Mar Lodge Estate

Crathie and Braemar, Aberdeenshire
Dee Tributaries Project: Riparian Planting Areas Survey 2015 MAR/15/1

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on behalf of

Cameron Archaeology

August 2015

Contents

ILLUSTRATIONS

1.0 Summary

An archaeological walkover survey of riparian planting areas within the Mar Lodge Estate, due west of Braemar, Aberdeenshire, was performed by Robert Lenfert on behalf of Cameron Archaeology for the National Trust for Scotland (NTS) over a 5 day period in July 2015.

The purpose of the walkover survey was to examine priority planting areas for several new conifer plantations along Geldie Burn and the upper reaches of the River Dee in the west of the estate, scheduled to commence in 2016 and 2017.

The survey did not reveal any visible indications of unrecorded archaeological finds or features, despite heavy levels of erosion sustained along the main watercourses adjacent to the planting areas. However, a large unrecorded enclosure which may have served as a sheep fold was discovered along the confluence of Geldie Burn and the River Dee. Additionally, eight prehistoric flints in the form of blades and debitage were recorded and collected from the footpath leading to the Chest of Dee, one of two currently known Mesolithic sites within the estate (Canmore ID 267763, NGR NO 0170 8855).

2.0 Location and Environment

Mar Lodge Estate is located due west of the town of Braemar, Aberdeenshire within the Cairngorms National Park (Illus. 1). The estate (Illus. 2) comprises approximately 29,000 hectares (71,660 acres) of which the majority may be regarded as remote wilderness which contains a number of distinct ecosystems ranging from rare remnants of ancient Caledonian forest, open moor and heathland and in the north of the estate, a sub-Arctic area known as the Cairngorm Plateau, within which the summit of Ben Macdui (1309m, the second highest point in Britain) may be rightfully regarded more as a sub-feature rather than a prominent peak. Most notably, this mountainous plateau is the only ecosystem classified as 'sub-Arctic' in the British Isles and, in regards to weather systems (such as Hurricane Bertha), often attracts severe weather originating from the North Atlantic or Scandinavia. This 'magnet' effect can result in heavy precipitation and deep snows relative to the surrounding region. This snowfall can last into summer months at higher elevations, with patches of deep snow remaining throughout much of the summer, especially above 800m. Naturally, a large number of watercourses make their way through the estate, most notably (from roughly west to east) Geldie Burn, Bynack Burn, the source or headwaters of the River Dee, Derry Burn, Lui Water and finally Quoich Water. These watercourses collectively receive dozens of smaller feeder streams within the overall catchment area, and exit the estate as the River Dee which empties into the North Sea at Aberdeen.

