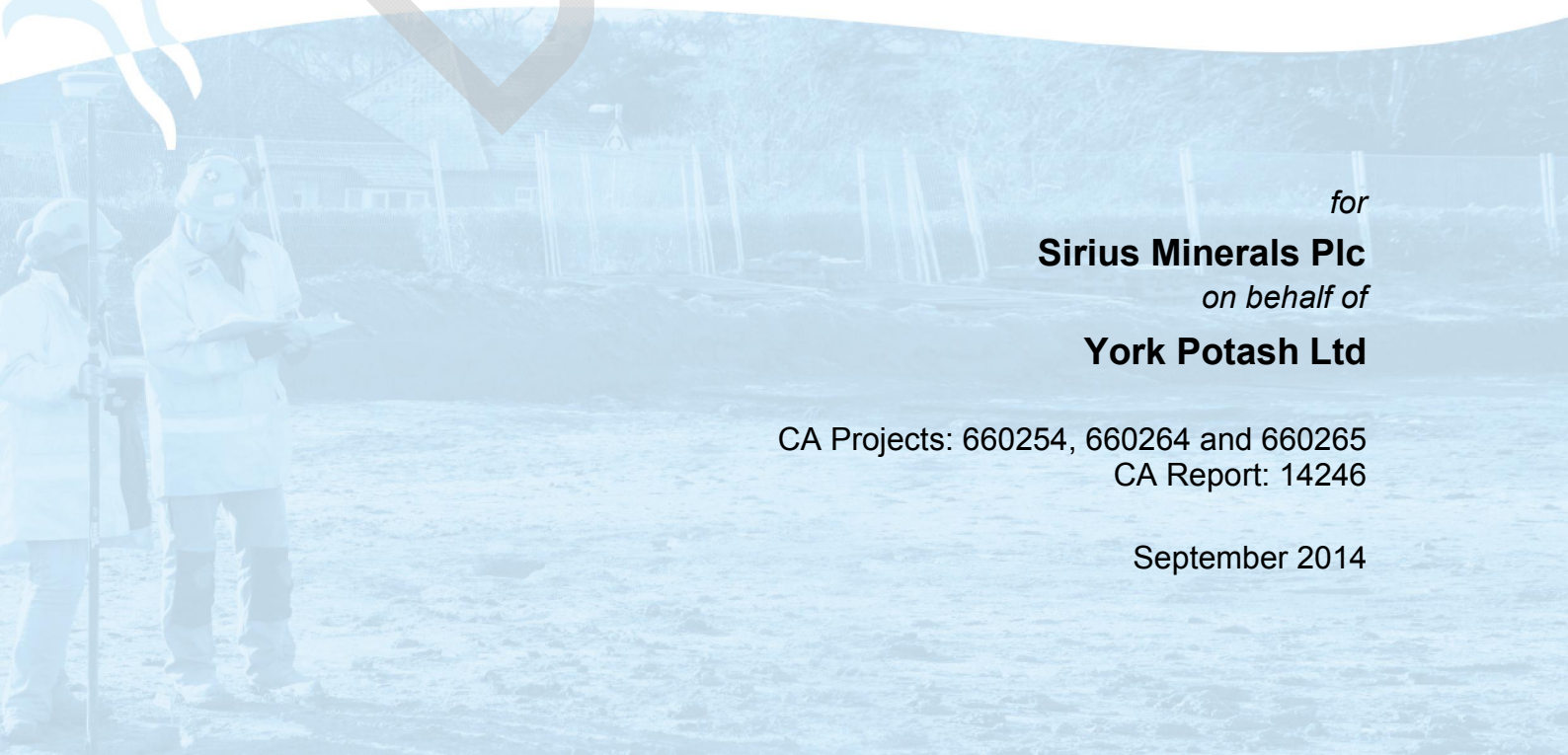


**Potash Exploration
North Yorkshire and Borough of Redcar and
Cleveland**

Programme of Archaeological Works (Phase 3)

DRAFT



for
Sirius Minerals Plc
on behalf of
York Potash Ltd


CA Projects: 660254, 660264 and 660265
CA Report: 14246

September 2014

Potash Exploration North Yorkshire and Borough of Redcar and Cleveland

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CA Report: 14246

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date	30 September 2014
issue	01

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CONTENTS

SUMMARY	2
1. INTRODUCTION.....	3
<i>The site</i>	3
<i>Archaeological background</i>	5
<i>Archaeological objectives</i>	6
<i>Methodology</i>	6
2. RESULTS (FIGS 2-4).....	7
3. DISCUSSION.....	8
4. CA PROJECT TEAM.....	9
5. REFERENCES.....	9
APPENDIX A: CONTEXT DESCRIPTIONS	11
APPENDIX B: THE FINDS.....	17
APPENDIX E: OASIS REPORT FORM.....	18

LIST OF ILLUSTRATIONS

- Fig. 1 Location of sites (1:80,000)
- Fig. 2 Tocketts Lythe, location of Hydrogeological Trial Pits (1:6000)
- Fig. 3 Detailed plan of Trial Pits 215 and 216 and photograph (1:1000 and 1:100)
- Fig. 4 Lockwood Beck, location of Hydrogeological Trial Pits (1:8000)
- Fig. 5 Lady Cross, location of Hydrogeological Trial Pits (1:7500)

SUMMARY

Project Name: Potash Exploration, North Yorkshire and Borough of Redcar and Cleveland, Program of Archaeological Works (Phase 3)

Site Locations:

