

Kinneil Woods, Falkirk: Archaeological Mitigation

Data Structure Report



by Sarah Krischer

issued 3rd October 2019

on behalf of Central Scotland Green Network Trust

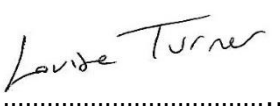
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Quality Assurance

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Signed  Date3rd October 2019....

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

Checked  Date3rd October 2019....

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Quality Assurance Data

Author(s)	Sarah Krischer		
Date of Issue	3 rd October 2019	Version	1.0
Commissioning Body	Central Scotland Green Network Trust		
Event Name	Kinneil Woods, Falkirk		
Event Type	Watching Brief		
Event Date(s)	July – August 2019		
Rathmell Code	RA16026	OASIS Ref	rathmell1-351064
Location	United Kingdom : Scotland : Falkirk		
NGR	NS 97391 80275	Parish	Bo'ness and Carriden
Designation(s)	None		
Canmore IDs	None		

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Introduction

1. This Data Structure Report has been prepared for Central Scotland Green Network Trust in support of access improvement work along a stretch of the Antonine Wall at Kinneil, Falkirk. The archaeological works were designed to mitigate adverse impact on the archaeological remains within the development area.
2. The cycle path improvement was being carried out on sections of path that lie both within and outwith the Scheduled Monument known as the 'Antonine Wall and fortlet, 430m E to 850m WSW of Kinneil House' (Index No 2210). However, no groundbreaking works were to be undertaken in those sections located within the scheduled area. As such, this report is concerned with works carried out in an area outwith the limits of the scheduled monument (Section E). This section remains within the non-statutory Frontiers of the Roman Empire (Antonine Wall) World Heritage Site, recognised to be of International significance.
3. Rathmell Archaeology Limited has been appointed by Central Scotland Green Network Trust to undertake the development and implementation of archaeological mitigation works for Section E. These works will be conducted in keeping with the Frontiers of the Roman Empire (Antonine Wall) Supplementary Planning Guidance.

Background

4. The new section of cycleway will deliver a curving, graded route on the Cow Bank from the top of a set of steps down to the roadside of a minor public road at NGR: NS 9739 8027.

Geological and Topographical

5. The Cow Bank is a wooded slope, falling to the north, with arable fields to the south. A minor public road climbs the bank at a moderate gradient, crossing the slope from east to west. A drain issues from the agricultural field to the south, issuing downhill through the area of the Cow Bank under consideration.
6. The area is underlain by raised marine deposits of Devensian date (clay, silt, sand and gravel). These drift deposits overlie Upper Limestone Formation sedimentary rock of the Clackmannan Group.

Archaeological and Historical

7. The historical and archaeological background are discussed fully within the Kinneil Woods Timeline and the Written Scheme of Investigation (WSI) for the Antonine Wall access improvements at Kinneil Woods, Falkirk;
 - ❖ Rees, T, 2016, *RA16026 Kinneil Woods Timeline*;
 - ❖ Rees, T. 2019, *Kinneil Woods, Falkirk: Archaeological Mitigation Written Scheme of Investigation*.

