Caledonian Cheese Effluent Pipeline, Dumfries & Galloway: Archaeological Mitigation

Data Structure Report



 ${}_{\text{issued }23^{rd}} \ January \ 2015$ on behalf of Caledonian Cheese Company



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 Claire Williamson Date23rd January 2015.....

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Introduction

- 1. This Data Structure Report has been prepared for Taylor Architecture Practice on behalf of Caledonian Cheese Company in respect to a consented effluent pipeline running between Stranraer and Portpatrick, Dumfries & Galloway. These archaeological works were designed to mitigate any adverse impact on the archaeological remains within the development area.
- 2. Dumfries & Galloway Council Archaeology Service, which advises Dumfries & Galloway Council on archaeological matters, provided guidance on the structure of archaeological works appropriate on this site. Rathmell Archaeology Limited has been appointed by Taylor Architecture Practice on behalf of Caledonian Cheese Company to undertake the development and implementation of archaeological mitigation works.
- 3. The Written Scheme of Investigation (Williamson 2014) provided the detail of the works (archaeological monitoring, exclusion, excavation, post-excavation analyses and publication) for the mitigation pertaining to ground breaking within the development area and hence the direct physical impact on buried sediments.

Development Summary

- 4. The development is a new effluent pipeline running from a holding tank at the Stranraer factory with the aim of fulfilling the requirements of SEPA and current EU Directives relating to water quality, particularly Loch Ryan where the current effluent is discharged to. The pipe is 200mm in diameter and broadly followed the route of the now-dismantled Stranraer to Portpatrick railway line. The pipeline was buried within the former railway solum, with several gantry framework-type support bridges erected across watercourses where previous railway structures were removed.
- 5. Trenches crossed roads on the periphery of Stranraer, and the A77 at Craigenquarroch, midway between Lochans and Portpatrick. The discharge point in the North Channel was designed to allow effluent to be dispersed by the deep and fast flowing tidal waters. This route was chosen as it offered advantages in terms of gradients, ground conditions, directness (11km), as well as avoiding existing services and consists of largely unused and overgrown land.

Archaeological and Historical Background

6. Along the route, and within the terrestrial and maritime buffers, some 34 heritage sites were identified through a desk-based assessment (Williamson 2013; Figure 1). The majority of the proposed route sat within the cutting of a former railway line (S1 in Williamson 2013) and as such the potential impact to surrounding archaeological sites was low. Cognisance of this report is recommended to understand the scope and character of the known historic environment along this pipeline.

Mitigation Strategy

- 7. The applications for planning consent encompassed a proposed programme of works to be implemented to mitigate the potential adverse impacts from the proposed development. Two specific adverse impacts were anticipated, both having the potential to create significant impacts should important assets exist in specific locations:
 - The cutting of track for the new pipeline; and
 - The seabed installation of outfall pipe.
- 8. Where these works lay within the extent of the railway line the protocols proposed were to avoid conflict with upstanding railway infrastructure and for the ground to be reinstated to reform the railway landscape.
- 9. A programme of archaeological monitoring of the development works was defined where the pipeline left the railway and there was a reasonable potential for archaeological

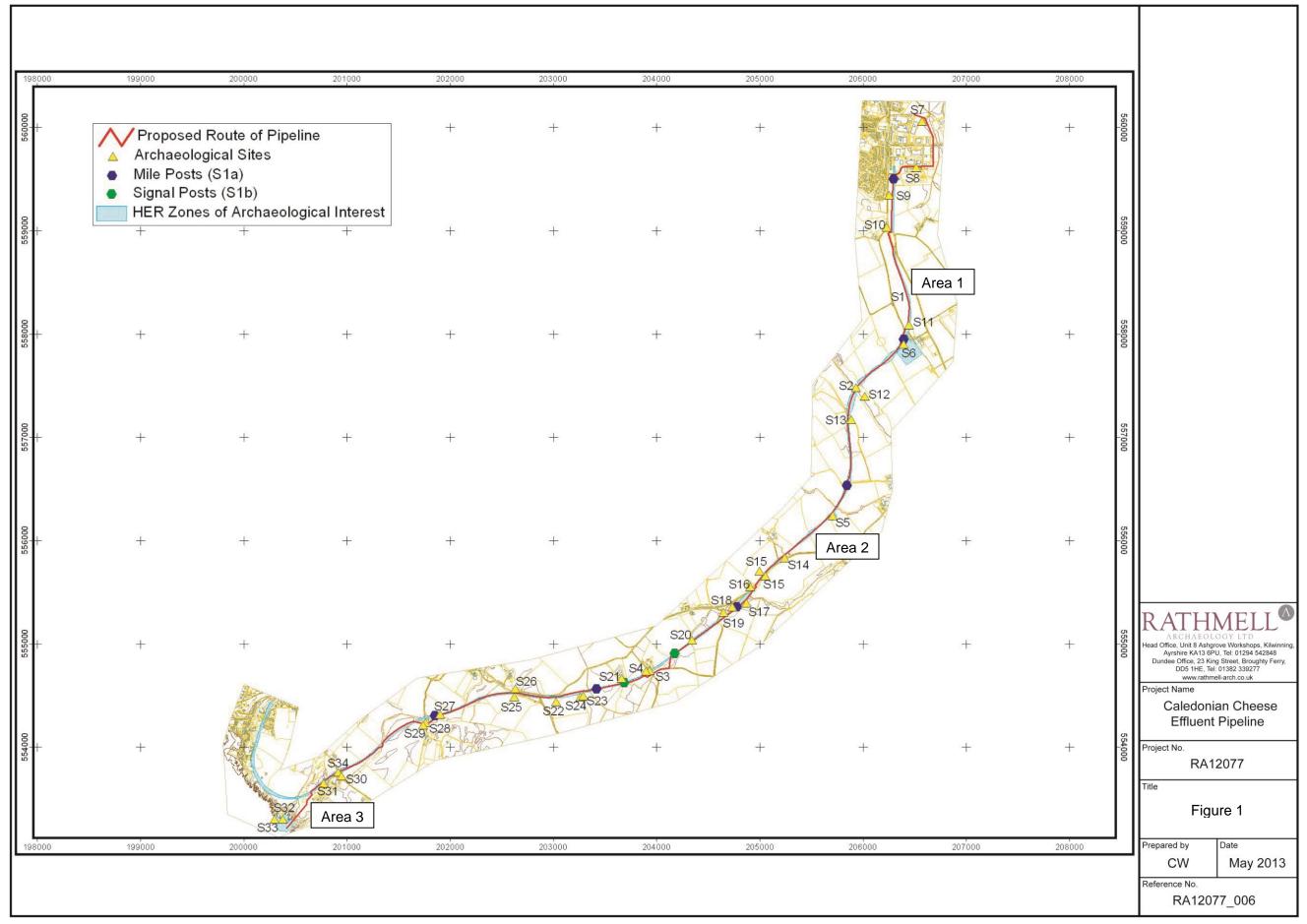


Figure 1: Overview Map of Archaeological Sites (extracted from Williamson 2013) with the three monitoring areas labelled

discoveries. Further, a Protocol for Archaeological Discoveries was put in place for unexpected or incidental finds along the route – including any foreshore or seabed work.

