Report on an Archaeological Watching Brief at Kempstone Hill, Stonehaven, AB39 3QB CA297-2016

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ILLUSTRATIONS

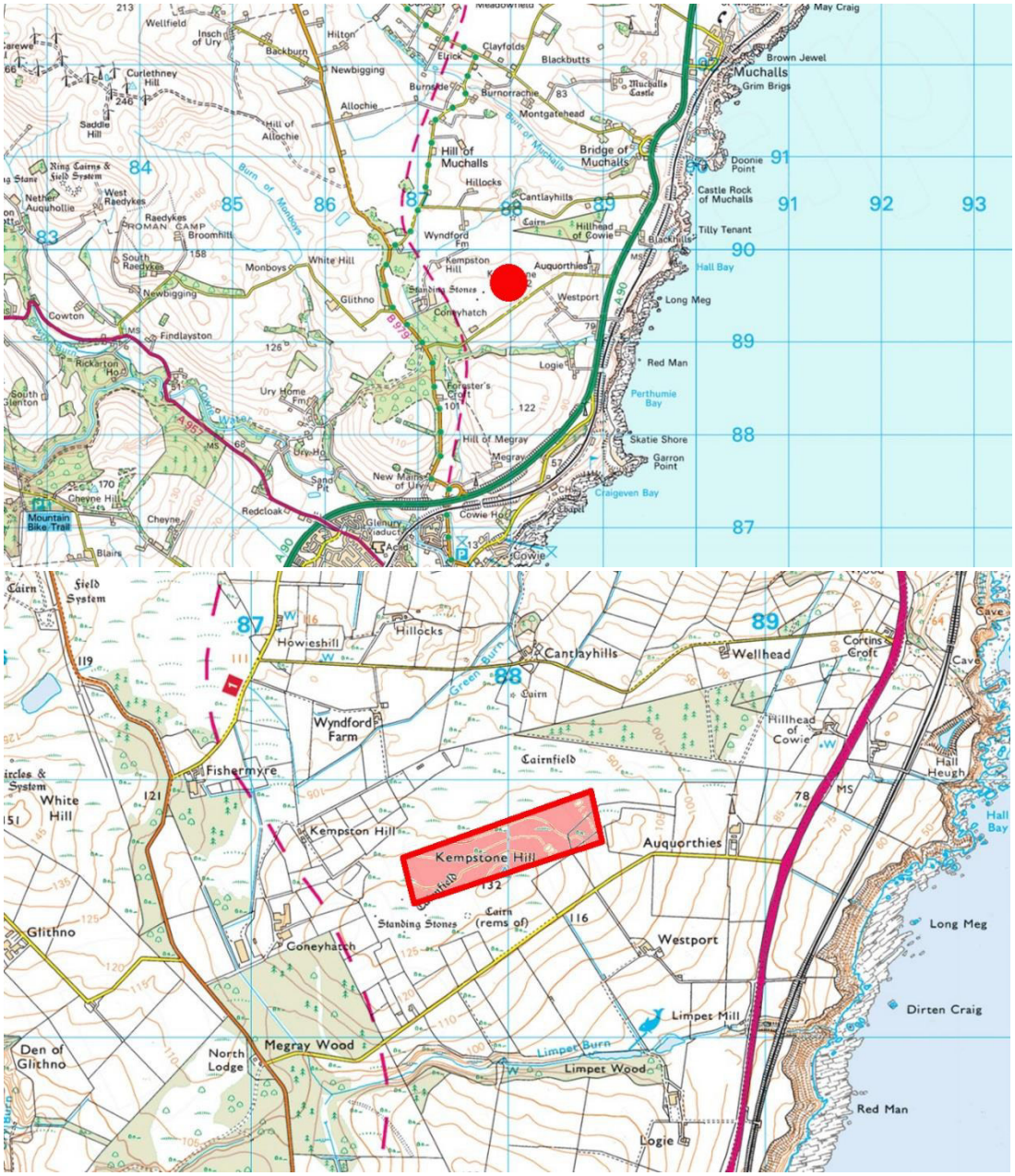
SUMMARY

An archaeological watching brief was performed on August 8th, 9th and 24th, 2016 by Dr Robert Lenfert on behalf of Cameron Archaeology. Site activity involved topsoil removal in advance of trenching and subsequent burial of electrical services formerly located on utility poles within the 'fall zone' of three new wind turbine pads, alongside pole replacement outwith the fall zone at the ends of the project area. Visual inspection and spot-troweling of the subsoil, in conjunction with an investigation of the surrounding spoil heap and localised field-walking, did not reveal any evidence of archaeological artefacts or features and it is therefore recommended that no further archaeological work is required during the current planning application.

