Whitecrook Quarry, Glenluce: Archaeological Evaluation

Data Structure Report

by Alan Matthews and Amanda Gow issued 30th March 2006



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 of Field Archaeology's Standards and Policy Statements and Code of Conduct.

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Contents

1 Overview	3	
2 Project Wor	3	
3 Findings: De	3	
4 Findings: Ev	/aluation	5
6 Discussion		8
7 Recommend	dations	10
8 Conclusion	11	
Appendix 1 - ⁻	12	
Appendix 2 - Registers		17
Appendix 3 - Discovery & Excavation in Scotland		21
Contact Detai	Is	22
Figures		
Figs. 1a-f	Historical maps	4
Fig. 2	Trench location plan	6
Figs. 3a-d	Images of trenches	7
Figs. 4a-d	Images of features	9

1 Overview

- This Data Structure Report presents the findings of archaeological investigative works required by ASH Design and Assessment on behalf of Barr Quarries in respect of a proposed sand extraction site at Whitecrook, Glenluce, Dumfries & Galloway (NGR: NX 1718 5669). The archaeological works, carried out from the 20th and 24th March 2006, were designed to inform any necessary mitigation of impact on the archaeological remains within the development area. The area concerned is currently a green field site extending to 7.2 ha.
- 1.2 The findings presented below inform on the character of any archaeologically significant features within the proposed extraction area. These investigative works were sufficient to inform on archaeological hazard and allow the determination of planning consent. The character of any archaeological mitigation, should planning consent be granted, will need to be agreed with Dumfries & Galloway Council and the Dumfries & Galloway Archaeology Service through a Written Scheme of Investigation.
- 1.3 Rathmell Archaeology Ltd was appointed by ASH on behalf of Barr Quarries, to act with regard to the archaeological issues. The Dumfries & Galloway Archaeology Service who advises Dumfries & Galloway Council on archaeological matters, provided guidance on the character of archaeological investigations required on this site.

2 Project Works

- 2.1 The programme of works agreed with the Dumfries & Galloway Archaeology Service, commenced with an archaeological evaluation through machine cut trenches extending to 5% of the extraction area, some 3600m². In total 3614m² was excavated, comfortably meeting the 5%. This intrusive evaluation was supported by a metal detector survey. These works were undertaken in keeping with the agreed Method Statement with the on-site works taking place from the 20th and 24th March 2006.
- 2.2 Some alteration to trench layout was necessary and the following changes were implemented in the field due to specific circumstances:
 - > the relocation of Trench 2 to the west
 - > the shortening of Trench 3 (eastern limit)
 - > the extending of Trench 6 (on east-north-east end)
- 2.3 The relocations, shortenings and extensions were undertaken to ensure that trenches did not extend into the disturbance from the nineteenth century sand extraction pit.
- 2.4 The majority of exposed features within the trenches were investigated and evaluated to determine archaeological significance, as stated in the agreed Written Scheme of Investigation. All works were conducted in accordance with the Institute of Field Archaeology's Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

3 Findings: Desktop study

- 3.1 Statutory protected sites
- 3.1.1 The desktop study did not identify the presence within the study area of any sites 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).
- 3.1.2 Nor were any sites identified that have the confident potential to contain the burial of human skeletal material, and hence raise the difficulties of the crime of violation of sepulchre (the common law crime of unlawful interference with human remains).



Figure 1a: Moll 1745



Figure 1b: Roy 1747-55



Figure 1c: Ainslie 1782



Figure 1d: Thomson 1826

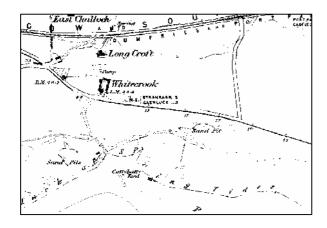


Figure 1e: 1st ed. Ordnance Survey 1850

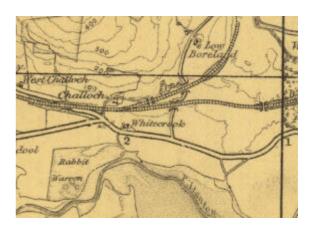


Figure 1f: 2nd ed. Ordnance Survey 1895

- 3.2 Archaeological and Historical Background
- 3.2.1 The National Monuments Record of Scotland identified no known archaeological sites within the extraction area; however the northern edge of the site is defined by the A75(T) which runs on the line of the Old Military Road (NMRS NX15NE78) while there are the recorded sites of an enclosure (NMRS NX15NE75) and cultivation remains (NMRS NX15NE76) to the immediate south.
- 3.2.2 The Council Sites and Monuments Record contains records of archaeological finds from the area at the head of Luce Bay, in the vicinity of the Piltanton Burn. These include: flint tools (DG 12725); the largest collection of Roman coins known from Scotland (DG 12724); and a Norse or Anglian ingot (DG 21045). The finds have been made within the last 10 years and reported to Stranraer Museum. It has been suggested that the Roman coins and ingot may indicate the site of a beach market where imported goods were brought ashore and traded in the early centuries AD.
- 3.2.3 The locations of all of these, except the flint tools, fall immediately to the south of the application area; however the flint objects were found in plough soil within the application area. Given this identified archaeological interest within and adjacent to the proposal area, it is considered possible that significant remains may exist within the proposal site.
- 3.2.4 The available pre-Ordnance Survey mapping (1745 to 1826) evidence suggests that ground has remained as open fields with Roy (1747-55) indicating unenclosed rig and furrow fields both above and below the marked break of slope across the middle of the application area.
- 3.2.5 The first edition Ordnance Survey of 1850 (Figure 1e) shows a sand pit cutting into this break of slope, the extent of this sand pit appears to be still identifiable on the modern topographic survey prepared by Barr Quarries (see base map underlying Figure 2).
- 3.2.6 None of the mapping consulted appears to illustrate the enclosure (NMRS NX15NE75) to the south of the application area. The cultivation remains noted (NMRS NX15NE76) may relate to the unenclosed arable fields depicted on the Roy map (Figure 1b).

4 Findings: Evaluation

- 4.1 The twelve trenches all exhibited a fairly common stratigraphic sequence with a mid brown sandy loam topsoil up to 600mm in depth overlying a sand subsoil. However, the topsoil on the higher ground tended to be significantly shallower than that on the lower ground. The principal subsoil was sand, two main variants were noted: a fine pale yellow-orange sand; and a compact orange-red sand. However, three of the trenches (4, 8 and 10), also contained a light brown/grey sandy gravel subsoil. Trench (8) also contained a mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay.
- 4.2 The lower ground
- 4.2.1 Only three of the trenches (4, 8 and 10) contained field drains. These trenches were located at the base of a slope in a waterlogged area which therefore required additional drainage. However, the majority of the drains were located in the trenches in the lower western area (4 and 10), which was more waterlogged than the lower eastern area. All the other trenches were located on higher ground at the top of the slope and therefore had adequate natural drainage. The drains were principally red ceramic drains, although there were very occasional rubble and plastic drains.
- 4.2.2 The presence of the drains matched well with the variation to clay in the underlying subsoil (see 4.1 above). The lower ground is likely to have experienced varying palaeohydrology conditions resulting in this ground being significantly wetter than that at the top of the slope. The route of the Piltanton burn, which is located further south of the study area, once probably flowed through the study area. The close proximity of the burn combined with natural slope run-off has resulted in a higher water table level in this part of the study area.



Figure 2: Plan of trench locations (Blue - planning boundary; Red - trenches, Green Sand-Pit; Yellow Star - feature group; Yellow circle - feature)



Figure 3a: Trench 10



Figure 3b: Trench 9



Figure 3c: Trench 3



Figure 3d: Western raised and lower Ground, with break of slope

- 4.2.3 The metal detector survey carried out on this lower ground failed to recover any significant objects and there was also an absence of modern (post-nineteenth century) detritus from agricultural activity.
- 4.3 Pit and Post-Hole Complex
- 4.3.1 Several archaeological features, consisting of pits and postholes, were noted. These features were located in the eastern portion of Trenches 1 and 2, on the higher ground in the western field. The majority appeared in two distinct feature groups: Feature Group 1 comprised [006] to [011] in Trench 1; and Feature Group 2 comprised [015] to [018]. Three other features [005] [012] [013] appeared in proximity to Feature Group 1 but sufficiently distant as to warrant exclusion from this group (see Figure 2).
- 4.3.2 The putative pits [012], [013] and [015] to [018] were roughly circular in shape, except pit [005] which was of a sub-rectangular shape in plan and measured 900mm by 900mm. This pit may also represent a possible large posthole sunk within larger sub-rectangular feature, as suggested by the slightly paler fill noted in the larger feature. The circular pits varied between 260mm and 520mm diameter. All the pits were filled with [001] comparable material which often included small flecks of wood charcoal and occasionally contained small flecks of what appears to be shale.
- 4.3.3 The postholes [006] to [011] measured between 200mm and 310mm diameter; they had a 'bowl' shaped profile. The postholes were very shallow, possibly resulting from truncation and were filled with [001]. The visible postholes were organised in a rough arc-shaped arrangement but it was not possible to determine the extent of this pattern as it went beyond the limits of the trench on the northern (road) side of the trench.
- 4.3.4 Several finds were recovered from the pit features. Pit [005] contained a flint flake with possible retouch evident on its distal end, giving the pit a probable prehistoric date. Pit [015] contained two stones, both of which have one flat, ground or abraded surface. The larger stone measured 470mm by 250mm and 100mm in height. The smaller stone measured 200mm by 130mm and 120mm in height.
- 4.4 Modern or other features
- 4.4.1 Further possible negative features were also noted in Trenches 7 and 8. These trenches were located in the eastern portion of the study area, one at the top of the break of slope, the other at the base. However, the break of slope was more gradual here than in the western part of the study area and the lower ground was less waterlogged. The features were [020], [022] and [023] and they varied in size from 50mm to 600mm diameter; they were filled with black humic soil. The irregular shape and character of these features suggests that they were not anthropic in origin.
- 4.4.2 The metal detector survey in the higher eastern and western section of the study area recovered only a small amount of modern agricultural detritus.

5 Discussion

- 5.1 The pit and post-hole complex
- 5.1.1 Thirteen features of archaeological significance were identified during the course of the archaeological evaluation. These features were concentrated in the higher western portion of the study area, in the eastern portions of Trench 1 and 2. This group of features can be reasonably taken to be a coherent pit and posthole complex, which consisted of features [005] to [013] and [015] to [018].
- 5.1.2 Seven of these features are reasonably interpreted as being pits [005], [012], [013] and [015] to [018] and are likely to be prehistoric in origin. This was suggested by the character of the finds recovered: the flint flake [01] and the improvised saddle quern with rubber stone [02].



Figure 4a: Feature [016]



Figure 4b: Feature [005]



Figure 4c: Features [008], [009], [010]



Figure 4d: Feature [015]

- 5.1.3 Six truncated posthole features [006] to [011] were also identified. The close proximity of these features to the pits may suggest an associated period of use. The rough arc-shaped arrangement of the visible postholes suggests that these possibly formed part of small structure or enclosure.
- 5.1.4 Although there appears to be two distinct groupings of features (Feature Group 1 in Trench 1 and Feature Group 2 in Trench 2), the existence of outlying features to these groups, namely pits [005], [012] and [013], makes the determination of the extent of the potentially archaeologically sensitive area problematic (see Figure 2). However, the absence of features in Trench 3, aligned west-north-west to east-south-east along the top of the break of slope, suggests that the potentially archaeologically sensitive area does not extend this far to the south.
- 5.1.5 The nineteenth century sandpit to the east of these trenches will have destroyed any archaeological features in this area. Within the area bounded by the nineteenth century sandpit and the top break of slope (ie Trench 3) it is problematic to establish the limits of an archaeologically significant area, as there are likely to be areas of survival and loss that cannot be accurately identified from the evaluation.
- 5.1.6 The pit and post complex cannot be rationalised from the evaluation into any coherent archaeological site. Given the presence of a improvised quern and a flint tool it is reasonable to assume that this is a settlement site, possibly from the Neolithic or early Bronze Age (say 4000BC to 2000 BC). This is a significant, if poorly located and truncated, archaeological site.
- 5.2 The Nineteenth century sandpit and eastern high ground
- 5.2.1 The extent of the nineteenth century sandpit (see Figure 1e) proved more extensive than anticipated prior to on-site works (see annotated extent on Figure 2). This extensive extraction site must have destroyed any potential for archaeology within its footprint.
- 5.2.2 The land in the eastern section of the study area, beyond the sandpit, has been used as arable land and has been subject to intensive ploughing. The landform has also been smoothed and the break of slope dropping to the lower ground is much less distinct. The absence of anthropic features from the eastern ground is likely to be attributable to this intensive agricultural use, should any archaeological activity have been present.
- 5.1.6 The pit-like features [020], [022] and [023] that were identified in the eastern section of the study area have, based on their irregular character been interpreted to be natural in origin. The most likely origin are from cleared broom (very common in the nineteenth century sandpit) or rabbits (again common across the study area).
- 5.2 The lower ground
- 5.2.1 Only a small proportion of the lower ground lay within the study area. The break of slope which separated the higher and lower ground was very steep in the western area, becoming more gradual towards the east. The high number of field drains which were identified in the trenches on the western lower ground (Trenches 4 and 10) indicates a clear attempt to improve the drainage on this ground. The majority of the drains were aligned on a roughly north-south axis. However, despite the high number of drains in this area (positioned roughly every 5m), parts of the ground were still more saturated.
- 5.2.2 The saturated character of this ground makes it inimical to settlement, a position that was probably common in the past. Coupled with the absence of finds from the metal detector survey this implies an absence of identifiable archaeological activity in this area.

6 Recommendations

6.1 Presented below are our provisional recommendations for archaeological mitigation in the event of the development proceeding. These recommendations are framed with reference to the issued planning guidance. The appropriateness and acceptability of our recommendations rest with Dumfries & Galloway Council and the Dumfries & Galloway

- Archaeology Service, their advisors. Confirmation that the below recommendations are acceptable should be confirmed with these bodies prior to the implementation of any development works whose appropriateness may rely on these recommendations.
- These investigative works identified a number of archaeologically significant features. Specifically, a pit and posthole complex was identified, which consisted of thirteen separate features. These appear to be located in two distinct groupings. These features are located on the higher western ground within the study area. The archaeologically significant area cannot be precisely defined, but is considered to be bounded to the south by the top break of slope and the nineteenth century sand pit to the east.
- 6.3 Should planning consent be given for the proposed extract then a significant proportion of the archaeologically sensitive area will be destroyed through Phases 1 and 2 (part) of the extraction process. This adverse impact needs to be mitigated, although the archaeological remains are likely to be minor or of uncertain nature. Consequently it is appropriate to undertake an archaeological monitoring in support of the topsoiling of the extraction area in keeping with planning guidance (SOEnv 1994, 13).
- 6.4 Consequently it is our recommendation that the appropriate mitigation for the pit and posthole complex is monitoring of all the ground breaking works above the top break of slope in the western field (predominantly Phases 1 to 2) outwith the nineteenth century sandpit. This monitoring would comprise:
 - continual archaeological monitoring of topsoil removal, the archaeologists would have to have control as to the depth of topsoiling;
 - investigation and excavation of any archaeological remains identified;
 - consequent post-excavation analysis and reporting on any excavated archaeology.
- 6.5 We would recommend that stripping was undertaken in whole Phases for the relevant phases. Reporting and analysis should be undertaken on a phase basis to prevent prolonged delay between excavation and reporting.
- The need for the monitoring should be re-assessed on the conclusion of each phase in conjunction with Dumfries & Galloway Council, with negative results encouraging the abandonment of these works as inappropriate and unrewarding.

7 Conclusion

- 7.1 A programme of archaeological investigative works was undertaken in respect of the proposed development on two parcels of land adjacent to Whitecrook, Glenluce, Dumfries & Galloway (NGR: NX 1718 5669). An evaluation was carried out from the 20th to 24th March 2006. The evaluation comprised twelve trenches covering 5% of the total area, supported by a metal detector survey.
- 7.2 Most trenches exhibited a common stratigraphic sequence with a topsoil up to 600mm in depth overlying either a fine pale yellow to orange sand or a compact orange-red sand. Occasional subsoil consisting of light brown/grey sandy gravel comprised of small-medium sized rounded stones or mottled grey/brown clay and black (humic) and grey sandy clay was also encountered. Numerous field drains indicate an attempt to improve drainage on the lower waterlogged ground.
- 7.3 Thirteen significant archaeological features, namely pits and postholes, were identified.

 These were concentrated in two groupings located on the western higher ground. A flint flake
 [01] and probable saddle quern and rubbing stone [02] were recovered from these features,
 giving a probable prehistoric date for the feature groups.

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. See Figure 2 for trench locations.

