

**Kinneil Woods, Falkirk:
Archaeological Support for Antonine Wall Access
Improvements – Phase 2**

Data Structure Report



by Liam McKinstry

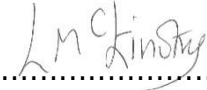
issued 12th May 2017

on behalf of Central Scotland Green Network Trust

RATHMELL 
ARCHAEOLOGY LTD

Quality Assurance

This report covers works which have been undertaken in keeping with the issued brief as modified by the agreed programme of works. The report has been prepared in keeping with the guidance of Rathmell Archaeology Limited on the preparation of reports. All works reported on within this document have been undertaken in keeping with the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct.

Signed  Date ...12th May 2017.....

In keeping with the procedure of Rathmell Archaeology Limited this document and its findings have been reviewed and agreed by an appropriate colleague:

Checked  Date ...12th May 2017.....

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Quality Assurance Data

Author(s)	Liam McKinstry		
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Location	United Kingdom: Scotland: Falkirk		
NGR	NS 97380 80272 (centred)	Parish	Bo'ness and Carriden
Designation(s)	UNESCO World Heritage Site		
Canmore IDs	288361 Antonine Wall		

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Introduction

1. This Data Structure Report has been prepared for Central Scotland Green Network Trust in respect to the second phase of archaeological works carried out in support of access improvement work for a footpath along a stretch of the Antonine Wall at Kinneil Woods, Falkirk. These archaeological works, to inform the mitigation of adverse impact on archaeological remains within a stretch of the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site, were carried out from the 19th to the 21st April 2017. A Risk Assessment Method Statement (McKinstry 2017) provided the detail of the works.
2. The archaeological works were located within an area not currently included within the scheduled area of the Antonine Wall. The area had previously been a scheduled area under the designation 'Antonine Wall, 120m SSW of Woodside Cottage' Index No 12643) (Figure 1). Though no longer scheduled the site was still classified as an element of the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site, and still recognised as being of International significance.
3. Rathmell Archaeology Limited were appointed by Central Scotland Green Network Trust to undertake the project works at Kinneil, Falkirk.

Historical and Archaeological Background

4. The historical and archaeological background are discussed fully within the Kinneil Woods Timeline and the Risk Assessment Method Statement (RAMS) for the Antonine Wall access improvements at Kinneil Woods, Falkirk;
 - ❖ Rees, T, 2016, *RA16026 Kinneil Woods Timeline*;
 - ❖ McKinstry, L, 2017, *Kinneil Woods, Falkirk: Archaeological Support for Antonine Wall Access Improvements, Risk Assessment & Method Statement*.

Project Works

5. The archaeological works, which took place from 19th to the 21st April 2017, were carried out in keeping with the methods detailed in the Risk Assessment Method Statement (RAMS) (McKinstry 2017). These works initially comprised the hand excavation of two test trenches each 1m broad and 3m long and up to 600mm deep in a manner that would expose any significant archaeological horizons with care. Both of these trenches were to be excavated in such a manner so as to inform the character of the archaeological resource without adverse impact on Roman strata.
6. As on site works commenced it became clear from the overgrown, wooded, nature of the site that the two trenches locations would have to move because of their proximity to standing trees or tree stumps (Figure 6a). An additional smaller trench (Figures 2 and 5), measuring 0.5m broad and 1.5m long and up to 600mm deep, was also excavated close to the two main trenches so as to confirm information retrieved from those trenches.
7. All of the works complied with the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Environment Scotland's Policy Statements.

Findings

8. The three trenches (Trenches 4 to 6) were located 22m to the WSW of the access to the modern footpath which was the focus of the Phase 1 works (McKinstry 2016). The trenches were positioned (Figure 2) in such a way so as to investigate what, if any, quarrying activity had been conducted at the site and what impact this may have had on the Antonine Wall. The full details and dimensions for each of the trenches can be found within Appendix 1.
9. Two different types of topsoil were identified on site. The topsoil, (001), within Trench 5 consisted of loosely compacted, light brown-grey silty sand with occasional small sub-

