

LMRE11/001



18TH CENTURY MILITARY ROAD AT LOCH ARKLET

Archaeological Evaluation

for Forestry Commission, Scotland

September 2011

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Archaeological Evaluation

An archaeological evaluation of the 18th century military road at Loch Arklet was carried out between 2nd and 4th August 2011. The evaluation targeted the intersection of the military road and an earlier pre-1718 road in order to record their relationship. A culvert forming part of the road was also investigated.

The evaluation established that the 18th century military road straightened and improved earlier phases of road construction with well constructed culverts built to cross the numerous streams feeding Loch Arklet. No finds or earlier features were identified during the evaluation.

1. INTRODUCTION

Forestry Commission Scotland commissioned Headland Archaeology to excavate several trial trenches through the 18th century military road on the north shore of Loch Arklet. The work forms part of a programme of archaeological mitigation in advance of the development of a cycleway on the line of the road. Previous survey work (Dalland 2010) identified a number of (presumed) earlier road alignments on parts of the route, which had been subsequently straightened and improved. The purpose of the trial trenches was to establish the relationships between different phases of road construction, as well as to characterise their physical construction. The work was undertaken between the 2nd and the 4th of August, 2011.

1.1 Site location and background

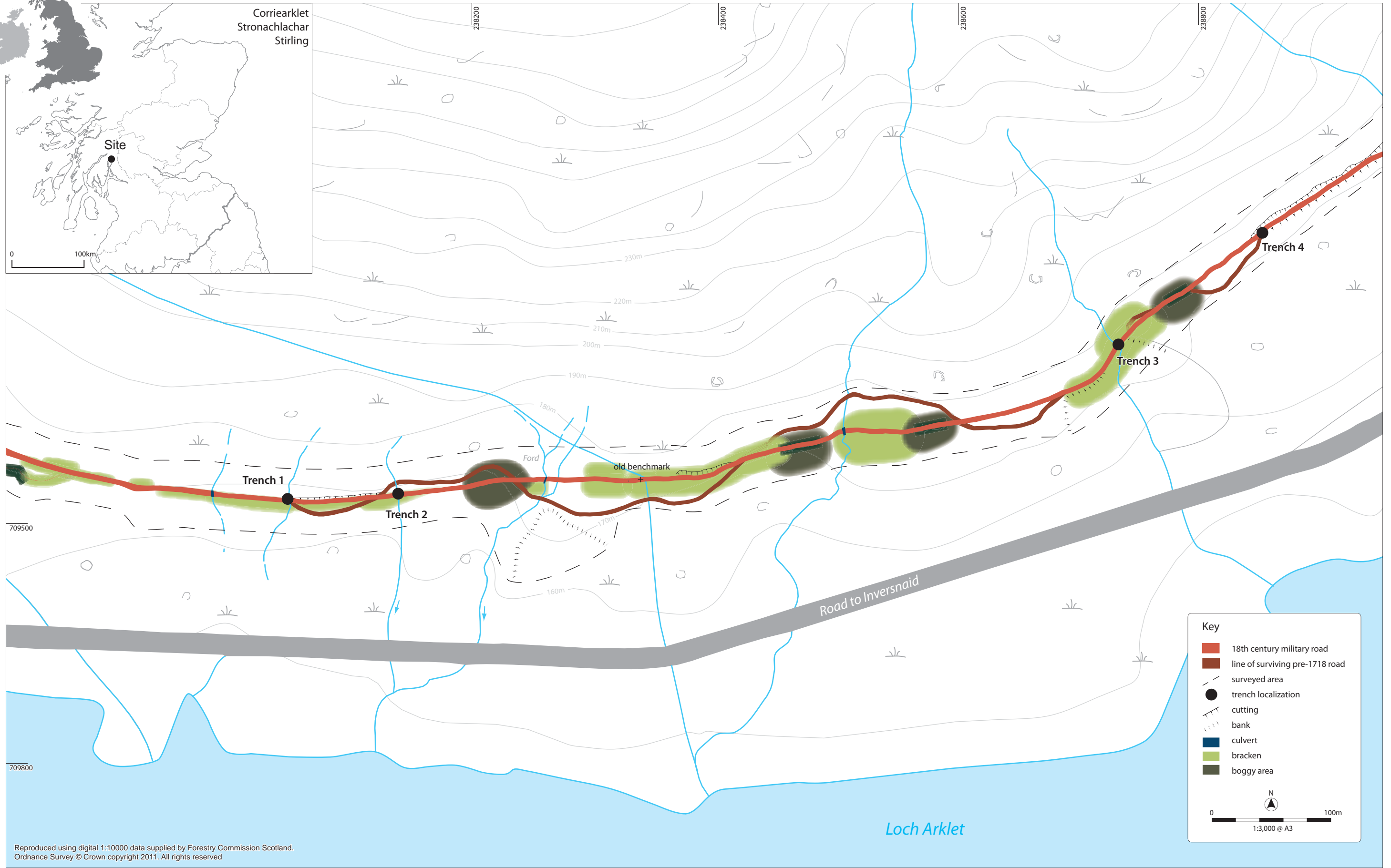
The military road is part of General Wade's 1740s network of military roads linking strongholds in the Highlands. The line of the 18th century military road runs for c.5km east to west from the former garrison at Inversnaid (NN 348 096) to Stronachlachar (NN 400 100) (Illus 1). It is situated on the lower south-facing slopes of Loch Arklet in an area of open moorland on the national forest estate and runs largely parallel with and 120m to 180m to the north of the modern road.