Project Works

- 10. Based on the findings of the desk-based assessment (Williamson 2013), only three areas were identified which required archaeological monitoring (Figure 1). As laid out in the Written Scheme of Investigation (Williamson 2014, 5-6), these areas were:
 - ❖ Area 1 the section of the proposed route which sat outwith the railway cutting near to Site 6, starting at the point where the route crossed the road at Whinstanes and running south until the route fell back into the cutting;
 - ❖ Area 2 the section of the proposed route which sat outwith the railway line cutting where it overlay the lower slopes of the hill on which Kilhilt settlement lies, to the south of Site 5; and
 - ❖ Area 3 the section falling from the railway line to the point where the pit for the directional drilling was established.
- 11. This Data Structure Report covers the findings from all three areas, which were monitored over four visits.
- 12. Area 1 was monitored over two visits: the first ran between the 4th and the 9th July 2014, with the second occurring on the 23rd July 2014. Monitoring works in Area 2 were carried out from the 25th August to the 27th August 2014, and in Area 3 they were carried out on the 9th December 2014.
- 13. In each area, the groundbreaking works were monitored until the upper surface of the underlying natural subsoil was exposed. All groundbreaking works were carried out by a 360° tracked excavator using a smooth ditching bucket.
- 14. In compliance with the Written Scheme of Investigation (Williamson 2014) any potential archaeological features were investigated and recorded. All works were conducted in accordance with the Institute for Archaeologists' Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

Findings

Area 1

- 15. The section of the route identified as Area 1 sat within enclosed agricultural fields adjacent to the line of the railway. The route was crossed by a roadway near to its northern end, splitting the monitored area into two sections: the northern section which sat to the north of the road, and the southern section which sat to the south (Figure 2). The point where the route crossed the road itself was not monitored, as the insertion of the road was judged to have already disturbed any potential archaeological features which may have been underlying it.
- 16. The northern section, running roughly north-north-west to south-south-east, measured approximately 900m in length and 4 to 6m wide (Figure 3a), totalling a minimum area approximately 3600m² in size. The southern section, running roughly north-north-east to south-south-west, measured approximately 133m in length and 4m wide, totalling an area approximately 532m² in size.
- 17. Prior to excavation the entire area was covered by turf and topsoil (001)/(013) which comprised a moderately compact mid-grey brown sandy silt with occasional small stones and gravel inclusions. It contained sherds of modern pottery, as well as wire and plastic artefacts which were particularly frequent near to the entrance of the field at the southern end. Across the northern section the topsoil ranged in depth from 180 to 680mm (Figure 3b), while in the southern section it ranged from 180 to 470mm.

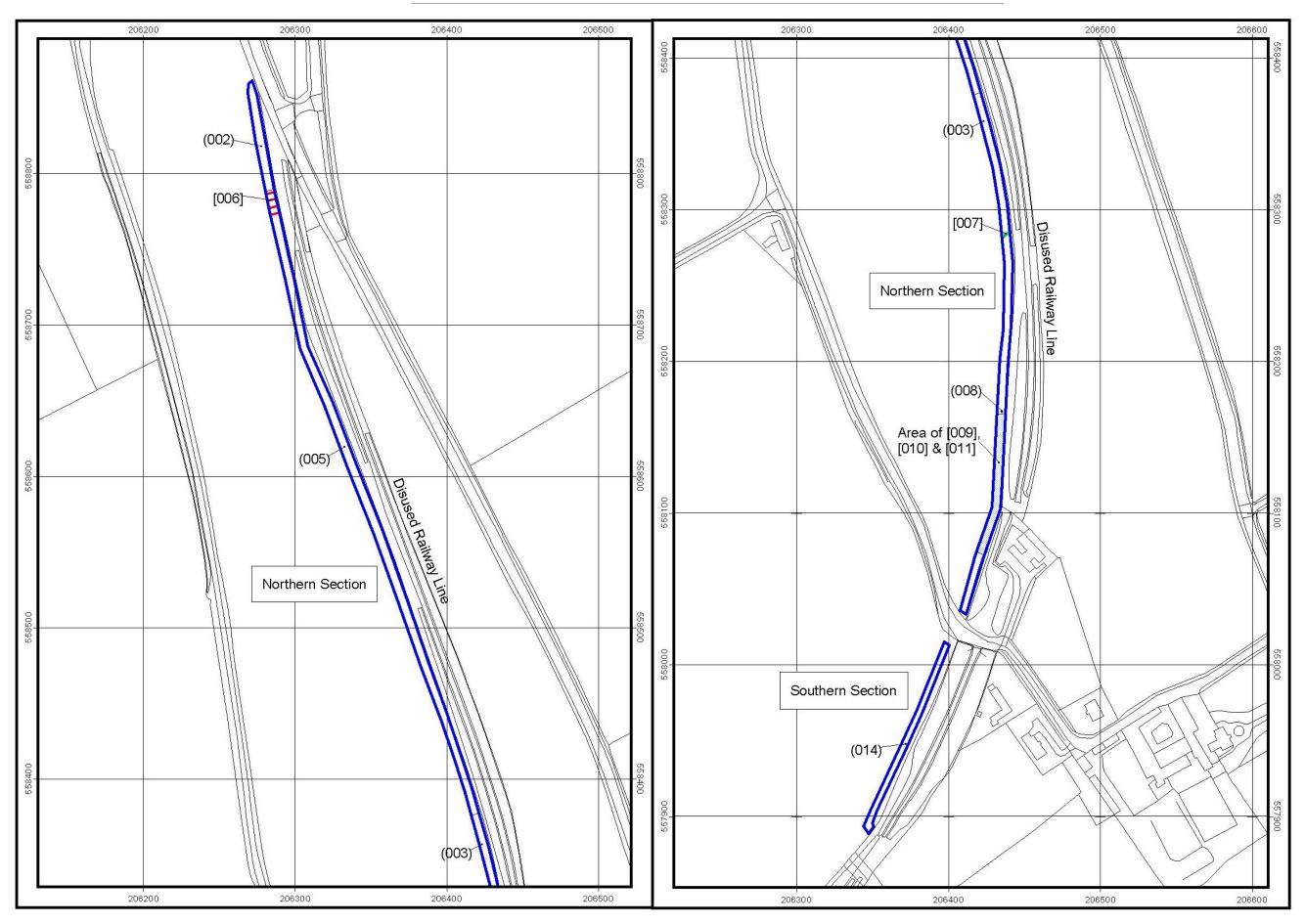


Figure 2: Plan of monitored areas in Area 1 (outlined in blue)



