

# **Culzean Castle, South Ayrshire: Archaeological Mitigation**

## **Data Structure Report**



by Douglas Gordon


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on behalf of National Trust for Scotland

**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 Institute for Archaeologists' Standards and Policy Statements and Code of Conduct.

Signed 

Date .....28<sup>th</sup> January...2015..

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 .....28<sup>th</sup> January 2015.....

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## Introduction

1. This Data Structure Report has been prepared for National Trust for Scotland in support of ground breaking works being undertaken around Culzean Castle and Culzean Estate, South Ayrshire (NGR NS2328 1023). These archaeological works are designed to mitigate any adverse impact on the archaeological remains within the development area.
2. The location of the work is in proximity to several known historical and archaeological features including:
  - Culzean Castle Estate, Culzean Castle (Canmore ID 40959), which is a category A listed building protected under the terms of Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997.
  - Culzean Coves, Caves, (SM10364) which is a scheduled monument protected under the terms of Ancient Monuments and Archaeological Areas Act 1979.
3. Rathmell Archaeology Ltd was appointed by the National Trust for Scotland to undertake the implementation of archaeological mitigation works. All works undertaken comply with Rathmell Archaeology Ltd standard working procedures and West of Scotland Archaeology Service standard conditions. The Data Structure Report is designed to meet the requirements of the National Trust for Scotland.

## Project Works

4. The programme of works comprised the archaeological monitoring of ground breaking at three areas around Culzean Castle and the Culzean Estate (Figure 1). The three areas were:
  - the garden to the located to the immediate west of the Clock Tower (Canmore ID: 238249) (NGR: NS23352 10306),
  - the Waste Chute (NGR: NS23392 10313) located 10m to the east of the Clock Tower Complex and the,
  - Hogston Burn Cundie (NGR 2287 0927) which is a culvert under a bend in one of the estate paths, which lies 43m NW of the Swinston or Cat Gates (Canmore 150620).
5. The works at the Clock Tower consisted of a single trench that was excavated along the west frontage of the Clock Tower. At the waste chute, three trenches were excavated; one for a drain pipe to the south of the chute and other two along the walls on either side of the chute to expose lower stonework for re-pointing.
6. The work for the Hogston Burn Cundie involved cleaning out a blocked culvert. After clearing approximately half of the blocked channel the capping stones of the culvert were found to be quite badly degraded and this necessitated a redesign of the culvert to ensure future stability.
7. The works were carried out either by hand, using a 1.5 tonne 360° excavator or with a 7 tonne 360° excavator depending on space or topography. The ground breaking works were monitored until the upper surface of the underlying natural subsoil was exposed or the maximum working depth reached.
8. The monitoring on-site took place intermittently between the 28<sup>th</sup> October 2014 and the 13<sup>th</sup> January 2015.
9. All works were conducted in accordance with the Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.