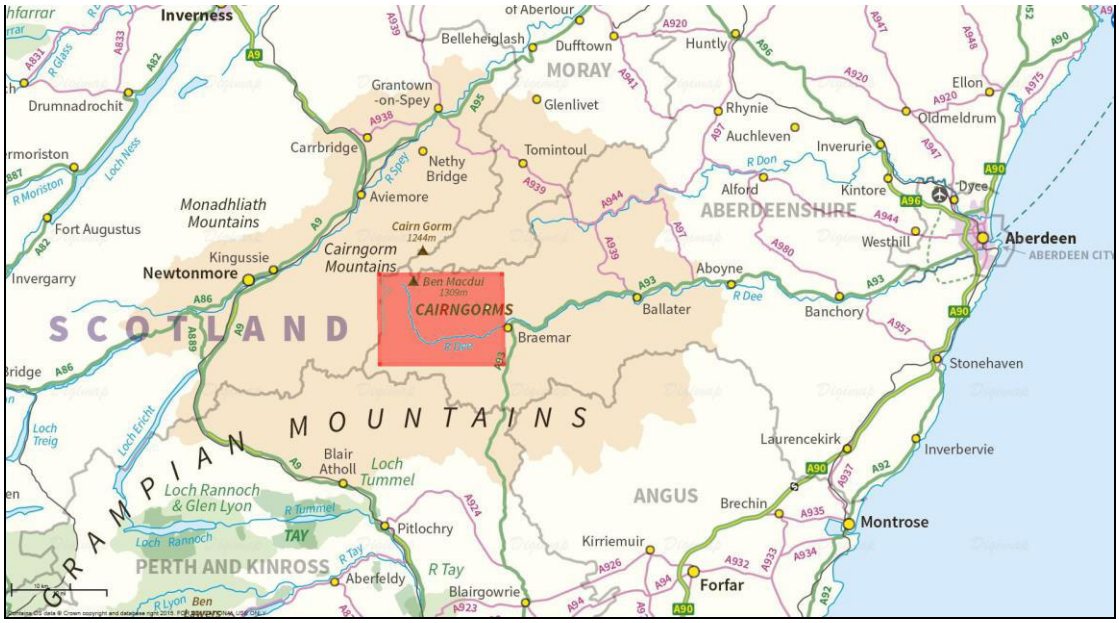

Illustration 1: General location of Mar Lodge Estate. This plan is based on an Ordnance Survey digital map reproduced with the permission of HM Stationery Office. © Crown Copyright NTS licence No. 100023880

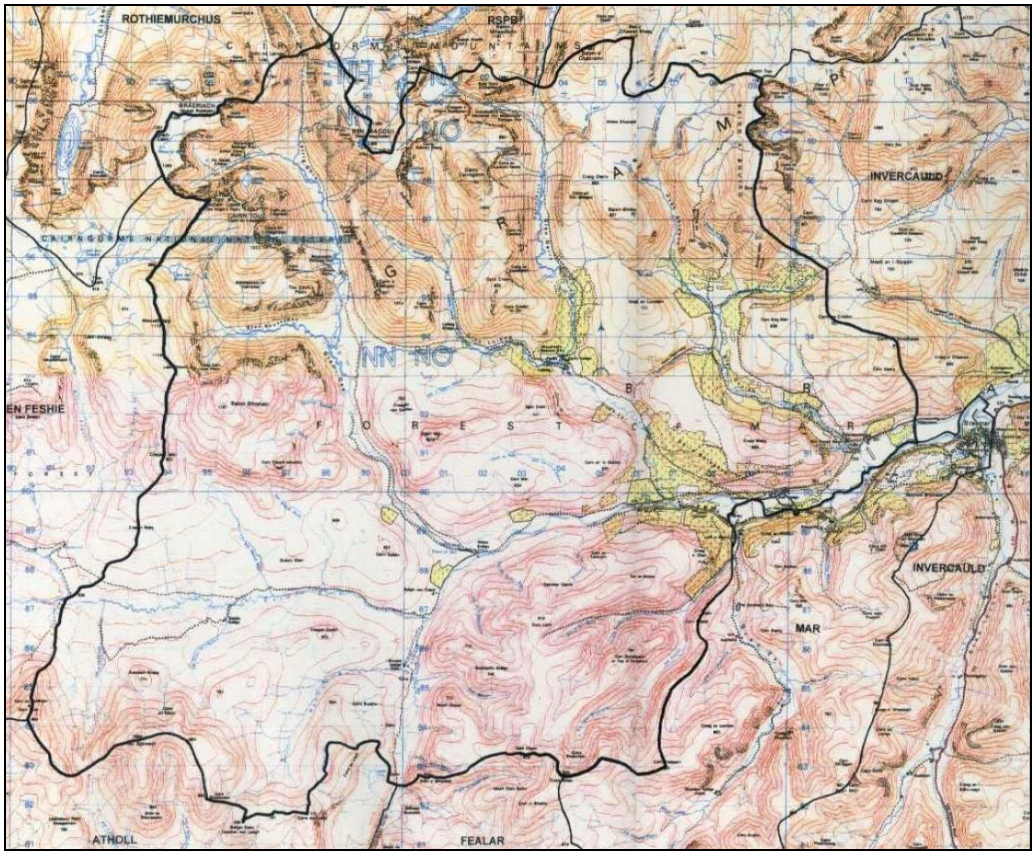

Illustration 2: Boundary of Mar Lodge Estate due west of Braemar. This plan is based on an Ordnance Survey digital map reproduced with the permission of HM Stationery Office. © Crown Copyright NTS licence No. 100023880

