

# SURVEY OF THE 18TH CENTURY MILITARY ROAD NETWORK ON NATIONAL FOREST ESTATE, WEST ARGYLL



Inverawe to Bridge of Orchy

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# Survey of the 18th century Military Road network on National Forest Estate, West Argyll: Inverawe to Bridge of Orchy.

## 1) NON-TECHNICAL SUMMARY

*This survey was commissioned in order to assess and record the nature and condition of the 18<sup>th</sup> Military Road network, and any features associated with it, within the National Forest Estate at Inverawe, Glen Lochy and the Bridge of Orchy. A total of 8.75 kilometres was walked and surveyed. Culverts and other drainage features were the predominant feature identified along the route but other features such as quarries, bridges, tracks and sidings were also identified. This baseline information will be used by Forestry Commission Scotland to i) increase awareness of the route of the Military Road, and any associated features, in relation to current and/or planned forest activities and also to ii) plan any necessary conservation management along key areas of the route.*

## 2) AIMS AND PURPOSE OF THE SURVEY

The aims of the survey were:

- 1) To survey and record all surviving features relating to the 18<sup>th</sup> century Military Road within the National Forest Estate at Inverawe, Glen Lochy and Bridge of Orchy, except where the route has been overlain by modern roads or forestry tracks.
- 2) To identify and record all known and unknown elements of the extant remains of the 18<sup>th</sup> century Military Road network, evaluate and categorise their importance and provide base-line condition monitoring information in regard to well-preserved stretches of roads and features.

The purpose of the survey was to enable Forestry Commission Scotland (FCS) to make informed and reasonable decisions on the future management of surviving elements of the military road network on the National Forest Estate.

### 3) METHODOLOGY AND DEFINITIONS

- A rapid desk based assessment was undertaken of the entire 18<sup>th</sup> century Military Road route from Bonawe (Inverawe) through Glen Lochy to the Bridge of Orchy in order to identify i) the route of the military 18<sup>th</sup> century road; ii) which elements of it were located within the National Forest Estate, and; iii) what sections and features had already been identified and recorded. The following sources of information were consulted - the Sites and Monuments Record, Canmore and PastMap, historic mapping held in the National Library of Scotland, online aerial photographic imagery held by the RCAHMS, online aerial photographic imagery (such as Google Earth, Bing etc), other appropriate military surveys (Atkinson 1994 and Shepherd 2009), secondary sources, Forestry Commission Scotland GIS mapping etc.
- The desk based assessment was followed by a walk over condition survey during October and November 2012. A total of nine separate areas were walked (Tigh Na Croig, Inverawe; Glen Lochy (Inverlochy Farm, South Strone, East Strone, Beinn na Sroine South, Beinn na Sroine North, Glenlochy Crossing and Arrivain – Arinabea); Bridge of Orchy) totalling 8.75 kilometres.
- For recording purposes, those lengths of the military way that intersected National Forest Estate were subdivided up into 200 metre sections. Each section was recorded (see Table 2) and any features in association and/or in close proximity to the road were recorded (see Table 1).
- Individual road section recording included a GPS (Garmin Etrex 20) location record for the start and end of each section, a brief description of the road (in terms of its structure, vegetation cover, condition, threats, etc) and general digital photographs (Nikon D3100) (see Tables 2 and 3).
  - In line with the condition classes determined by Shepherd (2009) in his survey of the 18<sup>th</sup> century Military Road network in the Highlands, the condition of the various sections of the Military Road were categorised as either:-
    - Well-preserved** – Used when a section of Military Road is very apparent as a landscape feature and appears not to have been marred by later destructive processes.
    - Degraded** – Used when a section of the Military Road is very apparent as a landscape feature, but has been marred by later destructive processes, man-made or natural.
    - Some visible features** – Used when individual features associated with the Military Road might be highly visible, but the overall context has been damaged or removed.

**Not visible** – Where nothing is now visible of the former Military Road, or any of its features, but there is the possibility that sub-surface evidence survives.

- Individual feature recording included a GPS location record (Garmin Etrex 20) and a full written description (RCAHMS Level 1) which included site interpretation, site condition and any basic management recommendations. Where appropriate, features were also digitally photographed (Nikon D3100) (see Tables 1 and 3).
  - In line with condition categories outlined in the FCS Designated Historic Assets Register (2012), individual features associated and/or in close proximity to the Military Road were classified as being of the following condition:
    - Condition 1 – Optimal condition
    - Condition 2 – Generally satisfactory condition but with minor localised problems
    - Condition 3 – Generally satisfactory condition but with significant localised problems
    - Condition 4 – Generally unsatisfactory condition with major localised problems
    - Condition 5 – Extensive problems
  - In line with Ritchie (2009) and Shepherd (2009), individual features were also graded in relation to their importance as either, of:
    - A - National importance
    - B – Regional importance
    - C – Local importance
    - D – Potential importance.

## 4) RESEARCH

The 18<sup>th</sup> century network of military roads and bridges in the Scottish Highlands was constructed by General Wade in 1725 in response to a report from Lord Lovat to George 1<sup>st</sup> in 1724. The military road network allowed the better movement of troops and supplies between existing and proposed forts and barracks and were planned in response to the perceived Jacobite threat and as an effort to improve communications (Shepherd 2009, Ritchie and Shepherd 2011).

Between 1725-1733, 400 km of roads were built by Wade which linked the four barracks at Fort William, Fort Augustus, Inverness and Ruthven. After Wade's death, the construction of

the majority of the military roads, were overseen by his successor Major Caulfeild, who continued the construction of the military road network after 1740. He built 1200 km of road before his death in 1767.

### Bonawe-Tyndrum-Bridge of Orchy (see Figs 1 – 9)

Caulfeild's 18<sup>th</sup> century Military Road extends from Bonawe (N of Taynuilt) on the east shore of Loch Crerar eastwards through Inverawe Estate to the Bridge of Awe. There is just one small section along this stretch which is within the National Forest Estate and which has not been compromised (*Tigh na Croig, Inverawe*).

The Military Road continues east to the Bridge of Awe and along the north shore of Loch Awe, predominantly along the current day route of the A85. At Stronmilchan, the Military Road crosses the Alt Mhouille and River Strae (north of where the A85 crosses the River Strae today) before heading south-east via the current day B8077 to Dalmally.

From Dalmally the Military Road heads east (the Dalmally to Inveraray 18<sup>th</sup> century Military Road heads south-west to Cladich) along the current A85 to Inverloch. Just past Inverloch Farm there are two small sections (*Inverloch Farm* and *South Strone*) of undeveloped Military Road just before a longer 3km stretch of Military Road (*East Strone*), which is located within woodland immediately east of Strone and north of the current day A85.

After the *East Strone* section, the Military Road then largely follows the route of the existing A85 through Glen Lochy, apart from four deviations. The largest deviation is a 3.5km stretch between Arrivain and Arinabea (*Arrivain*), approximately 4.5km west of Tyndrum. There are, however, three small deviations between East Strone and Arrivain (*Beinn na Sroine South*, *Beinn na Sroine North* and *Glenlochy Crossing*).

After the 3.5km *Arrivain* section, the Military Road then continues east to Clifton and Tyndrum following the existing route of the A85. Immediately before the Clifton bridge, the route turns ninety degrees and heads north through the village of Clifton and parallel to the river, before crossing it and heading north to the Bridge of Orchy.

At the Bridge of Orchy, the route re-crosses the river and ascends the Mam Carraigh before dropping down to Inveroran on the west shore of Loch Tulla. The first 600m stretch of the Bridge of Orchy to Inveroran section is undeveloped and within the National Forest Estate (*Bridge of Orchy*).

### Bonawe to Tyndrum:

The 18<sup>th</sup> century Military Road which extends from Bonawe on the shores of Loch Crerar to Dalmally and then to Tyndrum, was part of the Inveraray to Bonawe and Tyndrum Military

Road. It was constructed by Caulfeild between 1751 and 1754 (Taylor 1996) and was considered an alternative approach to Fort William.

Although Wade's 1724-45 fabulous but highly stylised map of the proposed roads from Callander and Loch Tay to Fort William and Appin predominantly concentrates on the route from Callander to 'Achintorin' (close to Tyndrum) and Fort William, he also sketches the proposed route from Achintorin/Tyndrum to Inverawe and Loch Crerar via Glen Lochy labelling it 'Way to Glenorchy the best winter road to Lochaber'. This incredible map, although slightly tricky to decipher, is a mine of information with short descriptions of routes, locations for new bridges, the location of good inns and information on mileage between specific points.

Wade describes the route from Achintorin to Bonawe as "The dry road from [Achintorin/Tyndrum] through Glenorchy, Bona Ferry, and by Appin is always good, wants a little help in some places. To be viewed and considered: Is but half a day about; And both the roads may be made good, and good boats to be kept [at the ferries]..."

#### Tyndrum to Inveroran:

The Tyndrum to Bridge of Orchy and over to Inveroran section via Mam Carraigh was part of the Stirling to Fort William Military Road and was constructed 1748-53. The Bridge of Orchy to Inveroran via Mam Carraigh section of the route depicted on Roy's military map of 1747-52 appears to have been used as a main route for a relatively short time and by 1776 (Taylor and Skinner's Survey and maps of the roads of North Britain or Scotland) it was quickly replaced by the valley floor route around the east shore of Loch Tulla (now the modern day A8005). The hilltop route however continued to be used as a droving route (Atkinson 1996).

Wade (1724-45) describes the route from Achinturn to Bridge of Orchy as 'a rough stonie road no hills, but through dry moors;' From Bridge of Orchy he says the route is 'all moor' and 'the whole way is a forest, no house, much moss and bogs, but by viewing it with guides, and pick out the driest, may mark out a horse road good in dry weather'

Interestingly, it is Wade's descriptions of the routes which suggest that the military road reutilised existing local routes rather than creating new routes. There is a slight suggestion that there was not an existing route between Bridge of Orchy and Inveroran ('all moor', 'the whole way is a forest' etc) but it may be that the local route was fairly informal, only used at certain times of the year and that Wade could not identify it (without guides).

#### Road construction:

The military routes chosen tended to be straight and level and where possible, existing drove roads would have been utilised and enhanced. The road foundations were dug with large stones being levered into the base of trench followed by smaller stones and topped off with gravel, which was beaten in with 'shovels, wheels and feet'. In marshy ground the road had to

be 'floated' on a raft of brushwood or timber (Taylor 1996, p35-36). The earth, thrown up during the excavations, was formed into banks on one or both sides of the road. Drains were dug on each side of the banks and if the road was cut into a hillside, the back drain was essential in keeping the road surface clear from water. Originally, sunken, stone paved, open drains were cut diagonally across the road to take the water to the lower slopes. It was not until later in the 18<sup>th</sup> century that stone culverts were used (Taylor 1996). Over the years, construction techniques greatly improved. Caulfield increasingly used stone lined culverts and drystone retaining walls, also making more use of earthworks for cuttings and embankments (Ritchie and Shepherd 2011).

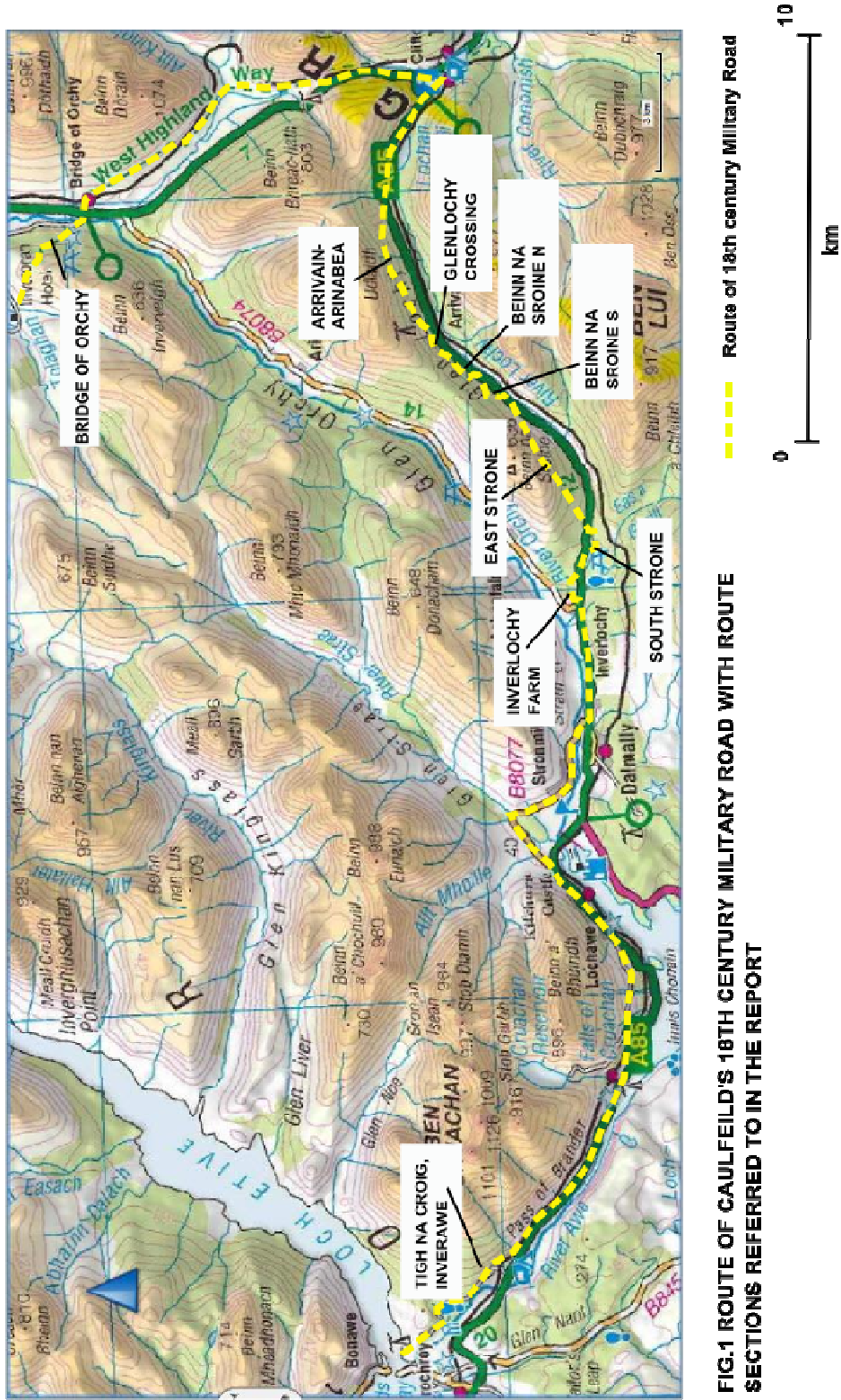
## 5) RESULTS

Sources agree that Cauldwell's 18<sup>th</sup> century Military Road extended from Bonawe (Inverawe) along the north bank of Loch Awe to Dalmally, through Glen Lochy to Tyndrum and then north to the Bridge of Orchy and briefly, up and over to the west shore of Loch Tulla.

Along this route a total of nine separate areas were identified (Fig 1) where undeveloped sections of the Military Road cross forest blocks within the National Forest Estate:

(1) Tigh na Croig, Inverawe (200m section); (2) Inverlochy Farm, Glen Lochy (450m section); (3) South Strone, Glen Lochy (200m section); (4) East Strone, Glen Lochy (3km section); (5) Beinn na Sroine South, Glen Lochy (200m section); (6) Beinn na Sroine North, Glen Lochy (200m section); (7) Glenlochy Crossing, Glen Lochy (400m section); (8) Arrivain – Achinabea, Glen Lochy (3.5km section); (9) Bridge of Orchy (600m section).

