



Kirkan Wind Farm Ltd

# Kirkan Wind Farm EIA

Appendix 5.2: Cultural Heritage Baseline

661694

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## RSK GENERAL NOTES

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# 1 INTRODUCTION

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## 1.1 Purpose of this report

This report has been prepared as a technical appendix to accompany the cultural heritage and archaeology chapter of the Kirkan Wind Farm EIA report (EIAR) and should be read in conjunction with this.

It has been presented in this manner to streamline the EIAR Volume 1. A summary of the key elements of this baseline report is included in Section 5.5 of the EIAR.

## 2 CULTURAL HERITAGE BASELINE

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### 2.1 Location, Geology and Topography

The location of the proposed development is described in Chapter 3 of the EIAR. The topography and geology of the project area are described in Chapter 5. Where these properties of the project area have an archaeological relevance, these are summarised here.

The topography of the project area and its surroundings consist of rolling upland interspersed with burns draining into the Glascarnoch River and Black Water to the north. The most prominent hill in the project area is the Sithean nan Cearc, whose summit (364 m above Ordnance Datum, or AOD) lies to the west of the final project area. The highest point within the project area lies further to the south at 379 m AOD. The ground drops consistently towards the north, with the edge of the project area at around 225 m AOD next to the Glascarnoch River and A835.

Most of the project area consists of open moorland maintained for deer stalking. There is an area of established mixed plantation forming the eastern portion of the project area.

Superficial (drift geological) deposits in the vicinity of the project area consist of glacial deposits of diamicton, gravel, sand and silt in the northern portion of the project area (broadly corresponding to plots 1, 2, 3 and 8 in Figure 5.3)<sup>1</sup>. Narrow bands of alluvium are present around the larger watercourses of the Allt Giubhais Beag, Glascarnoch River, Black Water and Allt Bad an t-Seabhaig near the project area. Peat deposits and bedrock outcrops dominate the entirety of the southern portion of the project area (broadly corresponding to plots 4, 5, 6 and 7 in Figure 5.3).

#### 2.1.1 Geotechnical Information

Peat depth information was compiled during the preparation of the Peat Slide Risk Assessment (Appendix 9.1) as part of the EIA, and observations were made during the site visit.

The majority of peat probes reported depths of up to 50 cm (see Table 9.1.2 in Appendix 9.1), but depths of greater than 4.01 m of peat are recorded within the project area (representing 0.1% of the total number of peat probes). This suggests that peat accumulated in parts of the project area throughout a significant proportion of the Holocene, and is likely that it initiated in the prehistoric period. The identification of tree stumps (no cultural modification observed) in the peat close to the base of the peat (Photo 5.4) provides evidence for at least partial colonisation of the project area with trees in the distant past.

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<sup>1</sup> BGS website: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>





**Photo 1: Tree stumps and roots eroding out of a peat bank in Plot 4.**

## **2.2 Historic Land-use Assessment**

Historic Land-use Assessment data was available for a portion of the project area<sup>2</sup>. Two areas of Medieval/Post-medieval settlement and agriculture are identified nearby, corresponding to the farmstead of Kirkan (NDA18) and Feith Bhaite (NDA12), now used for rough grazing.

Areas of Post-medieval (17<sup>th</sup> to 18<sup>th</sup>-century) traditional peat cutting are identified south of Black Bridge (centred at NH 37324 70683) and on the northeast slope of Sithean nan Cearc (centred at NH 36710 69095), now used for rough grazing. Land use in the 19<sup>th</sup> and 20<sup>th</sup> century includes forestry plantation.

A summary of landscape use and change based on cited sources is incorporated into the sections below.

## **2.3 Archaeological and Historical Background**

### **2.3.1 Prehistoric (500,000 BC – 560 AD)**

Until relatively recently, very little occupation evidence dating to the Palaeolithic period (500,000 – 12,000 BC) had been recorded from Scotland<sup>3</sup>. However, discoveries at

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<sup>2</sup> <http://hlamap.org.uk/>

<sup>3</sup> Saville, A. 1997. *Palaeolithic handaxes in Scotland Proc Soc Antiq Scot*, 127(1997), 1-16.

Howburn Farm, Biggar, South Lanarkshire<sup>4</sup>, provide evidence for occupation during the late Upper Palaeolithic period. It is possible that Palaeolithic activity took place within Study Area A, but there is currently no evidence for sites from this period. Any archaeological evidence for such occupation within Study Area A, including isolated findspots, are likely to have been disturbed by the scouring action of the numerous glacial advances and retreats that took place until the beginning of the Holocene geological epoch (8,000 BC).

The first recorded prehistoric activity in the Highlands occurred in the Mesolithic period (12,000 – 4,000 BC) in the form of flint scatters and middens. There are none recorded in Study Area A; the nearest groupings of sites are around Inverness, such as the shell midden at Muirtown (MHG3741). The landscape of the Scottish Mesolithic period is generally characterised as consisting of Boreal woodland interspersed with open peatland areas<sup>5</sup>.

The introduction of agriculture and stock-raising characterises the beginning of the Neolithic period (c.4,000 – c.2,400 BC)<sup>6</sup> in Scotland. Within Study Area B, there is evidence of funerary and ritual monuments from this period, such as the henge at Achilty (SM3), and chambered cairns at Preas Mairi (SM4), Heights of Brae (SM9), and Balnacrae (SM11).

Landscape change during the Mesolithic to Neolithic transition is likely to have taken the form of the removal of tree cover for agriculture. However, such change, having commenced in the Mesolithic, is unlikely to have been extensive until the later Prehistoric periods, with some clearance of forest as stock-raising began to supplement and replace hunter-gathering subsistence<sup>7</sup>. Episodes of woodland clearance would be followed by regeneration, with tree and shrub levels returning to their original densities in places. The beginning of peat accumulation is also attested to in northern Scotland, for example at Moss of Cruden in Buchan<sup>8</sup>.