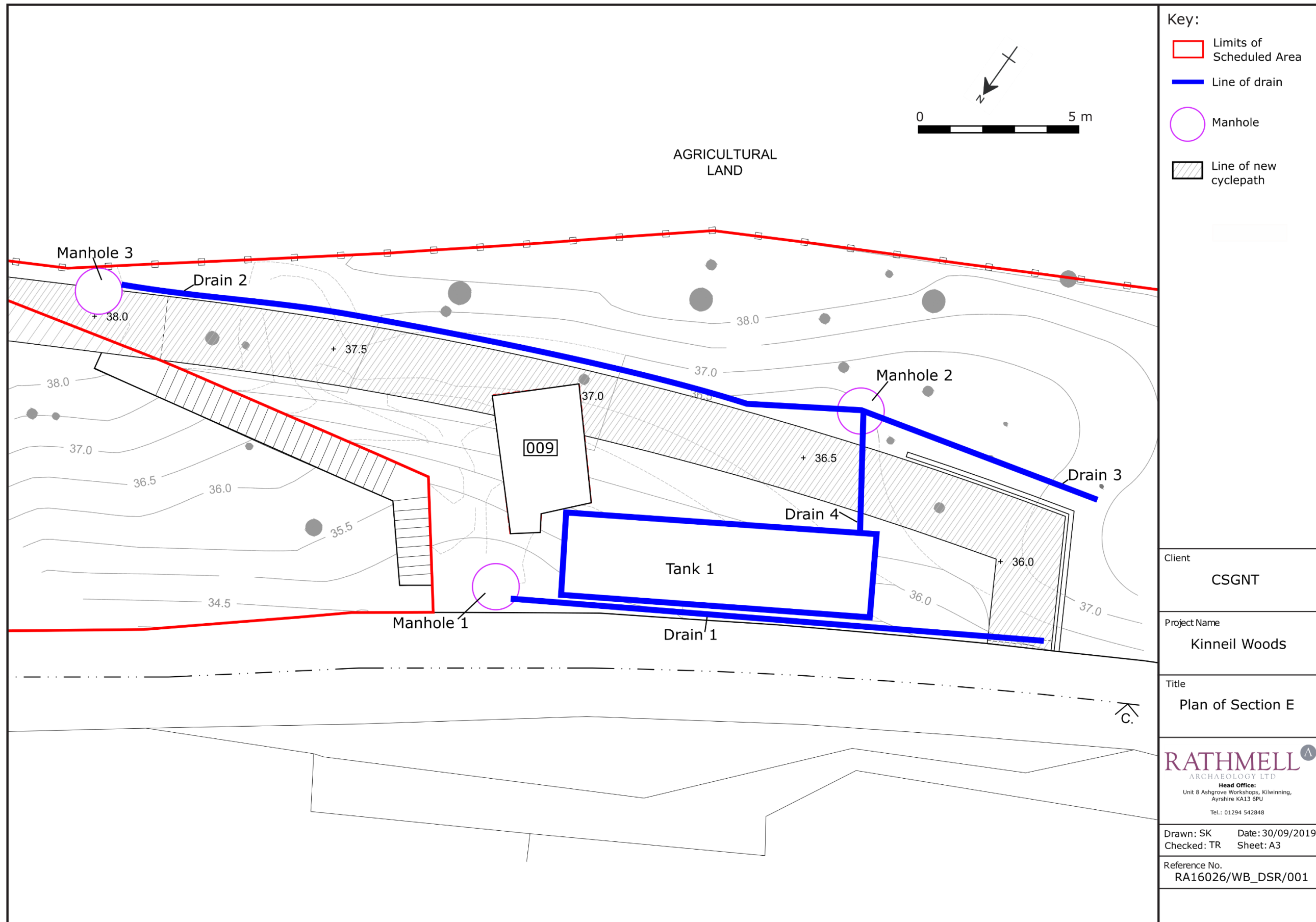


Figure 1: Plan of Section E.

Project Works

8. The programme of works consisted of monitoring the excavation of three manholes and three sections of drain associated with the upgrading of a section of cycle path. In addition, a rectangular trench for a new tank was excavated. The works took place between the 30th of July and the 28th of August 2019. The area was excavated by a 360° mechanical excavator under archaeological supervision.
9. In compliance with the WSI (Rees 2019) any potential archaeological features were investigated and recorded. All works were conducted in accordance with the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Environment Scotland Policy Statements.

