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The Castlecary limeworks Castlecary 'clamp kiln' evaluation, M80 Stepps to Haggs Improvement Scheme

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Project summary sheet

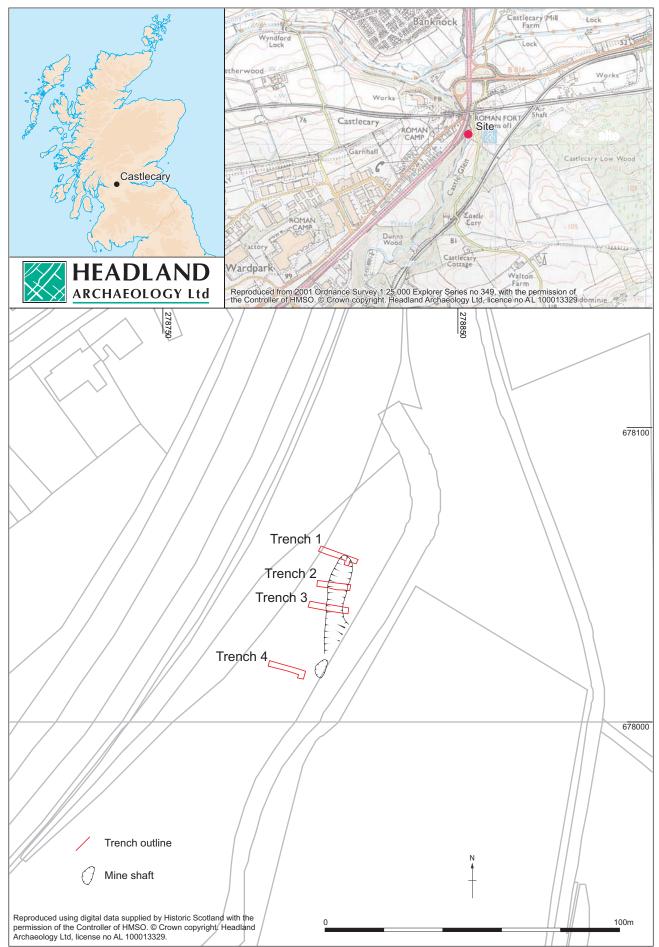
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Illus 1 Site location

The Castlecary limeworks

Castlecary 'clamp kilns' evaluation, M80 Stepps to Haggs Improvement scheme

By Laura Scott

Headland Archaeology Ltd was commissioned by Historic Scotland on behalf of Transport Scotland to undertake an evaluation on a putative clamp kiln and associated trackway or tramway at Castle Glen industrial area. The feature lies within the land-take of the M80 Stepps to Haggs improvement scheme and is located within a possible lay-down/access area to be used during road construction.

Three trenches were excavated across the supposed kiln and a fourth was excavated in the area to the south. Excavation of the feature revealed it to be two mounds of made ground, one associated with the construction of the A80 and the second probably with the construction of the river revetment. It was clear from the excavation that the landscape had been heavily impacted upon by modern development and heavily sculpted. No archaeological features were encountered.

INTRODUCTION

Headland Archaeology Ltd was commissioned by Historic Scotland on behalf of Transport Scotland to undertake an evaluation of a putative clamp kiln that was identified during a topographic and earthwork survey of the Castle Glen industrial area, East Dunbartonshire in May 2007 (Hatherley 2007). This work forms part of the archaeological programme for the M80 Stepps to Haggs DBFO improvement scheme.

The Castle Glen evaluation area forms part of extensive industrial remains surviving throughout the Castlecary glen, which include lime workings, quarrying and mining. Other probable contemporary features include banks, trackways, revetting and terracing.

The evaluation was undertaken between the 3rd and 20th of December in cold and varying dry and showery weather conditions.

SITE LOCATION & DESCRIPTION

The site is located to the north-east of the town of Cumbernauld, on the extreme eastern edge of the former Cumbernauld Parish, Dunbartonshire (Illus 1). It occupies a narrow valley in Castlecary glen, between the A80 road and the Red Burn, immediately upstream from the Castlecary Viaduct. It is bounded on the eastern side by the Red Burn watercourse and the steep, revetted road embankment forms the western boundary. The Castlecary Lime Works formerly occupied the north-west slope and base of the wooded valley.

The feature under investigation was tentatively identified as a clamp kiln (S Nisbet pers comm) during a topographic and earthwork survey due to its shape, U-shaped profile and proximity to the lime works. It is approximately 40 m long and 8-10 m wide. A row of pine trees line the eastern bank of the feature (Illus 2) and screen the Red Burn, which lies directly to the east. A curious circular feature, interpreted as a mineshaft, lies directly to the south of the 'kiln'.



Illus 2 Pre-excavation shot from south

THE GEOLOGY OF THE CASTLECARY

AREA

The Castlecary Limestone marks the upper strata of the Upper Limestone Group that is characterised by thick limestones and beds of mudstone, sandstone and coal. It outcrops at various locations in the central and eastern area of the central belt. The variability of Castlecary limestone in character and thickness is well illustrated in this area (Hinxman et al, 1917). Much of the Castlecary limestone was removed by erosion caused by incising river channels, thus accounting for the sporadic pattern of absence in certain areas (Cameron et al 1998). The limestone was extensively worked in the district, probably owing to its reputation for producing excellent lime for

building, agricultural purposes and as a flux in iron smelting. The naming of the limestone after this particular site indicates the importance of the lime industry within the glen and the early date of working on the site.

The Castlecary glen consists of three beds of limestone of differing quality which were worked from a number of mines on both sides of the glen. These beds were separated by shale, giving a total thickness of c. 2.1 m. The seams in this area are relatively flat, worked from horizontal mining tunnels (adits) throughout the western side of the glen. A long vertical rock face is located on the A80 side of the glen. A continuous sequence of adits in the form of stoop or room workings, the excavation of limestone so as to leave large supporting columns of natural rock at regular, safe, intervals, are cut into the rock face. The majority of these adits have been deliberately blocked with rubble and stone. Timber props can be identified within one of the unblocked entrances.

The Castlecary limeworks were located over one of the few limestone beds in Dunbartonshire and the accessible limestone is now completely mined out (Roberston et al 1948, 85).

ARCHAEOLOGICAL AND HISTORICAL

BACKGROUND

With contributions by Stuart Nisbet

The Castlecary area is very important both archaeologically and historically. One of the Antonine Wall forts (NS77NE 24.00) lies approximately 300 m to the north of the site. It was excavated in 1902 and although the majority of finds were Antonine in date, a number of 1st century sherds, including Samian and course wears were recovered. The Antonine Wall dates to the mid 2nd C AD and has recently been inscribed as a World Heritage Site. Castlecary tower house is located 500 m to the SE of site on the western side of the Red Burn and is an A listed 15th Century towerhouse (NS 77 NE 23) of national importance.

Research on the Castlecary Lime Works itself has proved to be difficult due to the location of the works, on the boundary between two districts, and its common name in the area, which has been applied to several different locations and businesses.

The Castlecary name for the lime works actually refers to an estate located across the Red Burn in Stirlingshire to the east. In addition to this duplicate name, two industrial sites, the Castlecary Fireclay and Limeworks (NS 784 783) and the Castlecary Fireclay works (NS 797 784), are both located nearby. The former operated between 1883 and 1968 and was abandoned and cleared by 1979 and the latter operated between 1902 and 1980 and has been largely demolished since 1979. These works were separate enterprises to the lime works (Douglas & Oglethorpe 1993). Locally made bricks stamped 'Castlecary' form revetments on the embankment on the western edge of the site and some loose bricks remain scattered around the site of the lime works, presumably from the structures formally located within the glen.

The Castlecary Lime Works does not appear on any maps prior to the 1st Edition Ordnance Survey map of 1859. This may be due to the location of the works, on the extreme edge of the county of Dunbartonshire and the parish of Cumbernauld and within a steep wooded glen.

18th century

Cumbernauld Parish was well known as a source of lime in the late 18th century. The Old Statistical Account (1791-99) notes that lime extracted from seven, unnamed, quarries in different parts of the parish was transported on the nearby Forth and Clyde Canal to Glasgow and beyond.

Roy's military survey map of Scotland 1747-55 shows the area with the Red Burn labelled. The entire area on the eastern side of the glen appears to be cultivated with rig bounded by field walls, potentially associated with Garnhall, a large house located to the north-west.