Trench 1

Orientation: East to west

Size: 205m by 2m (410m²).

Topsoil depth: 390mm to 500mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand is present for 51m.

This is intersected at 33m by [003], a 5m wide fluvio-glacial channel. At 51m subsoil changes to [004], compact orange-red sand with some paler mottling. This continues until 73m. Subsoil then changes back to [002]. This continues for the remainder of the trench, excluding two bands of [004], present from 109m-113m

and 131m-139m.

Modern features: None.

Significant features: Probable prehistoric pit [005] was located at 152.5m. This was

sub-rectangular shaped in plan, measuring 900mm by 900mm. Flint find [01] recovered. Feature Group 1 was located between 169m-179m. This consisted of features [006]-[011], representing possible truncated postholes. These measured between 200-310m diameter and were of shallow depth with 'bowl' shaped profiles. Possible prehistoric pit [013] was located at 203.5m. This

measured 400mm diameter and was filled with [001] which also

contained occasional small charcoal flecks.

Artefacts: Flint tool find [01].

Trench 2

Orientation: East-north-east to West-south-west

Size: 198m by 2m (396m²).

Topsoil depth: 400mm to 500mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, is present for 162m.

Within this are occasional small patches of [004], compact orangered sand with some paler mottling, present at 55m and 100m. Plant bases and patches of animal burrowing are also visible. Between 162m-180m several bands of [004], compact orange-red sand with some paler mottling, cut across [002]. [002] runs from

180m-187m, before changing to [004].

Modern features: None.

Significant features: Feature Group 2, which consists of possible prehistoric pits [015]-

[018], is present at 142m. These are roughly circular features measuring between 260mm-520mm diameter and with a maximum

depth of 210mm. All are filled with [001].

Data Structure Report - Whitecrook Quarry, Glenluce

Artefacts: Two possible ground stones find [02] were recovered from [015].

Trench 3

Orientation: West to east

Size: 161m by 2m (322m²).

Topsoil depth: 450mm to 510mm.

Subsoil character: The principal subsoil is [002], fine pale yellow to orange sand. This

covers the length of the trench, excluding a 9m band of [004] which runs from 113-122m. This consists of compact orange-red

sand with some paler mottling.

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 4

Orientation: West-north-west to east-south-east

Size: 204m by 2m (408m²).

Topsoil depth: 450mm to 600mm.

Subsoil character: Subsoil alternates between bands of [002], fine pale yellow to

orange sand, and [004], compact orange-red sand with some paler

mottling, for 37m. There is then a 2m patch of [019], light brown/grey sandy gravel comprised of small-medium sized rounded stones. Subsoil then changes back to [002], which from 39m-55m, is mottled with [019]. [002] continues until the end of the trench. There were 2 waterlogged sections from 155m-165m and

184m-196m.

Modern features: 25 red ceramic drains cut across the trench. These start at 42m

and continue at 5m intervals until 182m. There is 1 outlier at 200m. There is also a rubble drain at 170m. Drains are orientated on a

rough north-south axis.

Significant features: None.

Artefacts: None.

Trench 5

Orientation: East-south-east to west-north-west

Size: 203m by 2m (406m²).

Topsoil depth: 350mm to 450mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand is present for 25.5m.

There is then a 7m wide band of [004], compact orange-red sand

with some paler mottling. [002] then continues until 69m, where subsoil changes back to [004]. This continues until 89m, before changing to [002]. There is a 6m wide band of [004] at 118.5m. [002] then continues until 152m, where it changes back to [004].

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 6

Orientation: West-north-west to east-north-east

Size: 211m by 2m (422m²).

Topsoil depth: 220mm to 400mm.

Subsoil character: Subsoil [002], fine pale yellow-orange sand, is the principal

subsoil. It runs for 151m, excluding a 9m long patch of [004], compact orange-red sand with some paler mottling, present at 12m on SSW side of the trench. There are also two bands of [004] cutting across the trench at 115m and 128m and a small patch is visible at 106m. Subsoil [004] is present from 151m-182m, where it changes back to [002]. This continues until end of the trench, excluding a 3m wide band of [004] at 187m and a 1m wide band at

the end of the trench.

Modern features: None. Significant features: None.

Artefacts: None.

Trench 7

Orientation: West to east

Size: 207m by 2m (414m²).

Topsoil depth: 160mm to 380mm.

Subsoil character: Subsoil [004], compact orange-red sand with some paler mottling,

is present for 10m. Subsoil changes to [002], fine pale yelloworange sand, which continues until 42m, excluding a small patch of [004] on the SSW side of the trench at 38m. From 42m-80m subsoil is [004]. There is an 8m long area of root disturbance at 58m. [002] is present from 80m-131m. There is then an area of mixed [001] and [002] until 152m, before the subsoil becomes [002] again. This continues until 180m, where subsoil changes back to [004]. [004] continues until the end of the trench, excluding

a 10m long band of [002] at 196m.

Modern features: None.

Significant features: Possible pit feature [020] was visible at 186m on NNE side of the

trench. This was filled with black humic soil and stones.

Artefacts: None.

Trench 8

Orientation: East-south-east to West-north-west

Size: 200m by 2m (400m²).

Topsoil depth: 410mm to 540mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, runs for 21m,

excluding a small patch of [004], compact orange-red sand with some paler mottling, on southern side of the trench at 2m. Subsoil [004] runs from 21m-43m, where it changes to [021], a mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay. At 71m subsoil changes back to [004]. At 98m there is a 4m long patch of [019], a light brown/grey sandy gravel comprised of small-medium sized rounded stones, on the northern side of the trench. The subsoil then changes back to [002] until 105m, where it changes to [004]. This continues until 124.5m, before changing back to subsoil [002]. This continues until the end of the trench, excluding a 3m long patch of [004] on the southern

side of the trench at 142m.

Modern features: Two modern drains cut across the trench at 130m (orientated SW-

NE) and 190m (orientated NW-SE).

Significant features: Feature Group 3 is located at roughly 127m. This consists of

possible pits [022] and [023], which measure 500mm and 600mm in diameter respectively. Both are filled with black humic soil which

contains charcoal and stones.

Artefacts: None.

Trench 9

Orientation: North-north-west to south-south-east

Size: $75m \text{ by } 2m (125m^2).$

Topsoil depth: 460mm to 510mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, is present for 4m,

before changing to [004], compact orange-red sand with some paler mottling. This is present until 13m, before changing back to [002]. Subsoil changes back to [004] at 24m and continues until 43m, before changing back to [002]. This runs until 51m, where subsoil changes back to [004]. This continues until 60m, before changing back to [002]. This continues until the end of the trench,

excluding a 3m wide band of [004] at 63.5m.

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 10

Data Structure Report - Whitecrook Quarry, Glenluce

Orientation: East to West

Size: 49m by 2m (98m²).

Topsoil depth: 450mm to 540mm.

Subsoil character: Subsoil alternates between bands of [002], fine pale yellow to

orange sand and [019], light brown/grey sandy gravel comprised of small-medium sized rounded stones. [002] is present for 11m before changing to [019], which continues for 8m. [002] continues until 28m, before changing back to [019], which is present until 35m, where subsoil changes back to [002]. This continues until the end of the trench. There is a waterlogged section from 36m-44m.

Modern features: Two drains cut across the trench, at 9m and 31m. The latter drain

is plastic. Another drain runs along the trench under the

waterlogged section.

Significant features: None.

Artefacts: None.

Trench 11

Orientation: South-south-west to north-north-east

Size: $49m \text{ by } 2m (98m^2).$

Topsoil depth: 400mm to 530mm.

Subsoil character: Subsoil [004], compact orange-red sand with some paler mottling,

is present for 7m. This changes to [002], fine pale yellow to orange sand. There is some animal burrowing visible in this subsoil. At 19m the subsoil changes back to [004], which is present for the remainder of the trench, excluding a band of [002], from 32m-35m.

Modern features: None.
Significant features: None.

Artefacts: None.

Trench 12

Orientation: South to north

Size: $45 \text{m by } 2 \text{m } (90 \text{m}^2).$

Topsoil depth: 400mm to 550mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, runs for 22m. There

is then a change to subsoil [004], compact orange-red sand with some paler mottling. An area of possible burning, measuring

roughly 1m diameter, is present at 8m.

Modern features: A drain cuts across the trench at 2m, orientated SW-NE.

Significant features: None.

Artefacts: None.

Appendix 2: Registers

Context Summaries

No.	Trench	Interpretation	Description
001	All	Topsoil	Mid brown sandy loam containing frequent rootlets and occasional small stones
002	All	Sand subsoil	Fine pale yellow to orange sand
003	1	Fluvio-glacial channel	Broad (roughly 5m) linear feature measuring up to 0.50m in depth with graded sides. Orientated E-W. Filled with [001] comparable material and very occasional sub-angular medium stones. Minimal root activity. No evident anthropic material.
004	All	Sand subsoil	Compact orange-red sand with a small amount of paler mottling
005	1	Probable prehistoric pit or possible large posthole sunk within larger sub-rectangular feature.	Sub-rectangular shape in plan, measuring 900mm by 900mm. N corner possibly represents a separate circular feature with 600mm diameter. Larger feature filled with material comparable with [001], although slightly paler. Smaller circular feature filled with a dark brown sandy soil with occasional charcoal flecks and medium sub-angular and sub-rounded stones. Flint find [01] recovered.
006	1	Possible truncated posthole	Circular feature measuring 300mm diameter and 50mm deep. 'Bowl' shaped profile. Fill [001] covered section.
007	1	Possible truncated posthole	Circular feature measuring 200mm diameter and 30mm deep. 'Bowl' shaped profile. Fill [001] covered section.
800	1	Possible truncated posthole	Circular feature measuring 310mm diameter. Filled with [001].
009	1	Possible truncated posthole	Circular feature measuring 230mm diameter. Filled with [001].
010	1	Possible truncated posthole	Circular feature measuring 200mm diameter. Filled with [001].
011	1	Possible truncated posthole	Circular feature measuring 200mm diameter. 'Bowl' shaped profile. Filled with [001].
012	1	Possible prehistoric pit	Circular feature measuring 400mm diameter. Filled with [001] which also contained charcoal flecks

013	1	Possible prehistoric pit	Circular feature measuring 400mm diameter. Filled with [001] which also contained occasional small charcoal flecks
014	2	Probable natural feature	Shallow feature filled with black/brown very humic soil. Contained a large amount of frost damaged stone.
015	2	Possible prehistoric pit	Roughly circular feature measuring 520mm diameter and 210mm deep. Filled with [001]. Ground stone find [02] recovered.
016	2	Possible prehistoric pit	Roughly circular feature measuring 390mm diameter. Very shallow. Filled with [001].
017	2	Possible prehistoric pit	Rough square sided feature measuring 410mm diameter and 190mm deep. Filled with [001], which also contained very occasional small flecks of shale.
018	2	Possible prehistoric pit	Roughly circular feature measuring 260mm diameter. Very shallow. Filled with [001].
019	All	Sand/gravel subsoil	Light brown/grey sandy gravel comprised of small-medium sized rounded stones.
020	7	Probable natural feature	Possible pit feature filled with black humic soil and stones.
021	All	Subsoil	Very mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay.
022	8	Probable natural feature	Possible pit feature measuring 50mm diameter. Filled with black humic soil. Also contains stones.
023	8	Probable natural feature	Possible pit feature measuring 600mm diameter. Almost square shaped in plan. Filled with black humic soil. Also contains stones.

Drawing Register

Sheet	No.	Title	Scale	Date	Author
1	01	Trench 1 plan summary	1:100	20/3/06	TR
1	02	Trench 3 plan summary	1:100	20/3/06	TR
2	03	Trench 2 plan summary	1:100	23/3/06	AM
2	04	Trench 9 plan summary	1:100	23/3/06	AM
2	05	Trench 4 plan summary	1:100	23/3/06	AM

2	06	Trench 10 plan summary	1:100	23/3/06	AM
2	07	Trench 6 plan summary	1:100	23/3/06	AM
2	80	Trench 7 plan summary	1:100	23/3/06	AM
3	09	Trench 8 plan summary	1:100	23/3/06	AM
3	10	Trench 12 plan summary	1:100	23/3/06	AM
3	11	Trench 11 plan summary	1:100	23/3/06	AM
3	12	Trench 12 plan summary	1:100	23/3/06	AM

Photographic Register

Image	Description	From	Date
1	Trench 1 general	NW	20/3/06
2	Trench 1 [003] sondage	SW	20/3/06
3	Trench 1 [003] sondage	S	20/3/06
4	Trench 1 [005]	N	20/3/06
5	Trench 1 [005]	W	20/3/06
6	Trench 1 [006] half section	S	20/3/06
7	Trench 1 [008] - [010]	NW	20/3/06
8	Trench 1 [011] half section	S	20/3/06
9	Trench 1 [012]	SW	20/3/06
10	Trench 1 [013]	SW	20/3/06
11	Trench 3 general	NW	20/3/06
12	Trench 2 general	E	23/3/06
13	Trench 3 general	E	23/3/06
14	Trench 2 [015]	E	23/3/06
15	Trench 2 [016]	E	23/3/06
16	Trench 2 [017]and [018]	SW	23/3/06
17	Trench 9 general	N	23/3/06
18	General site shot- Western field	SW	23/3/06
19	General site shot- Western field	NW	23/3/06
20	Trench 4 general	W	23/3/06
21	Trench 10 general	W	23/3/06
22	Trench 5 general	W	23/3/06
23	Trench 6 general	E	23/3/06
24	Trench 7 general	Е	23/3/06

Data Structure Report – Whitecrook Quarry, Glenluce

25	Trench 11 general	NE	23/3/06
26	General site shot - Eastern field	Е	23/3/06
27	Trench 12 general	SW	23/3/06
28	Trench 7 [020]	Е	23/3/06
29	Trench 8 general	W	23/3/06
30	Trench 8 [023]	E	23/3/06
31	Trench 8 [022]	NW	23/3/06
32	General site shot - Eastern field	W	23/3/06
33	Little hill which represented north from station 1	S	23/3/06
34	Little hill which represented north from station 1	S	23/3/06

Artefacts List

No.	Description	From
01	1 Struck flint	005
02	2 possible ground stones-saddle quern with rubbing stone	015

Appendix 3: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	Dumfries & Galloway
PROJECT TITLE/SITE	Whitecrook Quarry, Glenluce
NAME:	
PARISH:	Glenluce
NAME OF CONTRIBUTOR:	Alan Matthews & Amanda Gow
NAME OF	Rathmell Archaeology Limited
ORGANISATION:	
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	None
SITE/MONUMENT	Pits; Post-holes
TYPE(S):	
SIGNIFICANT FINDS:	Flint tool and ground stones
NGR (2 letters, 6 figures)	NX 172 567
START DATE (this season)	20 th March 2006
END DATE (this season)	24 th March 2006
PREVIOUS WORK (incl.	None
DES ref.)	
PROPOSED FUTURE	None
WORK:	
MAIN (NARRATIVE)	A programme of archaeological investigative works was
DESCRIPTION: (may	undertaken in respect of the proposed development on two
include information from	parcels of land adjacent to Whitecrook, Glenluce, Dumfries &
other fields)	Galloway (NGR: NX 1718 5669). An evaluation was carried out from the 20 th to 24 th March 2006. The evaluation
	comprised twelve trenches covering 5% of the total area, supported by a metal detector survey.
	Supported by a metal detector survey.
	Most trenches exhibited a common stratigraphic sequence
	with a topsoil up to 600mm in depth overlying either a fine
	pale yellow to orange sand or a compact orange-red sand.
	Occasional subsoil consisting of light brown/grey sandy
	gravel comprised of small-medium sized rounded stones or
	mottled grey/brown clay and black (humic) and grey sandy
	clay was also encountered. Numerous field drains indicate an
	attempt to improve drainage on the lower waterlogged
	ground.
	Thirteen significant archaeological features, namely pits and
	postholes, were identified. These were concentrated in two
	groupings located on the western higher ground. A flint flake
	[01] and probable saddle quern and rubbing stone [02] were
	recovered from these features, giving a probable prehistoric
	date for the feature groups
PROJECT CODE:	06013
SPONSOR OR FUNDING BODY:	ASH on behalf of Barr Quarries
ADDRESS OF MAIN CONTRIBUTOR:	10 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
E MAIL:	contact@rathmell-arch.co.uk
ARCHIVE LOCATION	Report to Dumfries & Galloway Archaeology Service and
(intended/deposited)	archive to National Monuments Record of Scotland.
(toriada, adpositoa)	aronito to Hadional Mondinonto Robota di Godiana.

Contact Details

Rathmell Archaeology can be contacted at its Registered Office or through the web:

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Whitecrook Quarry, Glenluce: Archaeological Evaluation

Data Structure Report

by Alan Matthews and Amanda Gow issued 30th March 2006



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 of Field Archaeology's Standards and Policy Statements and Code of Conduct.

