. Glimpses of the Proposed Development will be seen beyond the castle buildings when approaching the castle from Castlemains Farmstead from the north-east and whilst looking out along the Nith River valley on the western side of the castle. The introduction of the Proposed Development will constitute a slight, detectable change to the wider landscape surroundings of the castle, but its presence will have little effect on the ability to appreciate and understand the setting of the castle. Other views out from the castle will be unaffected and the limited views of it from the A76 approach to Sanquhar will be uninterrupted.
- 10.7.17 The effect of the proposed Development on the setting of Crichton Peel and Sanquhar Castle is assessed to be of low magnitude, resulting in an effect of **minor** significance and not significant in EIA terms. The effect would be no different to that identified in the 2015 ES which supported the planning application for the Consented Development.

Sanquhar Parish Church (40538) (Figure 10.5.1-4)

- 10.7.18 This 19<sup>th</sup> century church stands within a large churchyard on raised ground to the west side of Sanquhar and on the edge of the Conservation Area. The building is orientated east to west with entrances at the western end and on the northern side of the building. Views out from the church, to the north and west, overlook low lying ground which is used as playing fields for the local high school and towards Sanquhar House on the opposite side of the A76; wider views are also gained out to surrounding rural farmland that surrounds Sanquhar in these same directions. Views in other directions, to the east and south, are principally limited by surrounding buildings. The church, which is still in use as an ecclesiastical building, is a prominent feature when approaching the town along the A76 from the north-west. The setting of the church is primarily defined by its association with Sanquhar and the surrounding semi-urban environment in which it stands. The church is of regional heritage importance and is considered to have a setting of medium, but localised sensitivity.
- 10.7.19 The Proposed Development will be present around 7.1 km to the west of the church and visible in distant views from the church, seen along with the operational Hare Hill Wind Farm in the same arc of view; the Hare Hill turbines being visible beyond the Proposed Development and at a slightly higher elevation. The Proposed Development will also be

partially screened from view by intervening woodland at Libry Moor (Figure 10.5.4) Although the proposed turbines will be an additional element in the wider surrounding landscape and will alter the character of the landscape out over which views from the church extend, the relationship between the asset and its surrounding landscape (both rural and urban) will still be easily legible and the presence of the Proposed Development will not affect an ability to appreciate the localised setting of the church and its association with Sanquhar.

- 10.7.20 The effect of the Proposed Development on the setting of the church is assessed to be of low magnitude, resulting in an effect of **minor** significance and not significant in EIA terms. The effect would be no different to that identified in the 2015 ES which supported the planning application for the Consented Development.

Old St Connel's Church & Graveyard (MDG75) (Figure 10.6.1-4)

- 10.7.21 The turf-covered foundations of the former, medieval St Connel's Church are situated in a slightly elevated location, on a south-facing plateau on the lower slopes of Kirkland Hill, within a rural landscape of enclosed improved pasture farmland, and rough pasture grassland and moorland. The principal views from the church are to the south, focused along the Glenaylmer Burn towards Kirkconnel and across the Nith valley below, and westwards along the valley floor. Views to the north and north-west are constrained by the rising ground and a range of hills in that direction. The church remains, surviving as low relief features within a walled enclosure, can best be fully appreciated from within its immediate environs, and they are not a prominent visual feature in the local landscape. The church remains have a relatively localised setting within the Nith valley.
- 10.7.22 The rural farmland surroundings of the church are reasonably sympathetic to the appreciation of both the surviving remains, and the visual relationship of the church's location within the valley below, although surface coal mining is also a visual feature of the landscape to the west. The remains of St. Connel's Church have a measure of social and experiential value due to their archaeological potential and historical and architectural properties, and landscape setting; they are a valued part of the local historic landscape and are promoted locally forming part of the Kirkconnel Parish Heritage Trail and there are interpretation boards on site. The congregation of the present St Connel's Church meet annually in the ruins of the original Church for a service. The enclosure, within which the church stands, also contains a cairn dedicated to local striking miners who, in 1926, excavated the site and uncovered the churches footings. The church is classified in the Dumfries and Galloway HER as being of national heritage importance, and it is assessed as having a setting of medium, but localised sensitivity.- The Proposed Development will be present to the south-west of the asset, approximately 4.6 km away. Figure 10.6.4 shows that all 24 proposed turbines will be visible from the church on the opposite side of the River Nith valley and at a similar elevation. The operational Hare Hill Wind Farm will be visible in the same views as the Proposed Development, but visibly separated from the proposed turbines and at a greater distance from the church, partially screened by intervening topography. However, the Proposed Development, on the opposite side of the river valley, will not affect an ability to appreciate the church building and its associated churchyard nor affect an appreciation of its immediate rural setting; the relationship between the asset and its surrounding landscape still being easily legible. In addition, the Proposed Development will not affect an ability to understand the historical or archaeological properties of the monument. -

- 10.7.23 It is assessed that the Proposed Development will have an effect of low magnitude on the setting of the St Connel's Church and Graveyard, resulting in an effect of **minor** significance and therefore not significant in EIA terms. The effect would be no different to that identified in the 2015 ES which supported the planning application for the Consented Development.

