

SUAT Ltd

archaeological
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**Archaeological Watching Brief
Innerhadden Hydro Scheme
Kinloch Rannoch
PERTH AND KINROSS**

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**ARCHAEOLOGICAL WATCHING BRIEF
INNERHADDEN HYDRO SCHEME
KINLOCH RANNOCH
PERTH AND KINROSS**

KX03 WB

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ABSTRACT

Innerhadden Hydro Limited commissioned SUAT Ltd to undertake an archaeological watching brief on the construction of a mini hydro-electric scheme on the Innerhadden Estate, just south of Kinloch Rannoch, Perthshire. The work (SUAT site code KX03 WB) was undertaken during the period 30th April-19th August 2008. The development had previously been the subject of a desk-based assessment and walkover survey conducted by SUAT in May 2005. The work was designed to satisfy the archaeological condition 6.9 of a Planning Consent granted by the Scottish Government dated 14th April 2008.

A number of mounds, enclosures and platforms were recorded, mainly circular, some of which may have been glacial features modified by human activity. Also recorded were possible boundary banks, a drystone wall foundation, peat cuttings and tracks, and grouse butts.

No artefacts were found.

1 Background

1.1 Introduction

Innerhadden Hydro Limited commissioned SUAT Ltd to undertake an archaeological watching brief on the construction of a mini hydro-electric scheme on the Innerhadden Estate, just south of Kinloch Rannoch, Perthshire. The pipeline has a total length of about 6 km, from its two intakes at NN 650 540 (W) and NN 670 540 (E), down to the turbine house at its northern end, at NN 670 570. The work (SUAT site code KX03 WB) was undertaken during the period 30th April–19th August 2008, mostly in good weather conditions. The requirement was to observe and record the stripping of the pipeline track and other related works in areas of interest identified in a desk-based assessment and walkover survey conducted by SUAT in May 2005.

The work was designed to satisfy the archaeological condition 6.9 of a Planning Consent granted by the Scottish Government dated 14th April 2008.

1.2 Aims and Objectives

The aim of the watching brief was to record any archaeological evidence exposed by the stripping of the pipeline track and other related works in the areas of interest previously identified, and also to mark certain sites which were to be avoided and preserved in situ.

1.3 Reporting

The present document has been prepared as the final report on this watching brief. Copies will be sent to the client, The Royal Commission on the Ancient and Historical Monuments of Scotland, and the Perth and Kinross Historic Environment Record.

1.4 Planning and Curatorial Issues

This Watching Brief is the final part of a programme of archaeological work designed to satisfy the outstanding archaeological condition on the planning consent for this development. Because of the size of the hydro scheme, Planning Consent was granted by the Scottish Government rather than Perth and Kinross Council, but under the terms of the planning condition, supervision of archaeological requirements was referred to the Council, and to its archaeological advisers Perth and Kinross Heritage Trust. The present watching brief was carried out in accordance with a Written Scheme of Investigation prepared by SUAT Ltd and approved by Perth and Kinross Heritage Trust.

1.5 Acknowledgements

This project involved the co-operation of many people and organisations. SUAT wishes to thank David Strachan and Sarah Winlow of Perth and Kinross Heritage Trust, Hector and Richard Barclay of Innerhadden Hydro Limited, Tom Shaw and Charlie Bateman of Shawater Ltd, designers and managers of the project, and Graham Robb, Graeme Duff and other staff of Barhaul contractors, Aberfeldy.

2 Details of Work

2.1 The Site (Illus 1 and 2)

The development extends along the Innerhadden Burn and its two tributaries, the Glen Sassun Burn (W) and the Allt Coire Cruach Sneachda (E). These burns combine and descend in a steep-sided gorge down to the River Tummel, just E of its emergence from Loch Rannoch.

The pipeline runs alongside these burns, from its intakes in the SW and SE, down to the turbine house beside the farmhouse and steading of Innerhadden. A steep farm track runs roughly parallel to the Innerhadden and Glen Sassun Burns, from the steading up to the western pipe intake and beyond. The pipeline in places follows and in places crosses this track.

Almost all of the glen consists of high moorland, thickly covered in heather, grazed by sheep and populated by grouse and deer. The ground is very uneven, with numerous glacial features, dissected by small burns, and occasional morasses. The burns flow over clean boulder beds in steep-sided ravines between glacial banks and terraces.

The final kilometre of the pipeline at the mouth of the glen passes through woodland, with grassy verges beside the farm track, before terminating in a steep bank overlooking the burn and the farmhouse, partly occupied by a mound of clearance boulders, and partly by other farm debris.

2.2 Archaeological Potential

Areas of archaeological interest had been identified around Site 36, near the SE intake; a small cluster of Sites 38, 39, 40; a large area of possible settlement around Sites 41–43 and 60–62, near the lower limit of open moorland; and a system of tracks or channels and platforms (Sites 44–54) in the woodland at the lower end of the project.

All these indicated evidence of earlier land use which might be further exposed during the stripping of the track for the water pipeline.

2.3 Archaeological Method

2.3.1 Construction

The archaeological record was necessarily constrained and focussed by the construction process. The opportunity was taken to observe and record this in some detail, both to give the background to the present record, and also for guidance in responding to similar projects in future.

The construction process required the stripping down to natural bedrock or glacial deposits of a pipe track typically 4–5m wide. Turf, heather, peat and subsoil were stripped off using large tracked 360° excavators, normally with a smooth-edged ditching bucket, except where extremely rocky ground conditions required a toothed bucket. After stripping, a deep pipe trench was dug into the natural deposits along the centre of the track, again using large tracked 360° excavators, equipped with a toothed bucket or a hydraulic breaker as required. Riddle buckets were used to provide a clean, soft bedding and fill under, around and over the pipes. The coarser stones were

laid well above the clean fill, where they could not crack the pipes, followed by a general mixed fill, subsoil and finally peat and turf, to allow natural regeneration.

The pipes descend from about 550m OD at the intakes, down to about 250m OD at the turbine house, a fall of 300m, giving a nominal pressure of 300 tonnes/m². This is equivalent to 426 psi, about twice the boiler pressure of a railway locomotive.

The water pipes were of two kinds. The lower part of the pipeline used cast ductile iron pipes, 0.6m (= 2ft) in diameter and 6.2m (= 20ft nominal) long, specially coated inside and out, with an integral push-fit joint at one end, sealed by rubber rings, and a slight taper at the other end to allow insertion into the next pipe. The pipes were lowered into the trench one at a time, and pushed together in situ. Where significant changes of direction were required, these were formed by using special joints, cast to the appropriate angle, cutting the pipes to length as required with an abrasive wheel, and pushing them into the joints with special sealing rings. All changes of direction required to be deeply buried and very firmly packed into place, as centrifugal force on the bend tends to blow the pipe sections apart. In any case, such a highly-pressurised system needed to be very carefully constructed, with all joints clean and well secured, all pipe sections firmly bedded in place, and no unintentional bending or crushing stresses applied to the pipes.

In the upper part of the pipeline, the lower pressure allowed the use of polyethylene pipes, 0.4m diameter x 9.8m long. These are much lighter, cheaper and easier to handle. They were laid out in long strings beside the trench, butt-welded together into continuous lengths on the surface, and then pushed, rolled and twisted sideways into the trench. Being flexible, they are able to accommodate gentle changes of direction without special angle joints.

Well above the water pipes were laid small diameter plastic conduit pipes, to carry the electric cables for controls and instruments to monitor and operate the system. These were light and small enough to install by hand. Also installed by hand was a very small-diameter blue plastic water pipe used to feed an agricultural water supply tank just above the turbine house, and replacing an old asbestos cement pipe along the side of the access track.

It will be appreciated that installation of the pipeline was a very substantial piece of engineering, requiring large machines and the movement of large quantities of heavy materials, mainly on trailers pulled by agricultural tractors. The old farm access track was substantially improved throughout its length to carry this traffic.

It would have been easiest to build the pipeline in a continuous run from top to bottom, but this was constrained by the need to avoid disturbance to nesting birds on the moorland, and to avoid silting the burns when fish were active. Wet weather also hampered access and progress in some steeper areas. As a result, construction, and the watching brief, moved to different work areas as they became available.

2.3.2 Watching Brief

The first part of the watching brief consisted in re-visiting the areas of interest, identifying the features previously identified in the walkover survey, and others adjacent, and marking them, mainly with wooden pegs, so that they could be either avoided or monitored as required.

Thereafter, work consisted in accompanying the machines when working in areas of interest, and recording the features exposed, by means of notes, digital photographs, and measured section drawings where sufficiently distinct and significant deposits could be seen. Initial stripping of the pipeline track was observed and recorded in detail. Subsequent digging of the pipe trench was entirely into natural, geological deposits, and was observed from time to time as work progressed.

Features and work areas were located using a simple hand-held GPS system, Garmin GPS 60. The open, high terrain gave very good satellite reception, with nominal error readings typically as low as $\pm 4\text{m}$. Easily identified landmarks were re-surveyed on each visit to calibrate the GPS. These confirmed a high degree of accuracy and consistency, allowing features to be mapped with confidence. The alignments of linear features were recorded using a simple hand-held magnetic compass, taking care to avoid errors introduced by electronic equipment and batteries.

Records of GPS positions, context numbers and descriptions, and photograph numbers were kept on Watching Brief Record Sheets, allowing most information for each visit to be recorded on a single sheet on a clipboard. These sheets form Appendix 4. The information was then extracted to form the Context and Photographic Registers. Multiple recording sheets and folders were found to be impractical for use on a long linear watching brief in exposed upland conditions, as everything had to be carried on foot from the limits of vehicle access up to the current work area, and the rapidly changing conditions of wind and rain quickly disorganised any attempt to shuffle papers and cross-refer between different folders. Photographic numbers are as generated by the camera, usually re-starting from 001 at each visit, and organised into folders day-by-day, and where convenient into subfolders by work area. Some features have been numbered more than once, for example when revisited after a long interval. Relations to other numbers are shown in the right-hand column of the Context Register.

2.4 Results of Investigations

2.4.1 General

A full record of all results is contained in the appendices. The natural turf, heather, peat and geological deposits were recorded as exposed, in order to provide a background to more significant deposits, and as a precaution against seemingly natural deposits proving to be more significant on further exposure.

The underlying solid geology appeared in a few places, and was generally of schist or similar materials. In most places this was covered by glacial deposits of angular boulders mixed with sand or clay, and covered with peat, turf and heather. This ought to have been a free-draining terrain, but in many places the glacial deposits were capped by a very thin skin of soft wet clay, trapping surface water in the turf and peat above, and allowing peat bogs to form wherever there was a sufficient hollow.

No artefacts were found in the watching brief.

2.4.2 Significant Features

The most significant features are described starting from the SE intake at the top of the scheme, and working down northwards to the turbine house and outfall near the

Innerhadden Farm Steading. These features comprise a mound and enclosure at high level near the SE intake, a small group of mounds, banks and platforms where the access track fords a burn, a large complex of platforms at the lower limit of moorland, and a complex of channels or tracks in the woodland towards the bottom of the scheme.