The Bronze Age of Scotland (c. 2,400 – 550 BC) is characterised by a variety of changes in material culture and practice, including the introduction of copper and bronze metallurgy. The division between the Neolithic and Bronze Age periods is typically marked by the introduction of Beaker pottery and its associated cultural suite, such as stone bracers, barb-and-tang arrowheads and short-cist inhumations. Later developments in the Bronze Age see smaller food vessels and a move towards cremation, often in round burial cairns. Within Study Area B, settlement activity is potentially in evidence in the form of the hut circles identified at Firth View (SM7) and Strath Sgitheach (SM8), and the crannog at Loch Kinellan (SM5) may date from the Bronze Age. Indications of Bronze Age ritual activity are less apparent within the area,

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<sup>4</sup> Ward, T. 2010. *The discovery and excavation of a late Upper Palaeolithic site at Howburn Farm*. Biggar Archaeology Group. <http://www.biggararchaeology.org.uk>; A. Saville, T.B. Ballin & T. Ward 2010. Howburn, Near Biggar, South Lanarkshire: Preliminary Notice of a Scottish Inland Early Holocene Lithic Assemblage *Lithics: The Journal of the Lithic Studies Society* 28: 41 – 49.

<sup>5</sup> Edwards, K. J. and I. Ralston. 1984. *Postglacial hunter-gatherers and vegetational history in Scotland*. *Proceedings of the Society of Antiquaries of Scotland* 114: 15 – 34.

<sup>6</sup> Darvill, T. 1987. *Prehistoric Britain*. B. T. Batsford: London: 48.

<sup>7</sup> Turnock, D. 1995. *The Making of the Scottish Rural Landscape* Aldershot: Scholar Press: 33

<sup>8</sup> Stewart, J. M. and S. E. Durno. 1969. *Structural Variations in peat*. *New Phytologist* 68: 167- 82. Cited in Edwards, K. J. and I. Ralston 1984. *Postglacial hunter-gatherers and vegetational history in Scotland*. *Proceedings of the Society of Antiquaries of Scotland* 114: 15 – 34.

with the cup-and-ring marked rock (which can be either Bronze Age or Neolithic in date) at Heights of Brae (SM10) being a notable exception.

Landscape change during the Bronze Age saw an accelerated rate of tree clearance, much in evidence at Loch Farlary, near Golspie<sup>9</sup>, an upland loch site. This involved the use of metal axes, coupled with a gradual decline in the population of pines as a result of grazing pressure. Such a pattern cannot necessarily be assumed in the upland areas of Study Area A, but observations of tree stumps within eroded peat banks on site support the interpretation that historical tree cover within the project area was previously more extensive. Elsewhere in Scotland, archaeological and palynological (pollen) evidence indicates that cultivation extended into upland areas for the first time just prior to and continuing into the Bronze Age, from c. 2500 BC, leading to soil erosion in places, possibly from deforestation. However, the overall picture is of small isolated settlements occupying clearings in the primary woodland<sup>10</sup>.

Iron Age activity within Study Area B (550 BC – 560 AD) is potentially apparent, though the date of origin and use of particular sites has not been confirmed by direct dating evidence. Some hut circle settlements (SM7, SM8) identified as potentially Bronze Age in date may have been occupied in the Iron Age. Typically, Iron Age settlements in the wider area are characterised by an emphasis on apparently defensive properties, such as the fort at Carn na Buaile (SM2). The Iron Age in Scotland witnessed an increase in the overall level of anthropogenic (man-made) landscape change and intensified agriculture, with extensive episodes of woodland clearance, an increase in arable and pastoral farming at the expense of forest, and the expansion of moorland<sup>11</sup>. However, studies of northern Scottish sites such as Loch Farlary and Reidchalm<sup>12</sup> indicate that the transition from late Bronze Age to Iron Age saw an abandonment of arable farming in upland areas in favour of increasing activity around lowland settlements.

### 2.3.2 Early Medieval (561 AD – 1057 AD)

The Cromarty Firth formed part of the heartland of the Picts during the later Iron Age (corresponding to the late Roman period in other parts of Scotland) and through much of the early medieval period. Pictish territory extended north of the Forth and Clyde as far as Orkney, with Study Area B comprising part of the province of Moray.

The Picts are famed for the quality of their sculpture, and a Pictish symbol stone is located within Study Area B at Clach an Tiompain (SM6). The evolution of the symbol stones shows the gradual Christianisation of the Picts through the unification with the Scots under Kenneth MacAlpin in 843 AD, but the example identified within Study Area B bears

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<sup>9</sup> Tipping, R. P. Ashmore, A. Davies, A. Haggart, A. Moir, A. Newton, R. Sands, T. Skinner and E. Tisdall. 2007. *Peat, pine stumps, and people: interactions behind climate, vegetation change and human activity in wetland archaeology at Loch Farlary, northern Scotland*. In J. Barber, C. Clark, M. Cressey, A. Crone, A. Hale, J. Henderson, R. Houseley, R. Sands and A. Sheridan (Eds) *Archaeology from the Wetlands: Recent Perspectives. Proceedings of the 11<sup>th</sup> WARP Conference, Edinburgh 2005*. WARP Occasional paper 18: 157 – 164. Society of Antiquaries of Scotland: Edinburgh.

<sup>10</sup> Tipping, R. 1997. *Vegetational History of Southern Scotland*. *Botanical Journal of Scotland*. 49: 151-162.

<sup>11</sup> Morrison, I. A. 1983. *Prehistoric Scotland*. In G. W. Whittington and I. D. Whyte (Eds) *An Historical Geography of Scotland: 1 – 24*. London: Academic Press.