Signed		Date	
	the procedure of Rathmell Archaeology I een reviewed and agreed by an appropri		
Checked		Date	

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Contents

1 Overview	3	
2 Project Wor	3	
3 Findings: De	3	
4 Findings: Ev	/aluation	5
6 Discussion		8
7 Recommend	dations	10
8 Conclusion	11	
Appendix 1 - ⁻	12	
Appendix 2 - Registers		17
Appendix 3 - Discovery & Excavation in Scotland		21
Contact Detai	Is	22
Figures		
Figs. 1a-f	Historical maps	4
Fig. 2	Trench location plan	6
Figs. 3a-d	Images of trenches	7
Figs. 4a-d	Images of features	9

1 Overview

- This Data Structure Report presents the findings of archaeological investigative works required by ASH Design and Assessment on behalf of Barr Quarries in respect of a proposed sand extraction site at Whitecrook, Glenluce, Dumfries & Galloway (NGR: NX 1718 5669). The archaeological works, carried out from the 20th and 24th March 2006, were designed to inform any necessary mitigation of impact on the archaeological remains within the development area. The area concerned is currently a green field site extending to 7.2 ha.
- 1.2 The findings presented below inform on the character of any archaeologically significant features within the proposed extraction area. These investigative works were sufficient to inform on archaeological hazard and allow the determination of planning consent. The character of any archaeological mitigation, should planning consent be granted, will need to be agreed with Dumfries & Galloway Council and the Dumfries & Galloway Archaeology Service through a Written Scheme of Investigation.
- 1.3 Rathmell Archaeology Ltd was appointed by ASH on behalf of Barr Quarries, to act with regard to the archaeological issues. The Dumfries & Galloway Archaeology Service who advises Dumfries & Galloway Council on archaeological matters, provided guidance on the character of archaeological investigations required on this site.

2 Project Works

- 2.1 The programme of works agreed with the Dumfries & Galloway Archaeology Service, commenced with an archaeological evaluation through machine cut trenches extending to 5% of the extraction area, some 3600m². In total 3614m² was excavated, comfortably meeting the 5%. This intrusive evaluation was supported by a metal detector survey. These works were undertaken in keeping with the agreed Method Statement with the on-site works taking place from the 20th and 24th March 2006.
- 2.2 Some alteration to trench layout was necessary and the following changes were implemented in the field due to specific circumstances:
 - > the relocation of Trench 2 to the west
 - > the shortening of Trench 3 (eastern limit)
 - > the extending of Trench 6 (on east-north-east end)
- 2.3 The relocations, shortenings and extensions were undertaken to ensure that trenches did not extend into the disturbance from the nineteenth century sand extraction pit.
- 2.4 The majority of exposed features within the trenches were investigated and evaluated to determine archaeological significance, as stated in the agreed Written Scheme of Investigation. All works were conducted in accordance with the Institute of Field Archaeology's Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

3 Findings: Desktop study

- 3.1 Statutory protected sites
- 3.1.1 The desktop study did not identify the presence within the study area of any sites 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).
- 3.1.2 Nor were any sites identified that have the confident potential to contain the burial of human skeletal material, and hence raise the difficulties of the crime of violation of sepulchre (the common law crime of unlawful interference with human remains).



Figure 1a: Moll 1745



Figure 1b: Roy 1747-55



Figure 1c: Ainslie 1782



Figure 1d: Thomson 1826

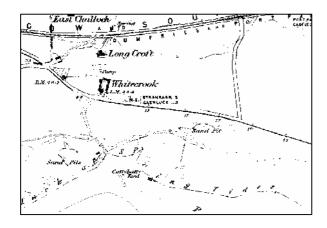


Figure 1e: 1st ed. Ordnance Survey 1850

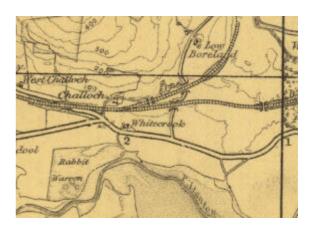


Figure 1f: 2nd ed. Ordnance Survey 1895

- 3.2 Archaeological and Historical Background
- 3.2.1 The National Monuments Record of Scotland identified no known archaeological sites within the extraction area; however the northern edge of the site is defined by the A75(T) which runs on the line of the Old Military Road (NMRS NX15NE78) while there are the recorded sites of an enclosure (NMRS NX15NE75) and cultivation remains (NMRS NX15NE76) to the immediate south.
- 3.2.2 The Council Sites and Monuments Record contains records of archaeological finds from the area at the head of Luce Bay, in the vicinity of the Piltanton Burn. These include: flint tools (DG 12725); the largest collection of Roman coins known from Scotland (DG 12724); and a Norse or Anglian ingot (DG 21045). The finds have been made within the last 10 years and reported to Stranraer Museum. It has been suggested that the Roman coins and ingot may indicate the site of a beach market where imported goods were brought ashore and traded in the early centuries AD.
- 3.2.3 The locations of all of these, except the flint tools, fall immediately to the south of the application area; however the flint objects were found in plough soil within the application area. Given this identified archaeological interest within and adjacent to the proposal area, it is considered possible that significant remains may exist within the proposal site.
- 3.2.4 The available pre-Ordnance Survey mapping (1745 to 1826) evidence suggests that ground has remained as open fields with Roy (1747-55) indicating unenclosed rig and furrow fields both above and below the marked break of slope across the middle of the application area.
- 3.2.5 The first edition Ordnance Survey of 1850 (Figure 1e) shows a sand pit cutting into this break of slope, the extent of this sand pit appears to be still identifiable on the modern topographic survey prepared by Barr Quarries (see base map underlying Figure 2).
- 3.2.6 None of the mapping consulted appears to illustrate the enclosure (NMRS NX15NE75) to the south of the application area. The cultivation remains noted (NMRS NX15NE76) may relate to the unenclosed arable fields depicted on the Roy map (Figure 1b).

4 Findings: Evaluation

- 4.1 The twelve trenches all exhibited a fairly common stratigraphic sequence with a mid brown sandy loam topsoil up to 600mm in depth overlying a sand subsoil. However, the topsoil on the higher ground tended to be significantly shallower than that on the lower ground. The principal subsoil was sand, two main variants were noted: a fine pale yellow-orange sand; and a compact orange-red sand. However, three of the trenches (4, 8 and 10), also contained a light brown/grey sandy gravel subsoil. Trench (8) also contained a mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay.
- 4.2 The lower ground
- 4.2.1 Only three of the trenches (4, 8 and 10) contained field drains. These trenches were located at the base of a slope in a waterlogged area which therefore required additional drainage. However, the majority of the drains were located in the trenches in the lower western area (4 and 10), which was more waterlogged than the lower eastern area. All the other trenches were located on higher ground at the top of the slope and therefore had adequate natural drainage. The drains were principally red ceramic drains, although there were very occasional rubble and plastic drains.
- 4.2.2 The presence of the drains matched well with the variation to clay in the underlying subsoil (see 4.1 above). The lower ground is likely to have experienced varying palaeohydrology conditions resulting in this ground being significantly wetter than that at the top of the slope. The route of the Piltanton burn, which is located further south of the study area, once probably flowed through the study area. The close proximity of the burn combined with natural slope run-off has resulted in a higher water table level in this part of the study area.



Figure 2: Plan of trench locations (Blue - planning boundary; Red - trenches, Green Sand-Pit; Yellow Star - feature group; Yellow circle - feature)



Figure 3a: Trench 10



Figure 3b: Trench 9



Figure 3c: Trench 3



Figure 3d: Western raised and lower Ground, with break of slope

- 4.2.3 The metal detector survey carried out on this lower ground failed to recover any significant objects and there was also an absence of modern (post-nineteenth century) detritus from agricultural activity.
- 4.3 Pit and Post-Hole Complex
- 4.3.1 Several archaeological features, consisting of pits and postholes, were noted. These features were located in the eastern portion of Trenches 1 and 2, on the higher ground in the western field. The majority appeared in two distinct feature groups: Feature Group 1 comprised [006] to [011] in Trench 1; and Feature Group 2 comprised [015] to [018]. Three other features [005] [012] [013] appeared in proximity to Feature Group 1 but sufficiently distant as to warrant exclusion from this group (see Figure 2).
- 4.3.2 The putative pits [012], [013] and [015] to [018] were roughly circular in shape, except pit [005] which was of a sub-rectangular shape in plan and measured 900mm by 900mm. This pit may also represent a possible large posthole sunk within larger sub-rectangular feature, as suggested by the slightly paler fill noted in the larger feature. The circular pits varied between 260mm and 520mm diameter. All the pits were filled with [001] comparable material which often included small flecks of wood charcoal and occasionally contained small flecks of what appears to be shale.
- 4.3.3 The postholes [006] to [011] measured between 200mm and 310mm diameter; they had a 'bowl' shaped profile. The postholes were very shallow, possibly resulting from truncation and were filled with [001]. The visible postholes were organised in a rough arc-shaped arrangement but it was not possible to determine the extent of this pattern as it went beyond the limits of the trench on the northern (road) side of the trench.
- 4.3.4 Several finds were recovered from the pit features. Pit [005] contained a flint flake with possible retouch evident on its distal end, giving the pit a probable prehistoric date. Pit [015] contained two stones, both of which have one flat, ground or abraded surface. The larger stone measured 470mm by 250mm and 100mm in height. The smaller stone measured 200mm by 130mm and 120mm in height.
- 4.4 Modern or other features
- 4.4.1 Further possible negative features were also noted in Trenches 7 and 8. These trenches were located in the eastern portion of the study area, one at the top of the break of slope, the other at the base. However, the break of slope was more gradual here than in the western part of the study area and the lower ground was less waterlogged. The features were [020], [022] and [023] and they varied in size from 50mm to 600mm diameter; they were filled with black humic soil. The irregular shape and character of these features suggests that they were not anthropic in origin.
- 4.4.2 The metal detector survey in the higher eastern and western section of the study area recovered only a small amount of modern agricultural detritus.

5 Discussion

- 5.1 The pit and post-hole complex
- 5.1.1 Thirteen features of archaeological significance were identified during the course of the archaeological evaluation. These features were concentrated in the higher western portion of the study area, in the eastern portions of Trench 1 and 2. This group of features can be reasonably taken to be a coherent pit and posthole complex, which consisted of features [005] to [013] and [015] to [018].
- 5.1.2 Seven of these features are reasonably interpreted as being pits [005], [012], [013] and [015] to [018] and are likely to be prehistoric in origin. This was suggested by the character of the finds recovered: the flint flake [01] and the improvised saddle quern with rubber stone [02].



Figure 4a: Feature [016]



Figure 4b: Feature [005]



Figure 4c: Features [008], [009], [010]



Figure 4d: Feature [015]

- 5.1.3 Six truncated posthole features [006] to [011] were also identified. The close proximity of these features to the pits may suggest an associated period of use. The rough arc-shaped arrangement of the visible postholes suggests that these possibly formed part of small structure or enclosure.
- 5.1.4 Although there appears to be two distinct groupings of features (Feature Group 1 in Trench 1 and Feature Group 2 in Trench 2), the existence of outlying features to these groups, namely pits [005], [012] and [013], makes the determination of the extent of the potentially archaeologically sensitive area problematic (see Figure 2). However, the absence of features in Trench 3, aligned west-north-west to east-south-east along the top of the break of slope, suggests that the potentially archaeologically sensitive area does not extend this far to the south.
- 5.1.5 The nineteenth century sandpit to the east of these trenches will have destroyed any archaeological features in this area. Within the area bounded by the nineteenth century sandpit and the top break of slope (ie Trench 3) it is problematic to establish the limits of an archaeologically significant area, as there are likely to be areas of survival and loss that cannot be accurately identified from the evaluation.
- 5.1.6 The pit and post complex cannot be rationalised from the evaluation into any coherent archaeological site. Given the presence of a improvised quern and a flint tool it is reasonable to assume that this is a settlement site, possibly from the Neolithic or early Bronze Age (say 4000BC to 2000 BC). This is a significant, if poorly located and truncated, archaeological site.
- 5.2 The Nineteenth century sandpit and eastern high ground
- 5.2.1 The extent of the nineteenth century sandpit (see Figure 1e) proved more extensive than anticipated prior to on-site works (see annotated extent on Figure 2). This extensive extraction site must have destroyed any potential for archaeology within its footprint.
- 5.2.2 The land in the eastern section of the study area, beyond the sandpit, has been used as arable land and has been subject to intensive ploughing. The landform has also been smoothed and the break of slope dropping to the lower ground is much less distinct. The absence of anthropic features from the eastern ground is likely to be attributable to this intensive agricultural use, should any archaeological activity have been present.
- 5.1.6 The pit-like features [020], [022] and [023] that were identified in the eastern section of the study area have, based on their irregular character been interpreted to be natural in origin. The most likely origin are from cleared broom (very common in the nineteenth century sandpit) or rabbits (again common across the study area).
- 5.2 The lower ground
- 5.2.1 Only a small proportion of the lower ground lay within the study area. The break of slope which separated the higher and lower ground was very steep in the western area, becoming more gradual towards the east. The high number of field drains which were identified in the trenches on the western lower ground (Trenches 4 and 10) indicates a clear attempt to improve the drainage on this ground. The majority of the drains were aligned on a roughly north-south axis. However, despite the high number of drains in this area (positioned roughly every 5m), parts of the ground were still more saturated.
- 5.2.2 The saturated character of this ground makes it inimical to settlement, a position that was probably common in the past. Coupled with the absence of finds from the metal detector survey this implies an absence of identifiable archaeological activity in this area.

6 Recommendations

6.1 Presented below are our provisional recommendations for archaeological mitigation in the event of the development proceeding. These recommendations are framed with reference to the issued planning guidance. The appropriateness and acceptability of our recommendations rest with Dumfries & Galloway Council and the Dumfries & Galloway

- Archaeology Service, their advisors. Confirmation that the below recommendations are acceptable should be confirmed with these bodies prior to the implementation of any development works whose appropriateness may rely on these recommendations.
- These investigative works identified a number of archaeologically significant features. Specifically, a pit and posthole complex was identified, which consisted of thirteen separate features. These appear to be located in two distinct groupings. These features are located on the higher western ground within the study area. The archaeologically significant area cannot be precisely defined, but is considered to be bounded to the south by the top break of slope and the nineteenth century sand pit to the east.
- 6.3 Should planning consent be given for the proposed extract then a significant proportion of the archaeologically sensitive area will be destroyed through Phases 1 and 2 (part) of the extraction process. This adverse impact needs to be mitigated, although the archaeological remains are likely to be minor or of uncertain nature. Consequently it is appropriate to undertake an archaeological monitoring in support of the topsoiling of the extraction area in keeping with planning guidance (SOEnv 1994, 13).
- 6.4 Consequently it is our recommendation that the appropriate mitigation for the pit and posthole complex is monitoring of all the ground breaking works above the top break of slope in the western field (predominantly Phases 1 to 2) outwith the nineteenth century sandpit. This monitoring would comprise:
 - continual archaeological monitoring of topsoil removal, the archaeologists would have to have control as to the depth of topsoiling;
 - investigation and excavation of any archaeological remains identified;
 - consequent post-excavation analysis and reporting on any excavated archaeology.
- 6.5 We would recommend that stripping was undertaken in whole Phases for the relevant phases. Reporting and analysis should be undertaken on a phase basis to prevent prolonged delay between excavation and reporting.
- The need for the monitoring should be re-assessed on the conclusion of each phase in conjunction with Dumfries & Galloway Council, with negative results encouraging the abandonment of these works as inappropriate and unrewarding.

7 Conclusion

- 7.1 A programme of archaeological investigative works was undertaken in respect of the proposed development on two parcels of land adjacent to Whitecrook, Glenluce, Dumfries & Galloway (NGR: NX 1718 5669). An evaluation was carried out from the 20th to 24th March 2006. The evaluation comprised twelve trenches covering 5% of the total area, supported by a metal detector survey.
- 7.2 Most trenches exhibited a common stratigraphic sequence with a topsoil up to 600mm in depth overlying either a fine pale yellow to orange sand or a compact orange-red sand. Occasional subsoil consisting of light brown/grey sandy gravel comprised of small-medium sized rounded stones or mottled grey/brown clay and black (humic) and grey sandy clay was also encountered. Numerous field drains indicate an attempt to improve drainage on the lower waterlogged ground.
- 7.3 Thirteen significant archaeological features, namely pits and postholes, were identified.

 These were concentrated in two groupings located on the western higher ground. A flint flake
 [01] and probable saddle quern and rubbing stone [02] were recovered from these features,
 giving a probable prehistoric date for the feature groups.

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. See Figure 2 for trench locations.

