

Brodick Castle Adventure Play, Arran:
Archaeological Watching Brief
Data Structure Report




by Joss Durnan & Liam McKinstry
issued 16th August 2017
on behalf of National Trust for Scotland

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Quality Assurance

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Signed  Date16th August 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  Date16th August 2017....

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Introduction

1. This Data Structure Report has been prepared for National Trust for Scotland (NTS) in support of the construction works at Brodick Castle Adventure Play, Arran. The archaeological works were designed to mitigate adverse impact on the archaeological remains from the installation of new utility connections to the Adventure Play area.
2. Rathmell Archaeology Ltd has been appointed by the NTS to undertake the implementation of archaeological mitigation works in response to guidance given by West of Scotland Archaeology Service (WoSAS). The scope of these works has been agreed with WoSAS and the planning authority by the NTS through a Method Statement (Rees 2017). All works undertaken comply with the agreed Method Statement (MS).
3. The history and development of Brodick Castle is well documented. A detailed analysis of the building's (Addyman Archaeology 2006) and archaeological aspects of the property are detailed in the Trust's document An Archaeological Guide to Brodick Castle, Country Park and Goatfell, Isle of Arran (National Trust for Scotland 2013). The latter includes a list of known archaeological interventions. For a concise summary which distils the main points of both documents, refer to the recent Conservation Plan issued on behalf of the NTS by Robert Potter & Partners LLP (Easton and Moffat 2015).

Project Works

4. The programme of works comprised the monitoring of the cutting of a utility trench running along the south-eastern edge of the adventure play area, from the ticket kiosk in the southwest to the rangers' office in the northeast. The adventure play area is located approximately 200m northwest of Brodick Castle, directly north of the main estate road (Figure 1) encompassing an earlier play area. These works were undertaken on 27th April 2017 using a 13-tonne 360-degree mechanical excavator with a narrow toothed bucket.
5. The trench ran in and approximate southwest to northeast direction but due to the presence of thick tree growth on the margins of the Adventure Play area the trench changed direction several times. For ease of recording each of these different orientated stretches of trench was given an area identifier (1-4) (Figure 1) which was used to divide up the findings below.

Findings

6. The present day topsoil within the Adventure Play area (001) comprised of dark brown, clayey silt with no inclusions. The topsoil layer had a maximum thickness of 150mm. In the north eastern part of the Adventure play area this topsoil was replaced in places with a thick layer of bark under which lay a layer of terram (011) which had a thickness of 150mm. Beneath the topsoil and bark/terram lay a subsoil layer (002) which comprised a firmly compacted, pinkish red silty clay with stone inclusions. This layer had a maximum thickness of 300mm.
7. Underneath these layers lay a buried topsoil layer (003) which comprised of moderately compacted, dark brown silty clay with frequent naturally occurring wood and other organic fragments. Underlying this were two naturally occurring subsoil layers, (004) and (009). The first of these subsoil layers, (004), comprised moderately compacted, pale brown clay with stone inclusions. The layer was located within Area 1 and the western part of Area 2. The second of these subsoil layers, (009), comprised of moderately compacted, red silty clay with stone inclusions. The layer was located in the eastern part of Area 2 and Areas 3 and 4. Underlying both of these subsoil layers was the naturally occurring bedrock (005).

Area 1

8. The first stretch of trench (Area 1) was orientated in an approximate north to south direction and measured 18.8m from the ticket kiosk to its junction with Area 2. The trench was 800mm wide and had a maximum depth of 1.1m.
9. Only one feature was identified within Area 1. A northeast to southwest orientated plastic