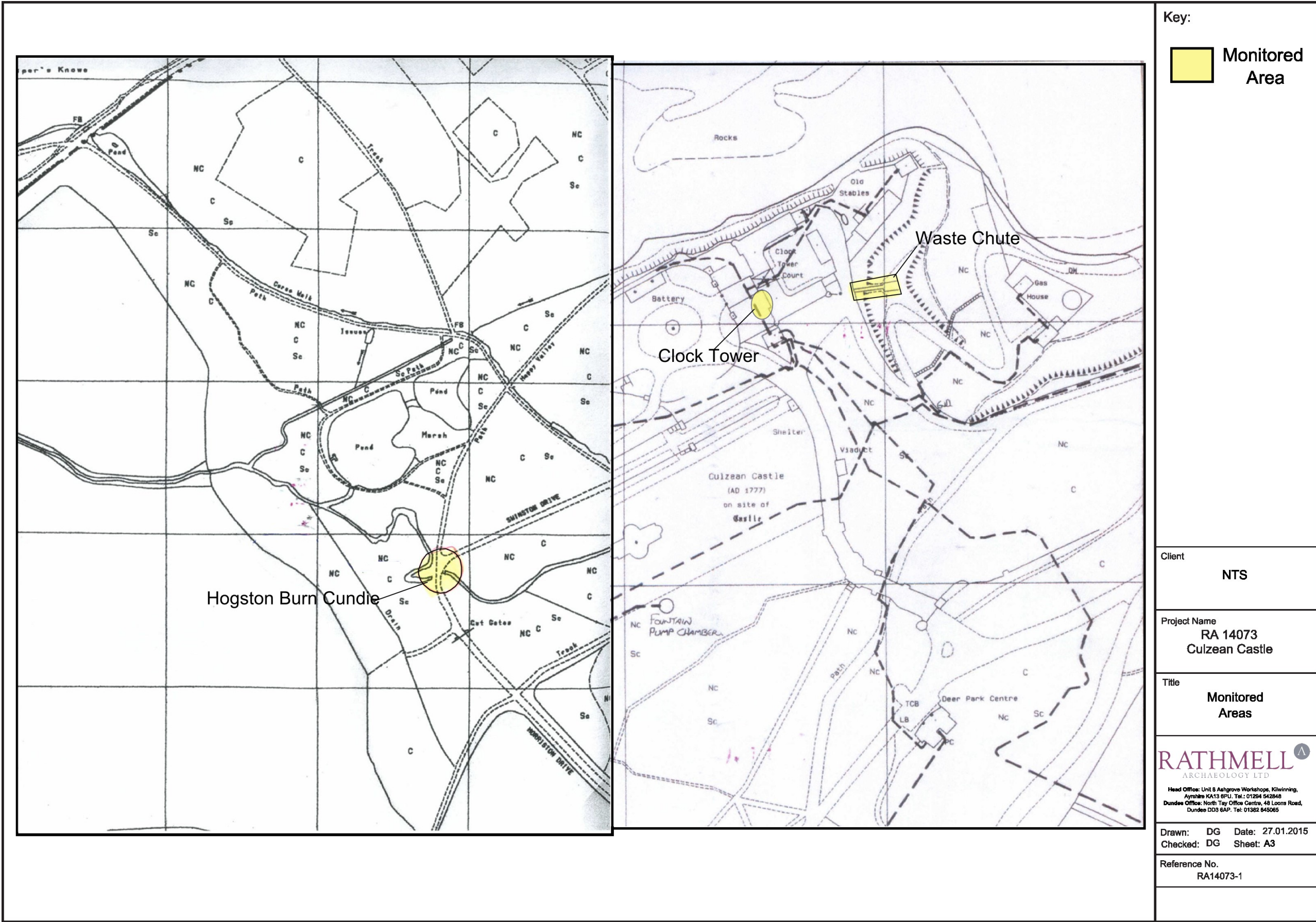


Figure 1: Map of monitored areas

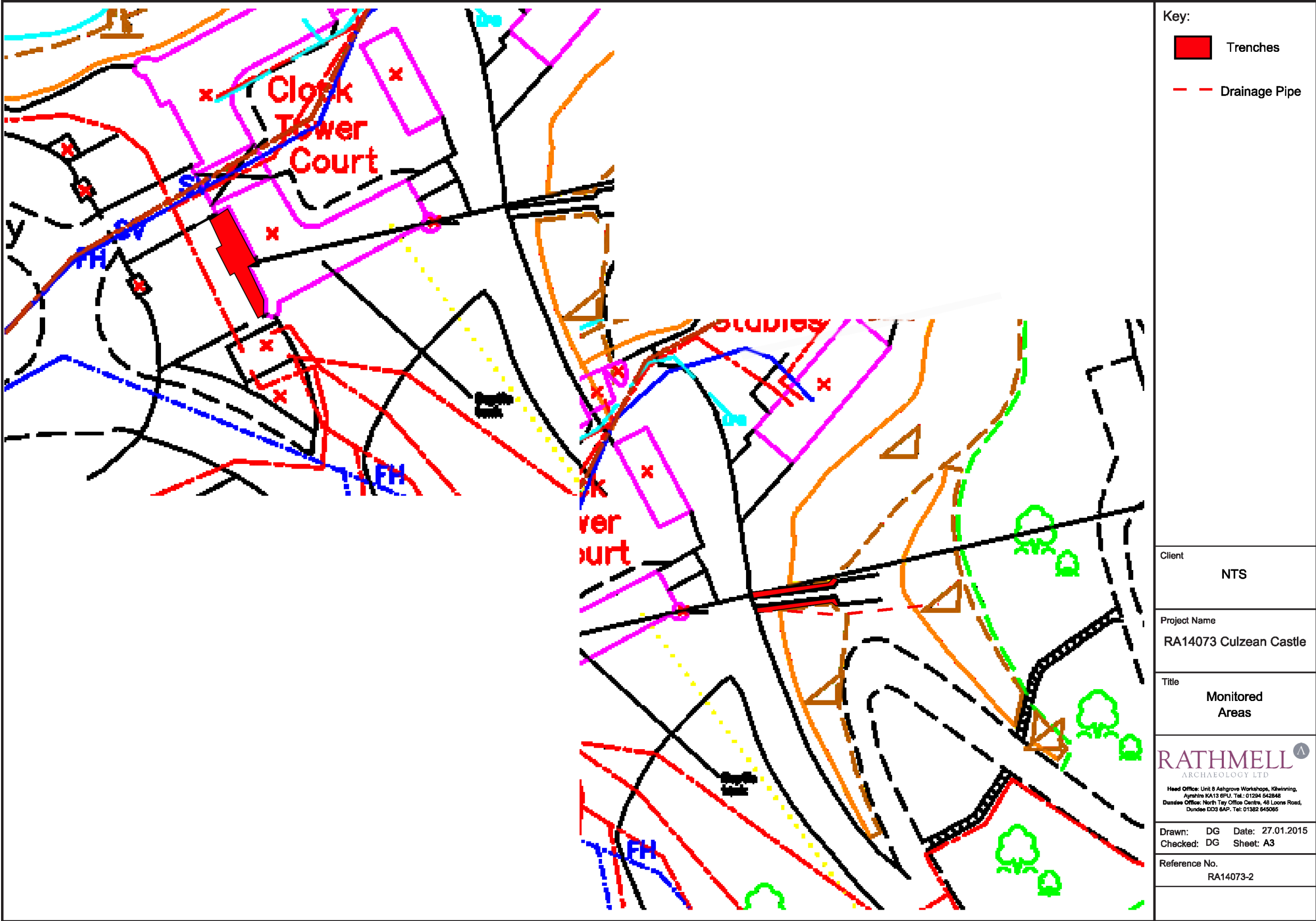


Figure 1b: Map of monitored areas around Clock Tower and Waste Chute

## Findings

### *Clock tower*

10. A trench was excavated in the southern garden along the front of the south west facing wall of the clock tower complex (Canmore ID 238249). The trench was 12m long, 1-2.5m wide and varied in depth from 250mm to 500mm. The topsoil was a mid to dark brown sandy silt (001), while the trench exposed at its southern end: bedrock (002), a modern electrical service and a light brown silty sand with rare large sandstone inclusions (004). In the northern portion a modern drain and a layer of modern concrete (003) was revealed. No archaeologically significant artefacts were recovered during the works here, though modern pottery and glass was recovered from (001).

### *Waste Chute*

11. To the east of the Clock Tower Complex is the Waste Chute (NGR.2339 1031). The work here consisted of monitoring the excavation of a new drain down the slope to the south of the chute and the exposure of the lower courses of stonework of the waste chute.
12. The drainage trench was approximately 25m long, 300-350mm wide and between 250-800mm deep. The topsoil (007) was a mid brown sandy silt with very frequent small to large tree roots and inclusions of modern detritus (coke cans, crisp packets & plastic bottles). No other strata was observed on the slope until the drainage trench got to the bottom of the slope, where large angular whinstone stones (008) 400-500mm deep were observed below the topsoil. The stratigraphy changed as the trench left the slope and crossed a terrace. Here there was small angular grey stones (009) 150mm in depth, over a mixed soil of light and mid brown sandy silt (010) with a black bitumen like layer and frequent modern detritus and ceramic building material. Below (010) was an orange brown silty sand (011) which appeared to have ceramic building material (brick) in the upper surface.
13. The two channels down either side of the waste chute were approximately 300mm wide and 250-350mm deep. They both showed the same stratigraphy as the drainage trench. Only (007) was exposed until the lower portion of the slope where (008) was encountered. Several courses of the chutes lower stonework were exposed though the base of the walls were not.
14. No archaeologically significant artefacts were recovered during the works here, though modern pottery and general detritus were noted.