Figure 3a: Sample shot of northern stripped section in Area 1 from the southwest



Figure 3b: Shot of pipe trench in northern section in Area 1 from the southwest

- 18. The works removed the topsoil to reveal natural subsoil lying beneath. The natural subsoil across the northern section varied between (002), (003) and (005). (002) comprised a moderately compact mid-orange/yellow-brown silt with patches of sand, containing occasional small stones and pebbles. (003) comprised a moderately compact light to mid-orange/yellow brown sandy silt with some clay patches, containing occasional small pebbles and very occasional larger stones. (005) comprised a very compact light orange/red sandy silt and gravel with occasional small to larger stone inclusions.
- 19. The natural subsoil across the entirety of the southern section consisted of (014), a moderate to firmly compacted light to mid-orange brown sandy silt with frequent small stone and gravel inclusions, and occasional medium sized stones.
- 20. A series of four linear features [006] ran across the northern section at approximately 75m from its north-north-west end. These ran east-north-east to west-south-west, each measuring 1.2m wide and 80mm deep. They sat with intervening gaps of 3 to 4m and were filled by topsoil (001). They appeared to represent modern agricultural furrows.
- 21. Starting at approximately 207m from the north-north-west end of the northern section, deposit (004) ran along the length of the eastern side of the stripped area to the south for a distance of approximately 468m, varying in width between 1 to 3m (not shown on plan). (004) consisted of a very compact light to mid-orange/red/grey brown sandy silt with some clay patches, containing occasional small stones and pebbles, and very occasional larger stones. It appeared to represent an area of disturbed subsoil running along the boundary fence which ran parallel slightly to the east of the stripped area, and was likely related to the construction of the adjacent railway.
- 22. At approximately 600m from the north-north-west end of the northern section, the trench for a modern water pipe [007] crossed the stripped area, running northeast to southwest. It measured 0.4m wide and 300mm deep, with a light orange mixed clay fill containing a plastic pipe at the base.
- 23. A spread of modern rubbish (008) covered a small area measuring 1.5m by 1m and 210mm deep, located approximately 720m from the north-north-west end of the northern section. It comprised a loosely compacted dark grey/black sandy silt with very frequent coal and stone inclusions. It contained frequent finds of modern pottery, glass and metal.
- 24. Starting at the southern side of (008) and continuing until approximately 40m from the south-south-east end of the section, a series of rubble field drains were present. [009], running north-north-east to south-south-west along the eastern edge of the area, measured 0.25 to 0.3m wide and 170 to 200mm deep, and represented the main drain into which the others fed. [010] represents a series of drains which ran west to east into the western side of [009] at its northern end. Individually they were each 0.2m wide and 180mm deep. [011] was a series of drains which fed into the western side of [009] towards its southern end. These had the same dimensions as [010] but ran west-southwest to east-north-east. [009], [010] and [011] were all filled by a mix of topsoil and orange brown clay with frequent small stone inclusions.
- 25. There were no archaeological features uncovered in the southern section.
- 26. No significant archaeological features were revealed within either of the two areas stripped in Area 1.

Area 2

- 27. The section of the route in Area 2 also sat within enclosed agricultural fields adjacent to the line of the railway. It ran across two fields which were separated by a small stream along their joint boundary, dividing the stripped area into two sections (Figure 4).
- 28. The portion which sat in the northeast field measured 176m in length and approximately 5m wide, covering a total area of approximately 880m². The portion which sat in the southwest field measured 220m in length and approximately 5m wide, covering a total area of approximately 1100m². Both ran roughly northeast to southwest.

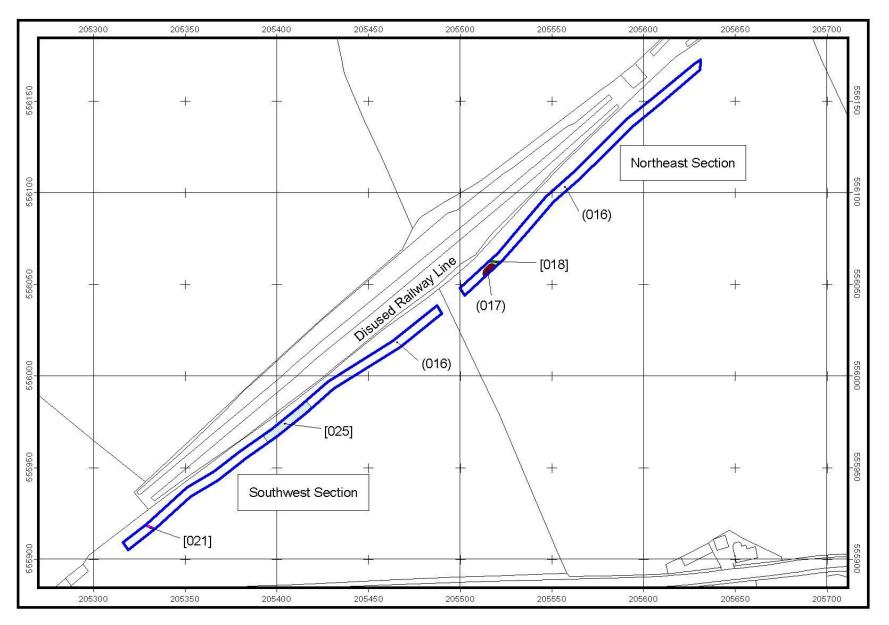


Figure 4: Plan of monitored areas in Area 2 (outlined in blue)



Figure 5a: Sample shot of northeastern stripped section in Area 2 from the northeast



Figure 5b: Southeast facing section through [025] showing field drain at base

- 29. Prior to excavation the entire area was covered by turf and topsoil (015) which comprised a mid- to dark brown sandy silt with frequent small stone inclusions. This ranged in depth from 160 to 300mm.
- 30. The works removed the topsoil to reveal natural subsoil underlying it. The natural subsoil across the whole area consisted of (016), a mid- to dark orange silt with frequent stone inclusions (Figure 5a).
- 31. Approximately 15m from the southern end of the northeast section, an area of peat (017) was uncovered. This measured 10m by 3.7m in extent, and was located against the eastern edge of the stripped area, although continued outwith the edge of the area further to the east.
- 32. Just to the north of peaty area (017) sat linear feature [018]. This ran west to east across the stripped area and measured 7.4m long (as exposed) by 0.45m wide. It was filled by rubble and appeared to be a field drain.
- 33. Lying within the first 20m at the southern end of the southwest section, sat the cut for a modern water pipe [021]. This ran east to west across the stripped area and measured 4.2m long (as exposed) and 2.9m wide, filled by topsoil (015). On either side of this sat deposit (022) which comprised of re-deposited topsoil covering an extent measuring 9.1m by 1.7m and up to 100mm deep. This appeared to represent disturbance relating to the insertion of the water pipe.
- 34. Approximately 95m from the southern end of the northeast section, sat large cut [025]. When excavated, a number of field drains were revealed at its base (Figure 5b); it appears that it was originally dug for the purpose of their insertion. As exposed, [025] measured 30m by 5.5m although it continued outwith the edges of the stripped area. Its maximum depth was 800mm and it was filled by (026) which comprised a mix of topsoil, grey and orange clay and moderately compact grey gravel. It sat in a natural dip in the surrounding landscape, at a point where water was likely prone to collecting, causing the need for the insertion of a number of field drains.
- 35. No significant archaeological features were revealed within either of the two areas stripped in Area 2.