- Tocketts Lythe, Guisborough, Borough of Redcar and Cleveland (CA job no: 660254; CA site code: TLG 14; NGR: NZ 6268 1702)
- Lockwood Beck Farm, Stanghow, Borough of Redcar and Cleveland (CA job no. 660264; CA site code LGI 14; NGR: NZ 6776 1397)
- Lady Cross Plantation, Egton, North Yorkshire (CA job no. 660265; CA site code LCY 14; NGR: NZ 8141 0793)

Type: Programme of Archaeological Works (Phase 3)

Date: 15 April to 18 June 2014

Location of Archive: To be deposited with Scarborough Museum

A programme of archaeological works was undertaken by Cotswold Archaeology during Hydrogeological Investigations carried out as part of the North York Moors potash development at three locations Tocketts Lythe, Guisborough, Borough of Redcar and Cleveland; Lockwood Beck Farm, Stanghow, Borough of Redcar and Cleveland; and Lady Cross Plantation, Egton, North Yorkshire.

At Tocketts Lythe 26 trial pits were excavated and revealed one north-west/south-east orientated ditch just to the west of Waterfall Gill, a surface to the east of the former tramway from Tocketts Lythe plantation to Waterfall Farm, and a dump of clay partially filling a large depression visible in the surface of the field. This depression may be situated over the collapsing galleries of an abandoned 19th-century iron mine.

At Lockwood Beck and Lady Cross 54 trial pits were excavated and no features or deposits of archaeological significance were identified. A small number of finds, generally from topsoil contexts, indicate a background level of prehistoric activity at Lockwood Beck and Lady Cross, but no evidence was revealed for substantive occupation during any period at either site.

1. INTRODUCTION

- 1.1 In April and May 2014 Cotswold Archaeology (CA) carried out a programme of archaeological works at the request of Sirius Minerals Plc on behalf of York Potash Ltd in three locations (Fig. 1): Tocketts Lythe, Guisborough, Borough of Redcar and Cleveland; Lockwood Beck Farm, Stanghow, Borough of Redcar and Cleveland; and Lady Cross Plantation, Egton, North Yorkshire.
- 1.2 The three extents of works form intermediate shaft locations and storage areas for material excavated as part of the North York Moors potash development. Hydrogeological Investigation works, consisting of 80 trial pits excavated under archaeological watching brief, were carried out as part of the design phase of the development, prior to the submission of a planning application. The objective of the watching brief was to record all archaeological remains exposed during the works.
- 1.3 The watching brief was carried out in accordance with detailed Written Schemes of Investigation (WSI) for each site, produced by CA (2014a, b, and c). The fieldwork also followed the *Standard and guidance for an archaeological watching brief* (IfA 2009), and the *Management of Archaeological Projects 2* (English Heritage 1991), the *Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide* (EH 2006).

The extents of works

Tocketts Lythe

- 1.4 Tocketts Lythe is the western most of the three extents of works and lies approximately 800m north-east of the town of Guisborough (Fig. 1). The extent of works lies at approximately 95m AOD, encloses an area of approximately 69ha (Fig. 2) and comprises a number of fields in predominantly arable use. The extent of works is generally bounded by agricultural land and to the east by the wooded valley of Waterfall Beck known as 'Waterfall Gill'.
- 1.5 The underlying bedrock geology of the area is mapped as Redcar Mudstone (to the south), Staithes Sandstone (to the east) and Cleveland Ironstone Formation mudstone, sandstone and ironstone (to the north). These are all sedimentary rocks formed approximately 183 to 200 million years ago. More recent, superficial deposits are also recorded within the extent of works. These largely comprise Devensian –

Diamicton Till formed up to 2 million years ago (British Geological Survey 2014). A red brown clay was observed in the base of all trial pits.

Lockwood Beck

1.6 Lockwood Beck is central within the three extents of works and lies 180m to the south of the settlement of Stanghow (Fig. 1). The extent of works lies between approximately 190m and 140m AOD and encloses an area of approximately 36ha. It comprises c. 22 fields, primarily a mixture of arable and pasture. The extent of works is bounded to the west by Lockwood Beck Farm and the Stanghow Road and Scar Wood, to the south by the A171, to the east by Swindale Farm and to the north by agricultural land to the south of Stanghow.

1.7 The underlying bedrock geology of the area is mapped as Scalby Formation sandstone, siltstone and mudstone. The north-western tip of the extent of works, however, is underlain by bands of Saltwick Formation and Cloughton Formation sandstone, siltstone and mudstone, and Scarborough Formation sandstone and limestone. All of these substrates are sedimentary rocks of Jurassic origin (British Geological Survey 2014). More recent, superficial deposits are also recorded within the extent of works. These largely comprise Devensian – Diamicton Till formed up to 2 million years ago. Clay deposits were encountered in all of the Trial Pits.

Lady Cross

1.8 Lady Cross is the eastern most of the three extent of works and lies approximately 1.5km north of the settlement of Egton (Fig. 1). The extent of works lies at approximately 210m AOD and encloses an area of approximately 26ha. It comprises of c. 4 fields, generally pasture. The extent of works is bounded by agricultural land, plantation woodland, a caravan park and to the south-east by an un-named road running between the A171 and Egton.

1.9 The underlying bedrock geology of the area comprises Long Nab Member sandstone, siltstone and mudstone, a form of sedimentary rock formed approximately 165 to 176 million years ago. More recent, glacio-fluvial deposits of sand and gravel, and Diamicton Till deposits are also present within the extent of works (British Geological Survey 2014). Silty clay deposits were encountered in all of the Trial Pits.