2.4.3 Mound and Enclosure

Mound 36 was located at high altitude, close to the SE intake. It had a distinctive conical shape, and stood overlooking the W bank of the Allt Coire Cruach Sneachda, on a platform projecting NE into the gorge formed by the burn, so that the mound was bounded on three sides by a steep drop, and partly eroded along its E edge. The mound was about 3m high, and 15m in diameter. The eroded edge showed that it was formed of gravel capped by turf.

Enclosure 1066 was directly adjacent to the mound on its SE side, D-shaped, about 11m N-S, formed by a low bank butted up against the mound. The E side of the enclosure was partly cut away by the drop into the gorge. On the W side was an apparent entrance, formed by a small gap between the bank and the mound.

The mound may have been a glacial feature, but it was very well-defined, and occupied a commanding position with wide views. The enclosure may have been a grouse butt, but is different from the other grouse butts seen at Innerhadden.

Neither the mound nor the enclosure is directly threatened by the pipeline.

Platform 1067 was about 100m upstream from mound 36, and about 10m lower, roughly square, projecting from the side of the gorge. This may well have been a natural feature, but might have attracted human activity.

2.4.4 Mounds, Banks, Platforms and Peat Cuttings

A small group of features was found close to where the access track and the pipeline cross a deep gorge formed by a tributary of the Innerhadden Burn. Moving down the pipeline from S to N, these were as follows:-

38. These peat cuttings lie on the S side of the gorge, to the E of the access track. They are extensive, but not well-defined, not directly affected by the pipeline.

39. This is a low bank, overlooking the gorge directly to the N, made of turf and stones, 3m wide, 15m long, less than 0.5m high, aligned roughly N-S, (10⁰ Magnetic). This was clearly artificial, but impossible to date, and of unknown function. It should not be directly affected by the pipeline.

1062 was a small mound or platform, directly opposite bank 39, overlooking the N side of the gorge. It was tear-drop shaped, defined by narrow, dry channels winding down into the gorge. These are probably natural, glacial features; they do not resemble any known artificial feature.

40 was a large, flat platform, a little to the NW, on the W side of the access track. It was originally round, but clipped on its E side by the track. It was not well-defined, but about 25m in diameter and 0.45m high. The S edge was defined by a shallow

channel, while the original E extent was perhaps shown by boulders on the E side of the access track.

Slight widening of the access track exposed a section along the E side of the platform, revealing a brown sandy loam turf layer 1059 over soft, clean yellow sand 1060. Near the middle of the section, the turf had been partly eroded away to reveal a concentration of stones and boulders 1061.

Platform 40 could perhaps have been formed by glacial or post-glacial action, but it occupies a prominent position overlooking the gorge of the Innerhadden Burn and the ford of its tributary, with other traces of human activity nearby.

1058 was about 0.5km N of platform 40, on the E side of the track, overlooking the gorge of the Innerhadden Burn. It was a small, hemispherical mound, 3.5m in diameter and 0.8m high. It was slightly flattened on the top, and surrounded by three large boulders. Widening of the track cut a section roughly through the middle of it. This revealed a grey stony turf layer 1063, over a core 1064 of orange grey sandy loam with abundant fine grass roots. This sealed an old ground surface 1065 of dark grey-green silty loam with occasional preserved heather root fragments. A sample of this was taken. Large boulders were embedded in the old ground surface, upstanding into the core 1064.

This mound cannot be glacial, because of the old ground surface, nor very recent, because of the turf cap. It might have been created accidentally during previous formation and maintenance of the access track. There are other accumulations of upcast along the side of the track in this area, though generally more irregular and formless.

2.4.5 Platform Complex

The largest and most important concentration of features was found at the lower limit of open moorland, just before the pipeline descended into the woods. Here a complex of mounds, platforms and other features was found, some close to the pipeline, and some farther away. Working down the pipeline, from S to N, these were as follows:-

59 = 1089, a drystone wall foundation, aligned to 45° Magnetic, 4–5m long, and about one course high. The old channel or peat track 60 runs directly to the W. The wall could have been part of an enclosure separating the complex below from the open moorland. It runs roughly perpendicular to the contours.

1053 = 1084, a promontory projecting N. Stripping of the pipeline showed that this coincided with rocky outcrop 1085, and was probably entirely natural.

1052 = 1083, a prominent oval mound, which may also have been purely natural.

60, a deep channel, probably an old peat track, winds its way up westward from the access track, to cross the pipeline close to a very small patch of rough stone paving 1051. It then turns S, and continues parallel to the pipeline, winding its way around the platforms, and passing to the W of the wall foundation 59 = 1089. This track is clearly artificial and perhaps of early modern date.

1054 = 1079, a large, well-defined grassy mound, to the W of the pipeline. This was oval, 20 x 22m, with a long axis aligned E–W, pointing towards Schiehallion. There was a well-defined central hollow, and a large upright stone to the S (220° Magnetic) of the centre. There was a slight bank on the north side, with a gap at 20° Magnetic from the centre. This was the best defined of all the features in this area, and far enough from the pipeline to escape disturbance.

1076 – 8. A platform 1077, on the E side of the pipeline, with a surface of turf over grey tan silty clay 1078. There was no bank on the S side, but the N side was defined by a rocky shelf 1076 including a large (1m), in-situ boulder, revealed in section as the pipeline passed by. The platform 1077 was part of a group (61) of about seven such platforms seen in the walkover survey. It could have been natural or artificially improved.

1074 – 5. The platform was defined on the N side by a yellow sandy bank 1074, revealed in section as the pipeline passed by to the W. The internal surface was a thin black turf layer 1075, directly on top of the natural. There was no S bank.

1055 = 1070 was a circular platform, a little to the W of the pipeline. It was well-defined, 8m in diameter, with a central hollow and exposed boulders. It was not disturbed by the pipeline.

1057 was a small mound, 3m x 2m, NW of 1055 and W of the pipeline.

1056 was a scatter of small irregularities to the W of 1055, too poorly defined to record in detail.

1071 was part of a group of three platforms 62, seen in the walkover survey. Platform 1071 lay directly to the E of the pipeline, about 15m in diameter, defined N and S by a sandy bank about 0.3m deep, revealed in section as the pipeline passed by.

41 was an oval mound, about 5m x 10m, aligned N–S, rising a little to the S. It lay to the NW of the pipeline, and was not disturbed.

1036 was a fairly well-defined platform, about 10m in diameter, directly on the pipeline, which here ran E–W. The platform was covered with dry sandy turf 1038, and its edges were defined by low stony banks in the subsoil, about 1.5m wide in the E (1039), and less well-defined in the W (1043). The interior was covered with a grey silty loam 1040 under the turf, with some large boulders protruding from below.

1033 was a possible platform, about 20m in diameter, but poorly defined, clipped on its N edge by the pipeline. It was part of a scattered group 42 of about seven platforms, mainly to the S of the pipeline.

1032 was a concentration of boulders running N–S across the pipeline, but poorly defined.

1030 was another concentration, better defined, and aligned with a standing tree. This seemed to mark the lower edge of a terrace on which the platforms stood, and may have been a deliberately formed boundary feature.

2.4.6 *Tracks in the Woodland*

Where the pipeline descended from the open moorland into the woodland, it partly followed the line of the access track, and partly ran parallel to it. In various places it crossed two channels or tracks also descending through the woods. These were first seen in the walkover, and were so deeply sunken as to resemble water channels such as mill lades. However, local tradition interprets them as peat tracks, in effect predecessors of the existing vehicle access road. They are very similar in form to the track 60 seen on the moorland above.

Track 44 entered the woodland through a 5m gap in a high bank or natural mound. It quickly joined the existing access track, thereby becoming invisible. This area was excavated for the pipeline, and revealed a layer of boulders (1012) on top of deep soft peat (1014). Underlying natural was yellow sand (1013) with occasional boulders (1015) on the surface. The boulders (1012) were perhaps laid down as a surface over the peat bog.

Track 45 appeared about 200m down the hill, turning off the modern access track SW into the woods.

Tracks 1006 and 1007 reappeared a further 300m downhill, as two separate, parallel tracks, E (1106) and W (1007), in places deeply sunken between grassy mounds, and eventually converging as a single track (1007), adjacent to a conical, grassy mound 1008. There were traces of a stony surface (1009) at this point. The converged track continued alongside the modern access track, in places crossing over it and reappearing as track 1050, all the way down to the bottom of the pipeline.

Mound 55 lay at the very bottom of the pipeline, on the W bank of the Innerhadden Burn. The mound was partly cut away to form the works compound the intended site of the turbine house. This revealed that it was made of very coarse rubble, probably glacial, perhaps augmented by field clearance stones at the top. The exposed section in the works compound was about 3m deep.

3 Interpretation

3.1 Mound and Enclosure

The mound 36, and the platform 1067 may well have been natural, glacial features, but the D-shaped enclosure 1066 abutting mound 36 is very well-defined, and appears to be man-made. It could be a grouse-butt, however it is different in shape from other grouse-butts seen at Innerhadden (eg 56, 1041, 1047), and at very high altitude. If not a grouse-butt, it seems too high and isolated to be part of a settlement. Its position overlooking the gorge, and looking up and down the glen, would make an excellent lookout post or watch tower, perhaps prehistoric, but no parallels are known.

3.2 Mounds, Banks, Platforms and Peat Cuttings

In this cluster of features, the peat cuttings 38 are the clearest, presumably pre-clearance. The adjacent bank 39 is clearly artificial, and perhaps of the same period, though otherwise undatable. The large (25m diameter), originally round platform 40 could have been a house platform, perhaps prehistoric given its shape, occupying a strategic location, perhaps at a time when a milder climate allowed high level

settlement. However it was not well-defined, and could be purely natural. The tear-drop shaped platform 1062 was probably natural, formed by erosion channels on the edge of the gorge; it seemed too small to be an intentionally formed structure. The small mound 1058 cannot be glacial, because it seals an old ground surface, but at 3.5m diameter and 0.8m high, it seems too small and too domed to form a useful structure. Upcast from the formation of the access track seems the likeliest explanation.

3.3 Platform Complex

This cluster of round platforms just above the limit of woodland seems the most important discovery of the project. All the platforms are likely to be glacial/early post-glacial in origin, but some have such well-defined sandy banks around them that some form of human utilisation seems likely, for example 1036 and 1071. The circular forms suggest a prehistoric or early historic rather than early modern / pre-clearance date, but the peat track 60, the wall 59 = 1089, and the possible boundary bank 1030 all suggest continuing activity into more recent times.

The mound 1054 = 1079 is so prominent, with its banks, upstanding boulders, and apparent orientation on the visible summit of Schiehallion, that it could be interpreted as some sort of prehistoric ceremonial structure, but it is much less clearly defined than the many well-recognised stone circles in Perthshire. Post-glacial processes, in effect the melting of large, dirty snowballs, and the circumambient grazing habits of sheep, can produce various phantom features to confuse the credulous.

3.4 Tracks or Channels in the Woodland.

The various tracks, 44, 45, 1006 and 1007 passing through the woodland were so well-defined and so deeply sunken, that they were originally (in the walkover survey) tentatively identified as water channels, but comparison with the peat track 60 in the moorland above, and consideration of their length and steepness, suggest that the local tradition that they are peat tracks is correct.