3.0 Survey Background

The walkover survey was performed by Robert Lenfert on behalf of Cameron Archaeology, Aberdeen under the direction of the client, Dr Shannon Fraser, Archaeologist East, The National Trust for Scotland (hereby known as 'NTS'). The project took place over five days in July 2015 with the aim of inspecting eroded areas of watercourses and gravel beds along the riparian planting areas in the wake of Hurricane Bertha, which created torrential rains and subsequent flooding in August 2014. The walkover survey was carried out in conjunction with another 12-day walkover of additional areas outwith the riparian planting areas. Though the author was not present at Mar Lodge during the severe weather in August 2014, personal communication with estate staff and examination of news articles and online photographs and videos (particularly at Linn of Dee) provided a clear indication of the extensive flooding which destroyed at least two footbridges – one near Derry Lodge (which is now replaced) and another in Glen Quoich. Photographs also show the swollen River Dee inundating the areas around the main estate buildings along with standing water across the majority of the valley floor. More conservative estimates regarded this storm as at least a once in 25 year flood event (e.g. the 1991 flood), if not a 50 year event. Some estimates even suggest it was the worst flooding since the 1829 'Muckle Spate' (North East Mountain Trust 2015:10) making it a c.200 year event. It was communicated by estate rangers and NTS archaeology staff that areas in the east, such as Glen Quoich, most likely sustained the highest levels of damage, while more open areas with larger flood plains, e.g. Glen Geldie, were less visibly affected yet altered nonetheless.

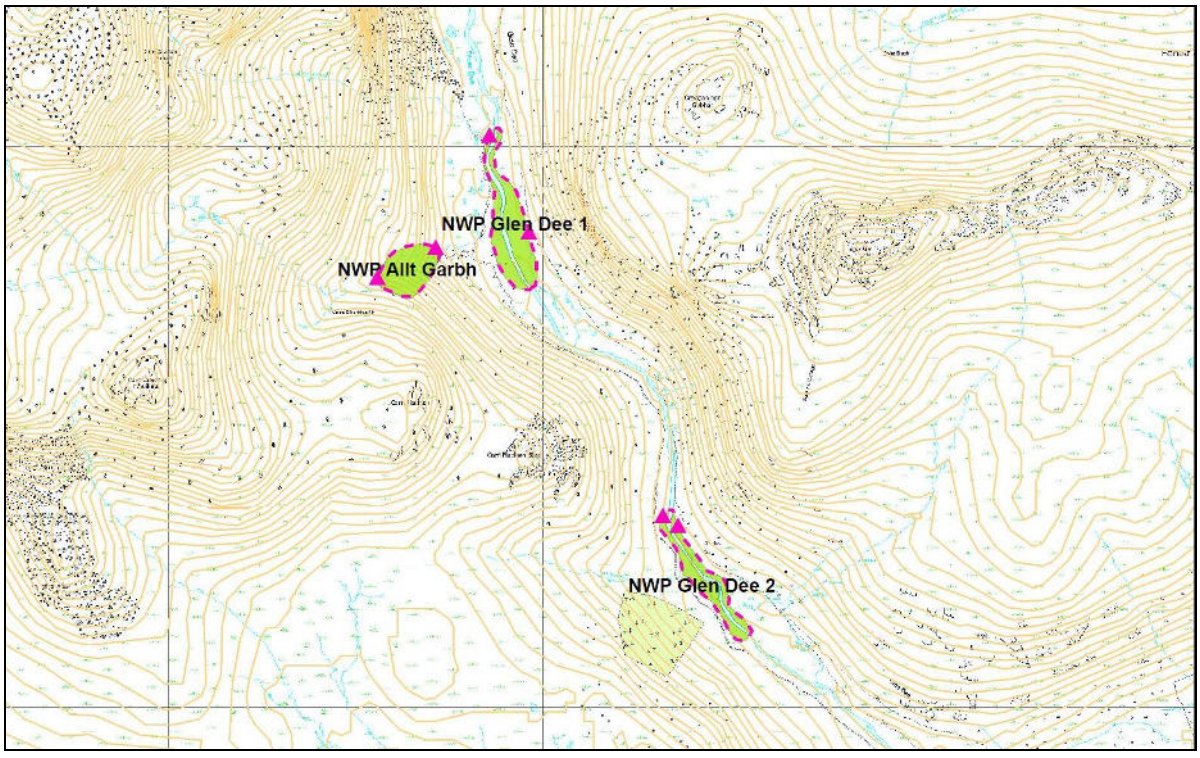

Illustration 3: Priority planting areas in Glen Dee. Allt Garbh was not examined, nor was Glen Dee 1 which was investigated by the team under Graeme Warren. This plan is based on an Ordnance Survey digital map reproduced with the permission of HM Stationery Office. © Crown Copyright NTS licence No. 100023880