Below is a summary of the results for each forest block. Full descriptions for each section and each feature can be found in Appendix 1 together with Tables 1-3 summarising location, description, condition, key management information, photograph references etc. The location of each section can also be seen in figures 1-9. Please note that + on the location maps indicates the end of each 200m section.



**FIG.1 ROUTE OF CAULFELD'S 18TH CENTURY MILITARY ROAD WITH ROUTE SECTIONS REFERRED TO IN THE REPORT**

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## Tigh na Croig, Inverawe (NN 02888 30546 – NN 03033 30410)

A 200m length of fairly well-preserved military road survives towards the eastern side of Inverawe Country Park to the immediate east of Tigh Na Croig (Fig. 2). The military road runs largely parallel to a drystone dyke which encloses an area of ground between the military road and the estate road to the south, which has been densely restocked with trees. Above the military way there is a mature native woodland with some particularly large oaks.



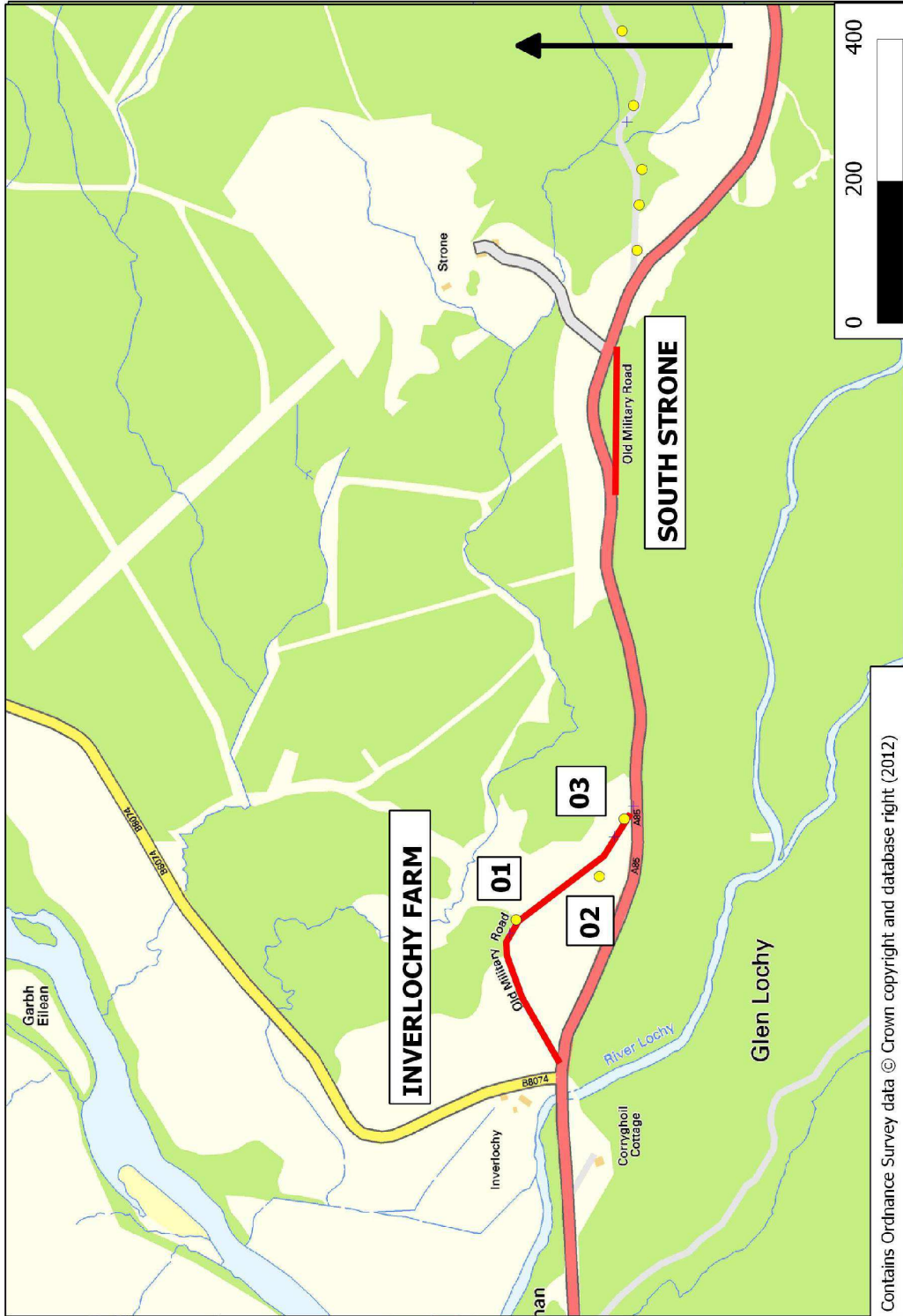
Photo 1: General view from E.

The military road is approximately 4.5 metres wide and terraced into the hillside. No bank is present on its south side. Instead there is a steep drop down towards the drystone dyke. The road is very overgrown with long grasses and regenerated trees along the western half and dense bracken along the eastern half. Piles of rotting, cut branches pepper the length of the section. A number of trees are also growing out of the wall head of the dyke to the south.

A small, unroofed stone-built structure [01] was identified at the west end of the road. It appears to post-date the road and is filled with wood, stone and general rubbish.



**FIG. 2 TIGH NA CROIG, INVERAWE SECTION**



**FIG. 3 INVERLOCHY FARM AND SOUTH STRONE SECTIONS**

## Inverlochy Farm, Glen Lochy (NN 19699 27559 - NN 20049 27462)



Photo 10: Section 2 from E

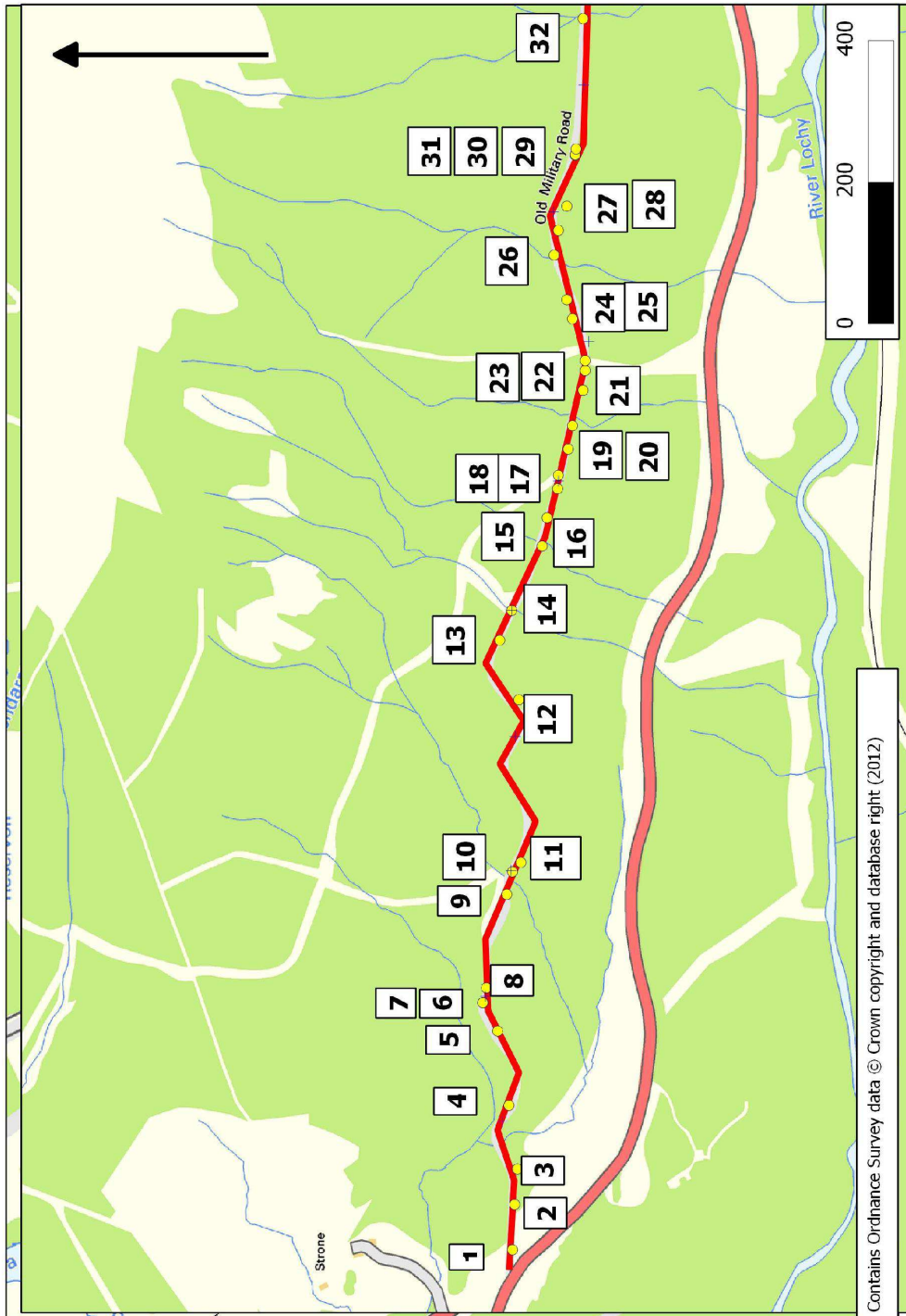
A degraded, curvilinear 450m length of the military way survives on the north side of the A85 (Fig. 3). Although overgrown with grass and bracken, the carriageway is approx five metres in width and clear along its entire length. It appears not to have been disturbed by any later developments, however, a number of young trees have been planted into its banks, which are visible intermittently on either side of the road. A number of quarries have been identified on either side of the road but no further features. The carriageway is particularly boggy at its immediate western and towards its eastern end.

## South Strone, Glen Lochy (NN 20505 27479 – NN 20706 27483)



Photo 13: General view from W

A degraded, short 200m section of the military road survives south of, and approximately three metres below, the existing road level of the A85, just to southeast of Strone (Fig. 3). This section is very overgrown and is almost impassable in places. The carriageway is generally five metres in width with two metre wide banks to either side which are up to one metre high. The entire road is covered in bracken (two metres high in places) and heather. The western end of the section is quite boggy and totally overgrown with scrubby trees. Towards the western end, a drainage ditch and a section of walling lie on the south side of the road, whilst a further drainage ditch appears to have been cut through the carriageway close to the northern bank. Towards the centre of this section an oak and a birch are growing out of the carriageway. Further to the east, material appears to have been dumped onto the carriageway across an area of approximately 20 metres in length and a number of trees have now established themselves in this material.



**FIG. 4 EAST STRONE SECTION**

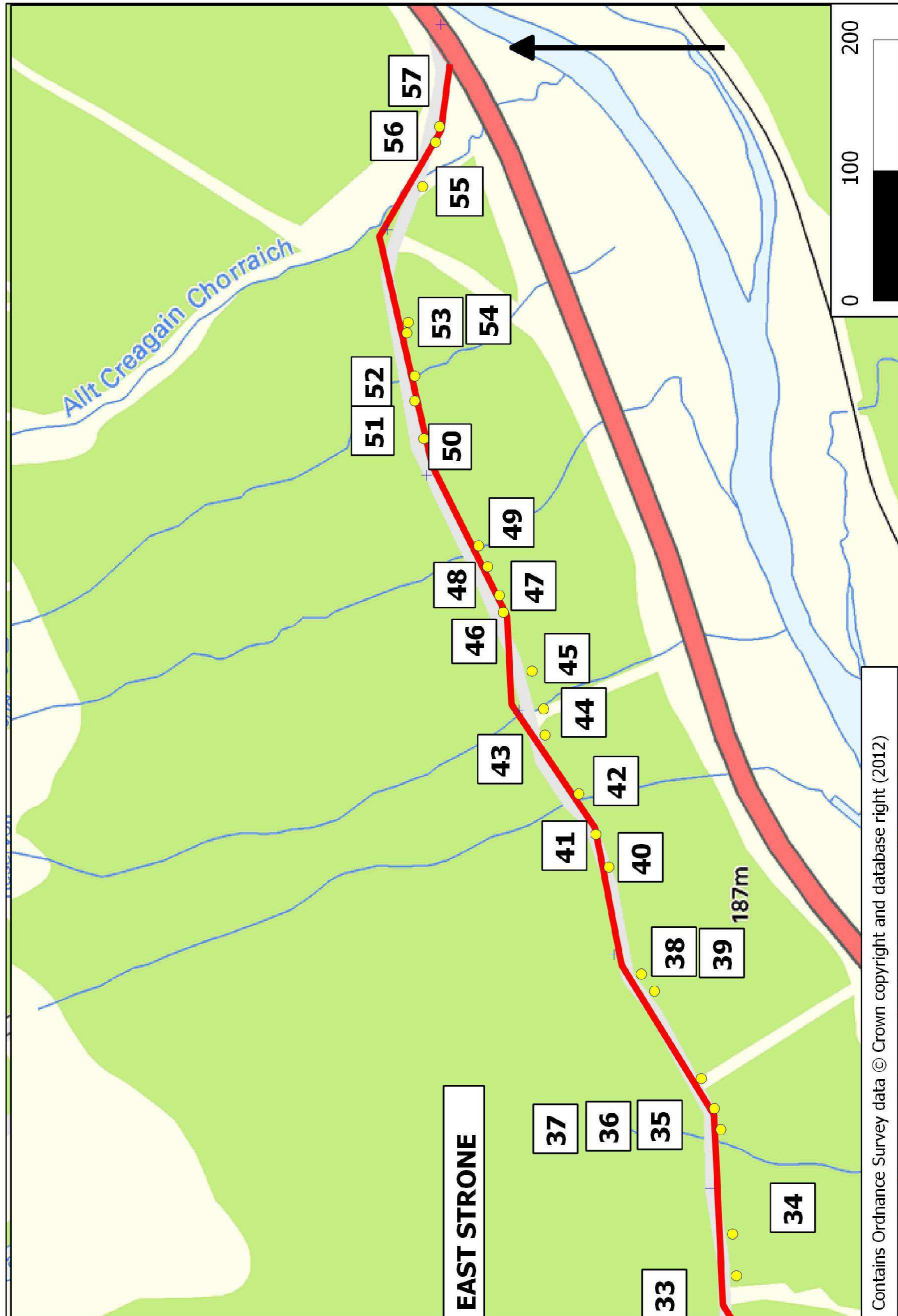


FIG. 5 EAST STRONE SECTION CONTINUED

## East Strone, Glen Lochy (NN 20798 27457 – NN 23628 27590)



Photo 60: Section 15 from W

A three kilometre, predominantly well-preserved section of the military way, survives north of the A85 between Strone and Airigh nan Cioch, starting and ending on the north side of the A85 (Figs. 4-5). The road has been bisected by a substantial forestry extraction road which extends from the north side of the A85 up to meet the military road between sections 09 and 010. This three kilometre stretch passes through mature forest, climbing steadily for the first 1.5km until it reaches a plateau and starts to descend again to meet the A85. The carriageway is on average five metres in width with intermittent banks on either side. It is clearly defined for the entire length but covered in grass, moss, patches of heather and the occasional windblown tree. A number of wet areas along the route showed signs of being used by rutting stags. A number of areas (particularly in the eastern half) have serious drainage issues as a consequence of blocked drains and collapsed culverts (see Sections 2, 5, 9, 11, 12, 14 and 15). The following drainage features have serious issues which need addressing (13, 14, 26, 27, 34, 40, 42, 44, 46, 49, 50, 52 and 55).