### ***Decommissioning***

- 10.7.24 There will be no direct effects on heritage assets during the decommissioning of the Proposed Development, presuming that the same road infrastructure is used for the dismantling and removal of the built features of the Proposed Development. The effect of the removal of the turbines and the dismantling of the associated infrastructure will remove indirect effects on the settings of heritage assets.

## **10.8 Mitigation Measures**

### ***Design Mitigation***

- 10.8.1 The layout of the Proposed Development, including the positioning of the turbines, routing of access tracks and the siting of other infrastructure elements has been arrived at through a series of iterative stages to develop the best layout within the context of all environmental and technical constraints and the Proposed Development has been designed to specifically avoid heritage assets where possible (refer to Chapter 2).

### ***Construction Mitigation***

- 10.8.2 Planning Advice Note 1/2013: Environmental Impact Assessment (PAN 1/2013) describes mitigation as a hierarchy of measures: prevention, reduction, compensatory (offset) measures. Prevention and reduction measures can be achieved through design, whilst compensatory measures offset effects that have not been prevented or reduced.
- 10.8.3 The emphasis in Planning Advice Note (PAN) 2/2011: Planning and Archaeology (PAN2) is the preservation of important remains in situ where practicable and by record where preservation is not possible. The mitigation measures presented below therefore take account of this planning guidance and provide various options for protection or recording and ensuring that, where practical, surviving assets are preserved intact to retain the present historic elements of the landscape.
- 10.8.4 All mitigation works presented in the following paragraphs will take place prior to, or, where appropriate, during, the construction of the Proposed Development. All works will be conducted by a professional archaeological organisation, and the scope of works will be detailed in the Written Scheme(s) of Investigation (WSI).

### **Preservation in Situ**

- 10.8.5 Two sheepfolds (**3** and **4**) which lie in close proximity to the access track between Turbines T10 and T13 will be marked-off to prevent accidental damage occurring to them during construction activities in the vicinity.
- 10.8.6 Where the access track crosses the Deil's Dyke (**6a**) the required breach in the alignment of the dyke will be kept to a minimum width necessary to facilitate the passage of the track and associated drainage ditch. This section will be subject to additional mitigation (see below).

### **Recording, Excavation and Post-Excavation**

- 10.8.7 Where the Deil's Dyke (6a) is to be crossed by the western site access track this section will be subject to archaeological investigation. Archaeological sections of the bank (and any associated ditch) will be excavated and recorded, by photography and drawings and the dyke where it is to be breached will be carefully removed under archaeologically controlled monitoring; the purpose being to monitor the dismantlement and recover any artefacts that may come to light.
- 10.8.8 Although considered unlikely, if important discoveries are made during archaeological mitigation works and preservation *in situ* is not possible, provision will be made for an appropriate level of recording that may include excavation, where necessary, of any archaeological remains encountered. Such provision will also include the consequent production of written reports on the findings, with post-excavation analyses and publications of the results of the works, as appropriate. This will be offset mitigation and although it will not reduce the level of significance of the effect, it will fully compensate for the loss of any archaeological value that the affected remains may hold.

### **Construction Guidelines**

- 10.8.9 Written Guidelines will be issued for use by all construction contractors, outlining the need to avoid causing unnecessary damage to known sites. The Guidelines will contain arrangements for calling upon retained professional support in the event that buried archaeological remains of potential archaeological interest (such as building remains, human remains, artefacts etc) should be discovered in areas not subject to archaeological monitoring. The guidance will make clear the legal responsibilities placed upon those who disturb artefacts or human remains.

### **Decommissioning**

- 10.8.10 Upon decommissioning of the Proposed Development tracks will be removed and turbine bases and crane hard-standings restored; the access required and works required being similar to those undertaken during the construction phase. The site infrastructure (access tracks and crane hard-standing) will be used in the dismantlement and removal of the turbines.
- 10.8.11 All protective measures (marking off) proposed during the construction phase mitigation will be put in place during and throughout the decommissioning phase to ensure the preservation of important remains *in situ*. Marking out will be removed following the completion of the removal of all infrastructure elements.