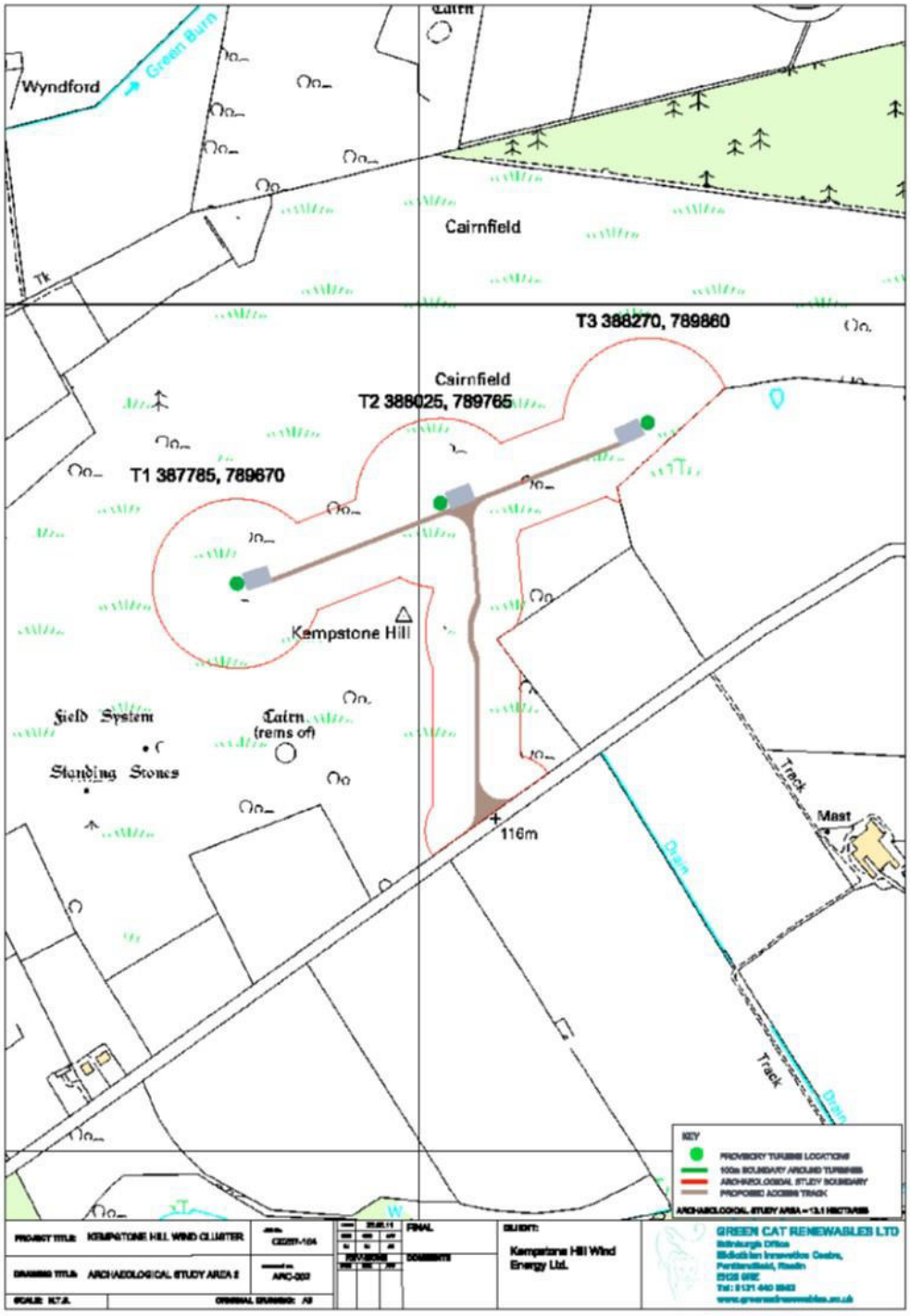
1 Background

1.1 The site (Illus 1) is located at NO 88010, 89790 in an area known as Kempstone Hill, located in rough pasture, predominately heather and gorse, due north of a single track which connects the B979 to the A90.

1.2 The work was commissioned by SSE for Green Cat Renewables on behalf of Kempstone Hill Wind Energy Ltd with archaeology conditions for an archaeological watching brief during all groundbreaking and development work. Previous archaeological investigation in