<sup>12</sup> Tipping, R., A. Davies, R. McCulloch and E. Tisdall. 2008. *Response to late Bronze Age climate change of farming communities in north east Scotland*. *Journal of Archaeological Science* 35: 2379 – 2386.



pagan symbols. Subsequently, the colonisation of the area by the Norse is attested to in place names such as Dingwall (place or field of the parliament in Old Norse).

Evidence for landscape change and settlement pattern during the early medieval period is difficult to ascertain, but there is some evidence that in the area under the political control of the Picts, exploitation of the land was focussed on fertile soils in sheltered, well-drained areas<sup>13</sup>, with occasional re-use and refortification of earlier Iron Age duns and hillforts.

### 2.3.3 Medieval (1058 AD –1559 AD)

The start of the medieval period in Scotland is identified as coinciding with the ascent to the throne of Malcolm III (Canmore). It is with the kingship of David I (1124 – 1153AD)<sup>14</sup> that feudalism becomes the dominant political form of Lowland Scotland, while the clan system persisted in the Highlands. The Highlands differed considerably from the Lowlands in both language and culture, with Gaelic being replaced by Saxon under Malcolm III and subsequently Scots dialect and French as the language of the royal court.

The primary regional centre was Dingwall. Norse political power stemmed from Dingwall Castle, established in the mid-11<sup>th</sup> century. Dingwall became incorporated into the Kingdom of Scotland in the early 13<sup>th</sup> century and was granted a royal charter as a burgh in 1226 AD<sup>15</sup>. The area remained under the political control of the Earl of Ross. The second source of power within medieval society lay with the Church, with a bishopric at Fortrose (from 1240) being the closest to the project area<sup>16</sup>.

Most of the population would have lived in small irregular agricultural settlements known as clachans or bailes, the pattern of which is still visible in the distribution of settlements in the early part of the post-medieval period. Occupation of individual house sites may have been temporary, with the locations of houses changing within a holding. In terms of landscape and land-use change during the medieval period, natural changes to the landscape have been far less important than anthropogenic ones<sup>17</sup>. These were caused in part by a general increase in population, leading to a greater demand for arable and pastoral farming. Complex communal run-rig systems of agriculture developed in the later medieval period. Divisions of land comprised “infield”, representing accessible, good quality land close to townships, and “outfield”, which was more marginal. Upland, outfield areas were exploited as summer pasture for livestock, with moorland expanding at the expense of forest. The larger settlements were clustered in the lowland areas, with scattered shielings (seasonally occupied shelters) in the uplands<sup>18</sup>.

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<sup>13</sup> Small, A. Dark Age Scotland. In G. W. Whittington and I D. Whyte (Eds) *An Historical Geography of Scotland*: 25 – 46. London: Academic Press.

<sup>14</sup> Schofield, J. 1999. *Landscapes of the Middle Ages: Towns*. In J. Hunter and I. Ralston (eds) *The Archaeology of Britain: An introduction from the Upper Palaeolithic to the Industrial Revolution*: 210 – 227. London: Routledge.

<sup>15</sup> <http://www.dingwall.org.uk/History-Clans/History.aspx>

<sup>16</sup> Turnock, D. 1995. *The Making of the Scottish Rural Landscape* Aldershot: Scholar Press: 161.

<sup>17</sup> Price, R. J. 1983. *Scotland's Environment during the last 30,000 years*. Edinburgh: Scottish Academic Press: 196.

<sup>18</sup> Turnock, D. 1995. *The Making of the Scottish Rural Landscape* Aldershot: Scholar Press.

### 2.3.4 Post-medieval (1560 AD – 1900 AD)

The post-medieval period is notable for two particular processes that changed the landscape of Scotland; the *agricultural revolution* and the *industrial revolution*. Of the two, given the predominantly rural character of Study Area A, changes associated with the agricultural revolution (also known as Improvement) are the most prominent.

A system of land-ownership and land-use developed during the middle of the post-medieval period based on the clan society. The system of run-rig, with pasture held in common, and communal traditions of herding, harvesting, peat-cutting and building prevailed until the early 18<sup>th</sup> century. Subsequently, clan chiefs and their immediate families occupied the summit of Highland society, with cadet branches and more distant relations holding leases from the chief. Tacksmen, representing substantial farmers, held 19-year long leases, with lesser farmers, joint-tenants, crofters, subtenants and cottars occupying more junior positions within rural society. Tacksmen and other agriculturalists tended to live in thatched, turf-walled “blackhouses” before 1745. These were gradually replaced with slated, stone and lime houses<sup>19</sup>. An example within the project area of such a pre-Improvement settlement is Lubfearn (NDA24).

The nature of high-status settlement sites changes gradually through this period, with the castles of the Middle Ages being abandoned in favour of dwellings which allowed more comfort, such as the Strathvaich Lodge located to the north of Study Area A, Wyvis Lodge (LB6), and Castle Leod (LB9).

Major changes were witnessed in the Highlands in terms of infrastructure development, especially after the uprising of 1745. These took the form of military roads under Wade and the construction of Fort George. The influential British Fisheries Society was involved in the founding of Ullapool to the west<sup>20</sup>, the purpose of which was to promote trade in the Highlands, particularly the west coast herring fishery. The “fish road” between Ullapool and Contin (NDA6 and 36) that bisects the project area was one of eight roads recommended by the Directors of the British Fisheries Society when consulted by the government in 1790. This 40-mile long road required eight new bridges (one within Study Area A, NDA8)), was 16 feet wide and constructed of local stone topped with gravel. The construction technique of the bridges soon came under criticism for the contractor’s use of rounded stones and too much mortar. Construction of the “fish road” was completed by 1797, but it fell quickly into disrepair. Thomas Telford was facing demand for its renewal after only 12 years of operation<sup>21</sup>. In response to this, the Ullapool to Garve road (NDA41), now the A835, formed a part of Telford’s wider programme of road, bridge and canal construction.