### **Operational Mitigation**

- 10.8.12 Effects arising from the operation of the Proposed Development are identified as being of no more than **minor** significance for any heritage asset. All effects are assessed as being not significant in EIA terms and therefore no mitigation is required.

## **10.9 Assessment of Proposed Development Residual Effects**

### **Direct (Construction) Effects**

- 10.9.1 The completion of the programme of archaeological mitigation works set out above (Section 10.8) will minimise (through perseveration *in situ*) or offset the effect on the Deil's Dyke

(through preservation by record) that may occur as a result of the construction of the Proposed Development.

- 10.9.2 There is some (albeit limited) potential for direct effects on any surviving buried archaeological remains that may be encountered. However, taking mitigation into account, any residual effect in relation to potential direct effects on the cultural heritage resources within the Proposed Development site will be of no more than **minor** significance.

### ***Operational Effects on Setting***

- 10.9.3 There will be no significant effects on the settings of cultural heritage assets within the wider landscape; therefore, the Proposed Development will not have a significant residual effect on the setting of any heritage assets. The residual effects would be no different to those identified in the 2015 ES that supported the planning application for the Consented Development.

### ***Decommissioning***

- 10.9.4 The removal of the turbines during decommissioning of the Proposed Development at the end of its operational life time will restore the settings of affected heritage assets to their pre-development status.

## **10.10 Assessment of Proposed Development Cumulative Effects**

- 10.10.1 The assessment of cumulative effects on the cultural heritage assets is based upon consideration of the effects of the Proposed Development on the setting of assets with statutory and non-statutory designations within 10 km of the proposed Development, in addition to the likely effects of other wind farms within the vicinity.
- 10.10.2 The cultural heritage cumulative effect assessment focuses on those assets identified by Dumfries and Galloway Council to be specifically assessed for effects on setting (Table 10.1 for details). Cumulative 360° wirelines from these assets have been produced and relevant Figure references are provided in Table 10.9 (above).
- 10.10.3 Figure 10.3 shows the Proposed Development, the location of heritage assets within 10 km of the Proposed Development from which there will be theoretical views of the turbines, and the locations of other wind energy developments that may, in combination with the Proposed Development, have a cumulative effect on the settings of heritage assets in the wider landscape.
- 10.10.4 Within 10 km of the Proposed Development there are:
- Four operational wind energy developments: Hare Hill (20 turbines), Hare Hill Extension (39 turbines), Whiteside Hill (10 turbines) and Sunnyside (two turbines).
  - Seven consented wind energy developments: Afton (27 turbines), Sanquhar Community Wind Farm (12 turbines), Sanquhar 'Six' (six turbines), Penbreck (nine turbines), Glenmuckloch (eight turbines), Twentysilling Hill (nine turbines) and High Park Farm (one turbine).
  - Seven wind energy developments at the planning application stage, including those which have been refused and are being appealed or are still within the allowable timeframe for appeal: Lethans (26 turbines), Pencloe (21 turbines), Ulzieside (12

turbines), Ashmark (seven turbines), Lorg (nine turbines) and High Park Farm Extension (2 turbines).

- 10.10.5 Other wind farm developments are present or are proposed in the wider landscape (refer to Table 6.13 in Chapter 6). Where predicted to be visible they are shown on the cumulative wirelines from the heritage assets assessed and are referenced in the assessment below.

### ***Crichton Peel and Sanquhar Castle (687)***

- 10.10.6 The cumulative wirelines (Figures 10.4.2-3) for this asset show that when looking in a western direction from the castle the Proposed Development will be visible together with four other wind farm developments (operational Hare Hill and Hare Hill Extension, consented Sanquhar Community Wind Farm and Sanquhar 'Six') as a group. If all of those other developments in that group currently in planning or consented are constructed they would form the baseline against which the addition of the Proposed Development would be a detectable but slight change. The cumulative effect of the addition of the Proposed Development to the operational and proposed cumulative wind farms in the western view on the asset's setting would be of low magnitude; a **minor** effect which is not significance. The effect would be no different to that identified in the 2015 ES which supported the planning application for the Consented Development.
- 10.10.7 The operational Whiteside Hill and the proposed Ulzieside developments would be visibly separate from the main group described above as would the proposed Lethans and consented Glenmuckloch developments. The operational Sunnyside development would also be visible to the north beyond Sanquhar and the consented Twentyshilling Hill would be visible in views to the south. The cumulative effect of the addition of the Proposed Development to the operational and proposed cumulative wind farms to the north and south on the asset's setting would be of no more than low magnitude; a **minor** effect which is not significance. The effect would be no different to that identified in the 2015 ES which supported the planning application for the Consented Development.