Trench 1

Orientation: East to west

Size: 205m by 2m (410m²).

Topsoil depth: 390mm to 500mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand is present for 51m.

This is intersected at 33m by [003], a 5m wide fluvio-glacial channel. At 51m subsoil changes to [004], compact orange-red sand with some paler mottling. This continues until 73m. Subsoil then changes back to [002]. This continues for the remainder of the trench, excluding two bands of [004], present from 109m-113m

and 131m-139m.

Modern features: None.

Significant features: Probable prehistoric pit [005] was located at 152.5m. This was

sub-rectangular shaped in plan, measuring 900mm by 900mm. Flint find [01] recovered. Feature Group 1 was located between 169m-179m. This consisted of features [006]-[011], representing possible truncated postholes. These measured between 200-310m diameter and were of shallow depth with 'bowl' shaped profiles. Possible prehistoric pit [013] was located at 203.5m. This

measured 400mm diameter and was filled with [001] which also

contained occasional small charcoal flecks.

Artefacts: Flint tool find [01].

Trench 2

Orientation: East-north-east to West-south-west

Size: 198m by 2m (396m²).

Topsoil depth: 400mm to 500mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, is present for 162m.

Within this are occasional small patches of [004], compact orangered sand with some paler mottling, present at 55m and 100m. Plant bases and patches of animal burrowing are also visible. Between 162m-180m several bands of [004], compact orange-red sand with some paler mottling, cut across [002]. [002] runs from

180m-187m, before changing to [004].

Modern features: None.

Significant features: Feature Group 2, which consists of possible prehistoric pits [015]-

[018], is present at 142m. These are roughly circular features measuring between 260mm-520mm diameter and with a maximum

depth of 210mm. All are filled with [001].

Data Structure Report - Whitecrook Quarry, Glenluce

Artefacts: Two possible ground stones find [02] were recovered from [015].

Trench 3

Orientation: West to east

Size: 161m by 2m (322m²).

Topsoil depth: 450mm to 510mm.

Subsoil character: The principal subsoil is [002], fine pale yellow to orange sand. This

covers the length of the trench, excluding a 9m band of [004] which runs from 113-122m. This consists of compact orange-red

sand with some paler mottling.

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 4

Orientation: West-north-west to east-south-east

Size: 204m by 2m (408m²).

Topsoil depth: 450mm to 600mm.

Subsoil character: Subsoil alternates between bands of [002], fine pale yellow to

orange sand, and [004], compact orange-red sand with some paler

mottling, for 37m. There is then a 2m patch of [019], light brown/grey sandy gravel comprised of small-medium sized rounded stones. Subsoil then changes back to [002], which from 39m-55m, is mottled with [019]. [002] continues until the end of the trench. There were 2 waterlogged sections from 155m-165m and

184m-196m.

Modern features: 25 red ceramic drains cut across the trench. These start at 42m

and continue at 5m intervals until 182m. There is 1 outlier at 200m. There is also a rubble drain at 170m. Drains are orientated on a

rough north-south axis.

Significant features: None.

Artefacts: None.

Trench 5

Orientation: East-south-east to west-north-west

Size: 203m by 2m (406m²).

Topsoil depth: 350mm to 450mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand is present for 25.5m.

There is then a 7m wide band of [004], compact orange-red sand

with some paler mottling. [002] then continues until 69m, where subsoil changes back to [004]. This continues until 89m, before changing to [002]. There is a 6m wide band of [004] at 118.5m. [002] then continues until 152m, where it changes back to [004].

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 6

Orientation: West-north-west to east-north-east

Size: 211m by 2m (422m²).

Topsoil depth: 220mm to 400mm.

Subsoil character: Subsoil [002], fine pale yellow-orange sand, is the principal

subsoil. It runs for 151m, excluding a 9m long patch of [004], compact orange-red sand with some paler mottling, present at 12m on SSW side of the trench. There are also two bands of [004] cutting across the trench at 115m and 128m and a small patch is visible at 106m. Subsoil [004] is present from 151m-182m, where it changes back to [002]. This continues until end of the trench, excluding a 3m wide band of [004] at 187m and a 1m wide band at

the end of the trench.

Modern features: None. Significant features: None.

Artefacts: None.

Trench 7

Orientation: West to east

Size: 207m by 2m (414m²).

Topsoil depth: 160mm to 380mm.

Subsoil character: Subsoil [004], compact orange-red sand with some paler mottling,

is present for 10m. Subsoil changes to [002], fine pale yelloworange sand, which continues until 42m, excluding a small patch of [004] on the SSW side of the trench at 38m. From 42m-80m subsoil is [004]. There is an 8m long area of root disturbance at 58m. [002] is present from 80m-131m. There is then an area of mixed [001] and [002] until 152m, before the subsoil becomes [002] again. This continues until 180m, where subsoil changes back to [004]. [004] continues until the end of the trench, excluding

a 10m long band of [002] at 196m.

Modern features: None.

Significant features: Possible pit feature [020] was visible at 186m on NNE side of the

trench. This was filled with black humic soil and stones.

Artefacts: None.

Trench 8

Orientation: East-south-east to West-north-west

Size: 200m by 2m (400m²).

Topsoil depth: 410mm to 540mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, runs for 21m,

excluding a small patch of [004], compact orange-red sand with some paler mottling, on southern side of the trench at 2m. Subsoil [004] runs from 21m-43m, where it changes to [021], a mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay. At 71m subsoil changes back to [004]. At 98m there is a 4m long patch of [019], a light brown/grey sandy gravel comprised of small-medium sized rounded stones, on the northern side of the trench. The subsoil then changes back to [002] until 105m, where it changes to [004]. This continues until 124.5m, before changing back to subsoil [002]. This continues until the end of the trench, excluding a 3m long patch of [004] on the southern

side of the trench at 142m.

Modern features: Two modern drains cut across the trench at 130m (orientated SW-

NE) and 190m (orientated NW-SE).

Significant features: Feature Group 3 is located at roughly 127m. This consists of

possible pits [022] and [023], which measure 500mm and 600mm in diameter respectively. Both are filled with black humic soil which

contains charcoal and stones.

Artefacts: None.

Trench 9

Orientation: North-north-west to south-south-east

Size: $75m \text{ by } 2m (125m^2).$

Topsoil depth: 460mm to 510mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, is present for 4m,

before changing to [004], compact orange-red sand with some paler mottling. This is present until 13m, before changing back to [002]. Subsoil changes back to [004] at 24m and continues until 43m, before changing back to [002]. This runs until 51m, where subsoil changes back to [004]. This continues until 60m, before changing back to [002]. This continues until the end of the trench,

excluding a 3m wide band of [004] at 63.5m.

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 10

Data Structure Report - Whitecrook Quarry, Glenluce

Orientation: East to West

Size: 49m by 2m (98m²).

Topsoil depth: 450mm to 540mm.

Subsoil character: Subsoil alternates between bands of [002], fine pale yellow to

orange sand and [019], light brown/grey sandy gravel comprised of small-medium sized rounded stones. [002] is present for 11m before changing to [019], which continues for 8m. [002] continues until 28m, before changing back to [019], which is present until 35m, where subsoil changes back to [002]. This continues until the end of the trench. There is a waterlogged section from 36m-44m.

Modern features: Two drains cut across the trench, at 9m and 31m. The latter drain

is plastic. Another drain runs along the trench under the

waterlogged section.

Significant features: None.

Artefacts: None.

Trench 11

Orientation: South-south-west to north-north-east

Size: $49m \text{ by } 2m (98m^2).$

Topsoil depth: 400mm to 530mm.

Subsoil character: Subsoil [004], compact orange-red sand with some paler mottling,

is present for 7m. This changes to [002], fine pale yellow to orange sand. There is some animal burrowing visible in this subsoil. At 19m the subsoil changes back to [004], which is present for the remainder of the trench, excluding a band of [002], from 32m-35m.

Modern features: None.
Significant features: None.

Artefacts: None.

Trench 12

Orientation: South to north

Size: $45 \text{m by } 2 \text{m } (90 \text{m}^2).$

Topsoil depth: 400mm to 550mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, runs for 22m. There

is then a change to subsoil [004], compact orange-red sand with some paler mottling. An area of possible burning, measuring

roughly 1m diameter, is present at 8m.

Modern features: A drain cuts across the trench at 2m, orientated SW-NE.

Significant features: None.

Artefacts: None.

Appendix 2: Registers

Context Summaries

No.	Trench	Interpretation	Description
001	All	Topsoil	Mid brown sandy loam containing frequent rootlets and occasional small stones
002	All	Sand subsoil	Fine pale yellow to orange sand
003	1	Fluvio-glacial channel	Broad (roughly 5m) linear feature measuring up to 0.50m in depth with graded sides. Orientated E-W. Filled with [001] comparable material and very occasional sub-angular medium stones. Minimal root activity. No evident anthropic material.
004	All	Sand subsoil	Compact orange-red sand with a small amount of paler mottling
005	1	Probable prehistoric pit or possible large posthole sunk within larger sub-rectangular feature.	Sub-rectangular shape in plan, measuring 900mm by 900mm. N corner possibly represents a separate circular feature with 600mm diameter. Larger feature filled with material comparable with [001], although slightly paler. Smaller circular feature filled with a dark brown sandy soil with occasional charcoal flecks and medium sub-angular and sub-rounded stones. Flint find [01] recovered.
006	1	Possible truncated posthole	Circular feature measuring 300mm diameter and 50mm deep. 'Bowl' shaped profile. Fill [001] covered section.
007	1	Possible truncated posthole	Circular feature measuring 200mm diameter and 30mm deep. 'Bowl' shaped profile. Fill [001] covered section.
800	1	Possible truncated posthole	Circular feature measuring 310mm diameter. Filled with [001].
009	1	Possible truncated posthole	Circular feature measuring 230mm diameter. Filled with [001].
010	1	Possible truncated posthole	Circular feature measuring 200mm diameter. Filled with [001].
011	1	Possible truncated posthole	Circular feature measuring 200mm diameter. 'Bowl' shaped profile. Filled with [001].
012	1	Possible prehistoric pit	Circular feature measuring 400mm diameter. Filled with [001] which also contained charcoal flecks

013	1	Possible prehistoric pit	Circular feature measuring 400mm diameter. Filled with [001] which also contained occasional small charcoal flecks
014	2	Probable natural feature	Shallow feature filled with black/brown very humic soil. Contained a large amount of frost damaged stone.
015	2	Possible prehistoric pit	Roughly circular feature measuring 520mm diameter and 210mm deep. Filled with [001]. Ground stone find [02] recovered.
016	2	Possible prehistoric pit	Roughly circular feature measuring 390mm diameter. Very shallow. Filled with [001].
017	2	Possible prehistoric pit	Rough square sided feature measuring 410mm diameter and 190mm deep. Filled with [001], which also contained very occasional small flecks of shale.
018	2	Possible prehistoric pit	Roughly circular feature measuring 260mm diameter. Very shallow. Filled with [001].
019	All	Sand/gravel subsoil	Light brown/grey sandy gravel comprised of small-medium sized rounded stones.
020	7	Probable natural feature	Possible pit feature filled with black humic soil and stones.
021	All	Subsoil	Very mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay.
022	8	Probable natural feature	Possible pit feature measuring 50mm diameter. Filled with black humic soil. Also contains stones.
023	8	Probable natural feature	Possible pit feature measuring 600mm diameter. Almost square shaped in plan. Filled with black humic soil. Also contains stones.

Drawing Register

Sheet	No.	Title	Scale	Date	Author
1	01	Trench 1 plan summary	1:100	20/3/06	TR
1	02	Trench 3 plan summary	1:100	20/3/06	TR
2	03	Trench 2 plan summary	1:100	23/3/06	AM
2	04	Trench 9 plan summary	1:100	23/3/06	AM
2	05	Trench 4 plan summary	1:100	23/3/06	AM

2	06	Trench 10 plan summary	1:100	23/3/06	AM
2	07	Trench 6 plan summary	1:100	23/3/06	AM
2	80	Trench 7 plan summary	1:100	23/3/06	AM
3	09	Trench 8 plan summary	1:100	23/3/06	AM
3	10	Trench 12 plan summary	1:100	23/3/06	AM
3	11	Trench 11 plan summary	1:100	23/3/06	AM
3	12	Trench 12 plan summary	1:100	23/3/06	AM

Photographic Register

Image	Description	From	Date
1	Trench 1 general	NW	20/3/06
2	Trench 1 [003] sondage	SW	20/3/06
3	Trench 1 [003] sondage	S	20/3/06
4	Trench 1 [005]	N	20/3/06
5	Trench 1 [005]	W	20/3/06
6	Trench 1 [006] half section	S	20/3/06
7	Trench 1 [008] - [010]	NW	20/3/06
8	Trench 1 [011] half section	S	20/3/06
9	Trench 1 [012]	SW	20/3/06
10	Trench 1 [013]	SW	20/3/06
11	Trench 3 general	NW	20/3/06
12	Trench 2 general	E	23/3/06
13	Trench 3 general	E	23/3/06
14	Trench 2 [015]	E	23/3/06
15	Trench 2 [016]	E	23/3/06
16	Trench 2 [017]and [018]	SW	23/3/06
17	Trench 9 general	N	23/3/06
18	General site shot- Western field	SW	23/3/06
19	General site shot- Western field	NW	23/3/06
20	Trench 4 general	W	23/3/06
21	Trench 10 general	W	23/3/06
22	Trench 5 general	W	23/3/06
23	Trench 6 general	E	23/3/06
24	Trench 7 general	Е	23/3/06

Data Structure Report – Whitecrook Quarry, Glenluce

25	Trench 11 general	NE	23/3/06
26	General site shot - Eastern field	Е	23/3/06
27	Trench 12 general	SW	23/3/06
28	Trench 7 [020]	Е	23/3/06
29	Trench 8 general	W	23/3/06
30	Trench 8 [023]	E	23/3/06
31	Trench 8 [022]	NW	23/3/06
32	General site shot - Eastern field	W	23/3/06
33	Little hill which represented north from station 1	S	23/3/06
34	Little hill which represented north from station 1	S	23/3/06

Artefacts List

No.	Description	From
01	1 Struck flint	005
02	2 possible ground stones-saddle quern with rubbing stone	015

Appendix 3: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	Dumfries & Galloway
PROJECT TITLE/SITE	Whitecrook Quarry, Glenluce
NAME:	
PARISH:	Glenluce
NAME OF CONTRIBUTOR:	Alan Matthews & Amanda Gow
NAME OF	Rathmell Archaeology Limited
ORGANISATION:	
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	None
SITE/MONUMENT	Pits; Post-holes
TYPE(S):	
SIGNIFICANT FINDS:	Flint tool and ground stones
NGR (2 letters, 6 figures)	NX 172 567
START DATE (this season)	20 th March 2006
END DATE (this season)	24 th March 2006
PREVIOUS WORK (incl.	None
DES ref.)	
PROPOSED FUTURE	None
WORK:	
MAIN (NARRATIVE)	A programme of archaeological investigative works was
DESCRIPTION: (may	undertaken in respect of the proposed development on two
include information from	parcels of land adjacent to Whitecrook, Glenluce, Dumfries &
other fields)	Galloway (NGR: NX 1718 5669). An evaluation was carried out from the 20 th to 24 th March 2006. The evaluation
	comprised twelve trenches covering 5% of the total area, supported by a metal detector survey.
	Supported by a metal detector survey.
	Most trenches exhibited a common stratigraphic sequence
	with a topsoil up to 600mm in depth overlying either a fine
	pale yellow to orange sand or a compact orange-red sand.
	Occasional subsoil consisting of light brown/grey sandy
	gravel comprised of small-medium sized rounded stones or
	mottled grey/brown clay and black (humic) and grey sandy
	clay was also encountered. Numerous field drains indicate an
	attempt to improve drainage on the lower waterlogged
	ground.
	Thirteen significant archaeological features, namely pits and
	postholes, were identified. These were concentrated in two
	groupings located on the western higher ground. A flint flake
	[01] and probable saddle quern and rubbing stone [02] were
	recovered from these features, giving a probable prehistoric
	date for the feature groups
PROJECT CODE:	06013
SPONSOR OR FUNDING BODY:	ASH on behalf of Barr Quarries
ADDRESS OF MAIN CONTRIBUTOR:	10 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
E MAIL:	contact@rathmell-arch.co.uk
ARCHIVE LOCATION	Report to Dumfries & Galloway Archaeology Service and
(intended/deposited)	archive to National Monuments Record of Scotland.
(toriada, adpositoa)	aronito to Hadional Mondinonto Robota di Godiana.

Contact Details

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Whitecrook Quarry, Glenluce: Archaeological Evaluation

Data Structure Report

by Alan Matthews and Amanda Gow issued 30th March 2006



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 of Field Archaeology's Standards and Policy Statements and Code of Conduct.