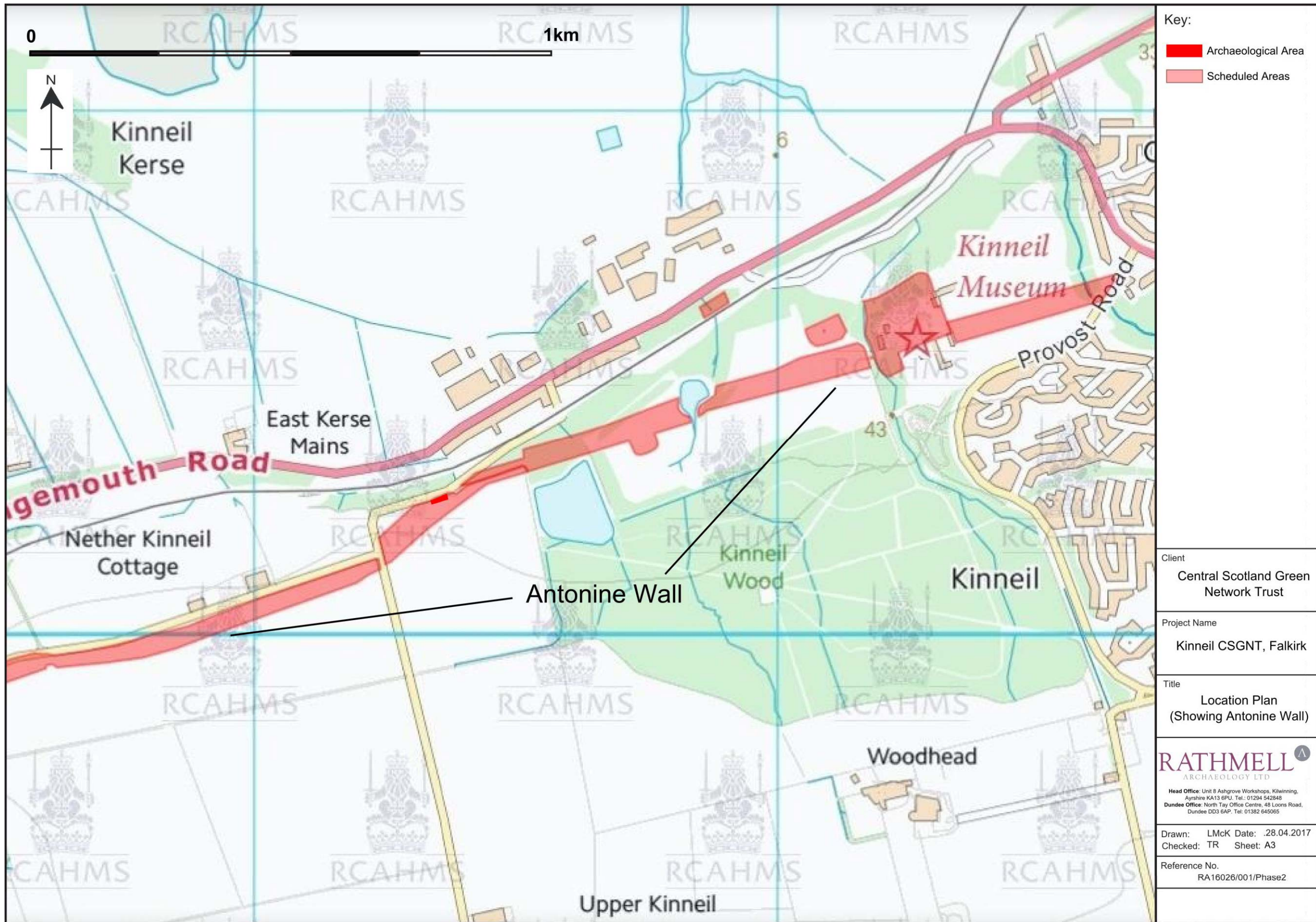


Figure 1: Site Location Plan.