Findings

10. The work within Section E consisted of the excavation of four drainage tracks, three square pits for manhole chambers, and the footprint for one rectangular tank. The dimensions of these are given below. In addition, the slope of Cow Bank was flattened into two terraces to allow for the construction of the new cycle path. The pre-existing drainage infrastructure of a brick tank [009] and chamber [007] were removed to make room for these works.
11. The entire area was covered with topsoil (001), a friable dark brown clayey silt deposit with frequent inclusions of roots, vegetation and modern artefacts. This was 0.3m deep and was underlain across the entirety of the site by moderately compact orange brown clay subsoil (002) with frequent inclusions of small sub-angular rocks. In the northern portion of Section E, (002) was underlain at a depth of 0.5m by moderately compact light yellow brown silty clay subsoil (004) with no inclusions. In the southern portion at the top of Cow Bank, (002) was underlain by laminated blond sandstone bedrock (008). In the far northeast of the study area immediately adjacent to the road and existing steps, topsoil (001) was underlain by a 0.2m thick layer of loose small red gravel made ground in an orange brown clay matrix (003). Topsoil (001) was removed across the entire site before any other works were carried out.
12. In the northeast corner of the site Manhole 1 was excavated in the same position as an existing concrete chamber [007]. Both the existing chamber and the new pit measured 1.65m by 1.15m. The chamber was filled with a deposit of made ground (006), comprising dark brownish grey clay with frequent stone inclusions. Both the fill of the chamber and its concrete lining were removed for Manhole 1. The pit was terminated at a depth of 1m.
13. Manhole chambers 2 and 3 were located in the southern portion of Section E. Manhole 2 lay at the junction between Drains 1 and 2 and the NW-SE running spur ('Drain 4') linked Tank 1 to the southeast drainage track. Manhole 3 was in the southeastern corner, at the northeast end of Drain 3. Both of the manhole chambers measured 2m by 2m: Manhole 2 had a maximum depth of 2m and Manhole 1 had a maximum depth of 1m. Both manhole chambers were excavated through subsoil (002) which was underlain by bedrock (008) at a depth of 0.5m. The bedrock continued to the full depth of the pits.
14. A further rectangular area measuring 4.8m by 2.8m (Tank 1) was opened to the north of the southeast drainage track, lying slightly northeast of centre in the widest portion of the excavation area. It had a maximum depth of 0.7m and was excavated through upper and lower layers of subsoil (002) and (004).
15. There were two discrete drainage tracks, both aligned roughly north-east to southwest. Drain 1 formed the northwesternmost track, terminating at the NE end in Manhole 1, from which it extended southwest along the northwest edge of Section E where it lay immediately adjacent to the road. The track measured 9m long by 0.5m wide and 0.5m deep. It was excavated through 0.1m of topsoil (001) which was underlain by made ground (006) that had been deposited as part of previous works on the road. .



Figure 2a: Post-excitation shot of Manhole 1 from the west.



Figure 2b: General shot of Tank 1 from the east.



Figure 3a: Post-excitation shot of Drain 2 from the west.



Figure 3b: Post-excitation shot of Drain 3 from the northwest.

16. Drains 2 and 3 followed a roughly northeast-southwest line running parallel with and slightly to the north of, the cycle path. Drain 2 connected Manholes 2 and 3. Drain 3 ran from Manhole 2 to the far western end of the study area. Both drains were 1m wide and 1m deep. Drain 2 was 7m long and Drain 3 was 8m long. Both drains were excavated through subsoil (002) and bedrock (008).
17. Drain 4 ran northwest-southeast from Manhole 2 to Drain 1. It was 7m in length and measured 1m wide by 1m deep. It was excavated through subsoil (002) that was underlain by subsoil (004) at a depth of 0.5m.
18. No artefacts or significant archaeological features were identified during these works.

Discussion

19. Section E was composed of ground which climbed steeply uphill from the level of the road in the north to the fields behind. The northern portion of the area, located adjacent to the road, had been previously subject to significant disturbance by earlier field drainage works, most notably the construction of the large brick tank.
20. No significant archaeology was identified during the site works. The only anthropic material identified related to a pre-existing field drainage system. The development area was located on a very significant slope which would have limited the amount of construction undertaken here at any time.
21. It is therefore likely that any features relating to the Roman occupation and the Antoine Wall are located within the Scheduled Area to the south of the site

Recommendations

22. This Data Structure Report covers archaeological works undertaken in support of upgrading a section of cycle path along a stretch of the Antonine Wall at Kinneil, Falkirk. This involved excavating three manholes and drainage tracks in addition to the levelling off of a ramp across the area. No significant features or artefacts were uncovered, with the majority of the deposits relating to the construction of a modern drainage tank.
23. As such no further archaeological works are recommended. The appropriateness and acceptability of our recommendations rest with Falkirk Community Trust.

Conclusion

24. This Data Structure Report has been prepared for Central Scotland Green Network Trust to present the findings of archaeological monitoring works undertaken near Kinneil Woods, Falkirk. These works were in support of upgrading a section of cycle path in an area associated with the Antonine Wall. The archaeological works were designed to mitigate any adverse impact on the archaeological remains within the affected areas.
25. The excavation of three pits for Manhole Chambers and four sections of drain were monitored as part of these works. The only evidence of anthropic activity within these areas related to previous field drainage works and no material relating to the Roman Occupation was uncovered.