The features identified along this stretch of the military road were predominantly quarries (18) and culverts (20) but a number of unclassified drainage features were noted in addition to possible sidings and track ways. All the culverts were drystone built and at least three distinctive types were represented. Culverts [02], [020] and [039] represented a relatively squat, square type with no or very little apron; culverts [010], [032] and [044] represented large types with quite large drystone built aprons spanning the banks of the burn; whilst culvert [014] showed signs of having been extended.





Photo 17: Culvert [02]



Photo 24: Culvert [010]



Photo 29: Culvert [014]

## Beinn na Sroine South, Glen Lochy (NN 24126 28146 - NN 24247 28239)



A short, curvilinear 200 metre section of degraded military road survives to the north side of the A85, separated from the road by a fence, within an area dense with bracken (Fig. 6). The road is clearly visible as a raised terrace (approximately one metre in height and four metres in width) hugging the foot of the hill with a ditch on its northern side. Towards the eastern end of this section a number of large boulders are apparent to either side of the road. A burn cuts through the road approximately halfway along its length but there is no evidence for any drainage feature, such as a culvert.

Photo 62: General view from SW

## Beinn na Sroine North, Glen Lochy (NN 24453 28531 – NN 24534 28632)

A short, curvilinear 200 metre degraded section of military road survives to the north side of the A85 (Fig. 6). The military road is separated from the road by a fence and a massive drainage ditch. Within the fenced area, the area is overgrown with grasses, rushes and bracken making it very difficult to establish the presence of the military road. However, the military road can be seen surviving as a slight raised terrace, hugging the foot of the hill.



Photo 64: NE end of section from E

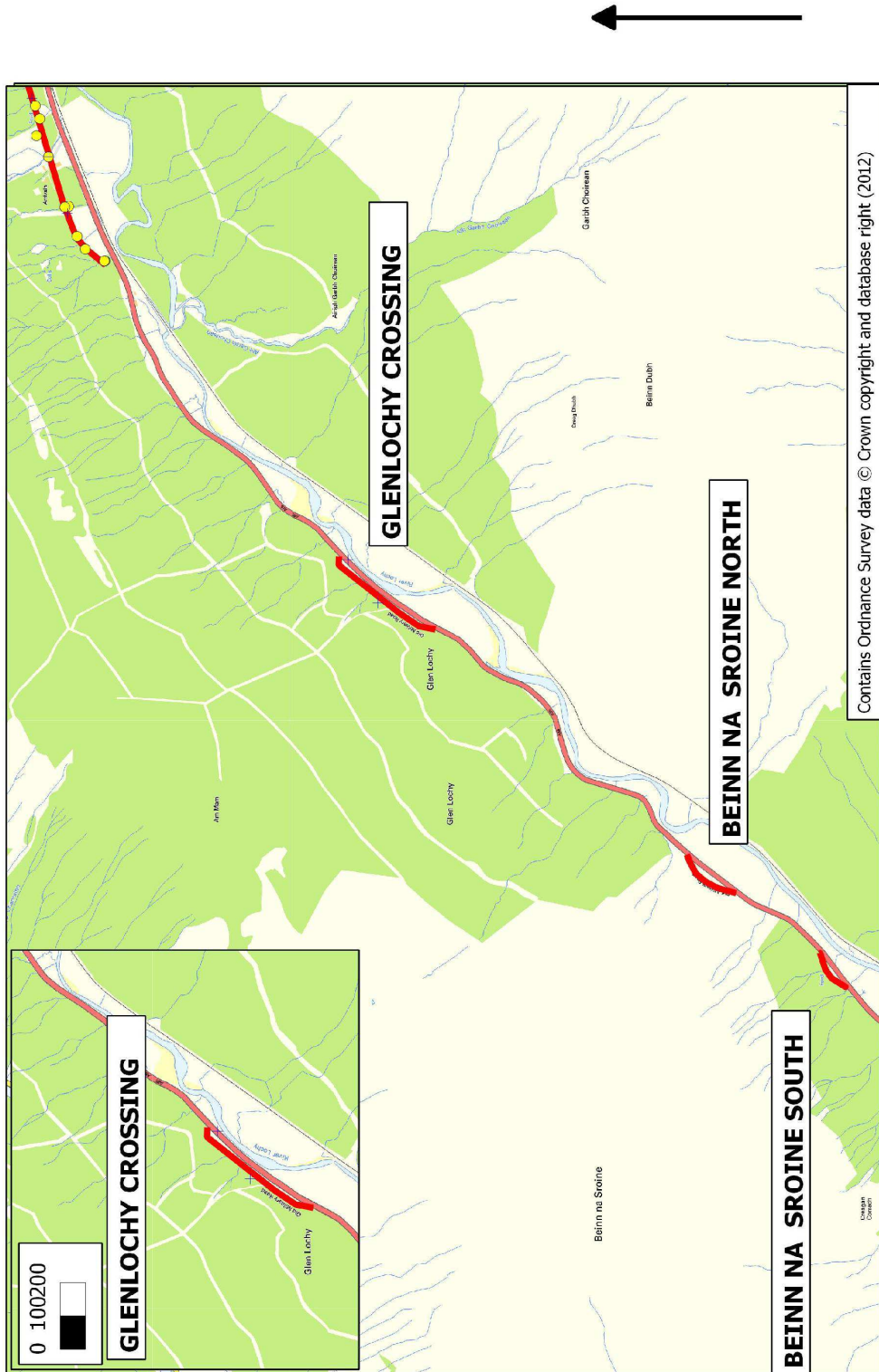


FIG.6 BEINN NA SROINE AND GLENLOCHLY CROSSING SECTIONS

## Glenloch Crossing, Glen Lochy (NN 25309 29528 – NN 25531 29840)

On the NMRS and SMR databases, the military road is shown as following the course of the now A85, however, on the modern 1:10,000 Ordnance Survey map of the area a short, linear 400 metre section of the military road is shown surviving on the north side of the A85, opposite Glenloch Crossing, extending from approximately NN 25309 29528 – NN 25531 29840 (Fig. 6).

A short length of degraded track, which may be the surviving remains of the military road, is faintly visible stretching from the north side of the A85 through boggy, tall grass to meet the junction (NN 25326 29594) between a part tarmac siding off the main A85 and a gravelly/stony hill track, which ascends up into the tree belt. A rowan tree is growing in the middle of the carriageway at the northern end of this surviving section.



Photo 67: View from vantage point down onto faint remains of military road

The military road then disappears but from a vantage point (NN 25373 29662) next to the hill track (mentioned above) it is possible to see the faint remains of a carriageway defined by two banks at approximately NN 2541 2971 extending over a length of about 20m. The feature, however, disappears before it reaches a burn further to the north. Improvements to the A85, particularly the deep drain on its west side, in addition to the tarmac siding may well have destroyed the part of the military road which extended from NN 25326 29594 to NN 2541

2971. Long grasses, rushes and bracken north of NN 2541 2971 may be disguising the remainder of the military road.

### Arrivain – Achinabea, Glen Lochy (NN 26519 30611 – NN 29647 31716)

A 3.5 km section of the military road survives to the north of the A85, extending from Arrivain (the western end) to Arinabea (the eastern end) (See Figs. 7-8). The entire length of the carriageway has been upgraded to accommodate automobiles and is covered in concrete which has started to be encroached upon by grass, moss and regeneration. The carriage way is defined either by banks on either side or cutting into the hillside on its northern side and terraced along its southern edge (occasionally with additional banking).



Photo 76: Section 4 general photograph.

A number of areas have serious drainage issues as a consequence of blocked drains and collapsed culverts (see Sections 4, 5, 6, 7, 10, 15 and 16). The following drainage features have particular serious issues which need addressing (10, 17, 22, 23, 27, 36, 38, 43, 44 and 46).

This long stretch of the military road stands out from the other eight areas by having five fine bridges and a large number (35) of fine culverts. The five bridges are 19<sup>th</sup> century Parliamentary bridges but at least two [013] and [029] show possible signs of incorporating earlier material.

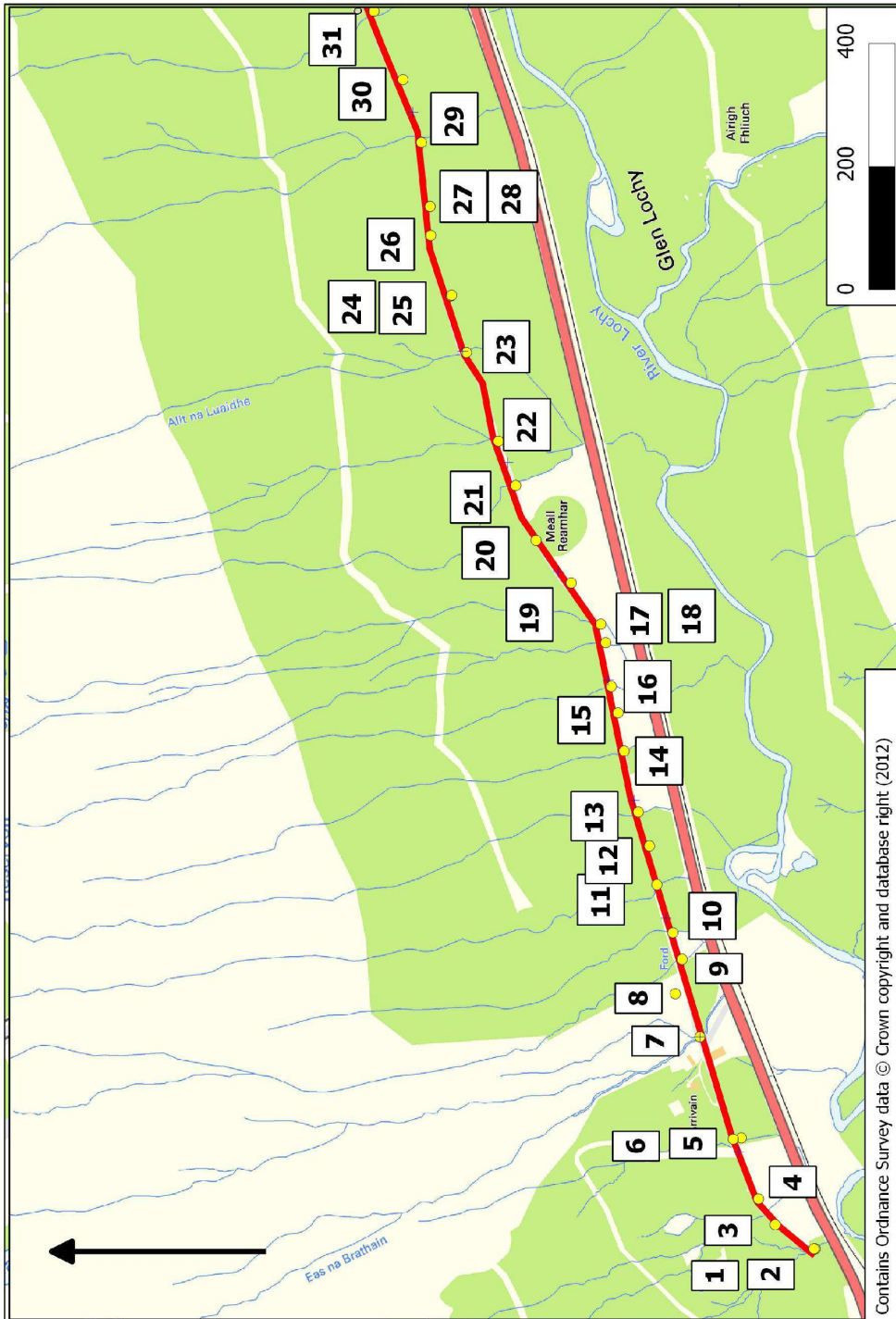
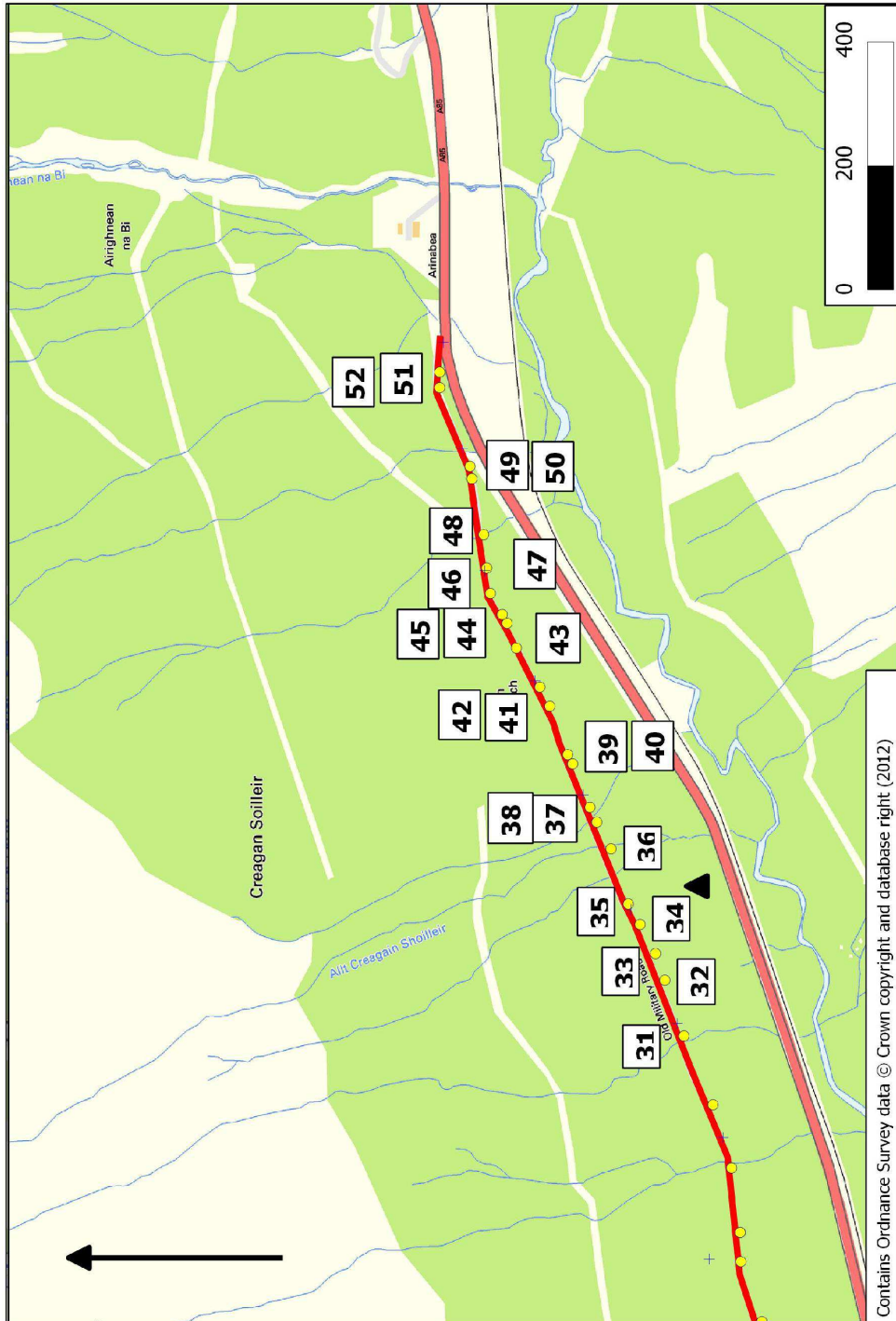


FIG. 7 ARRIVAIN TO ARINABEA SECTION (A)



**FIG. 8 ARRIVAIN TO ARINABEA SECTION [B]**



Photo 71: Bridge [07]

Similarly to East Strone, the culverts are predominantly drystone built and at least four distinctive types were represented: the small, fairly squat square/rectangular type with no/very little apron [025], [035], [037], [044] and [048]; the larger type with drystone built aprons which span the banks of the burn [023]; very large bridge-type culverts [088] with very large drystone built aprons and; culverts which show obvious signs of having been extended [09], [022], [026], [035] and [048]. A number of culverts also show signs of having been damaged by either later ceramic pipe insertions and/or flooding.