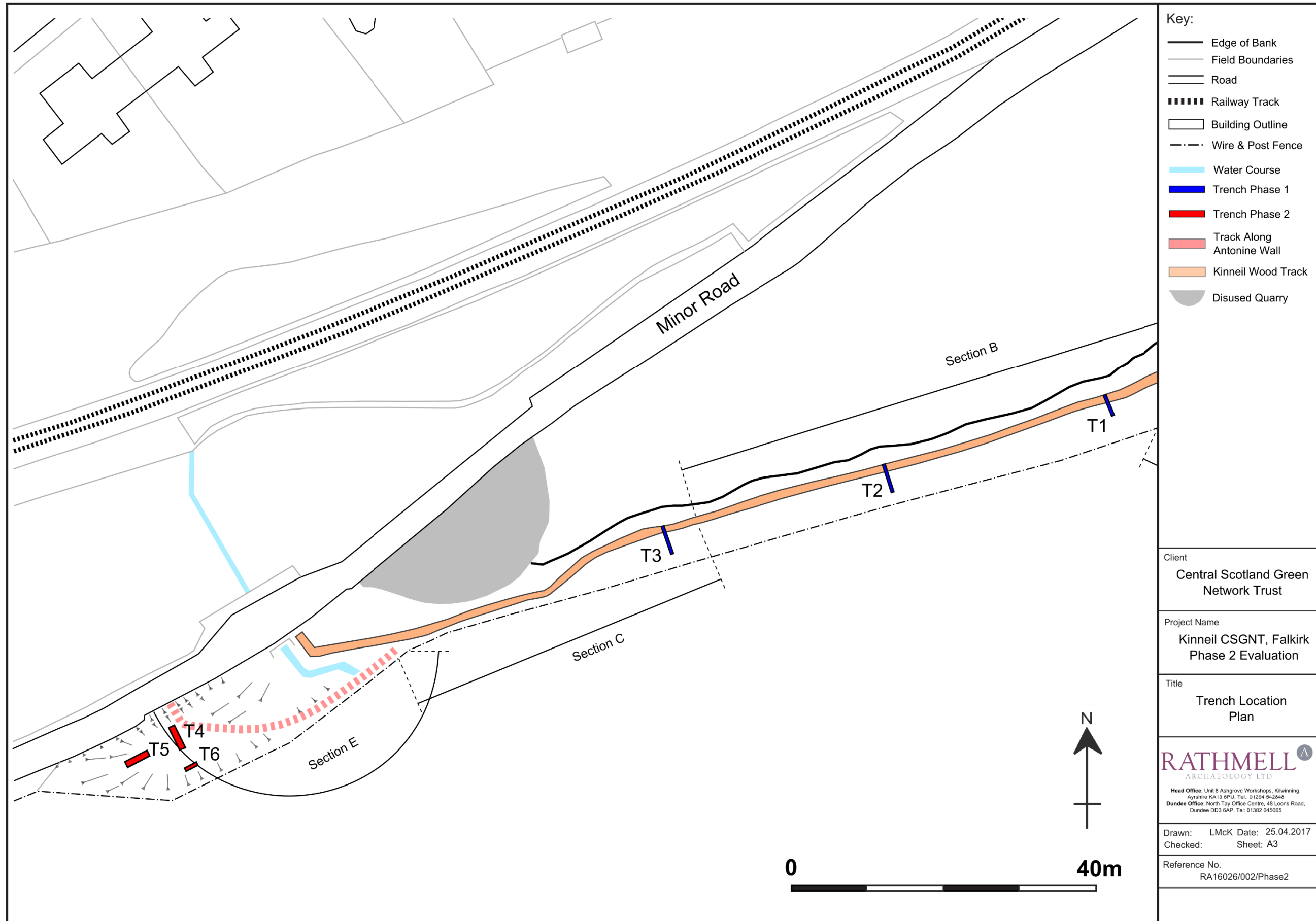


Figure 2: Trench Location Plan.

angular stones and frequent root inclusions. This topsoil layer was very disturbed and contained a number of items of modern refuse such as tin cans and plastic packaging. The topsoil in Trench 5 had a thickness range of between 0.22m–0.28m. The topsoil in the other two trenches (4 and 6), (005), consisted of moderately compacted, dark brown to grey, silty/clay with moderate to frequent root, occasional stone and very occasional modern plastic sheeting inclusions. The thickness of the topsoil ranged between 0.23–0.36m in Trench 4 and 0.23m–0.42m in Trench 6.

Trench 4

10. Trench 4 (Figures 3 & 6b) was orientated in a NNW to SSE direction and measured 3m by 1m and had a depth of between 0.35–0.52m. The topsoil layer, (005), had a thickness range of between 0.23m–0.36m and overlay what appeared to be up cast material, (007), from the construction of the adjacent road. This up cast layer was located at the NNW end of the trench and consisted of firmly compacted, mid grey clay with frequent angular stone and occasional root inclusions. The layer had a thickness range of between 0.05–0.23m within the trench. The up cast layer overlay the natural bedrock, (008), which consisted of orange to slight brown coloured sandstone. There were frequent fractures noted in the surface of the bedrock which contained clay from the up cast layer in the NNW end of the trench and more topsoil and root material in the SSE end of the trench.

Trench 5

11. Trench 5 (Figures 4 & 7a) was orientated in a WSW to ENE direction and measured 3m by 1m and had a depth of between 0.33m–0.72m and was positioned on an area of sharply sloping ground at the WSW end of the site. The topsoil layer, (001), had a thickness range of between 0.22–0.28m within Trench 5 and overlay a layer of natural sediment, (002), at the higher, WSW end, of the trench. This sediment layer consisted of firmly compacted, mid grey, clay with occasional to moderate angular stone and occasional root inclusions. The layer had a thickness range of between 0.05m–0.23m. Beneath this lay the natural subsoil, (003), which consisted of firmly compacted, mixed dark brown with slight orange to light brown clay which showed evidence of frequent bioturbation and animal burrowing.