Archaeological background

1.10 An Environmental Statement (ES) chapter (Chapter 13) has been prepared for all three extents of works (York Potash 2014). This chapter is based primarily upon the results of individual Desk-Based Assessments undertaken for each of the three extents of works, and which now form technical appendices to the chapter (CA 2014d-f). The extents of works at Tocketts Lythe and Lockwood Beck were also subject to LiDAR survey, which, besides the known mining remains at Tocketts Lythe, identified only a small number of agricultural features, e.g. field boundaries and ridge and furrow. The results of the LiDAR survey are also included as an appendix to the ES chapter (York Potash 2014).

1.11 The results of these investigations are summarised by extent of works as follows:

Tocketts Lythe

1.12 Waterfall Ironstone Mine, worked between 1892 and 1901, is located partially within the extent of works and the surface impacts of the collapsed galleries are clearly visible as earthworks. The First Edition OS Map of 1894 depicts the mine within the east of Tocketts Lythe Plantation. A tramway is depicted serving the ironstone mine. This tramway is shown running through the extent of works along the line of a current footpath from Waterfall Farm to Plantation Farm. Field survey identified the remains of both the mine and the northern part of the tramway; the remains identifiable as low earthworks. The southern part of the tramway is now in use as a trackway. No other heritage assets were identified within the extent of works.

Lockwood Beck

1.13 Scar Wood medieval field system, Lockwood Beck medieval field system, the course of a possible medieval road, and the potential (but no material evidence) for remains associated with medieval settlement at Kateridden Farm have been identified in the extent of works. A number of Scheduled and non-Scheduled burial mounds are recorded on Moorsholm Moor to the south of the extent of works, and a possible enclosure has been identified to the south-east. No other heritage assets were identified within the extent of works.

Lady Cross

1.14 The proposed site is likely to have comprised moorland for a substantial length of time, and by the 18th century it formed part of 'Egton Moores'. The proposed site formed part of Egton Low Moor from then until an un-named plantation woodland

was established in the later 19th century. The two present-day clearings within the plantation were established during the late 20th century.

- 1.15 There is plentiful evidence for prehistoric and medieval activity on the surrounding moorland, but there is no evidence for such occupation within the extent of works. Two WWII bomb craters are located within woodland adjacent to the extent of works, but these are not heritage assets and no heritage assets have been identified within the extent of works itself.

Archaeological objectives

- 1.16 The objectives of the archaeological works were:
- to monitor groundworks, and to identify, investigate and record all significant buried archaeological deposits revealed in the extent of works during the course of the development groundworks;
 - at the conclusion of the project, to produce an integrated archive for the project work and a report setting out the results of the project and the archaeological conclusions that can be drawn from the recorded data.

Methodology

- 1.17 The fieldwork followed the methodology set out within the WSI's (CA 2014a, b and c). An archaeologist was present during the excavation of 80 Hydrogeological Investigation trial Pits and four soakaway trial pits (401B, 409B, 410B, and 411B) as outlined below:

- Tocketts Lythe: Trial Pits 201 to 227 (206 omitted)
- Lockwood Beck: Trial Pits 301 to 332
- Lady Cross: Trial Pits 401 to 418 and 401B 409B, 410B, 411B

- 1.18 The Hydrogeological Investigation trial pits were typically 3.5m long by 0.6m wide by 4m deep and the soakaway trial pits were typically 2m long by 0.6m wide by up to 2m deep. Each soakaway trial pit was located at 90° to, and 1m from, an existing Hydrogeological Investigation trial pit.

- 1.19 Non-archaeologically significant deposits were removed by the contractors under archaeological supervision using a mechanical excavator equipped with a toothless bucket. The location of each Trial Pit was set out by Fugro and/or FWS Consulting prior to machine excavation.
- 1.20 Where archaeological deposits were encountered written, graphic and photographic records were compiled in accordance with CA Technical Manual 1: *Fieldwork Recording Manual* (2013).
- 1.21 The archive and artefacts from the programme of archaeological works are currently held by CA at their offices in Kemble. Subject to the agreement of the legal landowner the artefacts will be deposited with Scarborough Museum under accession number, along with the site archive. A summary of information from this project, set out within Appendix C, will be entered onto the OASIS online database of archaeological projects in Britain.

2. RESULTS (FIGS 2-5)

- 2.1 This section provides an overview of the results of the programme of archaeological works; detailed summaries of the recorded contexts and finds are to be found in Appendices A and B.

Tocketts Lythe (Figs 2 and 3)

- 2.2 Natural deposits were identified between 0.12m and 0.95m below present ground level (bpgl). Overlying the natural substrate (Trial Pits 211, 212, 214, 215, 216, 217, 218, 221, 224, and 227) was orange/red brown silty clay subsoil 0.09m to 0.65m thick, which was in turn overlain by a 0.12m to 0.48m thick topsoil/plough soil. Archaeological features/deposits were identified in Trial Pits 215, 216 and 220 and these results are described below:

Trail Pit 215

- 2.3 The eastern side of a possible north-west/south-east orientated ditch 2154 was revealed in the southern part of Trial Pit 215. It was at least 0.32m in width, 0.19m in depth and the eastern side was steeply-sloping. It contained a single, undated brown grey silty clay fill, 2153, which was overlain by subsoil 2152.

Trial Pit 216

- 2.4 The natural substrate was overlain by a deposit, 2164, comprising cobble stones and brick fragments 0.07m thick and which appeared to represent a surface. Recovered brick fragments predominantly dated to the post-medieval period, with a single fragment also found to be of Roman-period date. This deposit was overlain by subsoil and topsoil.

