

Girvan Mains AD Plant, South Ayrshire: Archaeological Evaluation



by Liam McKinstry

issued 10th August 2015

on behalf of Mr Andrew Young

RATHMELL 
ARCHAEOLOGY LTD

Quality Assurance

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Signed

Date10th August 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

Date10th August 2015....

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Introduction

1. This Data Structure Report has been prepared on behalf of Mr Andrew Young in support of the proposed erection of an Anaerobic Digestion Plant (14/01289/APP) on ground adjacent to the Girvan Waste Water Treatment Works on Girvan Mains Farm, South Ayrshire. These archaeological works were designed to mitigate any adverse impact on the archaeological remains within the development area.
2. South Ayrshire Council required a programme of archaeological works to be undertaken in support of any planning consent which may be granted by the planning authority. The West of Scotland Archaeology Service (WoSAS) who advise South Ayrshire Council on archaeological matters, provided guidance on the structure of archaeological mitigation required on this site prior to the development works.
3. A Written Scheme of Investigation (McKinstry 2015) provided the detail of the works (archaeological evaluation, exclusion, excavation, post-excavation analyses and publication) for the mitigation pertaining to any physical impact on buried sediments.

Historical and Archaeological Background

4. There are no sites within or close to the development area protected for their archaeological or historical merit under the terms of the Ancient Monuments and Archaeological Areas Act 1979 or buildings protected under the Town and Country Planning Act 1997 (Historic Scotland 1998).
5. The site lies c.750m to the NNW of Girvan Mains Farm which lies on the outskirts of the town of Girvan, South Ayrshire. The site is situated on the present day coastline with a palaeo-shoreline, which includes a high point called Gallows Hill, lying to the immediate east of the site. This palaeo-shoreline seems to have been made up of soft sedimentary rock, such as sandstone, and most likely suffered from coastal erosion in early prehistory which would leave the area in which the site was located as a wave cut platform covered in eroded material from shoreline above.
6. A number of early prehistoric sites have been identified close to the development area such as Littlehill Bridge (WoSAS Pin. 15862), Gallow Hill (WoSAS Pin. 5164) and to the north of Girvan Mains Farm (WoSAS Pin. 11406 and 20230). All of these sites produced Mesolithic period artefacts but were all located to the east of the development area on along the palaeo-shoreline. Archaeological work carried out in 1994 in advance of the construction of a sewage treatment plant to the immediate south of the development area produced no archaeology with an early prehistoric date suggesting that the development area site was submerged during that period.
7. There is the possibility that there was later prehistoric and medieval activity within the development area. Aerial photography and field walking have also identified other sites surrounding the development area such as a ring ditch (WoSAS Pin. 62053) and a large D-shaped enclosure (WoSAS Pin. 11413) located c.250m and c.300m, respectively, to the south of the development area. It is unclear as to the date of these sites but prehistoric and medieval dates cannot be ruled out. Excavations at Ladywell Farm to the northeast of the development area revealed evidence for burnt mounds and their associated features. Prehistoric and medieval dates were recovered from this site.
8. Cartographic evidence for the development area suggests that the area was always open farmland during the post-medieval and early modern period. Roy's map of the Lowlands shows Girvan Mains Farm and its associated farmland and both the 1st and 2nd edition Ordnance Surveys also show the farm and its associated fields. The boundaries of the field in which the development area is located appears to be relatively unchanged from the mid-18th century onwards.



Figure 1a: Roy's Military Survey (1752-55)



Figure 1b: 1st Ordnance Survey (1859)

Project Works

9. An archaeological evaluation was undertaken on the 8th August 2015. This consisted of the excavation of a series of intrusive trenches for the purposes of exposing an 8% sample of the available ground within the development area (roughly 0.35ha) to be archaeologically examined.
10. In total, 186.5 linear metres were excavated with a 1.6m wide bucket equalling an area of 298.4m². This slightly exceeded the 280m² required for the purposes of this investigation. The position of the trenches is depicted on the site plan below (Figure 2).
11. All works were conducted in accordance with the Chartered Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