### *Hogston Burn Cundie*

15. The Hogston Burn Cundie (NGR 2287 0927) is a culvert under a bend in one of the estate paths, which lies 43m NW of the Swinston or Cat Gates (Canmore 150620).
16. The culvert consisted of three capped parallel walls, which created two channels (each 700mm wide and 800mm deep) for the burn to pass through. The walls were 6-7 courses high and made from squared sandstone blocks that were mortared together, while the capping stones were very roughly hewn sandstone slabs. Rough stone slabs were also evident in the base of the northern channel.
17. The southern channel of the culvert was blocked with two deposits, the lower deposit (013) was a light brown silty sand approximately 150mm deep while the upper deposit (014) was a light to mid brown silty clay about 625mm in depth.
18. No artefacts of any significance were recovered or noted.





Figure 2a: Trench in front of Clock Tower from the NW



Figure 2b: Trench in front of Clock Tower from the SSW





Figure 3a: Working shot cutting drainage ditch from the ESE



Figure 3b: Drainage Trench from E





Figure 4a: Hogston Burn Cundie from the W



Figure 4b: Western end of Southern channel cleared out

## Discussion

### *Clock tower*

19. The works at the clock tower revealed modern disturbance for the most part, such as services and drainage. Deposit (004) was interpreted as building/demolition material and while may relate to the construction of the clock tower complex, however most likely relates to the construction of the modern services and drainage.
20. The presence of the bedrock quite close to the surface confirms the findings of previous works where it was found that the area from the castle to the clock tower had been reduced to the clean whin bedrock. (RCAHMS 2015)

### *Waste Chute*

21. The monitoring of the works at the waste chute revealed highly disturbed topsoil and made ground. The topsoil (007) on the slope apart from being disturbed by frequent roots from trees and bushes appears to have been disturbed by quite recent activities, given the amount and type of modern detritus within the soil. The waste chute showed evidence of being re-pointed and conserved recently which may have been the cause of the disturbance. The presence of the large stone hardcore (008) at the base of the waste chute may have either been from the original construction of the waste chute or from the more recent works. It was most likely deposited for infill and/or drainage.
22. The ground to the east of the chute on the terrace was made ground or fairly recent origin. The area appears to have been a dumping ground of type 2 hardcore (009) and generally dumped soil and detritus including bitumen (010).

### *Hogston Burn Cundie*

23. The two deposits with the southern channel were water borne deposits, most likely built up over a period of time. No archaeological information was recovered from within the channel.
24. The cundie itself was most likely built during the works of Robert Adam.

## Recommendations

25. The archaeological monitoring works failed to identify any significant archaeology, and only revealed activity that appears to be modern in origin (20<sup>th</sup> to 21<sup>st</sup> century). Due to this, no further archaeological works on-site are recommended as a direct consequence of these works.
26. The appropriateness and acceptability of our recommendations rest with National Trust for Scotland.

## Conclusion

27. Archaeological monitoring works were carried out in respect to various ground breaking works around the grounds and estate of Culzean Castle, Maybole, South Ayrshire. The archaeological works were designed to mitigate the impact on the archaeological remains within their development area.
28. The works carried out did not identify the presence of any significant archaeology, only modern 19<sup>th</sup> to 21<sup>st</sup> century activity.

## References

RCAHMS, 2015 Site Record for Culzean Castle [Online] Available from <http://canmore.rcahms.gov.uk/en/site/40959/details/culzean+castle/> [Accessed 27<sup>th</sup> January 2015]