A recent topographical archaeological survey undertaken by Headland Archaeology Ltd (Dalland 2010) has demonstrated that in many places along its route the road is still very well preserved, despite abandonment over 150 years ago. Two earlier phases of road construction were recorded during the survey, with the earlier phases intertwined with the Military Road which appears to have been built as a 'road straightening' upgrade (Dalland 2010, p.3).

2. METHODOLOGY

The archaeological evaluation targeted sections of the military road identified in illustrations 1.8 and 1.9 in Dalland (2010). The trenches were located in order to record well preserved sections of the 18th century military road and the pre-1718 historical road at Loch Arklet. In particular trenches were targeted on a stone lined culvert and to investigate the area where the two routes overlap.

Three hand excavated trenches were located at points of intersection between road phases, and a fourth hand excavated trench targeted a substantial stone culvert. A fifth trench was planned but the additional meterage was used to extend three trenches. The trenches were 1m wide (except Trench 3, which was up to 2m wide) and between 5m and 7m long.



Key

- 18th century military road
- line of surviving pre-1718 road
- surveyed area
- trench localization
- cutting
- bank
- culvert
- bracken
- boggy area

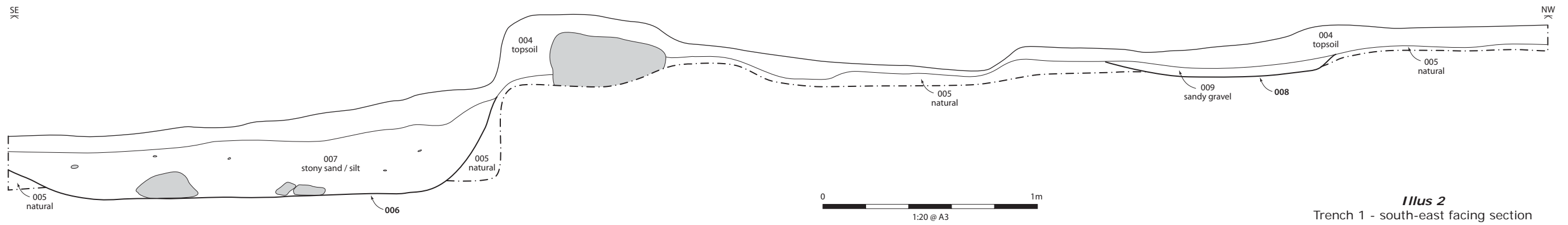
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0 100m