4 Conclusions and Recommendations

4.1

The watching brief was successful in recording the various features identified in the walkover survey. The complete absence of artefacts is frustrating, but not at all unusual in an upland context where economically marginal subsistence agriculture was the norm right up to the time of the clearances.

A special problem at Innerhadden was the extensive occurrence of landscape features on the boundary between natural and artificial. Enough of these have now been recorded to provide a sample for comparison with other sites, while the majority remain undisturbed, and available for future research.

4.2 Recommendations for Further Work

No further work is recommended in response to the present development. However, the final decision rest with Perth and Kinross Heritage Trust as advisers to Perth and Kinross Council.

More generally, continuing study of aerial photographs of this area, especially as further cover becomes available, may discern clearer patterns in these upland landscapes, and help to distinguish between artificial, purely natural, and deliberately modified features. This however would be part of ongoing research rather than in direct response to development pressures.

5 Bibliography

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Appendix 1 Context Register

No:	Description	=
	Features found in walkover survey, 2005	
21	Platforms Level platform over confluence of burns. Series of natural knolls suggest possible/potential occupation sites.	
22	Platform Irregular shape, c 10 m dia, on bluff overlooking burn. Potential shieling site.	
23	Weirs Sequence of 5-7 rock-built weirs in bed of burn, each c 0.5 m high.	
24	Weirs Artificial steps in burn	
25	Platform? Overlooking burn. 3m wide x 8 m long	
26	Bridge? Plank on far side of burn. Remains of footbridge? 20 m N of 25.	
27	Platform Irregular, overlooking burn, c 5 m dia.	
28	Platform Irregular, overlooking burn, c 3 m dia. Lower level ground, sheltered between two bluffs, preferable for sheltered encampment. GPS grid ref in error. Position re-plotted from site sketch plan.	
29	Shieling Shieling huts (associated with sites 30 & 31), 5 m diameter, 0.3-0.5 m high.	
30	Shieling Platform 8 m dia.	
31	Shieling Platform 5 m dia.	
32	Shieling 4 m dia.	
33	Shieling 4 m dia.	
34	Mound 10 m dia.	
35	Platform? Possible flat platform	
36	Mound 1.8 m high. Overlooking river.	
37	Mound Large mound, 15-20 m dia. Probably glacial, although possible lookout point, with very commanding views across glen.	
38	Peat Cutting Possible peat cutting, with rectangular area roughly 30m N-S	
39	Bank Boulders roughly lain and partially covered in peat, 15 m long by 3 m wide.	
40	Grassy, stony platform at road side	1059-60
41	Mound Oval mound 5 x 10 m, aligned N-S, with highest, rise at S end.	

No:	Description	=
42	Shielings 7 mounds, 3-8 m dia, 0.5-1.0 m high, with linear features. Boundary runs downslope, across contours. Quite large group, spread over 50 m to S of pipeline route, x 20-40 m.	
43	Sheepfank? Shieling? Hollow, 5 m dia., at edge of slope. Walls c 0.8-1m high, built into slope. Marks edge of complex 42.	
44	Shieling track? Cutting 5 m wide, in between two natural mounds.	
45	Grassy track, turning away SW into woods	
46	Lade or Track 46.	
47	Track N - S track, 5 m wide, 40 m long.	
48	Track crossing Lade 46. Traces of possible drystone footbridge abutment on one side.	
49	Mound and platform Small stone mound, overgrown with moss. 2 m square platform adjacent, possible settlement site.	
50	Mill Lade? Peat Road? Improved or artificial water course alongside track. 0.3 m deep, very straight.	
51	Mill Lade? Watercourse. Joins 50 at 6718 5752, associated with 52.	
52	Boundary Wall Collapsed wall, runs NW - SE, along edge of lade, crossing track at 6718 5752	
53	Platform? Flat area, 50 m dia. Water Tank?	
54	Track or Gully or drainage feature in line of track. Continues to site 8 (Sheepfold 6724 5759)	1050
55	Platform Dump from house. Slope too steep for natural angle of repose.	
56	Grouse Butt. Horseshoe-shaped drystone rubble and turf construction. 1m x 2 m internally. Walls 4 m dia overall. Entrance on downslope side.	
57	Peat Cutting 50 m x 30 m peat cutting, rectangular.	
58	Mound 10 m x 4 m. Oval mound, perhaps hut base associated with peat cutting.	
59	Dyke, very tumbled, with flat area to W, and 4 possible sheiling mounds. Dyke is immediately to E of narrow burn, possibly a head dyke, although following burn to S rather than contour. Potential for earlier occupation, since it occupies a sheltered position with good views of glen.	1089
60	Improved burn. V-profile. 5 m wide, 1.2 m overall depth, including 0.6 m high banks on either side.	
61	Sheiling complex. 7 possible houses, c 3 m dia. 10m E of pipe route.	1077
62	Sheilings. 3 mounds. Complex forms part of 61. Appears to extend down towards burn, and uphill about 150 m.	1071

No:	Description	=
	Watching Brief Contexts, 2008	
	13 May 2008	
1001	Wet peat. Dark and smelly, with standing water. 0.5 m deep.	
1002	Scattered rounded boulders under 1001. Most on S edge of bog. On surface of 1003.	
1003	Green boulder clay under 1001 and 1002. Angular boulders.	
1004	Turf, 0.1m deep, peels off 1005.	
1005	Natural yellow boulder sand, with abundant angular boulders. Replaces boulder clay 1003.	
1006	Eastern channel.	46-50
1007	Western channel. 1006 and 1007 converge to single channel, 1007.	46-50
1008	Large mound with trees on top, directly W of convergence of channels.	
1009	Concentration of stones in E channel. French Drain? Less obvious in W channel. Natural still yellow boulder sand.	
	15 May 2008	
1010	Dry brown grassy turf, 0.1 m deep.	
1011	Light brown silty loam subsoil under 1010.	
1012	Large schist boulders. Road surface? On top of 1014. Peters out to N of gap in bank	
1013	Yellow sand. Natural.	
1014	Localised deep peat in gap between banks, esp on E side.	44
1015	Occasional angular boulders on surface of sand 1013, S of gap in bank.	
1016	Occasional large boulders on sand 1013.	
1017	S of fence, dark, wet, peaty turf, 0.2 m deep	
1018	Schist rubble under turf 1017 S of fence. Road? No, extensive natural, angular schist crushed with blue dust.	
1019	Thin brown clay skin between peat 1017 and rubble 1018, waterproof, creates bog despite free-draining geology.	
1020	Natural changes to green sandy silt with abundant angular schist boulders. Frequent heather root penetration. Almost boulder clay.	
1021	Abundant angular boulders, some rounded. In brown sandy silt.	
1022	Geology changes to schist rubble, creating 'phantom' buildings.	
1023	Thick tan clay layer, 0.2 m, under 0.2 m peat.	

No:	Description	=
1024	Increase in large boulders, in deep brown peat, over 1026	
1025	Not used.	
1026	Natural, boulders in green / grey silty clay.	
1027	Soft peaty clay, chocolate brown, 0.5 m deep. Over 1026	
1028	Green clay cap, 0.1 m thick, between 1027 and 1026, traps water.	
1029	Natural. Very coarse boulders in green silty clay.	
1030	Concentration of stones in line with standing tree and edge of shieling terrace. <i>Possible</i> field bank.	
1031	Subsoil. Angular boulders in orange sand.	
1032	Concentration of boulders across pipeline. Not well-defined.	
1033	Centre of <i>possible</i> platform, clipped on w (S) edge by pipeline. Diameter about 20 m. Not well defined.	
1034	Abundant angular and large boulders in grey silty loam. Natural. Under 0.3 m peat and turf.	
1035	Natural green silty, sandy clay, with abundant angular boulders.	
1036	Another possible platform on pipeline, dia approx 10 m. Quite well defined.	
1037		
1038	Dry sandy turf 0.2 m deep on platform 1036	
1039	Subsoil turns stony at platform edge. Stony bank N-S, 1.5 m wide, defines platform E edge. Reasonably well defined.	
1040	Grey silty loam to W of bank 1039, ie inside platform. Some large boulders poke up from below. Also, root penetration.	
1041	Grouse butt on pipeline, 5m x 4m. E facing slope.	
1042	Natural under platform 1036. Yellow sand with boulders.	
1043	Stony bank? W edge of platform. Turf only 0.1 m deep. Not so well defined as 1039.	
1044	Boulder spread right under thin turf. Large, angular.	
1045	Natural directly S of grouse butt. Large boulders in orange sand	
1046	Yellow sand with boulders. Natural.	
1047	Grouse butt. E (downhill) bank made of yellow sand, 0.5 m deep, with 0.1 m thin turf cap.	
	Returning to area at bottom of woods.	
1048	Turf 0.2 m deep.	51 - 3

No:	Description	=
1049	Natural buff clay with boulders.	
1050	Old channel parallel to modern track. Lower (N) end meets track.	54
	27 May 2008	
1051	Cobble patch	
1052	Channel coils around oval mound 1052, just W of pipeline. Summit now marked with red peg. = 1083	1083
1053	Mound surmounted by pipeline post. Just SE of 1052. Grassy, extensive, not very flat. Centre platform perhaps oval, N-S, 14 x 6 m.	1084
1054	Prominent mound, just W of pipeline and 61. Now marked with red peg. Extensive, with well-defined central hollow. Large stone to S (220 Mag) of centre. Hollow in bank to N (20 Mag). Oval E-W, 20 x 22 m, aligned to Schiehallion.	1079
1055	Platform, N of 61, just W of pipeline. Well defined, circular, 8 m dia. Central hollow, boulders.	1070
1056	Irregular bumps W of 1055. Too vague to record.	
1057	Small mound NW of 1055, W of pipeline. 3 x 2 m	
1058	Mound with 3+ boulders, cut by existing track. Lies E of grouse butt 56. About 5 m dia. Doubtful. Many other boulders along track side. Probably just upcast from track formation. But see 1063 – 5 below	
	03 June 2008.	
1059	Brown sandy loam turf layer on mound 40. Generally 0.2 m deep.	40
1060	Clean soft yellow sand under 1059. Continues down to base of section. Natural. Shades to orange towards S.	40
1061	Concentration of boulders in turf layer, near centre of section. E of Peg. Exposed in depression 2.3 m long, 0.85 m wide, 0.4 m deep. Section is 0.45 deep underneath, turf and sand.	40
1062	Small mound, defined by channels and ravine into burn. Teardrop shape. Glacial? SE (150° Mag) of platform 40.	
1063	Grey stony turf on mound 1058	1058
1064	Orange grey sandy loam with abundant fine grass roots in mound 1058	1058
1065	Dark grey-green silty loam. Occasional preserved heather root fragments. Old ground surface under mound 1058. Sample kept.	1058
	11 June 2008	
1066	To SE of mound 36, low bank forms D-shaped annexe, about 11 m N – S. Cut on E side by ravine. Centre of mound is at about 300° from centre of D. Entrance across bank on W side, close to mound. Mound and bank both well clear of pipeline.	