Area 3

- 36. The section of the route in Area 3 ran from the edge of the railway embankment across an open grassed area close to coastal cliff line, at the edge of a caravan park (Figures 6 and 7a). Some of the area had been landscaped as part of the caravan park, with a gravelled roadway crossing the line of the route near to its northern end. The stripped area did not cross this roadway but instead left a gap across it, splitting the stripped area into two sections. As nothing significant appeared elsewhere in this area, and due to the disturbance likely caused by the landscaping carried out when the roadway was created, this gap was left unmonitored. This decision was agreed with the Dumfries & Galloway Archaeology Service.
- 37. The southern section, running southeast to northwest, measured 105m in length and 3m wide, totalling an area of approximately 315m². The northern section, running southwest to northeast, measured 34m in length and 3m wide, totalling an area of 102m².
- 38. Prior to excavation the entire area was covered by turf and topsoil (027), which comprised a moderately compacted mid-orange/brown slightly clayey silt with frequent rootlets and small stone inclusions. It also contained sherds of glazed white earthenware and other modern finds, such as a metal teaspoon. Across the southern section, (027) ranged in depth between 300 to 500mm, while across the northern section it ranged in depth from 300 to 600mm.
- 39. At approximately 40m from the southern end of the southern section, a modern gravel drain [032] crossed the trench running roughly east to west measuring 0.7 to 0.8m wide. This drain sat at surface level within the topsoil (027), and was put in place as part of the landscaping for the caravan park.

- 40. The works removed the topsoil to reveal natural subsoil underlying it. The natural subsoil across the southern section consisted of (028) and (029). (028) was present for the first 11.8m at the southeastern end of the section and comprised a compact dark yellow slightly sandy silt with patches of exposed red sandstone bedrock. After this the subsoil changed to (029), which comprised a loose dark red brown sandy gravel with some larger stones. (029) was present across the rest of the southern section. The natural subsoil across the entirety of the northern section consisted of (030), a very compact pale to mid-orange/brown silty clay with frequent stone inclusions.
- 41. The only other deposit recorded within either stripped area in Area 3 was (031). This consisted of a compact dark brown clayey silt with frequent roots, very frequent small-medium sized angular stones and frequent modern inclusions, such as fragments of red tile field drain. It was revealed in section overlying the topsoil (027) (Figure 7b) along the full length of the northwestern side of the northern stripped area, and measured between 150 to 350mm thick (thickest at the northeastern end). This deposit represented the base of the embankment along the edge of the railway line which sat slightly further to the northwest, and which the stripped area cut slightly into.
- 42. No significant archaeological features were revealed within either of the two areas stripped in Area 3.

Artefacts

43. Several artefacts were recovered from the topsoil across Areas 1 and 2, including fragments of modern glass, an iron bolt, a horseshoe and sherds of glazed white earthenware. All of the artefacts recovered from site appear to date from the 19th or 20th century, relating to modern activity from this period.

Discussion

- 44. The excavation works failed to identify any significant archaeological features within the monitored areas, only revealing features which related to modern 19th and 20th century activity.
- 45. The presence of field drains in both Areas 1 and 2 shows evidence for improvement across the fields relating to their continuous use for agriculture throughout at least the 19th and 20th centuries. The furrows [006] in Area 1 also indicate this. This continued use as enclosed fields for agriculture is visible on the historic mapping across both areas, with the only alterations being minor changes in the layout of the boundaries due to the insertion of the railway line in the 19th century.
- 46. Indeed, the complex of field drains sitting within large cut [025] show that some amount of effort was expelled in trying to maintain the ground for agricultural use. It also implies that some areas were prone to waterlogging, something also suggested by the presence of peat (017) elsewhere.
- 47. Some of the features uncovered did appear to be related to the railway line itself. In Area 3, one of the stripped areas cut slightly into the base of the adjacent railway embankment which sat upon higher ground. The section of this area revealed the composition of the railway embankment as having been built up with what appeared to be a mixture of topsoil and gravel (031), which had been laid over the top of the existing topsoil. Deposit (004) in Area 1 also showed an area of built up material which ran along the fenceline flanking the edge of the railway, which was also likely to have been built up or deposited during the railway's construction.
- 48. The remainder of the features uncovered were very recent, i.e. 20th century in date, and comprised of modern services (007) and (021), and a deposit of modern dumped material (008).
- 49. The lack of significant archaeological features uncovered may simply be a result of the nature of the works which only exposed a small sample of the ground, with the stripped areas only being between 3 to 5m in width. While there is the possibility that no significant remains are present, it could also be possible that the stripped area managed

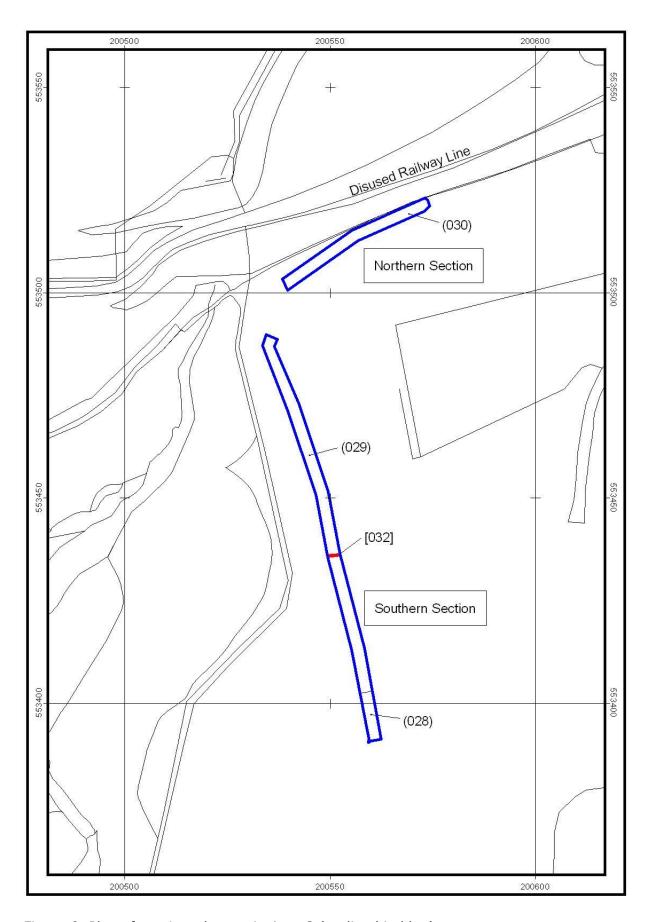


Figure 6: Plan of monitored areas in Area 3 (outlined in blue)



Figure 7a: General shot of Area 3 from the northeast



Figure 7b: Southeast facing section of northern section in Area 3 showing deposit (031) overlying topsoil (027)

to just miss what may still be present elsewhere.