19th century

Carmicheal (1837) records two main lime-working sites in the Cumbernauld Parish. One is described as the 'Cumbernauld' Lime Works, which could refer to the Castlecary Lime Works or to another large site, Vault Glen, located further up the valley. Another possible candidate is a limekiln noted on Thomson's map of Dumbartonshire in 1823 immediately to the north of Castlecary at Netherwood. The owner of both the works and Cumbernauld House, located approximately one mile to the south, is named as Admiral Fleming, suggesting that this may refer to the Castlecary site.

The 'Cumbernauld' works are described as a quarry and extensive mine where a 2.1 m thick seam of limestone was worked in the glen. Around seventy men were employed to burn the lime, quarry and mine. These mines were drained by water power which raised the water within the mine by over 15 m using shafts working on inclined planes (Carmicheal 1837).

By 1845 the mining of limestone was common in the Cumbernauld Parish, along with the working of coal to burn it. The New Statistical Account of 1834 - 45 describes the limestone as being burnt within both draw and clamp kilns. The draw kilns were more economical, using half as much coal as the clamp kilns which were vented by air-pens, carried up the sides and the ends. The 1st Edition Ordnance Survey map of 1859 (Illus 3) shows a wooded glen, later named 'Castle Glen', with a central pathway leading into the glen from the north. On the western side of the path, towards the northern end of the land parcel is a rectangular feature containing two circular kilns, and at the southern end of site is a rectangular feature containing 3 circular kilns, both are labelled 'kiln'. Two further kilns are located on the west side of the glen and are labelled 'Old Kiln', suggesting that by the date of the survey they were out of use. It is likely that this depicts the clamp kiln that is cut in to the main bank. The prefix 'old' suggests that the limekilns were out of use at the date of the survey.

A complex of three buildings on the upper slopes of the glen is labelled 'Limestone Pit', presumably the central quarry at this time. A pathway connects the pit to the block of three draw kilns.



Illus 3 OS 1st Edition map

Wall lines can be seen on the upper edge of the glen, along the banks of the burn, the slope and along the floor of the valley. The course of the Red Burn appears to have changed slightly and is mapped on the first edition.

It appears from the first edition map that the lime working may have commenced in the south of the site and gradually moved northwards as the seams became exhausted and perhaps as technology improved and demands for lime increased, causing less efficient kilns to be abandoned.

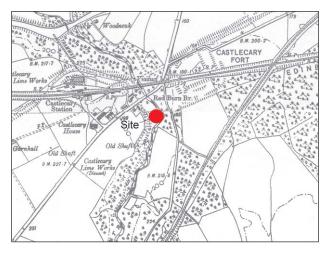
By the 1870's Castlecary Lime Works was worked by Andrew Stirling, who also owned coal works at Bankknock and Slamannan. At Castlecary he employed about 60 men (Scottish Mining Villages website 2005-2007).

The Ordnance Survey map of 1895 shows that the lime works appears to be functioning but is scaled down from the mid 19th century. The triple draw kiln is now labelled 'Old Kiln' and a number of the small un-labelled kilns seen on the 1st Edition are no longer present. The clamp kiln cut into the main bank and the limestone pit building complex to the north are still present.

7

A path runs from the main mining area to the north behind the triple draw kiln. No revetting is illustrated within the glen and no other paths are shown.

The 1899 Ordnance Survey map (Illus 4) marks the lime works as being disused and the shaft on the western edge of site is labelled 'old shaft'. It is likely that the works were exhausted at this time.



Illus 4 OS 2nd Edition map

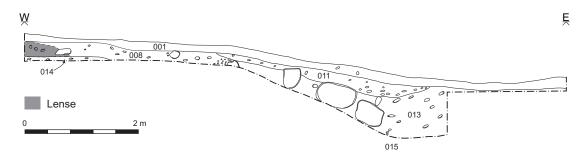
20th century

A U-shaped structure is depicted within the deciduous woodland to the west of the river on the 1922 OS map, in the area to the south west of the site. It is likely that the structure is the remains of the clamp kiln that was depicted on the 1st edition map. One 'old limekiln' is depicted and the track way is still visible. No evidence of a limekiln is shown in the area excavated and there is no evidence of lime working in the surrounding area on the maps at this time. Although Robertson et al (1948) state 'the accessible area is now quite worked out' the date of the closure of Castlecary Lime Works is unknown.

Transport in the area was improved during this period. The A80 runs north to south along the western boundary of the site and was first depicted on the 1976 map; however, discussions and studies regarding the upgrading of the road have been going on since 1968, so presumably the road was constructed in the 1960's.

AIMS & OBJECTIVES

The main aim of the evaluation was to investigate the authenticity of a putative clamp kiln and track way which were previously identified during the topographic and earthwork survey. The works were necessary to characterise the nature, quality and extent of the remains and to identify an appropriate mitigation strategy.



Illus 5 South facing section through Trench 1

RESULTS

METHODS

Excavation proceeded in close consultation with the client and their representatives in order to ensure that the information retrieved was fit for purpose. Three trenches (Illus 1), 2 m wide and up to 12 m long, were hand excavated across the 'clamp kiln', with a fourth trench over the line of a possible track or tramway.

Trench 1 was 10 m long and 2m wide and was located at the northern end of the feature in order to establish whether the stones that protruded through the vegetation were structural.

Trench 2 was located in the centre of the feature and was extended to encompass the path that ran north to south to the west of the feature, to ascertain whether any remains of a track or tram way survived.

Trench 3 was located at the southern end which was the presumed 'entrance' to the kiln.

Trench 4 was excavated in the area to the south of the feature to see if any evidence of the track or tram way remained and to establish if the mound was part of the natural topography or a feature associated with the lime working industry.

All four trenches were excavated systematically to establish the depths of each deposit. Excavation was halted when a depth of 2.5 m below the current ground level, due to upwelling water and health and safety restrictions.

The recording conformed to Headland Archaeology Ltd standard method. All contexts and environmental samples were given unique numbers. Bulk finds were collected by context. Colour transparencies and black & white negative photographs were taken. An overall site plan was recorded digitally using a PC running CAD software linked to a total station theodolite and related to the National Grid. Sections were drawn at 1:20 and accurately related to Ordnance Datum. All recording was undertaken on pro forma record sheets. Bulk samples were taken for wet sieving in accordance with Headland Archaeology Ltd standard environmental sampling practice.

Excavation

Trench 1 (Illus 1, 5 & 6))

Trench 1 was located at the northern end of the 'clamp kiln' (Illus 1). A thin covering of topsoil overlay a deposit of sandy loam (011) containing coal, cinder and brick fragments, which formed the upper fill within the hollow (Illus 5). Sandy material (008) containing glass, tarmac, linoleum and white ceramic fragments underlay this on the western slope.

Several large, river rounded boulders (Illus 6) were bedded in a sandy clay deposit (013) and protruded through the topsoil. They were concentrated on the eastern side of the trench and were previously recorded as 'stone lining' during the topographic survey (Hatherley 2007). A compact deposit of clay (015) containing occasional coal fragments was reached at a depth of 1.10 m beneath current ground surface. No structure became apparent during the excavations.

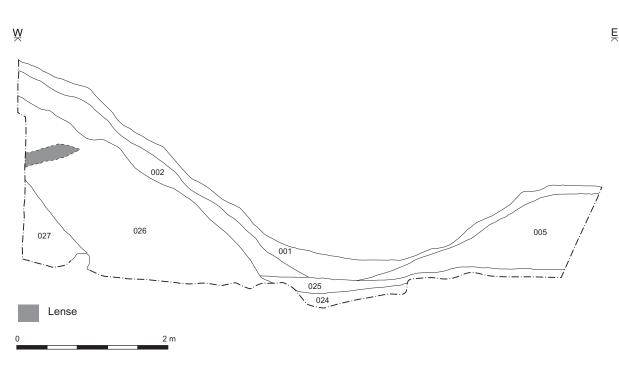


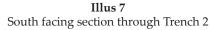
Illus 6 South facing section of Trench 1

Trench 2 (Illus 1 & 7)

Trench 2 was located in the centre of the feature. It was 10 m long, 2 m wide and up to 2.5 m deep. Topsoil was removed in the area of the supposed trackway on the western side and a deposit of firm sandy loam (017) containing white ceramic, metal, bricks







and tarmac, similar to deposit (011) in Trench 1, was revealed. Similarly, a compact deposit of mixed silty clay (007), similar to layer 008 in Trench 1, containing bottle glass, pottery and brick was uncovered beneath this. No evidence of a track way was encountered in this area.

Stratigraphy varied markedly between the two banks of the feature. A blackish brown sandy silt containing frequent bricks, bottle glass, and iron nails (002) formed the upper deposit of the western bank (Illus 7). In contrast, a deposit of light brown sandy loam (005) also containing modern debris formed a 1 m thick bank on the eastern side of the trench. A layer of silty sand (025) extended eastwards from beneath deposit 002 on the western bank to beneath deposit 005 on the eastern bank. It is probable that the deposit is the result of a flooding event prior to the construction of the eastern bank.