the form of an assessment, walkover survey and watching brief for the three wind turbine hardstandings and site access track was performed by Murray Archaeological Services (Murray 2011, 2016a, 2016b respectively) before handing over the remaining archaeological watching brief for buried electrical cable installation and pole replacement/installation to Cameron Archaeology, Aberdeen.



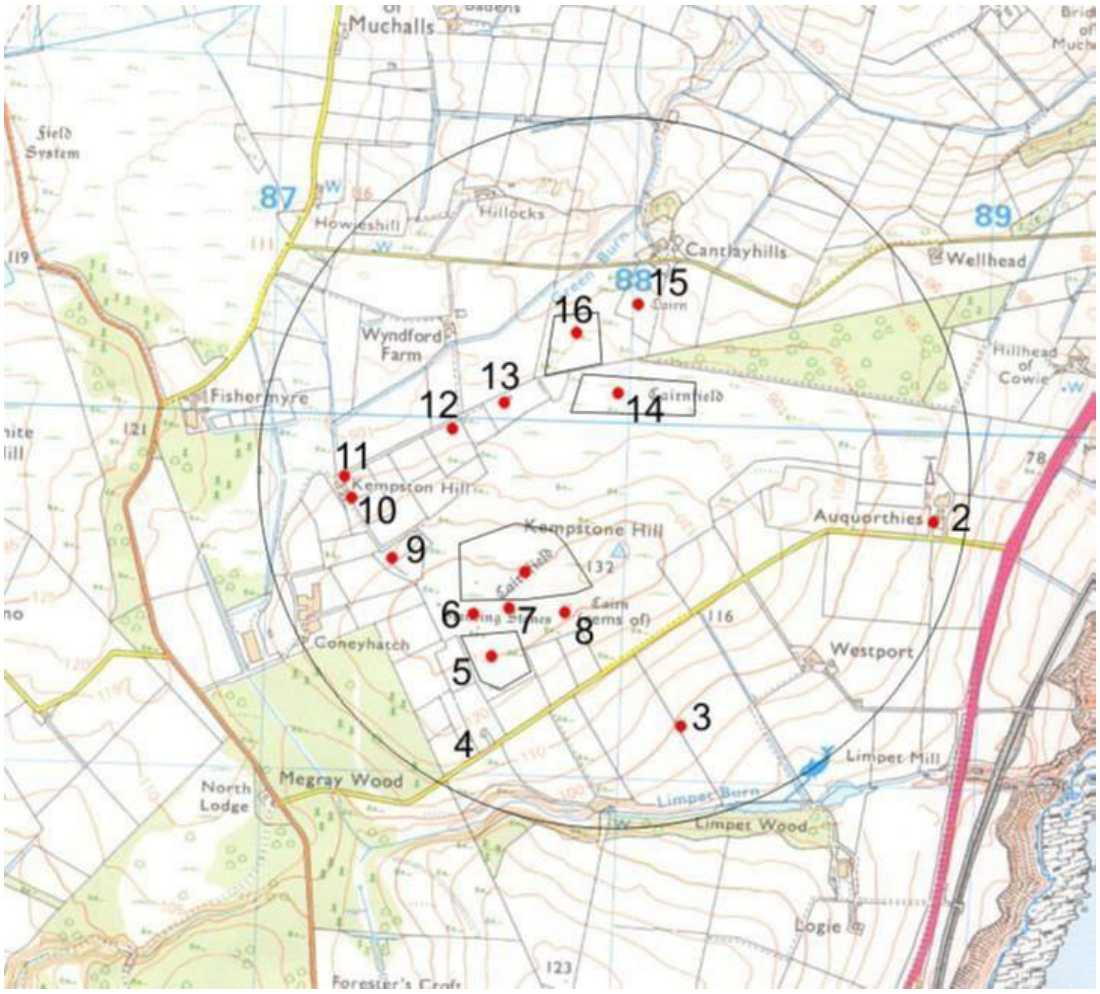
Illus 1 Location plan (Contains Ordnance Survey data © Crown copyright and database right 2016)