Acknowledgements

26. 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.
27. Thanks should also go to Jack Portwood for his on-site contributions as well as Louise Turner for her editing of this report.

References

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Appendix 1: Registers

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

Context Register

Context	Type	Description	Interpretation
001	Deposit	Friable dark brown clayey silt with frequent inclusions of roots, vegetation and modern rubbish. The deposit was 0.3m deep and covered the entirety of the site. It was underlain by deposits (002), (003) and (006).	Topsoil found throughout site.
002	Deposit	Moderately compact orange brown clay with frequent inclusions of small sub-angular rocks. The deposit underlies (001) at a depth of 0.3m. In the northern portion of the site it is underlain by a lower subsoil (004) at a depth of 0.5m. In the southern section it is underlain by bedrock (008) at a depth of 0.5m.	Subsoil in northern area of site.
003	Deposit	Loose small red gravel in an orange brown clay matrix. The deposit is 0.2m thick and underlies topsoil (001) in the northeastern portion of site.	Made ground
004	Deposit	Moderately compact light yellow brown silty clay with no inclusions underlying (002) at a depth of 0.5m in the northern portion of site.	Subsoil in southern area of site .
005	-	VOID	-
006	Deposit	Dark brownish grey clay with frequent stone inclusions. The deposit was 1m deep and found within [007].	Made ground
007	Structure	Concrete and brick structure to the immediate south of road next to large tank. Consisted of concrete blocks covered with a grate and filled with made ground (006). The structure measured 1.65m by 2.8m and had a maximum depth of 1.15m. It contained ceramic and plastic drainage pipes as well as a small metal pipe.	Extension of the large settling tank.
008	Deposit	Laminated blonde sandstone bedrock underlying (002) in the southern portion of site.	Bedrock
009	Structure	Brick chamber with concrete slab lid measured approximately 3m by 3m, 20 course high by 17 rows wide and 2 skins deep.	Brick chamber to catch run off from field

Photographic Register

Image No.	Digital	Description	From	Date
001	1172	Pre-excavation shot of site.	NE	30/07/2019
002	1173	Pre-excavation shot of site.	W	30/07/2019
003	1174	Possible laydown area within area of scheduled monument.	N	30/07/2019
004	1175	Possible laydown area within area of scheduled monument.	W	30/07/2019
005	1176	Pre-excavation shot of site.	N	30/07/2019
006	1177	Pre-excavation shot of site.	NE	30/07/2019
007	1178	Pre-excavation shot of site.	N	30/07/2019
008	1179	Pre-excavation shot of site.	NE	30/07/2019
009	1180	Site after vegetation clearance.	NE	30/07/2019
010	1181	Site after vegetation clearance.	SE	30/07/2019
011	1182	Pre-excavation shot of old manhole removal.	E	30/07/2019
012	1183	Pre-excavation shot of old manhole removal..	W	30/07/2019
013	1184	Pre-excavation shot of old manhole removal.	E	30/07/2019
014	1185	Mid-excavation shot of old manhole removal.	SW	30/07/2019
015	1186	Mid-excavation shot of old manhole removal.	SW	30/07/2019
016	1187	Mid-excavation shot of old manhole removal.	SW	30/07/2019

Image No.	Digital	Description	From	Date
017	1188	Mid-excavation shot of old manhole removal.	NE	30/07/2019
018	1189	Mid-excavation shot of old manhole removal.	SW	30/07/2019
019	1190	Mid-excavation shot of old manhole removal.	SW	30/07/2019
020	1191	Mid-excavation shot of old manhole removal.	NE	30/07/2019
021	1192	Mid-excavation shot of old manhole removal.	SE	30/07/2019
022	1193	Mid-excavation shot of old manhole removal.	SE	30/07/2019
023	1194	Mid-excavation shot of old manhole removal.	NW	30/07/2019
024	1195	Mid-excavation shot of old manhole removal.	NE	30/07/2019
025	1196	Post-excavation shot of old manhole removal.	SW	31/07/2019
026	1197	Post-excavation shot of old manhole removal.	SW	31/07/2019
027	1198	Mid-excavation shot of north area.	N	31/07/2019
028	1199	Mid-excavation shot of north area.	NW	31/07/2019
029	1200	Mid-excavation shot of north area.	NW	31/07/2019
030	1201	Working shot- excavation of north area.	-	31/07/2019
031	1202	Working shot	-	31/07/2019
032	1203	Mid-excavation shot of south area.	SW	31/07/2019
033	1204	Shot of bedrock	W	31/07/2019
034	1205	Shot of bedrock	W	31/07/2019