Similarly a deposit of dark brown, loosely compacted sandy silt (024), also devoid of finds, was uncovered beneath the layer at a depth of 2.5 m. A 1.8 m thick deposit of sandy silt (026) containing white ceramic pottery, red brick and bottle glass formed the main component of the western bank. The deposit appeared to dive steeply downhill beneath the silt deposit. Up welling ground water and health and safety precautions prevented this trench from being excavated further

Trench 3 (Illus 1, 8 & 9)

Trench 3 was located at the southern end of the feature. It measured 11 m by 2 m in plan and reached a maximum depth of 2.5 m. Excavation was generally limited to the western side of the trench due to the presence of mature pine trees (Illus 8). Stratigraphy was very similar to Trench 2.

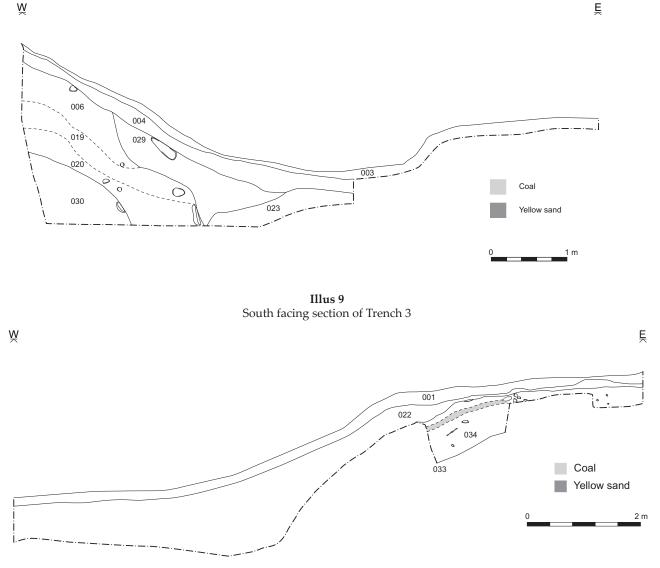
Six deposits of made ground were observed in the south facing section (Illus 9). A deposit of sandy silt (004) containing occasional fragments of pottery, glass and iron was uncovered beneath the topsoil. A deposit of blackish grey sandy silt (029) also containing 20th century finds underlay this and overlay a deposit (006) which was the same as 008 in Trench 1.

Deposits 019 and 020 were very similar and consisted of dark grey sandy silt with frequent brick, iron and glass inclusions. Several tip lines were observed in the north facing section in this area. Deposit 030 was the last deposit encountered and was very similar to deposit 027 in Trench 2. As with trench 2, a deposit of silty sand (023) was encountered in the central hollow. Excavation was stopped at this point due to up welling water and health and safety precautions.



Illus 8 Post-excavation shot of Trench 3

SHG06



Illus 10 North facing section through Trench 4

Trench 4 (Illus 1, 10 & 11)

Trench 4 was located 20 m to the south of Trench 3. It was extended to the west to investigate a possible trackway which was identified during the survey. A compact, stony dark greyish brown loamy sand (022) was located beneath the topsoil at the western end of the trench (Illus 10). No remains of a track way were unearthed in this area. A very mixed deposit of silty clay (034) with visible tip lines formed the western mound of the feature. A greyish brown sandy clay containing occasional limestone fragments (033) was encountered beneath this at the western end of the trench.

Frequent sub rounded slabs (016) (Illus 11), embedded in redeposited natural were uncovered in the western part of Trench 4. Three tree throw hollows filled with modern debris cut through the clay. It is probable that this deposit relates to the construction of the A80 or may be up cast from former mining in the area.



Illus 11 Deposit 016 in Trench 4, from west

Environmental Results

D. Masson and S. Timpany

Fourteen samples were collected from various contexts, identified during the excavation of the 4 trenches, for environmental assessment (see appendix 1.2). Samples 3 (013) and 9 (5) were taken from the eastern bank of the feature. Sample 14 (27) was taken from the lowest fill of trench 2. Samples 5 (25) and 12 (24) were taken from the alluvial deposit between the banks in the centre of the feature and the remaining samples were taken from deposits on the western bank of the feature. The results are presented in Tables 1 (retent samples) and 2 (floatation samples) below, See Appendix 1.6. All plant remains recovered were preserved through charring.

Burnt Limestone

Burnt limestone was found in twelve out of fourteen samples, it was common in all the samples with the exception of two, sample 09, where it was rare but still present and sample 01 where it was absent.

Plant remains

Charcoal fragments were present in seven samples (see Tables 1 and 2), however, only one sample (06) contained charcoal fragments of a suitable size for identification and/or Accelerated Mass Spectrometry (AMS) dating. Charred cereal grain is present in four samples (01, 05, 06 and 11), the majority of the grain was found to be poorly preserved being abraded and broken, making identifications to species level not possible. Thus grain has been identified to possible type with cf. barley (cf. Hordeum vulgare) cf. emmer wheat (cf. Triticum dicoccum) and cf. club/bread wheat (cf. Triticum aestivo-compactum) present. Some grain was completely unidentifiable due to exceedingly poor preservation and has been recorded as Cereal indet. Of a much better condition were the oat (Avena sp.) grains within the samples making identification possible. These were found to be so well preserved that the hairs were still visible on the grain.

Other finds

Pottery sherds were found in five samples (01, 05, 06, 07, 11 and 14). Glass fragments were present in ten samples, being absent from samples 04, 08, 12 and 15. Leather was recovered in three samples (06, 10 and 11). Metal objects were found in three samples, with a Fe nail in sample 6, and Cu pins in samples 9 and 11. A small amount of lithic material was recovered in Sample 9. Small fragments of burnt bone were present in Samples 01 and 05 and a large, unburnt, mammal bone was found in sample 14.

For further information on pottery fragments and other finds please refer to the finds report.

Discussion

Coal and cinders along with burnt limestone were found together in ten of the samples, with them being found individually in the remaining samples (see Table 2). The association of the coal and lime within the samples suggests lime production was taking place in the area.

A small amount of charred cereal grain was found in the samples and tentatively suggests two separate phases of activity. The first phase is associated with grains of cf. barley, cf. emmer wheat and cf. club/ bread wheat recovered from samples 1 and 11. The finding of possible emmer wheat in particular along with possible barley and club/ bread wheat would point to a potential prehistoric assemblage (e.g. Barclay et al 2002). However, these grains are very poorly preserved showing evident abrasion, some so badly broken that identification beyond cereal type proved not possible, few grains were able to be recognised as resembling grain species. This degradation of the grains indicates that there may be several taphonomic issues involved in their current state. It is likely the grains have not been found in-situ the abrasion and breakage being caused by prolonged exposure and probable movement on the surface before being incorporated into the deposit. The presence of modern oat grain (see below), pottery fragments and glass sherds within these contexts (see Finds report below) also indicates active disturbance to the deposits where the grain has been found. The description of these contexts [2 and 17] as dumped deposits further illustrates the non-secure nature of these contexts. Therefore although there is some tentative evidence for possible prehistoric activity it is unclear as to where these grains relate to, being nonsecure within their contexts and highly questionable as to whether they are even from around the site.

The second phase of activity is represented by the oat grains found in samples 6 and 11. These grains found were found to be exceptionally well preserved, with even the hairs on the grains still attached, this high level of preservation points to them being fairly recent. The grains were also observed to be swollen and misshaped suggesting they were wet before drying. Again it is unknown as to what these grains relate to with no evidence of agricultural features uncovered and the questionable nature of the security of the contexts.

Finds

J Franklin and J Lochrie

The excavation finds are all modern. All appear to date from the late 19th to the 20th century. They are very much concentrated in Trenches 2, 3 and 4 with

relatively little from Trench 1 (See appendix 1.7). They seem to represent domestic type midden, with only a small amount of industrial finds. The finds may derive from the immediate environs of the site or may have been imported as midden used as land-fill and make up, possibly from nearby Falkirk.

The number and variety of glass bottles are a particularly striking part of the assemblage, many identifiable from embossed lettering. Bottles include syrup of figs, from the California Fig Syrup Company (founded 1897), Goodall Backhouse's Yorkshire Relish (in production from the late 19th century to possibly the 1960's), Barrs of Falkirk (founded 1875, makers of Irn Bru since 1901), Ponds cold cream jars (in production since 1910's), a Brylcreem jar (in production since 1928), a Bovril jar (in production since 1889), a H.J.Heinz sauce bottle (company name since 1888), and another marked for the S.C.W.S for the Scottish Wholesale Co-operative Society (founded 1868). Other bottles are unmarked, originally being labelled with paper labels, but their size and shape indicate beers, wine, spirits, medicines, ink and fish paste. The pottery also includes several similarly unmarked jars and bottles, of types used for products such as jam, ginger beer and any number of other common household products.