Photo 88: Culvert [036]



## Bridge of Orchy

This section of the Military Road is scheduled (FCS Ref 2858) and is part of the very popular West Highland Way which continues up and over Mam Carraigh to Inveroran on the west shore of Loch Tulla (Fig. 9). The Military Road crosses an area of recently clear felled, but now open heather ground, to the east which is backed to the west by standing conifer plantation. The Military Road survives over this section but has been seriously truncated by the West Highland Way, which has cut into and through the road deposits which make up the Military Road. The road has also suffered severe erosion as a consequence of poor drainage. There are a number of modern and older drainage features across the road in addition to a large stone built culvert/bridge.



Photo 96: Severely eroded section 1 from NW

Close to the start two stone springers are all that remain of an abandoned bridge. The path has been diverted slightly to the west and the bridge has been superseded by a modern drainage channel. The stone block kerbing at the start of the section (as identified by Atkinson in 1994) could not now be identified.



**FIG. 9 BRIDGE OF ORCHY SECTION**



Photo 107: Culvert/Bridge [09] with modern pipes inserted.



Photo 109: Section 3 from NW

## 6) CONCLUSIONS AND RECOMMENDATIONS

The main purpose of this survey was to provide baseline data in relation to the 18<sup>th</sup> century Military Road and its associated features for Forestry Commission Scotland. This baseline data can:

- Provide an assessment of the condition of the Military Road within the National Forest Estate in order to monitor and help prevent further degradation.
- Provide a record of the range of features which are associated with the Military Road.
- Help in the management of the surviving remains so as to ensure their survival for future generations.

Ritchie's 2012 *The categorisation and management of 18<sup>th</sup> century military roads on the national forest estate* emphasises the fact that in relation to heritage conservation and protection, different elements of the Military Road are of varying importance.

The report states that Forest Districts should:

- Consider significant surviving stretches within relevant Forest Design Plans
- Protect significant stretches and associated built features within the Work Plan system
- Avoid unnecessary damage to significant surviving stretches and associated built features

In relation to significant surviving stretches of road the report recommends that

- Trees should be removed from the line of the route where possible
- Road stretches should not be used by heavy vehicles or upgraded to forest use
- Crossing points should be carefully considered

In relation to built features such as bridges and culverts, the report recommends that:

- Bridges and culverts should be protected
- Scrub and sapling regeneration should be controlled
- Culverts should be repaired and retained in use, where possible

In accordance with the 2012 Report, the following conservation management measures are suggested for the following Military Road sections.

### **Tigh na Croig, Inverawe**

This short section of the Military Road starts and ends with private ground not in ownership by Forestry Commission Scotland but appears to be part of local linear walk which extends from Tigh na Croig to where the railway line meets the A85. The road is overgrown, covered in piles of rotting timber and regenerated trees have started growing across the carriageway. Although not part of any formal trail it is suggested that the vegetation, timber and regenerated trees are removed.

### **Inverlochry Farm:**

This short section is overgrown and boggy in places. Young trees have been planted on the banks of the road. It is recommended that the young trees are removed to prevent long term damage to the road.

### **South Strone:**

This short section of the Military Road is particularly overgrown with vegetation and scrubby trees. The FCS may wish to consider removing the scrubby trees to prevent further long term damage to the road.

### **East Strone:**

This lovely long section of predominantly well-preserved Military Road should to be actively conserved and managed. The main issues are drainage and culvert repairs, removal of windblown trees and removal of intrusive vegetation and regenerated trees on the carriageway and banks. The culverts and drainage features represent a range of types from different periods of the Military Road's history. It is recommended that prior to and during any work to repair any culverts or drainage features, a professional archaeologist records the remains. Not only will this enable the construction of the culverts to be recorded, but also any different phases of construction and their possible date.

Unfortunately the Military Road has already been truncated by the construction of a large extraction/haulage road. As per the 2012 report, future crossing points should consider utilising areas of road already broken or compromised.

### **Beinn na Sroine South**

No conservation management required

### **Beinn na Sroine North**

No conservation management required

### **Glenlochy Crossing**

No conservation management required

### **Arrivain – Achinabea**

Although this stretch of the Military Road has been classified as ‘Degraded’ because it has been slightly compromised by the addition of a layer of surface concrete, it is presumed that the Military Road survives completely intact below. This is a lovely long stretch of Military Road which is in excellent condition and deserves to be conserved and managed. The main issues are drainage and culvert repairs and the removal of intrusive vegetation and regenerated trees on the carriageway and banks.

Similarly to East Strone, the bridges, culverts and other drainage features along this stretch represent a range of types from different periods of the Military Road’s history. It is recommended that prior to and during any work to repair any bridges (particularly those identified with possible earlier phases), culverts or drainage features, a professional archaeologist records the remains. Not only will this enable the construction of the built heritage to be recorded, but also any different phases of construction and their possible date.

### **Bridge of Orchy**

As also outlined in the Atkinson (1994) report, this stretch of the Military Road has been severely compromised by both serious visitor erosion and poor drainage. In fact, the East Strone and Arrivain stretches are in much better condition than the Bridge of Orchy section.

It is strongly recommended that the drainage along the entire stretch (but particularly Sections 1 and 2) is re-designed to carry water away from the Military Road as soon as possible.

In addition, visitor pressure on the path which leads along the Military Road has meant that the surface of the Road has been severely eroded, exposing the upper levels of gravel and underlying larger stone material. Along Section 1, the situation has been greatly exasperated by water running down the path and Military Road and the visitor erosion is over a wider area of the Road. Where the Road has been eroded, it needs to be urgently repaired. The worst affected area is from the start of Section 1 at the car park (on the west side of the Bridge of Orchy bridge) up to the re-diverted section of path at features [01] and [02]. This area requires serious repairs and either the path re-routed away from the Military Road (to join up with it again in Section 2 or 3) or extensive board walks erected. Any work on this section of the Military Road would require consent from Historic Scotland.

### **Further Suggestions:**

The following are a few further suggestions which Forestry Commission Scotland may wish to consider:

East Strone: Although currently not part of a formal trail, the FCS may wish to consider opening up and promoting this lovely section of the Military Road to the public. There is a car park a short distance from the west end of the route, however the A85, which is a busy road, would need to be crossed.

Arrivain-Arinabea: Similarly, although not part of a formal trail, the FCS may wish to consider opening up and promoting this lovely section of the Military Road to the public.

Bridge of Orchy: To ascertain the level of damage to the Military Road as a consequence of drainage issues and visitor pressure, one suggestion is to undertake a small scale evaluation of this stretch by way of a series of hand dug evaluation trenches. This evaluation would be able to determine the level of damage to the Road, confirm the construction makeup of the Military Road and potentially identify any features associated with the Military Road which are not visually apparent.

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## 8) ACKNOWLEDGEMENTS

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## 9) APPENDICES

### APPENDIX 1: FULL DESCRIPTIONS OF SECTIONS AND FEATURES

#### TIGH NA CROIG, INVERAWE NN 02888 30546 – NN 03033 30410

A 200m length of military road survives towards the eastern side of Inverawe Country Park to the immediate east of Tigh Na Croig. The military road runs largely parallel to a drystone dyke which encloses an area of ground between the military road and the estate road to the south, which has been densely restocked with trees. Above the military way there is a mature, native woodland with some particularly large oaks. Access through the newly planted area was impossible and therefore, access to the military road was through the garden of Tigh Na Croig (with kind permission of the owner).

The military road is approximately 4.5 metres wide and terraced into the hillside. No bank is present on its south side. Instead there is a steep drop down towards the drystone dyke. At the western end of this section the drystone dyke lies approximately five metres to the south, whereas at the eastern end of the section, the dyke is abutting the southern side of the military road.

The road is very overgrown with long grasses and regenerated trees along the western half and dense bracken along the eastern half. Either singular or piles of, rotting, cut branches pepper the length of the section. A number of trees are also growing out of the wall head of the dyke to the south.

#### **Features:**

##### **[01] Stone structure (NN02888 30546)**

A curvilinear section of stone walling is located at the western end of the military road section. It appears to be built on top of the carriageway and abutting the hillside to its north. It is filled with modern wood, stone and rubbish and although it could be a retaining wall for a rubbish dump it is also possible that the rubbish is disguising an earlier, possible 19<sup>th</sup> century feature which was built once the military road went out of use. The feature measured approximately 10 m in length, was five metres wide and stood to approximately one metre.

## GLEN LOCHY:

### INVERLOCHY FARM (IF) NN 19699 27559 – NN 20049 27462

#### Summary:

A curvilinear length of the military way survives on the north side of the A85 which extends for approx. 450m. Although overgrown, the carriageway is clear along its entire length and appears not to have been disturbed by any later developments. Banks are visible intermittently on either side of the road. A number of quarries have been identified on either side of the road.

#### 200 metre sections:

##### **IF1: NN 19699 27559 - NN 19870 27636**

The road is five metres in width and visibly built up from the surrounding ground which consists of overgrown grasses and rushes. The western end of this section is very boggy and the entire road surface is overgrown with long grasses. No banks are visible on either side of the road along the western half of this section, but approximately 100m along, the road cuts through a small hill on its north side and a bank now survives to approx. One metre high along its southern edge. A number of young trees have been planted into the southern bank. A ditch is apparent on the north side of the road towards the eastern end of this section.

##### **IF2: NN 19870 27636 – NN 20006 27489**

The road continues to be five metres in width and overgrown with long grasses and heather. Banks are intermittently apparent on both sides of the road and are approx two metres in width and up to one metre in height. Young trees have recently been planted on the banks. Dense bracken flanks the road and has encroached upon the banks and the road edges. A number of large boulders are apparent on the north side of the road towards the end of this section.

##### **IF 3: NN 20006 27489 - NN 20049 27462**

The final 50 metre section climbs up hill to the A85. Dense bracken over one metre high covers the surrounding area and road surface. On the south side of the road at the start of this section, the surrounding area is boggy with areas of standing water. The bank on the southern side of the road is approx. two metres high in places. A number of large boulders are apparent on the south side, one of which has rolled onto the carriageway. A number of mature trees are growing out of the bank and are overhanging the road. The road narrows as it approaches the A85 and there are a number of dead branches covering the road surface.

#### Features:

[01] Quarry NN 19889 27627 Large quarry overgrown with bracken and trees. (Ref. SMR 58115).

[02] Quarry NN 20031 27475 Small quarry. (Ref. SMR 58116)

[03] Quarry NN 1995 2751 Large quarry. Not visited as area dense with bracken. (Ref. SMR 58113)

## SOUTH STRONE (SS) NN 20505 27479 – NN 20706 27483

A short 200m section of the military road survives south of, and approximately three metres below, the existing road level of the A85, just to southeast of Strone. This section is very overgrown and is almost impassable in places. The carriageway is generally five metres in width with two metre wide banks to either side which are up to one metre high. The entire road is covered in bracken (two metres high in places) and heather. The western end of the section is quite boggy and totally overgrown with scrubby trees. Towards the western end, a drainage ditch and a section of walling lie on the south side of the road, whilst a further drainage ditch appears to have been cut through the carriageway close to the northern bank. Towards the centre of this section an oak and a birch are growing out of the carriageway. Further to the east, material appears to have been dumped onto the carriageway across an area of approximately 20 metres in length and a number of trees have now established themselves in this material.

## EAST STRONE (ES) NN 20798 27457 – NN 23628 27590

### Summary:

A three kilometre well preserved section of the military way survives north of the A85 between Strone and Airigh nan Cioch, starting and ending on the north side of the A85. The way has been bisected by a substantial forestry extraction road which extends from the north side of the A85 up to meet the military road between sections 09 and 010. This three kilometre stretch passes through mature forest, climbing steadily for the first 1.5km until it reaches a plateau and starts to descend again to meet the A85. The carriageway is on average five metres in width with intermittent banks on either side. It is clearly defined for the entire length but covered in grass, moss, patches of heather and the occasional windblown tree. A number of wet areas along the route showed signs of being used by rutting stags. Some drainage problems and collapsed culverts

### **200 metre sections:**

#### **ES01: NN20798 27457 – NN 21013 27471**

A well-preserved section of military road defined by a good carriageway and banks on either side, initially up to one metre in height and width. At the west end of this section an area of banking has been removed by forestry to the north and towards the end of this section, the southern bank is reduced in height to approximately 0.2 – 0.3m in height. The road is covered with grasses and

moss, the banks with bracken. Towards the end of this section, as the road descends to a burn, the banks are also covered with ferns.

**ES02: NN 21013 27471 – NN 21190 27495**

Following the burn, the military road starts to steadily climb. The carriageway is between four-five metres in width and defined by a bank on either side which is one metre high and two metres wide. A number of windblown trees have fallen across the road and there is a large area of windblown trees to the south of the road. Approximately three-quarters along this section, a number of young trees have established themselves on the southern bank. Towards the end of this section the road becomes increasingly boggy and mossy, as it approaches a burn.

**ES03: NN 21190 27495 - NN 21368 27459**

Hugging the contours of Beinn na Sroine, the northern side of the five metre wide road cuts into the hillside, whilst the bank continues for a time on the southern side, before disappearing. The road and banks are covered in grass and moss, with the occasional wind blown tree lying across the carriageway. A few young trees have established themselves on the northern side of the road. Towards the end of this section, the road descends slightly to meet a burn. As the road descends towards the burn it widens to approximately six metres in width and it is defined on its southern side by a steep bank and ditch.

**ES04: NN 21368 27459 - NN 21557 27453**

This section of the military way is defined again by banks on either side of the carriageway, which vary in height from 0.3 – 1.0 metre. The road continues to be approximately five metres in width and covered in grass and moss. There are a considerable amount of wind blown trees on the southern side of the road.

**ES05: NN 21557 27453 - NN 21735 27458**

Once again, the bank on the northern side of the road disappears as the road cuts into the contours of the steep hillside. Dense bracken covers the upper hillside. At the end of this section the road surface is particularly boggy.

**ES06: NN 21735 27458 - NN 21918 27392**

The road continues to cut into the hillside but in this section, there is a slight bank on the southern side. This section of the road is quite overgrown with regeneration to both sides of the road.