No:	Description	=
1067	Natural platform, roughly square, on terrace in ravine, about 100 m S of mound, and about 10 m lower. Distances estimated by eye.	
	19 August 2008	
1068	Dark brown peaty topsoil growing heather.	
1069	Very coarse angular boulders in greenish silty sand. Natural glacial material. Well drained and dry despite wet conditions. Natural becomes more sandy just W of 62. Golden colour.	
1070	Mound marked with red peg, on W side of track. Revisited to calibrate GPS. = mound 1055. Track passes E of 1070.	1055
1071	Sandy bank, S side of 62. Yellow sand, about 0.3 m deep. Over 1069, under turf.	62
1072	Deep wet peaty turf layer, on E side of track. About 0.4 m deep. Machine digs drain NE into existing watery depression, to prevent trench flooding. Runs up to N slope of platform 1074	
1073	Grey clay layer under 1072, blends into natural boulders.	
1074	Deep yellow sand under turf. 0.4 m deep. Forms N bank of platform marked with peg. Track cuts W side of platform. Peg at centre of platform defined by 1074.	
1075	Thin black turf in section. No sand. No S bank.	
1076	Rocky shelf approaching next pegged platform (61). Large in situ boulder, about 1 m x 1 m.	61
1077	Centre of mound to E, marked by Yellow peg.	61
1078	Grey tan silty clay under turf, 0.2 m deep, in section, passing 1077. No obvious bank.	61
1079	Very large green mound, marked with red peg, well to W of track. Not affected.	1054
1080	Deep wet peat bog, S of platforms. Stripping temporarily stops here to avoid flooding.	
1081	Dark grey silty turf / topsoil layer, 0.1 – 0.2 m deep	
1082	Coarse boulders in green-grey silt. More loamy, less coarse boulders than farther N	
1083	High mound, partly encircled by old peat track. Red peg.	1052
1084	Probably natural promontory projecting N. Large pipeline stake in centre. Lies 145 Mag from 1083. Faint detour from peat road passes just W of centre.	1053
1085	Outcrop of hard very dark schist or whinstone boulders, forming N edge of 1084. Appears natural.	1053
1086	Top of 1085. Turf shallow, 0.1 m. Dark whin or schist boulders. Becoming coarser.	1053
1087	Glacial deposits. Coarse greenish schist boulders in green and brown sandy silt.	
1088	Outcrop of solid ironstone, in centre of pipe track.	
1089	Short stretch of Drystone dyke, aligned 45 Mag. About one course high, mostly. About 4 –	59

<i>No.</i>	<i>Description</i>	=
	5 m long. About 10 m W of S end of pipe track stripping. Peat track lies immediately to W. Location correct to within 40 m of dyke 59.	
1090		
1091	Natural Grey-green silty sand with abundant coarse boulders.	
1092	Thin black peaty turf, 0.1 m.	
1093	Deep wet peat, becomes deeper to N. Dark brown, with abundant visible roots. Generally about 1 m deep.	
1094	Natural under wet peat, grey clay with abundant boulders.	

Appendix 2 Photographic Register

<i>Image</i>	<i>Description</i>	<i>View</i>
	13 May 2008	
	AM	
001	View from top of woods up into open moorland	SSW
002	View from top of woods up into open moorland. Yellow peg in middle distance marks area of interest.	SW
003	View down into woods along intended pipe track, through gap in bank at top of woods. (= DBA site 44).	NE
004	From gap in bank 44 down to existing access track.	NE
005 – 6	From access track up to gap in bank 44.	SW
007 – 10	Descending access track through woods.	NNE
011	Descending access track through woods. High-pressure water pipe exposed at bend. Red-painted ductile iron. Light blue plastic pipe is agricultural water supply, replacing existing. Black plastic is duct for control systems.	NNE
012	Descending access track through woods.	NNE
013	Old channel or peat road 45 turns away into woods.	W
014	Looking back up access track. Old channel or peat road 45 turns away R into woods.	SSW
015	Descending access track through woods.	NNE
016	Descending access track through woods.	NNE

017	Work area.	NNE
018	Work area. Pipe track here moves to L (E) of access track.	NNE
019	Detail of pipe trench.	NNE
020	Looking back up pipe track from bog area	SSW
021	Bog Area	S
022	Ductile Iron pipes awaiting installation.	E
023	Peat Bog 1001	W
024	Stripping the Peat Bog 1001.	NNE
025 – 6	Boulders 1002 in Peat 1001	W
027	Stripping the Peat Bog 1001.	SSW
028	Boulders 1002 in Peat 1001	E
029	Stripping the Peat Bog 1001.	SSW
030 – 2	Green boulder clay 103 appearing under 1001 and 1002. Angular boulders.	W
033 – 4	Green boulder clay 103 appearing under 1001 and 1002.	NNE
035 -	Green boulder clay 103 appearing under 1001 and 1002. Angular boulders.	NE
037	Deeper bog area, just before step down into area of old channels.	NE
038	Looking ahead down pipe track into area of old channels and mounds.	NNE
039 – 41	Looking back up pipe track at stripped bog.	SSW
042	Concentration of stones under turf.	E
043 -	Clear of Bog. Turf 1004, 0.1m deep, peels off Natural yellow boulder sand 1005	E
045 -	Over the step. Descending slope, W of E channel 1006. Thin (0.1 m) dry turf 1004 over dry, yellow boulder sand 1005. Ground has secondary slope down E – W. Some terracing and ramping to create level path for machinery. Tree stumps lifted at intervals.	SSW
047 - 8	Descending slope, bucket-first. Thin (0.1 m) dry turf 1004 over dry, yellow boulder sand 1005.	E
049	Thin (0.1 m) dry turf 1004 over dry, yellow boulder sand 1005.	NNE
050	Thin (0.1 m) dry turf 1004 over dry, yellow boulder sand 1005.	S

051 – 3	Descending slope, W of E channel 1006. Tree stumps removed.	SSW
	PM	
054 – 7	Access track with pipe track in woods to R (W), passing through mounds and channels. Tree stump marks line of pipe track return to access track.	SSW
058 - 9	Pipe track about to cross W channel 1007.	SSW
060	Pipe track about to cross W channel 1007.	S
061	Crossing of channel 1007. Boulders on surface. Bridge?	SE
062	Crossing of channel 1007. Boulders on surface. Bridge?	NE
063	Crossing of channel 1007. Boulders on surface. Bridge?	SSE
064 – 5	Crossing of channel 1007. Boulders on surface.	SE
066 – 7	Crossing of channel 1007.	SE
068 – 9	North of channel crossing. Natural still yellow boulder sand. Abundant boulders on surface. Turf 0.2 m deep	SE
070	North of channel crossing. Natural still yellow boulder sand. Abundant boulders on surface. Turf 0.2 m deep	SSE
071	North of channel crossing. Natural still yellow boulder sand. Abundant boulders on surface. Turf 0.2 m deep	SE
072	Machine working N, bucket-first. E channel 1006 on L (E)	SSE
073	Machine working N, bucket-first.	SE
074 – 5	Approaching channel 1006, very shallow. Tree stump as in 056 above.	SE
076 - 7	Approaching channel 1006, very shallow. Tree stump as in 056 above.	SSW
078 – 80	Crossing channel 1006, approaching access track.	SE
081	Crossing channel 1006, approaching access track.	SSW
082	Concentration of boulders along edge of chanel 1006. Cobbles?	S
083	Crossing channel 1006, approaching access track.	SSW
084	Large mound 1008 with trees on top directly W of Convergence.	W
085 – 6	E and W channels converge, W channel 1007 is the dominant survivor.	SSW
087	Stony surface 1009 approaching convergence.	SSE
088 – 9	Stony surface 1009 approaching convergence.	SE
090 – 2	Convergence point	SE

093 – 6	W channel 1007 near access track. E 1006 channel absorbed. No well-defined structures. Channel banks made of earth and stones, not boulder sand.	S
097	Pipe track joins access track. View down access track to agricultural water supply tank.	NNE
098	View down access track to agricultural water supply tank, fed by blue polyethylene pipe.	NNE
099 - 100	Deep pipe trench working down through bedrock towards bog 1001	SSW
101 - 5	Deep pipe trench working down through bedrock towards bog 1001	N
106	Deep section through bedrock.	SW
107	Deep pipe trench approaching bog 1001	SSW
108 - 10	View down along pipe track though area of mounds and channels to convergence with access track.	NNE
111	View back up access track from convergence.	SSW
112	Modern access track crosses burn or drain just S of farm water tank.	SW
113	Top of farm water tank. New pipeline will pass just W of this, in disturbed area.	NE
114	View back up pipe track from top of farm water tank.	SSW
115	View down access track from water tank.	NE
116 - 9	Site compound dug into glacial mound. Intended site of turbine house.	S
	15 May 2008	
	AM	
001	Pipe Track crossing through gap in bank at top of woods. (= DBA site 44).	NE
002	Pipe Track crossing through gap in bank at top of woods. (= DBA site 44). Turf 1010 stripping off Light brown silty loam subsoil 1011.	NW
003	Pipe Track crossing through gap in bank at top of woods. (= DBA site 44). Large schist boulders 1012. On top of 1014. Road Surface?	NNW
004	Pipe Track crossing through gap in bank at top of woods. (= DBA site 44). Large schist boulders 1012. Yellow sand 1013.	W
005	Pipe Track crossing through gap in bank at top of woods. (= DBA site 44). Deep peat 1014 between banks.	SE
006	Pipe Track crossing through gap in bank at top of woods. (= DBA site 44). Deep peat 1014 between banks.	NE
007	Detail. Deep peat 1014 over yellow sand 1013.	SE

008	Detail S of gap, Turf 1010 stripping off subsoil 1011.	SSE
009	Detail S of gap, Turf 1010 stripping off subsoil 1011.	SE
010 - 11	Angular boulders 1015 appearing over sand 1013.	SSE
012 -3	Crossing post-and-wire fence. Turf 1010 on sand and boulders 1013 + 1015. Pipe track progressing W. Access track diverges to E. Occasional large boulders 1016 on sand.	S
014	Crossing post-and-wire fence.	NE
015	S of fence, dark, wet, peaty turf 1017, 0.2 m deep	NW
016 – 18	Natural blue schist rubble 1018 under turf 1017.	N
019	Thin brown clay skin 1019 between peat and rubble, waterproof, creates bog despite free-draining geology.	N
020 - 1	Moving up onto natural terrace. Peat and clay together thin out to 0.2 m.	NW
022	Natural 1020. Green sandy silt with abundant angular schist boulders. Frequent heather root penetration. Almost boulder clay.	NNE
023	Natural 1020.	W
024 – 5	Up onto natural terrace edge. Peaty turf, 0.2 deep, over Abundant angular boulders 1021, some rounded. In brown sandy silt.	W
026	At edge of second natural terrace, 0.2 m peat. Geology changes to schist rubble, 1022.	NW
028	Phantom features in rubble.	NE
029	Up on second terrace edge, thick tan clay layer 1023, 0.2 m, 0.2 peat on top	NNW
030	Increase in large boulders, in deep brown peat 1024, over 1026.	NNW
031 – 3	Natural, boulders in green / grey silty clay 1026.	N
034 – 5	Bog with surface water. Soft peaty clay 1027, chocolate brown, 0.5 m deep. Over 1026	WNW
036	View ahead, climbing up westwards	WNW
037	View back down pipe track	ENE
038 - 40	Cutting through bog 1027.	NNW
041 – 2	Detail of section. Green clay cap 1028 between 1027 and 1026, traps water.	N
043	Climbing out of bog onto settlement terrace.	WNW
044	Climbing out of bog onto settlement terrace. Crossing natural peaty channel with surface water.	NW