As well as containers, there is also a large amount of domestic tableware such as dishes, plates, teacups, teapots, including quite a high proportion of porcelain, probably due to the relatively late date for this assemblage. There is, by contrast, a relatively small amount of kitchen and more utilitarian wares such as mixing bowls, storage jars, casseroles and chamber pots. Methods of pottery decoration include transfer printing (in blue, green & black), sponge printing and gilding. There are several pieces from the same pink floral patterned porcelain service. Other domestic finds include part of a leather shoe with hob nailed sole, a sheet metal kettle or similar vessel, a porcelain doll's arm and the lead foot from a possible garden ornament.

Industrial finds are limited to only a few small fragments of iron slag. However the metal kettle found in Trench 3 does appear to be covered in an iron slag type deposit. It is unclear exactly how this happened. Finds of fragments of burnt stone and coal may also have an industrial origin, but equally might derive from domestic hearth sweepings.

The remaining finds are building materials and fittings. Structural finds include sherds of chimneys, pan tiles, brick, concrete and drain pipe. Fittings include asbestos tiles, sanitary wares, wall tiles, an iron bolt, window glass of various kinds, some textured, some safety glass with integral chicken wire, and, rather strangely for so modern an assemblage, a very large crown glass 'bulls eye'.

DISCUSSION

'Kiln'

No evidence of a clamp kiln was discovered in the excavated area. Excavation of the feature revealed it to consist of two banks of made ground. There was a stark contrast between the eastern and western mounds. The eastern mound generally consisted of a single, 1 m thick deposit of greyish brown sandy loam containing occasional pottery and brick fragments, whereas the western mound consisted of up to seven deposits of mixed material with tip lines indicative of several phases of dumping.

It became apparent that the stones observed, at the northern end of the feature, during the evaluation and interpreted as stone lining were not structural but part of the artificial bank that formed the eastern side of the feature. It is probable that the stones were the remains of a wall which was slightly set back from the banks of the Red Burn and depicted on the 1st Edition map.

The stratigraphic sequence in Trench 2 was the most revealing. The silt deposits in the centre of the trench underlay the mound that formed the eastern bank and overlay the lowest deposits on the western bank. The western bank therefore predates the eastern. It is likely that a flooding episode or silt build up occurred prior to the construction of the eastern bank and the completion and stabilisation of the western bank.

It is possible that the eastern bank of the excavated feature was created either to reduce the effects of over bank flooding from the Red Burn or to reduce the sediment input, caused by surface run off from the embankment, in to the stream. The area in the centre of the banks form an entrapment area for silts washed off the embankment.

The deposits above and below the silt both contain similar finds including transfer print wares, porcelain and Caneware, Rockingham sherds, dating to the 19th to 20th century suggesting that there was only a short interval, between the silting episode and the last dumping phases, which finds evidence suggests may have been the 1940's or later.

No evidence was found to date the earliest depositional period as excavation showed that the made ground deposits were over 2.6 m deep.

Track way

The main trackway running into the industrial complex from the northern entrance to the glen was easily visible and well defined by banks along the embankment of the Red Burn and the main bank running parallel to it along the outer edge of the level base of the glen. Excavation of the trackway in the area directly to the west of the 'kiln' showed that there was no formal structure to it i.e. topsoil overlay a thick deposit of made up ground.

Landscaping

The works highlighted post abandonment modifications and landscaping of the site.

The site of the Castlecary Lime works appears to be a palimpsest, subjected to several phases of landscaping and development. The topography was obviously landscaped during the life of the works, prior to the construction of the A80, to allow for easier access and egress for workers, raw materials and the finished product. Numerous linear and curvilinear banks were identified throughout the level base of the glen and running up the slope.

The whole of the glen is steep and terraced from the carriageway boundary down to the Red Burn. The northern half of the steep north-west slope of the glen running from the edge of the A80 down to the flat base of the valley was revetted with stone and brick walls. These retaining walls were probably constructed to allow for rough terracing and trackways to be cut into the slope. The wall along the base of the slope had obviously been created by cutting into the hillside to form a wider base for the valley, which appeared to be the main access route to and from the kilns. It is probable that the western bank of the feature was created during the landscaping and stabilization of the embankment that presumably occurred during the 1960's when the road was constructed.

It was suggested during the evaluation and survey (Hatherley 2007) that that the glen may have been used to dump rubbish and waste materials during its life as a lime workings. However, it was not clear to what extent this had occurred. The collective assemblage is indicative of the reworking and redeposition of domestic and industrial waste. The recovery of lime, industrial waste, coal and cinders from the feature together with abundant domestic waste suggests that material was being imported to the site and used as landfill makeup, possibly from nearby Falkirk and also spread around the site.

It is possible that the excavated feature and the curious circular depression directly to the south represent prospective mining attempts in order to ensure that the area was cleared of limestone prior to abandonment. This would account for the scars in the landscape in this area and for the depth of the made ground deposits.

It seems probable that any features associated with the lime working industry within the evaluated area would have been destroyed during the landscaping of the site.

Recommendations

As no evidence of a clamp kiln was uncovered in the excavated area no further post-excavation analysis work is recommended for this site.

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Maps

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Ordnance Survey 1859. Dunbartonshire Sheets XX & XXIX

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Ordnance Survey 1899. Sheet XXIX SE

Ordnance Survey 1899. Sheet XXIX NE

Ordnance Survey 1922. 6" to 1 mile; Sheet XXIX

Internet Resources

http://www.mining-villages.co.uk/

The Castlecary Limeworks SHG06

APPENDIX 1: SITE REGISTERS

1.1 Context Register

Context No.	Description		
001	Turf and topsoil. Depth less than 0.10m, covers entire area however is slightly thinner on W slope.		
002	Trench 2. Upper fill, black brown sandy silt, loosely compacted, frequent roots. Frequent stones, bricks, modern glass, ceramics, leather, iron, etc. Appears to represent a dump modern material from the slope above. Length- 5.2m, width-2m, depth up to 0.5m.		
003	Trench 3. Turf and topsoil. Same as 001.		
004	Trench 3. Black brown sandy silt, layer beneath topsoil. Occasional pieces of coal and cinder, frequent pot, glass and iron fragments. Material washed or thrown downslope, possibly from the embankment. Length- 13.3m, width- 2m, max depth- 0.1m.		
005	Trench 2. Light greyish brown sandy loam, moderately to firm compaction, lots of stones, roots and 20th Century pot- tery, remains of batteries, glass etc. Exists only on E side, may be related to construction of the river revetment, appears to post-date opposite side and may have been build up from road. Length 3m, max depth 1m.		
006	Trench 3. Compact deposit. Mixed soil, but predominately sandy silt containing occasional patches of brown clay. Includes frequent fragments of pot, glass, Fe and coal truncated by root action on the eastern side. Similar to 008. Length- 13.3m, width- 2m.		
007	Trench 2. Light greyish yellow, friable and firm silty clay, very mixed, contains glass pottery and brick fragments. Only on W side of trench. Dump of modern material from slope. Length- 2.2m, width- 2.1m, depth 0.42m.		
008	Trench 1. Mid brown, compact, moderately stony sandy silt – containing glass, pieces of tarmac, linoleum and white ceramics fragments. Same as 006. Material slumped from the construction of the embankment, 0.10m deep.		
009	Trench 3. Compact grey brown sandy silt deposit containing occasional sub-angular stones. Same as 006 but with fewe finds. Truncated by roots. Length- 3m, width- 2m.		
010	Trench 1. Grey, compact, sandy clay loam, contains large fragment of linoleum, occasional shreds of modern pot, frag- ments of CBM. Possibly part of motorway embankment construction. Not visible in section. Probable lense of material between 008 and 014.		
011	Trench 1. Moderate to soft grey brown, sandy loam, frequent stones and frequent fragments of coal and cinder, disturbed by roots. Slumped deposit on upper slopes of hollow. Similar to topsoil, visible in central part of trench 1. Length- 3.8, width- 0.85, depth 0.25.		
012	Void		
013	Trench 1. Light greyish brown, loose and moist, very stony sandy clay. Abundant inclusion of coal, stones and small lime stone fragments, also include modern material, depth from 0.1m to 1.20. Tip lines were observed in the eastern part of the section.		
014	Trench 1. Blackish grey, firm and moist sandy clay. Includes frequent stones, modern pottery and occasional bricks and tarmac. Material from road embankment very mixed. Depth from 0.05m to 0.23m		
015	Trench 1. Dark brownish grey, plastic and moist, moderately stony, sandy clay contains frequent stones and coal, no finds. Deposit sloping gently from W to E. Probably natural – excavation stopped when this surface was reached.		
016	Trench 4. Brownish yellow silty clay lumps in dark brown loam matrix. Frequent sub-rounded slab-like boulders and large sub-rounded river boulders. Probable natural alluvial terrace heavily disturbed by roots. Length 2.2m, width 2.5m.		
017	Trench 2. Firm and friable, stony, greyish black sandy clay. Deposit very mixed contains lots of modern pottery, glass, bricks, metal, tarmac, slag etc. Only visible on W side of trench. Slumped from road embankment. Depth- 0.3m		
018	Same as 26		
019	Trench 3. Compact greyish brown sandy silt containing frequent stones, bricks, iron, glass and pottery. Diffuse inter- faces. Depth- 0.34m		
020	Trench 3. Very compact dark grey sandy silt. Frequent inclusion of stone, diffuse interfaces. Made ground, possibly from nearby A80. Depth- 0.40m.		
021	Trench 1. Deposit of large stones, slopes from north to south and is clearly visible on the surface. Probably associated with the diversion of river or the creation of revetment on W side of river. Length- 1.2m, width 1.1m.		
022	Trench 4. Very stony, dark greyish brown loamy sand. Loose and moist. Possible bank material from road construction Depth- 0.12m – 1.1m.		
023	Trench 3. Soft, mid brown silty sand in the centre of trench, heavily disturbed by roots.		
024	Trench 2.Light brown loosely compacted sand with no inclusions – silty deposit, natural silting process prior to the construction of river bank. Appears alluvial in nature however is darker than sand visible at the riverside, excavation were stopped due to influx of water.		
025	Trench 2. Dark blackish grey sand, moderately to loose compaction, small pebbles and roots, clear and smooth inter- faces. Alluvial deposit, possible result of standing water, only in E part, darker but similar to 024.		