**ES07: NN 21918 27392 - NN 22115 27349**

The road is defined by slight banks on either side of the carriageway. A rowan and other young trees have established themselves in the northern bank

**ES08: NN 22115 27349 - NN 22298 27399**

The road continues to measure approximately five metres in width with banks on either side for a time. The northern bank disappears once again when the road cuts into the hillside but the southern bank continues and measures up to two metres high in places and up to two metres in width. In a few places this southern bank has been truncated, possibly to allow drainage. One wind blown tree lies across the carriageway.

**ES09: NN 22298 27399 - NN 22477 27356**

The road continues to cut into the hillside and the bank on the southern side is approximately one metre in height. One windblown tree lies across the carriageway. Towards the end of this section the carriageway is covered in standing water. This section ends at a modern drainage channel which defines the western edge of the modern forestry extraction road.

**ES10: NN 22477 27356 – NN 22737 27383**

First half of this section has been completely truncated by a modern, reinforced forestry extraction road which is approx. four-five metres higher than the original military road. In the second half of this section the military road is defined by banks on either side of the carriageway.

**ES11: NN 22737 27383 – NN 22916 27457**

The carriageway is terraced into the hillside and the carriageway is waterlogged in several places. There is a slight, irregular bank on the southern edge of the carriageway. Rank grass covers the road surface and dense bracken is growing on both sides of the road. The occasional young, regenerated trees have established themselves along the carriageway.

**ES12: NN 22916 27457 – NN 23103 27530**

At the west end of this section, there is evidence to suggest that the hillside was significantly quarried to accommodate the road. The hillside to the north of the road is stepped and there is a large bank of re-deposited soil on the opposing side of the road which has spilled down the hillside. The road continues to be terraced into the hillside with occasional signs of an bank on the southern road edge. As above, the carriageway is waterlogged in several places.

**ES13: NN 23103 27530 – NN 23283 27601**

The road continues to be terraced into the hillside with a bank defining the southern edge of the road.

**ES14: NN 23283 27601 – NN 23471 27631**

The road continues to be terraced into the hillside with a bank defining the southern edge of the road. The bank is now about two metres wide and one metre high. Scrubby, moss covered trees have colonised the north side of the road and overhang the carriageway. Towards the end of this section, water runs down the centre of the carriageway.

### **ES15: NN 23471 27631 – NN 23628 27590**

The road descends down towards the main road. The first half of this section is boggy and wet with the carriageway covered in rank grass and moss. Water continues to run down the centre of the carriageway. A bank defines the southern edge of the road and there is a small length of substantial banking on the north side of the road, which appears to also help channel a burn down towards a substantial culvert. The second half of this section curves through scrubby native trees. The banks momentarily disappear but appear again towards the end of this section. The carriageway is now covered in short grass and heather.

#### **Features:**

01: Quarry (NN 20832 27457)

15m by 15m and ca. 5 m deep. Overgrown with bracken

02: Track/Siding (NN 20896 27454)

A track cuts through the northern bank at two points (NN 20896 27454 and NN 20924 27447) creating a type of siding.

03: Stone culvert (NN 20946 27450)

The culvert structure is approximately 1.50m wide, three courses high with a stone lintel and a stone slab base. The actual culvert, itself, is approximately 0.5 m by 0.5 m in dimension. Numerous branches block the drainage channel on the northern side of the road.

04: Rectangular cutting (NN 21036 27462)

A rectangular, recessed area measuring 30 m by 7m, lying parallel to the road. Difficult to tell whether this is some form of quarried area, siding or the remnants of an alternative approach up/down to the burn to its immediate west.

05: Quarry (NN 21141 27478)

A rectangular quarry lying perpendicular to the road. It measures 30m by 10m and varies in depth from 1-5m.

06: Track (NN 21181 27499)

A faint track can be seen on the north side of the road climbing up hill. It is approximately 4m in width as its start but quickly narrows. At its foot, there is a possible quarry (see below).

07: Quarry (NN 21181 27499)

A square, truncated area measuring 12m by 12m and 0.4 m to 1.5 m deep.

08: Quarry (NN 21202 27494)

A small quarry measuring 10m by 10m and 3 m deep.

09: Quarry (NN 21334 27465)

A quarry measuring approximately 15m by 10m and 5 m deep.

010: Culvert/Bridge (NN 21366 27457)

Stone built culvert/bridge measuring 6 m in width and length. It is 3.5m high with a rectangular, culvert-like under carriage measuring 1.5 m in height by 0.5 m in width. A number of trees are growing close to it and out of it its fabric. The stone work is also covered with mosses and ferns.

011: Quarry (NN 21379 27445)

Possible quarry measuring 10 m by 5 m and 2 m deep.

012: Quarry (NN 21609 27448)

Large quarry measuring 30 m by 30 m and up to 8 m in depth.

013: Drainage feature (NN 21693 27475)

A narrow drainage feature which cuts across the carriageway. Drain appears blocked and ground is boggy with standing water.

014: Culvert (NN 21735 27458)

A partially collapsed stone-built culvert which measures 2.5m wide and approximately 2 m high with built up road above it. The south facing culvert facade is partly hidden by long grass and moss but stones in the culvert tunnel have become dislodged. A large hole has appeared on the southern side of carriageway, suggesting the culvert has collapsed beneath the carriageway.

015: Culvert (NN 21826 27415)

Stone built culvert approximately 1m in height and 0.5m in width. Covered in overhanging grasses and moss. A number of trees are growing in close proximity.

016: Drainage feature (NN 21866 27408)

A narrow, drainage feature truncates the road carriageway.

017: Quarries (NN 21907 27393)

Two quarries abutting one another. The western-most quarry is 7m by 7m and 1.5 m deep, whilst the eastern-most quarry is larger, measuring 15m by 15m and is 2m deep.

018: Quarries (NN 21926 27392)

Two adjacent quarries. The western-most quarry measures 8m by 8m and is 2m deep, whereas the eastern-most quarry is 10m by 5m and is 1.5 m deep.

019: Culvert (NN 21963 27378)

Approximately 1 m wide and 1 m wide, this stone-built culvert is very overgrown. A very small young spruce has started to grow right next to it.

020: Culvert (NN 21996 27372)

Stone-built culvert measuring 1m wide by 2m high with an undercarriage approximately 1m high and 0.4m high.

021: Quarry (NN 22046 27357)

A large quarry lying perpendicular to the road and measuring 30m by 10m. It is 2m deep with a number of large boulders at its entrance.

022: Drainage feature (NN 22074 27354)

A narrow, 0.15m wide drainage feature which can be seen as a cutting on the south side of the road.

023: Culvert (NN 22088 27354)

Collapsed stone-built culvert measuring 1m wide and 1.5m in height. Bracken obscures the collapsed south facing culvert facade.

024: Drainage cutting (NN 22147 27372)

Southern carriageway bank truncated, possibly to allow for drainage.

025: Culvert (NN 22174 27380)

Stone-built culvert 1m wide and 1.5m in height.

026: Culvert (NN 22237 27398)

Small stone-built culvert only 0.20m wide and 0.40m high. Visible linear depression across carriageway suggesting it may be collapsing or slumping.

027: Drainage feature (NN 22272 27392)

Narrow 0.15 m wide drainage feature visible across carriageway. Carriageway immediately above is wet and boggy (suggesting drain is blocked) and is being used as a mud bath by a rutting stag.

028: Drainage feature (NN 22306 27380)

Narrow 0.2m wide drainage feature (now grassed over and not in use), visible to immediate south of road.



029: Culvert (NN 22378 27368)

Stone-built culvert approximately 3m wide and 1.5m high with a concrete pipe inserted.

030: Track (NN 22379 27368)

Immediately east of 029, a faint track descends to the south.

031: Quarry (NN 22387 27367)

A rectangular quarry measuring 20m by 25m and 2.5m deep.

032: Culvert (NN 22571 27357)

Stone-built culvert approximately 0.70m in height and 0.60m in width within an apron measuring 1.5m in length. The culvert has a stone basal slab and lintel with a 1.10m constructed face below its basal stone.

033: Culvert (NN 22670 27363)

A nine inch ceramic pipe with stone capstone on possible site of earlier culvert.

034: Culvert (NN 22702 27366)

A drystone built culvert 0.60m in height and 0.50m in width with basal slab and lintel stone. The culvert exit on the south side of the road is covered with moss. The entrance on the north side of the road is partially collapsed and a number of scrubby trees are growing upstream.

035: Culvert (NN 22782 27375)

Large 0.5m diameter concrete pipe with no obvious stone surround.

036: Quarries (NN 22798 27380)

Two quarries on opposite sides of the road, approximately 10m by 5m in size.

037: Quarry (NN 22821 27390)

Large quarry 15m by 15m in diameter and approx. 5m deep.

038: Quarry (NN 22888 27426)

Quarry on north side of road directly opposite a large sitka growing on the south edge of the road.

039: Culvert (NN 22901 27436)

Very overgrown, large stone built culvert 0.70m high and 0.45m wide.

040: Culvert (NN 22983 27461)

Very overgrown stone built culvert with entrance and exit both choked. The carriageway above and in the vicinity of the culvert is covered in standing water.

041: Quarry (NN 23008 27471)

Large quarry 15m by 1m in size and approx. 6m deep.

042: Culvert (NN 23039 27484)

Totally overgrown, substantial but collapsed culvert, which is still partly running.

043: Quarry (NN 23084 27510)

Quarry measuring approx. 12m by 5m and 5m deep.

044: Culvert (NN 23104 27511)

Substantial stone built culvert measuring 0.70m by 0.70m within a dry stone built apron which is 5m in length. Below the stone basal stone is a 2m drystone constructed face. The culvert entrance on the north side of the road and a 2m section of culvert pipe below the road has partially collapsed. To the immediate east of the culvert exit (south side of road) the military road has slipped and eroded over a length of approx. 3m.

045: Quarry (NN 23133 27520)

A quarry measuring 7m by 6m and approx. 3m in depth.

046: Culvert (NN 23178 27542)

Very overgrown, small stone culvert. Covered in overhanging grass and moss. Entrance to culvert choked with dead, rotten branches.

047: Quarry (NN 23191 27545)

Large quarry 12m by 12m in size and approx. 3m in depth. Full of scrubby trees.

048: Drainage feature (NN 23213 27554)

Choked old drainage feature.

049: Culvert (NN 23229 27561)

Modern concrete pipe. The narrow burn is now free-flowing and cutting into, the surface of the carriageway.

050: Drainage feature (NN 23311 27603)

Partially collapsed, small drainage feature. The carriageway above this feature is covered in standing water.

051: Quarry (NN 23340 27610)

Quarry measuring 10m by 7m and approx. 3m in depth.

052: Culvert (NN 23359 27610)

Drystone built culvert with collapsed south exit and collapsed 1m length of culvert pipe (which is continuing to erode). A further small hole has appeared in the carriageway.

053: Quarry (NN 23392 27616)

Quarry measuring 10m by 7m in size and approx 2m in depth.

054: Quarry (NN 23400 27615)

Quarry measuring 7m by 7m and approx. 2m in depth.

055: Culvert (NN 23504 27604)

Large, very overgrown culvert, with inserted metal pipe. The burn banks (especially the west bank) on the southern (culvert exit) side of the road are extremely eroded. The carriageway across the culvert is only 2m in width. It is very likely that this modern culvert is on the site of an earlier culvert.

056: Culvert (NN 23538 27594)

Stone built, very overgrown culvert measuring 0.50m by 0.50m.

057: Quarry (NN 23550 27591)

Quarry measuring 10m in diameter and approx 1.5m in depth.

## BEINN NA SROINE SOUTH NN 24126 28146 – NN 24247 28239

A short, curvilinear 200 metre section of military road is depicted surviving to the north side of the A85, separated from the road by a fence, within an area dense with bracken. The road is clearly visible as a raised terrace (approximately one metre in height and four metres in width) hugging the foot of the hill with a ditch on its northern side. Towards the eastern end of this section a number of large boulders are apparent to either side of the road. A burn cuts through the road approximately halfway along its length but there is no evidence for any drainage feature, such as a culvert.

## BEINN NA SROINE NORTH NN 24453 28531 – NN 24534 28632

A short, curvilinear 200 metre section of military road is depicted surviving to the north side of the A85. The military road is separated from the road by a fence and a massive drainage ditch. Within the fenced area, the area is overgrown with grasses, rushes and bracken making it very difficult to establish the presence of the military road. However, the military road can be seen surviving as a raised terrace, hugging the foot of the hill.

## GLENLOCHY CROSSING (GC) NN 25309 29528 – NN 25531 29840

On the NMRS and SMR databases, the military road is shown as following the course of the now A85, however, on the modern 1:10,000 Ordnance Survey map of the area a short, linear 400 metre section of the military road is shown surviving on the north side of the A85, opposite Glenloch Crossing extending from approximately NN 25309 29528 – NN 25531 29840.

### **200 metre sections:**

#### **GC 01: NN 25309 29528 – NN 25388 29706**

A short length of track, which may be the surviving remains of the military road, is faintly visible stretching from the north side of the A85 through boggy, tall grass to meet the junction (NN 25326 29594) between a partly tarmac siding off the main A85 and a gravelly/stony hill track which ascends up into the tree belt. A rowan tree is growing in the middle of the carriageway at the northern end of this surviving section. A faint forestry skirts the forest line and runs parallel to the possible military road. The military road then disappears and no further sign of it could be seen at ground level.

#### **GC 02: NN 25388 29706 – NN 25531 298040**

From a vantage point (NN 25373 29662) next to the hill track (mentioned above) it is possible to see the faint remains of a carriageway defined by two banks at approximately NN 2541 2971 extending over a length of about 20m. The feature, however, disappears before it reaches a burn further to the north. Improvements to the A85, particularly the deep drain on its west side, in addition to the tarmac siding may well have destroyed the part of the military road which extended from NN 25326 29594 to NN 2541 2971. Long grasses, rushes and bracken north of NN 2541 2971 may be disguising the remainder of the military road.

## ARRIVAIN TO ARINABEA (AA) NN 26519 30611 – NN 29647 31716

### Summary:

A 3.5 km section of the military road survives to the north of the A85, extending from Arrivain (the western end) to Arinabea (the eastern end). The entire length of the carriageway has been upgraded to accommodate automobiles and is covered in concrete which has started to be encroached upon by grass, moss and regeneration. The carriage way is defined either by banks on either side or cutting into the hillside on its northern side and terraced along its southern edge (occasionally with additional banking). This particularly stretch is peppered with 19<sup>th</sup> century Parliamentarian bridges, a few of which show possible signs of incorporating earlier material. A number of fine stone culverts are apparent, a number of which show evidence for two phases where they have been added to and lengthened. Some culverts have been damaged by either later ceramic pipe insertions and/or flooding.

### 200 metre sections:

#### **AA01: NN 26519 30611 – NN 26676 30735**

A well-defined section of carriageway defined by banks on either side. The western extreme of this section has been entirely truncated and obliterated by a large quarry. The road to the immediate east of the quarry has been considerably built up and reinforced. The road is approximately five metres in width.

#### **AA02: NN 26676 30735 – NN 26863 30798**

The military road between these two points does not survive. This section is now part of the access and drive to Arrivain house and outbuildings.

#### **AA03: NN 26863 30798 – NN 27056 30853**

Concrete capped carriageway defined by banks extending between a 19<sup>th</sup> century bridge and date to the east of a large sheep fank.