045 – 7	Looking back down to bog.	NE
048 – 9	Climbing out of channel, approaching settlement terrace.	NW
050 – 2	Natural 1029, very coarse boulders in green silty clay.	NW
053	Looking back down pipe track.	NE
054 – 5	Concentration of stones 1030 in line with standing tree and edge of settlement terrace. <i>Possible</i> field bank.	S
	PM	
056 – 7	Grouse butt, (to L of pheasant) = Walkover feature 43. Off pipeline. Revisited to calibrate GPS	NE
058	Skirting N edge of possible terrace. Peat very shallow. Lots of surface boulders. No clear structures.	W
059 – 60	Subsoil 1031. Angular boulders in orange sand.	NW
061 – 4	Concentration of boulders 1032 across pipeline. Not well-defined.	NW
065	Centre of <i>possible</i> platform 1033, clipped on S edge by pipeline. Diameter about 20 m. Not well defined.	N
066	Pipeline clipping 1033.	NE
067	View from pipeline down across woods.	NE
068	Machine sondage shows more boulders 1034 under 1032. Natural.	NNW
069	Abundant angular and large boulders in grey silty loam. Natural 1034.	NW
070	Natural 1035, green silty, sandy clay, with abundant angular boulders.	NW
071 – 3	Area of grey silty clay in natural. Flecks of decayed schist mimic charcoal. Large patches of iron-stained silt. Natural.	N
074	Centre of platform 42, off pipeline, to calibrate GPS.	N
075	Pipe trench skirting N of feature 42.	W
076	Natural boulder clay.	NW
077	Natural boulder clay.	NE
078	Peat about 0.4 m deep, quite wet.	NW
079 – 81	Peat becomes deeper (0.5 m) just W of platform 42.	NW
082 – 3	Slight dip into deep bog just W of platform 42.	NW
084	Possible platform 1036 ahead.	W
085 - 6	Machine approaching platform 1036	N

087	Climbing onto platform 1036	NW
088	Standing on platform 1036	NW
089 – 92	Looking back from platform 1036 down to peat bog.	E
093 – 5	Digging platform 1036. Dry sandy turf 1038, 0.2 m deep on platform 1036	NW
096	Subsoil turns stony at platform edge. Stony bank 1039 N-S, 1.5 m wide, defines platform E edge. Reasonably well defined.	NW
097 – 8	Stony bank 1039 N-S, 1.5 m wide, defines platform E edge.	N
099	Stony bank 1039 N-S, 1.5 m wide, defines platform E edge.	S
100	Stony bank 1039 N-S, 1.5 m wide, defines platform E edge.	SE
101	Stony bank 1039 N-S, 1.5 m wide, defines platform E edge.	NW
102	Grey silty loam 1040 to W of bank 1039, ie inside platform. Some large boulders poke up from below. Also, root penetration.	NW
103	View from platform 1036 down pipeline to woods.	E
104	View across pipeline and platform to summit of Schiehallion. Vitara parked on access track at crossing of wire fence.	SSE
105 - 6	Machine on platform 1036. Schiehallion behind.	SSE
107	Grouse butt 1041 on pipeline, 5m x 4m. E facing slope. Drystane dyke ahead.	SW
108	View from grouse butt across to Schiehallion	SSE
109	View from grouse butt down pipeline to Dunalastair Water	E
110	Natural 1042 under platform 1036. Yellow sand with boulders.	N
111	Stony bank 1043 W edge of platform. Turf only 0.1 m deep. Not so well defined as 1039.	N
112	Stony bank 1043 W edge of platform. Turf only 0.1 m deep.	NW
113 – 4	Stony bank 1043 W edge of platform. Turf only 0.1 m deep.	N
115	Boulder spread 1044 right under thin turf. Large, angular. Just W of platform	NW
116 – 7	Working bucket-first upslope through grouse butt.	N
118 – 21	Grouse butt half-sectioned.	NE
122 – 4	Grouse butt half-sectioned. Natural 1045 directly S of grouse butt. Large boulders in orange sand.	N
125	W of grouse butt, pipe rising up slope. Turf thin. Yellow sand with boulders. Natural 1046.	N

126 – 9	Grouse butt. E (downhill) bank made of yellow sand, 0.5 m deep, with 0.1 m thin turf cap.	N
130	View from grouse butt down pipeline.	E
131	View from grouse butt across to Schiehallion.	SE
132	Machine at crossing of drystane dyke. Limit of day's work.	NW
133	Grouse butt as left.	NW
134 – 5	Machine on skyline crossing drystane dyke.	NW
136 – 7	Descending from pipe track to access track and pipe dump.	SE
138	Descending from pipe track to access track. Schiehallion beyond.	SE
139 – 40	View down access track to woods.	NE
	PM2	
141	Access Track crosses modern drain. Pipe track parallel to access track.	ESE
142	Pipe track parallel to access track, crossing modern drain, passing farm water tank on right.	NNE
143	View down pipe track. Turf 1048 over natural buff clay with boulders 1049.	NNE
144	Descending slope, more stony abreast farm water tank.	NNE
145	Farm water tank hatch. To calibrate GPS.	NE
146	Pipe track passing farm water tank.	E
147	View back up pipe track to modern drain.	SSW
148	Bottom of slope, looking back. Pipe track converging on access track.	SW
149	Old track or channel 1050 in foreground, parallel to access track.	WSW
150	Old track or channel 1050 in foreground, parallel to access track.	SSW
151	Old track or channel 1050 in centre, parallel to access track (Left) and pipe track (Right).	NE
152	View into woods at bend of access track.	SW
	27 May 2008	
	01 Old Track 60	
001	Old track or channel 60 meets access track.	SW
002	Looking down old track 60 to access track. Channel 60 bends gently N	ESE
003	Three marker posts near track 60, recorded to calibrate GPS	W

004	Three other posts off channel, recorded to calibrate GPS. Schiehallion beyond.	E
005	Track curves smoothly round to W.	N
006	Bend, looking back. Schiehallion beyond.	E
007	Sharp bend to S, starts new curve to W. Deep gully.	SW
008	Channel crosses projected pipe line, just W of cobble patch 1051	W
009	Detail of cobble patch 1051. View N down pipeline. Yellow pegs in distance mark possible mounds.	N
010	Detail of cobble patch 1051. View N down pipeline, marked by tall cane.	N
011	Track 60 curves gently from W to S (L),	W
012	Track coils around oval mound 1052, just W of pipeline. Summit marked with red peg.	NNW
013 – 14	Track coils around oval mound 1052, just W of pipeline. Summit marked with red peg.	N
015 – 17	Mound 1053 surmounted by pipeline post. Just SE of 1052. Track 60 on R	S
018	Mound 1053. Track 60 in foreground. Schiehallion beyond.	E
019	Detail, Mound 1053.	SW
020	Detail, Mound 1053.	N
021	View down pipeline from mound 1051	N
022	Prominent green mound 1054 to W of pipeline.	NNW
	02 Mounds	
023	Mound 1054. Red peg in centre. Large boulder in foreground.	N
024	Detail, boulder.	N
025	Detail, boulder.	S
026 – 7	Detail, red peg in centre of mound, gap in bank opposite.	N
028 - 9	Centre with boulders in W periphery. Banks at E end. Pipeline marker and mound 61 (yellow peg) beyond. Schiehallion far distant	E
030	Detail, banks at E end.	E
031	Banks at E end. Pipeline marker and mound 61 (yellow peg) beyond. Schiehallion far distant	E
032	Detail, pipeline marker and mound 61 (yellow peg) beyond.	E
033	Mound 61 and pipeline marker to R. Mound 1055 in foreground, marked by	SW

	hammer. Mound 1054 in distance, red peg.	
034	Mound 61 (yellow peg) and pipeline marker. Mound 1054 beyond.	W
035	View from mound 61 (yellow peg) to Schiehallion.	E
036	Pipeline marker and mound 61 (yellow peg) to Schiehallion.	E
037 – 8	View down pipeline to lower marker and mound 62, and crossing of burn. Foreground, mound 1055, central hollow.	N
039 – 40	View from 1055 to Dunalastair Water.	NNE
041	View from 1055.	NE
042	Irregular bumps 1056 W of 1055. Too vague to record.	W
043 – 4	Small mound 1057 NW of 1055, W of pipeline.	NW
045	Feature 62. Large, irregular.	NE
046	Feature 62. Large, irregular.	NNE
047	Feature 62. Large, irregular. Boulder on N side.	N
048	Feature 62. Large, irregular. Boulder on N side.	N
049	Feature 62. Large, irregular.	E
050	View S up pipeline. Crossing of burn in foreground.	S
051	View S up pipeline. Crossing of burn in foreground.	SW
	03 Peat 38, Bank 39, Platform 40	
052	Platform 40, cut through by existing access road. Large boulders on E side. Yellow peg in centre.	N
053 - 4	Platform 40, cut through by existing access road.	S
055	Platform 40, yellow peg in centre.	W
056	Platform 40, yellow peg in centre. Schiehallion beyond.	E
057	Detail of boulders on E side.	
058 – 9	Low bank 39. Marked by yellow peg.	SE
060 – 1	Low bank 39. Marked by yellow peg. Schiehallion beyond.	NE
062 – 3	Low bank 39. Marked by yellow peg. Access road beyond, and Platform 40.	NW
064 – 5	Low bank 39. Marked by yellow peg.	SE
066	Peat cuttings 38. Extensive and ill defined.	SW
067	Peat cuttings 38. Extensive and ill defined. Marked by yellow peg.	E

	Schiehallion beyond.	
068	Peat cuttings 38. Extensive and ill defined. Marked by yellow peg. Bank 39 and access road beyond.	NW
069 – 72	Platform 40, marked by yellow peg, overlooking gorge and burn.	NNW
	04 Mound 1058	
073 – 4	Grouse butt 56 on hillside.	SW
075 – 6	Mound 1058 with 3+ boulders, cut by existing track.	E
077 – 8	Mound 1058 with 3+ boulders, cut by existing track.	N
079	Mound 1058 with 3+ boulders, cut by existing track.	NW
080	Mound 1058 with 3+ boulders, cut by existing track.	NNW
081	Mound 1058 with 3+ boulders, cut by existing track.	NW
082	General view along access road. Other similar ‘features’.	S
083	Mound 1058 with 3+ boulders, cut by existing track.	NE
084	General view along access road. Other similar ‘features’.	S
085 – 6	Mound 1058, and general view along access road. Other similar ‘features’.	S
	03 June 2008	
	AM 1 Platform 40	
001 – 2	Track improvement clips E edge of platform 40.	S
003 – 8	Turf 1059 over clean soft yellow sand 1060 in section.	SW
009 – 12	View SE up burn from platform 40.	SW
013	View from platform 40.	NW
014	Leaving platform 40.	NW
015	Platform 40 as excavated.	SW
016 – 78	S dge of platform in section.	W
018	S edge of platform in section. Scale near mid point	SW
019	Middle of platform in section	SW
020	Middle of platform in section	NW
021 – 3	Middle of platform in section	W
024	Middle of platform in section	WSW