Illus 2 Site plan showing location of new turbine locations (Murray 2016). The topsoil stripping and trenching for the buried electrical service is located along the northern edge of the zone. Map copyright RM Energy.

1.3 All the archaeological work was carried out in the context of Scottish Planning Policy (SPP) Planning Advice Note (PAN 2/2011) and Scottish Historic Environment Policy (SHEP), which state that archaeological remains should be regarded as part of the environment to be protected and managed.

Illus 3 Aerial photo of site with GPS overlay (red) for trench containing buried cable and pole replacement corridor. Copyright Terrametrics and Digital Globe 2016.



Illus 4 Location of archaeological sites within 1km (after Murray 2011:13). Ordnance Survey, Crown copyright 2007.

2 Archaeological sites within 1km of the project area (Illus 4)

2.1 (within the confines of the proposed development – Murray 2011:7) Kempstone Hill: NO88NE0016. Clearance cairns; at least 33 small cairns; five of them stand within the remains of an earth and stone bank and near two standing stones.

2.2 Aquhorthies: NO88 NE63. Farm chimney dating from the mid-19th Century. It is a circular-section brick chimney on a square stone base, serving a small single-story engine and boiler house.

2.3 Westport: NO88NE0100. Remains of a farmstead depicted on the 1867 1st edition OS map. It shows an L-plan and a rectangular building, two enclosures and a well. Part of the L-plan building and the enclosures had been removed by the time of the 1888 2nd edition OS map.

2.4 Standingstones: NO88NE0123. Small farmstead depicted on the OS 1st and 2nd edition map. The 1st edition map shows a small rectangular building and large L-shaped one to the W. By the time of the 2nd edition the smaller one is roofless and a new building has been added to the N. This is now ruinous and the L-shaped building has been removed.

2.5 Kempstone Hill: NO88NE0044. Remains of a field system; enclosures banks and cairns visible.

2.6 Kempstone Hill: NO88NE0077. Standing stone; said to have stood on a low cairn though this is no longer evident. Human remains but no urns found.

2.7 Kempstone Hill: NO88NE0021. There are two standing stones on Kempstone Hill. One (NO 8767 8947) measures 1.8m in height and thickens from 0.6m by 0.7m at the base to 1.3m by 0.9m near the top; it appears to stand in the centre of a cairn 4.5m in diameter. The other, situated 85m to the SW (NO 8760 8942), measures up to 1.3m by 0.9m and 2.4m in height. In the 19th century human remains are supposed to have been found beside each stone, and later excavations revealed a small pit, covered by a slab 0.3m square, at the base of the S side of the E stone.