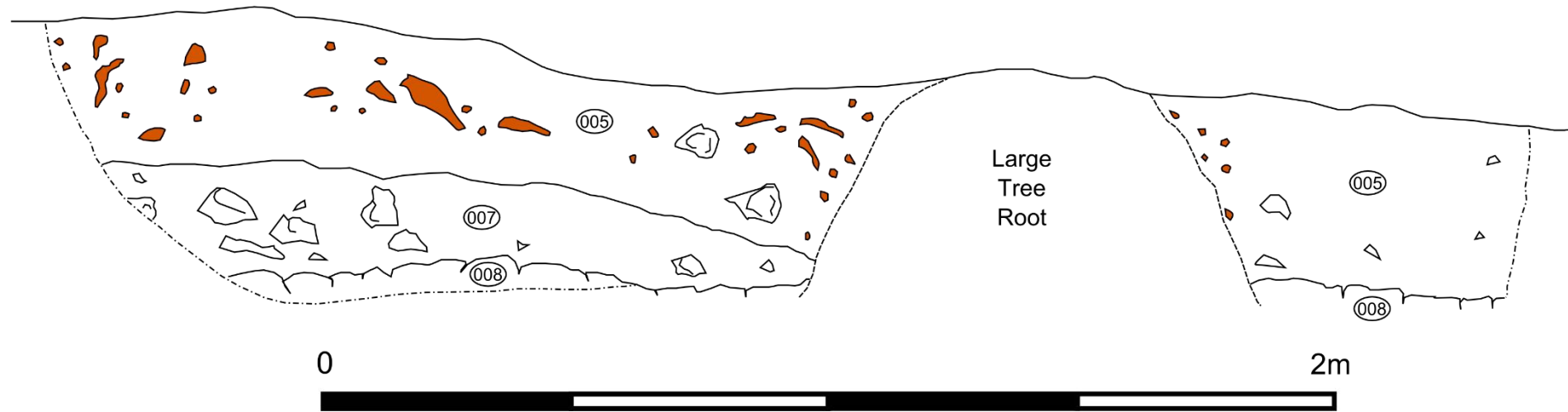
Trench 6

12. Trench 6 (Figures 5 & 7b) was orientated in a NNW to SSE direction and measured 1.5m by 0.5m and had a depth of between 0.22m–0.74m and was positioned on an area of relatively level ground to the SSE of Trench 4 with a banked field boundary to the immediate SSE of it. The topsoil layer, (005), had a thickness range of between 0.36m–0.39m within Trench 6 and overlay a layer of naturally occurring subsoil, (006), similar to that found in Trench 5. This subsoil layer consisted of firmly compacted, mixed dark brown with very slight orange/light brown clay with frequent inclusions of roots. The layer was excavated to a depth of 0.15m–0.35m within the trench.
13. No artefacts were recovered from any of the trenches, though modern metal and plastic refuse was noted in the topsoil within all of the trenches.

Discussion

14. The trenches were all positioned at the WSW part of Section E (Figure 2) in a heavily wooded area so as to investigate the effects of nearby quarrying and the construction of the adjacent road. The present road had been cut through the steep sloping side of the cowbank, a natural ridge which ran in a WSW to ENE direction to the south of the Grangemouth Road (A904), and had also been subject to later quarrying and road improvements. The site was steeply sloping at its WSW end before levelling off into a very gently sloping to almost level terrace between the edge of the road and banked boundary to the SSE (Figure 2).
15. The two topsoil types, (001 and 005), identified within the site were very different in character. Within higher sloping ground around Trench 5 the topsoil was looser and sandier whereas in the more level and lower ground around Trenches 4 and 6 it was more compact and clay-like. In both cases modern refuse (such as aluminium cans and plastic sheeting) was

- Key:
- Limit of excavation
 - _____ Context Boundary
 - Unclear Edge
 - ⓪ Context Number
 - Root
 - ◊ Stone



WSW facing section,
NNW end of trench 4



WSW facing section,
SSE end of trench 4

Client
Central Scotland Green
Network Trust

Project Name
Kinneil Woods
Phase 2, Falkirk

Title
WSW facing Section,
Trench 4

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Drawn: LMCK Date: 25/04/17
Checked: Sheet: A3

Reference No.
RA16026/004/Phase2

Figure 3: WSW facing section of Trench 4.