50. Area 3 sat within the grounds of a caravan park and it was uncertain whether earlier landscaping would have caused substantial disturbance to the underlying deposits. The monitoring works revealed that while substantial landscaping works had been carried out near to the northern end, where the gravel roadway sat, the majority of the area did not appear to have been too disturbed. While being close to the coast and nearby Dunskey Castle did suggest a high potential for earlier remains to be present here, the lack of finds may be a result of the position of the proposed route which ran very close to the edge of the steep cliffs which dominate this part of the coastline. It is possible that buried archaeological remains could still survive sitting slightly further inland.

Recommendations

- 51. The archaeological monitoring works failed to identify any significant archaeological features, and the only features revealed appeared to be the result of modern 19th and 20th century activity. Due to this, no further archaeological works are recommended as a direct consequence of these works.
- 52. The appropriateness and acceptability of our recommendations rest with Dumfries & Galloway Council and their advisors, the Dumfries & Galloway Council Archaeology Service.

Conclusion

- 53. Archaeological monitoring works were carried out in respect to a consented effluent pipeline running between Stranraer and Portpatrick, Dumfries & Galloway. The archaeological works were designed to mitigate any adverse impact on the archaeological remains within the development area.
- 54. While the majority of the proposed route for the pipeline sat within the cutting of a disused 19th century railway line, a small number of sections fell outwith the line and into previously undisturbed ground. Based on the presence of known archaeological sites within the surrounding area and also the nature of the landscape itself, three of these sections were subject to archaeological monitoring.
- 55. No significant archaeological features were revealed throughout the course of the monitoring works. The only features discovered related to modern 19th to 20th century activity within the area.

Acknowledgements

56. The author would like to thank Liam McKinstry and Leah Kyle who carried out the monitoring works in Areas 1 and 2 respectively. I am grateful to Taylor Architecture Practice and Caledonian Cheese Company for allowing us the opportunity to carry out these works and also to Dumfries & Galloway Council Archaeology Service who gave guidance throughout the project. Thanks also go to Arnaud Canonne and Steven Morrow who acted as our site liaisons for organising the schedule of monitoring works on site. I would also like to thank Dr Louise Turner for her final editing of this report.

References

- Williamson, C. 2013 Caledonian Cheese Effluent Pipeline, Dumfries & Galloway: Archaeological Mitigation, Desk-Based Assessment. Unpublished commercial report by Rathmell Archaeology Ltd
- Williamson, C. 2014 Caledonian Cheese Effluent Pipeline, Dumfries & Galloway: Archaeological Mitigation, Written Scheme of Investigation. Unpublished commercial report by Rathmell Archaeology Ltd

Appendix 1: Registers

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

Context Register

Context	Area/ Trench	Туре	Description	Interpretation
001	Area 1 (N)	Deposit	Moderately compact mid grey brown sandy silt with occasional small stones and gravel and occasional modern pottery and flint chunks. Measured 180 to 680mm in thickness.	Topsoil across northern section in Area 1
002	Area 1 (N)	Deposit	Moderately compact mid orange/yellow-brown silt with patches of sand, containing occasional small stones and pebbles.	Natural subsoil
003	Area 1 (N)	Deposit	Moderately compact light to mid- orange/yellow brown sandy silt with some clay patches, containing occasional small pebbles and very occasional larger stones.	Natural subsoil
004	Area 1 (N)	Deposit	Very compact light to mid- orange/red/grey brown sandy silt with some clay patches, containing occasional small stones and pebbles, and very occasional larger stones. Full extent unknown but runs along the boundary fence which sits to the east of the stripped area.	Disturbed subsoil – either caused by agricultural activity or more likely, by the insertion of the railway tracks which run parallel to the boundary.
005	Area 1 (N)	Deposit	Very compact light orange/red sandy silt and gravel with occasional small to larger stone inclusions.	Natural subsoil
006	Area 1 (N)	Feature	Linear in plan running ENE-WSW. Measured 1.2m wide and 80mm deep. Filled by topsoil (001). Four in total spaced at intervening intervals of 3 to 4m.	Modern agricultural furrows
007	Area 1 (N)	Feature	Linear in plan running NE-SW. Measured 0.4m wide and 300mm deep. Vertical sides and a sharp break of slope. Filled by a light orange mixed clay containing a plastic pipe at the base.	Modern water pipe trench
008	Area 1 (N)	Deposit	Loosely compacted dark grey/black sandy silt with very frequent coal and stone inclusions. Also containing modern pottery, glass and metal finds. Extent measured 1.5m by 1m and 210mm deep.	Spread of modern rubbish, probably related to the railway

Context	Area/ Trench	Туре	Description	Interpretation	
009	Area 1 (N)	Feature	Linear in plan running NNE-SSW. Measured 0.25 to 0.3m wide, and 170 to 200mm deep. Filled by mix of topsoil and orange brown clay with frequent small stone inclusions.	Field drain of 19 th to 20 th century date. Fed into by some of the other drains – (010) and (011)	
010	Area 1 (S)	Feature	Linear in plan running E-W. Measured 0.2m wide and 180mm deep. Filled by mix of topsoil and orange brown clay with frequent small stone inclusions. Two in total.	Field drains of 19th to 20th century date	
011	Area 1 (S)	Feature	Linear in plan running ENE-WSW. Measured 0.2m wide. Filled by a mix of topsoil and orange brown clay with frequent small stone inclusions.	Field drains of 19th to 20th century date	
012	-	-	Void	Void	
013	Area 1 (S)	Deposit	Moderately compacted mid-grey brown sandy silt with occasional inclusions of small stones and gravel, modern wire and plastic. Measured 180 to 470mm in thickness.	Topsoil across southern section in Area 1	
014	Area 1 (S)	Deposit	Moderate to firmly compacted light to mid orange brown sandy silt with frequent small stone and gravel inclusions, and occasional medium sized stones.	Natural subsoil	
015	Area 2	Deposit	Mid- to dark brown sandy silt with frequent small stone inclusions. Maximum depth of 300mm.	Topsoil across Area 2	
016	Area 2	Deposit	Mid- to dark orange silt with frequent stone inclusions.	Natural subsoil	
017	Area 2	Deposit	Dark brown peat at southern end of NE field. Measured approximately 10m by 3.7m in extent although continued outwith the boundaries of the stripped area.	Peat bog located at southern end of NE field in Area 2	
018	Area 2	Feature	Linear in plan running E-W. Measured roughly 7.4m long by 0.45m wide, although continued outwith the extent of the stripped area. Filled by rubble.	Rubble field drain	
019	-	-	Void	Void	
020	-	-	Void	Void	
021	Area 2	Feature	Linear in plan running E-W. Measure 4.2m long by 2.9m wide although continued outwith the extent of the stripped area. Filled by topsoil (015).	Modern water pipe trench	