Trench 2. Greyish brown, moderately compact sandy silt with frequent stones, pottery, bottle glass, frogged red bricks and lenses of clay. Main fill of trench 2 – material dumped from hill above. Length- 6.9m, width- 2.3m, depth- 1.8m.
Trench 2. Dark grey clayely silt, loosely compacted and waterlogged with frequent small stones and modern material. Lowest fill of trench, underlying material could not be determined because slot was getting to deep. Length- 0.8m, width- 0.8m, depth 0.9m
Void
Trench 3. Dark blackish, brownish, grey sandy silt, moderately compact containing moderate inclusions of white ce- ramic, bottle glass and brick. Dumped material. Depth- 0.35m – 0.5m
Trench 3. Dark grey compact silty clay, frequent sub-angular stones, fragments of white ceramics, red bricks and bottle glass. Excavation stopped at this level due to health and safety.
Trench 1. Fill of 032. Light greyish brown, firm and moist clay, no visible inclusion. Possible lense within 015, unlikely posthole. Length- 0.2m, width- 0.2m, depth- 0.1m.
Trench 1. Cut. Circular in plan, sharp break of slope on top and gradual at base, steep sides base flat and irregular. Length- 0.2m, width- 0.2m, depth- 0.1m. Possible lense within 015.
Trench 4. Mottled yellowish brown – greyish brown, poorly sorted, compact boulder clay. Located at the W end of trench. Natural sediments.
Trench 4. Yellowish grey brown, moderately compact, very mixed silty clay containing large sub-angular stones and occasional charcoal fragments. Overlies 033. Thicker towards E. Levelling deposit. Max depth- 0.83

1.2 Sample Register

Sample No.	Context No.	Description
001	002	Dark – mid grey deposit in trench 2.
002	-	Void
003	013	Bulk soil sample for environmental dating.
004	015	Bulk soil sample for environmental dating.
005	025	Dark blackish grey deposit in trench 2
006	019	Dark brown sandy silt in trench 3
007	022	Dark brown deposit in trench 4
008	022	Deposit in trench 4
009	005	Greyish brown sandy loam in trench 2
010	007	Greyish yellow silty clay in trench 2
011	017	Greyish brown sandy clay in trench 2
012	024	Light brown sand in trench 2
013	026	Grey brown sandy silt in trench 2
014	027	Dark grey clay silt in trench 2
015	034	Mixed redeposited natural, trench 4
016	034	Limestone, trench 4
017	020	Limestone

1.3 Photo Register

Black and white print and Colour slide, Film 1

Shot No.	Direction facing	Description
01		ID shot.
02	S	Pre-ex of clamp kiln
03	Ν	Ferrous lumps in Trench 3
04	Е	General shot along Trench 3
05	W	General shot along Trench 3
06	NW	Exposed ferrous lumps in Trench 3.
07	N	Slumped deposit (011) at N end of Trench 1.

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- 51	IC.	300

08	W	General shot along Trench 2 (working shot).
09		Void
10	N	Shot of S-facing section through 008
11	Е	Working shot showing slot through 008
12	NE	Working shot showing slot through 008
13	Е	Mid-ex shot of 013
14	Е	Mid-ex shot of 013
15	W	Trench 4: deposit 016
16	Е	Trench 4: deposit 016
17	NE	W part of trench 2 showing 007
18	NE	W part of trench 2 showing 007
19	Е	W part of trench 2 showing 007
20		Void
21	Е	Mid-ex shot of 021 and 013
22	W	Trench 3 showing 020
23	NW	Trench 4 : Mature Ash tree showing extent of recent hillwash.
24	Ν	Trench 2 – deposit 024 at base of feature
25	W	Mid-ex shot of 013 showing stones
26	W	Shot of E part of trench 2
27	Е	024 in trench 2
28	W	026 in trench 2
29	Е	General site shot
30	SE	General shot – trench 4
31	Е	General site shot
32	Е	General shot – trench 4
33	SE	General shot – trench 4
34	Ν	S- facing section of trench 3
35	NW	Shot of section through trench 1
36	Ν	Shot of section through trench 1
37	Е	Post-ex shot, trench 1

Black and white print and Colour slide, Film 2

Shot No.	Direction facing	Description
01		ID shot
02	Е	Shot of slot through 013
03	Е	Shot of slot through 013
04	Ν	Shot of slot through 013
05	W	General shot of trench 1
06	NW	S- facing section of trench 2
07	SE	Mid-ex shot of 032
08		Post-ex general shot of trench 3
09	Е	Post-ex general shot of trench 3
10	W	General shot of trench 3
11	W	General working shot of trench 2
12	W	General working shot of trench 2
13	W	General working shot of trench 1
14	Ν	General working shot from W (trench 1+2+3)
15	SW	General shot of trench 4
16	Ν	General shot at E end of trench 4
17	Е	General shot at W end of trench 4
18	Е	Working shot at E end of trench 4
19	W	View of compact-levelling W edge, trench 4

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20	Е	View of compact-levelling W edge, trench 4
21	NE	Trench 4, 016 exposed in E- end of trench
22	SW	Trench 4, 016 exposed in E- end of trench tree throw in SW (top right)
23	SE	Sondage through levelling, W edge of trench 4 (033)
24	SSE	Sondage through levelling, W edge of trench 4
25	S	N- facing section of west end of trench 2.
26	SW	N- facing section of west end of trench 2.
27	NE	S- facing section of E end of trench 2
28	W	General shot of west end of trench 2
29	N	South facing section of centre of trench 2
30	S	Environmental monitoring station opposite site.
31	W	Trench area from across river
32	SW	Site from across river
33	N	Area of revetting to north of site from across river
34	N	Footbridge north of site
35	Е	Site from road above

1.5 Drawing Register

Drawing No.	Scale	Description
01	1:10	N- facing section through deposits 012 and 014
02	1:10	N- facing section through 013
03	1:20	S- facing section through 013
04	1:20	S- facing section through trench 3
05	1:20	S- facing section through trench 2
06	1:20	N- facing section through trench 2 (top)
07	1:10	N- facing section through trench 4 (top)