Trial Pit 220

- 2.5 The natural substrate was overlain by silty clay deposit 2203, which was 0.93m thick and contained two sherds of post-medieval/modern pottery. A depression in the surface of the field was visible in the vicinity of Trial Pit 220.

Lockwood Beck (Fig. 3)

- 2.6 The natural substrate was identified between 0.15m and 0.50m bpgl. Overlying the natural substrate (Trial Pits 308, 309, 310, 314, 319, 321, 324, and 325) was grey brown silty clay subsoil 0.09m to 0.32m thick, which was in turn overlain by a 0.15m to 0.50m thick topsoil/ploughsoil. A worked flint flake was recovered from the topsoil in Trial Pit 317.

Lady Cross (Fig. 4)

- 2.7 The natural substrate was overlain by ploughsoil between 0.18m and 0.33m thick. No subsoil was observed; in Trial Pits 401, 402, 403, 409B, 413, and 417 probable tree-root disturbance was identified. A single utilised natural granite cobble with a smooth flat face was retrieved from the ploughsoil in Trial Pit 415.

The finds evidence

- 2.8 The majority of artefacts were recovered from topsoil/ploughsoil deposits. However a fragment of Roman brick was recovered from probable surface 2164. The worked flint from Trial Pit 317 at Lockwood Beck and the stone rubber from Trial Pit 415 at Lady Cross may be indicative of a background level of prehistoric activity in these areas.

3. DISCUSSION

- 3.1 The piece of struck flint from Trial Pit 317 at Lockwood Beck and the utilised natural granite cobble with a smooth flat face from Trial Pit 415 at Lady Cross suggest a

possible background level of prehistoric activity in these areas, but they are not indicative of substantive occupation.

- 3.2 The undated ditch or pit, sealed by the subsoil in Trial Pit 215 at Tocketts Lythe, may indicate low-level pre-modern activity in this area, probably agricultural in nature, e.g part of a pre-modern field system.
- 3.3 The cobbled surface within Trial Pit 216 at Tocketts Lythe, along with the tramway earthworks, suggests that 19/20th century archaeological remains associated with Waterfall Ironstone Mine may survive within this area. The fragment of Roman brick is out of context and was presumably imported to the site with the fragments of 19th-century brick.
- 3.4 The clay deposit in Trial Pit 220 at Tocketts Lythe, and the large depression visible in the surface of the field, may represent infill of the collapsed galleries of Waterfall Ironstone Mine.

4. CA PROJECT TEAM

Fieldwork was undertaken by Peter Busby. The report was written by Peter Busby. The illustrations were prepared by Aleksandra Osinska. The archive has been compiled by Peter Busby, and prepared for deposition by Hazel O'Neill. The project was managed for CA by Laurent Coleman.

5. REFERENCES

BGS (British Geological Survey) 2014 <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> accessed 28 May 2014

CA (Cotswold Archaeology) 2014a *Tocketts Lythe, Guisborough, Borough of Redcar and Cleveland: Written Scheme of Investigation for an Archaeological Watching Brief*

CA (Cotswold Archaeology) 2014b *Lockwood Beck Farm, Stanghow, Borough of Redcar and Cleveland: Written Scheme of Investigation for an Archaeological Watching Brief*

CA (Cotswold Archaeology) 2014c *Lady Cross Plantation, Egton, North Yorkshire: Written Scheme of Investigation for an Archaeological Watching Brief*

CA (Cotswold Archaeology) 2014d *Heritage Desk-Based Assessment: Tocketts Lythe*

CA (Cotswold Archaeology) 2014e *Heritage Desk-Based Assessment: Lockwood Beck*

CA (Cotswold Archaeology) 2014f *Heritage Desk-Based Assessment: Lady Cross Plantation*

York Potash 2014 *York Potash Project MTS Environmental Statement: Chapter No.13: Cultural Heritage 2014*

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APPENDIX A: CONTEXT DESCRIPTIONS

Tocketts Lythe (660254)

Trench No.	Context No.	Type	Fill of	Context interpretation	Description	L (m)	W (m)	Depth /thickness (m)	Spot date
201	2011	Layer		Plough soil	Grey brown silt clay	2.7	0.6	0.44	
201	2012	Layer		Natural (superficial)	Bolder clay	2.7	0.6	>2.96	
202	2021	Layer		Plough soil	As 2011	2.8	0.6	0.25	
202	2022	Layer		Natural (superficial)	Bolder clay	2.8	0.6	>2.45	
203	2031	Layer		Plough soil	As 2011	3	0.6	0.34	
203	2032	Layer		Natural (superficial)	Bolder clay	3	0.6	>2.66	
204	2041	Layer		Plough soil	As 2011	3.6	0.6	0.16	
204	2042	Layer		Natural (superficial)	Bolder clay	3.6	0.6	>3.14	
205	2051	Layer		Plough soil	As 2011	3	0.6	0.18	
205	2052	Layer		Natural (superficial)	Bolder clay	3	0.6	>2.92	
206					Omitted				
207	2071	Layer		Plough soil	As 2011	3	0.6	0.15	
207	2072	Layer		Natural (superficial)	Bolder clay	3	0.6	>2.75	
208	2081	Layer		Plough soil	Dark brown silt clay	3.3	0.6	0.27	
208	2082	Layer		Natural (superficial)	Bolder clay	3.3	0.6	>2.83	
209	2091	Layer		Plough soil	Grey brown silt clay	3.4	0.6	0.23	
209	2092	Layer		Subsoil	Orange brown silt clay	3.4	0.6	0.11	
209	2093	Layer		Natural (superficial)	Bolder clay	3.4	0.6	>2.66	
210	2101	Layer		Plough soil	As 2091	4	0.6	0.12	
210	2102	Layer		Natural (superficial)	Bolder clay	4	0.6	>3.68	
211	2111	Layer		Plough soil	As 2091	3.8	0.6	0.28	
211	2112	Layer		Subsoil	As 2092	3.8	0.6	0.12	
211	2113	Layer		Natural (superficial)	Bolder clay	3.8	0.6	>2.6	
212	2121	Layer		Plough soil	As 2091	3.8	0.6	0.48	
212	2122	Layer		Subsoil	Orange brown silt clay with 1% small stones	3.8	0.6	0.15	
212	2123	Layer		Natural (superficial)	Bolder clay	3.8	0.6	>2.67	
213	2131	Layer		Plough soil	As 2091	4	0.6	0.2	
213	2132	Layer		Natural (superficial)	Bolder clay	4	0.6	>3.3	
214	2141	Layer		Plough soil	As 2091	4	0.6	0.44	
214	2142	Layer		Subsoil	As 2092	4	0.6	0.44	
214	2143	Layer		Natural (superficial)	Bolder clay	4	0.6	>2.52	
215	2151	Layer		Plough soil	As 2091	3.8	0.6	0.16	
215	2152	Layer		Subsoil	As 2092	3.8	0.6	0.17	
215	2153	Fill	2154	Ditch fill	Brown grey silt clay with 1% gravel	>1	>0.32	>0.19	
215	2154	Cut		Ditch	NW/SE orientated linear with a steep eastern side. Base and western side not seen	>1	>0.32	>0.19	