Context	Area/ Trench	Туре	Description	Interpretation
022	Area 2	Deposit	Area of re-deposited topsoil. Measured 9.1m by 5m in extent, and 30mm thick.	Deposit which had been disturbed by the insertion of water pipe [021]
023	-	-	Void	Void
024	-	-	Void	Void
025	Area 2	Cut	Linear in plan. Measured approximately 37m by 5.5m and 800mm deep. Contained several field drains present at base. Filled by (026).	Large cut which appears to relate to the insertion of several field drains. Sits in a natural dip in the landscape suggesting that this was where water may have collected, causing the need for the insertion of the field drains
026	Area 2	Fill	Mix of topsoil, grey and orange clay and moderately compact grey gravel. Measured approximately 37m by 5.5m in extent and 800mm deep.	Fill of [025]
027	Area 3	Deposit	Moderately compacted mid- orange/brown slightly clayey silt with frequent rootlets and small stone inclusions. Also contained sherds of white glazed white earthenware and modern artefacts e.g. metal teaspoon. Ranges in depth from 300-500mm across southern section, and 300-600mm across northern section.	Topsoil across Area 3
028	Area 3	Deposit	Compact dark yellow slightly sandy silt with patches of exposed red sandstone which may have been bedrock. Exposed for first 11.8m at southern end of southern section.	Natural subsoil
029	Area 3	Deposit	Loose dark red brown sandy gravel with some larger stones. Present across majority of southern section.	Natural subsoil
030	Area 3	Deposit	Very compact pale to mid- orange/brown silty clay with frequent stone inclusions. Present across whole of northern section.	Natural subsoil
031	Area 3	Deposit	Compact dark brown clayey silt with frequent roots, very frequent small-medium sized angular stones and modern inclusions e.g. fragments of red tile field drain. Exposed along NW section of northern section overlying topsoil (027). Measured 150-350mm deep (deepest at NE end) and ran full length of section (34m). Extended further to the NW.	Made ground which formed embankment for railway line which sat to the NW of the stripped area

Context	Area/ Trench	Туре	Description	Interpretation
032	Area 3	Feature	Gravel surface drain running roughly east to west. Measured 0.7 to 0.8m wide. Continues outwith the extent of the stripped area to the east and slightly to the west. Located at approximately 40m from the southern end of the southern section.	Modern surface drain, 20th century in date, put in as part of the caravan park

Photographic Register

Image	Digital	Description	From	Date
01	090717	Area 1 - view of trench 1 before excavation	S	04/07/14
02	090905	Area 1 - view of stripped area at +18m	N	04/07/14
03	103002	Area 1 - view of stripped area at +40m	N	04/07/14
04	113338	Area 1 - view of stripped area at +90m	N	04/07/14
05	124842	Area 1 - view of stripped area at +135m	N	04/07/14
06	160929	Area 1 - view of stripped area at +180m	N	04/07/14
07	228	Area 1 – view of excavated area	NE	07/07/14
08	229	Area 1 – view of 207m, shows shape of field	ENE	07/07/14
09	230	Area 1 – view of stripped area at +220m	SW	07/07/14
10	231	Area 1 – view of stripped area at +270m	SW	07/07/14
11	232	Area 1 – view of NE facing section of trench at +261m	NE	07/07/14
12	233	Area 1 – view of stripped area at +315m	SW	07/07/14
13	234	Area 1 – view of NE facing section of trench at +315m	NE	07/07/14
14	235	Area 1 – view of trench at +360m	SW	07/07/14
15	236	Area 1 – view of disused rail tracks	SE	07/07/14
16	237	Area 1 – view of disused rail tracks	NW	07/07/14
17	238	Area 1 – view of stripped area at +405m	SW	07/07/14

Image	Digital	Description	From	Date
18	239	Area 1 – view of stripped area at +480m	SW	07/07/14
19	240	Area 1 – view of stripped area at +495m	SW	07/07/14
20	241	Area 1 – view of stripped area at +495m	NE	07/07/14
21	242	Area 1 – view of stripped area at +540m	SW	08/07/14
22	-	Void	-	-
23	243	Area 1 – view of pipe (007)	NNE	08/07/14
24	244	Area 1 – view of stripped area at +630m	SSW	08/07/14
25	245	Area 1 – view of stripped area at +675m	SSW	08/07/14
26	246	Area 1 – view of stripped area at +698m	SSW	08/07/14
27	247	Area 1 – general view at +698m	SSW	08/07/14
28	248	Area 1 – view of modern pit at +723m	NNE	08/07/14
29	249	Area 1 – view of pipe trench at NX 06280 58838	SW	08/07/14
30	250	Area 1 – view of spread (008)	WSW	08/07/14
31	251	Area 1 – view of section at +720m	SSE	08/07/14
32	252	Area 1 – view of section at goal posts at +747m	NNE	08/07/14
33	253	Area 1 – modern drain (009) at +774m	NNE	09/07/14
34	254	Area 1 – view of pipe trench at NX 06331 58639	SW	09/07/14
35	255	Area 1 – view of stripped area at +810m	SSE	09/07/14
36	256	Area 1 – view of stripped area at +855m	SSE	09/07/14
37	257	Area 1 – final shot of stripped area at +909m	SSE	09/07/14
38	45	Area 1 – pre-excavation view of Trench 2	N	23/07/14
39	46	Area 1 – southern section, view of stripped area at +18m	SW	23/07/14
40	47	Area 1 – southern section, view of stripped area at +36m	SW	23/07/14
41	48	Area 1 – southern section, view of stripped area at +54m	N	23/07/14
42	49	Area 1 – southern section, view of stripped area at +81m	SW	23/07/14