#### **AA04: NN 27056 30853 – NN 27247 30905**

The carriageway- replaced at first by sand and gravels, later by concrete- is defined by two banks. The bank on the northern side is three metres wide and two metres high and topped by a later drystone dyke. The bank on the southern side of the road is 2.5 metres wide and 0.5-1.0 metres high. The road is 4.5 to 5 metres in width. The carriageway is covered in standing water.

#### **AA05: NN 27247 30905 - NN 27442 30947**

Concrete capped carriageway defined by banks on either side. The northern bank is 1.5 m high and three metres wide, the southern bank is one metre high and also three metres wide. A fence line runs along the top of the southern bank. The carriageway is covered in standing water.

**AA06: NN 27442 30947 – NN 27618 31028**

As above

**AA07: NN 27618 31028 – NN 27795 31110**

As above

**AA08: NN 27795 31110 – NN 27976 31183**

This section of the military road is terraced into the hillside with a small bank along its southern edge. The road is predominantly 4.5-5 metres in width but widens to approximately 6.5 metres towards its eastern end, where it crosses a burn (see culvert 23). A number of young larches have started to grow on the northern side of the carriageway.

**AA09: NN 27976 31183 – NN 28168 31286**

The road continues to be defined by banks on either side but the southern bank is considerably less in height and width and eroded in places.

**AA10: NN 28168 31286 – NN 28364 31264**

As above but with areas of the carriageway waterlogged.

**AA11: NN 28364 31264 – NN28548 31338**

As above with the northern most bank being 1.5 m high and four-five wide and the southern bank being one metre wide and only 0.4m high. A tree lies partly across the carriageway.

**AA12: NN28548 31338 – NN 28732 31413**

As above

**AA13: NN 28732 31413 – NN 28917 31490**

Carriageway continues to be defined by banks on either side of road. A number of larch saplings have established themselves across the carriageway. The road continues to be predominantly 4.5 – 5 metres in width but widens considerably to seven metres as it crosses a burn (see culvert 35)

**AA14: NN 28917 31490 – NN 29101 31568**

As above

**AA15: NN 29101 31568 – NN 29279 31649**

This section of the military road is terraced into the hillside with a bank present along its southern edge. There is water running across the road and areas of standing water in places along this section.

**AA16: NN 29279 31649 – NN 29476 31685**

As above. Bank along southern edge is 0.5 metres in width and 0.4 metres high. The carriageway has an increasingly mossy surface and is very boggy. Towards the eastern end, this section starts to descend towards the A85.

**AA17: NN 29476 31685 – NN 29647 31716**

This section is represented by a two metre high terrace with a slight bank on its northern side and deer fence bounding the southern edge. A number of young trees are growing out of the carriageway. Towards the eastern end of this section, the bank and terrace disappear as the military road meets a modern, tarmac forestry extraction road and the main A85 road.

Features:

01: Quarry (NN 26519 30611)

Large quarry on north side of military road. Probably associated with later enhancement and reinforcement of the road.

02: Culvert (NN 26519 30613)

Concrete culvert

03: Quarry (NN 26558 30676)

Quarry measuring 20 m by 10 metres and 5 metres deep. Large rhodendron bush growing out of centre.

04: Quarry (NN 26600 30703)

Quarry probably associated with later development of military road. Measures 30 metres by 30 metres and is 10 metres deep.

05: Culvert (NN 26699 30731)

Dry-stone built culvert measuring 0.6 metres in height and 0.4m in width, up to four course high abutments with a basal stone slab and lintel. Extends under road for a length of 5.8 metres.

06: Plantation bank (NN 26697 30744)

Earthen linear bank aligned N-S on north side of the military road and delineating the western edge of a woodland plantation.

07: Bridge (NN 26863 30798)

Nineteenth century, stone and mortar bridge with parapets capped with concrete. Concrete shuttering beneath bridge arch.

08: Sheep fank (NN 26933 30838)

Drystone-built sheep fank on north side of road.

09: Culvert (NN 26989 30827)

A burn appears on the north side of the road through a large 4.5m gap in the drystone dyke and flows beneath the road. A concrete ramp/edge on the southern side of the military road, which juts out approximately one metre from the edge of the road, disguises a possible original culvert.

010: Culvert (NN 27032 30842)

A burn flows through a stone 'window' in the dyke on the north side of the road under the road. The culvert on the southern side of the road is overgrown with grass and bracken and has completely silted up. The carriageway above the culvert has become boggy.

011: Culvert (NN 27110 30868)

Dry-stone built culvert, 0.80 metres in height, 0.60 metres in width, with abutments up to four courses in height, a stone lintel and basal slab. The concrete road surface lies approximately 0.70 m above the lintel. The culvert extends across the width of the road for 4.40 metres. A modern pipe has been inserted into the northern side of the culvert, disturbing some of the structure.

012: Culvert (NN 27173 30880)

Culvert obscured by dense vegetation.

013: Bridge (NN 27228 30898)

Nineteenth century stone and mortar bridge with parapet capped with concrete. Possibly sits on site of older bridge.

014: Culvert (NN 27327 30921)

Drystone-built culvert, 0.60 metres in height, 0.60 metres in width, with stone abutments, lintel and basal slab. There is a 0.50 metre constructed drystone face below the basal slab. The culvert crosses beneath the road on a diagonal alignment and is six metres in length.

015: Culvert (NN 27389 30931)

Culvert obscured by dense vegetation



016: Culvert (NN 27432 30942)

Stone and mortar culvert, 0.70 metres in height, 0.60 metres in width with stone abutments, lintel and basal slab. There is a 0.80 metre constructed drystone face below the basal slab. The concrete road surface only lies 0.20 metres above the lintel.

017: Culvert (NN 27503 30951)

Blocked stone and mortar culvert overgrown with vegetation. The burn has re-diverted itself up and over the carriageway to the west of the culvert. A number of river stones have washed up onto the carriageway.

018: Culvert (NN 27533 30959)

Collapsed large, stone and mortar culvert with very large stone lintels measuring 0.80 metres in height and 0.65 metres in width with large, curving abutments on either side. The eastern abutment has collapsed. The northern side of the culvert is well preserved. Post dates the military road?

019: Culvert (NN 27600 31007)

A possible culvert but obscured by dense vegetation. No obvious outflow on the southern side could be seen.

020: Quarry (NN 27669 31064)

Quarry on north side of road measuring 20 metres by 10 metres and five metres deep.

021: Culvert (NN 27758 31097)

Large drystone-built culvert almost entirely washed away (plus carriageway above it). Only the very north end survives partly buried under silt and river stones and some of the south end. Surviving remains suggest it was 0.70 metres in height and 0.70 metres wide.

022: Culvert (NN 27830 31125)

Tall, drystone-built culvert measuring 1.50 metres in height and 0.60 metres in width. Two phases of construction are apparent. The second phase of construction extended the length of the culvert to the south and this second phase has started to collapse. The concrete carriageway lies 0.50 metres above the lintel. A hole has also appeared on the northern side of the road.

023: Culvert (NN 27974 31177)

A well preserved drystone-built culvert measuring 0.40 metres in height and 0.60 metres in width with abutments, lintel and basal slab. There is some collapse on the eastern side of the culvert. The concrete carriageway lies approximately 0.50 metres above the lintel and is 6.50 metres wide.

024: Earthen bank (NN 28066 31202)

Massive linear bank extending south of the military road for approximately 10 metres. It is five metres wide and approximately two metres high

025: Culvert (NN 28067 31201)

Drystone-built culvert measuring 0.60 metres high and 0.40 metres wide extending across the width of the road for 5.50 metres.

026: Culvert (NN 28164 31235)

Drystone-built culvert 0.60 metres in height and 0.50 metres in width. Two phase of construction apparent with the second phase extending the length of the culvert to the south. The culvert extends diagonally across the road for a length of seven metres. A small larch is growing out of the top of the south facing culvert facade.

027: Culvert (NN 28211 31236)

Silted up narrow culvert obscured by vegetation. The carriageway above the culvert is flooded.

028: Quarries (NN 28211 312236)

Two large quarries on north side of road.

029: Bridge (NN 28315 31250)

Nineteenth century, stone and mortar bridge re-pointed with cement. No concrete visible in the archway. Possibly incorporates elements of earlier bridge.

030: Culvert (NN 28417 31280)

Small overgrown drystone culvert measuring 0.40 metres in height and 0.80 metres in width. Extends across the width of the road for 5.50 metres.

031: Bridge (NN 28528 31327)

Nineteenth century stone and mortar bridge re-pointed with cement.

032: Culvert (NN 28618 31358)

Small drystone-built culvert covered in a variety of mosses. Extends across the width of the road for 5.5 metres.

033: Culvert/drainage feature (NN 28661 31373)

Narrow overgrow drainage feature

034: Quarry (NN 28708 31398)

Quarry on north side of road measuring 20 metres by 10 metres and five metres deep. A spruce is growing out of the quarry entrance.

035: Culvert (NN 28741 31417)

Drystone-built culvert with two phases of construction evidenced by extended length (one metre) and stepped interior profile. The culvert measures 0.90 metres in height and 0.50 metres in width. The culvert extends across the road (seven metres in width).

036: Bridge/culvert (NN 28830 31445)

Large, stone and mortar built culvert measuring 0.90 metres in height and 0.60 metres in width, abutments, lintel and basal slab. There is a 0.50 metre constructed drystone face below the basal slab. A ceramic drain has been inserted to the immediate east of the culvert which has damaged and partially collapsed the eastern culvert wall. A hole has also appeared in the carriageway surface above. The northern side of the culvert is fairly ruinous. Larch saplings are growing out of the road surface.

037: Culvert (NN 28873 31468)

A well preserved, drystone-built culvert with splayed abutments on its south side. It measures 0.70 metres high and 0.60 metres wide with a stone lintel and basal stone. The carriageway only lies 0.20 metres above the lintel. The culvert extends across the width of the road (five metres). At the northern entrance to the culvert a number of small rectangular stones have been arranged to create a basal layer.

038: Culvert (NN 28897 31479)

Partly silted up culvert obscured by vegetation.

039: Culvert/drainage feature (NN 28967 31507)

A narrow culvert or drainage feature obscured by dense vegetation

040: Culvert (NN 28982 31515)

Drystone-built culvert measuring 0.60 metres in height and 0.60 metres in width. The concrete carriageway lies 0.50 metres above the lintel. Heavily overgrown with mosses. It extends across the width of the road (6.5 metres).

041: Culvert (NN 29060 31544)

Drystone-built culvert measuring 0.50 metres in height and 0.40metres in width. The carriageway lies 0.50 metres above the lintel. The southern facade is covered in mosses. The culvert extends across the width of the road (5.5 metres).

042: Drainage feature (NN 29091 31560)

Heavily overgrown drainage feature

043: Culvert (NN 29154 31598)

Blocked, drystone-built culvert measuring 0.60 metres in height and 0.50 metres in width. The carriageway lies 0.40 metres above the lintel. Water runs down (east-west) the carriageway, across the road and down, on top of the culvert. Culvert extends across the width of the road (five metres).

044: Culvert (NN 29194 31613)

Blocked, drystone-built culvert measuring 0.60 metres in height and 0.50 metres in width with a nice stone lintel and base slab. There is a 0.50 metre constructed drystone face below the basal slab. The carriageway lies 0.40 metres above the lintel. A large amount of standing water sits on the carriageway above the culvert.

045: Culvert (NN 29208 31621)

Blocked, overgrown culvert now not in use.

046: Culvert (NN 29242 31640)

Drystone-built culvert measuring 0.50 metres in height and width. The carriageway lies 0.40 metres above the lintel and is 5.50 metres in width. The culvert is partially collapsed on the northern side.

047: Quarry (NN 29283 31646)

Quarry on north side of road measuring 15 metres by 10 metres and seven metres deep.

048: Culvert (NN 29337 31651)

Well preserved stone and mortar built culvert obscured on the south side by low hanging spruce branches. It measures 0.60 metres in height and width with a 0.70 metre constructed face below its basal slab. The carriageway lies 0.40 metres above the lintel. Two phases of construction can be clearly seen. The culvert has been extended in length to the south and the first phase culvert entrance can be seen 1.50 metres in from the current southern facade.

049: Quarries (NN 29427 31670)

Two linear quarries on the northern side of the road. The western most quarry measures 15 metres by eight metres and is five metres deep. The eastern most quarry is 30 metres in length by eight metres and is five metres in depth.

050: Bridge (NN 29447 31673)

Nineteenth century, stone and mortar bridge with concrete parapet cap and concrete re-pointing. Evidence for concrete shuttering beneath bridge archway. A number of trees are growing out of the bridge carriageway.

051: Culvert (NN 29574 31722)

Deer fence on southern side of road does not allow access to record culvert. The culvert extends across the width of the road (seven metres).

052: Culvert (NN 29599 31722)

Culvert obscured by brambles. Extends across width of road (six metres).

## BRIDGE OF ORCHY (BO) NN 29604 39666 – NN 29297 40183

### Summary:

This section of the military way is scheduled (FCS Ref 2858) and part of the very popular West Highland Way which continues up and over Mam Carraigh to Inveroran on the west shore of Loch Tulla. The military way crosses an area of recently clear felled but now open heather ground to the east which is backed to the west by standing conifer plantation. The military road survives over this section but has been seriously truncated and eroded by the West Highland Way, which has cut into and through the deposits which make up the military road. There are a number of modern and older drainage features across the road in addition to a massive stone built culvert/bridge.

### 200 metre sections:

#### **BO01: NN 29604 39666 – NN 29463 39818**

Heavily eroded one metre wide walking track with no obvious signs of the military way surviving.

#### **BO02: NN 29463 39818 – NN 29363 39994**

The military road survives as a slightly raised road, four metres in width, defined by slight, overgrown banks on either side. The western-most bank is approx one metre high and two metres wide with the occasional young sitka spruce growing out of it. The eastern-most bank is only 0.50m high but two metres wide. The walking track has cut right through the gravel and stone makeup of the carriageway. Felled trees and branches litter both sides of the road.

### **BO03: NN 29363 39994 – NN 29297 40183**

The banks on either side of the carriageway are very slight and covered in rank grass, heather and the occasional regenerated young sitka spruce. Both banks are two metres in width with the west bank now only 0.50m in height and the east bank 0.3-0.4m in height. The walking path continues to cut through the carriageway of the military road.

#### **Features**

##### **01: Bridge springers (NN 29480 39784)**

The remains of a stone springer are still visible within the heavily overgrown south bank of a burn a few metres downstream (east) of a new crossing point and culvert (02) which carries the diverted West Highland Way. Directly opposite and approximately 2m away on the north bank of the burn, is a small pile of stones which may have acted as the opposing bridge springer (SMR 15691; NMRS Ref NN23NE3.01)

##### **02: Stone cross-drain (NN 29480 39784)**

Modern stone-lined drainage channel across the re-diverted West Highland Way path.

##### **03: Quarry (NN 29426 39879)**

Small quarry measuring approximately 10m by 7m and 1m deep lying on the east side of the road. A rowan is growing on its western edge.

##### **04: Quarry (NN 29378 39966)**

A larger quarry lying to the north of 03. It measures approximately 15m by 10m and is 3m deep. It is full of cut lengths of wood.

##### **05: Drainage feature (NN 29411 39902)**

Very narrow and overgrown drainage feature crossing beneath road. Sitka growing out of west side and filled with brash on east side.

##### **06: Drainage feature (NN 29389 39945)**

Narrow, slightly overgrown drainage feature which crosses surface of road with one oval stepping stone. Path quite wet and muddy to immediate north.