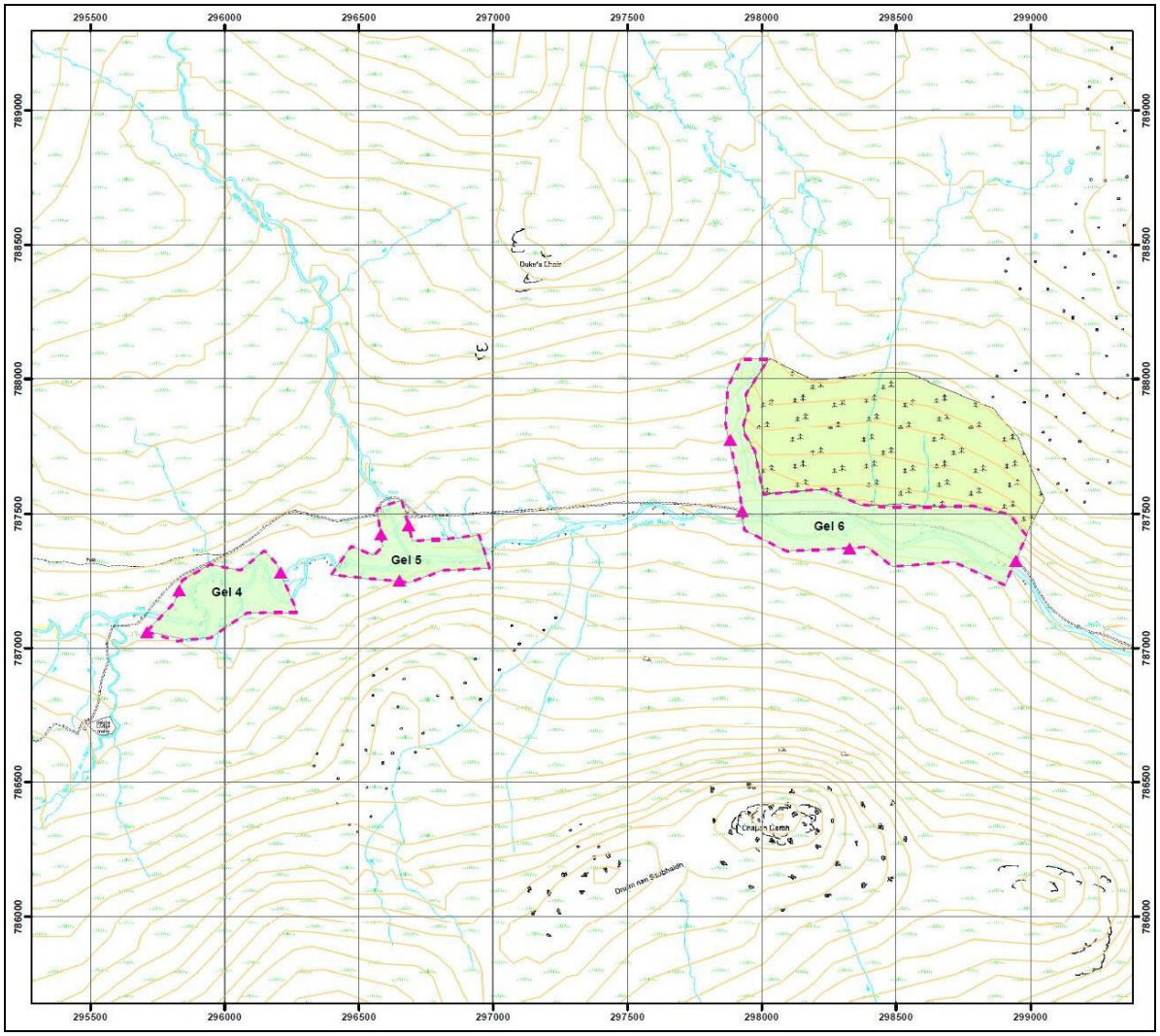

Illustration 4: Priority planting areas along Glen Geldie. This plan is based on an Ordnance Survey digital map reproduced with the permission of HM Stationery Office. © Crown Copyright NTS licence No. 100023880