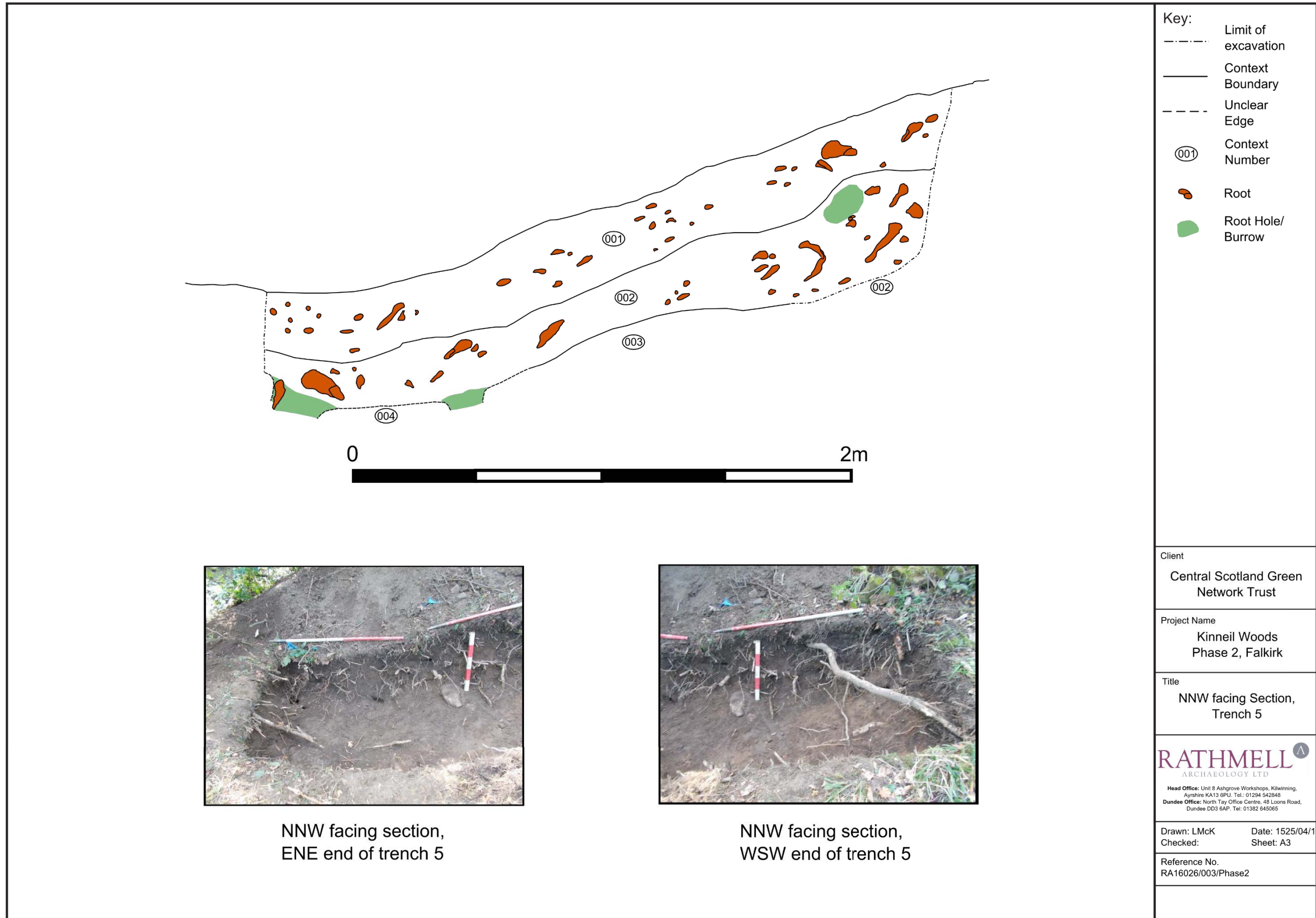


Figure 4: NNW facing section of Trench 5.