## Appendix 1: Registers

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

### *Context Register*

Context	Area/ Trench	Type	Description	Interpretation
001		Deposit	Mid-brown sandy silt with frequent rootlets	Topsoil
002		Deposit	Dark Green volcanic like stone	Bedrock
003		Deposit	Grey Concrete 40mm in depth	Modern concrete
004		Deposit	Light brown silty sand rare large sandstone inclusions	Possible demolition/backfill layer
005		Deposit	Light to mid brown sandy silt with frequent bedrock frags	Bedrock and topsoil
006		Deposit	Mortar found in (004)	Mortar
007	Waste Chute	Deposit	Mid-brown sandy silt with very frequent small to large roots. With inclusions of modern detritus. 80-200mm in depth	Disturbed topsoil
008	Waste Chute	Deposit	Large angular grey stones ≤150mm in size. 400-500mm in depth	Hardcore/infill
009	Waste Chute	Deposit	Angular grey stone ≤30mm in size. 150mm in depth	Type 2 Hardcore
010	Waste Chute	Deposit	Mixed light to mid brown and black sandy silt, with bitumen like layer. 450-600mm in depth.	Made ground
011	Waste Chute	Deposit	Orange brown silty sand	Natural
012	Hogston Burn	Deposit	Mid brown sandy silt with frequent small to medium sized roots. 50-300mm in depth	Topsoil
013	Hogston Burn	Deposit	Light brown silty sand 150mm in depth	Lower fill of cundie channel
014	Hogston Burn	Deposit	Light to mid brown silty clay	Upper fill of cundie channel
015	Hogston Burn	Structure	Stone built twin channelled culvert. Three walls approximately 6m long, spaced 700mm apart capped with rough irregular	Estate Culvert (Cundie)

Context	Area/ Trench	Type	Description	Interpretation
			sandstone slabs. The walls are 6-7 courses high, with shaped blocks and mortared. The channels were 700mm wide and 800mm deep. The northern channel had flat stones present in its base, while the southern one did not.	

### *Photographic Register*

Image	Digital	Description	From	Date
01	1	Pre excavation of Drainage Ditch Area	NW	28/10/14
02	2	Pre excavation of Drainage Ditch Area	SE	28/10/14
03	3	Pre excavation of Drainage Ditch Area S side of tower	SW	28/10/14
04	4	Pre excavation of Drainage Ditch Area S side of tower	SW	28/10/14
05	5	Culzean Castle	NE	28/10/14
06	6	Landscape Shot	NE	28/10/14
07	7	Landscape Shot	NE	28/10/14
08	8	Landscape Shot	SE	28/10/14
09	9	Clock tower Court	NE	28/10/14
10	10	Trench starting point	WSW	28/10/14
11	11	General working shot, cable disturbance	W	28/10/14
12	12	General shot of mini digger	SSE	28/10/14
13	13	Modern service setting	SSW	28/10/14
14	14	Disturbance by cable	SE	28/10/14
15	15	Disturbance by cable with service setting	SSW	28/10/14
16	16	Lower Service setting and Demolition sandstone block in SE corner	NW	28/10/14
17	17	Lower Service setting	NW	28/10/14
18	18	Lower Service setting	NW	28/10/14

Image	Digital	Description	From	Date
19	19	Lower Service setting and SW wall	SW	28/10/14
20	20	General shot of cut of wall through bedrock	S	28/10/14
21	21	General shot of cut of wall through bedrock showing mortar fill	SE	28/10/14
22	22	General shot of cut of wall through bedrock	SW	28/10/14
23	23	General shot of cut of wall through bedrock and demolition in SE corner	SW	28/10/14
24	24	Bedrock, wall and demolition material	SE	28/10/14
25	25	SE front elevation of wall with sandstone infill	SW	28/10/14
26	26	SE front elevation	SW	28/10/14
27	27	SE front elevation	SSW	28/10/14
28	28	Central area of Trench straight onto bedrock	SSW	28/10/14
29	29	Central area of Trench straight onto bedrock	SSW	28/10/14
30	30	Central area of Trench straight onto bedrock	SE	28/10/14
31	31	Central area of Trench straight onto bedrock	SE	28/10/14
32	32	NE front section of trench	NE	28/10/14
33	33	General shot first part of trench	WNW	28/10/14
34	34	General shot first part of trench	WNW	28/10/14
35	35	Second part of trench (W half) straight onto concrete	SW	28/10/14
36	36	Second part of trench (W half) straight onto concrete	WNW	28/10/14
37	37	Working shot modern man hole	W	28/10/14
38	38	Straight onto concrete in central area of trench	SW	28/10/14
39	39	Straight onto concrete in central area of trench	SW	28/10/14
40	40	General shot of SE front elevation of wall	SW	28/10/14
41	41	General shot of SE front elevation of wall	SW	28/10/14
42	42	General shot of SE front elevation of wall	SSE	28/10/14
43	43	SE corner of trench	W	28/10/14