Image	Digital	Description	From	Date
43	139	Area 2 – gorse removal	SE	25/08/14
44	140	Area 2 – working shot/gorse removal	SE	25/08/14
45	141	Area 2 – peat bog area	SE	25/08/14
46	142	Area 2 – peat bog area	SE	25/08/14
47	143	Area 2 – peat bog area	SE	25/08/14
48	144	Area 2 – working shot of rubble drain	SE	25/08/14
49	145	Area 2 – general shot	NE	25/08/14
50	146	Area 2 – working shot	S	25/08/14
51	147	Area 2 – small pit [019] (Voided)	ESE	25/08/14
52	148	Area 2 – working shot	SE	26/08/14
53	149	Area 2 – working shot showing beginning of railway embankment	S	26/08/14
54	150	Area 2 – general shot of area after stripping day 2	SE	26/08/14
55	151	Area 2 – general shot of area stripped on day 1	NE	26/08/14
56	152	Area 2 – area stripped on day 2	NE	26/08/14
57	153	Area 2 – shot of embankment and pipe cut	S	26/08/14
58	154	Area 2 – NW facing section at end of whole area	NW	26/08/14
59	155	Area 2 – shot of 26m stripped in NE field on day 2	NE	26/08/14
60	156	Area 2 – shot of 26m stripped in NE field on day 2	NE	26/08/14
61	157	Area 2 – NE field, view of stripped area at +20m from NE end	NE	26/08/14
62	158	Area 2 – NE field, NW facing section at +20m from NE end	NW	26/08/14
63	159	Area 2 – NE field, view of stripped area at +40m from NE end	NE	26/08/14
64	160	Area 2 – NE field, view of stripped area at +40m from NE end	SE	26/08/14
65	161	Area 2 – NE field, NW facing section at +20m from NE end	NW	26/08/14
66	162	Area 2 – NE field, view of stripped area at +60m from NE end	NE	26/08/14
67	163	Area 2 – NE field, NW facing section at +60m from NE end	NW	26/08/14

Image	Digital	Description	From	Date
68	164	Area 2 – NE field, view of stripped area at +80m from NE end	NE	26/08/14
69	165	Area 2 – NE field, NW facing section at +80m from NE end	NW	26/08/14
70	166	Area 2 – NE field, view of stripped area at +100m from NE end	NE	26/08/14
71	167	Area 2 – NE field, shot of bog running E-W	NW	26/08/14
72	168	Area 2 – NE field, shot of bog running E-W	E	26/08/14
73	169	Area 2 – general shot	SE	26/08/14
74	170	Area 2 – SW field, general shot	NE	26/08/14
75	171	Area 2 – SW field, general shot	SSE	26/08/14
76	172	Area 2 – Working shot	S	26/08/14
77	173	Area 2 – SW field, view of stripped area at +20m from SW end	NNE	26/08/14
78	174	Area 2 – SW field, water drainage pipe [021]	E	26/08/14
79	175	Area 2 – working shot	SSE	26/08/14
80	176	Area 2 – SW field, view of stripped area at +40m from SW end	NNE	26/08/14
81	177	Area 2 – SW field, deposit of quarried stone (023)	NE	26/08/14
82	178	Area 2 – SW field, NNW facing section at +40m from SW end	NNW	26/08/14
83	179	Area 2 – SW field, view of stripped area at +60m from SW end	NE	26/08/14
84	180	Area 2 – SW field, view of stripped area at +60m from SW end	NE	26/08/14
85	181	Area 2 – SW field, NNW facing section at +60m from SW end	NNW	26/08/14
86	182	Area 2 – SW field, view of stripped area at +80m from SW end	NE	26/08/14
87	183	Area 2 – SW field, NNW facing section at +80m from SW end	NNW	26/08/14
88	184	Area 2 – SW field, general shot of three possible postholes	NE	26/08/14
89	185	Area 2 – SW field, view of stripped area at +100m from SW end	NE	26/08/14
90	186	Area 2 – SW field, shot of possible culvert and rubble drain	NE	26/08/14
91	187	Area 2 – SW field, general shot of slope running to stream	ESE	27/08/14
92	188	Area 2 – SW field, view of stripped area at +220m from SW end	NE	27/08/14

Image	Digital	Description	From	Date
93	189	Area 2 – general shot looking over stream to NE field	SW	27/08/14
94	190	Area 2 – SW field, NNW facing section at +220m from SW end	NNW	27/08/14
95	191	Area 2 – SW field, view of stripped area at +200m from SW end	NE	27/08/14
96	192	Area 2 – SW field, NNW facing section at +200m from SW end	NNW	27/08/14
97	193	Area 2 – pre-excavation shot of (024) (voided)	NE	27/08/14
98	194	Area 2 – pre-excavation shot of (024) (voided)	NE	27/08/14
99	195	Area 2 – NE facing section of (024) (voided)	NE	27/08/14
100	196	Area 2 – SW field, view of stripped area at +180m from SW end	NE	27/08/14
101	197	Area 2 – SW field, NNW facing section at +180m from SW end	NNW	27/08/14
102	198	Area 2 – SW field, view of stripped area at +160m from SW end	NE	27/08/14
103	199	Area 2 – SW field, general shot of possible feature	NE	27/08/14
104	200	Area 2 – SW field, NNW facing section at +160m from SW end	NNW	27/08/14
105	201	Area 2 – SW field, general shot of stripped area	SW	27/08/14
106	202	Area 2 – SW field, view of stripped area at +140m from SW end	NE	27/08/14
107	203	Area 2 – SW field, two possible rubble drains	NE	27/08/14
108	204	Area 2 – SW field, Test Pit 1 though feature [025]	SE	27/08/14
109	205	Area 2 – SW field, field drain at bottom of Test Pit 1	SE	27/08/14
110	206	Area 2 – SW field, general shot of [025]	S	27/08/14
111	207	Area 2 – SW field, Test Pit 1 with field drain	SE	27/08/14
112	208	Area 2 – SW field, Test Pit 1 through [025]	SE	27/08/14
113	209	Area 2 – SW field, Test Pit 2 through [025]	S	27/08/14
114	210	Area 2 – SW field, Test Pit 2 through [025]	SSE	27/08/14
115	211	Area 2 – SW field, Test Pit 2 through [025] showing two rubble drains	SE	27/08/14
116	212	Area 2 – SW field, Test Pit 2 through [025] showing two rubble drains	S	27/08/14
117	213	Area 2 – SW field, Test Pit 2 through [025]	SE	27/08/14