Therefore the riparian walkover was aimed at examining areas which were selected for native woodland planting areas with the aim of re-establishing a woodland habitat in areas that are now largely afforested, but revealed past evidence for a woodland environment (Illus. 3 & 4). Given that the planting process for conifers is intrusive, it was determined that an archaeological walkover of area Glen Dee 2, and Geldie 4-6 respectively was necessary to prevent the accidental destruction of any unrecorded archaeological features during planting. The walkover survey of Glen Dee 1 was under the remit of Graeme Warren of University College Dublin, who was running a separate archaeological project at the time, while Allt Garbh was deemed to have limited potential for prehistoric habitation.

3.1 Recent Discoveries of Mesolithic Activity

Recent discoveries within the estate have now added two Mesolithic sites to the archaeological inventory, greatly expanding the chronological range of established human activity within the estate. The first is the Chest of Dee (Site Number NO08NW 31, NGR NO 0170 8855) which was identified in 2003 during footpath works when a large flint scatter was exposed between White Bridge and the Chest of Dee, a small sheltered gorge interspersed with deep pools and fast flowing cataracts. The site is currently being excavated by Dr Gordon Noble of the University of Aberdeen. The surprise discovery of Mesolithic activity within the estate, especially in a remote upland area, has significantly altered the previously held notion that these uplands were largely void of human activity until recent periods.

A second Mesolithic flint scatter, along with a pit containing burnt artefacts, is located at Caochanan Ruadha, Geldie Burn (Site Number NN98NW 7 NGR NN 944 8740). This equally significant site was first identified in 2005, also as a result of footpath works. Caochanan Ruadha, in conjunction with Chest of Dee, forms the focal point of the Upper Dee Tributaries Project. The site is also actively being excavated by Graeme Warren of University College Dublin in conjunction with a localised walkover survey of Glen Dee 1.

3.2 Methodology

The methodology employed during the walkover survey consisted of 4x4 transport to a suitable starting point for the daily area, at which point a walkover inspection began by closely inspecting gravel beds and eroded embankments along watercourses for exposed and unrecorded finds. These eroding banks were especially useful at providing a snapshot of the underlying strata adjacent to the rivers, streams and burns throughout the estate. Extensive high resolution digital photographs were taken throughout the project. Any eroding sections that were inaccessible due to deep or fast flowing water, or unsafe due to the potential for collapse, were photographed from the closest possible distance with a 600mm telephoto lens and high-definition 24Mp Nikon DSLR, and later examined at 100% on a computer monitor for any signs of archaeological activity. This technique proved highly useful, and was most commonly employed along the River Dee itself, east of White Bridge where the river begins to gather pace and depth. Additionally, when in transit, particular attention was given to the footpath south and north of the Chest of Dee (adjacent to Glen Dee 2 planting areas), given the established presence of known archaeological deposits there. Eight prehistoric flints were recovered from the footpath and recorded with a Garmin etrex 30 GPS unit and photographed in their respective locations.

The watercourses and gravel beds within the priority planting areas were systematically examined in approximately an east to west manner, beginning with Glen Dee (Illus. 3) and culminating at Geldie 4 in the west of the estate (Illus 4) east of Geldie Lodge. As the author was primarily working alone, a satellite phone was carried and communication made twice daily at fixed intervals to maintain safe working practices. Weather throughout the project was mixed, with fine weather offset with several periods of prolonged and heavy rains which made some watercourses difficult to access, particularly along the River Dee. The ubiquitous Highland midge was out in number, being particularly abundant throughout the later stages of the survey. A second walker was present for added safety towards the end of the project when the waters receded to a safe level and speed for wading (Illus. 7).