### ***Sanquhar Parish Church (40538)***

- 10.10.8 The cumulative wirelines (Figures 10.5.2-3) for this asset show that when looking in a westerly direction from the church the Proposed Development will be visible together with four other wind farm developments (the operational Hare Hill and Hare Hill Extension, consented Sanquhar Community Wind Farm and Sanquhar 'Six') as a group. If all of those developments in that group currently proposed or consented are constructed they would form the baseline against which the addition of the Proposed Development would be a detectable but slight change. The cumulative effect of the addition of the Proposed Development to the operational and proposed cumulative wind farms in the western view on the asset's setting would be of low magnitude; a **minor** effect which is not significance. The effect would be no different to that identified in the 2015 ES which supported the planning application for the Consented Development.
- 10.10.9 The operational Whiteside Hill and consented Ulzieside developments would be visibly separate from the main group described above as would the proposed Lethans and consented Glenmuckloch developments. The operational Sunnyside development would be visible to the north beyond Sanquhar and the consented Twentyshilling Hill would be visible in views to the south. The cumulative effect of the addition of the Proposed Development to the operational and proposed cumulative wind farms to the north and south on the asset's

setting would be of no more than low magnitude; a **minor** effect which is not significance. The effect would be no different to that identified in the 2015 ES which supported the planning application for the Consented Development.

### ***St Connel's Church and Graveyard (MDG75)***

- 10.10.10 The cumulative wirelines (Figures 10.6.2-3) for this asset show that when looking in a southerly direction from St Connel's Church the Proposed Development will be visible along with six additional wind farm developments (operational Hare Hill and Harehill Extension, Whiteside Hill, consented Sanquhar Community Wind Farm and Sanquhar 'Six', and the proposed development at Ulzieside. These developments will be visible as a group along the hill slopes and moorland on the opposite side of the river valley. The majority of the cumulative developments will be visible along the skyline, but the Proposed Development will be largely back clothed by the surrounding hills and set against the backdrop of the other schemes. If all of those other developments in that group currently proposed or consented are constructed they would form the baseline against which the addition of the Proposed Development would be a detectable but slight change. The cumulative effect of the addition of the Proposed Development to the operational and proposed cumulative wind farms in the southerly view on the asset's setting would be of low magnitude; a **minor** effect which is not significance. The effect would be no different to that identified in the 2015 ES which supported the planning application for the Consented Development.
- 10.10.11 The proposed Lethans and consented Glenmuckloch developments would occupy a separate arc of view from that of those to the south being visible along the skyline in the view to the northwest and seen as distinct and separate from the main group to the south. If these two schemes were to go ahead, the cumulative effect of the addition of the Proposed Development in a different arc of view would be of low magnitude; a **minor** effect which is not significance. The effect would be no different to that identified in the 2015 ES which supported the planning application for the Consented Development.
- 10.10.12 The consented Twentyshilling Hill development would lie to the southeast and a great distance (12 km) from the asset. The cumulative effect with Twentyshilling Hill would be of negligible magnitude; a **minor** effect which is not significance. The effect would be no different to that identified in the 2015 ES which supported the planning application for the Consented Development.

## **10.11 Conclusion**

- 10.11.1 This Cultural Heritage chapter considers the likely effects on heritage assets (archaeology and built heritage) of the construction and operation of the Proposed Development.
- 10.11.2 The assessment was designed to identify and evaluate any cultural heritage assets within the Proposed Development site through examination of desk-based sources and a site visit, and to identify heritage assets within 10 km of the Proposed Development that could have their settings affected.
- 10.11.3 Ten heritage assets have been identified within the Proposed Development site (Figure 10.1) including sections of medieval field boundary 'Deil's Dyke' (6), two sheep shelters (2 and 5), four sheepfolds (3, 4, 7 and 8), former coal mining shafts (1 and 9), and a find-spot (10). The majority of these sites are associated with 19<sup>th</sup>/20<sup>th</sup> century farming activity and attest to the use of the area principally for grazing. Previous excavations of sections of the Deil's Dyke,

just south of Kirkconnel, suggest that sections of the dyke may have an earlier prehistoric date and the feature is assessed as being of regional heritage importance; while the other sites are judged to be of no more than lesser importance.