1.6 Environmental

Table 1 SH	Table 1 SHG06 Retent Sample Results	t Sample	e Results														
Context Number	Sample Retent Number Vol (1)		Potterv	Burnt Lime- stone	Cement	Glass	Metal	Metallic waste (slag) I	Leather	Terr. 1 Snail 1	Unburnt Burnt bone Bone	Burnt Bone	Coal (Charcoal Ouantity	Charcoal max size (cm)	Charcoal AMS	Com- ments
5	1		1									1					
13	3	10		ŧ									+++++++++++++++++++++++++++++++++++++++				
15	4	10		++++	+												
25	5	8	+	+									+++++				
19	6	20	+	+++++++++++++++++++++++++++++++++++++++		++	+						- T		4.5	*	Fe nail
22	7	10	+	+++++++++++++++++++++++++++++++++++++++									+++++++++++++++++++++++++++++++++++++++				
22	8	10		++++									++++				
5	6	10		+			+						++++				Cu pin
7	10	10		+++									++++				
17	11	10	+	+++			+		+				++++				Cu pin
24	12	2											++++				
26	13	10		+++									+++				
27	14	10	+	+++							+		++++				
34	15	10		++++									++++				
Key: + = rar(++ = occasic	onal, +++ =	= common	Key: + = rare, ++ = occasional, +++ = common and ++++ = abundant	ndant												
	* = sufficien	t sized ch	arcoal for i	* = sufficient sized charcoal for identification and AMS dating	d AMS dat	ing											

lotai	Table 2 SHG6 Flotation Sample Results	le Results										
<u>D</u>	tal flot	Cereal	Context Sample Total flot Cereal cf Hordeum vulgare cf Triticum		cf. Triticum	Avena Cereal Coal	Cereal	Coal	Charcoal Charcoal Charcoal Comments	Charcoal	Charcoal	Comments
2	Jumber Number Vol (ml)	grain:		dicoccum	aestivo-compactum sp.		ndet.	indet. and cinders Quantity max size AMS	Quantity	max size	AMS	
			+		+			+++				
\simeq	0							+				
								+				
	0					_+						

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19	9	10			+		+			
22	7	10					+	+	⊲lcm	
22	8	5								Archaeologically sterile
5	6	5								Archaeologically sterile
7	10	10					+	+	<1cm	
17	11	40	+_		+	‡	++++		<1cm	
24	12	5								Archaeologically sterile
26	13	12					++	+	<1cm	Slag+
27	14	10					++	+	<1cm	Prill+
34	15	15					++	+	<1cm	Slag+
Key: $+ = r$,	are, ++ = occ	Key: + = rare, ++ = occasional, +++ = common and ++++ = abundant	n and ++++ = abundant							
	* = sufficie	ent sized charcoal for ic	* = sufficient sized charcoal for identification and AMS dating	BL						

S	
2d	
. H	
H	
5	

boirof	Mod	Mod	Mod	Mod	Mod	Mod	Mod		Mod	Mod	Mod
976 Dafe	20th		19th/20th	18th/20th	19th/20th				19th/20th		20th
noitqrisesO	Rod - from battery	Frag	Single sherd of stonewaredrain pipe	Three small sherds	Clear, green and blue sherds		Curving bar with straight perpendicular bar at right angles to one end, all ends appear broken	Large lump with lots of stone inclusions	Stoneware bottle	Mostly modern whitewares	Rod. Central perforation running through length, battery?
to9ject	Battery Frag	Brick	Drain Pipe	Pan Tile	Bottle/ Vessel	Window	Object	Fe slag	Modern	Modern	Battery Frag
(g) 14gisW								1117			
Viitneu D	1	1	1	3	16	3	1		1	77	1
lsitətsM	Carbon	CBM	CBM	CBM	Glass	Glass	Metal	MWD	Pottery	Pottery	Carbon
o _N əldmeS											
txətnoƏ	001	001	001	001	001	001	001	001	001	001	002
Ттепсћ	2	2	2	2	2	2	2	2			2

boiroa	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod				poM	Mod	poM	poM	Mod		
Spot Date	19th/20th	19th/20th	18th/20th	18th/20th	18th/20th	19th/20th	19th/20th	19th/20th	19th/20th	L.19th/e.20th		19th/20th				20th	L.19th/20th	L.19th/20th	20th	19th/20th		
Description	Fragment, frogged, black & red coarse fabric	Stoneware sherd, sooted interior	Large sherd		Earthenware drain pipe sherds	Pipe sherds	Stoneware drain pipe sherd	Small white glazed sherd	Brown glazed, yellow & brown mottled. Fireplace?	Part of ovoid plate with fixing hole	Burnt coal lumps, hearth sweepings, found within glass bottle	Slab with red surface		Narrow shaft in three pieces with attached slag	Small strip, in two pieces with attached slag	 Bottle & jar sherds. 20 Colourless bottles & jars: 5 square sauce bottles (2 complete) with screw thread necks, one sherd from square bottle embossed '-nia Fig Syrup Co./-ncisco, Cal.' (USA, 1897->); 1 round sauce bottle (corked rim?), embossed 'Goodall Backhouse & Co./Yorkshire/Relish' (Leeds, L.19th-c.1960's); 1 jar rim; 1 jar base embossed 'Pa-/Army & -/Co^{-/} 10 Green bottles, near complete ?beer bottles, oval ?spirit bottle, , sherd marked '-AD & Co['] 5 Natural bottles, two marked for 'Barrs, Falkirk' (1875->), one screw top neck 2 Opaque white ?ointment jars 	Incl. "HP SAUCE" bottle and bottle sherd marked "GLA"	Frags and sherds of clear bottle and window glass, purple vessel glass and amber frags; bottle reads "IRK" most likely meant to read FALKIRK	Decorative vessel glass, moulded, internally coloured (white & pink, lurid orange), blue with external polychrome splatters	Thick sherds	Slag-like material	Burnt stone?
Dbject	Brick	Chimney	Pan Tile	Pan Tile	Pipe	Pipe	Pipe	Sanitary Ware	Wall Tile	Electrical Fitting?	Coal	Concrete	Plate	Shaft	Strip	Bottle	Bottle/ Vessel	Bottle/ Window/ Vessel	Vessel	Window		
(g) ingieW				619																	119	284
Quantity	1	1	1	1	2	Э	1	1	2	1	20	1	1	1	1	40	11	18	4	3		
Initerial M	CBM	CBM	CBM	CBM	CBM	CBM	CBM	CBM	CBM	Ceramic	Coal	Concrete	Fe	Fe	Fe	Glass	Glass	Glass	Glass	Glass	Industrial Waste	Industrial Waste
o ^N sIqms2																		001				
txətnoƏ	002	002	002	002	002	002	002	002	002	002	002	002	002	002	002	002	002	002	002	002	002	002
Ттепсћ	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4		2	2		

boiroq							Mod	poM	Mod	Mod	Mod	poM	Mod	Mod	poM	Mod	Mod	Mod
Spot Date								18th/20th	19th/20th	18th/20th	19th/20th	19th/20th			L.19th/20th	20th	19th/20th	19th/20th
Description	Burnt stone?	Burnt stone?	Slag-like material	Shoe leather with nails	Small frags	Large lump with lots of stone inclusions and smaller frags	Light fragments	Hollow object shaped like a human lower leg and foot. Part of statuette? Garden ornament? L.79mm	Porcelain?	Whitewares One redware sherd, poss post-med?	4 Whiteware, plain 1 Porcelain, blue trans printed	 58 Whiteware, trans printed (blue, green, black), sponge printed (blue, grey), hand painted, green glazed 16 Porcelain, pink floral service, willow, hand coloured bird design, gilding 7 Stoneware, bowl sherds, jar sherds 4 Redware, Rockingham teapot spout, slip lined sherd, flower pot rim 2 Caneware, Rockingham 	Burnt ?shale fragments	Unburnt lump	Bottle & jar sherds. 5 Colourless jars, including complete Fish/meat past jar embossed '??? Brand Product / North Shields England' 3 Green bottles, wine bottle neck, sherd embossed –t & Co/-ers' Brown ?medicine bottle Brown bovril jar, embossed '20x Bovril Limited 202/Bottle Made in England' (1889->) Blue ?ointment jar with screw thread rim	Bottle, complete, embossed 'Califig' & ' Successors to the California Fig Syrup Co.' (c.1905) (bottlebooks.com)	Thick sherd	1 Whiteware teacup handle 1 Porcelain plain sherd
Object				Shoe Frag	Fe slag	Fe slag	Fe slag	Foot	Modern	Modern	Modern	Modern	Burnt	Coal	Bottle	Bottle	Window	Modern
(_{ຊີ}) ຳປຊ່າອW	50	137	3		57	2964												
Quantity				1			Э	1	1	~	ß	87	ഹ	1	11	1	1	2
Initerial M	Industrial Waste	Industrial Waste	Industrial Waste	Leather	MWD	MWD	MWD	Pb	Pottery	Pottery	Pottery	Pottery	Stone	Coal	Glass	Glass	Glass	Pottery
oN sIqms2			001	001	001				001	001								
łxsłnoD	002	002	002	002	002	002	002	002	002	002	002	002	002	004	004	004	004	004
цэцэт							2	7			1	р	2	3	m	Э	3	ю