4.0 The Walkover along Watercourses and River Gravels

It was agreed that a separate walkover of exposed areas along watercourses and riparian planting areas was vital, given the newly established presence of prehistoric material in Glen Dee and Glen Geldie where accessible exposed banks and gravels were visually inspected for flint scatters. This segment of the survey concentrated on the areas adjacent to priority planting areas along Glen Dee 2, and the three planting areas within Geldie Burn (Geldie 4-6). In addition, opportunities to inspect other eroded sections while en route to inspect known archaeological sites throughout the estate were taken in the hopes of revealing artefacts. While this phase of the project

Illustration 5: Looking towards Glen Geldie from the southern extent of Glen Dee 2 (right of frame).

Illustration 6: A view of Geldie 4 from NE corner of compartment.

Illustration 7: Inspection of undercut peat banks containing remnant conifers along the Geldie 4 planting area.

Illustration 8: The southern portion of Geldie 5 looking towards Geldie Lodge in the distance.

Illustration 9: The lower reaches of the Chest of Dee. Exceptional water clarity highlights the potential for the identification of submerged flints ex situ, which in turn would help locate in situ deposits.

Illustration 10: East facing view of erosion along Allt Dhaidh Mor in Geldie 5, c.75m above the confluence with Geldie Burn.

Illustration 11: South-eastern corner of Geldie 6 with footbridge over Allt Dhaidh Beag.

was inconclusive and did not reveal any new archaeological sites, eight flints were recorded nearby and collected above White Bridge on the footpath to Chest of Dee. The locations of these will be discussed with Gordon Noble to determine if they represent an extension of the known site, possibly a separate phase or site, or if they are considered within the context of the existing site.

4.1 Priority Planting Area: Glen Dee 2

The Glen Dee 2 priority planting area is located some 2km NW of White Bridge (Illus. 3 & 5). Access is via the Chest of Dee footpath above White Bridge. Glen Dee 2 is located at approximately 445m OD and is located along both banks of the River Dee heading NW towards the headwaters of the Dee. Although there were clearly visible sections of exposed peats >0.50m and good visibility in gravel beds, the exposed gravels and peats in this compartment did not reveal any indications of archaeological deposits or features at the time of the survey.

4.2 Priority Planting Areas: Glen Geldie 4-6

The Glen Geldie priority planting areas exist as three separate compartments (labelled W to E as Geldie 4-6) extending to a maximum distance some 6.2km SW of White Bridge along Geldie Burn (Illus. 4).

Geldie 4 (Illus. 4, 6 & 7) is located along the confluence of Geldie Burn and Allt Coire an t-Seilich, a small feeder stream which runs roughly S to N past Geldie Lodge down into Geldie Burn which meanders extensively here, with numerous oxbows and erosion channels tracing across the bed of the watercourse.

Geldie 5 (Illus. 4, 8 & 10) is located some 300m east of Geldie 4, where the feeder stream Allt Dhaidh Mor runs roughly N to S until it meets Geldie Burn. Allt Dhaidh Mor provided some excellent visibility of the underlying stratigraphy along the eroded banks located here (Illus. 8), however no archaeological material was noted.

Geldie 6 (Illus. 4, 9 & 11) is the largest of the three planting areas in Glen Geldie with an E to W length of approximately 1km and a N to S distance of c.635m. However, the majority of the site has previously been planted, yet significantly, there is a large undisturbed margin along the southern and western periphery of the compartment along Geldie Burn and Allt Diadh Beag, the small feeder stream which is crossed by a small footbridge (Illus. 11). The underlying gravels in Geldie 6 tended to be larger in size than those in Geldie 4 and 5, making the identification of archaeological deposits more challenging. However, finer gravels and better visibility exists at small meanders located at the southern and northern periphery of Allt Dhaidh Beag.