In terms of industry, the Statistical Account of Scotland<sup>22</sup> describes no manufacture or industry being undertaken in the parish, though some limestone quarrying and marl extraction is recorded. Arable agriculture during this period was limited to the parish’s straths, but the soils were shallow and prone to flooding. At the time of its writing (1791), enclosure had not been adopted, with the inhabitants preferring to hold their pasture in

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<sup>19</sup> Information from *The Birth of the Modern Highlands*, an exhibition at the Highland Archives. Visited 23/01/12

<sup>20</sup> Dunlop, J. 1978. *The British Fisheries Society: 1786 – 1893*. Edinburgh: John Donald Publishers.

<sup>21</sup> *Ibid*

<sup>22</sup> Mackenzie, R. M. 1793. *Statistical Account of Scotland: Contin, County of Ross and Cromarty*. OSA Vol VIII.

common. Mackenzie observed that sheep farming was being encouraged by landowners in the parish and anticipated this would lead to a rapid depopulation.

In terms of land-use and economy within the project area during the later part of this period, particularly relevant were cattle droving, sheep farming, illicit whisky distilling and (latterly) deer stalking. The foundation of the Aultguish Inn (in a different position thought to pre-date its current location<sup>23</sup> (NDA9), the many enclosures (e.g. NDA10, NDA1 to 14) and the drovers road itself (NDA6 and 36) are visible evidence of the legacy of cattle droving in the area. According to MacLellan<sup>24</sup>, the last sheep were cleared from Lubfearn and Kirkan in 1890; though many sheep stells (e.g. NDA11, NDA40) remain. MacLellan also confirms that the farmstead of Kirkan (NDA18) also ceased to be occupied at this time but was subsequently used for storage for winter feed for the deer.

The remains of a “smuggling bothy” or illicit still recorded by MacLellan (NDA39) was identified near the project area by the North of Scotland Archaeology Society. Evidence for deer hunting on site in the form of structures is less apparent, but this activity has strongly influenced habitat, land management and the character of the project area and its wider surroundings in Study Area B. There are however modern deer fencing, and records of Lubfearn (NDA24) being occupied by stalkers. MacLellan<sup>25</sup> describes how historically, deer were driven to a rifle, with stone-built butts being built on the Strathvaich Estate near deer tracks for this purpose<sup>26</sup>; however, no such butts were identified during the site visit.

The New Statistical Account of Contin<sup>27</sup> published in 1845 describes the parish being held by 11 landowners, only one of whom was resident. The population of 2,023 in the 1831 census supports Mackenzie’s expectation of the previous century that the population in the parish would not increase as a result of commercial sheep farming being introduced. However, the author points to an increase in the value of rents in the parish over a period of 60 years because of arable land improvements (enclosure), husbandry (black cattle and sheep herding), access to market (following the construction of the railway station at Garve), high prices for sheep and wool, and shooting estates. Downie also described the superior quality of the salmon caught on the “Rasay” (Black Water) adjacent to the project area, and that illicit whisky distilling had largely been suppressed, in part as a result of the passing of the 1823 Excise Act<sup>28</sup>.

### 2.3.5 Modern (1901 AD – Present)

The modern period in the Highland sees considerable and extensive changes in land-use. A review commissioned by Scottish Natural Heritage<sup>29</sup> shows significant increases in coniferous plantation and rough grassland at the expense of heather moorland and mixed and broadleaved woodland between the 1940s and 1980s. Within Study Area A, heather moorland has been replaced by mixed woodland, but with most of the project

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<sup>23</sup> MacLellan, K. 1991. *Memories of Strathvaich*. Privately published book held at Strathvaich Lodge

<sup>24</sup> *Ibid*

<sup>25</sup> *Ibid*

<sup>26</sup> Later, true stalking was possible following an improvement in rifle technology.

<sup>27</sup> Downie, C. 1845. *New Statistical Account of Scotland: Contin, County of Ross and Cromarty*. NSA Vol XIV.

<sup>28</sup> Barnard, A. 1987. *The Whisky Distilleries of the United Kingdom*. Edinburgh: Mainstream Publishing

<sup>29</sup> Mackey, E. C., M. C. Shewry and G. J. Tudor. 1998. *Land Cover Change: Scotland from the 1940s to the 1980s*.

area being retained for deer stalking since the end of the 18<sup>th</sup> century. Also apparent is the substantial change to Strath Dirrie by the construction of the Glascarnoch Dam (LB1) and the Vaich Dam on Strath Vaich (LB2), which would have substantially changed the appearance of the Glascarnoch River and Black Water within Study Area B. Telford's Ullapool to Garve road (now the A835) has also been steadily upgraded and remodelled over the decades. Commercial coniferous forestry plantation has become an increasing feature of the landscape within Study Area A over the course of the last century. In more recent years the area has seen the introduction of onshore wind turbines (see Figure 4.6 in the EIA report), such as Lochluichart and Corriemoillie to the west of the project area, as well as telecommunications masts within it to the south of the A835, overhead powerlines and deer fencing.

## **2.4 Baseline: Known Heritage Assets**

All known heritage assets within Study Area A are referenced in chronological context in the archaeological and historical narrative above, but are summarised by count for the proposed development site boundary and Study Areas A and B as follows:

### **2.4.1 Scheduled Monuments (SMs)**

There are no SMs within the project area or Study Area A. There are 12 SMs within Study Area B (Appendix 5.1 and Figure 5.2). There are no monuments proposed for scheduling within Study Area B.