- 10.11.4 One direct effect of moderate significance is predicted on the remains of a section of the Deil's Dyke (6a) which will be crossed by the proposed western site access track. In addition, there is some (albeit limited) potential for direct effects on any surviving buried archaeological remains that may be encountered. Mitigation to offset these effects has been set out and taking this into account there will be no residual significant direct effects in relation to cultural heritage assets.
- 10.11.5 There will be no significant effects on the settings of cultural heritage assets within the wider landscape from the Proposed Development alone when considered in the context of the current baseline including the operational Hare Hill Wind Farm.
- 10.11.6 The residual effects of the Proposed Development on the cultural heritage resource would be no different to those identified in the 2015 ES that supported the planning application for the Consented Development.
- 10.11.7 It is assessed that there will be a cumulative effect on St Connel's Church (MDG75) of minor significance from addition of the Proposed Development to a baseline comprising other operational, consented or proposed wind energy schemes if all of those currently in planning were to be consented.
- 10.11.8 The predicted residual significant effects for the Proposed Development are exactly the same as those which would arise from the 'do-nothing scenario', which would result in the implementation of the Consented Development.
- 10.11.9 The EIA Regulations, at Schedule 4, require the EIA Report to provide a:
- "description of the likely significant effects of the development on the environment resulting from, inter alia:*
- ... (e) the cumulation of effects with other existing and/or approved development, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;"*
- 10.11.10 In this regard, the Proposed Development would be indiscernible from the Consented Development.

**Table 10.10 – Summary of Proposed Development Effects**

Description of Effect	Potential Effect		Mitigation	Residual Effect	
	Significance	Adverse/ Beneficial		Significance	Adverse/ Beneficial
<b>Construction and decommissioning</b>					
Potential direct effect on a section of the Deil’s Dyke (6a)	Moderate (significant)	Adverse	Breaches of the dyke during construction of the off-site access track will be kept to a minimum width necessary to facilitate the passage of the track and associated drainage ditch. Archaeological investigation and a watching brief will be carried out where the Deil’s Dyke is crossed by the off-site access track.	Minor (non-significant)	Adverse
Potential direct effects on hitherto unknown buried archaeological remains	Minor (non-significant)	Adverse	Recording; Watching Brief/Evaluation	Minor (non-significant)	Adverse
<b>Operation</b>					
Indirect effect predicted on the setting of Crichton Peel and Sanquhar Castle (687)	Minor (non-significant)	Adverse	None required	Minor (non-significant)	Adverse
Indirect effect predicted on the setting of and Sanquhar Parish Church (40538)	Minor (non-significant)	Adverse	None require	Minor (non-significant)	Adverse
Indirect effect predicted on the setting of St Connel’s Church and Graveyard (MDG75)	Minor (non-significant)	Adverse	None required	Minor (non-significant)	Adverse
Indirect effects predicted on the setting of all other cultural heritage assets with predicted visibility of the Proposed Development	Negligible/Minor (non-significant)	Adverse	None required	Negligible/Minor (non-significant)	Adverse

**Table 10.11 – Summary of Cumulative Effects**

Description of Effect	Residual Effect		Cumulative Wind Farms	Cumulative Effect	
	Significance	Adverse/ Beneficial		Significance	Adverse/ Beneficial
<b>Construction and decommissioning</b>					
None	None	None	None	None	None
<b>Operation</b>					
Indirect effect predicted on the setting of Crichton Peel and Sanquhar Castle ( <b>687</b> )	Minor (non-significant)	Adverse	Hare Hill, Hare Hill Extension, Sanquhar Community Wind Farm and Sanquhar 'Six', Whiteside Hill, Ulzieside, Lethans, Glenmuckloch, Sunnyside, Twentyshilling Hill.	Minor (non-significant)	Adverse
Indirect effect predicted on the setting of and Sanquhar Parish Church ( <b>40538</b> )	Minor (non-significant)	Adverse	Hare Hill, Hare Hill Extension, Sanquhar Community Wind Farm and Sanquhar 'Six', Whiteside Hill, Ulzieside, Lethans, Glenmuckloch, Sunnyside, Twentyshilling Hill.	Minor (non-significant)	Adverse
Indirect effect predicted on the setting of St Connel's Church and Graveyard ( <b>MDG75</b> )	Minor (non-significant)	Adverse	Hare Hill, Hare Hill Extension, Sanquhar Community Wind Farm and Sanquhar 'Six', Whiteside Hill, Ulzieside, Lethans, Glenmuckloch.	Minor (non-significant)	Adverse
Indirect effects predicted on the setting of all other cultural heritage assets with predicted visibility of the Proposed Development	Negligible/Minor (non-significant)	Adverse	Hare Hill, Hare Hill Extension, Sanquhar Community Wind Farm and Sanquhar 'Six', Whiteside Hill, Ulzieside, Lethans, Glenmuckloch, Sunnyside.	Negligible/Minor (non-significant)	Adverse

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