Signed		Date	
	the procedure of Rathmell Archaeology I een reviewed and agreed by an appropri		
Checked		Date	

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Contents

1 Overview	3	
2 Project Wor	ks	3
3 Findings: De	3	
4 Findings: Ev	5	
6 Discussion		8
7 Recommend	dations	10
8 Conclusion		11
Appendix 1 - ⁻	12	
Appendix 2 - I	17	
Appendix 3 - I	Discovery & Excavation in Scotland	21
Contact Detai	Is	22
Figures		
Figs. 1a-f	Historical maps	4
Fig. 2	Trench location plan	6
Figs. 3a-d	Images of trenches	7
Figs. 4a-d	Images of features	9

1 Overview

- This Data Structure Report presents the findings of archaeological investigative works required by ASH Design and Assessment on behalf of Barr Quarries in respect of a proposed sand extraction site at Whitecrook, Glenluce, Dumfries & Galloway (NGR: NX 1718 5669). The archaeological works, carried out from the 20th and 24th March 2006, were designed to inform any necessary mitigation of impact on the archaeological remains within the development area. The area concerned is currently a green field site extending to 7.2 ha.
- 1.2 The findings presented below inform on the character of any archaeologically significant features within the proposed extraction area. These investigative works were sufficient to inform on archaeological hazard and allow the determination of planning consent. The character of any archaeological mitigation, should planning consent be granted, will need to be agreed with Dumfries & Galloway Council and the Dumfries & Galloway Archaeology Service through a Written Scheme of Investigation.
- 1.3 Rathmell Archaeology Ltd was appointed by ASH on behalf of Barr Quarries, to act with regard to the archaeological issues. The Dumfries & Galloway Archaeology Service who advises Dumfries & Galloway Council on archaeological matters, provided guidance on the character of archaeological investigations required on this site.

2 Project Works

- 2.1 The programme of works agreed with the Dumfries & Galloway Archaeology Service, commenced with an archaeological evaluation through machine cut trenches extending to 5% of the extraction area, some 3600m². In total 3614m² was excavated, comfortably meeting the 5%. This intrusive evaluation was supported by a metal detector survey. These works were undertaken in keeping with the agreed Method Statement with the on-site works taking place from the 20th and 24th March 2006.
- 2.2 Some alteration to trench layout was necessary and the following changes were implemented in the field due to specific circumstances:
 - > the relocation of Trench 2 to the west
 - > the shortening of Trench 3 (eastern limit)
 - > the extending of Trench 6 (on east-north-east end)
- 2.3 The relocations, shortenings and extensions were undertaken to ensure that trenches did not extend into the disturbance from the nineteenth century sand extraction pit.
- 2.4 The majority of exposed features within the trenches were investigated and evaluated to determine archaeological significance, as stated in the agreed Written Scheme of Investigation. All works were conducted in accordance with the Institute of Field Archaeology's Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

3 Findings: Desktop study

- 3.1 Statutory protected sites
- 3.1.1 The desktop study did not identify the presence within the study area of any sites 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).
- 3.1.2 Nor were any sites identified that have the confident potential to contain the burial of human skeletal material, and hence raise the difficulties of the crime of violation of sepulchre (the common law crime of unlawful interference with human remains).



Figure 1a: Moll 1745



Figure 1b: Roy 1747-55



Figure 1c: Ainslie 1782



Figure 1d: Thomson 1826

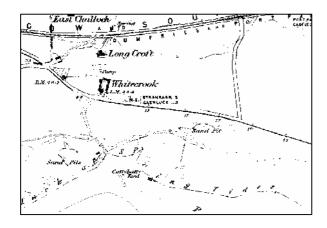


Figure 1e: 1st ed. Ordnance Survey 1850

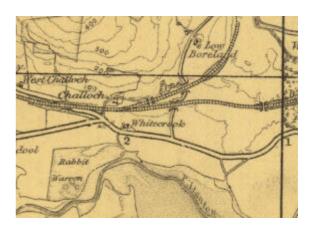


Figure 1f: 2nd ed. Ordnance Survey 1895

- 3.2 Archaeological and Historical Background
- 3.2.1 The National Monuments Record of Scotland identified no known archaeological sites within the extraction area; however the northern edge of the site is defined by the A75(T) which runs on the line of the Old Military Road (NMRS NX15NE78) while there are the recorded sites of an enclosure (NMRS NX15NE75) and cultivation remains (NMRS NX15NE76) to the immediate south.
- 3.2.2 The Council Sites and Monuments Record contains records of archaeological finds from the area at the head of Luce Bay, in the vicinity of the Piltanton Burn. These include: flint tools (DG 12725); the largest collection of Roman coins known from Scotland (DG 12724); and a Norse or Anglian ingot (DG 21045). The finds have been made within the last 10 years and reported to Stranraer Museum. It has been suggested that the Roman coins and ingot may indicate the site of a beach market where imported goods were brought ashore and traded in the early centuries AD.
- 3.2.3 The locations of all of these, except the flint tools, fall immediately to the south of the application area; however the flint objects were found in plough soil within the application area. Given this identified archaeological interest within and adjacent to the proposal area, it is considered possible that significant remains may exist within the proposal site.
- 3.2.4 The available pre-Ordnance Survey mapping (1745 to 1826) evidence suggests that ground has remained as open fields with Roy (1747-55) indicating unenclosed rig and furrow fields both above and below the marked break of slope across the middle of the application area.
- 3.2.5 The first edition Ordnance Survey of 1850 (Figure 1e) shows a sand pit cutting into this break of slope, the extent of this sand pit appears to be still identifiable on the modern topographic survey prepared by Barr Quarries (see base map underlying Figure 2).
- 3.2.6 None of the mapping consulted appears to illustrate the enclosure (NMRS NX15NE75) to the south of the application area. The cultivation remains noted (NMRS NX15NE76) may relate to the unenclosed arable fields depicted on the Roy map (Figure 1b).

4 Findings: Evaluation

- 4.1 The twelve trenches all exhibited a fairly common stratigraphic sequence with a mid brown sandy loam topsoil up to 600mm in depth overlying a sand subsoil. However, the topsoil on the higher ground tended to be significantly shallower than that on the lower ground. The principal subsoil was sand, two main variants were noted: a fine pale yellow-orange sand; and a compact orange-red sand. However, three of the trenches (4, 8 and 10), also contained a light brown/grey sandy gravel subsoil. Trench (8) also contained a mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay.
- 4.2 The lower ground
- 4.2.1 Only three of the trenches (4, 8 and 10) contained field drains. These trenches were located at the base of a slope in a waterlogged area which therefore required additional drainage. However, the majority of the drains were located in the trenches in the lower western area (4 and 10), which was more waterlogged than the lower eastern area. All the other trenches were located on higher ground at the top of the slope and therefore had adequate natural drainage. The drains were principally red ceramic drains, although there were very occasional rubble and plastic drains.
- 4.2.2 The presence of the drains matched well with the variation to clay in the underlying subsoil (see 4.1 above). The lower ground is likely to have experienced varying palaeohydrology conditions resulting in this ground being significantly wetter than that at the top of the slope. The route of the Piltanton burn, which is located further south of the study area, once probably flowed through the study area. The close proximity of the burn combined with natural slope run-off has resulted in a higher water table level in this part of the study area.



Figure 2: Plan of trench locations (Blue - planning boundary; Red - trenches, Green Sand-Pit; Yellow Star - feature group; Yellow circle - feature)



Figure 3a: Trench 10



Figure 3b: Trench 9



Figure 3c: Trench 3



Figure 3d: Western raised and lower Ground, with break of slope

- 4.2.3 The metal detector survey carried out on this lower ground failed to recover any significant objects and there was also an absence of modern (post-nineteenth century) detritus from agricultural activity.
- 4.3 Pit and Post-Hole Complex
- 4.3.1 Several archaeological features, consisting of pits and postholes, were noted. These features were located in the eastern portion of Trenches 1 and 2, on the higher ground in the western field. The majority appeared in two distinct feature groups: Feature Group 1 comprised [006] to [011] in Trench 1; and Feature Group 2 comprised [015] to [018]. Three other features [005] [012] [013] appeared in proximity to Feature Group 1 but sufficiently distant as to warrant exclusion from this group (see Figure 2).
- 4.3.2 The putative pits [012], [013] and [015] to [018] were roughly circular in shape, except pit [005] which was of a sub-rectangular shape in plan and measured 900mm by 900mm. This pit may also represent a possible large posthole sunk within larger sub-rectangular feature, as suggested by the slightly paler fill noted in the larger feature. The circular pits varied between 260mm and 520mm diameter. All the pits were filled with [001] comparable material which often included small flecks of wood charcoal and occasionally contained small flecks of what appears to be shale.
- 4.3.3 The postholes [006] to [011] measured between 200mm and 310mm diameter; they had a 'bowl' shaped profile. The postholes were very shallow, possibly resulting from truncation and were filled with [001]. The visible postholes were organised in a rough arc-shaped arrangement but it was not possible to determine the extent of this pattern as it went beyond the limits of the trench on the northern (road) side of the trench.
- 4.3.4 Several finds were recovered from the pit features. Pit [005] contained a flint flake with possible retouch evident on its distal end, giving the pit a probable prehistoric date. Pit [015] contained two stones, both of which have one flat, ground or abraded surface. The larger stone measured 470mm by 250mm and 100mm in height. The smaller stone measured 200mm by 130mm and 120mm in height.
- 4.4 Modern or other features
- 4.4.1 Further possible negative features were also noted in Trenches 7 and 8. These trenches were located in the eastern portion of the study area, one at the top of the break of slope, the other at the base. However, the break of slope was more gradual here than in the western part of the study area and the lower ground was less waterlogged. The features were [020], [022] and [023] and they varied in size from 50mm to 600mm diameter; they were filled with black humic soil. The irregular shape and character of these features suggests that they were not anthropic in origin.
- 4.4.2 The metal detector survey in the higher eastern and western section of the study area recovered only a small amount of modern agricultural detritus.

5 Discussion

- 5.1 The pit and post-hole complex
- 5.1.1 Thirteen features of archaeological significance were identified during the course of the archaeological evaluation. These features were concentrated in the higher western portion of the study area, in the eastern portions of Trench 1 and 2. This group of features can be reasonably taken to be a coherent pit and posthole complex, which consisted of features [005] to [013] and [015] to [018].
- 5.1.2 Seven of these features are reasonably interpreted as being pits [005], [012], [013] and [015] to [018] and are likely to be prehistoric in origin. This was suggested by the character of the finds recovered: the flint flake [01] and the improvised saddle quern with rubber stone [02].



Figure 4a: Feature [016]



Figure 4b: Feature [005]



Figure 4c: Features [008], [009], [010]



Figure 4d: Feature [015]

- 5.1.3 Six truncated posthole features [006] to [011] were also identified. The close proximity of these features to the pits may suggest an associated period of use. The rough arc-shaped arrangement of the visible postholes suggests that these possibly formed part of small structure or enclosure.
- 5.1.4 Although there appears to be two distinct groupings of features (Feature Group 1 in Trench 1 and Feature Group 2 in Trench 2), the existence of outlying features to these groups, namely pits [005], [012] and [013], makes the determination of the extent of the potentially archaeologically sensitive area problematic (see Figure 2). However, the absence of features in Trench 3, aligned west-north-west to east-south-east along the top of the break of slope, suggests that the potentially archaeologically sensitive area does not extend this far to the south.
- 5.1.5 The nineteenth century sandpit to the east of these trenches will have destroyed any archaeological features in this area. Within the area bounded by the nineteenth century sandpit and the top break of slope (ie Trench 3) it is problematic to establish the limits of an archaeologically significant area, as there are likely to be areas of survival and loss that cannot be accurately identified from the evaluation.
- 5.1.6 The pit and post complex cannot be rationalised from the evaluation into any coherent archaeological site. Given the presence of a improvised quern and a flint tool it is reasonable to assume that this is a settlement site, possibly from the Neolithic or early Bronze Age (say 4000BC to 2000 BC). This is a significant, if poorly located and truncated, archaeological site.
- 5.2 The Nineteenth century sandpit and eastern high ground
- 5.2.1 The extent of the nineteenth century sandpit (see Figure 1e) proved more extensive than anticipated prior to on-site works (see annotated extent on Figure 2). This extensive extraction site must have destroyed any potential for archaeology within its footprint.
- 5.2.2 The land in the eastern section of the study area, beyond the sandpit, has been used as arable land and has been subject to intensive ploughing. The landform has also been smoothed and the break of slope dropping to the lower ground is much less distinct. The absence of anthropic features from the eastern ground is likely to be attributable to this intensive agricultural use, should any archaeological activity have been present.
- 5.1.6 The pit-like features [020], [022] and [023] that were identified in the eastern section of the study area have, based on their irregular character been interpreted to be natural in origin. The most likely origin are from cleared broom (very common in the nineteenth century sandpit) or rabbits (again common across the study area).
- 5.2 The lower ground
- 5.2.1 Only a small proportion of the lower ground lay within the study area. The break of slope which separated the higher and lower ground was very steep in the western area, becoming more gradual towards the east. The high number of field drains which were identified in the trenches on the western lower ground (Trenches 4 and 10) indicates a clear attempt to improve the drainage on this ground. The majority of the drains were aligned on a roughly north-south axis. However, despite the high number of drains in this area (positioned roughly every 5m), parts of the ground were still more saturated.
- 5.2.2 The saturated character of this ground makes it inimical to settlement, a position that was probably common in the past. Coupled with the absence of finds from the metal detector survey this implies an absence of identifiable archaeological activity in this area.

6 Recommendations

6.1 Presented below are our provisional recommendations for archaeological mitigation in the event of the development proceeding. These recommendations are framed with reference to the issued planning guidance. The appropriateness and acceptability of our recommendations rest with Dumfries & Galloway Council and the Dumfries & Galloway

- Archaeology Service, their advisors. Confirmation that the below recommendations are acceptable should be confirmed with these bodies prior to the implementation of any development works whose appropriateness may rely on these recommendations.
- These investigative works identified a number of archaeologically significant features. Specifically, a pit and posthole complex was identified, which consisted of thirteen separate features. These appear to be located in two distinct groupings. These features are located on the higher western ground within the study area. The archaeologically significant area cannot be precisely defined, but is considered to be bounded to the south by the top break of slope and the nineteenth century sand pit to the east.
- 6.3 Should planning consent be given for the proposed extract then a significant proportion of the archaeologically sensitive area will be destroyed through Phases 1 and 2 (part) of the extraction process. This adverse impact needs to be mitigated, although the archaeological remains are likely to be minor or of uncertain nature. Consequently it is appropriate to undertake an archaeological monitoring in support of the topsoiling of the extraction area in keeping with planning guidance (SOEnv 1994, 13).
- 6.4 Consequently it is our recommendation that the appropriate mitigation for the pit and posthole complex is monitoring of all the ground breaking works above the top break of slope in the western field (predominantly Phases 1 to 2) outwith the nineteenth century sandpit. This monitoring would comprise:
 - continual archaeological monitoring of topsoil removal, the archaeologists would have to have control as to the depth of topsoiling;
 - investigation and excavation of any archaeological remains identified;
 - consequent post-excavation analysis and reporting on any excavated archaeology.
- 6.5 We would recommend that stripping was undertaken in whole Phases for the relevant phases. Reporting and analysis should be undertaken on a phase basis to prevent prolonged delay between excavation and reporting.
- The need for the monitoring should be re-assessed on the conclusion of each phase in conjunction with Dumfries & Galloway Council, with negative results encouraging the abandonment of these works as inappropriate and unrewarding.

7 Conclusion

- 7.1 A programme of archaeological investigative works was undertaken in respect of the proposed development on two parcels of land adjacent to Whitecrook, Glenluce, Dumfries & Galloway (NGR: NX 1718 5669). An evaluation was carried out from the 20th to 24th March 2006. The evaluation comprised twelve trenches covering 5% of the total area, supported by a metal detector survey.
- 7.2 Most trenches exhibited a common stratigraphic sequence with a topsoil up to 600mm in depth overlying either a fine pale yellow to orange sand or a compact orange-red sand. Occasional subsoil consisting of light brown/grey sandy gravel comprised of small-medium sized rounded stones or mottled grey/brown clay and black (humic) and grey sandy clay was also encountered. Numerous field drains indicate an attempt to improve drainage on the lower waterlogged ground.
- 7.3 Thirteen significant archaeological features, namely pits and postholes, were identified.

 These were concentrated in two groupings located on the western higher ground. A flint flake
 [01] and probable saddle quern and rubbing stone [02] were recovered from these features,
 giving a probable prehistoric date for the feature groups.

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. See Figure 2 for trench locations.

Trench 1

Orientation: East to west

Size: 205m by 2m (410m²).

Topsoil depth: 390mm to 500mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand is present for 51m.