Period	Mod			Mod	Mod	Mod		Mod			Mod	Mod	Mod	Mod	Mod				Mod	Mod	Mod			Mod	Mod	
sted toq2	19th/20th			19th/20th	19th/20th	20th					19th/20th	19th/20th	18th/19th	19th/20th	19th/20th									19th/20th	19th/20th	
noitqirəeəU	Brick and frag, frogged and stamped, "SHORE"	Small pin frag		Colourless bottles & vessels: complete chemists phial with cork, lid sherd	Clear and amber frags	Safety glass with chicken wire	Burnt stone?	Textured surface, rubber?	Small frags	Lump and smaller frags	3 Whiteware, plain, moulded 3 Porcelain, plain 1 Stoneware bottle	Caneware, Rockingham teapot rim	Stoneware, moulded bowl rim	10 Colourless, including complete ink bottle 2 green bottle sherds	Clear and dark black-brown vessel frag	Burnt stone?	Small fragments of leather	Small frags	Modern Whitewares	Modern whiteware	Frag			3 Colourless, one embossed 'Pois-' 2 Green	Clear frags	Burnt stone?
Dbject	Brick	Wire Pin	Fragment	Bottle	Frags	Window		Fragments	Fe slag	Fe slag	Modern	Modern	Modern	Bottle	Frags		Frag	Fe slag	Modern	Modern	Brick	Drill Bit	Nail	Bottle	Frags	5
(g) રૂતેફાંકW							339		77	460						12		12								25
Quantity	2	1	1	7	3	1		2			~	1	1	12	4		1		7	8	1	1	1	ω	2	
Initerial M	CBM	Cu	Fe	Glass	Glass	Glass	Industrial Waste	Leather	DWD	MWD	Pottery	Pottery	Pottery	Glass	Glass	Industrial Waste	Leather	MWD	Pottery	Pottery	CBM	Fe	Fe	Glass	Glass	Industrial Waste
oN slqms2		600			600				600						010	010	010	010							003	003
łxsłnoJ	005	005	005	005	005	005	005	005	005	005	005	900	900	007	007	007	007	007	007	008	011	013	013	013	013	013
Ттепсћ	2		2	2		2		2			5	ю	ю	2	2	2	2	2	2	1		1	1	1		

boir94	poM	Mod			Mod	Mod	Mod	Mod	Mod			poM	Mod	Mod			Mod			Mod
Spot Date	19th/20th	19th/20th			19th/20th	18th/20th	19th/20th	18th/20th				L.19th/20th	19th/20th	19th/20th			19th/20th			19th/20th
noitqinoseO	12 Whiteware, sponge printed (green), flow blue 5 Porcelain, one trans printed pink & green 1 Redware, Rockingham 1 Stoneware, bottle sherd	Fragments	Burnt stone?	Small frags	Stoneware chimney sherd, sooted interior	Abraded fragment	Stoneware pipe sherd	Narrow bore.	Burnt fragments	Small pin frag		Bottles & jars 5 Natural coloured, one square sauce bottle base, one embossed ?Barrs Falkirk, one embossed 'Robe-3 Colourless, small round bottle base, complete fish/meat paste jar, embossed 'Packed by Oxo Limited London' 1 Blue bottle base 1 Turquoise ?vessel sherd	Clear and amber frags	Clear sherds	Burnt stone?	Small fragment of leather	Stainless steel, stamp on blade, no handle	Small frags	Small lump	Porcelain/glass?
Object	Modern			Fe slag	Chimney	Pan Tile	Pipe	Stem	Coal	Wire Pin	Nail	Bottle	Frags	Window		Frag	Knife	Fe slag	Fe slag	Modern
(g) វាវgiəW		51	8	3											34			6	86	
Quantity	19				1	1	1	1	2	1	1	10	ъ	2		1	1			1
<u>IsitəteM</u>	Pottery	Concrete	Industrial Waste	MWD	CBM	CBM	CBM	Clay Pipe	Coal	Cu	Fe	Glass	Glass	Glass	Industrial Waste	Leather	Metal	MWD	MWD	Pottery
oN slqms2		004	004	004						011			011		011	011		011		011
txətnoD	013	015	015	015	017	017	017	017	017	017	017	017	017	017	017	017	017	017	017	017
Ттепсћ	1	1	1	1	2	2	2	2	2	2	2	7	2	2			2		2	2

The Castlecary Limew	orks
SF	1G06

SI	H	70	16

Period	poM		Mod						Mod	Mod	Mod						poM	Mod			
Spot Date	19th/20th		20th						19th/20th	19th/20th							L.19th/20th	19th/20th			
noitqirəzəU	 29 Whiteware, large chamber pot sherd, v. small ?Cup, spongeware (grey, green/red thistle), gilded, trans printed (green, blue) 14 Porcelain, pink floral, gilded, plain 6 Stoneware, jars and bottles 3 Redware, Rockingham, slip lined 1 Caneware, Rockingham teapot lid 	Modern whiteware, sherd and frag	Rod. Battery?	Possibly copper pipe	Crushed and bent sheet frag with remains of looped/perforated end	Strip of iron with looped end (poss handle?)	Bracket? Bent strip with perforation at one end and remains of perforation	Iron plate, heavily corroded	Transfer printed brown on cream	Porcelain doll's arm. Unglazed pink surface.	Burnt and unburnt fragments			Shaft with fitting/strap?	Sheet fragments	Shaft with expanded end	Bottles & jars 4 Colourless, square souce bottle with screw thread rim; round ?juice bottle embossed 'Robertson Fruit Products'; polygonal bottle embossed 'H.J.Heinz Co.' (1888->), wide oval bottle embossed 'Brylcreem' (1928->) 2 Brown, jar & small ?sauce bottle 1 Green square souce bottle embossed 'Shieldhall S.C.W.S' (Scottish Co-operative Wholesale Society, Glasgow, 1868->) 1 Blue small jar with screw thread top	Clear frags, incl window glass	Burnt stone? and slag-like material	Shoe leather with nails	Small frags
to9ject	Modern	Modern	Battery Frag	Cylinder	Frag	Obj	Obj	Obj	Wall Tile	Doll's Arm	Coal	Nail	Nail/Bolt	Object	Sheet	Tool?	Bottle	Frags		Shoe Frag	Fe slag
(૪) રૂપજ્ઞાંગ્મ																			74		64
Quantity	53	2	1	1	1	1	1	1	1	1	8	1	2	1	2	1	×	13		1	
laitətaM	Pottery	Pottery	Carbon	Си	Fe	Fe	Fe	Fe	CBM	Ceramic	Coal	Fe	Fe	Fe	Fe	Fe	Glass	Glass	Industrial Waste	Leather	MWD
o _N əldmeS		011										006						006	900	900	900
txətnoƏ	017	017	018	018	018	018	018	018	019	019	019	019	019	019	019	019	019	019	019	019	019
цэиәлТ	5			2	2	2	2	2	3	ю	ю				Э		ω	e	ω	ю	3

Period				Mod	Mod	Po M	Mod	Mod	Mod	Mod			Mod			Mod	Mod			Mod	poM	Mod	Mod			Mod
Spot Date					19th/20th	tioc	ZUth		19th/20th				19th/20th			20th	18th/20th				19th/20th		19th/20th			20th
noitqirəsəD	Large lump	Large lump, poss iron or iron corroded to slag	Small fragment of iron slag?	Fragments	Porcelain?	 Whiteware, one base with gilded ?shamrock, marked 'Wetley China, Longton, Made in England', for Sampson Smith, Staffs, (1925-30) (potteries.org) Stoneware, jars 	l l'orceiain, glided	Burnt ?shale fragments	Frogged and stamped, "ROSEHALL"	Unburnt lump	Ring or similar object, in three fragments	Large bolt, screw thread and nut	Kettle or similar handled vessel, made from sheet iron. Squashed, broken, misshapen and covered in slaggy deposit. In four large pieces with number of smaller fragments			3 Colourless, one complete small bottle with narrow screw rim 1 Opaque white ointment jar	Large bull's eye sherd		Small frags		3 Whiteware, hand coloured pink & green floral design 1 Stoneware, ribbed jar, marked on base 'Not Genuine Unless-'	Burnt ?shale fragments	Frag, poss stamped/frogged	Stone conglomerate Bag 1 of 2	Stone conglomerate Bag 2 of 2	Batteries? One has remains of surrounding carbon?
Object	Fe slag	Fe slag	Fe Slag	Fe slag	Modern	moboli	Modern	Burnt	Brick	Coal	Object	Bolt	Kettle?	Shaft	Tack	Bottle	Window		Fe slag	Prill	Modern	Burnt	Brick			Batteries
(g) રૃતેકાંગ્ર્	1033	1810																TBW	8						TBW	
Quantity			1	8	З	и	n	10	1	1	1	1	1	1	1	4	1			1	4	~	1			3
Initerial M	DWM	DMM	MWD	DWM	Pottery	Dottom	l'ottery	Stone	CBM	Coal	Cu	Fe	Fe	Fe	Fe	Glass	Glass	Industrial Waste	DWM	DWM	Pottery	Stone	CBM	Industrial Waste	Industrial waste	Carbon
o _N əldmeS			900		900																					
fxəfnoD	019	019	019	019	019	010	610	019	020	020	020	020	020	020	020	020	020	020	020	020	020	020	021	021	021	022
Цгепсћ	3	3	ю	ю	ю		υ	ю	3	3	3	3	3	3	3	ю	ю			3	m	ю	1	1	1	4