Image	Digital	Description	From	Date
44	44	Post excavation shot	NW	28/10/14
45	45	Post excavation shot	NW	28/10/14
46	46	Post excavation shot	NW	28/10/14
47	47	Out flow of drain at top of waste chute	W	12/01/15
48	48	Top of new drainage trench	W	12/01/15
49	49	General shot of S side of waste chute	SE	12/01/15
50	50	General shot of S side of waste chute	E	12/01/15
51	51	Working shot	SE	12/01/15
52	52	Drainage trench in slope	E	12/01/15
53	53	Working shot	E	12/01/15
54	54	Drainage trench in slope	E	12/01/15
55	55	Drainage trench through terrace	E	13/01/15
56	56	South facing section of drainage trench in terrace	S	13/01/15
57	57	E end of trench	E	13/01/15
58	58	End of trench	SW	13/01/15
59	59	Trench along North side of waste chute	E	13/01/15
60	60	Trench along south side of chute	E	13/01/15
61	61	W end of culvert	W	13/01/15
62	62	W end of culvert	W	13/01/15
63	63	Cleared out west end of culvert channel	W	13/01/15
64	64	Cleared out west end of culvert channel	SW	13/01/15
65	65	Cleared out mid-section of culvert channel	WNW	13/01/15



*Find Register*

Find No.	Area / Trench	Context	Find Type	Description / Quantity	Excavator	Date
1	CT	001	Glass	3 glass shards	DiG	28/10/14
2	CT	001	Ceramic	9 sherds of modern red ceramics	DiG	28/10/14

*Samples Register*

Sample No.	Area / Trench	Context	Sample Type	Description / Quantity	Excavator	Date
1	CT	004	Bulk x 1 bag	Fill of surrounding stones demolition layer	DiG	28/10/14
2	CT	006	Bulk x 1 bag	Mortar on stones within (004)	DiG	28/10/14

## Appendix 2: Discovery & Excavation in Scotland

<b>LOCAL AUTHORITY:</b>	South Ayrshire
<b>PROJECT TITLE/SITE NAME:</b>	Culzean Castle
<b>PROJECT CODE:</b>	RA14073
<b>PARISH:</b>	Maybole
<b>NAME OF CONTRIBUTOR:</b>	Douglas Gordon
<b>NAME OF ORGANISATION:</b>	Rathmell Archaeology Limited
<b>TYPE(S) OF PROJECT:</b>	Watching brief
<b>NMRS NO(S):</b>	None
<b>SITE/MONUMENT TYPE(S):</b>	None
<b>SIGNIFICANT FINDS:</b>	None
<b>NGR (2 letters, 8 or 10 figures)</b>	NS23352 10306; NS22877 09274; NS23392 10313
<b>START DATE (this season)</b>	28 <sup>th</sup> October 2014
<b>END DATE (this season)</b>	13 <sup>th</sup> January 2015
<b>PREVIOUS WORK (incl. <i>DES</i> ref.)</b>	None
<b>MAIN (NARRATIVE) DESCRIPTION:</b> (may include information from other fields)	<p>Archaeological monitoring works were carried out in respect to various ground breaking works around the grounds and estate of Culzean Castle, Maybole, South Ayrshire. The archaeological works were designed to mitigate the impact on the archaeological remains within their development area.</p> <p>The works carried out did not identify the presence of any significant archaeological features. The only archaeological features present were those relating to modern 19<sup>th</sup> to 21<sup>st</sup> century activity</p>
<b>PROPOSED FUTURE WORK:</b>	None
<b>CAPTION(S) FOR ILLUSTRS:</b>	None
<b>SPONSOR OR FUNDING BODY:</b>	National Trust for Scotland
<b>ADDRESS OF MAIN CONTRIBUTOR:</b>	Unit 8 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
<b>E MAIL:</b>	contact@rathmell-arch.co.uk
<b>ARCHIVE LOCATION (intended/deposited)</b>	Report to West of Scotland Archaeology Service and archive to RCAHMS Collections

## Contact Details

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