### **2.4.2 Inventory Historic Battlefields**

There are no Inventory Historic Battlefields within Study Area B.

### **2.4.3 Conservation Areas**

The project area does not lie within a conservation area, and there are no conservation areas within Study Areas A or B. The nearest conservation areas are Strathpeffer, located 13.9 km to the southeast of the project area.

### **2.4.4 Listed Buildings**

There are no listed buildings (LBs) within the project area. There are is a single LB within Study Area A; the Loch Glascarnoch Dam (LB1), a Category B LB located 1.06 km northwest of the project area. There is a further LB within 5 km of the project area; the Vaich Dam (LB2), a Category C LB located 4.9 km north of the project area.

There are a further seven Category A LBs located within 15 km of the project area (Study Area B). These are detailed in Appendix 5.1 and identified on Figure 5.2.

### **2.4.5 Inventory Historic Gardens and Designed Landscapes**

There are no inventory Gardens or Designed Landscapes (GDLs) within the project area or Study Area A. There are three GDLs within Study Area B:

- Fairburn (GDL1), located 14.9 km southeast of the project area;
- The Spa Gardens, Strathpeffer (GDL2), located 14.3 km southeast of the project area; and

- Castle Leod (GDL3), located 13.2 km southeast of the project area.

## 2.4.6 Non-designated Assets

There are 35 non-designated assets (NDAs) within Study Area A recorded on the Highland Council HER and NRHE, none of which are within the project area. They are grouped by importance below.

### 2.4.6.1 High Importance

There are no non-designated assets recorded in the gazetteer that are considered of High importance.

### 2.4.6.2 Medium Importance

There are five sites recorded in the HER and NRHE considered of Medium importance, none of which are located within the project area.

The Aultguish Inn (NDA9), a drover's inn located next to the A835, is located 495 m northwest of the project area. The former farmstead of Kirkan (NDA18) is set within a substantial enclosure wall 500 m to the northwest of the project area.

The pre-improvement township of Lubfearn (NDA24), the recorded location of a burial site at Inchbae (NDA31), and the post-medieval township at Garbat (NDA35) are also present within Study Area A.

### 2.4.6.3 Low Importance

There are 24 assets recorded in the HER and NRHE interpreted as of low importance. The former drovers' road between Ullapool and Contin (recorded as NDA6 to the west of the project area, and as NDA36 as it crosses the project area) is the only one within the project area. Beyond the project area, it incorporates the remains of a former Aultguish bridge over the Allt Giubhais Beag (NDA8).

Shielings are also present in Study Area A at Allt Coire Muilidh (NDA7) and Garbat (NDA34).

Well-represented are numerous enclosures, sheepfolds and stells; likely features arising from the history of droving through Study Area A, such as at Doire Nan Clach (NDA10, 13), Kirkan (NDA11, 17), Feith Bhaite (NDA12), Glascarnoch River (NDA14), Black Bridge (NDA21), Lubfearn (NDA22, 23 and 25), Coille Na Sroine (NDA26) and Ruigh Na Cloiche (NDA29).

Evidence for arable agriculture is also present, through the field systems at Lub Na Bruaich (NDA19), Coille Na Sroine (NDA27, 28) and Dubh Choille (NDA33). Other assets considered of low importance include satellite buildings to Kirkan (NDA15, 16), the former school at Strathvaich (NDA20), and archaeological records of a drain, floor and cultivation marks at Inchbae Lodge (NDA32).

### 2.4.6.4 Negligible and Unknown Importance

There are five assets recorded in the HER and NRHE interpreted as being of negligible importance. These include the several assets related to the Glascarnoch Dam, including the site of the temporary construction camp (NDA3), the cottage and enclosure of West



Aultguish, subsequently inundated by the dam (NDA4), and a survey post related to dam construction (NDA5). Other assets included in this category included anecdotal records of the location of a Roman military camp, subsequently discounted (NDA30), and a metal chimney identified during the watching brief on the Lochluichart Wind Farm (NDA2).

A single asset was interpreted as being of unknown importance; the record of a standing stone of possible anthropogenic (i.e. man-made) origin (NDA1), located 2.4 km west of the project area.

## **2.5 Map Regression**

The following historical maps depict the project area and relevant to the proposed development.

### **2.5.1 Roy's Military Survey of Scotland: Highlands (1752 – 1755)**

Roy's Military Survey, conducted following the uprising of 1745, was the first to depict Study Area A in any detail. The only settlement depicted near the project area was the township of "Lubefern" (corresponding to Lubfearn, NDA24), shown as four buildings on the north side of the Black Water with adjacent unenclosed arable cultivation. Within the project area, the unnamed watercourses of the Allt Giubhais Beag, Feith Bhaite and Allt Bad an -Seabhaig were depicted draining to the north; the entirety the project area and its environs are shown as rolling uncultivated moorland.

### **2.5.2 Aaron Arrowsmith, Map of Scotland constructed from original materials (1807)**

Arrowsmith's map showed the Study Area A in less detail than Roy's map, but depicted several features for the first time. The Aultguish Inn (NDA9, labelled "Alguish") was shown, as was the steading of Kirkan or "Carkine" (NDA18) and Inchbae (NDA32). The former Ullapool to Contin road crossed the project area (NDA6 and NDA36) to the south of the unnamed Glascarnoch River and Black Water.

### **2.5.3 N. Maclean, Strathvaich and Kerkan Estate Map (surveyed 1831)**

This estate map, held by the Strathvaich Estate, surveyed the area in considerable detail, and provided measurements of the areas under arable farming and rough pasture. The steading of "Kerkan" (NDA18) was depicted as two buildings and a yard within its surrounding enclosure. No arable farmland was located within the project area, with the ground described as "heathy pasture". In terms of other manmade features, Lubfearn (NDA24) was labelled as "the property of Mr. Mackenzie of Ord", but not depicted in detail. The Ullapool to Contin Road (NDA6 and 36) was depicted in the position as recorded on Figure 5.1.