215	2155	Layer		Natural (superficial)	Bolder clay	3.8	0.6	>3.1	
216	2161	Layer		Plough soil	As 2091	3.5	0.6	0.24	
216	2162	Layer		Subsoil	Yellow brown silt clay with 10% large rounded stones	3.5	0.6	0.09	
216	2163	Layer		Buried topsoil	Black brown silt clay with 5% charcoal flecks	3.5	0.6	0.06	
216	2164	Layer		Surface	Dark brown silt clay with 50% assorted round stones and <1% bricks	3.5	0.6	0.07	PM
216	2164	Layer		Buried soil	Brown silt clay	3.5	0.6	0.27	
216	2163	Layer		Natural (superficial)	Bolder clay	3.5	0.6	>2.65	
217	2171	Layer		Plough soil	As 2091	3.4	0.6	0.23	
217	2172	Layer		Subsoil	Yellow brown silt clay	3.4	0.6	0.11	
217	2173	Layer		Natural (superficial)	Bolder clay	3.4	0.6	>3	
218	2181	Layer		Plough soil	As 2091	3.5	0.6	0.3	
218	2182	Layer		Subsoil	Grey orange silt clay	3.5	0.6	0.65	
218	2183	Layer		Natural (superficial)	Bolder clay	3.5	0.6	>2.65	
219	2191	Layer		Plough soil	As 2091	3.6	0.6	0.20	
219	2193	Layer		Natural (superficial)	Bolder clay	3.6	0.6	>3.3	
220	2201	Layer		Topsoil/turf	Dark brown grey silt clay	2.4	0.6	0.15	PM
220	2202	Layer		Plough soil	Dark brown grey silt clay	2.4	0.6	0.27	
220	2203	Layer		Dump	Mixed brown/yellow brown silt clay with 20% small rounded stones and 1% charcoal flecks	2.4	0.6	0.93	
220	2204	Layer		Natural (superficial)	Bolder clay	2.4	0.6	>2.2	
221	2211	Layer		Topsoil/turf	As 2201	2.5	0.6	0.16	
221	2212	Layer		Subsoil	Grey orange silt clay with 1% charcoal flecks	2.5	0.6	0.24	
221	2213	Layer		Natural (superficial)	Bolder clay	2.5	0.6	>3.3	
222	2221	Layer		Plough soil	Dark grey brown silt clay	2.5	0.6	0.25	
222	2222	Layer		Natural (superficial)	Bolder clay	2.5	0.6	>2.75	
223	2231	Layer		Plough soil	Red brown silt clay with 10% fine gravel	4.1	0.6	0.26	
223	2232	Layer		Natural (superficial)	Bolder clay	4.1	0.6	>3.74	
224	2241	Layer		Topsoil/turf	As 2201	4.1	0.6	0.25	
224	2242	Layer		Subsoil	Light grey brown silt clay with 5% gravel	4.1	0.6	0.25	
224	2243	Layer		Natural (superficial)	Bolder clay	4.1	0.6	>3.5	
225	2251	Layer		Plough soil	As 209	4.4	0.6	0.24	
225	2252	Layer		Natural (superficial)	Bolder clay	4.4	0.6	>4.16	
226	2261	Layer		Plough soil	As 209	3.7	0.6	0.22	
226	2262	Layer		Natural (superficial)	Bolder clay	3.7	0.6	>3.78	
227	2271	Layer		Plough soil	As 2091	4	0.6	0.22	
227	2272	Layer		Subsoil	Red brown silt clay	4	0.6	0.22	
227	2273	Layer		Natural (superficial)	Bolder clay	4	0.6	>3.56	

Lockwood Beck (660264)