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Period	Mod	Mod	Mod	Mod	Mod	Mod										Mod	poM	Mod	Mod	Mod	Mod	Mod			Mod	Mod	Mod	
Spot Date	20th	19th/20th	19th/20th	19th/20th	19th/20th	18th/20th										19th/20th	19th/20th	L.19th/20th	19th/20th	19th/20th						20th		
noitqirəzəU	Battery consisting of carbon core. See other carbon rods	Single sherd of stoneware drain pipe	White-glazed sherd of sanitary ware with small perforation	Single sherd, glazed on both sides	Bottle stopper, ceramic stopper with attached iron ring	Narrow bore	Copper sheet fragment; fragmentary; 3 original edges remaining; countersunk perforation; one end shows signs of curving but is broken.	Twisted strands of copper wire	Small iron Bolt	Very fragmentary	Bar bent into S-shape, there is a fitting at one end and a perforation along the bar.	Possibly gardening fork		One long thin rod with tapering ends and a thicker rod which tapers at one end.	Sheet fragments, broken at 2 ends, 2 original edges	Complete, clear, glass bottle	Clear, brown and green sherds, includes small tube container and small cylindrical bottle with small opening, similar to modern cosmetics	White, opaque jar, clear, green and brown bottle sherds incl "BARR" and milk bottle	Green and amber fragment	Clear cylindrical glass object	Clear window sherds	Clear sherds	Slag-like material	Burnt stone? and slag-like material	Heel end of sole with iron hob nails	Screwtop lid	Shaft with one end threaded and the other end expands to 2 circular plates with channel between.	Small frags
Dbject	Battery	Drain Pipe	Sanitary Ware	Sanitary Ware	Bottle Stopper	Stem	Sheet	Wire	Bolt	Can	Fitting	Fork	Nails	Rods	Sheet	Bottle	Bottle	Bottle	Frags	Tube	Window	Window			Shoe	Lid	Object	Fe slag
(g) 14gisW																							~	60				120
Quantity	1	1	1	1	1	1	1	1	1	1	1	1	4	2	1	1	18	15	2	1	2	2			1	1	1	
Inite Inita	Carbon + Metal	CBM	CBM	CBM	Ceramic + Fe	Clay Pipe	Си	Cu	Fe	Fe	Fe	Fe	Fe	Fe	Fe	Glass	Glass	Glass	Glass	Glass	Glass	Glass	Industrial Waste	Industrial Waste	Leather	Metal	Metal	MWD
oN slqms2																			007				008	007				007
txətnoD	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022	022
Цгепсћ	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

boir99			Mod	Mod	Mod	Mod	Mod	Mod	Mod		Mod	Mod	Mod	Mod	Mod	Mod	Mod			poM	Mod	Mod		
Spot Date									19th/20th		19th/20th	L.19th/20th	20th	18th/20th	19th/20th	19th/20th				20th	19th/20th	20th		
noitqirəeəD	Small Lumps and frags	Lumps	Mostly modern whitewares with some modern redwares and stonewares	Mostly modern whitewares, one plate marked "made in Czechoslovakia"	Modern Whiteware	Fragments from a sheet of rubber, one surface corrugated	Reads "S.C.W.S.Ltd, UNITAS GLASGOW" pictured are two hands shaking		Clear (slightly pink tinge)	Small frags	Whiteware, blue and white pattern	One flat, one curved	Rod - from battery	Earthenware pipe tiles	Sherd, glazed white and cream	Hand painted blue on white	Burnt fragments	Small copper pipe/tube, crushed in middle	Iron plate with rod running through centre. The rod extends beyond the plate presumably attached to something else or to serve as a fitting.	 35 Colourless, including whole small thick bottle with cork; neck with internal screw thread and rubber top marked 'R.Douglas Ltd 1940 / Kirkcaldy / Dunfermline', thick tumbler rim; chemists phial, small ovoid spirit bottle 10 Green, including complete quarter spirit bottle 5 Natural coloured, one embossed for Barrs Falkirk' 4 Brown bottle sherds, one embossed 'Dry-' 3 Opaque white, jars, one embossed 'Ponds' 	Clear and green frags	Various, including safety, textured, thick, thin	Burnt stone?	Leather frag with perforations
Object	Fe slag	Fe slag	Modern	Modern	Modern		Bottle lid	Brick	Frag	Fe slag	Modern	Tiles	Battery Frag	Pipe	Sanitary Ware	Wall Tile	Coal	Pipe	Object	Bottle & Vessel	Frags	Window		Frag
(g) ingieW	146	858								5													16	
Quantity			81		Э	16	1	1	1		1	2	1	2	1	1	7	1	1		ю	15		1
Interial M	MWD	QMM	Pottery	Pottery	Pottery	Rubber	Rubber	CBM	Glass	DWM	Pottery	Asbestos	Carbon	CBM	CBM	CBM	Coal	Cu	Fe	Glass	Glass	Glass	Industrial Waste	Leather
o ^N slqms2					007				005	005	005										013		013	
txətnoƏ	022	022	022	022	022	022	022	024	025	025	025	026	026	026	026	026	026	026	026	026	026	026	026	026
Ттепсћ	4	4	4	4		4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

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			-77		-75	-75			-17	-15		-73		-75	-75	-75	-73	77	-73			
Period			Mod	poM	Mod	Mod			Mod	Mod	Mod	Mod	poM	Mod	Mod	Mod	Mod	Mod	Mod			
9760 Joq2				19th/20th		19th/20th				19th/20th	L.19th/20th	19th/20th	19th/20th		19th/20th	18th/20th		19th/20th				
noitqinosəU	Small frags	Small lumps	fragment	 34 Whiteware, trans printed (blue, black, dark green with gilding), gilded, plain mat blue, plain yellow glaze, sponge printed (brown & pink) 19 Porcelain, purple floral design, polychrome bird design, painted teapot lid, commemorative cup from Saltcoats 1885? 4 Stoneware, jar sherds 2 Caneware, Rockingham teapot sherds 	Burnt ?shale fragment	Clear, green and amber frags	Burnt stone?	Small frags	Modern whitewares	Large white glazed bowl sherd	1 Brown ?beer bottle base embossed 'Brewer's Falkirk' 1 Colourless odd flat sherd	Thick sherd	3 Whiteware, blue banded plate 1 Porcelain 1 Stoneware	Burnt material, light weight, grey	Stamped on both sides with corrugated pattern + "ARNGAVIL" on one side	Earthenware pipe or flower pot sherd	fragments	Base and neck of bottle	Burnt ?shale fragments	Slag-like material	Slag-like material	Small frags
Doject	Fe slag	Fe slag	Fe slag	Modern	Burnt	Frags		Fe slag	Modern	Sanitary Ware	Bottle	Window	Modern	~	Brick	Pipe	Coal	Bottle	Burnt			Fe slag
(g) 14gi9W	63	237					11	21												228	853	10
Quantity			1	59	1	9			3	1	2	1	сı	З	1	1	4	2	4			
IsirəfeM	MWD	MWD	MWD	Pottery	Stone	Glass	Industrial Waste	MWD	Pottery	CBM	Glass	Glass	Pottery	ż	CBM	CBM	Coal	Glass	Stone	Industrial Waste	Industrial Waste	DWD
oN slqms2	013					014	014	014	014											015		015
txətnoJ	026	026	026	026	026	027	027	027	027	029	029	029	029	030	030	030	030	030	030	034	034	034
цгепсћ	2	2	2	0	2	2	2	2	2	3	3	3	ε	ю		ю	3		3	4	4	4