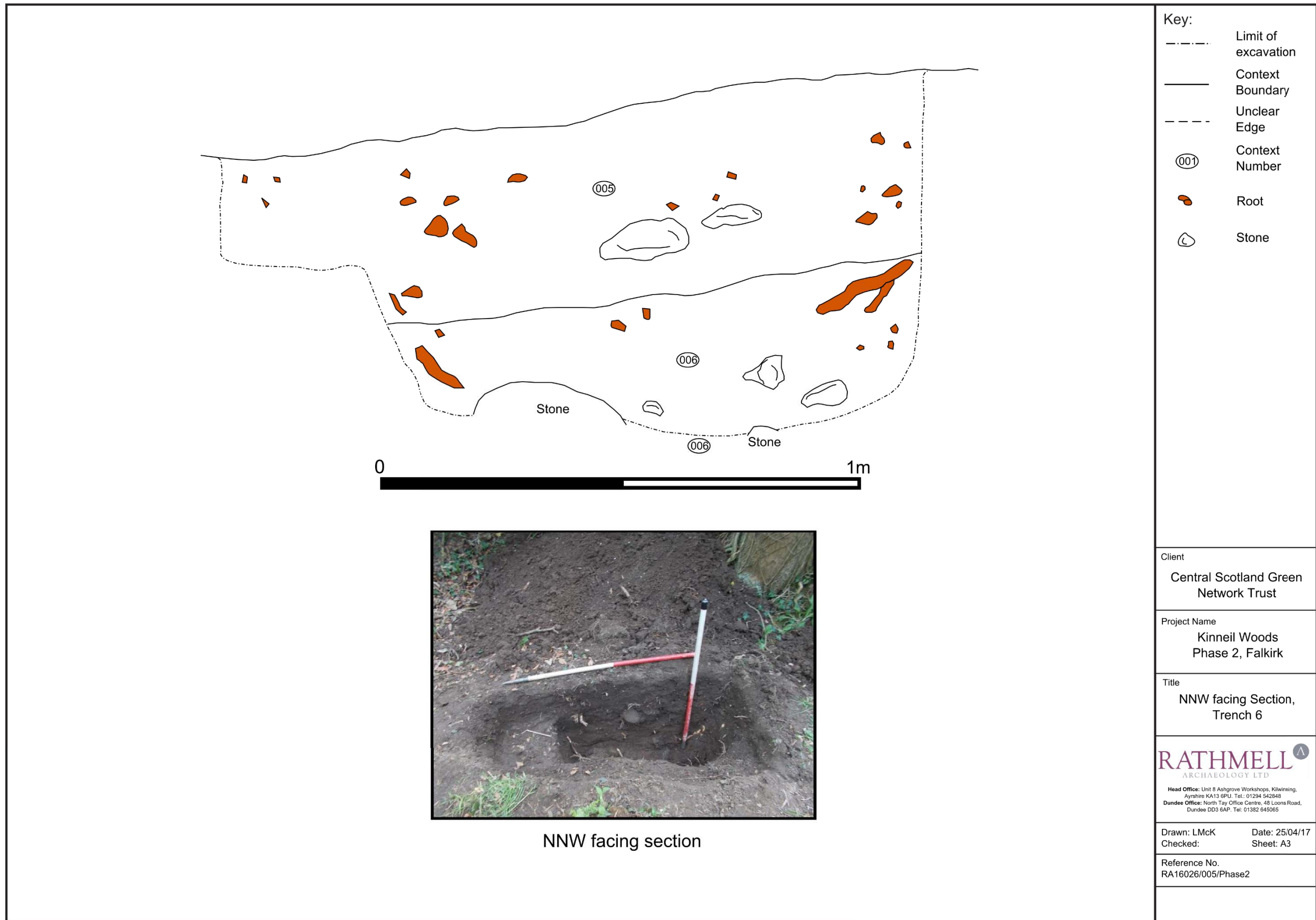


Figure 5: NNW facing section of Trench 6.



Figure 6a: Pre excavation view of the site. From the NE.



Figure 6b: Post excavation view of Trench 4. From the SSW.



Figure 7a: Post excavation view of Trench 5. From the NNE.



Figure 7b: Post excavation view of Trench 6. From the ENE.

noted suggesting that the upper layers of the site area had been heavily disturbed in recent times.

16. In Trench 4, which was adjacent to the road, a layer of mid grey clay, (007), with frequent angular stone inclusions was identified at the trenches NNW end. The fact that this layer was the only material lying between the topsoil in Trench 4 and what appeared to be a deliberately levelled layer of naturally occurring bedrock, (008), would suggest that some form of quarrying had occurred at the southern edge of the road. Also the thickness of the topsoil was fairly similar in both Trenches 4 and 6, 0.36m and 0.36m-0.39m respectively overlying both bedrock and naturally occurring subsoil, could also suggest that this quarrying had extended back to the banked boundary to the SSE creating a levelled ground surface in that part of site. Evidence of nearby quarrying was first depicted in the 1st edition Ordnance Survey published in 1856 located approximately 50m to the ENE of the site. From the topography of the site, its steeply sloping nature at its WSW end and the levelled nature of the ENE part of the site, it would seem probable that the site area had been included in this 19th century quarrying, though not to the same extent as the quarry to the ENE.
17. No evidence of Roman activity pertaining to the Antonine Wall was identified in any of the three trenches excavated within the site. Its extrapolated route (Figure 1) through the site area was the result of work carried out in 1961 by T. A. Hendry who identified the ditch and wall base within Summerhouse Park (the field adjacent to the site area) to the SW and at Kinneil House to the ENE of the site. This built on earlier work carried out by G. McDonald in 1915 who also identified elements of the wall and ditch within Summerhouse Park and to the immediate N of the reservoir within Kinneil Woods, though the exact locations of these earlier excavations is not entirely clear.
18. These archaeological works suggested that the Antonine Wall crossed Summerhouse Park in a straight SW to NE alignment before changing to a WSW to ENE alignment close to the existing road. The fact that only recent quarrying, natural subsoils and bedrock were identified within the Phase 2 trenches and that they showed no evidence for Roman strata would suggest that the wall either does not run through the site area (possibly running instead in an alignment further to the south within Summerhouse Park) or that recent quarrying has fully or partially destroyed any Roman strata which had been within the site area.