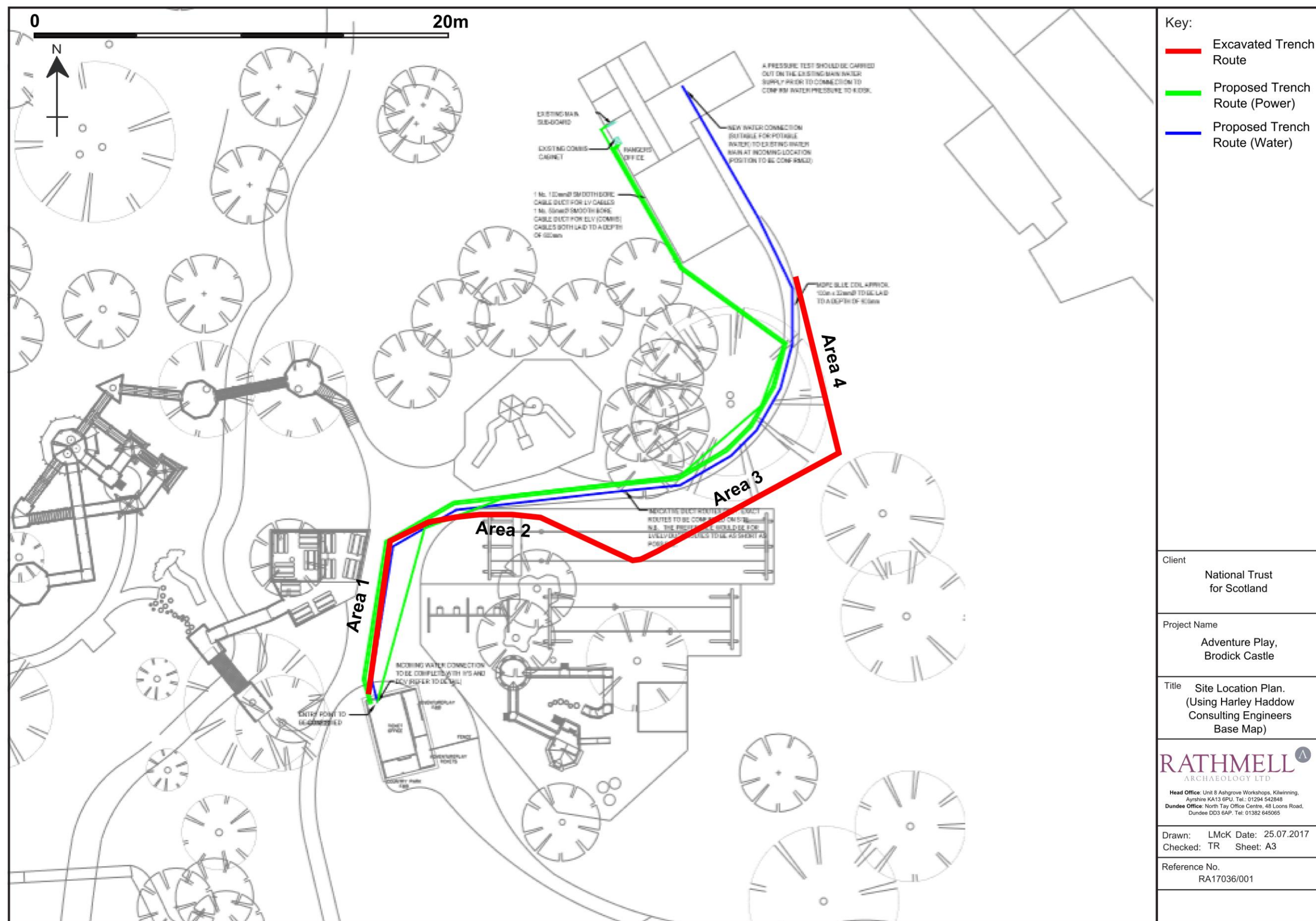


Figure 1: Site Location Plan.



Figure 2a: Plastic drainage pipe (006) within Area 1. From E.



Figure 2b: Ceramic horseshoe pipe at junction of Areas 1 and 2. From NW.