A number of place names appeared for the first time in the 1831 map, including: Carnantreac (the area now labelled as Càrn an t-Sneachda ("Snow Cairn") on modern OS mapping); Riechrappach (Sithean nan Cearc, or "Hen Hill"); Druimadoun (Druim Donn, or "Brown Ridge"); and Meallnaclaich (Meallan na Cloiche, or "Stone Cluster"). Most of the rivers and streams were labelled for the first time and in their modern position. There is an area labelled Eas-a-vuic (later called Eas Buidhe, or "Yellow Falls") depicted as a bend on the River of Strathandireah (corresponding to the Glascarnoch River),

indicating the river was considerably wilder before the construction of the Glascarnoch Dam (LB1).

#### **2.5.4 First Edition Ordnance Survey (surveyed 1875, published 1881)**

The first edition Ordnance Survey is the first available detailed systematic survey of Study Area A. Telford's Ullapool to Garve road (NDA41), which the modern A835 largely follows, was depicted for the first time. This was shown as a road, with the earlier Ullapool to Contin road (NDA6 and 36) depicted as a track. The steading of Kirkan (NDA18) was depicted as two roofed structures with adjacent enclosures and tracks, with further features such as stells and sheepfolds (NDA11, 23, 40) also shown. The former township of Lubfearn (NDA24) was shown in a much-reduced form in comparison to Roy's Map, comprising two small buildings and nearby enclosures (NDA22, 25). The place names for hills and watercourses within the project area were included, and largely followed the Gaelic naming and spelling shown on modern OS maps of the area. A footbridge (NDA37) was depicted near Inchbae Lodge crossing the Black Water, as was the school at Black Bridge (NDA 20). A small number of deciduous trees were shown along the banks of the Allt Giubhais Beag. The entirety of the rest of the project area and its environs were depicted as open moorland.

#### **2.5.5 Second Edition Ordnance Survey (published 1905)**

Very few changes between the first and second OS maps are discernible in Study Area A, demonstrating a continuity of occupation and use of the area. The only change of note was the addition of a second rectilinear enclosure to the immediate north of the Aultguish Inn (NDA 9). Demarcated march fencelines in the west of south of the project area, corresponding to the modern title boundary between Strathvaich and Corriemoillie estates, are delineated.

## **2.6 Primary written sources**

### **2.6.1 Memories of Strathvaich**

The book *Memories of Strathvaich* was written by Kenneth MacLellan (1991), the son of one of the former head stalkers of the Strathvaich Estate of which Kirkan is a part, and a former pupil at the school at Black Bridge (NDA20). The information relevant to the historic background of the project area is included above. This resource also identified an additional two archaeological sites near the project area, as well as detailing a number of other estate buildings, presently in various states of repair and in need of renovation. MacLellan (1991, 77) refers to a cairn on Kirkan, "which is now only a heap of stones and known as the Kirkan Monument". This is included in the gazetteer as NDA38. MacLellan also refers to the site of a former illicit whisky still (known as a "smuggling bothy") at Kirkan (1991, 79), the location of which was subsequently identified by members of the North of Scotland Archaeology Society<sup>30</sup>, and is included in the gazetteer as NDA39.

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<sup>30</sup> North of Scotland Archaeology Society blogpost: <https://nosasblog.wordpress.com/2017/08/05/walking-the-old-fish-road-aultguish-inn-to-little-garve-bridge/> [accessed 16/08/2018]

## 2.7 Photography

Aerial photography was interrogated from the National Collection of Air Photography (NCAP) and Google Earth.

The earliest aerial photography available dated to 1989 and depicted the vicinity of the project area as a patchwork of craggy upland moorland interspersed with narrow watercourses, apart from an area of improved pasture around the farmstead of Kirkan (NDA18). Later satellite imagery (2006, 2009 and 2015) depicts the regular rows of planted mixed woodland across Druim Donn (Plots 3 and 6 in Figure 5.3).

## 2.8 Site Visit

The site visit coincided with a period of extended dry weather in the area, and conditions underfoot were found to be very dry. Weather conditions during the site visit were changeable but clear. The visibility of earthworks (if they rose above the peat) was moderate in open moorland areas that comprised most of the project area and its surroundings (Plots 1, 2, 4, 5, 7 and 8 as shown in Figure 5.3), and poor in areas of establishing forestry (Plots 3 and 6).

**Photo 2: view of area of open moorland within Plot 4**



The western and southern portion of the project area (broadly corresponding to plots 4 and 7, and part of plot 6 in Figure 5.3) comprises unmodified blanket peat bog. Photo 2 above provides an illustration of the typical landform in these areas.

The northern portion of the project area (corresponding to plot 1) comprises areas of shallower peat with frequent bedrock outcrops (see Photo 3 for an example); the only

exception to this is the improved pasture at Kirkan (NDA18) comprising the area formerly under tillage around the farmstead (see section 2.5.3 above).

The eastern portion of the project area (corresponding to part of plot 6) comprises areas of establishing mixed forestry. The extent of forestry cover was found to be considerably less than that shown on Ordnance Survey mapping; deep-ploughed areas of failed woodland planting, upland moorland, and bedrock outcrops are also present (see Photo 4 as an illustration).

**Photo 3: view of landform within Plot 2**





**Photo 4: View of area of patchy plantation woodland in Plot 6**



No new heritage assets were identified during the site visit, but observations were made on the sites described above, and are included in Table 5.8 below. Photographs of key observations made are included in Figure 5.3. Also of note is that no evidence for peat cutting (contrary to the historic land use assessment data in Section 2.2 above) was identified on site.