4.3 Discussion of walkover along watercourses and gravels

The walkover of the riparian planting areas on both Glen Dee and Glen Geldie did not produce any archaeological finds, although there exists excellent opportunities for environmental sampling strategies via the eroded areas along the watercourses. Despite this portion of the survey being carried out in great detail, given the particularly small size of Mesolithic debitage which can be <1mm (Caroline Wickham-Jones, *pers comm*) versus the large size of the survey area, the lack of evidence for new sites always remained a possibility. It must be said that this apparent lack of evidence does not imply absence, especially within Mar Lodge Estate on the whole. One alternative for future site prospection within watercourses (which would ideally require two persons for safety reasons, and was not employed) is to simply use a wetsuit and snorkel to closely examine submerged deposits and gravels, as the water in the estate have shown remarkable clarity and likely

represents the largest areas of unhindered visibility (Illus. 9). The waters within the estate, especially within the western portion, tend to be under .75m in depth and when properly attired, can be comfortably forded at will when rains have not adversely raised water levels. Though any finds would likely not be in situ, their location and degree of water-wear on surfaces would prove useful for locating in situ deposits nearby.

5.0 Conclusion and Future Recommendations

Beyond additional in- or underwater inspection of eroded areas and river gravels, two other possibilities may aid in future site prospection for cropmarks or low-lying structures away from watercourses. First, the use of small aerial camera drones have now become quite affordable, in addition to having increasingly sophisticated and high-resolution cameras. As with aerial photography from manned aircraft, oblique lighting in winter or early spring would likely yield the best results unless drought conditions, however unwelcome, present themselves. The second (albeit significantly more expensive) alternative is the use of Lidar, a remote sensing method typically mounted underneath an aeroplane. Lidar has the benefit of being able to effectively 'see through' vegetation, including forests, to reveal minute elevation changes over large areas down to c.5cm, possibly detecting low-rising foundations that otherwise remain obscured and unrecorded. It is possible Lidar data may already exist for Mar Lodge Estate, as UK coverage has steadily increased in recent years.

Given the lack of visible archaeological sites within the priority planting areas, it is the author's opinion that planting can take place with the caveat that operators are aware of the potential for buried archaeological deposits or horizons. It is also highly recommended that an archaeologist inspect any planting groundworks on a regular basis for signs of flints or other archaeological materials.

Regarding the possibility of later prehistoric or historic archaeological deposits, it is perhaps not coincidental that people who settled within the current boundaries of the estate were well aware of the potential for flooding, and deliberately chose to locate the more permanent settlements efforts beyond sheilings or temporary huts in terraced areas beyond the reach of all but the most severe flood episodes. Conversely, if there were upstanding archaeological features in these areas, particularly of a prehistoric or Medieval nature, events such as the 1829 Muckle Spate, or robbing of stone for more recent constructions, appear to have erased any trace visible during the walkover survey.

6.0 Acknowledgements

The author would like to thank Alison Cameron of Cameron Archaeology, Shannon Fraser, Archaeologist East for NTS, David Frew, NTS Property Manager at Mar Lodge Estate, the Mar Lodge Estate Ranger Team, Bruce Mann, Regional Archaeologist for Aberdeenshire, Moray and Angus Councils, Caroline Wickham-Jones and Gordon Noble of the University of Aberdeen, Graeme Warren from University College Dublin and finally, Nataliya Danilova for their collective support and advice.

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Appendix One: Photographs

RIPARIAN SURVEY PHOTO ID	DIRECTION FACING	COMMENTS
DSC_001 (61)	NW	Examining priority planting areas in Geldie 5
DSC_001 (62)	W	Examining priority planting areas in Geldie 5
DSC_001 (63)	W	Examining priority planting areas in Geldie 5
DSC_001 (64)	W	Examining priority planting areas in Geldie 5
DSC_001 (66)	E	Examining priority planting areas in Geldie 5
DSC_001 (68)	E	Examining priority planting areas in Geldie 5
DSC_001 (73)	S	Examining priority planting areas in Geldie 5
DSC_001 (74)	E	Examining priority planting areas in Geldie 5
DSC_001 (75)	SW	Erosion along watercourse in Geldie 5
DSC_001 (76)	N	Erosion along watercourse in Geldie 5
DSC_001 (77)	NE	Erosion along watercourse in Geldie 5
DSC_001 (79)	W	Erosion along watercourse in Geldie 5
DSC_001 (80)	E	Erosion along watercourse in Geldie 5
DSC_001 (81)	S	Erosion along watercourse in Geldie 5