##### **07: Quarry (NN 29372 39980)**

A substantial quarry lying on the east side of the road which is full of timber. It measures approximately 16m by 10m.

##### **08: Stone cross-drain (NN 29343 40035)**

A modern stone-lined drainage channel which cuts across the path and military road.

09: Culvert/Bridge (NN 29347 40032)

The remains of an original and substantial drystone built culvert with two plastic pipes inserted and visibly protruding through the path surface. The culvert, itself, measures approximately 1m by 1m with a basal stone and two side walls still visible. There is a 1m height drystone built face below the basal stone. The culvert sits within a massive drystone built ramped apron (14m in length and 5m in width) which acts a ford or bridge across the burn.

Area	Sub Area	Feature No.	Type	NGR	Condition	Threats	Grade	Grade D	Management Required	Photo No.
Inverawe	Tigh na Croig	1	Stone Structure	NN 02888 30546	2	none	C	√	Remove rubbish	2
Glen Loochy	Inverlochy Farm	2	Quarry	NN 19889 27627	2	Vegetation	C		none	9
Glen Loochy	Inverlochy Farm	3	Quarry	NN 20031 27475	2	Vegetation	C		none	12
Glen Loochy	Inverlochy Farm	3	Quarry	NN 19865 27511	2	Vegetation	C		none	16
Glen Loochy	East Strone	1	Quarry	NN 20832 27457	2	Vegetation	C		none	17
Glen Loochy	East Strone	2	Siding	NN 20886 27454	1	none	C		Remove vegetation	18
Glen Loochy	East Strone	3	Culvert	NN 20946 27480	2	Vegetation	B		none	19
Glen Loochy	East Strone	4	Cutting	NN 21036 27462	1	none	C		none	21
Glen Loochy	East Strone	5	Quarry	NN 21141 27478	1	none	C		none	22
Glen Loochy	East Strone	6	Track	NN 21181 27499	2	none	C		none	23
Glen Loochy	East Strone	7	Quarry	NN 21181 27499	1	none	C		none	24
Glen Loochy	East Strone	8	Quarry	NN 21202 27494	1	none	C		none	26
Glen Loochy	East Strone	9	Quarry	NN 21334 27465	1	none	C		none	28
Glen Loochy	East Strone	10	Culvert	NN 21366 27457	3	Vegetation	B		Remove vegetation	29
Glen Loochy	East Strone	11	Quarry	NN 21379 27445	1	none	C		none	30
Glen Loochy	East Strone	12	Quarry	NN 21609 27448	1	none	C		none	32
Glen Loochy	East Strone	13	Drainage feature	NN 21693 27475	3	Blocked	C		Unblock and repair	34
Glen Loochy	East Strone	14	Culvert	NN 21735 27458	4	Collapse	C		Repair	35
Glen Loochy	East Strone	15	Culvert	NN 21826 27415	3	Vegetation	C		Remove vegetation & trees	37
Glen Loochy	East Strone	16	Drainage feature	NN 21886 27408	3	Erosion	C		Repair	38
Glen Loochy	East Strone	17	Quarry	NN 21907 27393	1	none	C		none	40
Glen Loochy	East Strone	18	Quarry	NN 21926 27392	1	none	C		none	42
Glen Loochy	East Strone	19	Quarry	NN 21983 27378	3	Vegetation	C		Remove vegetation	43
Glen Loochy	East Strone	20	Culvert	NN 21696 27372	1	none	C		none	44
Glen Loochy	East Strone	21	Quarry	NN 22046 27367	1	none	C		none	45
Glen Loochy	East Strone	22	Drainage feature	NN 22074 27354	1	none	C		none	47
Glen Loochy	East Strone	23	Culvert	NN 22088 27354	4	Collapse	C		Repair	
Glen Loochy	East Strone	24	Drainage feature	NN 22147 27372	1	none	C		none	
Glen Loochy	East Strone	25	Culvert	NN 22174 27380	1	none	C		none	
Glen Loochy	East Strone	26	Culvert	NN 22237 27388	4	Collapse	C		Repair	
Glen Loochy	East Strone	27	Drainage feature	NN 22272 27392	3	Blocked	C		Unblock and repair	
Glen Loochy	East Strone	28	Drainage feature	NN 22366 27380	1	none	C		none	
Glen Loochy	East Strone	29	Culvert	NN 22378 27368	1	none	C	√	none	
Glen Loochy	East Strone	30	Track	NN 22379 27368	1	none	C		none	
Glen Loochy	East Strone	31	Quarry	NN 22387 27367	1	none	C		none	
Glen Loochy	East Strone	32	Culvert	NN 22571 27357	1	none	B		none	
Glen Loochy	East Strone	33	Culvert	NN 22670 27363	1	none	C		none	
Glen Loochy	East Strone	34	Culvert	NN 22702 27366	3	Collapse	C	√	Repair	
Glen Loochy	East Strone	35	Culvert	NN 22782 27375	1	none	C		none	
Glen Loochy	East Strone	36	Quarry	NN 22798 27380	1	none	C		none	
Glen Loochy	East Strone	37	Quarry	NN 22821 27380	1	none	C		none	
Glen Loochy	East Strone	38	Quarry	NN 22888 27428	2	Tree	C		Remove tree	
Glen Loochy	East Strone	39	Culvert	NN 22801 27436	2	Vegetation	C		Remove vegetation	50
Glen Loochy	East Strone	40	Culvert	NN 22983 27461	3	Blocked	C		Unblock and repair	51

TABLE 1 FEATURE DESCRIPTIONS

PLEASE NOTE THAT THE FOLLOWING TABLES (1-3) ARE ALSO AVAILABLE AS SEPARATE FILES.



Glen Loochy	East Strone	41	Quarry	NN 23008 27471	1	none	C	none	none	52
Glen Loochy	East Strone	42	Culvert	NN 23039 27484	4	Collapse	C	Repair	none	53
Glen Loochy	East Strone	43	Quarry	NN 23084 27510	1	none	C	none	Repair	53;54
Glen Loochy	East Strone	44	Culvert	NN 23104 27511	5	Collapse	B	Repair	none	
Glen Loochy	East Strone	45	Quarry	NN 23133 27520	1	none	C	none	none	
Glen Loochy	East Strone	46	Culvert	NN 23178 27542	3	Blocked	C	Unblock and repair	remove vegetation	56
Glen Loochy	East Strone	47	Quarry	NN 23181 27545	2	Vegetation	C	Unblock and repair	Unblock and repair	57
Glen Loochy	East Strone	48	Drainage feature	NN 23213 27564	3	Blocked	C	Unblock and repair	Unblock and repair	
Glen Loochy	East Strone	49	Culvert	NN 23229 27561	4	Blocked	C	Unblock and repair	Unblock and repair	
Glen Loochy	East Strone	50	Drainage feature	NN 23311 27603	4	Blocked	C	Unblock and repair	Unblock and repair	
Glen Loochy	East Strone	51	Quarry	NN 23340 27610	1	none	C	none	none	
Glen Loochy	East Strone	52	Culvert	NN 23359 27610	5	Collapse	C	Repair	Repair	
Glen Loochy	East Strone	53	Quarry	NN 23392 27618	1	none	C	none	none	
Glen Loochy	East Strone	54	Quarry	NN 23400 27615	1	none	C	none	none	
Glen Loochy	East Strone	55	Culvert	NN 23504 27604	5	Erosion	C	Repair	Repair	58;59
Glen Loochy	East Strone	56	Culvert	NN 23538 27594	2	Vegetation	C	Remove vegetation	Remove vegetation	
Glen Loochy	East Strone	57	Quarry	NN 23550 27591	1	none	C	none	none	60
Glen Loochy	Armvain	1	Quarry	NN 26519 30611	1	none	C	none	none	
Glen Loochy	Armvain	2	Culvert	NN 26519 30613	1	none	C	none	none	
Glen Loochy	Armvain	3	Quarry	NN 26559 30676	2	Vegetation	C	Remove vegetation	Remove vegetation	
Glen Loochy	Armvain	4	Quarry	NN 26600 30703	1	none	C	none	none	
Glen Loochy	Armvain	5	Culvert	NN 26698 30731	1	none	C	none	none	69
Glen Loochy	Armvain	6	Plantation bank	NN 26697 30744	1	none	C	none	none	
Glen Loochy	Armvain	7	Bridge	NN 26883 30798	1	none	B	none	none	70;71
Glen Loochy	Armvain	8	Fank	NN 26833 30838	1	none	C	none	none	
Glen Loochy	Armvain	9	Culvert	NN 26869 30827	1	none	C	none	none	
Glen Loochy	Armvain	10	Culvert	NN 27032 30842	4	Blocked	B	Unblock and repair	Unblock and repair	72
Glen Loochy	Armvain	11	Culvert	NN 27173 30880	2	none	C	none	none	74
Glen Loochy	Armvain	12	Culvert	NN 27173 30880	2	Vegetation	C	Remove vegetation	Remove vegetation	
Glen Loochy	Armvain	13	Bridge	NN 27228 30898	1	none	B	none	none	75
Glen Loochy	Armvain	14	Culvert	NN 27327 30621	1	none	C	none	none	
Glen Loochy	Armvain	15	Culvert	NN 27389 30631	2	Vegetation	C	Remove vegetation	Remove vegetation	
Glen Loochy	Armvain	16	Culvert	NN 27432 30942	1	none	C	none	none	
Glen Loochy	Armvain	17	Culvert	NN 27503 30951	4	Blocked	C	Unblock and repair	Unblock and repair	77
Glen Loochy	Armvain	18	Culvert	NN 27533 30959	4	Collapse	B	Repair	Repair	
Glen Loochy	Armvain	19	Culvert	NN 27600 31007	3	Blocked	C	Unblock and repair	Unblock and repair	
Glen Loochy	Armvain	20	Quarry	NN 27698 31064	1	none	C	none	none	
Glen Loochy	Armvain	21	Culvert	NN 27758 31097	5	Collapse	C	Repair	Repair	79;80
Glen Loochy	Armvain	22	Culvert	NN 27830 31125	4	Collapse	C	Repair	Repair	
Glen Loochy	Armvain	23	Culvert	NN 27974 31177	4	Collapse	B	Repair	Repair	81;82
Glen Loochy	Armvain	24	Earthen bank	NN 28066 31202	1	none	C	none	none	
Glen Loochy	Armvain	25	Culvert	NN 28067 31201	1	none	B	none	none	83;84
Glen Loochy	Armvain	26	Culvert	NN 28164 31235	2	Vegetation	C	Remove tree	Remove tree	85
Glen Loochy	Armvain	27	Culvert	NN 28211 31238	4	Blocked	C	Unblock and repair	Unblock and repair	

TABLE 1 FEATURE DESCRIPTIONS

Glen Loochy	Armvain	28	Quarry	NN 282111 312238	1	none	C	none	none	
Glen Loochy	Armvain	29	Bridge	NN 28315 31260	1	none	B	none	none	86
Glen Loochy	Armvain	30	Culvert	NN 28417 31260	2	Vegetation	C	Remove vegetation	none	
Glen Loochy	Armvain	31	Bridge	NN 28628 31327	1	none	C	none	none	
Glen Loochy	Armvain	32	Culvert	NN 28618 31368	2	Vegetation	C	Remove vegetation	none	
Glen Loochy	Armvain	33	Drainage feature	NN 28681 31373	2	Vegetation	C	none	none	
Glen Loochy	Armvain	34	Quarry	NN 28708 31388	2	Tree	C	Remove tree	none	
Glen Loochy	Armvain	35	Culvert	NN 28741 31417	1	none	B	none	none	87
Glen Loochy	Armvain	36	Bridge/Culvert	NN 28830 31445	5	Collapse	B	Repair	none	88
Glen Loochy	Armvain	37	Culvert	NN 28873 31468	2	Vegetation	B	none	none	90/91
Glen Loochy	Armvain	38	Culvert	NN 28887 31479	3	Blocked	C	Unblock and repair	none	
Glen Loochy	Armvain	39	Drainage feature	NN 28967 31507	2	Vegetation	C	none	none	
Glen Loochy	Armvain	40	Culvert	NN 28982 31515	2	Vegetation	C	Remove vegetation	none	
Glen Loochy	Armvain	41	Culvert	NN 29000 31544	2	Vegetation	C	Remove vegetation	none	
Glen Loochy	Armvain	42	Drainage feature	NN 29031 31560	2	Vegetation	C	Unblock and repair	none	92
Glen Loochy	Armvain	43	Culvert	NN 29154 31568	4	Blocked	C	none	Repair	
Glen Loochy	Armvain	44	Culvert	NN 29194 31613	4	Blocked	B	none	none	
Glen Loochy	Armvain	45	Culvert	NN 29208 31621	2	Blocked	C	Remove branches	none	94
Glen Loochy	Armvain	46	Culvert	NN 29283 31646	3	Collapse	C	none	none	
Glen Loochy	Armvain	47	Quarry	NN 29242 31640	1	none	C	Repair	none	
Glen Loochy	Armvain	48	Culvert	NN 29337 31651	2	Trees	B	Remove trees	none	95
Glen Loochy	Armvain	49	Quarry	NN 29427 31670	1	none	C	Remove trees	none	
Glen Loochy	Armvain	50	Bridge	NN 29447 31673	3	Trees	B	Remove trees	none	
Glen Loochy	Armvain	51	Culvert	NN 29574 31722	1	none	C	Remove vegetation	none	
Glen Loochy	Armvain	52	Culvert	NN 29599 31722	2	Vegetation	C	Remove vegetation	none	100/101
Bridge of Orchy*		1	Bridge springers	NN 29480 39784	2	Vegetation	C	none	none	89
Bridge of Orchy		2	Modern drain	NN 29480 39784	1	none	C	none	none	
Bridge of Orchy		3	Quarry	NN 29426 39879	2	Tree	C	Remove vegetation	none	
Bridge of Orchy		4	Quarry	NN 29376 39866	2	Brash	C	Remove vegetation	none	
Bridge of Orchy*		5	Drainage feature	NN 29411 39802	2	Vegetation	C	Remove vegetation	none	103/104
Bridge of Orchy*		6	Drainage feature	NN 29389 39845	2	Vegetation	C	Remove vegetation	none	
Bridge of Orchy		7	Quarry	NN 29372 39880	2	Brash	C	Remove vegetation	none	102
Bridge of Orchy		8	Modern drain	NN 29343 40036	1	none	C	Remove vegetation	none	
Bridge of Orchy*		9	Bridge/Culvert	NN 29347 40032	2	Vegetation	B	Remove vegetation	none	106-108
Condition = 1 (Optimal) - 5 (Extensive Problems) (See FCS Designated Historic Assets Register 2012)										
Grade = A (National), B (Regional), C (Local) and D (Potential) (See Shepherd 2009)										
√ Grade D = Earlier remains possibly survive										
* = Scheduled Monument										