Trench No.	Context No.	Type	Fill of	Context interpretation	Description	L (m)	W (m)	Depth/thickness (m)	Spot date
301	3011	Layer		Plough soil	Dark grey brown silt clay	3.3	0.6	0.2	
301	3012	Layer		Natural (superficial)	Bolder clay	3.3	0.6	>3.8	
302	3021	Layer		Plough soil	As 3011	3.2	0.6	0.28	
302	3022	Layer		Natural (superficial)	Bolder clay	3.2	0.6	>3.72	
303	3031	Layer		Topsoil/turf	As 3011	3.2	0.6	0.28	
303	3032	Layer		Natural (superficial)	Bolder clay	3.2	0.6	>3.72	
304	3041	Layer		Topsoil/turf	As 3011	3.3	0.6	0.28	
304	3042	Layer		Natural (superficial)	Bolder clay	3.3	0.6	>3.52	
305	3051	Layer		Topsoil/turf	As 3011	3.6	0.6	0.34	
305	3052	Layer		Natural (superficial)	Bolder clay	3.6	0.6	>3.66	
306	3061	Layer		Topsoil/turf	As 3011	3.8	0.6	0.2	
306	3062	Layer		Natural (superficial)	Bolder clay	3.8	0.6	>4.7	
307	3071	Layer		Topsoil/turf	As 3011	3.9	0.6	0.22	
307	3072	Layer		Natural (superficial)	Bolder clay	3.9	0.6	>3.97	
308	3081	Layer		Topsoil/turf	As 3011	3.6	0.6	0.15	
308	3082	Layer		Subsoil	Grey brown silt clay with 5% fine gravel	3.6	0.6	0.13	
308	3083	Layer		Natural (superficial)	Bolder clay	3.6	0.6	>3.72	
309	3091	Layer		Topsoil/turf	As 3011	3.4	0.6	0.3	
309	3092	Layer		Subsoil	Grey brown silt clay with 1% rounded pebbles	3.4	0.6	0.1	
309	3093	Layer		Natural (superficial)	Bolder clay	3.4	0.6	>3	
310	3101	Layer		Topsoil/turf	As 3011	3.3	0.6	0.24	
310	3102	Layer		Topsoil	Grey brown silt clay with 1% large assorted pebbles	3.3	0.6	0.12	
310	3103	Layer		Subsoil	As 3082	3.3	0.6	0.14	
310	3104	Layer		Natural (superficial)	Bolder clay	3.3	0.6	>3	
311	3111	Layer		Topsoil/turf	As 3011	3.1	0.6	0.28	
311	3112	Layer		Natural (superficial)	Grey brown/orange brown sand clay with 75% angular sandstone pebbles to boulders	3.1	0.6	0.55	
311	3113	Layer		Natural (solid)	Sandstone	3.1	0.6		
312	3121	Layer		Topsoil/turf	As 3011	3.3	0.6	0.22	
312	3122	Layer		Natural (superficial)	Grey brown/orange brown/yellow sand clay/sand with 75% angular sandstone pebbles to boulders	3.3	0.6	0.55	
312	3123	Layer		Natural (solid)	Sandstone	3.3	0.6		
313	3131	Layer		Plough soil	As 3011	3.3	0.6	0.28	
313	3132	Layer		Natural (superficial)	Boulder clay	3.3	0.6	1.82	
313	3133	Layer		Natural (solid)	Sandstone	3.3	0.6		
314	3141	Layer		Plough soil	As 3011	3	0.6	0.15	Modern
314	3142	Layer		Subsoil	Brown silt clay with 1% small stones	3		0.32	
314	3143	Layer		Natural (superficial)	Boulder clay	3	0.6	0.93	

314	3144	Layer		Natural (solid)	Sandstone	3	0.6		
315	3151	Layer		Plough soil	As 3011	2.7	0.6	0.23	
315	3152	Layer		Natural (superficial)	As 3122	2.7	0.6	1.57	
315	3153	Layer		Natural (solid)	Sandstone	2.7	0.6		
316	3161	Layer		Plough soil	As 3011	2.7	0.6	0.3	
316	3162	Layer		Natural (superficial)	As 3122	2.7	0.6	1	
316	3163	Layer		Natural (solid)	Sandstone	2.7	0.6		
317	3171	Layer		Plough soil	As 3011	3	0.6	0.28	Modern
317	3172	Layer		Natural (superficial)	As 3122	3	0.6	1.02	
317	3173	Layer		Natural (solid)	Sandstone	3	0.6		
318	3181	Layer		Plough soil	As 3011	3.1	0.6	0.34	
318	3182	Layer		Natural (superficial)	Boulder clay	3.1	0.6	1.21	
318	3183	Layer		Natural (superficial)	Orange yellow sand with 25% assorted sandstone pebbles	3.1	0.6	0.95	
318	3184	Layer		Natural (solid)	Sandstone	3.1	0.6		
319	3191	Layer		Topsoil/turf	As 3011	3.5	0.6	0.26	
319	3192	Layer		Subsoil	Light grey brown silt clay	3.5	0.6	0.1	
319	3193	Layer		Natural (superficial)	Boulder clay	3.5	0.6	>3.64	
320	3201	Layer		Plough soil	As 3011	3.3	0.6	0.3	
320	3202	Layer		Natural (superficial)	Yellow grey silt sand with 10% assorted sandstone pebbles/ boulders	3.3	0.6	0.9	
320	3203	Layer		Natural (solid)	Sandstone	3.3	0.6		
321	3211	Layer		Plough soil	As 3011	3.5	0.6	0.3	
321	3212	Layer		Subsoil	Dark red brown sand silt with gravel	3.5	0.6	0.09	
321	3213	Layer		Natural (superficial)	Mix of boulder clay and 3202	3.5	0.6	3.51	
321	3214	Layer		Natural (solid)	Sandstone	3.5	0.6		
322	3221	Layer		Plough soil	As 3011	3	0.6	0.5	
322	3222	Layer		Natural (superficial)	As 3183	3	0.6	0.8	
322	3223	Layer		Natural (solid)	Sandstone	3	0.6		
323	3231	Layer		Plough soil	As 3011	3.4	0.6	0.34	
323	3232	Layer		Natural (superficial)	As 3183	3.4	0.6	0.96	
323	3233	Layer		Natural (solid)	Sandstone	3.4	0.6		
324	3241	Layer		Plough soil	As 3011	3.5	0.6	0.5	
324	3242	Layer		Subsoil	Red brown sand silt with 5% fine gravel	3.5	0.6	0.3	
324	3243	Layer		Natural (superficial)	Yellow orange sand with 5% sandstone gravel and pebbles	3.5	0.6	>3.2	
325	3251	Layer		Plough soil	As 3011	3.2	0.6	0.22	
325	3252	Layer		Subsoil	Light grey silt clay with 1% fine gravel	3.2	0.6	0.1	
325	3253	Layer		Natural (superficial)	Boulder clay	3.2	0.6	>3.68	
326	3261	Layer		Topsoil/turf	As 3011	3.6	0.6	0.34	
326	3261	Layer		Natural (superficial)	Boulder clay	3.6	0.6	>3.68	
327	3271	Layer		Plough soil	As 3011	4	0.6	0.24	
327	3272	Layer		Natural (superficial)	Boulder clay	4	0.6	>3.76	
328	3281	Layer		Plough soil	As 3011	4.1	0.6	0.23	