2.8 Kempstone Hill: NO88NE0015. The remains of a large cairn. 18th C records refer to cists and urns.

2.9 Kempstone Hill: NO88NE0122. House or cottage depicted on the OS 1st edition as roofed; roofless on the OS 2nd edition map.

2.10 Kempstone Hill: NO89SE0121. Farmstead still in use, depicted on the OS 1st and 2nd edition maps.

2.11 Blackhill: NO88NE0111. Site of a now destroyed stone, probably a boundary stone, which is shown on OS 1st and 2nd edition maps.

2.12 Kempstone Hill: NO88NE0119. Site of a cottage which is shown only on the 1st edition OS map.

2.13 Kempstone Hill: NO89SE00059. Site of a cottage which is shown on OS 1st and 2nd edition maps.

2.14 Cantlayhills 1: NO89SE0018. A group of c.25 small cairns which extends over 4ha of moorland.

2.15 Cantlayhills: NO89SE0008. Cairn; present remains give the superficial impression of a horned cairn.

2.16 Cantlayhills 2: NO89SE0019. Cairns; numerous small cairns visible between dense gorse thickets that cover 6ha. There are also several stony banks, but at least one of them is probably a relatively modern field dyke.

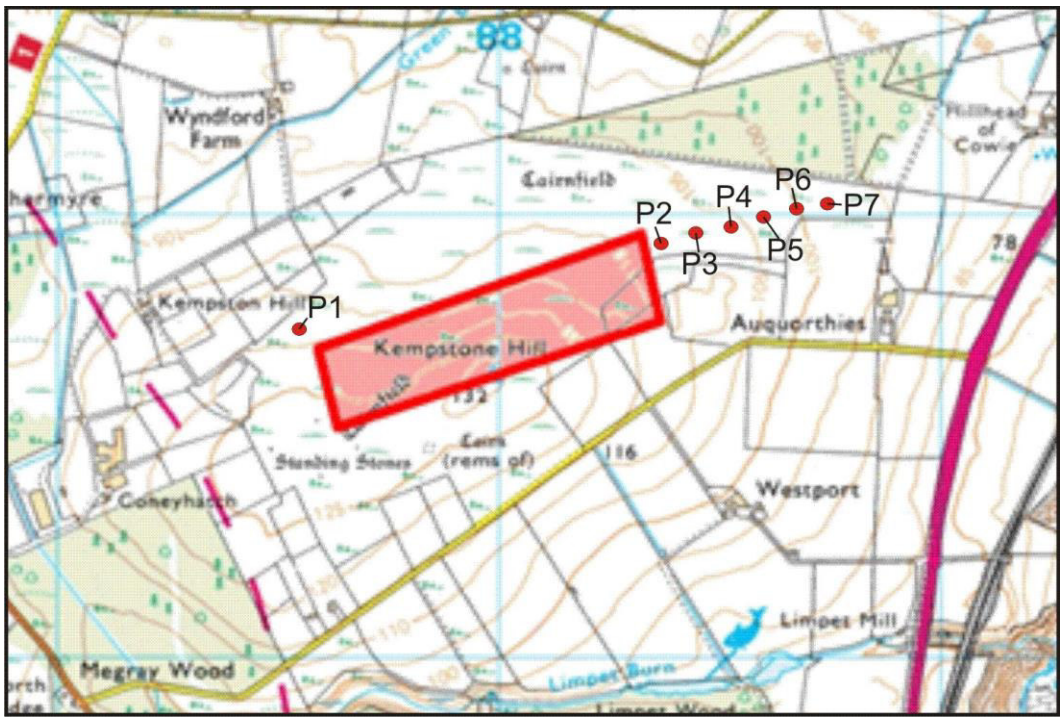
3 The Watching Brief

Topsoil stripping (Illus 5) was carried out on the 8th and 9th of August 2016 with a 1.8m wide toothless bucket attached to a 13-ton excavator. This initial clearing was quickly followed by a 20-ton excavator using a 1m deep v-shaped trenching bucket. Any potential archaeological deposits were hand cleaned while soils and spoil closely inspected prior to trenching. Dark humic or peaty topsoils typically extended to a depth of 0.1 to 0.3m which in turn overlaid a natural mid brown sandy-silty clay subsoil with gritty inclusions.
The trench dimensions, obtained using handheld Garmin glonass GPS for the overall length, were 1.8m wide by 850m ENE-WSW, with a second trench running for c.155m at a right angle to the main corridor (Illus 3). At this central junction or 'T', a larger sub-rectangular area of topsoil was cleared which was 10m wide by 20m in length to facilitate machine and contractor access in wheeled vehicles.

Illus 5 West facing view of corridor during topsoil removal.

Illus 6 Insertion of new utility pole at eastern extent of project corridor. This particular pole required the most soil removal for completion while the remainder required substantially less ground disturbance.

Following the initial stripping and trenching, on August 24th 2016, two teams from Scottish and Southern Energy (SSE) arrived onsite to remove and replace seven utility poles along the corridor (Illus 6, 7). While this activity produced relatively little disturbance by utilizing existing holes, some digging was necessary around the bases to allow removal and replacement. This second phase did not produce any archaeological remains.



Illus 7 Plan showing location of pole replacements shown as red dots (after Murray 2011:13). Ordnance Survey, Crown copyright 2007.

4 Conclusions and recommendations