025	S edge of platform in section. Channel runs down to track.	SW
026	S edge of platform in section. Channel runs down to track.	W
027 - 8	S edge of platform in section. Channel runs down to track.	NW
029	Low cloud approaching platform.	SW
030	Horizontal scale in front of concentration of boulders 1061 in turf layer, near centre of section.	SW
031 - 3	Horizontal scale in front of concentration of boulders 1061 in turf layer, near centre of section.	W
034	Horizontal scale in front of concentration of boulders 1061 in turf layer, near centre of section.	NW
035	Horizontal scale in front of concentration of boulders 1061 in turf layer, near centre of section.	S
	AM 2	
036 - 7	Low cloud approaching platform 40. Site is about 500 m ASL. Cloud about 15 m higher.	SW
038	Low cloud approaching platform 40.	S
039 - 40	Low cloud approaching platform 40. Red tip of scale visible on platform 40.	SW
041	Peat cuttings 38, unaffected by track widening. Scales mark line of track.	SW
042	Peat cuttings 38, unaffected by track widening. Scales mark line of track.	NNW
043 - 4	Bank 39, unaffected by track widening.	S
045	Bank 39, unaffected by track widening.	SE
046 - 7	Bank 39, unaffected by track widening.	W
048 - 9	Platform 40, to R of Vehicle, cut by track widening.	S
050	Teardrop mound 1062, on edge of gorge.	W
051 - 4	Teardrop mound 1062, on edge of gorge.	SW
055 - 8	View from platform 40 down to mound 1062	SE
	PM 1 Mound 1058	
059 - 60	Grouse butt 56 on hillside, seen from access track.	SW
061 - 4	Mound 1058, cut by access track.	E
065 - 6	Mound 1058, cut by access track. Section cleaned. Grey stony turf 1063, over Orange grey sandy loam 1064 with abundant fine grass roots, and Old Ground Surface 1065.	E

	PM 2 Pipes	
067	Large diameter polyethylene pipe	
068	Pipe detail. 400 mm x 9.8 m.	
069	Ductile iron pipe, cast angle joints.	
070	Small diameter plastic pipe for cable conduits.	
071	Detail, conduit pipe.	
	11 June 2008	
001	View along pipeline from mound 36. Natural glacial mounds ahead. Ravine of Allt Coire Cruach Sneachda on R.	NW
002 - 3	Mound 36, cut on E side by ravine. Bank 1066 just visible behind mound.	SSE
004	View up ravine of Allt Coire Cruach Sneachda towards E intake.	SSE
005	View along pipeline from marker post. Ravine of Allt Coire Cruach Sneachda on ahead.	NW
006	From marker post to mound 36, just R of machine.	N
007	View across banked enclosure 1066. Ravine beyond. Mound 36 on L.	N
008	From banked enclosure 1066 to mound 36. Machine behind mound. Eroded E bank of mound on R.	NW
009	Banked enclosure 1066. Entrance opposite. Mound 36 on R.	W
010	From banked enclosure 1066 to mound 36. Machine behind mound. Eroded E bank of mound on R.	NW
011	From banked enclosure 1066 to mound 36. Machine behind mound. Eroded E bank of mound on L. Ravine of Allt Coire Cruach Sneachda ahead.	N
012 - 13	View up Allt Coire Cruach Sneachda to E intake. Platform 1067 in foreground.	SE
014	View up Allt Coire Cruach Sneachda. Detail of E intake.	SE
015	Pipe Marker post. Mound 36 to R of machine.	NE
016	Banked enclosure 1066 from top of mound 36. Allt Coire Cruach Sneachda behind.	SE
017 - 18	Banked enclosure 1066 from top of mound 36. Allt Coire Cruach Sneachda and platform 1067 behind.	SE
019	View across banked enclosure 1066. Ravine beyond. Mound 36 on L.	N
020	View up Allt Coire Cruach Sneachda to E intake. Detail, Platform 1067.	SE

	19 Aug 2008	
001 – 2	Drystane dyke 1089. View down day's progress to Dunalastair Water.	NNW
003 – 4	Detail, drystane dyke 1089. Pipe track to E (R).	45 ⁰ mag.
005	Drystane dyke 1089. Side view.	WNW
006 – 7	Upper limit of pipe track today.	NNW
008	Outcrop of solid ironstone 1088, in centre of pipe track.	15 ⁰ mag.
009	Central knoll in corrie, sand with E facing boulder step, appears natural.	W
010	Central knoll in corrie.	NW
011	View down pipeline, crossing old peat track 60	N
012	View along peat track 60, crossing pipeline.	W
013	View of crossing.	NW
014	View of crossing. Mound 1083 beyond, with red peg.	SW
015	Promontory 1084 cut by pipeline.	SE
016	Promontory 1084 cut by pipeline.	SW
017	Promontory 1084 cut by pipeline.	S
018	View down pipeline to Dunalastair Water.	NNE
019 – 20	View down pipeline from peat track crossing to bog. Natural 1091, grey-green silty sand with abundant coarse boulders.	N
021	Machine entering peat bog 1080. Mound 1077 marked with yellow peg to R.	N
022 – 3	Deep wet peat 1093. Natural 1094 beneath, grey clay with abundant boulders.	NW
024	Deep wet peat 1093. Natural 1094 beneath, grey clay with abundant boulders.	W
025	Deep wet peat 1093.	S
026	Digging into peat bog 1080.	S
027 – 8	Mound 1077 marked with yellow peg.	WSW
029	Detail of section beside mound 1077. Grey tan silty clay 1078 under turf.	WSW
030 – 1	Platform 1074, red peg at centre. (= 62). Vertical scale on N bank.	N
032	Platform 1074, section through N bank.	NE
033	Platform 1074, section through N bank.	E
034	Platform 1074, section through N bank. Mound 1077 marked by yellow peg to	ESE

	S (L).	
035	Platform 1074, section through N bank.	E
036	Detail of grey clay 1073 in section under wet turf 1072.	ENE
037	Detail of grey clay 1073 in section under wet turf 1072. Just N of N bank 1074, centre marked by red peg and green bag.	ESE
038	Detail of grey clay 1073 in section under wet turf 1072. Watery depression marked by horizontal scale.	E
039 – 40	Mound 1070, marked with red peg.	W
041 – 2	Mound 62 marked by yellow peg. Scales mark possible N bank in section? Dark brown peaty topsoil 1068 growing heather, over natural 1069.	SE
043	Mound 62 marked by yellow peg. Possible N bank in section?	NE
044	Centre of mound 62 in section.	E
045	Starting point of day's stripping, just S of crossing of burn.	N
046 – 7	Starting point, and mound 62, and view up pipe track.	SE
048 – 9	General view of day's progress, from N side of burn and a little E.	SW

Appendix 3 Drawing Register

<i>Sheet No.</i>	<i>Description</i>	<i>Scale</i>
1	Section, Platform 40	1:100
2	Section, Mound 1058	1:20
3	Section, Platform 1074	1:100
4	Section, Platform 62.	1:100

Appendix 4 Watching Brief Log Sheets

GPS Location	Images	Context	Comments
			13 May 2008.
			Stripping in Woods. Starting in bog, working S – N. Strip about 4 m wide.
NN 67148 57318	023-29	1001	Wet peat. Dark and smelly, with standing water. 0.5 m deep.

GPS Location	Images	Context	Comments
NN 67140 57315		1002	Scattered rounded boulders under 1001. Most on S edge of bog. On surface of 1003.
	030-	1003	Green boulder clay under 1001 and 1002. Angular boulders.
NN 67141 57322	032-35		Temporary dam left to prevent water flowing down track. Peat 0.2 m deep over boulder clay 1003.
	036		Natural concentrations of angular boulders in clay.
NN 67160 57351	037-		Deeper bog area, just before step down into area of old channels.
NN 67153 57359	042		Concentration of stones under turf.
		1004	Turf, 0.1m deep, peels off.
		1005	Natural yellow boulder sand, with abundant angular boulders. Replaces boulder clay 1003.
	043-		Approaching the step down, angular boulders.
NN 67170 57367	045-	1006	Over the step. Descending slope, W of E channel 1006. Thin (0.1 m) dry turf 1004 over dry, yellow boulder sand 1005. Ground has secondary slope down E – W. Some terracing and ramping to create level path for machinery. Tree stumps lifted at intervals.
NN 67158 57382	055-	1007	Track crossing W channel 1007.
NN 67205 57402	69-71		North of channel crossing. Natural still yellow boulder sand. Abundant boulders on surface. Turf 0.2 m deep
NN 67185 57428	72 -		E channel 1006 now very shallow. Pipeline approaching.
NN 67200 57445	75-		Turf deeper (0.2 m) and softer. Ground wetter. Possible concentration of boulders along E edge of channel 1006.
NN 67198 57459	88 -		E and W channels converge, W channel 1007 is the dominant survivor.
NN 67174 57471		1008	Large mound with trees on top directly W of Convergence.
		1009	Concentration of stones in E channel. French Drain? Less obvious in W channel. Natural still yellow boulder sand.
NN 67205 57477	93-		W channel near modern track. E channel absorbed. No well-defined structures. Channel banks made of

GPS Location	Images	Context	Comments
			earth and stones, not boulder sand.
NN 67205 57488	- 98		Pipeline reaches E road side. Digging stops for the day.
NN 67207 57515	111 -		Modern track crosses burn or drain just S of farm water tank.
NN 67223 57546	113		Top of farm water tank. New pipeline will pass just W of this, in disturbed area.
			Note, ductile iron pipes are 0.6 m diameter (= 2 ft), 6.2m long, £600 each.
			15 May 2008
			Stripping in lower moorland, from top of woods up to drystone dyke.
NN 66869 56997	001 – 2		Track crossing through gap in bank at top of woods. (= DBA site 44).
		1010	Dry brown grassy turf, 0.1 m deep.
		1011	Light brown silty loam subsoil
	003	1012	Large schist boulders. Road surface? On top of 1014. Peters out to N of gap.
	004	1013	Yellow sand. Natural
			Machine sinking into 1014.
		1014	Localised deep peat between banks, esp on E side.
	011	1015	Occasional angular boulders on surface of sand 1013, S of gap.
NN 66852 56992	012		Crossing post-and-wire fence. Turf 1010 on sand and boulders 1013 + 1015
	013	1016	Occasional large boulders on sand.
	015	1017	S of fence, dark, wet, peaty turf, 0.2 m deep
	016 - 18	1018	Schist rubble under turf S of fence. Road? No, extensive natural, angular schist crushed with blue dust.
	019	1019	Thin brown clay skin between peat and rubble, waterproof, creates bog despite free-draining geology.
	020		Moving up onto natural terrace. Peat and clay together thin out to 0.2 m.