**Table 2.1 Findings of site visit**

Plot Number	Known sites, description, and state of preservation	Plot Description ( <i>topography, land use, field boundaries etc.</i> )
1	<p>NDA8 – The Aultguish Bridge (Allt Guibhais Beag). Very little visible of former abutment of the bridge. See Figure 5.3</p> <p>NDA11 – Sheep fold/stell near Kirkan. Found to be prominent in the landscape</p> <p>NDA12 – Feith Bhaite turf enclosure wall. The enclosure banks are clearly visible.</p> <p>NDA15 – Building, Kirkan deserted farmstead (rectangular). The ephemeral remains of a possible rectangular building were noted</p> <p>NDA16 - Building, Kirkan deserted farmstead (circle).</p> <p>NDA17 – Enclosure, Kirkan.</p> <p>NDA18 – Kirkan farmstead. This was observed and found to be as described in the HER (see Appendix 5.1). Some additional features to the yard area were visible (possible platform).</p> <p>NDA36 – Former road between Ullapool and Contin. Generally apparent as an approximately 3m wide level track running through the plot. Gravel/loose stone surface frequently visible, though obscured by moss and mud in many places. No evidence of drainage apparent during site visit. Currently in use as a footpath and route for argo cat ATV. Edges of the track are slightly higher than the surrounding land by typically 20-40 cm. Weathered rocks and boulders occasionally present, presumably cast to the side during construction. Meandering route following the contours; one stream forded. See Figure 5.3</p>	<p>Rolling upland moorland sloping downwards to the north at approximately a 5° angle. Open views with a moderate visibility of earthworks, and a poor visibility for finds. Bound by the Allt Guibhais Beag (stream) to the west, with the A835 road and fencing to the north of the site. The east is bound by a stream and fence.</p> <p>Peat, which appears to be shallow. Exposed geology is erratic boulders and bedrock outcrops.</p> <p>Evidence of tree stumps and peat near the Allt Guibhais Beag, very little evidence of peat working.</p>

Plot Number	Known sites, description, and state of preservation	Plot Description ( <i>topography, land use, field boundaries etc.</i> )
	NDA39 – Kirkan illicit whisky still, visible and located close to stream. See Figure 5.3	
2	NDA22 – Lubfearn enclosure. Extent is bound by deer fencing. Feeding troughs visible in the enclosure.	Convex upland glacial land. Open views of the landscape. Moderate visibility of earthworks, with poor visibility for finds. Peat, with bedrock outcrops throughout the area being visible. Frequent bedrock outcrops and erratic boulders jutting out of heather moorland.
3	NDA40 – subcircular drystone sheep shelter/fold, with adjacent drystone walling. Around 1.2m high and 9m diameter. Heavily lichenated, no other material culture. Collapsed entrance to the south, with adjoining drystone walling. Undressed stone. Occupies the shoulder of the hill looking north east.	Rolling glacial upland area, slopes downwards in a northwest direction at an angle of around 5°. Bound on the south east by a stream – the Allt Bad an t Seabhaig. Bound on the north west by a deer fence, which was still under construction during the site walk over. Visibility of earthworks and finds was poor. Peat was observed. Previous land use observed to be former heather moorland, now with establishing mixed birch woodland, with extensive gaps.
4	NDA36 – As per description in Plot 1.  NDA38 – Cairn. Low cairn on the summit of Sìthean nan Cearc, with dominant views to the east, north and west. Rounded boulders making up the cairn are typically 40-60cm long, 30cm wide, and 20cm deep. Heavily lichenated. Serves as a local landmark/waypoint. 2.1m long (N-S), 1.5m wide (E-W), and 0.6m high Nearby (>15m) are a modern antenna and a modern windmill and antenna.	Rolling upland area, with a downward slope to the north east at an angle of around 5°. Dominant open views. This area is bound to the north by the drove road, to the east by a deer fence and stream, to the west by the Allt Guibhais Beag (stream) and a fence, and to the east by a deer fence and stream. Visibility of earthworks was moderate, with poor visibility for finds.
5	No known or visible sites.	Glacial upland moorland sloping downwards to the north east at a slope angle of around 15°. The landform means that views are restricted to the south west. Visibility of earthworks was moderate, and visibility of finds was poor.

Plot Number	Known sites, description, and state of preservation	Plot Description ( <i>topography, land use, field boundaries etc.</i> )
		<p>Peat.</p> <p>Area was bound to the southwest by a fence, and to the northeast by a stream.</p> <p>Observed evidence for recent clear fell of Corriemoillie forest to the southwest.</p>
6	NDA36 – As per description in Plot 1.	<p>Rolling glacial upland area.</p> <p>Views restricted to the south.</p> <p>Visibility of earthworks and finds was poor. Peat with a depth of 1.8m was observed, with exposed bedrock psammite visible.</p> <p>Hazards in the area included the met mast.</p> <p>The Allt Bad an t Seabhaig stream runs through this area.</p> <p>The area is bound to the north by the drove road, to the east by a deer fence and stream, to the west by the deer fence, and to the south by the deer fence and a stream.</p> <p>The land was previously heather moorland, but is now given aside to mixed plantation. Evidence of tree stumps eroding out of the peat in the southern portion of the plot.</p>
7	No known or visible sites.	<p>Rolling glacial upland area, sloping downwards to the north at an angle of around 10°.</p> <p>Views are restricted to the south.</p> <p>Visibility of earthworks is moderate, and visibility of any finds is poor.</p> <p>Bedrock outcrops observed.</p>
8	<p>NDA24 – Lubfearn township, found to be as described. A pre-improvement township consisting of a single building, 4 bays, rectangular and at least 2 phases of construction. The easternmost bay is slightly lower in height. Walls consist of undressed stone with mortar, though the middle bay on the west side has pebble-dashed walls. Roof consists of rough slates over the two easternmost bays, and corrugated tin on the two westernmost. Varying states of repair – two easternmost appear in poor state (e.g., no windows), while two westernmost appear to be in a good state (e.g. furniture, soft furnishings in the interior, windows</p>	<p>Glacial mid-slope valley, sloping downward to the north, at an angle of around 3°.</p> <p>Views are restricted to the south.</p> <p>Visibility of earthworks is moderate, with visibility of finds being poor.</p> <p>The topsoil was observed to be peat, with bedrock outcrops, erratic boulders and undulating terrain. This makes the area only suitable for rough grazing.</p> <p>The area is bound to the north by a deer fence and the Black Water, to the east by a stream, to the west by a stream, and to the south by a deer fence.</p>