Image No.	Digital	Description	From	Date
035	1206	Shot of bedrock	W	31/07/2019
036	1207	Shot of bedrock	N	31/07/2019
037	1208	Shot of bedrock	NW	31/07/2019
038	1209	Shot of bedrock	E	31/07/2019
039	1210	Shot of bedrock	E	31/07/2019
040	1211	Shot of bedrock	E	31/07/2019
041	1212	Shot of bedrock	W	31/07/2019
042	1213	Shot of bedrock	W	31/07/2019
043	1214	Shot of bedrock	N	31/07/2019
044	1215	Shot of bedrock	E	31/07/2019
045	1216	Shot of bedrock	E	31/07/2019
046	1217	Shot of bedrock	E	31/07/2019
047	-	VOID	-	-
048	-	VOID	-	-
049	-	VOID	-	-
050	1218	Post-excavation shot of area for western manhole.	E	31/07/19
051	1219	General shot of site.	N	31/07/19
052	1220	General shot of site.	W	31/07/19

Image No.	Digital	Description	From	Date
053	1221	General shot of site.	E	31/07/19
054	1222	General shot of site.	N	31/07/19
055	1245	General shot of brick chamber	NW	19/08/19
056	1246	General shot of brick chamber	N	19/08/19
057	1247	General shot of brick chamber	E	19/08/19
058	1248	General shot of brick chamber	N	19/08/19
059	1249	General shot of brick chamber	N	19/08/19
060	1250	General shot of brick chamber	N	19/08/19
061	1251	Working shot of the demolition of brick chamber	N	19/08/19
062	1252	Working shot of the demolition of brick chamber	N	19/08/19
063	1253	Working shot of the demolition of brick chamber	E	19/08/19
064	1254	General shot at end of day	E	19/08/19
065	1255	General shot at end of day	NE	19/08/19
066	1256	General shot at end of day	NW	19/08/19
067	1257	Removal of waterlogged deposit	E	19/08/19
068	1258	Removal of waterlogged deposit	NE	20/08/19
069	1259	Removal of waterlogged deposit	NW	20/08/19
070	1260	Removal of waterlogged deposit exposing bedrock	E	20/08/19

Image No.	Digital	Description	From	Date
071	1261	Removal of waterlogged deposit exposing bedrock	NE	20/08/19
072	1262	General shot at end of day	E	20/08/19
073	1263	Excavation of pit for manhole	E	23/08/19
074	1264	Excavation of pit for manhole	E	23/08/19
075	1265	Excavation of pit for manhole	E	23/08/19
076	1266	Excavation of pit for manhole	E	23/08/19
077	1267	Excavation of pit for manhole	E	23/08/19
078	1268	Excavation of pit for manhole	N	23/08/19
079	1269	Excavation of pit for manhole	N	23/08/19
080	1270	Excavation of pit for manhole	N	23/08/19
081	1271	Excavation of track for connecting pipe for manhole	E	23/08/19
082	1272	Excavation of track for connecting pipe for manhole	E	23/08/19
083	1273	Excavation of track for connecting pipe for manhole	E	23/08/19
084	1274	Excavation of track for connecting pipe for manhole	E	23/08/19
085	1275	Removal of bulk at NW end of site	N	26/08/19
086	1276	Removal of bulk at NW end of site	N	26/08/19
087	1277	Removal of bulk at NW end of site	N	26/08/19
088	1278	Installation of wooden posts for cycle path	N	26/08/19