Despite the presence of numerous prehistoric features in the immediate area, including at least once probable cist burial, human remains and standing stones (Historic Environment Scotland NO88 NE23) in conjunction with dozens of prehistoric clearance cairns (Historic Environment Scotland NO88 NE16) in the immediate area, no archaeology was noted. While the archaeological potential here remains very high, this is negatively offset by very limited surface visibility due to the extensive heather and sections of thick gorse which makes any visual identification of possible clearance cairns or other upstanding features very challenging without the vegetation being cleared by hand which was not a practical option.

As Kempstone Hill is undisturbed by modern plough, this provides a relatively rare opportunity for high quality archaeological preservation. However, the land surface is also heavily obscured by heather and gorse, while random, natural spreads of large stones and boulders adds background noise which can obscure legitimate archaeological remains or features. The process of rapid machine clearing of vegetation also poses the risk of removing or damaging archaeological remains, such as small clearance cairns, before they can be positively identified; a situation also encountered by Murray during the initial watching brief phase (Murray 2016b: 7). Nonetheless, closer inspection of these stony deposits and small boulders by the author during this watching brief revealed natural distributions with no convincing archaeological characteristics.

Therefore, Kempstone Hill raises interesting questions in regards to the best archaeological methodology for these types of rough unimproved upland areas and moorland which have the potential to provide abundant undisturbed archaeology that is not heavily truncated as typically found in ploughed agricultural soils. On one hand, the undisturbed nature of the land surface, in conjunction with known prehistoric activity both within and immediately adjacent to the project area, should in theory allow a very high probability of archaeological discovery. However, the machine removal of vegetation also

unavoidably disturbs any low yet upstanding features which remain on the land surface prior to identification, in this case primarily clearance cairn distributions (e.g. NO88 NE16). Pre-disturbance walkover survey (Murray 2016a) in these conditions can only reliably be expected to reveal larger earth works and stone features which protrude sufficiently above the land surface to be identified without hand-clearing of vegetation. Perhaps in NE Scotland, Lidar data of sufficient resolution will be more widely available in the future (as is increasingly common in more built up areas of the UK) to allow pinpoint investigation of surface anomalies in terrain such as Kempstone Hill, and provide more confidence in identifying archaeological remains in the future.

Visual inspection and spot-troweling of the subsoil, in conjunction with an investigation of the surrounding spoil heap and localised field-walking, did not reveal any evidence of archaeological artefacts or features and it is therefore recommended that no further archaeological work is required during the current planning application.