Image	Digital	Description	From	Date
118	214	Area 2 – SW field, general shot of [025] after test pits	NE	27/08/14
119	215	Area 2 – SW field, general shot of [025] after test pits	NE	27/08/14
120	216	Area 2 – SW field, general shot of [025] after test pits	NE	27/08/14
121	217	Area 2 – SW field, general shot of first 100m stripped from SW end	ENE	27/08/14
122	218	Area 2 – SW field, general shot of +100m to +220m stripped from SW end	S	27/08/14
123	1	Area 3 – working shot	SW	09/12/14
124	2	Dunskey Castle	-	09/12/14
125	3	Area 3 – general pre-excavation shot	SSW	09/12/14
126	4	Area 3 – working shot	SSW	09/12/14
127	5	Area 3 – southern section, first 10m stripped from S end	SE	09/12/14
128	6	Area 3 – southern section, first 20m stripped from S end	NW	09/12/14
129	7	Area 3 – southern section, working shot	SE	09/12/14
130	8	Area 3 – general shot	NNE	09/12/14
131	9	Shot of castle and setting	SE	09/12/14
132	10	Area 3 – general shot	NE	09/12/14
133	11	Area 3 – southern section, view of stripped area from +40m from S end	NW	09/12/14
134	12	Area 3 – southern section, modern drain [032] at +40m from S end	NE	09/12/14
135	13	Area 3 – southern section, modern drain [032] at +40m from S end	NE	09/12/14
136	14	Void	-	-
137	15	Void	-	-
138	16	Area 3 – southern section, view of stripped area from +60m from S end	NW	09/12/14
139	17	Void	-	-
140	18	Dunskey Castle in setting	SE	09/12/14
141	19	Void	-	-

Image	Digital	Description	From	Date
142	20	Area 3 – southern section, view of stripped area from +80m from S end	NW	09/12/14
143	21	Area 3 – southern section, view of stripped area from +80m from S end	NW	09/12/14
144	22	Area 3 – southern section, view of area fully stripped from N end	NW	09/12/14
145	23	Area 3 – northern section, working shot	S	09/12/14
146	24	Area 3 – shot of gap left for roadway	SE	09/12/14
147	25	Area 3 – shot of gap left for roadway	SE	09/12/14
148	26	Area 3 – general shot of northern section	SSW	09/12/14
149	27	Area 3 – shot of gap left for roadway	NE	09/12/14
150	28	Area 3 – northern section, fully stripped	SW	09/12/14
151	29	Area 3 – northern section, fully stripped	SW	09/12/14
152	30	Area 3 – northern section with railway embankment	SSW	09/12/14
153	31	Area 3 – northern section, SE facing section showing (031)	SE	09/12/14
154	32	Void	-	-
155	33	Area 3 – northern section, SE facing section showing (031)	S	09/12/14
156	34	Area 3 – southern section, sample shot of NE facing section	NE	09/12/14
157	35	Area 3 – view of Dunskey Castle and setting	SE	09/12/14
158	36	Area 3 – view of setting, water on coast	E	09/12/14
159	37	Area 3 – general shot towards northern section	SW	09/12/14
160	38	Area 3 – general shot towards southern section	NE	09/12/14
161	39	Area 3 – general shot of southern end	NE	09/12/14
162	40	Area 3 – general shot of southern end	NE	09/12/14
163	41	Area 3 – general shot	N	09/12/14
164	42	Area 3 – general shot	NE	09/12/14
165	43	Area 3 – general shot	NE	09/12/14

Image	Digital	Description	From	Date
166	44	Area 3 – shot of footpath and culvert beyond roadway	SE	09/12/14
167	45	Area 3 – shot of footpath and culvert beyond roadway	SE	09/12/14
168	46	Area 3 – shot of footpath beyond roadway	NE	09/12/14
169	47	Area 3 – shot of footpath beyond roadway	ENE	09/12/14
170	48	Void	-	-
171	49	Area 3 – shot of footpath beyond roadway	E	09/12/14
172	50	Area 3 – general shot of northern end	SW	09/12/14
173	51	General shot of Dunskey Castle	-	09/12/14
174	52	General shot of Dunskey Castle	-	09/12/14
175	53	Shot of coast to west of Area 3	N	09/12/14
176	54	Void	-	-
177	55	Area 3 – general shot of northern end		09/12/14
178	56	Area 3 – shot of gravel roadway	SW	09/12/14

Finds Register

Find No.	Area/ Trench	Context No.	Material Type	Description	Excavator	Date
1	1	001	Ceramic	7 x modern pottery sherds	LMcK	09/07/14
2	1	001	Lithic	2 x burnt flint (?unworked)	LMcK	09/07/14
3	1	008	Ceramic	6 x modern pottery sherds	LMcK	09/07/14
4	1	008	Glass	1 x fragment from modern glass vessel/bottle	LMcK	09/07/14
5	1	800	Metal	1 x iron bolt	LMcK	09/07/14
6	2	015	Ceramic	4 x modern pottery sherd; 1 x insulator	LRK	25/08/14
7	2	015	Lithic	2 x burnt flint cores	LRK	25/08/14

Find No.	Area/ Trench	Context No.	Material Type	Description	Excavator	Date
8	2	015	Glass	6 x glass fragments	LRK	26/08/14
9	2	015	Metal	1 x railway spanner	LRK	26/08/14
10	2	015	Metal	1 x horseshoe	LRK	27/08/14

Appendix 2: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	Dumfries & Galloway
PROJECT TITLE/SITE NAME:	Caledonian Cheese Effluent Pipeline
PROJECT CODE:	RA12077
PARISH:	Portpatrick & Inch
NAME OF CONTRIBUTOR:	Claire Williamson
NAME OF ORGANISATION:	Rathmell Archaeology Limited
TYPE(S) OF PROJECT:	Watching brief
NMRS NO(S):	-
DGHER NO(S):	MDG12832
SITE/MONUMENT TYPE(S):	Railway
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NX 06417 58385 (Area 1 centre point); NX 05481 56028 (Area 2 centre point); NX 00546 53466 (Area 3 centre point)
START DATE (this season)	4 th July 2014
END DATE (this season)	9 th December 2014 (intermittent)
PREVIOUS WORK (incl. DES ref.)	Desk-based assessment (no DES entry)
MAIN (NARRATIVE) DESCRIPTION: (may include information from other fields)	Archaeological monitoring works were carried out in respect to a consented effluent pipeline running between Stranraer and Portpatrick, Dumfries & Galloway. The archaeological works were designed to mitigate any adverse impact on the archaeological remains within the development area.
	While the majority of the proposed route for the pipeline sat within the cutting of a disused 19th century railway line, a small number of sections fell outwith the line and into previously undisturbed ground. Based on the presence of known archaeological sites within the surrounding area and also the nature of the landscape itself, three of these sections were subject to archaeological monitoring.
	No significant archaeological features were revealed throughout the course of the monitoring works. The only features discovered related to modern 19 th to 20 th century activity within the area.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Caledonian Cheese Company
ADDRESS OF MAIN CONTRIBUTOR:	Unit 8 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
E MAIL:	contact@rathmell-arch.co.uk
ARCHIVE LOCATION (intended/deposited)	Report to Dumfries and Galloway Council Archaeology Service and archive to RCAHMS Collections

Contact Details

57. Rathmell Archaeology can be contacted at our Registered Office or through the web:

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