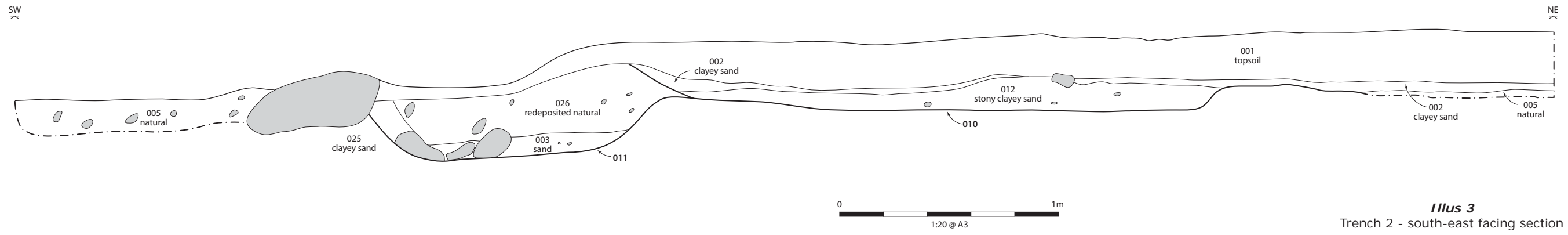
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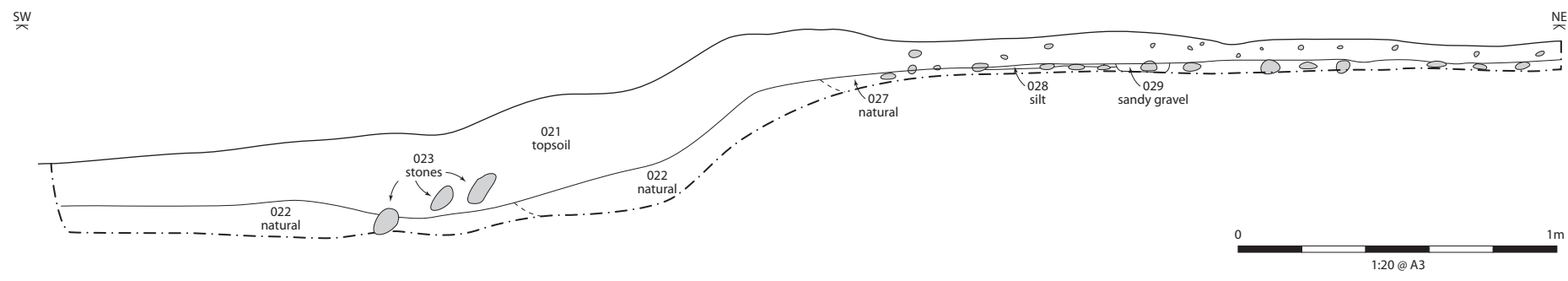
Illus 1
Location plan