Plot Number	Known sites, description, and state of preservation	Plot Description ( <i>topography, land use, field boundaries etc.</i> )
	intact). 3 chimney breasts, later porch inserted on the North side. Single storey, east to west orientation.	

In historical (medieval to modern) periods, at 190 m AOD and adjacent to the Black Water, Lubfearn (NDA24) is likely to have been a focus of settlement, arable agriculture and stock raising dating back several hundred years. Kirkan (NDA18) is likely to have been more recent, potentially originating from the late 18<sup>th</sup> century when large-scale sheep farming was adopted in the area. However, it is possible that it pre-dates this period. During these periods, the project area was exploited in the form of grazing for Highland black cattle, cattle droving along the Ullapool to Contin road (NDA36), sheep farming and later deerstalking.

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## 3.2 Archival sources

Information from The Birth of the Modern Highlands, an exhibition at the Highland Archives. Visited 23/01/12

### 3.2.1 Highland archival sources

Code	Date	Item
D1237/11/5	n.d.	Photocopy of 1" OS Map showing drove routes from Aultguish to Strathgarve and across Ben Wyvis
D527/4/2	1890	Duncan Logan (Contractors) Garve and Ullapool Railway plans and sections
D1217/2/1/5	1985	Facsimile of Garve and Ullapool Railway plans and sections
D895/1	Nov 1889	Book of reference – plans and sections of railway Garve to Ullapool
CRC/2/14/9	1834 – 1850	District Roads Trustees Lochbroom – Garve to Ullapool Road
CRC/10/6/1/10	1919 – 1926	Mid-Ross District Roads improvements to the Garve to Ullapool Road (Inc. repair to Black Bridge, Strathvaich)
Collection D102	Various	Papers of Jane Durham
CH2/658/1	1793 – 1873	The Contin Kirk Session Minutes and Accounts

## 3.3 Websites

BGS website: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

Historic Land Use Assessment: <http://hlamap.org.uk>

History of Dingwall and surroundings: <http://www.dingwall.org.uk/History-Clans/History.aspx>

### 3.4 Aerial photography and satellite images

Sortie	Frame	Date	Scale	Link
ASS/61589	0187	07/05/1989	1:24,000	<a href="https://ncap.org.uk/frame/8-1-3-1-63-175">https://ncap.org.uk/frame/8-1-3-1-63-175</a>
ASS/61589	0188	07/05/1989	1:24,000	<a href="https://ncap.org.uk/frame/8-1-3-1-63-176">https://ncap.org.uk/frame/8-1-3-1-63-176</a>
ASS/61589	0189	07/05/1989	1:24,000	<a href="https://ncap.org.uk/frame/8-1-3-1-63-177">https://ncap.org.uk/frame/8-1-3-1-63-177</a>
ASS/61589	0247	07/05/1989	1:24,000	<a href="https://ncap.org.uk/frame/8-1-3-1-63-232">https://ncap.org.uk/frame/8-1-3-1-63-232</a>
ASS/61589	0248	07/05/1989	1:24,000	<a href="https://ncap.org.uk/frame/8-1-3-1-63-233">https://ncap.org.uk/frame/8-1-3-1-63-233</a>
ASS/61589	0250	07/05/1989	1:24,000	<a href="https://ncap.org.uk/frame/8-1-3-1-63-235">https://ncap.org.uk/frame/8-1-3-1-63-235</a>

### 3.5 Map regression

Cartographer Name	Map Title	Imprint	Source	Link(s)
William Roy	Military Survey of Scotland: Highlands	1752 – 1755	NLS	<a href="https://maps.nls.uk/roy/index.html">https://maps.nls.uk/roy/index.html</a>
Aaron Arrowsmith	Map of Scotland constructed from original materials.	London : Arrowsmith, 1807.	NLS	<a href="https://maps.nls.uk/joins/747.html">https://maps.nls.uk/joins/747.html</a>
N McLean	Plan of the Hills and Grazings of Strathvaich and Kerkan: The Property of Sir George Mackenzie of Coul Bar <sup>t</sup>	Surveyed 1831	Strathvaich Estate	-
Ordnance Survey	Ross-shire & Cromartyshire (Mainland), Sheet LXII (includes: Contin)	Survey date: 1875 Publication date: 1881	NLS	<a href="https://maps.nls.uk/view/74428386">https://maps.nls.uk/view/74428386</a>
Ordnance Survey	Ross and Cromarty Sheet LXII (includes: Contin)	Publication date: 1905 Date revised: 1902	NLS	<a href="https://maps.nls.uk/view/76343776">https://maps.nls.uk/view/76343776</a>
Ordnance Survey	Fifeshire IX.10 (St Andrews and St Leonards). 25" Scale	Publication date: 1914 Revised: 1912 Levelled: 1913	NLS	<a href="https://maps.nls.uk/view/82880184">https://maps.nls.uk/view/82880184</a>