328	3282	Layer		Natural (superficial)	Boulder clay	4.1	0.6	>3.77	
329	3291	Layer		Plough soil	As 3011	4.5	0.6	0.26	
329	3292	Layer		Natural (superficial)	Boulder clay	4.5	0.6	>3.74	
330	3301	Layer		Plough soil	As 3011	5.3	0.6	0.17	
330	3302	Layer		Natural (superficial)	Boulder clay	5.3	0.6	>3.8	
331	3311	Layer		Topsoil/turf	As 3011	4	0.6	0.2	
331	3312	Layer		Natural (superficial)	Boulder clay	4	0.6	>3.8	
332	3321	Layer		Topsoil/turf	As 3011	4.1	0.6	0.42	
332	3322	Layer		Natural (superficial)	Boulder clay	4.1	0.6	>3.58	

Lady Cross (660265)

Trench No.	Context No.	Type	Fill of	Context interpretation	Description	L (m)	W (m)	Depth/thickness (m)	
401	4011	Layer		Plough soil	Dark grey brown silt clay	3.5	0.6	0.2	
401	4012	Layer		Natural (superficial)	Mixed light grey/orange silt sand with 10% gravel, above sandy gravels, capping boulder clay	3.5	0.6	>3.8	
402	4021	Layer		Plough soil	As 4011	3.5	0.6	0.2	
402	4022	Fill	4023	Tree through fill	Dark grey brown silt clay	2.2	0.6	0.3	
402	4023	Cut		Tree through	Very irregular cut	2.2	0.6	0.3	
402	4024	Layer		Natural (superficial)	As 4012	3.5	0.6	>3.8	
403	4031	Layer		Plough soil	Black silt clay	3.5	0.6	0.24	
403	4032	Fill	4033	Tree through fill	Dark grey brown silt clay	2.1	0.6	0.26	
403	4033	Cut		Tree through	Very irregular cut	2.2	0.6	0.26	
403	4034	Layer		Natural (superficial)	Mixed light grey/orange silt sand with 10% gravel; capping boulder clay	3.5	0.6	>2.76	
404	4041	Layer		Plough soil	As 4011	3.6	0.6	0.2	
404	4042	Layer		Natural (superficial)	As 4012	3.6	0.6	2.3	
404	4043	Layer		Natural (solid)	Sandstone	3.6	0.6		
405	4051	Layer		Plough soil	As 4011	4	0.6	0.18	
405	4052	Layer		Natural (superficial)	As 4012	4	0.6	2.12	
405	4053	Layer		Natural (solid)	Sandstone	4	0.6	>1.7	
406	4061	Layer		Plough soil	As 4011	4	0.6	0.18	
406	4062	Layer		Natural (superficial)	As 4012	4	0.6	2.5	
406	4063	Layer		Natural (solid)	Sandstone	4	0.6		
407	4071	Layer		Plough soil	As 4011	3.7	0.6	0.33	
407	4072	Layer		Natural (superficial)	As 4012	3.7	0.6	1.27	
407	4073	Layer		Natural (solid)	Sandstone	3.7	0.6		
408	4081	Layer		Topsoil/turf	As 4011	4.1	0.6	0.2	
408	4082	Layer		Natural (superficial)	As 4012	4.1	0.6	1.9	
408	4083	Layer		Natural (solid)	Sandstone	4.1	0.6		
409	4091	Layer		Topsoil/turf	As 4011	3.7	0.6	0.2	
409	4092	Layer		Natural	As 4012	3.7	0.6	>3.8	