Recommendations

19. This evaluation was undertaken to inform the design work on a new access route onto an existing stretch of footpath which ran within the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site at Kinneil Woods, Falkirk. As discussed above no Roman strata were identified within the three test trenches excavated as part of the Phase 2 works which revealed naturally occurring subsoils and bedrock. Based on the evidence from cartographic sources and the trenches it appears this portion of the World Heritage Site has experienced quarrying since the 19th century.
20. On balance we would recommend that the new stretch of path through this portion of the World Heritage Site should not be constrained in form by concerns regarding direct physical impact on archaeological strata.
21. Though the three trenches revealed no evidence pertaining to the Antonine Wall this does not mean that the elements of the wall did not at one time exist within the site area. There is the probability that it had been removed by recent quarrying. However on a precautionary basis, in case of any fragmentary survival of archaeological material even in ex situ contexts, we further recommend all ground breaking works should be carried out under archaeological supervision.
22. The appropriateness and acceptability of our recommendations rest with the representative of the Falkirk Community Trust.

Conclusion

23. This Data Structure Report has been prepared for Central Scotland Green Network Trust in respect to the archaeological works carried out in support of the design of an access route onto an existing footpath within the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site at Kinneil Woods, Falkirk.
24. Three trenches were excavated by hand within the proposed area and revealed evidence of 19th or 20th century quarrying cutting into naturally occurring subsoil layers and bedrock. No Roman strata or artefacts were identified in any of the excavated trenches which suggested that the Antonine Wall within the site area had either been fully or partially destroyed by the quarrying or that it may have run further to the south of the site within an adjacent field.

Acknowledgements

25. The author would like to thank Tommy Samuel of Central Scotland Green Network Trust, for the opportunity to carry out these works and also to Geoff Bailey from Falkirk Community Trust for his assistance and input during the project.
26. Thanks should also go to Rathmell Archaeology site staff member Chelsea Anderson for her on-site contributions and data entry as well as Thomas Rees for his editing of this report.

References

McKinstry, L, 2016, Kinneil Woods, Falkirk: Archaeological Support for Antonine Wall Access Improvements, Data Structure Report, unpublished commercial report by Rathmell Archaeology Ltd

McKinstry, L, 2017, *Kinneil Woods, Falkirk: Archaeological Support for Antonine Wall Access Improvements Phase 2, Risk Assessment & Method Statement*, unpublished commercial report by Rathmell Archaeology Ltd

Rees, T, 2016, *Kinneil Woods Timeline*, unpublished commercial report by Rathmell Archaeology Ltd

Appendix 1: Trench Details

Within this appendix a standardised set of data pertaining to the trenches is presented.

Test Pit Summary

Area/ Trench	Orientation	Size	Depth	Subsoil Character	Modern/ Agricultural Features	Significant Features	Artefacts
1	NNW-SSE	3m by 1m 3m ²	0.35- 0.52m	(007) Firmly compacted, mid grey, clay. Angular stone inclusions with occasional roots. (008) Bedrock	None	None	None
2	WSW-ENE	3m by 1m 3m ²	0.33- 0.72m	(002) Moderately compacted. Orange to light brown, silt and slightly clay. Very frequent inclusions of roots with occasional holes which are possible burrows or rotted roots (003) and (004) Firmly compacted, dark brown/grey with specks of light brown and orange. Very frequent inclusions of roots, with possible animal burrows	None	None	None
3	WSW-ENE	1.5m by 0.5m 1.5m ²	0.22- 0.74m	(006). Firmly compacted, dark brown with very slight orange/light brown. Mixed clay with frequent inclusions of roots (007). Firmly compacted, mid grey, clay. Angular stone inclusions with occasional roots	None	None	None

Appendix 2: Registers

Within this appendix are all registers pertaining to works on-site during the evaluation.

Context Register

Context No.	Area/ Trench	Type	Description	Interpretation
001	Trench 5	Deposit	Moderate to loosely compacted, medium to dark grey brown, silt sand. Very frequent inclusions of roots and occasional modern rubbish. Thickness range of between 0.22m–0.28m.	Very disturbed topsoil
002	Trench 5	Deposit	Moderately compacted, orange to light brown, silty clay with very frequent inclusions of roots. There were occasional holes/voids within the deposit most likely the result of root or animal activity. Thickness ranges of between 0.19m to 0.36m.	Natural subsoil.
003	Trench 5	Deposit	Firmly compacted, mid brown-grey, with slight orange to light brown patches, clay. Frequent root inclusions.	Natural subsoil
004	Trench 5	Deposit	Firmly compacted, dark brown/grey with specks of light brown and orange. Very frequent inclusions of roots, with possible animal burrows.	Natural subsoil
005	Trench 4 & Trench 6	Deposit	Moderately compacted, dark brown to grey, silty/clay. Inclusions included roots, slight frequency of stones and very little modern plastic. In Trench 4 thickness ranges from 0.23-0.36m and in Trench 6 the thickness ranges from 0.23 – 0.42m.	Top soil which has recently been deposited, most likely modern.
006	Trench 6	Deposit	Firmly compacted, dark brown with very slight orange/light brown. Mixed clay with frequent inclusions of roots. Within Thickness ranges from 0.15-0.35m.	Natural subsoil
007	Trench 4	Deposit	Firmly compacted, mid grey, clay. Angular stone inclusions with occasional roots. Thickness ranges from 0.05-0.23m	Up cast from road construction
008	Trench 4	Deposit	Firmly compacted, orange to slight brown, possibly sandstone. Inclusions of very occasional roots.	Bedrock