This is intersected at 33m by [003], a 5m wide fluvio-glacial channel. At 51m subsoil changes to [004], compact orange-red sand with some paler mottling. This continues until 73m. Subsoil then changes back to [002]. This continues for the remainder of the trench, excluding two bands of [004], present from 109m-113m

and 131m-139m.

Modern features: None.

Significant features: Probable prehistoric pit [005] was located at 152.5m. This was

sub-rectangular shaped in plan, measuring 900mm by 900mm. Flint find [01] recovered. Feature Group 1 was located between 169m-179m. This consisted of features [006]-[011], representing possible truncated postholes. These measured between 200-310m diameter and were of shallow depth with 'bowl' shaped profiles. Possible prehistoric pit [013] was located at 203.5m. This

measured 400mm diameter and was filled with [001] which also

contained occasional small charcoal flecks.

Artefacts: Flint tool find [01].

Trench 2

Orientation: East-north-east to West-south-west

Size: 198m by 2m (396m²).

Topsoil depth: 400mm to 500mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, is present for 162m.

Within this are occasional small patches of [004], compact orangered sand with some paler mottling, present at 55m and 100m. Plant bases and patches of animal burrowing are also visible. Between 162m-180m several bands of [004], compact orange-red sand with some paler mottling, cut across [002]. [002] runs from

180m-187m, before changing to [004].

Modern features: None.

Significant features: Feature Group 2, which consists of possible prehistoric pits [015]-

[018], is present at 142m. These are roughly circular features measuring between 260mm-520mm diameter and with a maximum

depth of 210mm. All are filled with [001].

Data Structure Report - Whitecrook Quarry, Glenluce

Artefacts: Two possible ground stones find [02] were recovered from [015].

Trench 3

Orientation: West to east

Size: 161m by 2m (322m²).

Topsoil depth: 450mm to 510mm.

Subsoil character: The principal subsoil is [002], fine pale yellow to orange sand. This

covers the length of the trench, excluding a 9m band of [004] which runs from 113-122m. This consists of compact orange-red

sand with some paler mottling.

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 4

Orientation: West-north-west to east-south-east

Size: 204m by 2m (408m²).

Topsoil depth: 450mm to 600mm.

Subsoil character: Subsoil alternates between bands of [002], fine pale yellow to

orange sand, and [004], compact orange-red sand with some paler

mottling, for 37m. There is then a 2m patch of [019], light brown/grey sandy gravel comprised of small-medium sized rounded stones. Subsoil then changes back to [002], which from 39m-55m, is mottled with [019]. [002] continues until the end of the trench. There were 2 waterlogged sections from 155m-165m and

184m-196m.

Modern features: 25 red ceramic drains cut across the trench. These start at 42m

and continue at 5m intervals until 182m. There is 1 outlier at 200m. There is also a rubble drain at 170m. Drains are orientated on a

rough north-south axis.

Significant features: None.

Artefacts: None.

Trench 5

Orientation: East-south-east to west-north-west

Size: 203m by 2m (406m²).

Topsoil depth: 350mm to 450mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand is present for 25.5m.

There is then a 7m wide band of [004], compact orange-red sand

with some paler mottling. [002] then continues until 69m, where subsoil changes back to [004]. This continues until 89m, before changing to [002]. There is a 6m wide band of [004] at 118.5m. [002] then continues until 152m, where it changes back to [004].

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 6

Orientation: West-north-west to east-north-east

Size: 211m by 2m (422m²).

Topsoil depth: 220mm to 400mm.

Subsoil character: Subsoil [002], fine pale yellow-orange sand, is the principal

subsoil. It runs for 151m, excluding a 9m long patch of [004], compact orange-red sand with some paler mottling, present at 12m on SSW side of the trench. There are also two bands of [004] cutting across the trench at 115m and 128m and a small patch is visible at 106m. Subsoil [004] is present from 151m-182m, where it changes back to [002]. This continues until end of the trench, excluding a 3m wide band of [004] at 187m and a 1m wide band at

the end of the trench.

Modern features: None. Significant features: None.

Artefacts: None.

Trench 7

Orientation: West to east

Size: 207m by 2m (414m²).

Topsoil depth: 160mm to 380mm.

Subsoil character: Subsoil [004], compact orange-red sand with some paler mottling,

is present for 10m. Subsoil changes to [002], fine pale yelloworange sand, which continues until 42m, excluding a small patch of [004] on the SSW side of the trench at 38m. From 42m-80m subsoil is [004]. There is an 8m long area of root disturbance at 58m. [002] is present from 80m-131m. There is then an area of mixed [001] and [002] until 152m, before the subsoil becomes [002] again. This continues until 180m, where subsoil changes back to [004]. [004] continues until the end of the trench, excluding

a 10m long band of [002] at 196m.

Modern features: None.

Significant features: Possible pit feature [020] was visible at 186m on NNE side of the

trench. This was filled with black humic soil and stones.

Artefacts: None.

Trench 8

Orientation: East-south-east to West-north-west

Size: 200m by 2m (400m²).

Topsoil depth: 410mm to 540mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, runs for 21m,

excluding a small patch of [004], compact orange-red sand with some paler mottling, on southern side of the trench at 2m. Subsoil [004] runs from 21m-43m, where it changes to [021], a mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay. At 71m subsoil changes back to [004]. At 98m there is a 4m long patch of [019], a light brown/grey sandy gravel comprised of small-medium sized rounded stones, on the northern side of the trench. The subsoil then changes back to [002] until 105m, where it changes to [004]. This continues until 124.5m, before changing back to subsoil [002]. This continues until the end of the trench, excluding a 3m long patch of [004] on the southern

side of the trench at 142m.

Modern features: Two modern drains cut across the trench at 130m (orientated SW-

NE) and 190m (orientated NW-SE).

Significant features: Feature Group 3 is located at roughly 127m. This consists of

possible pits [022] and [023], which measure 500mm and 600mm in diameter respectively. Both are filled with black humic soil which

contains charcoal and stones.

Artefacts: None.

Trench 9

Orientation: North-north-west to south-south-east

Size: $75m \text{ by } 2m (125m^2).$

Topsoil depth: 460mm to 510mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, is present for 4m,

before changing to [004], compact orange-red sand with some paler mottling. This is present until 13m, before changing back to [002]. Subsoil changes back to [004] at 24m and continues until 43m, before changing back to [002]. This runs until 51m, where subsoil changes back to [004]. This continues until 60m, before changing back to [002]. This continues until the end of the trench,

excluding a 3m wide band of [004] at 63.5m.

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 10

Data Structure Report - Whitecrook Quarry, Glenluce

Orientation: East to West

Size: 49m by 2m (98m²).

Topsoil depth: 450mm to 540mm.

Subsoil character: Subsoil alternates between bands of [002], fine pale yellow to

orange sand and [019], light brown/grey sandy gravel comprised of small-medium sized rounded stones. [002] is present for 11m before changing to [019], which continues for 8m. [002] continues until 28m, before changing back to [019], which is present until 35m, where subsoil changes back to [002]. This continues until the end of the trench. There is a waterlogged section from 36m-44m.

Modern features: Two drains cut across the trench, at 9m and 31m. The latter drain

is plastic. Another drain runs along the trench under the

waterlogged section.

Significant features: None.

Artefacts: None.

Trench 11

Orientation: South-south-west to north-north-east

Size: $49m \text{ by } 2m (98m^2).$

Topsoil depth: 400mm to 530mm.

Subsoil character: Subsoil [004], compact orange-red sand with some paler mottling,

is present for 7m. This changes to [002], fine pale yellow to orange sand. There is some animal burrowing visible in this subsoil. At 19m the subsoil changes back to [004], which is present for the remainder of the trench, excluding a band of [002], from 32m-35m.

Modern features: None.
Significant features: None.

Artefacts: None.

Trench 12

Orientation: South to north

Size: $45 \text{m by } 2 \text{m } (90 \text{m}^2).$

Topsoil depth: 400mm to 550mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, runs for 22m. There

is then a change to subsoil [004], compact orange-red sand with some paler mottling. An area of possible burning, measuring

roughly 1m diameter, is present at 8m.

Modern features: A drain cuts across the trench at 2m, orientated SW-NE.

Significant features: None.

Artefacts: None.

Appendix 2: Registers

Context Summaries

No.	Trench	Interpretation	Description
001	All	Topsoil	Mid brown sandy loam containing frequent rootlets and occasional small stones
002	All	Sand subsoil	Fine pale yellow to orange sand
003	1	Fluvio-glacial channel	Broad (roughly 5m) linear feature measuring up to 0.50m in depth with graded sides. Orientated E-W. Filled with [001] comparable material and very occasional sub-angular medium stones. Minimal root activity. No evident anthropic material.
004	All	Sand subsoil	Compact orange-red sand with a small amount of paler mottling
005	1	Probable prehistoric pit or possible large posthole sunk within larger sub-rectangular feature.	Sub-rectangular shape in plan, measuring 900mm by 900mm. N corner possibly represents a separate circular feature with 600mm diameter. Larger feature filled with material comparable with [001], although slightly paler. Smaller circular feature filled with a dark brown sandy soil with occasional charcoal flecks and medium sub-angular and sub-rounded stones. Flint find [01] recovered.
006	1	Possible truncated posthole	Circular feature measuring 300mm diameter and 50mm deep. 'Bowl' shaped profile. Fill [001] covered section.
007	1	Possible truncated posthole	Circular feature measuring 200mm diameter and 30mm deep. 'Bowl' shaped profile. Fill [001] covered section.
800	1	Possible truncated posthole	Circular feature measuring 310mm diameter. Filled with [001].
009	1	Possible truncated posthole	Circular feature measuring 230mm diameter. Filled with [001].
010	1	Possible truncated posthole	Circular feature measuring 200mm diameter. Filled with [001].
011	1	Possible truncated posthole	Circular feature measuring 200mm diameter. 'Bowl' shaped profile. Filled with [001].
012	1	Possible prehistoric pit	Circular feature measuring 400mm diameter. Filled with [001] which also contained charcoal flecks

013	1	Possible prehistoric pit	Circular feature measuring 400mm diameter. Filled with [001] which also contained occasional small charcoal flecks
014	2	Probable natural feature	Shallow feature filled with black/brown very humic soil. Contained a large amount of frost damaged stone.
015	2	Possible prehistoric pit	Roughly circular feature measuring 520mm diameter and 210mm deep. Filled with [001]. Ground stone find [02] recovered.
016	2	Possible prehistoric pit	Roughly circular feature measuring 390mm diameter. Very shallow. Filled with [001].
017	2	Possible prehistoric pit	Rough square sided feature measuring 410mm diameter and 190mm deep. Filled with [001], which also contained very occasional small flecks of shale.
018	2	Possible prehistoric pit	Roughly circular feature measuring 260mm diameter. Very shallow. Filled with [001].
019	All	Sand/gravel subsoil	Light brown/grey sandy gravel comprised of small-medium sized rounded stones.
020	7	Probable natural feature	Possible pit feature filled with black humic soil and stones.
021	All	Subsoil	Very mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay.
022	8	Probable natural feature	Possible pit feature measuring 50mm diameter. Filled with black humic soil. Also contains stones.
023	8	Probable natural feature	Possible pit feature measuring 600mm diameter. Almost square shaped in plan. Filled with black humic soil. Also contains stones.

Drawing Register

Sheet	No.	Title	Scale	Date	Author
1	01	Trench 1 plan summary	1:100	20/3/06	TR
1	02	Trench 3 plan summary	1:100	20/3/06	TR
2	03	Trench 2 plan summary	1:100	23/3/06	AM
2	04	Trench 9 plan summary	1:100	23/3/06	AM
2	05	Trench 4 plan summary	1:100	23/3/06	AM

2	06	Trench 10 plan summary	1:100	23/3/06	AM
2	07	Trench 6 plan summary	1:100	23/3/06	AM
2	80	Trench 7 plan summary	1:100	23/3/06	AM
3	09	Trench 8 plan summary	1:100	23/3/06	AM
3	10	Trench 12 plan summary	1:100	23/3/06	AM
3	11	Trench 11 plan summary	1:100	23/3/06	AM
3	12	Trench 12 plan summary	1:100	23/3/06	AM

Photographic Register

Image	Description	From	Date
1	Trench 1 general	NW	20/3/06
2	Trench 1 [003] sondage	SW	20/3/06
3	Trench 1 [003] sondage	S	20/3/06
4	Trench 1 [005]	N	20/3/06
5	Trench 1 [005]	W	20/3/06
6	Trench 1 [006] half section	S	20/3/06
7	Trench 1 [008] - [010]	NW	20/3/06
8	Trench 1 [011] half section	S	20/3/06
9	Trench 1 [012]	SW	20/3/06
10	Trench 1 [013]	SW	20/3/06
11	Trench 3 general	NW	20/3/06
12	Trench 2 general	E	23/3/06
13	Trench 3 general	E	23/3/06
14	Trench 2 [015]	E	23/3/06
15	Trench 2 [016]	E	23/3/06
16	Trench 2 [017]and [018]	SW	23/3/06
17	Trench 9 general	N	23/3/06
18	General site shot- Western field	SW	23/3/06
19	General site shot- Western field	NW	23/3/06
20	Trench 4 general	W	23/3/06
21	Trench 10 general	W	23/3/06
22	Trench 5 general	W	23/3/06
23	Trench 6 general	E	23/3/06
24	Trench 7 general	Е	23/3/06

Data Structure Report – Whitecrook Quarry, Glenluce

25	Trench 11 general	NE	23/3/06
26	General site shot - Eastern field	Е	23/3/06
27	Trench 12 general	SW	23/3/06
28	Trench 7 [020]	E	23/3/06
29	Trench 8 general	W	23/3/06
30	Trench 8 [023]	E	23/3/06
31	Trench 8 [022]	NW	23/3/06
32	General site shot - Eastern field	W	23/3/06
33	Little hill which represented north from station 1	S	23/3/06
34	Little hill which represented north from station 1	S	23/3/06

Artefacts List

No.	Description	From
01	1 Struck flint	005
02	2 possible ground stones-saddle quern with rubbing stone	015

Appendix 3: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	Dumfries & Galloway
PROJECT TITLE/SITE	Whitecrook Quarry, Glenluce
NAME:	
PARISH:	Glenluce
NAME OF CONTRIBUTOR:	Alan Matthews & Amanda Gow
NAME OF	Rathmell Archaeology Limited
ORGANISATION:	
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	None
SITE/MONUMENT	Pits; Post-holes
TYPE(S):	
SIGNIFICANT FINDS:	Flint tool and ground stones
NGR (2 letters, 6 figures)	NX 172 567
START DATE (this season)	20 th March 2006
END DATE (this season)	24 th March 2006
PREVIOUS WORK (incl.	None
DES ref.)	
PROPOSED FUTURE	None
WORK:	
MAIN (NARRATIVE)	A programme of archaeological investigative works was
DESCRIPTION: (may	undertaken in respect of the proposed development on two
include information from	parcels of land adjacent to Whitecrook, Glenluce, Dumfries &
other fields)	Galloway (NGR: NX 1718 5669). An evaluation was carried out from the 20 th to 24 th March 2006. The evaluation
	comprised twelve trenches covering 5% of the total area, supported by a metal detector survey.
	Supported by a metal detector survey.
	Most trenches exhibited a common stratigraphic sequence
	with a topsoil up to 600mm in depth overlying either a fine
	pale yellow to orange sand or a compact orange-red sand.
	Occasional subsoil consisting of light brown/grey sandy
	gravel comprised of small-medium sized rounded stones or
	mottled grey/brown clay and black (humic) and grey sandy
	clay was also encountered. Numerous field drains indicate an
	attempt to improve drainage on the lower waterlogged
	ground.
	Thirteen significant archaeological features, namely pits and
	postholes, were identified. These were concentrated in two
	groupings located on the western higher ground. A flint flake
	[01] and probable saddle quern and rubbing stone [02] were
	recovered from these features, giving a probable prehistoric
	date for the feature groups
PROJECT CODE:	06013
SPONSOR OR FUNDING BODY:	ASH on behalf of Barr Quarries
ADDRESS OF MAIN CONTRIBUTOR:	10 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
E MAIL:	contact@rathmell-arch.co.uk
ARCHIVE LOCATION	Report to Dumfries & Galloway Archaeology Service and
(intended/deposited)	archive to National Monuments Record of Scotland.
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Whitecrook Quarry, Glenluce: Archaeological Evaluation

Data Structure Report

by Alan Matthews and Amanda Gow issued 30th March 2006



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 of Field Archaeology's Standards and Policy Statements and Code of Conduct.