Image No.	Digital	Description	From	Date
089	1279	Installation of wooden posts for cycle path	N	26/08/19
090	1280	Removal of tree stumps	NE	26/08/19
091	1281	Removal of tree stumps	NE	26/08/19
092	1282	Removal of tree stumps	SW	26/08/19
093	1283	Excavation of pit for manhole by stairs	E	26/08/19
094	1284	Excavation of pit for manhole by stairs	E	26/08/19
095	1285	Excavation of pit for manhole by stairs	E	26/08/19
096	1286	Excavation of pit for manhole by stairs	NE	26/08/19
097	1287	Excavation of track through area previously excavated for tank	NE	26/08/19
098	1288	Excavation of track through area previously excavated for tank	NW	26/08/19
099	1289	Post excavation shot of manhole by stairs	NE	26/08/19
100	1290	Excavation of track through area previously excavated for tank	SE	26/08/19
101	1291	Excavation of track through area previously excavated for tank	SE	26/08/19
102	1292	Post excavation shot of track down length of road	SW	26/08/19
103	1293	Post excavation shot of track down length of road	NE	26/08/19
104	1294	Post excavation shot of track down length of road	SW	26/08/19
105	1295	Mid excavation shot of track for drain between manholes	SW	26/08/19
106	1296	Mid excavation shot of track for drain between manholes	W	28/08/19

Image No.	Digital	Description	From	Date
107	1297	Mid excavation shot of track for drain between manholes	W	28/08/19
108	1298	Mid excavation shot of track for drain between manholes	NW	28/08/19
109	1299	Mid excavation shot of track for drain between manholes	NW	28/08/19
110	1300	Mid excavation shot of track for drain between manholes	W	28/08/19
111	1301	Mid excavation shot of track for drain between manholes	E	28/08/19
112	1302	Mid excavation shot of track for drain between manholes	E	28/08/19
113	1303	Mid excavation shot of track for drain between manholes	W	28/08/19
114	1304	Mid excavation shot of track for drain between manholes	W	28/08/19
115	1305	Mid excavation shot of track for drain between manholes	E	28/08/19
116	1306	General shot	-	28/08/19
117	1307	Pre excavation shot of drain	W	28/08/19
118	1308	Post excavation shot of drain	NE	28/08/19
119	1309	Post excavation shot of drain	E	28/08/19
120	1310	Post excavation shot of drain	SE	28/08/19
121	1311	Post excavation shot of drain	W	28/08/19
122	1312	General shot	W	28/08/19
123	1313	Post excavation shot of drain	W	28/08/19
124	1314	Post excavation shot of drain	W	28/08/19

Image No.	Digital	Description	From	Date
125	1315	Post excavation shot of drain	W	28/08/19
126	1316	Post excavation shot of drain	W	28/08/19
127	1317	Post excavation shot of drain	W	28/08/19
128	1318	Post excavation shot of drain	E	28/08/19
129	1319	Post excavation shot of drain	E	28/08/19
130	1320	Post excavation shot of drain	E	28/08/19
131	1321	Post excavation shot of drain	NE	28/08/19

Appendix 2: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	Falkirk Council
PROJECT TITLE/SITE NAME:	Kinneil Woods
PROJECT CODE:	RA16026
PARISH:	Bo'ness and Carriden
NAME OF CONTRIBUTOR:	Sarah Krischer
NAME OF ORGANISATION:	Rathmell Archaeology Limited
TYPE(S) OF PROJECT:	Watching brief
NMRS NO(S):	
SITE/MONUMENT TYPE(S):	Antonine Wall
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NS 97391 80275
START DATE (this season)	30 th July 2019
END DATE (this season)	28 th August 2019
PREVIOUS WORK (incl. <i>DES</i> ref.)	Evaluation
MAIN (NARRATIVE) DESCRIPTION: (may include information from other fields)	<p>Archaeological monitoring works were undertaken for Central Scotland Green Network Trust in an area associated with the Antonine Wall in support of the upgrading of a section of cycle path. The archaeological works were designed to mitigate any adverse impact on the archaeological remains within the affected areas.</p> <p>The excavation of three pits for manhole chambers and four sections of drain were monitored as part of these works. The only evidence of anthropic activity within these areas related to previous field drainage works and no material relating to the Roman occupation was uncovered.</p>
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Central Scotland Green Network Trust
ADDRESS OF MAIN CONTRIBUTOR:	Unit 8 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
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ARCHIVE LOCATION (intended/deposited)	Report to Falkirk Community Trust and archive to National Record of the Historic Environment

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