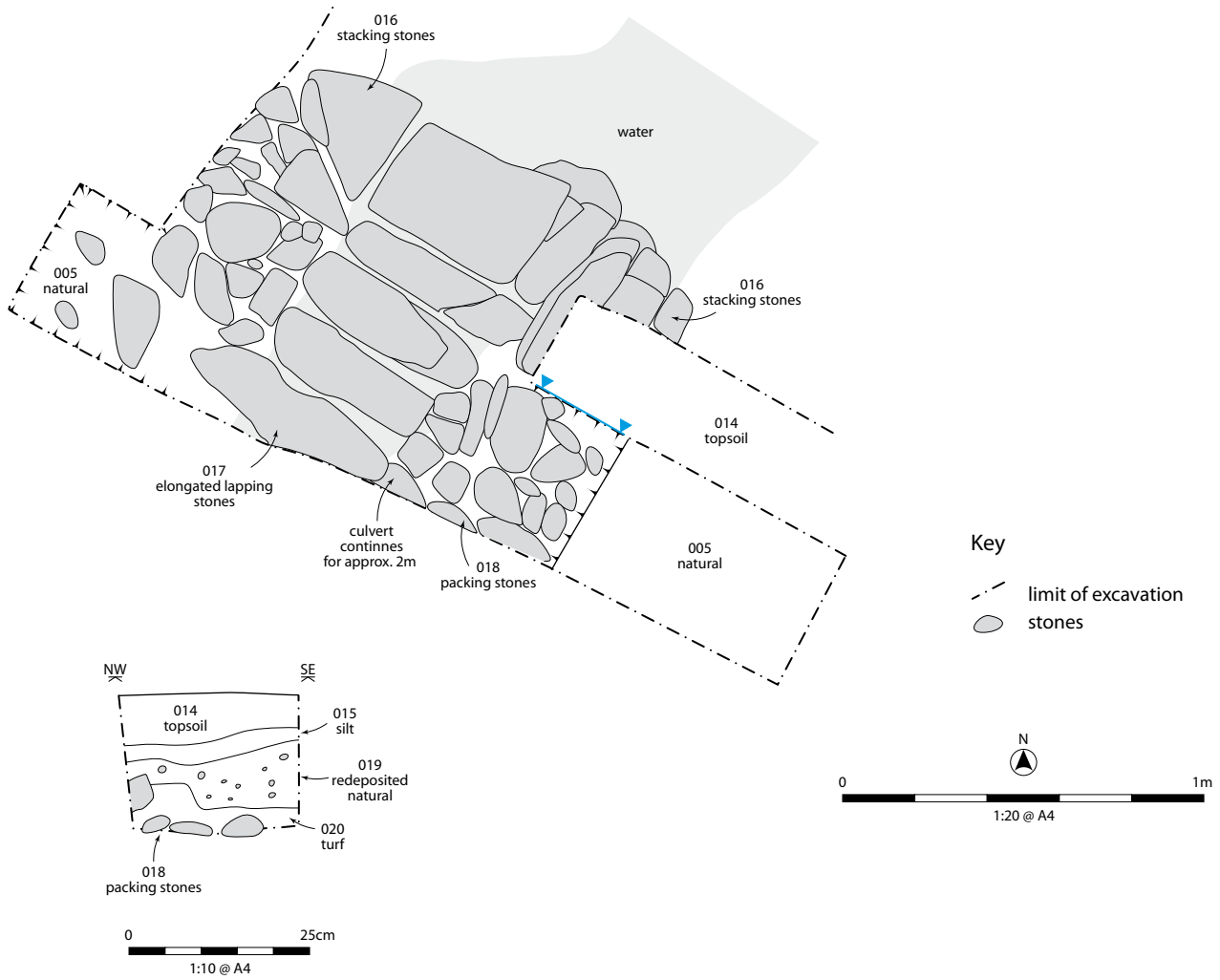
Illus 2
Trench 1 - south-east facing section



Illus 3
Trench 2 - south-east facing section



Illus 4
Trench 4 - south-east facing section



Illus 5

Trench 3 – plan and south-west facing section through collapse

2.1 Reporting

All recording was in accordance with the code of practice of the Institute for Archaeologists. All trenches and contexts were given unique numbers and all recording was undertaken on *pro forma* record cards that conform to accepted archaeological standards. All stratigraphic relationships were recorded.

The locations and orientations of each trench was recorded using a handheld GPS and digital compass.

A full photographic record of colour slide and colour print photographs was taken, supplemented with digital photography. A metric scale was clearly visible in record photographs of contexts.

3. RESULTS

3.1 Trench 1

Trench 1 (Illus 2) was aligned north-south and measured approximately 7 x 1m (Illus 3). The trench was located 3m west of a possible blocked culvert or ford (Illus 1). The trench was located across the line of the pre-1718, and 18th century military roads, both clearly visible. Excavation revealed orange/brown natural [005] at a depth of 0.3m sealed by a layer of dark brown topsoil [004].