TABLE 1 FEATURE DESCRIPTIONS

Area	Sub Area	Seof.	NGR	Description	Condition	Remove Veg	Remove Windblow	Remove Regen	Repair Drainage	Repair Erosion	Photo
Inverawe	Tigh na Croig	1	NN 02888 30545 - NN 03033 30410	Double banks; overgrown	Well-preserved	✓					13,415
Glen Lochy	Inverlochy Farm	1	NN 19659 27659 - NN 19870 27636	Single bank; overgrown and boggy; trees	Degraded						6,7,8
	Inverlochy Farm	2	NN 19870 27636 - NN 20006 27489	Double banks; overgrown; trees	Degraded						9,10,11
	Inverlochy Farm	3	NN 20006 27489 - NN 20049 27462	Double banks; broken; trees; boggy	Degraded						12
Glen Lochy	South Strone	1	NN 30505 27479 - NN 30765 27483	Double banks; overgrown; trees; dumped material	Degraded			✓			13,14
Glen Lochy	East Strone	1	NN 30765 27483 - NN 31013 27471	Double banks; grass and moss; bracken	Well-preserved						15,16
	East Strone	2	NN 31013 27471 - NN 31190 27495	As above; windblow; boggy at end	Well-preserved	✓					20
	East Strone	3	NN 31190 27495 - NN 31368 27455	Terraced into hill; windblow; regeneration	Well-preserved	✓					21
	East Strone	4	NN 31368 27455 - NN 31557 27453	Double banks; windblow	Well-preserved	✓					25
	East Strone	5	NN 31557 27453 - NN 31795 27458	Terraced into hill; waterlogged at end	Degraded			✓			27
	East Strone	6	NN 31795 27458 - NN 31918 27392	Terraced into hill; single bank; overgrown; regeneration	Degraded			✓			31
	East Strone	7	NN 31918 27392 - NN 32115 27349	Double banks; regeneration	Well-preserved	✓					33
	East Strone	8	NN 32115 27349 - NN 32298 27399	Double banks; windblow	Well-preserved	✓					41
	East Strone	9	NN 32298 27399 - NN 32477 27356	Terraced into hill; single bank; windblow; water logged	Well-preserved	✓		✓			46
	East Strone	10	NN 32477 27356 - NN 32737 27383	Part punctured by modern road	Some features visible			✓			48
	East Strone	11	NN 32737 27383 - NN 32916 27457	Terraced into hill; waterlogged; regen; overgrown	Degraded			✓			49
	East Strone	12	NN 32916 27457 - NN 33103 27530	Terraced into hill; waterlogged; regen; erosion	Degraded			✓			51
	East Strone	13	NN 33103 27530 - NN 33283 27601	Terraced into hill; single bank	Well-preserved			✓			55
	East Strone	14	NN 33283 27601 - NN 33471 27631	As above; overhanging trees; standing water; erosion	Well-preserved			✓			✓
	East Strone	15	NN 33471 27631 - NN 33638 27590	Double banks; standing water; erosion	Degraded			✓			50,51
Glen Lochy	Benn na Strone B.	1	NN 34135 28148 - NN 34247 28239	Raised road; overgrown	Some features visible						52
Glen Lochy	Benn na Strone N.	1	NN 34453 28531 - NN 34534 28632	Raised road; overgrown	Some features visible						53,54
Glen Lochy	Glenloch Crossing	1	NN 35309 28529 - NN 35368 28705	Raised road; overgrown	Some features visible						55,56
	Glenloch Crossing	2	NN 35368 28705 - NN 35531 28400	Double banks; overgrown; bent	Some features visible						57
Glen Lochy	Arriain	1	NN 25519 30511 - NN 25576 30735	Double banks; burnt; surface; punctured by quarry	Degraded						58
	Arriain	2	NN 25576 30735 - NN 25853 30799	Private access	Not visible						
	Arriain	3	NN 25853 30799 - NN 27056 30853	Double banks; concrete capped	Degraded						
	Arriain	4	NN 27056 30853 - NN 27247 30905	Double banks; concrete capped; standing water	Degraded						73,76
	Arriain	5	NN 27247 30905 - NN 27442 30947	Double banks; concrete capped; standing water	Degraded						
	Arriain	6	NN 27442 30947 - NN 27618 31028	Double banks; concrete capped; standing water	Degraded						
	Arriain	7	NN 27618 31028 - NN 27795 31183	Double banks; concrete capped; erosion	Degraded						78
	Arriain	8	NN 27795 31183 - NN 27976 31183	Terraced into hill; concrete capped; single bank; regen	Degraded						
	Arriain	9	NN 27976 31183 - NN 28168 31286	Double banks; concrete capped	Degraded						
	Arriain	10	NN 28168 31286 - NN 28354 31264	Double banks; concrete capped; waterlogged	Degraded						
	Arriain	11	NN 28354 31264 - NN 28548 31339	Double banks; concrete capped; windblow	Degraded						
	Arriain	12	NN 28548 31339 - NN 28732 31413	Double banks; concrete capped; windblow	Degraded						
	Arriain	13	NN 28732 31413 - NN 28917 31490	Double banks; concrete capped; regen	Degraded						88
	Arriain	14	NN 28917 31490 - NN 29101 31568	Double banks; concrete capped; regen	Degraded						
	Arriain	15	NN 29101 31568 - NN 29279 31649	Double banks; concrete capped; regen	Degraded						
	Arriain	16	NN 29279 31649 - NN 29476 31692	Terraced into hill; concrete capped; single bank; water logged	Degraded						92
	Arriain	17	NN 29476 31692 - NN 29647 31716	Raised road; concrete capped; regen	Degraded						
Bridge of Orchy		1	NN 25604 35665 - NN 25453 35818	Substantially eroded	Not visible						96
Bridge of Orchy		2	NN 25453 35818 - NN 25363 35994	Double banks; raised road; regen; erosion	Degraded						97-9,104-5
Bridge of Orchy		3	NN 25363 35994 - NN 25297 40183	Double banks; raised road; regen; erosion	Degraded						105,110

Condition = Well-preserved; Degraded; Some features visible; Not visible (see Shepherd 2009)

TABLE 2 SECTION DESCRIPTIONS

Survey of the 18th century Military Road network on national forest estate, West Argyll: Inverawe to Bridge of Orchy.

No.	Area	Sub Area	Section	Feature	Subject	From	Date	Archive No.
1	Inverawe	Tigh na Croig			E end of road	E	16/10/2012	1
2	Inverawe	Tigh na Croig		[01]	Stone structure	E	16/10/2012	2
3	Inverawe	Tigh na Croig			Mid section	W	16/10/2012	3
4	Inverawe	Tigh na Croig			Mid section	E	16/10/2012	4
5	Inverawe	Tigh na Croig			W end of road	W	16/10/2012	5
6	Glen Lochy	Inverlochy Farm	1		W start of section	W	14/10/2012	6
7	Glen Lochy	Inverlochy Farm	1		Towards E end	E	14/10/2012	7
8	Glen Lochy	Inverlochy Farm	1		E end with planting	W	14/10/2012	8
9	Glen Lochy	Inverlochy Farm	2	[01]	Quarry	SE	14/10/2012	9
10	Glen Lochy	Inverlochy Farm	2		W start of section	NW	14/10/2012	10
11	Glen Lochy	Inverlochy Farm	2		E end of section	NW	14/10/2012	11
12	Glen Lochy	Inverlochy Farm	3	[02]	Quarry	E	14/10/2012	12
13	Glen Lochy	South Strone			Mid section	W	14/10/2012	13
14	Glen Lochy	South Strone			E end of section	E	14/10/2012	14
15	Glen Lochy	East Strone	1		W start of section	W	14/10/2012	15
16	Glen Lochy	East Strone	1	[01]	Quarry	N	14/10/2012	16
17	Glen Lochy	East Strone		[02]	Culvert	S	14/10/2012	17
18	Glen Lochy	East Strone		[04]	Cutting	W	14/10/2012	18
19	Glen Lochy	East Strone		[05]	Quarry	S	14/10/2012	19
20	Glen Lochy	East Strone	2		General	W	14/10/2012	20
21	Glen Lochy	East Strone	3	[06]	Track	SW	14/10/2012	21
22	Glen Lochy	East Strone		[07]	Quarry	SE	14/10/2012	22
23	Glen Lochy	East Strone		[08]	Quarry	S	14/10/2012	23
24	Glen Lochy	East Strone		[010]	Culvert	S	14/10/2012	24
25	Glen Lochy	East Strone	4		General	E	14/10/2012	25
26	Glen Lochy	East Strone		[012]	Quarry	S	14/10/2012	26
27	Glen Lochy	East Strone	5		General	E	14/10/2012	27
28	Glen Lochy	East Strone		[013]	Drain	E	14/10/2012	28
29	Glen Lochy	East Strone		[014]	Culvert	SSW	14/10/2012	29
30	Glen Lochy	East Strone		[015]	Culvert	SE	14/10/2012	30
31	Glen Lochy	East Strone	6		General	E	14/10/2012	31
32	Glen Lochy	East Strone		[017]	Quarry	SE	14/10/2012	32
33	Glen Lochy	East Strone	7		General	W	14/10/2012	33
34	Glen Lochy	East Strone		[019]	Culvert	S	14/10/2012	34
35	Glen Lochy	East Strone		[020]	Culvert	SSW	14/10/2012	35
36	Glen Lochy	East Strone		[021]	Quarry	SSW	14/10/2012	36
37	Glen Lochy	East Strone		[022]	Drain	W	14/10/2012	37
38	Glen Lochy	East Strone		[023]	Culvert	SSW	14/10/2012	38
39	Glen Lochy	East Strone		[024]	Drain	W	14/10/2012	39
40	Glen Lochy	East Strone		[025]	Culvert	ESE	14/10/2012	40
41	Glen Lochy	East Strone	8		General	E	14/10/2012	41
42	Glen Lochy	East Strone		[027]	Blocked drain	E	14/10/2012	42
43	Glen Lochy	East Strone		[028]	Drain	W	14/10/2012	43
44	Glen Lochy	East Strone		[029]	Culvert	S	14/10/2012	44
45	Glen Lochy	East Strone		[030]	Track	N	14/10/2012	45
46	Glen Lochy	East Strone	9		E end of section	E	14/10/2012	46
47	Glen Lochy	East Strone		[032]	Culvert	SSW	09/11/2012	47
48	Glen Lochy	East Strone	10		General	W	09/11/2012	48
49	Glen Lochy	East Strone	11		General	W	09/11/2012	49
50	Glen Lochy	East Strone		[039]	Culvert	S	09/11/2012	50

TABLE 3 PHOTOGRAPHIC LIST

Survey of the 18th century Military Road network on national forest estate, West Argyll: Inverawe to Bridge of Orchy.

51	Glen Lochy	East Strone	12	[040]	General	W	09/11/2012	51
52	Glen Lochy	East Strone		[042]	Culvert	SSW	09/11/2012	52
53	Glen Lochy	East Strone		[044]	Culvert	S	09/11/2012	53
54	Glen Lochy	East Strone		[044]	Culvert	S	09/11/2012	54
55	Glen Lochy	East Strone	13		General	E	09/11/2012	55
56	Glen Lochy	East Strone		[047]	Quarry	SW	09/11/2012	56
57	Glen Lochy	East Strone		[049]	Drain	N	09/11/2012	57
58	Glen Lochy	East Strone		[055]	Culvert	S	09/11/2012	58
59	Glen Lochy	East Strone		[055]	Culvert	N	09/11/2012	59
60	Glen Lochy	East Strone	15	[057]	E end of section	W	09/11/2012	60
61	Glen Lochy	East Strone	15		E end of section	E	09/11/2012	61
62	Glen Lochy	Beinn na Sroine South			General	SW	14/10/2012	62
63	Glen Lochy	Beinn na Sroine North			General	W	14/10/2012	63
64	Glen Lochy	Beinn na Sroine North			General	E	14/10/2012	64
65	Glen Lochy	Glenloch Cross	1		W end of section	NE	14/10/2012	65
66	Glen Lochy	Glenloch Cross	1		Junction with hill track	SW	14/10/2012	66
67	Glen Lochy	Glenloch Cross	2		Continuance of road (?)	W	14/10/2012	67
68	Glen Lochy	Arrivain	1		General	W	23/10/2012	68
69	Glen Lochy	Arrivain		[05]	Culvert	SSW	23/10/2012	69
70	Glen Lochy	Arrivain		[07]	Bridge	N	23/10/2012	70
71	Glen Lochy	Arrivain		[07]	Bridge	N	23/10/2012	71
72	Glen Lochy	Arrivain		[010]	Culvert	S	23/10/2012	72
73	Glen Lochy	Arrivain	4		General	E	23/10/2012	73
74	Glen Lochy	Arrivain		[011]	Culvert	S	23/10/2012	74
75	Glen Lochy	Arrivain		[013]	Bridge	E	23/10/2012	75
76	Glen Lochy	Arrivain	4		General	W	23/10/2012	76
77	Glen Lochy	Arrivain		[018]	Culvert	SW	23/10/2012	77
78	Glen Lochy	Arrivain	7		General	W	23/10/2012	78
79	Glen Lochy	Arrivain		[021]	Culvert	NW	23/10/2012	79
80	Glen Lochy	Arrivain		[021]	Culvert	SE	23/10/2012	80
81	Glen Lochy	Arrivain		[023]	Culvert	SSW	23/10/2012	81
82	Glen Lochy	Arrivain		[023]	Culvert	SSW	23/10/2012	82
83	Glen Lochy	Arrivain		[025]	Culvert	SSW	23/10/2012	83
84	Glen Lochy	Arrivain		[025]	Culvert	S	23/10/2012	84
85	Glen Lochy	Arrivain		[026]	Culvert	S	23/10/2012	85
86	Glen Lochy	Arrivain		[029]	Bridge	NE	23/10/2012	86
87	Glen Lochy	Arrivain		[035]	Culvert	SSW	23/10/2012	87
88	Glen Lochy	Arrivain	13	[036]	Culvert	SSW	23/10/2012	88
89	Glen Lochy	Arrivain			General	E	23/10/2012	89
90	Glen Lochy	Arrivain		[037]	Culvert	S	23/10/2012	90
91	Glen Lochy	Arrivain		[037]	Culvert	N	23/10/2012	91
92	Glen Lochy	Arrivain	15	[044]	Culvert	S	23/10/2012	92
93	Glen Lochy	Arrivain			General	E	23/10/2012	93
94	Glen Lochy	Arrivain		[048]	Culvert	S	23/10/2012	94
95	Glen Lochy	Arrivain		[050]	Bridge	NE	23/10/2012	95
96	Bridge of Orchy		1		General	NW	09/11/2012	96
97	Bridge of Orchy		2		S start of section	NW	09/11/2012	97
98	Bridge of Orchy		2		General	SE	09/11/2012	98
99	Bridge of Orchy			[02]	Drain	W	09/11/2012	99
100	Bridge of Orchy			[01]	Bridge springers	E	09/11/2012	100

TABLE 3 PHOTOGRAPHIC LIST

101	Bridge of Orchy		[01]	Bridge springers	ENE	09/11/2012	101
102	Bridge of Orchy		[08]	Drain	SE	09/11/2012	102
103	Bridge of Orchy		[06]	Drain	SE	09/11/2012	103
104	Bridge of Orchy	2	[06]	General	SE	09/11/2012	104
105	Bridge of Orchy	2		General	NW	09/11/2012	105
106	Bridge of Orchy		[09]	Culvert	W	09/11/2012	106
107	Bridge of Orchy		[09]	Culvert	E	09/11/2012	107
108	Bridge of Orchy		[09]	Culvert	NE	09/11/2012	108
109	Bridge of Orchy	3		General	NW	09/11/2012	109
110	Bridge of Orchy	3		General	NW	09/11/2012	110

TABLE 3 PHOTOGRAPHIC LIST