Findings

12. In all, 6 evaluation trenches were excavated by a 13 ton excavator using a smooth 1.6m ditching bucket; details of the trenches may be found in Appendix 1 of this document. Included below is a synthesis of the findings and interpretation from these trenches.
13. The trenches were excavated through a thick layer of plough soil (001) (Figure 3a) which comprised of a moderate to very loosely compacted, mid to dark yellow-brown silty sand with frequent small stone and pebble inclusions. There was also the presence of the last potato crop grown found throughout this layer. The natural subsoil was encountered at depths of between 310 to 520mm below the top of the current ground surface.
14. The subsoil across the site consisted of bands of buried beach material (002), (003), (004), (005) and (006). The lower, western part of the site contained mainly sandy layers such as (002), Moderate to loosely compacted, light to mid orange-brown sand with occasional small (rounded) stone and pebble inclusions, and (003), a moderately compacted, mid orange-brown sand with occasional to moderate small (rounded) stone and moderate pebble inclusions. The central part of the site contained bands of fine gravel and shingle such as (004), which consisted of loosely compacted, mid grey/orange fine gravel/shingle with frequent small stone and pebble and moderate small to medium sized stone (rounded) inclusions, and (005), which consisted of Loosely compacted, mid orange-brown fine gravel with moderate small to medium sized (rounded) stone and 5-10% sand inclusions. The easternmost part of the site lay at the base of the steep sided palaeo-shoreline and contained a band of sandy silt (006) which consisted of moderately compacted, mixed mid grey and mid orange-brown silty sand with moderate to frequent small (rounded) stone and pebble and occasional medium sized (rounded) stone inclusions.
15. No significant archaeological features or artefacts were recovered from any of the trenches within the site. There was also no post-medieval or modern features or artefacts recovered apart from the recent agricultural activity in the current plough soil.