DSC_001 (82)	W	Examining priority planting areas in Geldie 5
DSC_001 (83)	SE	Erosion along watercourse in Geldie 5
DSC_001 (84)	--	Fine sands and gravels in Geldie 5
DSC_001 (85)	--	Deer tracks along Geldie 5
DSC_001 (86)	E	Erosion along Geldie 4
DSC_001 (87)	S	Erosion along Geldie 4
DSC_001 (88)	S	Erosion along Geldie 4
DSC_001 (89)	S	Erosion along Geldie 4
DSC_001 (90)	S	Erosion along Geldie 4
DSC_001 (91)	S	Erosion along Geldie 4
DSC_001 (92)	S	Erosion along Geldie 4
DSC_001 (93)	S	Erosion along Geldie 4
DSC_001 (94)	S	Erosion along Geldie 4
DSC_001 (95)	S	Erosion along Geldie 4
DSC_001 (96)	S	Erosion along Geldie 4
DSC_001 (97)	S	Erosion along Geldie 4
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DSC_001 (103)	S	Erosion along Geldie 4
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DSC_001 (110)	S	Erosion along Geldie 4

DSC_001 (111)	S	Erosion along Geldie 4
DSC_001 (112)	S	Erosion along Geldie 4
DSC_001 (113)	S	Erosion along Geldie 4
DSC_001 (114)	S	Erosion along Geldie 4
DSC_001 (115)	S	Erosion along Geldie 4
DSC_0356	W	General view towards Geldie Lodge near Geldie 6
DSC_0357	SE	General view of Glen Geldie
DSC_0359	SE	General view of Glen Geldie
DSC_0360	S	Stream crossing at Geldie 5
DSC_0378	S	General view near Geldie 5
DSC_0379	S	General view near Geldie 5
DSC_0380	N	General view near Geldie 5
DSC_0381	N	Erosion along Allt Diaidh Mor, Geldie 5
DSC_0382	W	Erosion along Allt Diaidh Mor, Geldie 5
DSC_0387	N	Erosion along Allt Diaidh Mor, Geldie 5
DSC_0393	--	Exposed sands and fine gravels, Allt Diaidh Mor, Geldie 5
DSC_0394	--	Detail of sands and fine gravels in Geldie 5
DSC_0395	N	General View Geldie 5
DSC_0397	N	Boulder field in Geldie 5
DSC_0398	--	Fragment of Deer (or sheep) cranium and horn
DSC_0399	--	Larger gravels in Glen Dee 2
DSC_0400	S	General view towards Chest of Dee and Glen Dee 2 in distance
DSC_0414	NW	General view towards Chest of Dee and Glen Dee 2 in distance
DSC_0418	NW	General view towards Chest of Dee and Glen Dee 2 in distance
DSC_0419	NW	General view towards Chest of Dee and Glen Dee 2 in distance
DSC_0420	S	Erosion along Glen Dee 2

DSC_0424	S	General view above Chest of Dee near Glen Dee 2
DSC_0442	S	General view above Chest of Dee near Glen Dee 2
DSC_0443	S	General view above Chest of Dee near Glen Dee 2
DSC_0444	S	General view above Chest of Dee near Glen Dee 2
DSC_0451	W	Water clarity above Chest of Dee
DSC_0453	E	Visible sands and gravel deposits in Glen Dee 2
DSC_0458	W	Exposed peats away from watercourse in Glen Dee 2
DSC_0459	--	Detail of exposed peats away from watercourse in Glen Dee 2
DSC_0460	S	General view towards Chest of Dee, camera panning along the Dee
DSC_0461	S	General view towards Chest of Dee, camera panning along the Dee
DSC_0462	SE	General view towards Chest of Dee, camera panning along the Dee
DSC_0463	E	General view towards Chest of Dee, camera panning along the Dee
DSC_0464	E	General view towards Chest of Dee, camera panning along the Dee


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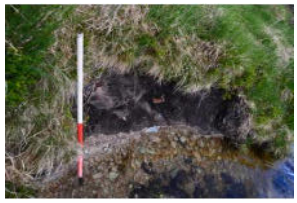
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