				(superficial)					
409B	4093	Layer		Topsoil/turf	As 4011	1.8	0.6	0.2	
409B	4094	Fill	4095	Tree through fill	Dark grey brown silt clay peat	0.9	0.6	0.2	
409B	4095	Cut		Tree through	Very irregular cut	0.9	0.6	0.2	
409B	4096	Layer		Natural (superficial)	As 4012	1.8	0.6	>0.3	
410	4101	Layer		Topsoil/turf	As 4011	3.2	0.6	0.15	
410	4102	Layer		Natural (superficial)	As 4012	3.2	0.6	>3.35	
410B	4103	Layer		Topsoil/turf	As 4011	2.3	0.6	0.15	
410B	4104	Layer		Natural (superficial)	As 4012	2.3	0.6	>0.25	
411	4111	Layer		Topsoil/turf	Black silt clay peat	3.7	0.6	0.18	
411	4112	Layer		Natural (superficial)	As 4012	3.7	0.6	2.12	
411	4113	Layer		Natural (solid)	Sandstone	3.7	0.6		
412	4121	Layer		Topsoil/turf	As 4011	3.8	0.6	0.16	
412	4122	Layer		Natural (superficial)	As 4012	3.8	0.6	2.89	
412	4123	Layer		Natural (solid)	Sandstone	3.8	0.6		
413	4131	Layer		Topsoil/turf	As 4011	3.8	0.6	0.26	
413	4132	Fill	4133	Tree through fill	Dark grey brown silt clay peat	1.5	0.6	0.34	
413	4133	Cut		Tree through	Very irregular cut	1.5	0.6	0.34	
413	4134	Layer		Natural (superficial)	As 4012	3.8	0.6	>3.74	
414	4141	Layer		Topsoil/turf	As 4111	3.8	0.6	0.2	
414	4142	Layer		Natural (superficial)	As 4012	3.8	0.6	3	
414	4143	Layer		Natural (solid)	Sandstone	3.8	0.6		
415	4151	Layer		Plough soil	As 4011	4.3	1.3	0.22	Prehist
415	4152	Layer		Natural (superficial)	As 4012	4.3	1.3	>3.88	
416	4161	Layer		Plough soil	As 4011	3.6	0.6	0.22	
416	4162	Layer		Natural (superficial)	As 4012	3.6	0.6	3.78	
417	4171	Layer		Topsoil/turf	As 4011	4.3	0.6	0.22	
417	4172	Fill	4173	Tree through fill	Dark grey black silt peat	4.3	0.6	0.17	
417	4173	Cut		Tree through	Very irregular cut	4.3	0.6	0.17	
417	4174	Layer		Natural (superficial)	As 4012	4.3	0.6	3	
417	4175	Layer		Natural (solid)	Sandstone	4.3	0.6		
418	4181	Layer		Plough soil	As 4011	6.3	0.6	0.18	
418	4182	Layer		Natural (superficial)	As 4012	6.3	0.6	4	

APPENDIX B: THE FINDS**Tocketts Lythe (660254)**

Context	Material	Count	Weight	Date	Comments
2164	CBM	1	460	RB	Brick
2164	CBM	1	43	Post-medieval	
2201	Pottery	2	0	Post-medieval/modern	

Lockwood Beck (660264)

Context	Material	Count	Weight	Date	Comments
3141	Ceramic ball	1	23	Modern	Bottle stopper 26mm diam
3171	Pottery	1	3	Post-medieval/modern	
3171	Worked flint	1	0	Prehistoric	Flake
3171	Burnt flint	1	5	-	
3171	Shell	1	2	-	

Lady Cross (660265)

Context	Material	Count	Weight	Date	Comments
4151	Stone	1	590	Prehistoric	Rubber frag

APPENDIX E: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Potash Exploration, North Yorkshire and Borough of Redcar and Cleveland	
Short description	<p>A programme of archaeological works was undertaken by Cotswold Archaeology during Hydrogeological Investigations carried out as part of the North York Moors potash development at three locations Tocketts Lythe, Guisborough, Borough of Redcar and Cleveland; Lockwood Beck Farm, Stanghow, Borough of Redcar and Cleveland; and Lady Cross Plantation, Egton, North Yorkshire.</p> <p>At Tocketts Lythe 26 trial pits were excavated and revealed one north-west/south-east orientated ditch just to the west of Waterfall Gill, a surface to the east of the former tramway from Tocketts Lythe plantation to Waterfall Farm, and a dump of clay partially filling a large depression visible in the surface of the field. This depression may be situated over the collapsing galleries of an abandoned 19th-century iron mine. At Lockwood Beck and Lady Cross 54 trial pits were excavated and no features or deposits of archaeological significance were identified. A small number of finds, generally from topsoil contexts, hint at prehistoric activity at Lockwood Beck and Lady Cross.</p>	
Project dates	15 April to 18 June 2014	
Project type	Archaeological Watching Briefs	
Previous work (reference to organisation or SMR numbers etc)		
Future work	Unknown	
PROJECT LOCATION		
Site Location	Tocketts Lythe, Guisborough, Borough of Redcar and Cleveland; Lockwood Beck Farm, Stanghow, Borough of Redcar and Cleveland; and Lady Cross Plantation, Egton, North Yorkshire	
Study area (M ² /ha)		
Site co-ordinates (8 Fig Grid Reference)	NZ 6288 1702, NZ 6776 1397, NZ 8141 0793	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Brief originator		
Project Design (WSI) originator	Cotswold Archaeology	
Project Manager	Laurent Coleman	
Project Supervisor	Peter Busby	
MONUMENT TYPE	None	
SIGNIFICANT FINDS	None	
PROJECT ARCHIVES		
	Intended final location of archive	Content (e.g. pottery, animal bone etc)
Physical	Scarborough Museum	For example ceramics, animal bone etc
Paper	Scarborough Museum	Context sheets, matrices etc
Digital	Scarborough Museum	Database, digital photos etc
BIBLIOGRAPHY		

CA (Cotswold Archaeology) 2014 Potash Exploration Borough of Redcar and Cleveland and North Yorkshire. CA typescript report **14246**

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