Signed		Date	
	the procedure of Rathmell Archaeology I een reviewed and agreed by an appropri		
Checked		Date	

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Contents

1 Overview	3	
2 Project Wor	3	
3 Findings: De	esktop Study	3
4 Findings: Ev	5	
6 Discussion	8	
7 Recommend	10	
8 Conclusion	11	
Appendix 1 - Trench Details		12
Appendix 2 - Registers		17
Appendix 3 - I	Discovery & Excavation in Scotland	21
Contact Detai	Is	22
Figures		
Figs. 1a-f	Historical maps	4
Fig. 2	Trench location plan	6
Figs. 3a-d	Images of trenches	7
Figs. 4a-d	Images of features	9

1 Overview

- This Data Structure Report presents the findings of archaeological investigative works required by ASH Design and Assessment on behalf of Barr Quarries in respect of a proposed sand extraction site at Whitecrook, Glenluce, Dumfries & Galloway (NGR: NX 1718 5669). The archaeological works, carried out from the 20th and 24th March 2006, were designed to inform any necessary mitigation of impact on the archaeological remains within the development area. The area concerned is currently a green field site extending to 7.2 ha.
- 1.2 The findings presented below inform on the character of any archaeologically significant features within the proposed extraction area. These investigative works were sufficient to inform on archaeological hazard and allow the determination of planning consent. The character of any archaeological mitigation, should planning consent be granted, will need to be agreed with Dumfries & Galloway Council and the Dumfries & Galloway Archaeology Service through a Written Scheme of Investigation.
- 1.3 Rathmell Archaeology Ltd was appointed by ASH on behalf of Barr Quarries, to act with regard to the archaeological issues. The Dumfries & Galloway Archaeology Service who advises Dumfries & Galloway Council on archaeological matters, provided guidance on the character of archaeological investigations required on this site.

2 Project Works

- 2.1 The programme of works agreed with the Dumfries & Galloway Archaeology Service, commenced with an archaeological evaluation through machine cut trenches extending to 5% of the extraction area, some 3600m². In total 3614m² was excavated, comfortably meeting the 5%. This intrusive evaluation was supported by a metal detector survey. These works were undertaken in keeping with the agreed Method Statement with the on-site works taking place from the 20th and 24th March 2006.
- 2.2 Some alteration to trench layout was necessary and the following changes were implemented in the field due to specific circumstances:
 - > the relocation of Trench 2 to the west
 - > the shortening of Trench 3 (eastern limit)
 - > the extending of Trench 6 (on east-north-east end)
- 2.3 The relocations, shortenings and extensions were undertaken to ensure that trenches did not extend into the disturbance from the nineteenth century sand extraction pit.
- 2.4 The majority of exposed features within the trenches were investigated and evaluated to determine archaeological significance, as stated in the agreed Written Scheme of Investigation. All works were conducted in accordance with the Institute of Field Archaeology's Standards and Policy Statements and Code of Conduct and Historic Scotland Policy Statements.

3 Findings: Desktop study

- 3.1 Statutory protected sites
- 3.1.1 The desktop study did not identify the presence within the study area of any sites 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).
- 3.1.2 Nor were any sites identified that have the confident potential to contain the burial of human skeletal material, and hence raise the difficulties of the crime of violation of sepulchre (the common law crime of unlawful interference with human remains).



Figure 1a: Moll 1745



Figure 1b: Roy 1747-55



Figure 1c: Ainslie 1782



Figure 1d: Thomson 1826

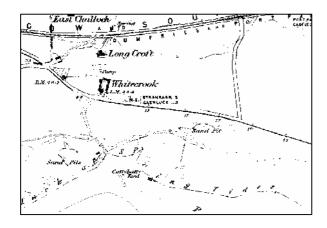


Figure 1e: 1st ed. Ordnance Survey 1850

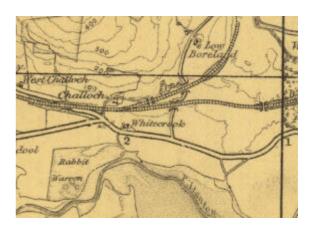


Figure 1f: 2nd ed. Ordnance Survey 1895

- 3.2 Archaeological and Historical Background
- 3.2.1 The National Monuments Record of Scotland identified no known archaeological sites within the extraction area; however the northern edge of the site is defined by the A75(T) which runs on the line of the Old Military Road (NMRS NX15NE78) while there are the recorded sites of an enclosure (NMRS NX15NE75) and cultivation remains (NMRS NX15NE76) to the immediate south.
- 3.2.2 The Council Sites and Monuments Record contains records of archaeological finds from the area at the head of Luce Bay, in the vicinity of the Piltanton Burn. These include: flint tools (DG 12725); the largest collection of Roman coins known from Scotland (DG 12724); and a Norse or Anglian ingot (DG 21045). The finds have been made within the last 10 years and reported to Stranraer Museum. It has been suggested that the Roman coins and ingot may indicate the site of a beach market where imported goods were brought ashore and traded in the early centuries AD.
- 3.2.3 The locations of all of these, except the flint tools, fall immediately to the south of the application area; however the flint objects were found in plough soil within the application area. Given this identified archaeological interest within and adjacent to the proposal area, it is considered possible that significant remains may exist within the proposal site.
- 3.2.4 The available pre-Ordnance Survey mapping (1745 to 1826) evidence suggests that ground has remained as open fields with Roy (1747-55) indicating unenclosed rig and furrow fields both above and below the marked break of slope across the middle of the application area.
- 3.2.5 The first edition Ordnance Survey of 1850 (Figure 1e) shows a sand pit cutting into this break of slope, the extent of this sand pit appears to be still identifiable on the modern topographic survey prepared by Barr Quarries (see base map underlying Figure 2).
- 3.2.6 None of the mapping consulted appears to illustrate the enclosure (NMRS NX15NE75) to the south of the application area. The cultivation remains noted (NMRS NX15NE76) may relate to the unenclosed arable fields depicted on the Roy map (Figure 1b).

4 Findings: Evaluation

- 4.1 The twelve trenches all exhibited a fairly common stratigraphic sequence with a mid brown sandy loam topsoil up to 600mm in depth overlying a sand subsoil. However, the topsoil on the higher ground tended to be significantly shallower than that on the lower ground. The principal subsoil was sand, two main variants were noted: a fine pale yellow-orange sand; and a compact orange-red sand. However, three of the trenches (4, 8 and 10), also contained a light brown/grey sandy gravel subsoil. Trench (8) also contained a mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay.
- 4.2 The lower ground
- 4.2.1 Only three of the trenches (4, 8 and 10) contained field drains. These trenches were located at the base of a slope in a waterlogged area which therefore required additional drainage. However, the majority of the drains were located in the trenches in the lower western area (4 and 10), which was more waterlogged than the lower eastern area. All the other trenches were located on higher ground at the top of the slope and therefore had adequate natural drainage. The drains were principally red ceramic drains, although there were very occasional rubble and plastic drains.
- 4.2.2 The presence of the drains matched well with the variation to clay in the underlying subsoil (see 4.1 above). The lower ground is likely to have experienced varying palaeohydrology conditions resulting in this ground being significantly wetter than that at the top of the slope. The route of the Piltanton burn, which is located further south of the study area, once probably flowed through the study area. The close proximity of the burn combined with natural slope run-off has resulted in a higher water table level in this part of the study area.



Figure 2: Plan of trench locations (Blue - planning boundary; Red - trenches, Green Sand-Pit; Yellow Star - feature group; Yellow circle - feature)



Figure 3a: Trench 10



Figure 3b: Trench 9



Figure 3c: Trench 3



Figure 3d: Western raised and lower Ground, with break of slope

- 4.2.3 The metal detector survey carried out on this lower ground failed to recover any significant objects and there was also an absence of modern (post-nineteenth century) detritus from agricultural activity.
- 4.3 Pit and Post-Hole Complex
- 4.3.1 Several archaeological features, consisting of pits and postholes, were noted. These features were located in the eastern portion of Trenches 1 and 2, on the higher ground in the western field. The majority appeared in two distinct feature groups: Feature Group 1 comprised [006] to [011] in Trench 1; and Feature Group 2 comprised [015] to [018]. Three other features [005] [012] [013] appeared in proximity to Feature Group 1 but sufficiently distant as to warrant exclusion from this group (see Figure 2).
- 4.3.2 The putative pits [012], [013] and [015] to [018] were roughly circular in shape, except pit [005] which was of a sub-rectangular shape in plan and measured 900mm by 900mm. This pit may also represent a possible large posthole sunk within larger sub-rectangular feature, as suggested by the slightly paler fill noted in the larger feature. The circular pits varied between 260mm and 520mm diameter. All the pits were filled with [001] comparable material which often included small flecks of wood charcoal and occasionally contained small flecks of what appears to be shale.
- 4.3.3 The postholes [006] to [011] measured between 200mm and 310mm diameter; they had a 'bowl' shaped profile. The postholes were very shallow, possibly resulting from truncation and were filled with [001]. The visible postholes were organised in a rough arc-shaped arrangement but it was not possible to determine the extent of this pattern as it went beyond the limits of the trench on the northern (road) side of the trench.
- 4.3.4 Several finds were recovered from the pit features. Pit [005] contained a flint flake with possible retouch evident on its distal end, giving the pit a probable prehistoric date. Pit [015] contained two stones, both of which have one flat, ground or abraded surface. The larger stone measured 470mm by 250mm and 100mm in height. The smaller stone measured 200mm by 130mm and 120mm in height.
- 4.4 Modern or other features
- 4.4.1 Further possible negative features were also noted in Trenches 7 and 8. These trenches were located in the eastern portion of the study area, one at the top of the break of slope, the other at the base. However, the break of slope was more gradual here than in the western part of the study area and the lower ground was less waterlogged. The features were [020], [022] and [023] and they varied in size from 50mm to 600mm diameter; they were filled with black humic soil. The irregular shape and character of these features suggests that they were not anthropic in origin.
- 4.4.2 The metal detector survey in the higher eastern and western section of the study area recovered only a small amount of modern agricultural detritus.

5 Discussion

- 5.1 The pit and post-hole complex
- 5.1.1 Thirteen features of archaeological significance were identified during the course of the archaeological evaluation. These features were concentrated in the higher western portion of the study area, in the eastern portions of Trench 1 and 2. This group of features can be reasonably taken to be a coherent pit and posthole complex, which consisted of features [005] to [013] and [015] to [018].
- 5.1.2 Seven of these features are reasonably interpreted as being pits [005], [012], [013] and [015] to [018] and are likely to be prehistoric in origin. This was suggested by the character of the finds recovered: the flint flake [01] and the improvised saddle quern with rubber stone [02].



Figure 4a: Feature [016]



Figure 4b: Feature [005]



Figure 4c: Features [008], [009], [010]



Figure 4d: Feature [015]

- 5.1.3 Six truncated posthole features [006] to [011] were also identified. The close proximity of these features to the pits may suggest an associated period of use. The rough arc-shaped arrangement of the visible postholes suggests that these possibly formed part of small structure or enclosure.
- 5.1.4 Although there appears to be two distinct groupings of features (Feature Group 1 in Trench 1 and Feature Group 2 in Trench 2), the existence of outlying features to these groups, namely pits [005], [012] and [013], makes the determination of the extent of the potentially archaeologically sensitive area problematic (see Figure 2). However, the absence of features in Trench 3, aligned west-north-west to east-south-east along the top of the break of slope, suggests that the potentially archaeologically sensitive area does not extend this far to the south.
- 5.1.5 The nineteenth century sandpit to the east of these trenches will have destroyed any archaeological features in this area. Within the area bounded by the nineteenth century sandpit and the top break of slope (ie Trench 3) it is problematic to establish the limits of an archaeologically significant area, as there are likely to be areas of survival and loss that cannot be accurately identified from the evaluation.
- 5.1.6 The pit and post complex cannot be rationalised from the evaluation into any coherent archaeological site. Given the presence of a improvised quern and a flint tool it is reasonable to assume that this is a settlement site, possibly from the Neolithic or early Bronze Age (say 4000BC to 2000 BC). This is a significant, if poorly located and truncated, archaeological site.
- 5.2 The Nineteenth century sandpit and eastern high ground
- 5.2.1 The extent of the nineteenth century sandpit (see Figure 1e) proved more extensive than anticipated prior to on-site works (see annotated extent on Figure 2). This extensive extraction site must have destroyed any potential for archaeology within its footprint.
- 5.2.2 The land in the eastern section of the study area, beyond the sandpit, has been used as arable land and has been subject to intensive ploughing. The landform has also been smoothed and the break of slope dropping to the lower ground is much less distinct. The absence of anthropic features from the eastern ground is likely to be attributable to this intensive agricultural use, should any archaeological activity have been present.
- 5.1.6 The pit-like features [020], [022] and [023] that were identified in the eastern section of the study area have, based on their irregular character been interpreted to be natural in origin. The most likely origin are from cleared broom (very common in the nineteenth century sandpit) or rabbits (again common across the study area).
- 5.2 The lower ground
- 5.2.1 Only a small proportion of the lower ground lay within the study area. The break of slope which separated the higher and lower ground was very steep in the western area, becoming more gradual towards the east. The high number of field drains which were identified in the trenches on the western lower ground (Trenches 4 and 10) indicates a clear attempt to improve the drainage on this ground. The majority of the drains were aligned on a roughly north-south axis. However, despite the high number of drains in this area (positioned roughly every 5m), parts of the ground were still more saturated.
- 5.2.2 The saturated character of this ground makes it inimical to settlement, a position that was probably common in the past. Coupled with the absence of finds from the metal detector survey this implies an absence of identifiable archaeological activity in this area.

6 Recommendations

6.1 Presented below are our provisional recommendations for archaeological mitigation in the event of the development proceeding. These recommendations are framed with reference to the issued planning guidance. The appropriateness and acceptability of our recommendations rest with Dumfries & Galloway Council and the Dumfries & Galloway

- Archaeology Service, their advisors. Confirmation that the below recommendations are acceptable should be confirmed with these bodies prior to the implementation of any development works whose appropriateness may rely on these recommendations.
- These investigative works identified a number of archaeologically significant features. Specifically, a pit and posthole complex was identified, which consisted of thirteen separate features. These appear to be located in two distinct groupings. These features are located on the higher western ground within the study area. The archaeologically significant area cannot be precisely defined, but is considered to be bounded to the south by the top break of slope and the nineteenth century sand pit to the east.
- 6.3 Should planning consent be given for the proposed extract then a significant proportion of the archaeologically sensitive area will be destroyed through Phases 1 and 2 (part) of the extraction process. This adverse impact needs to be mitigated, although the archaeological remains are likely to be minor or of uncertain nature. Consequently it is appropriate to undertake an archaeological monitoring in support of the topsoiling of the extraction area in keeping with planning guidance (SOEnv 1994, 13).
- 6.4 Consequently it is our recommendation that the appropriate mitigation for the pit and posthole complex is monitoring of all the ground breaking works above the top break of slope in the western field (predominantly Phases 1 to 2) outwith the nineteenth century sandpit. This monitoring would comprise:
 - continual archaeological monitoring of topsoil removal, the archaeologists would have to have control as to the depth of topsoiling;
 - investigation and excavation of any archaeological remains identified;
 - consequent post-excavation analysis and reporting on any excavated archaeology.
- 6.5 We would recommend that stripping was undertaken in whole Phases for the relevant phases. Reporting and analysis should be undertaken on a phase basis to prevent prolonged delay between excavation and reporting.
- The need for the monitoring should be re-assessed on the conclusion of each phase in conjunction with Dumfries & Galloway Council, with negative results encouraging the abandonment of these works as inappropriate and unrewarding.

7 Conclusion

- 7.1 A programme of archaeological investigative works was undertaken in respect of the proposed development on two parcels of land adjacent to Whitecrook, Glenluce, Dumfries & Galloway (NGR: NX 1718 5669). An evaluation was carried out from the 20th to 24th March 2006. The evaluation comprised twelve trenches covering 5% of the total area, supported by a metal detector survey.
- 7.2 Most trenches exhibited a common stratigraphic sequence with a topsoil up to 600mm in depth overlying either a fine pale yellow to orange sand or a compact orange-red sand. Occasional subsoil consisting of light brown/grey sandy gravel comprised of small-medium sized rounded stones or mottled grey/brown clay and black (humic) and grey sandy clay was also encountered. Numerous field drains indicate an attempt to improve drainage on the lower waterlogged ground.
- 7.3 Thirteen significant archaeological features, namely pits and postholes, were identified.

 These were concentrated in two groupings located on the western higher ground. A flint flake
 [01] and probable saddle quern and rubbing stone [02] were recovered from these features,
 giving a probable prehistoric date for the feature groups.

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. See Figure 2 for trench locations.

Trench 1

Orientation: East to west

Size: 205m by 2m (410m²).

Topsoil depth: 390mm to 500mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand is present for 51m.