At the northern extent of the trench the cut for the 18th Century Military Road was identified ([008] cut into the natural [005]). The cut was approximately 1.6m wide and



Illus 6
Trench 1, facing north

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0.15m deep, and contained a thin basal layer of compact mid grey sandy gravel [009], overlain by topsoil [004]. Basal deposit [009] likely represents the remains of the road surface.

At the southern end of trench 1 the cut of the pre-1718 road was identified [006] cut into the natural. This was 2.2m wide, 0.45m deep, and filled with a greyish brown sand/silt material [007], overlain by topsoil [004]. The deposit [007] contained abundant small and medium stone inclusions with larger stones set into the natural at the base of the cut.

3.2 Trench 2

Trench 2 (Illus 4) was also aligned north-east to south-west and measured approximately 7m x 1m (Illus 5). The trench was located at a point where both roads converge, approximately 60m east of Trench 1. Excavation revealed an orange/brown natural [005] at a depth of 0.35m. At the south-western end of Trench 2, cut into the natural, the cut of the pre-1718 road was identified [011]. On a north-west to south-east alignment it measured 0.95m wide and 0.35m deep. Filling the base of the cut was a layer of stones sitting on and compressed into the natural this deposit likely represents the remains of the road surface. Overlaying this was a mid grey sand deposit [003], and a natural build up of light grey clay sand [025]. Above this was a layer of light orange re-deposited natural [026].

At the northern extent of Trench 2, the cut of the military road [010] was identified cut into deposit [026] and natural [005]. The exposed section measured 2.2m wide and 0.2m deep. The cut contained a basal deposit of compact orange grey clayey sand with sub-angular stone inclusions [012], overlain by a compact grey clayey sand [002], which extended beyond the cut of the road. Sealing both deposits was topsoil [001]. It is possible that deposit [002] is the road surface, placed directly upon the hard natural, with the road cut [010] and deposit [012] providing levelling and foundation where the ground may have been uneven or less stable. The re-deposited natural [026] found within trench [011] may have been placed there during this process.

3.3 Trench 3

Trench 3 (Illus 6) was aligned north-west to south-east and located approximately 150m south-west of Trench 4. Trench 3 was excavated measured 7m by 1m and located across a well preserved dry stone constructed stone lined culvert [024] (Illus 8 & 9).

The sides of culvert [016] were constructed of three to five courses of angular to sub-angular stones ranging in size from 0.2m x 0.18m x 0.1m to 0.4m x 0.3m x 0.4m. Overlaying the sides of the culvert were angular to sub-angular capping stones [017] ranging in size from 1m x 0.8m x 0.1m to 1m x 0.4m x 0.08m. Between the gaps



Illus 7
Trench 2, facing south-west



Illus 8

Trench 3, facing north-west and showing collapse in foreground

created by the capping stones there was an abundance of smaller capping stones up to 0.12 x 0.12 x 0.07m in size.

Natural orange/brown clay sand natural [005] was identified at a depth of 0.25m to either side of the structure. This was overlain by compacted light grey silt [015], and a dark brown topsoil [014]. On the western extent of the culvert there had been minor collapse of the structure where lower courses of the sides of the culvert had subsided. Attempts at repair have clearly been made as the subsided stones [018] were sealed by dark brown turf [020], a layer of re-deposited natural [019], a compact light grey silt road surface [015], overlain by dark brown topsoil.



Illus 9

Trench 3, facing south-west, showing elevation of culvert

3.4 Trench 4

Trench 4 (Illus 5) was on a north-east to south-west alignment located approximately 150m north-east of Trench 3 (Illus 11). Measuring 5m by 1m it was located to target the intersection of the two roads Natural yellow silty sand [022] was located at a depth of 0.1 to 0.25m. This was sealed by a thick layer of dark brown topsoil [004]. Although in the correct location, there was no definite sign of the earlier pre-1718 road. But, several stones [023] set into the natural could represent a revetment or kerb marking its north eastern extent. At the north-eastern extent of the trench, the natural was compacted, reddish orange gravel [027] with abundant small stone inclusions. This was sealed by a thin dark brown silt deposit [028] with occasional patches of grey sand/gravel [029] interpreted as the military road surface, and dark brown topsoil [004].