5 References

Murray, H K 2011 *Proposed windfarm site, Kempstone Hill, Aberdeenshire: Archaeological Assessment*. Archive report MAS 2011-18. Available in Aberdeenshire SMR.

Murray, H K 2016a *Kempstone Hill Cable to Windfarm Walkover Survey.* Archive report, MAS 2011-2018. Available in Aberdeenshire SMR.

Murray, H K 2016b *Kempstone Hill Windfarm Stonehaven, Aberdeenshire, Archaeological Watching Brief.* Archive Report MAS 2011-2018. Available in Aberdeenshire SMR.

6 Acknowledgements

Thanks to SSE, Green Cat Renewables and Kempstone Hill Wind Energy Ltd for initiating this project and to Claire Herbert of Aberdeenshire Council Archaeology Service for her advice during this work.

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APPENDIX 1 PHOTOGRAPHS

Photo ID	Direction Facing	Comments
DSC_9318	NW	Initial clearing of vegetation in project area
DSC_9319	NW	Typical distribution of large stones and occasionally small boulders revealed by vegetation clearance.
DSC_9322	W	Clearance of vegetation prior to topsoil removal
DSC_9323	E	Clearance of vegetation prior to topsoil removal
DSC_9325	W	Commencement of topsoil stripping
DSC_9329	E	Topsoil strip in progress
DSC_9331	W	Topsoil strip in progress
DSC_9336	W	Topsoil strip in progress
DSC_9338	ESE	Commencement of trenching at eastern end of project corridor.
DSC_9339	W	Trenching for cable underway
DSC_9340	E	Trenching for cable underway
DSC_9341	W	Trenching for cable underway
DSC_9342	N	Section of trench clearly showing peaty topsoil and yellowish-brown sandy0silt clay subsoil.
DSC_9344	E	Large boulder being removed from topsoil
DSC_9345	W	Trenching for cable underway
DSC_9347	W	Topsoil stripping nearing west end of corridor
DSC_9348	E	Topsoil nearing completion
DSC_9349	W	Topsoil strip nearing completion
DSC_9351	E	Topsoil strip through sections of gorse
DSC_9352	W	Topsoil strip revealing scattered stones either bedded in sub or set within topsoil layer.
DSC_9353	E	Trenching nearing completion
DSC_9354	E	Trenching nearing completion
DSC_9357	W	Topsoil stripping nearing west end of corridor
DSC_9358	N	Topsoil strip for north extension of ‘T’
DSC_9360	S	Topsoil strip for north extension of ‘T’
DSC_9362	NE	Large area of topsoil strip at ‘T’ junction. Despite close inspection of promising deposits, no archaeology was noted
DSC_9363	W	Topsoil strip nearing completion
DSC_9364	E	Topsoil strip with completed trench in background
DSC_9365	W	Trenching at west end of corridor
DSC_9366	E	Topsoil strip nearing east end of corridor
DSC_9368	W	Mottled soils at the topsoil/subsoil interface

DSC_9370	E	Mottled soils at the topsoil/subsoil interface.
DSC_9373	E	Completed section of trenching along the extent
DSC_9374	W	Trenching nearing west end of corridor
DSC_9376	W	Trenching working eastwards from W end of corridor
DSC_9378	E	Trenching away from W end of corridor
DSC_9380	E	Completed extent of trenching
DSC_9381	ESE	Completed extent of trenching
DSC_9382	W	Western terminus of trenching at base of pole
DSC_9383	E	Trenching completed
DSC_9409	N	Pole replacement commencing
DSC_9411	SE	Pole replacement underway
DSC_9424	N	Pole replacement underway
DSC_9437	SE	Pole replacement underway
DSC_9450	E	Pole replacement underway
DSC_9467	E	Easternmost pole replacement in progress


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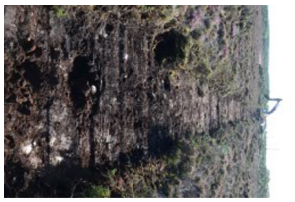
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