Drawing Register

Drawing No.	Sheet No.	Area/ Trench	Drawing Type	Scale	Description
1	1	5	Section	1:10	NNW facing section of Trench 5
2	1	5	Plan	1:10	Post excavation plan of Trench 5
3	2	4	Section	1:10	WSW facing section of Trench 4

Drawing No.	Sheet No.	Area/Trench	Drawing Type	Scale	Description
4	2	4	Plan	1:10	Post excavation plan of Trench 4
5	3	6	Section	1:10	NNW facing section of Trench 6
6	3	6	Plan	1:10	Post excavation plan of Trench 6

Photographic Register

Image No.	Digital	Description	From	Date
001	DSCN0373	Pre-excavation view of site from the NE	NE	19/04/17
002	DSCN0374	Pre-excavation view of site from the NE	NE	19/04/17
003	DSCN0375	Pre-excavation view of site from the WNW	WNW	19/04/17
004	DSCN0376	Pre - excavation view of Trench 5	ENE-	19/04/17
005	DSCN0377	Pre-excavation view of Trench 4 and 6	ESE	19/04/17
006	DSCN0378	View of orange safety fence up on site	NE	19/04/17
007	DSCN0379	Pre excavation view of Trench 5	NE	20/04/17
008	DSCN0380	ENE end of Trench 5	NNW	20/04/17
009	DSCN0381	WSW end of Trench 5	NNW	20/04/17
010	DSCN0382	Post excavation view of Trench 5	NE	20/04/17
011	DSCN0383	Post excavation view of Trench 5	ENE	20/04/17
012	DSCN0384	Post excavation view of Trench 5	ENE	20/04/17
013	DSCN0385	Mid excavation view of Trench 4	SSE	21/04/17
014	DSCN0386	Mid excavation view of Trench 6	NE	21/04/17
015	DSCN0387	Mid excavation view of Trench 6 and 4	ESE	21/04/17

Image No.	Digital	Description	From	Date
016	DSCN0388	Post excavation view of Trench 6	ENE	21/04/17
017	DSCN0389	Post excavation view of Trench 6	NNW	21/04/17
018	DSCN0390	Post excavation view of Trench 6	NNW	21/04/17
019	DSCN0391	Post excavation view of Trench 6	NE	21/04/17
020	DSCN0392	Post excavation view of Trench 4	SW	21/04/17
021	DSCN0393	NNW end of Trench 4	WSW	21/04/17
022	DSCN0394	SSE end of Trench 4	WSW	21/04/17
023	DSCN0395	Post excavation view of Trench 4	SSE	21/04/17
024	DSCN0396	Post excavation view of Trench 4	SW	21/04/17

Appendix 3: Discovery & Excavation in Scotland LOCAL AUTHORITY:	Falkirk Council
PROJECT TITLE/SITE NAME:	Kinneil Woods – Phase 2
PROJECT CODE:	RA16026
PARISH:	Bo'ness and Carriden
NAME OF CONTRIBUTOR:	Liam McKinstry
NAME OF ORGANISATION:	Rathmell Archaeology Limited
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	Canmore ID 284234
SITE/MONUMENT TYPE(S):	Antonine Wall
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NS 97380 80272 (centred)
START DATE (this season)	19 th April 2017
END DATE (this season)	21 st April 2017
PREVIOUS WORK (incl. <i>DES</i> ref.)	Yes
MAIN (NARRATIVE) DESCRIPTION: (may include information from other fields)	<p>The evaluation was carried out in support of the design of an access route onto an existing footpath within the Antonine Wall World Heritage Site at Kinneil Woods, Falkirk.</p> <p>Three trenches, excavated by hand, revealed evidence of 19th or 20th century quarrying cutting into naturally occurring subsoil layers and bedrock. No Roman strata or artefacts were identified in any of the excavated trenches which suggested that the Antonine Wall within the site area had either been fully or partially destroyed by the quarrying or that it may have run further to the south of the site within an adjacent field.</p>
PROPOSED FUTURE WORK:	Unknown
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Falkirk Council
ADDRESS OF MAIN CONTRIBUTOR:	Unit 8 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
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ARCHIVE LOCATION (intended/deposited)	Report to Falkirk Council archaeologist and archive to National Record of the Historic Environment.

Contact Details

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