Illus 10

Trench 4, facing north-east

4. DISCUSSION

The 18th century military road was successfully identified in each of the four trenches. In Trench 1, two phases of road construction were recorded; one was a shallow cut filled with compact sandy gravel, while the second lay further down the slope as a narrow terrace, also overlain by a stony deposit. Although no direct stratigraphic relationship could be identified between the two at that point, it is likely that the lower route represents the earlier alignment of the road. The higher line is more direct and firmer ground – it is also likely that the



watercourse immediately to the west of the trench has eroded the slope to the point that the lower route would be unusable.

In Trench 2, the relationship between the two phases of the road could be demonstrated stratigraphically. The earlier (lower) line exists as a clear cut into the natural, with some large stones and a thin deposit of sand at the base. The road cut has been filled with redeposited natural sand – whether this is the result of natural erosion or deliberate levelling related to the construction of the Military road is unclear. It is likely that the full width of the road was not seen, with a possible levelling deposit continuing under a slumped bank to the north.

Trench 3 exposed part of a substantial stone culvert. An area of collapse on the western side of the culvert had been repaired with turf and a compact silt that may represent levelling material from the road as it approached the culvert. No evidence for any surfacing or levelling material was used over the culvert itself.

In Trench 4, the old road barely survives – a slight terrace with a few small to medium stones set into the natural. During construction of the military road further upslope, the topsoil was cleared and the stony natural used as a surface, possibly levelled with a sandy gravel infill.

10 It is evident that the construction of the road was adapted to the geology along the route. The pre-1718 road was generally terraced into the slope and may have suffered from regular flooding and erosion. As a result, parts of the road were rebuilt to a straighter and higher alignment, often in substantial cuttings. The present work suggests

that in most places, the compact, stony natural was used directly as the road surface, possibly levelled with finer material from the adjacent slope. Soft or boggy patches have been excavated and infilled. No imported metalling was encountered, nor was there any evidence for drainage works or kerbing.

5. CONCLUSIONS AND RECOMMENDATIONS

The test trenches have successfully established both the presence of, and relationship between the two phases of road on this section of the route. They confirm that the more direct alignment supersedes the lower, sinuous one and that they were of simple construction, relying largely on exposing or terracing into the natural stony deposits. However, the stone culvert demonstrates that substantial structures were built where necessary.

No finds or samples were recovered during the evaluation and the results evaluation on its own does not merit full publication. It is instead recommended that a short publication (1–2 pages) to report the results of the Topographic Survey undertaken in 2010 and this evaluation be prepared. This may take the form of a note within the Scottish Archaeological Journal.

6. REFERENCES

Dalland, M, 2010, *A Topographic Archaeological Survey of the 18th Century Military Road at Loch Arklet*, unpublished Headland Archaeology report.

7. APPENDICES

7.1 Appendix 1 – Site registers

Trench register

Trench no.	Orientation	Dimensions	Description
1	N-S	7 x 1m	Military road present at north end of trench, the pre-1718 road located at the south end of the trench
2	NE-SW	7 x 1m	Pre-1718 road located at the SW end of the trench; the military road was encountered at the NE of the trench
3	NW-SE	7 x 1m	Targeted on Drystone culvert built as part of the military road
4	NE-SW	5 x 1m	Military road identified at NE end of trench

Context register

Context no.	Trench	Description
001	2	Topsoil Trench 2
002	2	Military road – fill of [010]
003	2	Pre-1718 road
004	1	Topsoil
005	1	Natural
006	1	Cut of pre-1718 road
007	1	Fill of [006]
008	1	Cut of military road
009	1	Fill of [009]
010	2	Cut of military road
011	2	Cut of pre-1718 road
012	2	Built up bog deposit for military road [010]
013	2	Possible stone lining of pre-1718 road
014	3	Topsoil
015	3	Military road deposit