This is intersected at 33m by [003], a 5m wide fluvio-glacial channel. At 51m subsoil changes to [004], compact orange-red sand with some paler mottling. This continues until 73m. Subsoil then changes back to [002]. This continues for the remainder of the trench, excluding two bands of [004], present from 109m-113m

and 131m-139m.

Modern features: None.

Significant features: Probable prehistoric pit [005] was located at 152.5m. This was

sub-rectangular shaped in plan, measuring 900mm by 900mm. Flint find [01] recovered. Feature Group 1 was located between 169m-179m. This consisted of features [006]-[011], representing possible truncated postholes. These measured between 200-310m diameter and were of shallow depth with 'bowl' shaped profiles. Possible prehistoric pit [013] was located at 203.5m. This

measured 400mm diameter and was filled with [001] which also

contained occasional small charcoal flecks.

Artefacts: Flint tool find [01].

Trench 2

Orientation: East-north-east to West-south-west

Size: 198m by 2m (396m²).

Topsoil depth: 400mm to 500mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, is present for 162m.

Within this are occasional small patches of [004], compact orangered sand with some paler mottling, present at 55m and 100m. Plant bases and patches of animal burrowing are also visible. Between 162m-180m several bands of [004], compact orange-red sand with some paler mottling, cut across [002]. [002] runs from

180m-187m, before changing to [004].

Modern features: None.

Significant features: Feature Group 2, which consists of possible prehistoric pits [015]-

[018], is present at 142m. These are roughly circular features measuring between 260mm-520mm diameter and with a maximum

depth of 210mm. All are filled with [001].

Data Structure Report - Whitecrook Quarry, Glenluce

Artefacts: Two possible ground stones find [02] were recovered from [015].

Trench 3

Orientation: West to east

Size: 161m by 2m (322m²).

Topsoil depth: 450mm to 510mm.

Subsoil character: The principal subsoil is [002], fine pale yellow to orange sand. This

covers the length of the trench, excluding a 9m band of [004] which runs from 113-122m. This consists of compact orange-red

sand with some paler mottling.

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 4

Orientation: West-north-west to east-south-east

Size: 204m by 2m (408m²).

Topsoil depth: 450mm to 600mm.

Subsoil character: Subsoil alternates between bands of [002], fine pale yellow to

orange sand, and [004], compact orange-red sand with some paler

mottling, for 37m. There is then a 2m patch of [019], light brown/grey sandy gravel comprised of small-medium sized rounded stones. Subsoil then changes back to [002], which from 39m-55m, is mottled with [019]. [002] continues until the end of the trench. There were 2 waterlogged sections from 155m-165m and

184m-196m.

Modern features: 25 red ceramic drains cut across the trench. These start at 42m

and continue at 5m intervals until 182m. There is 1 outlier at 200m. There is also a rubble drain at 170m. Drains are orientated on a

rough north-south axis.

Significant features: None.

Artefacts: None.

Trench 5

Orientation: East-south-east to west-north-west

Size: 203m by 2m (406m²).

Topsoil depth: 350mm to 450mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand is present for 25.5m.

There is then a 7m wide band of [004], compact orange-red sand

with some paler mottling. [002] then continues until 69m, where subsoil changes back to [004]. This continues until 89m, before changing to [002]. There is a 6m wide band of [004] at 118.5m. [002] then continues until 152m, where it changes back to [004].

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 6

Orientation: West-north-west to east-north-east

Size: 211m by 2m (422m²).

Topsoil depth: 220mm to 400mm.

Subsoil character: Subsoil [002], fine pale yellow-orange sand, is the principal

subsoil. It runs for 151m, excluding a 9m long patch of [004], compact orange-red sand with some paler mottling, present at 12m on SSW side of the trench. There are also two bands of [004] cutting across the trench at 115m and 128m and a small patch is visible at 106m. Subsoil [004] is present from 151m-182m, where it changes back to [002]. This continues until end of the trench, excluding a 3m wide band of [004] at 187m and a 1m wide band at

the end of the trench.

Modern features: None. Significant features: None.

Artefacts: None.

Trench 7

Orientation: West to east

Size: 207m by 2m (414m²).

Topsoil depth: 160mm to 380mm.

Subsoil character: Subsoil [004], compact orange-red sand with some paler mottling,

is present for 10m. Subsoil changes to [002], fine pale yelloworange sand, which continues until 42m, excluding a small patch of [004] on the SSW side of the trench at 38m. From 42m-80m subsoil is [004]. There is an 8m long area of root disturbance at 58m. [002] is present from 80m-131m. There is then an area of mixed [001] and [002] until 152m, before the subsoil becomes [002] again. This continues until 180m, where subsoil changes back to [004]. [004] continues until the end of the trench, excluding

a 10m long band of [002] at 196m.

Modern features: None.

Significant features: Possible pit feature [020] was visible at 186m on NNE side of the

trench. This was filled with black humic soil and stones.

Artefacts: None.

Trench 8

Orientation: East-south-east to West-north-west

Size: 200m by 2m (400m²).

Topsoil depth: 410mm to 540mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, runs for 21m,

excluding a small patch of [004], compact orange-red sand with some paler mottling, on southern side of the trench at 2m. Subsoil [004] runs from 21m-43m, where it changes to [021], a mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay. At 71m subsoil changes back to [004]. At 98m there is a 4m long patch of [019], a light brown/grey sandy gravel comprised of small-medium sized rounded stones, on the northern side of the trench. The subsoil then changes back to [002] until 105m, where it changes to [004]. This continues until 124.5m, before changing back to subsoil [002]. This continues until the end of the trench, excluding a 3m long patch of [004] on the southern

side of the trench at 142m.

Modern features: Two modern drains cut across the trench at 130m (orientated SW-

NE) and 190m (orientated NW-SE).

Significant features: Feature Group 3 is located at roughly 127m. This consists of

possible pits [022] and [023], which measure 500mm and 600mm in diameter respectively. Both are filled with black humic soil which

contains charcoal and stones.

Artefacts: None.

Trench 9

Orientation: North-north-west to south-south-east

Size: 75m by 2m (125m²).

Topsoil depth: 460mm to 510mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, is present for 4m,

before changing to [004], compact orange-red sand with some paler mottling. This is present until 13m, before changing back to [002]. Subsoil changes back to [004] at 24m and continues until 43m, before changing back to [002]. This runs until 51m, where subsoil changes back to [004]. This continues until 60m, before changing back to [002]. This continues until the end of the trench,

excluding a 3m wide band of [004] at 63.5m.

Modern features: None.

Significant features: None.

Artefacts: None.

Trench 10

Data Structure Report - Whitecrook Quarry, Glenluce

Orientation: East to West

Size: 49m by 2m (98m²).

Topsoil depth: 450mm to 540mm.

Subsoil character: Subsoil alternates between bands of [002], fine pale yellow to

orange sand and [019], light brown/grey sandy gravel comprised of small-medium sized rounded stones. [002] is present for 11m before changing to [019], which continues for 8m. [002] continues until 28m, before changing back to [019], which is present until 35m, where subsoil changes back to [002]. This continues until the end of the trench. There is a waterlogged section from 36m-44m.

Modern features: Two drains cut across the trench, at 9m and 31m. The latter drain

is plastic. Another drain runs along the trench under the

waterlogged section.

Significant features: None.

Artefacts: None.

Trench 11

Orientation: South-south-west to north-north-east

Size: $49m \text{ by } 2m (98m^2).$

Topsoil depth: 400mm to 530mm.

Subsoil character: Subsoil [004], compact orange-red sand with some paler mottling,

is present for 7m. This changes to [002], fine pale yellow to orange sand. There is some animal burrowing visible in this subsoil. At 19m the subsoil changes back to [004], which is present for the remainder of the trench, excluding a band of [002], from 32m-35m.

Modern features: None.
Significant features: None.

Artefacts: None.

Trench 12

Orientation: South to north

Size: $45 \text{m by } 2 \text{m } (90 \text{m}^2).$

Topsoil depth: 400mm to 550mm.

Subsoil character: Subsoil [002], fine pale yellow to orange sand, runs for 22m. There

is then a change to subsoil [004], compact orange-red sand with some paler mottling. An area of possible burning, measuring

roughly 1m diameter, is present at 8m.

Modern features: A drain cuts across the trench at 2m, orientated SW-NE.

Significant features: None.

Artefacts: None.

Appendix 2: Registers

Context Summaries

No.	Trench	Interpretation	Description
001	All	Topsoil	Mid brown sandy loam containing frequent rootlets and occasional small stones
002	All	Sand subsoil	Fine pale yellow to orange sand
003	1	Fluvio-glacial channel	Broad (roughly 5m) linear feature measuring up to 0.50m in depth with graded sides. Orientated E-W. Filled with [001] comparable material and very occasional sub-angular medium stones. Minimal root activity. No evident anthropic material.
004	All	Sand subsoil	Compact orange-red sand with a small amount of paler mottling
005	1	Probable prehistoric pit or possible large posthole sunk within larger sub-rectangular feature.	Sub-rectangular shape in plan, measuring 900mm by 900mm. N corner possibly represents a separate circular feature with 600mm diameter. Larger feature filled with material comparable with [001], although slightly paler. Smaller circular feature filled with a dark brown sandy soil with occasional charcoal flecks and medium sub-angular and sub-rounded stones. Flint find [01] recovered.
006	1	Possible truncated posthole	Circular feature measuring 300mm diameter and 50mm deep. 'Bowl' shaped profile. Fill [001] covered section.
007	1	Possible truncated posthole	Circular feature measuring 200mm diameter and 30mm deep. 'Bowl' shaped profile. Fill [001] covered section.
800	1	Possible truncated posthole	Circular feature measuring 310mm diameter. Filled with [001].
009	1	Possible truncated posthole	Circular feature measuring 230mm diameter. Filled with [001].
010	1	Possible truncated posthole	Circular feature measuring 200mm diameter. Filled with [001].
011	1	Possible truncated posthole	Circular feature measuring 200mm diameter. 'Bowl' shaped profile. Filled with [001].
012	1	Possible prehistoric pit	Circular feature measuring 400mm diameter. Filled with [001] which also contained charcoal flecks

013	1	Possible prehistoric pit	Circular feature measuring 400mm diameter. Filled with [001] which also contained occasional small charcoal flecks
014	2	Probable natural feature	Shallow feature filled with black/brown very humic soil. Contained a large amount of frost damaged stone.
015	2	Possible prehistoric pit	Roughly circular feature measuring 520mm diameter and 210mm deep. Filled with [001]. Ground stone find [02] recovered.
016	2	Possible prehistoric pit	Roughly circular feature measuring 390mm diameter. Very shallow. Filled with [001].
017	2	Possible prehistoric pit	Rough square sided feature measuring 410mm diameter and 190mm deep. Filled with [001], which also contained very occasional small flecks of shale.
018	2	Possible prehistoric pit	Roughly circular feature measuring 260mm diameter. Very shallow. Filled with [001].
019	All	Sand/gravel subsoil	Light brown/grey sandy gravel comprised of small-medium sized rounded stones.
020	7	Probable natural feature	Possible pit feature filled with black humic soil and stones.
021	All	Subsoil	Very mixed subsoil consisting of mottled grey/brown clay and black (humic) and grey sandy clay.
022	8	Probable natural feature	Possible pit feature measuring 50mm diameter. Filled with black humic soil. Also contains stones.
023	8	Probable natural feature	Possible pit feature measuring 600mm diameter. Almost square shaped in plan. Filled with black humic soil. Also contains stones.

Drawing Register

Sheet	No.	Title	Scale	Date	Author
1	01	Trench 1 plan summary	1:100	20/3/06	TR
1	02	Trench 3 plan summary	1:100	20/3/06	TR
2	03	Trench 2 plan summary	1:100	23/3/06	AM
2	04	Trench 9 plan summary	1:100	23/3/06	AM
2	05	Trench 4 plan summary	1:100	23/3/06	AM

2	06	Trench 10 plan summary	1:100	23/3/06	AM
2	07	Trench 6 plan summary	1:100	23/3/06	AM
2	80	Trench 7 plan summary	1:100	23/3/06	AM
3	09	Trench 8 plan summary	1:100	23/3/06	AM
3	10	Trench 12 plan summary	1:100	23/3/06	AM
3	11	Trench 11 plan summary	1:100	23/3/06	AM
3	12	Trench 12 plan summary	1:100	23/3/06	AM

Photographic Register

Image	Description	From	Date
1	Trench 1 general	NW	20/3/06
2	Trench 1 [003] sondage	SW	20/3/06
3	Trench 1 [003] sondage	S	20/3/06
4	Trench 1 [005]	N	20/3/06
5	Trench 1 [005]	W	20/3/06
6	Trench 1 [006] half section	S	20/3/06
7	Trench 1 [008] - [010]	NW	20/3/06
8	Trench 1 [011] half section	S	20/3/06
9	Trench 1 [012]	SW	20/3/06
10	Trench 1 [013]	SW	20/3/06
11	Trench 3 general	NW	20/3/06
12	Trench 2 general	E	23/3/06
13	Trench 3 general	E	23/3/06
14	Trench 2 [015]	E	23/3/06
15	Trench 2 [016]	E	23/3/06
16	Trench 2 [017]and [018]	SW	23/3/06
17	Trench 9 general	N	23/3/06
18	General site shot- Western field	SW	23/3/06
19	General site shot- Western field	NW	23/3/06
20	Trench 4 general	W	23/3/06
21	Trench 10 general	W	23/3/06
22	Trench 5 general	W	23/3/06
23	Trench 6 general	E	23/3/06
24	Trench 7 general	Е	23/3/06

Data Structure Report – Whitecrook Quarry, Glenluce

25	Trench 11 general	NE	23/3/06
26	General site shot - Eastern field	Е	23/3/06
27	Trench 12 general	SW	23/3/06
28	Trench 7 [020]	E	23/3/06
29	Trench 8 general	W	23/3/06
30	Trench 8 [023]	E	23/3/06
31	Trench 8 [022]	NW	23/3/06
32	General site shot - Eastern field	W	23/3/06
33	Little hill which represented north from station 1	S	23/3/06
34	Little hill which represented north from station 1	S	23/3/06

Artefacts List

No.	Description	From
01	1 Struck flint	005
02	2 possible ground stones-saddle quern with rubbing stone	015

Appendix 3: Discovery & Excavation in Scotland

LOCAL AUTHORITY:	Dumfries & Galloway
PROJECT TITLE/SITE	Whitecrook Quarry, Glenluce
NAME:	
PARISH:	Glenluce
NAME OF CONTRIBUTOR:	Alan Matthews & Amanda Gow
NAME OF	Rathmell Archaeology Limited
ORGANISATION:	
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	None
SITE/MONUMENT	Pits; Post-holes
TYPE(S):	
SIGNIFICANT FINDS:	Flint tool and ground stones
NGR (2 letters, 6 figures)	NX 172 567
START DATE (this season)	20 th March 2006
END DATE (this season)	24 th March 2006
PREVIOUS WORK (incl.	None
DES ref.)	
PROPOSED FUTURE	None
WORK:	
MAIN (NARRATIVE)	A programme of archaeological investigative works was
DESCRIPTION: (may	undertaken in respect of the proposed development on two
include information from	parcels of land adjacent to Whitecrook, Glenluce, Dumfries &
other fields)	Galloway (NGR: NX 1718 5669). An evaluation was carried out from the 20 th to 24 th March 2006. The evaluation
	comprised twelve trenches covering 5% of the total area, supported by a metal detector survey.
	Supported by a metal detector survey.
	Most trenches exhibited a common stratigraphic sequence
	with a topsoil up to 600mm in depth overlying either a fine
	pale yellow to orange sand or a compact orange-red sand.
	Occasional subsoil consisting of light brown/grey sandy
	gravel comprised of small-medium sized rounded stones or
	mottled grey/brown clay and black (humic) and grey sandy
	clay was also encountered. Numerous field drains indicate an
	attempt to improve drainage on the lower waterlogged
	ground.
	Thirteen significant archaeological features, namely pits and
	postholes, were identified. These were concentrated in two
	groupings located on the western higher ground. A flint flake
	[01] and probable saddle quern and rubbing stone [02] were
	recovered from these features, giving a probable prehistoric
	date for the feature groups
PROJECT CODE:	06013
SPONSOR OR FUNDING BODY:	ASH on behalf of Barr Quarries
ADDRESS OF MAIN CONTRIBUTOR:	10 Ashgrove Workshops, Kilwinning, Ayrshire KA13 6PU
E MAIL:	contact@rathmell-arch.co.uk
ARCHIVE LOCATION	Report to Dumfries & Galloway Archaeology Service and
(intended/deposited)	archive to National Monuments Record of Scotland.
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Contact Details

Rathmell Archaeology can be contacted at its Registered Office or through the web:

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The Dumfries and Galloway Council Archaeology Service can be contacted through the details noted below:

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