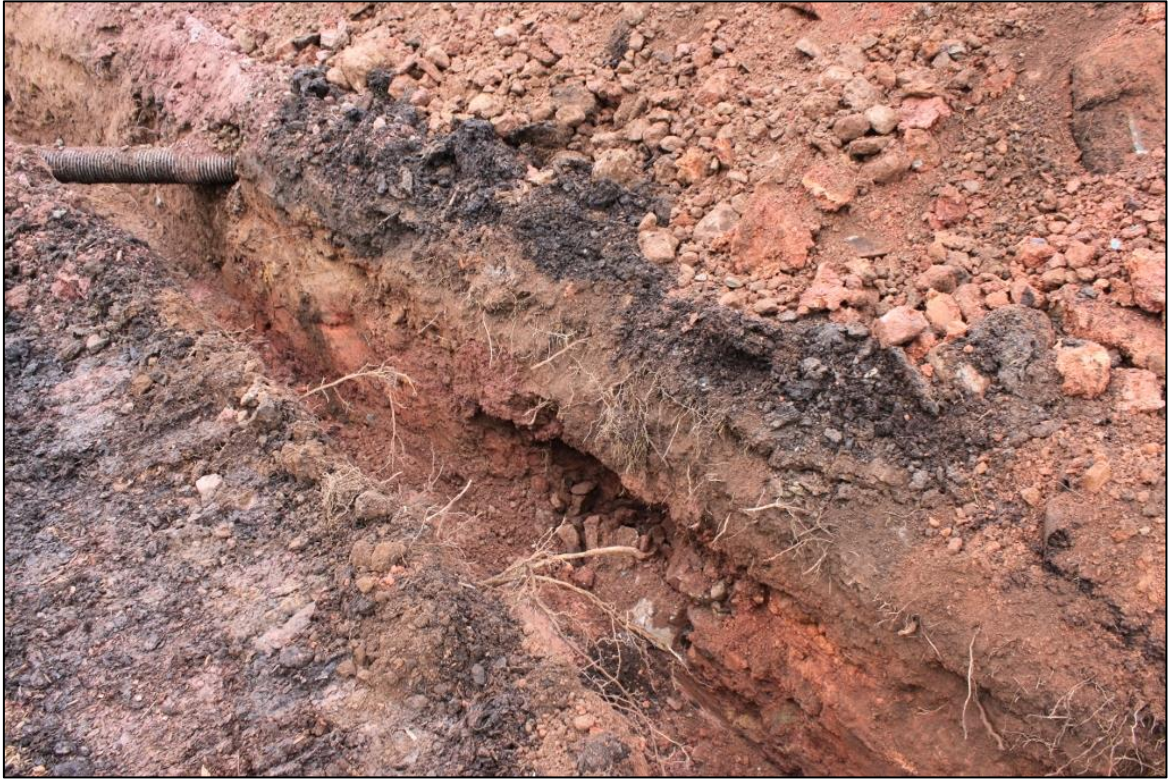


Figure 3a: Plastic drainage pipe (006) and rubble drain (008) within Are 2. From ESE.



Figure 3b: Pit (013) and plastic service pipe (012) within Area 3. From SSE.

drain (006) was identified 14m from the southern end of Area 1 (Figure 2a). The cut into which this drain had been placed was within subsoil layer (004). It had cut through the overlying, buried, topsoil layer (003) but not the layers above.

Area 2

10. The second stretch of trench (Area 2) was orientated in an approximate west to east direction and measured 22m from the northern end of Area 1 to its junction with Area 3. The trench was 800mm wide and had a maximum depth of 1.3m.
11. Four features were identified in Area 2. The first of these was a horseshoe shaped ceramic field drain (006) located at the junction between Areas 1 and 2 (Figure 2b). This drain had a diameter of 180mm and was located at a depth of 600mm, within (004). The second feature was the continuation of the plastic drain (006) which was identified crossing Area 2, 8.5m from the western end of the area. The third feature identified was a northeast to southwest orientated rubble drain (008) located 11.2m from the western end of Area 2 (Figure 3a). The drain was filled with rough cobbles and was 500mm wide by 1.3m deep. The final feature identified was a, north to south orientated, narrow metal pipe (010) which was located 13.5m from the western end of the area. The metal pipe was located at a depth of 100mm within (003).

Area 3

12. The third stretch of trench (Area 3) was orientated in an approximate west southwest to east northeast direction and measured 19m from the eastern end of Area 2 to its junction with Area 4. The trench was 800mm wide and had a maximum depth of 1.1m.
13. Two features were identified in Area 3 located 5-6m from the junction with Area 2 (Figure 3b). The first of these was a pit feature (013) which underlay the bark/terram layer (011). The pit had a width of 500mm and a depth of 440mm. Its fill was comparable to the buried topsoil layer (003) except it contained more organic material in the form of rootlets. The second feature identified was a yellow plastic field drain located within a narrow trench filled with small stones and gravel. The trench it was located in had a width of 90mm and was located at a depth of 700mm cut into the naturally occurring subsoil (009).

Area 4

14. The fourth stretch of trench (Area 4) was orientated in a north northwest to south southeast direction and measured 20m from the east northeast end of Area 3 to where the trench terminated 20m to the southeast of the ranger's office. The trench was 800mm wide and had a maximum depth of 1.1m. No features were identified within Area 4.

Discussion

15. The topsoil (001), bark/terram (011) and redeposited subsoil (002) layers represented the modern landscaping associated with the creation of the original play area within the castle grounds. The buried topsoil layer (003) was the original ground surface before its construction.
16. The features identified within the utilities trench fall into two categories. The first, consisting of the plastic drain (006) and yellow plastic service (012) that were most likely associated with the construction of the Rangers offices. The second, consisting of the ceramic horseshoe drain (007), rubble filled drain (008) and the metal service pipe (010), are earlier and most likely related to 19th or 20th century activity within the castle grounds.
17. One feature whose function and date are not as clear is pit (013) though its shape in section looks to be machine cut so it may be the result of 20th century activity before the creation of the original play area.

Recommendations

18. This Data Structure Report covers archaeological works undertaken in support construction works at Brodick Castle Adventure Play, Arran.
19. The archaeological monitoring works identified only layers relating to the creation of the

original play area and services or drainage from the 19th and 20th century. No significant archaeological features or artefacts were identified and as such it is recommended that no further work will be required.