Context no.	Trench	Description
016	3	Stacking stones of culvert [024]
017	3	Capping stones of culvert [024]
018	3	Packing stones of culvert [024]
019	3	Redeposited natural
020	3	Layer of redeposited turf
021	4	Topsoil
022	4	Natural
023	4	Possible stone lining of pre-1718 road
024	3	Stone culvert
025	2	Built up deposition around [013]
026	2	Redeposited natural
027	4	Natural
028	4	Deposit of road surface
029	4	Grey sand and gravel/military road surface

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Drawing register

Drawing no.	Plan	Section	Description
001	1:20	-	Post-ex plan of T1
002	-	01:10	East facing section of T1
003	1:20	-	Post-ex plan of T2
004	-	01:10	SE facing section of T2
005	1:20	-	Post-ex plan of stone culvert [024]

Drawing no.	Plan	Section	Description
006	-	01:10	NE facing section of stone culvert [024]
007	-	01:10	Sketch section of stone culvert [024]
008	1:20	-	Post-ex plan of T4
009	-	01:10	SE facing section of T4



Photographic register

Photo no.	Direction facing	Description
01	-	ID shot (film 1)
02	SE	Shot of T1 showing [008]
03	NW	Shot of T1 showing [008]
04	S	General shot of T1
05	S	Shot fo T2 showing [010]
06	N	Shot of T1 showing [010]
07	W	General shot of T2
08	W	Section through military road [008]
09	W	Secton through pre-1718 military road
10	S	T2 showing slots through [010] and [011]
11	N	T2 showing slots through [010] and [011]
12	W	East facing section of T2
13	E	T3 showing stone culvert [024]
14	W	T3 showing stone culvert [024]
15	S	T3 showing stone culvert [024]
16	S	T2 after removal of surface [002] of military road
17	W	East facing section of T2 showing pre-1718 road
18	NE	General shot of T1 showing [006] and [008]

Photo no.	Direction facing	Description
19	SW	General shot of T1 showing [006] and [008]
20	N	T2 showing large stones in situ at south end
21	W	T2 east facing section through [011]
22	W	T2 east facing section through [010]
23	S	Post-ex of T2
24	S	North facing section of culvert [024]
25	W	General shot of culvert [024]
26	W	General shot of culvert [024]
27	SE	General shot of culvert [024]
28	N	South facing section of culvert [024]
29	NE	Shot of T4
30	E	Shot of T4
31	NE	General shot
32	W	East facing section of T4
33	SE	General shot
34	E	West facing section of T4
35	N	South facing section of culvert [024]
36	NW	General shot

7.2 Appendix 2 – Discovery and Excavation Scotland

LOCAL AUTHORITY	Stirling
PROJECT TITLE/SITE NAME	Loch Arklet Military Roads
PROJECT CODE	LMRE11
PARISH	Buchanan
NAME OF CONTRIBUTOR(S)	Jürgen van Wessel
NAME OF ORGANISATION	Headland Archaeology
TYPE(S) OF PROJECT	Evaluation
NMRS NO(S)	-
SITE/MONUMENT TYPE(S)	Military Road
SIGNIFICANT FINDS	-
NGR (2 letters, 8 or 10 figures)	NN 370 095
START DATE (this season)	2nd August 2011
END DATE (this season)	4th August 2011
PREVIOUS WORK (incl. DES ref.)	Topographic Survey (OASIS ref headland1-85677)
MAIN (NARRATIVE) DESCRIPTION (May include information from other fields)	<p>An archaeological evaluation of the 18th century military road at Loch Arklet was carried out between 2nd and 4th August 2011. The evaluation targeted the intersection of the military road and an earlier pre-1718 road in order to record their relationship. A culvert forming part of the road was also investigated.</p> <p>The evaluation established that the 18th century military road straightened and improved earlier phases of road construction with well constructed culverts built to cross the numerous streams feeding Loch Arklet. No finds or earlier features were identified during the evaluation.</p>
PROPOSED FUTURE WORK	-
ARCHIVE LOCATION (intended/ deposited)	RCAHMS
SPONSOR OR FUNDING BODY	Forestry Commission Scotland
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