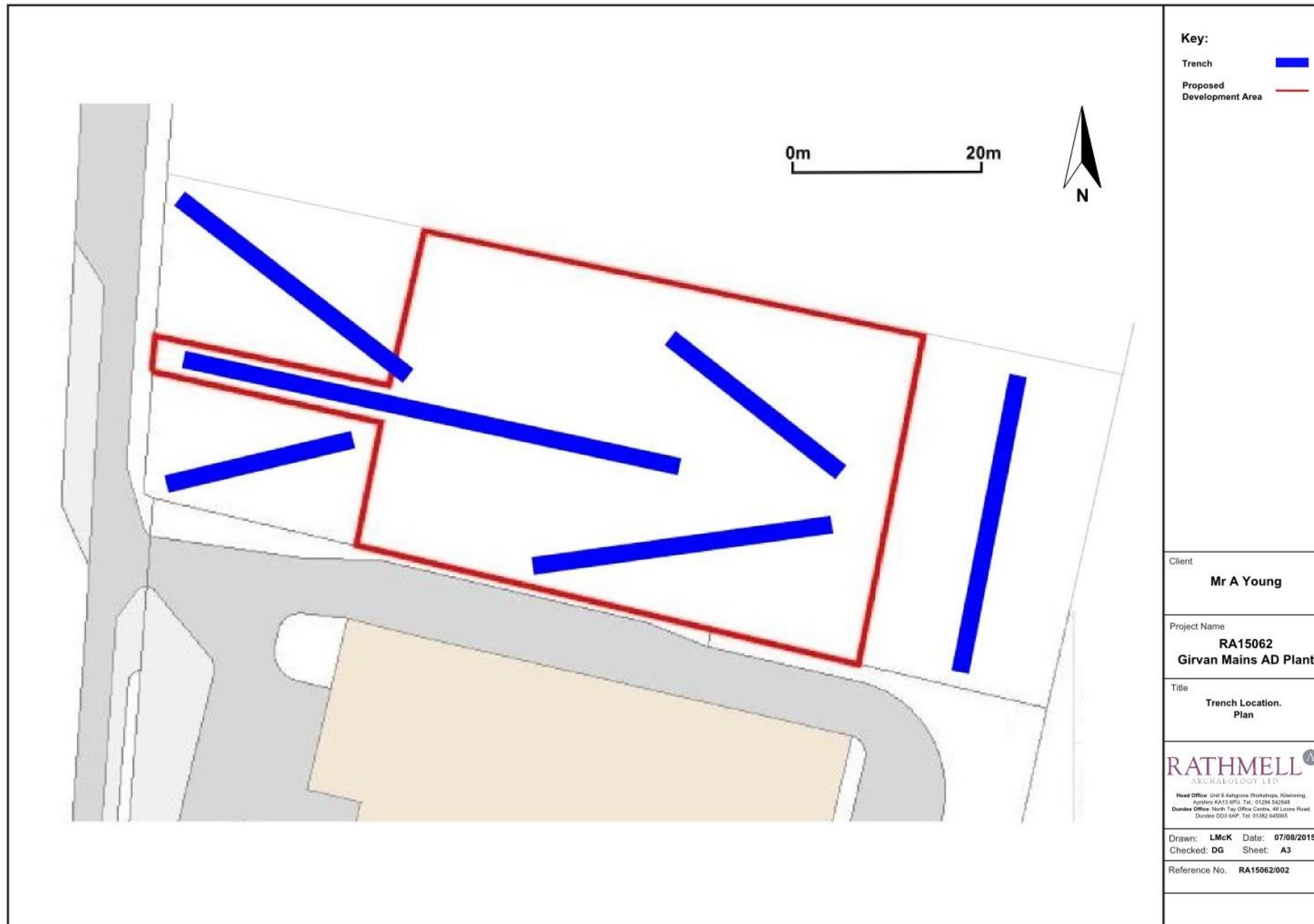


Figure 2: Trench Location Plan

Discussion

16. No significant archaeological features were uncovered during the course of the archaeological works.
17. The trenches excavated into the current plough soil within the site showed natural bands of sands, silty sands and gravel/shingle which formed a beach overlooked by an older palaeo-shoreline located to the immediate east of the development area. Much of the earliest prehistoric activity identified close to the development area was situated to the east of this older shoreline. Work carried out in 1994 before the construction of the nearby sewage treatment plant produced Mesolithic flints but all in the area to the east of the palaeo-shoreline, none within the area to the immediate south of the development area.
18. This lack of archaeological evidence from the site seems to show that most of the earliest prehistoric activity was taking place on the higher ground to the east of the palaeo-shoreline. Any artefacts of early prehistoric date which have been found along the beach at the base of the older shoreline to the north or south of the development area would seem to have got there after the formation of the current coastline, probably washed down by natural processes.

Recommendations

19. No significant archaeological remains were located within the development area and the only features observed suggested modern use of the site.
20. On balance, given the lack of significant archaeological material recovered in the course of the evaluation works, Rathmell Archaeology Ltd recommends that no further archaeological work be carried out within this development area.
21. The appropriateness and acceptability of our recommendations rest with South Ayrshire Council and their advisors, the West of Scotland Archaeology Service.



Figure 3a: General shot of development area from the NW



Figure 3b: SW facing section of Trench 2 showing the depth of the plough soil (001)



Figure 4a: Post excavation shot of Trench 2 from the E



Figure 4b: Post excavation shot of Trench 6 from the NW

Conclusion

22. A programme of archaeological works was required by Andrew Young in support of the erection of an Anaerobic Digestion Plant (14/01289/APP) on ground adjacent to the Girvan Waste Water Treatment Works on Girvan Mains Farm, South Ayrshire. The archaeological works were designed to deliver the appropriate archaeological mitigation to facilitate the development.
23. No significant archaeological remains or artefacts were uncovered.

Acknowledgements

24. The author would like to thank Andrew Young, for the opportunity to carry out these works and also to Paul Robins at the West of Scotland Archaeology Service who gave support and guidance throughout. We would also like to thank Douglas Gordon for his editing of this report.

References

Documentary

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- Scottish Government, 2011, *Planning Advice Note 2/2011: Planning & Archaeology*
- Watkinson & Neal, 1998, *First Aid for Finds*

Cartographic

- Ordnance Survey, 1859, 6-inch 1st edition, Ayrshire
- Roy, W. 1752-55. Roy's map of the Lowlands

Appendix 1: Trench Details

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

All measurement distances quoted along the trench measure based on the quoted orientation of the trench.

Trench Summary

Trench	Orientation	Size	Plough soil Depth	Subsoil Character	Modern/ Agricultural Features	Significant Features	Artefacts
1	NE-SW	1.6m by 21.3m 34.08m ²	520 to 530mm	(002) Moderate to loosely compacted, light to mid orange-brown sand with occasional small (rounded) stone and pebble inclusions. (003) Moderately compacted, mid orange-brown sand with occasional to moderate small (rounded) stone and moderate pebble inclusions.	None	None	None
2	W-E	1.6m by 51.5m 82.4m ²	420 to 460mm	(002) Moderate to loosely compacted, light to mid orange-brown sand with occasional small (rounded) stone and pebble inclusions. (003) Moderately compacted, mid orange-brown sand with occasional to moderate small (rounded) stone and moderate pebble inclusions. (004) Loosely compacted, mid grey/orange fine gravel/shingle with frequent small stone and pebble and moderate small to medium sized stone (rounded) inclusions. (005) Loosely compacted, mid orange-brown fine gravel with moderate small to medium sized (rounded) stone and 5-10% sand inclusions.	None	None	None