GPS Location	Images	Context	Comments
NN 66839 56998	022	1020	Natural changes to green sandy silt with abundant angular schist boulders. Frequent heather root penetration. Almost boulder clay.
NN 66834 56993	024		Up onto natural terrace edge.
340' OD.			Peaty turf, 0.2 deep, over:-
	025	1021	Abundant angular boulders, some rounded. In brown sandy silt.
			At edge of second natural terrace, 0.2 m peat.
NN 66815 56993	026 -	1022	Geology changes to schist rubble, phantom buildings.
			Up on second terrace edge:-
NN 66808 56994	029 -	1023	Thick tan clay layer, 0.2 m, 0.2 peat on top
NN 66793 56992	30 –	1024	Increase in large boulders, in deep brown peat, over 1026
	– 33	1026	Natural, boulders in green / grey silty clay.
NN 66787 57011	34 -		Bog with surface water
		1027	Soft peaty clay, chocolate brown, 0.5 m deep. Over 1026
	041, 2	1028	Green clay cap, 0.1 m thick, between 1027 and 1026, traps water.
NN 66785 57000	043		Climbing slope from bog up to shieling terrace.
NN 66772 56992	044		Natural peaty channel with surface water. Peat 0.5 m deep over 1026.
NN 66759 56988	048 – 49		Leaving channel, approaching shieling terrace. Peat 0.3 m deep.
	050 - 3	1029	Natural. Very coarse boulders in green silty clay.
NN 66747 56990	054 - 55	1030	Concentration of stones in line with standing tree and edge of shieling terrace. <i>Possible</i> field bank.
NN 66774 56966	056 – 7		Grouse butt, (to L of pheasant) = Walkover feature 43. Off pipeline. Revisited to calibrate GPS
NN 66746 56990	058		Skirting W (N) edge of possible terrace. Peat very shallow. Lots of surface boulders. No clear structures.
	059, 60	1031	Subsoil. Angular boulders in orange sand.
NN 66739 56991	061 - 4	1032	Concentration of boulders across pipeline. Not well-

GPS Location	Images	Context	Comments
			defined.
NN 66741 56978	065	1033	Centre of <i>possible</i> platform, clipped on w (S) edge by pipeline. Diameter about 20 m. Not well-defined.
	068		Machine sondage shows more boulders 1034 under 1032. Natural.
	069	1034	Abundant angular and large boulders in grey silty loam. Natural. Under 0.3 m peat and turf.
NN 66736 56982	070	1035	Natural green silty, sandy clay, with abundant angular boulders.
NN 66726 56969			Approaching walkover feature 42.
	071 – 3		Area of grey silty clay in natural. Flecks of decayed schist mimic charcoal. Large patches of iron-stained silt. Natural.
			Skirting walkover feature 42, possible platform.
NN 66723 56976	074		Centre of platform, off pipeline, to calibrate GPS
NN 66720 56979	075		Pipe trench skirting N of feature 42.
	076		Natural boulder clay.
	078		Peat about 0.4 m deep, quite wet.
NN 66712 56976	079 - 80		Peat becomes deeper (0.5 m) just W of platform 42.
NN 66709 56965	083		Slight dip into deep bog just W of platform 42.
NN 66685 56972	085 - 88	1036	Another possible platform on pipeline, dia approx 10 m. Quite well defined.
	089 - 92		Looking back E to bog
	093 - 95		Digging platform 1036
		1038	Dry sandy turf 0.2 m deep on platform 1036
	096 - 101	1039	Subsoil turns stony at platform edge. Stony bank N-S, 1.5 m wide, defines platform E edge. Reasonably well defined.
	102	1040	Grey silty loam to W of bank 1039, ie inside platform. Some large boulders poke up from below. Also, root penetration.
	105 - 6		Machine on platform 1036. Schiehallion behind.
NN 66664 56964	107 - 9	1041	Grouse butt on pipeline, 5m x 4m. E facing slope.
NN 66695 56973	110	1042	Natural under platform 1036. Yellow sand with

GPS Location	Images	Context	Comments
			boulders.
NN 66683 56969	111 – 14	1043	Stony bank? W edge of platform. Turf only 0.1 m deep. Not so well-defined as 1039.
			Dip W of platform 1036
NN 66681 56967	115	1044	Boulder spread right under thin turf. Large, angular.
	116 - 24		Cutting through grouse butt 1041.
		1045	Natural directly S of grouse butt. Large boulders in orange sand
			W of grouse butt, pipe rising up slope. Turf thin.
	125	1046	Yellow sand with boulders. Natural.
	126 – 9	1047	Grouse butt. E (downhill) bank made of yellow sand, 0.5 m deep, with 0.1 m thin turf cap.
	130 – 1		View from grouse butt.
	132 – 5		Machine on skyline at crossing of drystone dyke. Limit of day's work.
	136 – 40		Views from near limit of day's work.
			Returning to area at bottom of woods.
NN 67213 57503			Pipeline crosses modern track
NN 67203 57517	141		Track crosses modern drain.
	142		View N to farm water tank.
		1048	Turf 0.2 m deep.
	143	1049	Natural buff clay with boulders.
NN 67217 57562	144		More stony abreast of water tank.
NN 67229 57566	145 – 6		Farm water tank hatch. To calibrate GPS.
	147 – 8		Pipe drops down steep slope to modern track.
NN 67222 57588		1050	Old channel parallel to modern track. Lower (N) end meets track.
NN 67194 57564	151 - 2		Old channel 1050. Upper (S) end meets track
			27 May 2008
NN 67223 57555 ± 9 m			Farm water supply tank cover. Re-visited to calibrate GPS.

GPS Location	Images	Context	Comments
NN 66867 56999 ± 6 m			Old track crossing natural mounds at top of woods. Walkover feature 44, revisited to calibrate GPS.
NN 66666 56755 ± 4 m	001	60	Old Channel 60 meets existing track
	002	60	Channel 60 bends gently N
NN 66609 56799			Sharp bend to S
NN 66601 56804	003	60	Three posts near channel, to calibrate GPS
NN 66600 56746	004	60	Three posts off channel, to calibrate GPS
	005	60	Channel curves smoothly round to W.
NN 66579 56755		60	S limit of curve. Continues round to N
NN 66558 56783		60	Sharp bend S
		60	Curves gently E to near green plastic feeder tub.
NN 66528 56741		60	Begins bend to W
	006	60	Bend, looking back.
NN 66475 56739	007	60	Sharp bend to S, starts new curve to W. Deep gully.
NN 66440 56730 ±4		60	Marker post, Walkover point 60
NN 66405 56735	008 - 10	1051	Channel crosses projected pipe line, just W of cobble patch 1051
	011	60	Channel curves gently from W to S,
NN 66372 56726 ±5	012 - 14	1052	Channel coils around oval mound 1052, just W of pipeline. Summit now marked with red peg. = 1083
NN 66384 56698 ±6	015 - 20	1053	Mound surmounted by pipeline post. Just SE of 1052. Grassy, extensive, not very flat. Centre platform perhaps oval, N-S, 14 x 6 m.
NN 66404 56842 ±5	021 - 31	1054	Prominent mound, just W of pipeline and 61. Now marked with red peg. Extensive, with well-defined central hollow. Large stone to S (220 Mag) of centre. Hollow in bank to N (20 Mag). Oval E-W, 20 x 22 m, aligned to Schiehallion.
NN 66447 56835	032	61	Mound 61 and pipeline marker adjacent.
NN 66437 56839			Pipeline marker.
NN 66458 56852 ±5	033 - 8, 041	1055	Platform, N of 61, just W of pipeline. Well defined, circular, 8 m dia. Central hollow, boulders.

GPS Location	Images	Context	Comments
	039 - 40		View from 1055 to Dunalastair Water.
	042	1056	Irregular bumps W of 1055. Too vague to record.
NN 66458 56880	043 - 4	1057	Small mound NW of 1055, W of pipeline. 3 x 2 m
NN 66473 56882 ±5	045 - 9		Nominal location of Feature 62. Large, irregular. Boulder on N side.
NN 66477 56902 ±5			Pipeline marker.
	050		View S up pipeline.
NN 66148 55440 ±5	052 - 7	40	Platform 40, cut through by existing road. Dia 15 m. Large boulder on E side.
NN 66122 55373 ±5	058 - 65	39	Low bank 39. Turf and stones, 3 m wide x 15 m long, aligned roughly N - S, (10 ⁰ Mag).
NN 66128 55336 ±5	066 - 8	38	Peat cuttings. Extensive and ill defined.
	69 - 72	40	Platform 40 overlooking burn
NN 66421 55989 ±7	073 - 4	56	Grouse butt 56 on E facing slope overlooking road. Well clear of pipe. Pipe passes to W.
NN 66418 56054 ±7			Platform 58. Small, doubtful, on N edge of Peat cuttings 57. N of grouse butt 56. Well E of pipeline, well down slope in E-facing corrie, looking towards Schiehallion. Not pegged or photographed, due to fading light and impending rain.
NN 56040 66420			Peat cuttings 57. In corrie N of grouse butt 56. Well E of pipeline. Not pegged or photographed, due to fading light and impending rain.
NN 66561 55974 ±4 m	75 - 86	1058	Mound with 3+ boulders, cut by existing track. Lies E of grouse butt 56. About 5 m dia. Doubtful. Many other boulders along track side. Probably just upcast from track formation. But see 1063 below
			Left site 6:30
			03 June 2008. 10:30 on.
NN 66148 55437 ±5 m, 503m ASL			Platform 40. Peg revisited to calibrate GPS.
	001 - 14		Track improvement clips E edge of platform.
		1059	Brown sandy loam turf layer on mound 40. Generally 0.2 m deep.
		1060	Clean soft yellow sand under 1059. Continues down to base of section. Natural. Shades to orange

GPS Location	Images	Context	Comments
			towards S.
NN 66142 55447 ± 4 m 503m ASL	015 – 17		N limit of platform at W edge of track. Turf 0.2 m deep. ASL on top of turf.
NN 66152 55436 ± 4 m	018 – 24		Point on section abreast (ie E of) centre peg. Turf 0.1 m, sand 0.4 m.
NN 66150 55431 ± 4 m			Highest point on section. Turf 0.1 m, Sand 0.5 m.
NN 66142 55428 ± 4 m. 506m ASL*	025 – 8		S Limit of mound. A channel comes down to track, running 341 Mag. Turf 0.15 m deep. *Must be wrong, as actually much lower than centre points above.
NN 66155 55435 ± 4 m 505m ASL. Top turf.	029 – 35	1061	Concentration of boulders in turf layer, near centre of section. E of Peg. Exposed in depression 2.3 m long, 0.85 m wide, 0.4 m deep. Section is 0.45 deep underneath, turf and sand.
			Section is 30 paces (= 30 m) long. Aligned NE = 46 ⁰ Mag.
	36 – 40		Site is about 50' below orographic cloud base blowing in from NW 290 ⁰ Mag
	41 – 42		Peat Cuttings 38, not affected by road.
	043 – 7		Bank 39, nearby. Not affected.
	048 – 9		Cut through platform 40.
NN 66176 55398 ± 5 m	50 – 8	1062	Small mound, defined by channels and ravine into burn. Teardrop shape. Glacial? SE (150 ⁰ Mag) of platform 40.
	59 – 60		Grouse butt 56 seen from track.
NN 66564 55978 ± 5 m	61 – 6	1058	Mound 1058 revisited. New section exposed on E side of track. Section aligned N-S (26 ⁰ Mag). OGS revealed. Section drawn. Mound marked with peg.
		1063	Grey stony turf
		1064	Orange grey sandy loam with abundant fine grass roots
		1065	Dark grey-green silty loam. Occasional preserved heather root fragments. Old ground surface. Sample kept.
NN 66406 56841 ± 5 m		1054	Mound 1054 revisited to calibrate GPS
NN 66455 56856 ± 5		1055	Platform 1055 revisited, marked with red peg. Right