20. The appropriateness and acceptability of our recommendations rest with the representative of the West of Scotland Archaeological Service.

Conclusion

21. This Data Structure Report has been prepared for the National Trust for Scotland to report minor archaeological works undertaken in the grounds of Brodick Castle, Arran. These works were in support of the planned installation of new utilities adjacent to an Adventure Play area to the northwest of Brodick Castle. The archaeological works were designed to mitigate any adverse impact on the archaeological remains within the affected areas.
22. In total, one trench (divided into four areas) was excavated to identify any archaeological features within the utilities trench. This identified layers relating to the creation of the Adventure Play area, services connected to it and earlier, 19th and 20th century, services related to activity within the castle grounds. No other features or artefacts were identified during the monitoring of the utilities trench.

References

Addyman, T. and Oram, R., 2009. *Historic Building Survey and Analytical Assessment: 2006-8. Volume 1: General Report* Unpublished report: Addyman Archaeology.

Easton, A. and Moffat, P., 2015, *Conservation Plan: Brodick Castle, Brodick, Isle of Arran* Unpublished conservation management plan: Robert Potter & Partners LLP.

National Trust for Scotland, 2013, *An Archaeology Guide to Brodick Castle, Country Park and Goatfell, Isle of Arran*.

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	Dark brown clayey silt, 150mm thick	Topsoil
002	Deposit	Stiff pinkish-red clay with stones, 300mm thick	Subsoil
003	Deposit	Dark brown silty clay with very common wood fragments, 100mm thick	Buried topsoil
004	Deposit	Pale brown clay with stones	Subsoil
005	Deposit	Bedrock	Natural solid geology
006	Structure	Plastic drain in beach cobbles, drain: 180mm diameter, cut: 400mm diameter / 600mm deep.	Modern drain
007	Structure	Horseshoe drain, 105mm diameter, 700mm deep. Set into (004)	19 th century drain
008	Cut	Cobble-filled channel crossing track at shallow angle. 500mm broad, at least 1.3m deep	Rubble drain
009	Deposit	Same as (002) but underlying (004), more red in colour	Subsoil
010	Structure	Narrow metal pipe set 100mm deep in (003)	Service pipe
011	Deposit	Geotextile up to 150mm thick over (003)	Playpark landscaping
012	Structure	Yellow plastic drain, 90mm diameter, 700mm deep	Field drain
013	Cut	Cut feature in section, 500mm broad, 440mm deep, fill comparable to (003) rootlets throughout, cut through (009) U-shaped section	Possible pit
014	Deposit	Very stiff pale grey clay with stones	Subsoil?
015	Structure	Round clay pipe, 90mm diameter, 600mm deep	Field drain

Photographic Register

Image No.	Digital	Description	From	Date
1	1525	Service trench, mid-ex	S	27/4/17
2	1526	Drain (006)	E	27/4/17
3	1527	Drain (006) showing (003) in stratigraphy	E	27/4/17
4	1528	Horseshoe drain (007)	S	27/4/17
5	1529	Service trench, post-ex	E	27/4/17
6	1530	Service trench, post-ex showing stratigraphy	W	27/4/17
7	1531	Service trench, post-ex	E	27/4/17
8	1532	Service trench, post-ex	W	27/4/17
9	1533	Section showing cut (013) and geotextile	S	27/4/17
10	1534	Service trench, section leading to rangers' office, post-ex	S	27/4/17

Appendix 2: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	North Ayrshire
PROJECT TITLE/SITE NAME:	Brodick Castle Adventure Play
PROJECT CODE:	RA17036
PARISH:	Kilbride
NAME OF CONTRIBUTOR:	Joss Durnan and Liam McKinstry
NAME OF ORGANISATION:	Rathmell Archaeology Limited
TYPE(S) OF PROJECT:	Watching brief
NMRS NO(S):	None
SITE/MONUMENT TYPE(S):	None
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NS 01474 37954
START DATE (this season)	27 th April 2017
END DATE (this season)	27 th April 2017
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (may include information from other fields)	<p>This Data Structure Report has been prepared for the National Trust for Scotland to report minor archaeological works undertaken in the grounds of Brodick Castle, Arran. These works were in support of the planned installation of new utilities adjacent to an Adventure Play area to the northwest of Brodick Castle. The archaeological works were designed to mitigate any adverse impact on the archaeological remains within the affected areas.</p> <p>In total, one trench (divided into four areas) was excavated to identify any archaeological features within the utilities trench. This identified layers relating to the creation of the Adventure Play area, services connected to it and earlier, 19th and 20th century, services related to activity within the castle grounds. No other features or artefacts were identified during the monitoring of the utilities trench.</p>
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