Trench	Orientation	Size	Plough soil Depth	Subsoil Character	Modern/ Agricultural Features	Significant Features	Artefacts
3	NE-SW	1.6m by 30m 48m ²	310 to 500mm	(005) Loosely compacted, mid orange-brown fine gravel with moderate small to medium sized (rounded) stone and 5-10% sand inclusions. (006) Moderately compacted, mixed mid grey and mid orange-brown silty sand with moderate to frequent small (rounded) stone and pebble and occasional medium sized (rounded) stone inclusions.	None	None	None
4	N-S	1.6m by 31.6m 50.56m ²	460 to 500mm	(006) Moderately compacted, mixed mid grey and mid orange-brown silty sand with moderate to frequent small (rounded) stone and pebble and occasional medium sized (rounded) stone inclusions.	None	None	None
5	NW-SE	1.6m by 22.3m 35.68m ²	330 to 430mm	(006) Moderately compacted, mixed mid grey and mid orange-brown silty sand with moderate to frequent small (rounded) stone and pebble and occasional medium sized (rounded) stone inclusions.	None	None	None
6	NW-SE	1.6m by 29.8m 47.68m ²	480 to 510mm	(002) Moderate to loosely compacted, light to mid orange-brown sand with occasional small (rounded) stone and pebble inclusions. (003) Moderately compacted, mid orange-brown sand with occasional to moderate small (rounded) stone and moderate pebble inclusions.	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	All	Deposit	Moderate to very loosely compacted, mid to dark yellow-brown silty sand with frequent small stone and pebble inclusions. There was also the presence of the last potato crop throughout this layer.	Current plough soil
002	2, 6 and 1	Deposit	Moderate to loosely compacted, light to mid orange-brown sand with occasional small (rounded) stone and pebble inclusions.	Natural subsoil/old beach layer
003	2, 6 and 1	Deposit	Moderately compacted, mid orange-brown sand with occasional to moderate small (rounded) stone and moderate pebble inclusions.	Natural subsoil/old beach layer
004	2	Deposit	Loosely compacted, mid grey/orange fine gravel/shingle with frequent small stone and pebble and moderate small to medium sized stone (rounded) inclusions.	Natural subsoil/old beach layer
005	2 and 3	Deposit	Loosely compacted, mid orange-brown fine gravel with moderate small to medium sized (rounded) stone and 5-10% sand inclusions.	Natural subsoil/old beach layer
006	3, 4 and 5	Deposit	Moderately compacted, mixed mid grey and mid orange-brown silty sand with moderate to frequent small (rounded) stone and pebble and occasional medium sized (rounded) stone inclusions.	Natural subsoil/old beach layer

Photographic Register

Image No.	Digital	Description	From	Date
001	1546	General Pre excavation shot of the site	W	06/08/15
002	1547	General Pre excavation shot of the site	NW	06/08/15
003	1548	Post excavation shot of Trench 1	NE	06/08/15
004	1549	SW facing section at western end of Trench 2	SW	06/08/15
005	1550	Post excavation shot of Trench 2	E	06/08/15
006	1551	Post excavation shot of Trench 3	NE	06/08/15
007	1552	Post excavation shot of Trench 4	N	06/08/15
008	1553	Post excavation shot of Trench 5	NW	06/08/15
009	1554	Post excavation shot of Trench 6	NW	06/08/15
010	1555	General shot of site after trenches were back filled	W	06/08/15
011	1556	General shot of site after trenches were back filled	NW	06/08/15
012	1557	Shot of the Ailsa Craig from the site entrance	E	06/08/15

Drawing Register

Drawing No.	Sheet No.	Area/ Trench	Drawing Type	Scale	Description	Drawer	Date
001	1	2	Plan	1:100	Plan of Trench 2	LMcK	06/08/15
002	1	6	Plan	1:100	Plan of Trench 6	LMcK	06/08/15
003	1	5	Plan	1:100	Plan of Trench 5	LMcK	06/08/15

Drawing No.	Sheet No.	Area/ Trench	Drawing Type	Scale	Description	Drawer	Date
004	1	4	Plan	1:100	Plan of Trench 4	LMcK	06/08/15
005	1	3	Plan	1:100	Plan of Trench 3	LMcK	06/08/15
006	1	1	Plan	1:100	Plan of Trench 1	LMcK	06/08/15

Appendix 3: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	South Ayrshire
PROJECT TITLE/SITE NAME:	Girvan Mains AD Plant
PROJECT CODE:	RA15062
PARISH:	Girvan
NAME OF CONTRIBUTOR:	Liam McKinsty
NAME OF ORGANISATION:	Rathmell Archaeology Limited
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	-
SITE/MONUMENT TYPE(S):	-
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NS 19045 00067
START DATE (this season)	8 th March 2015
END DATE (this season)	8 th March 2015
PREVIOUS WORK (incl. <i>DES</i> ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (may include information from other fields)	<p>A programme of archaeological works was required by Andrew Young in support of the erection of an Anaerobic Digestion Plant (14/01289/APP) on ground adjacent to the Girvan Waste Water Treatment Works on Girvan Mains Farm, South Ayrshire.</p> <p>No significant archaeological features were uncovered during the course of the archaeological works.</p> <p>The trenches excavated into the current plough soil within the site showed natural bands of sands, silty sands and gravel/shingle which formed a beach overlooked by an older palaeo-shoreline located to the immediate east of the development area.</p>
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Mr Andrew Young
ADDRESS OF MAIN CONTRIBUTOR:	Unit 8 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
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ARCHIVE LOCATION (intended/deposited)	Report to West of Scotland Archaeology Service and archive to RCAHMS Collections

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