GPS Location	Images	Context	Comments
m			on pipeline.
NN 66454 56877 \pm 5 m		1057	Mound 1057 revisited, marked with red peg.
			Left site 4:30
			11 June 2008
NN 67208 54113 \pm 4 526 \pm 6m ASL		015	Marker Post, 11 m SW (215 ⁰) of mound 36. Walkover Post I was 6719 5413. New post is nominally 18 m E, 17 m S of Walkover Post I. New post is set in deep peat, > 1.4 m deep, extensive bog.
NN 67218 54126 \pm 4 526 \pm 6m ASL	001 – 6	36	Mound 36. Cut on E by steep ravine. On platform projecting NE into ravine, so bounded on 3 sides by ravine. Eroded face shows turf on gravel. Mound about 3m high, 15 m diameter. Compare location with Walkover Post I:- Mound is nominally 28 m E, 4 m S of old post. ie, same mound.
	008 – 11, 16 – 19	1066	To SE of mound 36, low bank forms D-shaped annexe, about 11 m N – S. Cut on E side by ravine. Centre of mound is at about 300 ⁰ from centre of D. Entrance across bank on W side, close to mound. Mound and bank both well clear of pipeline.
	012 – 13, 20	1067	Natural platform, roughly square, on terrace in ravine, about 100 m S of mound, and about 10 m lower. Distances estimated by eye.
			Left site 2:00 pm.
			19th August 2008. DPB on site 9:15. Digging from 10:15 am. Working N – S in area through mounds previously marked. Changeable weather. Photographed at end, in reverse order.
NN 66471 56879 \pm 7	41 - 47	62	Peg revisited to calibrate GPS
NN 66476 56897 \pm 6			Stripping starts, SW, aligned 240 Mag, 5 – 6 m wide, passing W of mound 62.
		1068	Dark brown peaty topsoil growing heather
		1069	Very coarse angular boulders in greenish silty sand. Natural glacial material. Well drained and dry despite wet conditions.
NN 66465 56883 \pm 6		1069	Natural becomes more sandy at this point, just W of 62. Golden colour. Trench passes about 1.5 m W of peg at centre of 62.
NN 66452 56878 \pm 5	39 – 40	1070	Mound marked with red peg, on W side of track. Revisited to calibrate GPS. = mound 1055. Track

GPS Location	Images	Context	Comments
			passes E of 1070.
NN 66463 56876 ± 9		1071	Sandy bank, S side of 62. Yellow sand, about 0.3 m deep. Over 1069, under turf.
		1072	Deep wet peaty turf layer, on E side of track. About 0.4 m deep. Machine digs drain NE into existing watery depression, to prevent trench flooding. Runs up to N slope of platform 1074 (= 61?)
	36 – 8	1073	Grey clay layer under 1072, blends into natural boulders.
NN 66455 56860 ± 6	30 – 35	1074	Deep yellow sand under turf. 0.4 m deep. Forms N bank of platform marked with peg. Track cuts W side of platform.
NN 66453 56855 ± 6			Peg at centre of platform defined by 1074.
NN 66450 56855 ± 5		1075	Track passes just W of centre peg. Thin black turf in section. No sand. No S bank.
NN 66448 56858 ± 5			Centre of track passing peg.
NN 66443 56849 ± 6		1076	Rocky shelf approaching next pegged platform (61). Large in situ boulder, about 1 m x 1 m.
NN 66443 56836 ± 6	27 – 29	1077	Yellow peg, centre of mound to E. 61
NN 66 56 ±		1078	Grey tan silty clay under turf, 0.2 m deep, in section, passing 1077. No obvious bank.
NN 66408 56839 ± 6		1079	Very large green mound, marked with red peg, well to W of track. Not affected. = 1054
NN 66435 56831 ± 7			Track passing 1079
NN 66433 56823 ± 7		1080	Deep wet peat bog, S of platforms. Stripping temporarily stops here to avoid flooding.
NN 66399 56740 ± 7		60	Crossing old peat track (= 60). Stripping restarts, N – S.
		1081	Dark grey silty turf / topsoil layer, 0.1 – 0.2 m deep
		1082	Coarse boulders in green-grey silt. More loamy, less coarse boulders than farther N
NN 66369 56725 ± 7		1083	High mound, partly encircled by old peat track. Red peg. = 1052
NN 66382 56696 ± 7	15 – 17	1084	Probably natural promontory projecting N. Large pipeline stake in centre. Lies 145 Mag from 1083. Faint detour from peat road passes just W of centre.
		1085	Outcrop of hard very dark schist or whinstone

GPS Location	Images	Context	Comments
			boulders, forming N edge of 1084. Appears natural.
		1086	Top of 1085. Turf shallow, 0.1 m. Dark whin or schist boulders. Becoming coarser.
NN 66389 56700 ± 6			As track continues S, dark boulders die out here.
		1087	Glacial deposits from here S are coarse greenish schist boulders in green and brown sandy silt.
NN 66381 56651 ± 5			Track enters a small, E-facing corrie.
NN 66383 56634 ± 6	9 - 10		Central knoll in corrie, sand with E facing boulder step, appears natural. Old peat track runs parallel to pipe track, a little to W, outwith corrie.
NN 66377 56584 ± 6		1091	From here S, natural boulders in mainly yellow sand.
NN 66362 56567 ± 8	8	1088	Outcrop of solid ironstone, in centre of pipe track.
NN 66362 5656 ±	6 - 7		Stripping stops here for today. Track aligned 195 Mag.
NN 66340 56557 ± 5	3 - 5	1089	Short stretch of Drystone dyke, aligned 45 Mag. About one course high, partly mostly. About 4 - 5 m long. About 10 m W of S end of pipe track stripping. Peat track lies immediately to W.
NN 66401 56747 ± 5	18 - 21		Return to peat bog skipped over earlier in day. Stripping S - N from here. Crossing of old peat track. Descending N into wetter conditions.
		1091	Natural Grey-green silty sand with abundant coarse boulders.
		1092	Thin black peaty turf, 0.1 m.
	22 - 5	1093	Deep wet peat, becomes deeper to N. Dark brown, with abundant visible roots. Generally about 1 m deep.
		1094	Natural under wet peat, grey clay with abundant boulders.
NN 66432 56834 ± 6			N end of peat bog. Only 4 m S of mound 1077.
			DPB left site 5:15 pm.

Appendix 5 Discovery & Excavation in Scotland Entry

LOCAL AUTHORITY:	Perth and Kinross
PROJECT TITLE/SITE NAME:	Innerhadden Hydro Scheme
PROJECT CODE:	KX03 WB
PARISH:	Fortingall
NAME OF CONTRIBUTOR(S):	David Bowler
NAME OF ORGANISATION:	SUAT Ltd
TYPE(S) OF PROJECT:	Watching Brief.
NMRS NO(S):	N/a
SITE/MONUMENT TYPE(S):	Platforms, tracks and boundaries
SIGNIFICANT FINDS:	None.
NGR (2 letters, 8 or 10 figures)	Intakes at NN 650 540 (W) and NN 670 540 (E), down to turbine house at N end, NN 670 570.
START DATE	30 April 2008
END DATE	19 August 2008
PREVIOUS WORK (incl. <i>DES</i> ref.)	Bowler, D and Hind, D 2005 'Innerhadden Hydro Scheme', <i>Discovery and Excavation in Scotland 6 2005</i> , 107 – 8.
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>Innerhadden Hydro Limited commissioned SUAT Ltd to undertake an archaeological watching brief on the construction of a mini-hydroelectric scheme on the Innerhadden Estate, just south of Kinloch Rannoch, Perthshire. The work (SUAT site code KX03 WB) was undertaken during the period 30th April–19th August 2008. The development had previously been the subject of a desk-based assessment and walkover survey conducted by SUAT in May 2005. The work was designed to satisfy the archaeological condition 6.9 of a Planning Consent granted by the Scottish Government dated 14th April 2008.</p> <p>A number of mounds, enclosures and platforms were recorded, mainly circular, some of which may have been glacial features modified by human activity. Also recorded were possible boundary banks, a drystone wall foundation, peat cuttings and tracks, and grouse butts.</p> <p>No artefacts were found.</p>
PROPOSED FUTURE WORK:	None
SPONSOR OR FUNDING BODY:	Innerhadden Hydro Limited
CAPTIONS FOR ILLUSTRS	Drystone Wall Foundation 59 = 1089, aligned NW (45 ⁰ mag.). Dunalastair Water beyond. \Images\WB\19Aug2008\003.jpg

ADDRESS OF MAIN CONTRIBUTOR:	SUAT Ltd, 55 South Methven Street, Perth PH1 5NX
ARCHIVE LOCATION (intended)	NMRS
EMAIL ADDRESS:	Director@suat.co.uk

Appendix 6 Standard Terms of Reference for all Fieldwork

6.1 Recording Methodology

SUAT employs a Single Context Recording System that allows full cross-referencing of stratigraphy, finds and environmental samples, as well as site-wide phasing. All features will be planned at scale 1:20, and sections drawn at scale 1:10. Sections and profiles will be drawn and all features will be photographed with metric scale included. Environmental samples will be taken from archaeologically significant contexts, if the analysis of these samples would aid significantly in the interpretation of any features identified.

6.2 Human Remains

If human remains are encountered they will be left in situ and the local police will be informed. If removal is required this will take place in compliance with Historic Scotland's Policy Paper *The Treatment of Human Remains in Archaeology*.

6.3 Products and Reporting

A Data Structure Report will normally be prepared within a period agreed within the Written Scheme of Investigation/ Project Design, after the completion of the fieldwork. This forms the basic level of reporting. Further reporting may be required on the basis of discoveries made during excavations.

A copy of the report and the project archive will be deposited in the NMRS. Further copies will be sent to the client, LAAO and others, as appropriate.

6.4 Artefacts

Finds of objects will be subject to the Scots Laws of Treasure Trove and *Bona Vacantia*. SUAT will report such finds, if recovered, with supporting documentation to the Secretariat of the Treasure Trove Panel for disposal to the appropriate museum.

6.5 Discovery and Excavation in Scotland

A brief summary of the results will be submitted to *Discovery and Excavation in Scotland*.

6.6 General Conditions and Health and Safety

SUAT adheres to the Code of Conduct of the Institute of Field Archaeologists.

SUAT has public liability insurance of £5,000,000. Details of this can be provided on request.

SUAT operates a strict health and safety policy and conforms to the Health and Safety at Work Act. SUAT undertakes Risk Assessments on all fieldwork carried out.

All SUAT representatives will at all times wear protective footwear, high visibility clothing and other appropriate clothing. Hard hats will be worn if there is active plant on site or at all times if the site is deemed a hard hat area.

If lightly contaminated deposits are uncovered disposable boiler suits and gloves will be worn. A source of clean water will be made available for staff to clean hands with. If the health risk posed by site contamination is felt to be too high all further archaeological work will stop in that area.