

# Staney Hill Housing Development Lerwick Shetland



**Data Structure Report  
Phase 2 Evaluations  
and Earthwork Survey**

September 2016





**North Staney Hill**

**Lerwick**

**Shetland**

**ZE1 0QG**

**Data Structure Report**

**Project No: 686**

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## Executive Summary

ORCA was commissioned by Hjaltland Housing Ltd to undertake a scheme of archaeological excavation, and an earthwork and photographic survey of sites of archaeological and cultural heritage interest at North Staney Hill, Lerwick, Shetland. This evaluation has been undertaken in support of a planning application for the development of housing on the site (Planning ref: 2014/197).

This scheme of works forms the Phase 2 archaeological investigation of the site following the Phase 1 walkover surveys and detailed instrument surveys undertaken in 2014.

The extensive defensive First World War and Second World War infrastructure of the hillside was recorded by means of detailed earthwork and photographic surveys of in order to ensure the preservation of the sites by record. The survey included a total of thirteen features including gun positions, buildings, an observation post, air raid shelter and accommodation block

The evaluation of sites by means of excavation included 16 possible features of archaeological interest, of which 6 were shown to be natural, formed from outcropping bedrock and topographic features.

The 10 remaining features evaluated represent sites ranging in date and relative importance. The sites investigated include a dyke of probable prehistoric date and associated ancient buried land surfaces. An extensive complex of possible prehistoric features was also investigated at the summit of the hill and potentially represents a chambered cairn and associated features.

A number of features relating to the late nineteenth and early twentieth century activity on the Site were investigated, including two structures built against bedrock outcrops and a possible enclosure, predating a boundary dyke along the western edge of the development area.

Two of the evaluated sites were shown to relate to the First and Second World War defensive earthworks, including a probable gun position and a pile of spoil associated with a dugout position higher on the hillside.

A number of the investigated sites could not be effectively dated or interpreted within the remit of the evaluation due to the ephemeral nature of the features and deposits and an absence of datable material.

This investigation has proposed a range of measures designed to mitigate the potential impact of the development upon sites of archaeological and cultural heritage interest. These measures range from preservation of sites in situ by means of avoidance to full excavation of identified archaeological features and preservation in record. Any development on the site should be subject to an archaeological management plan, including additional site prospection and watching briefs.

## **Acknowledgements**

Thanks to Hjaltland Housing Association for commissioning the work and the Shetland Regional Archaeologist for support and consultation through monitoring of the fieldwork. Thanks also to Stuart Malcolmson Plant Ltd for supplying the mechanical excavator.

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## 1 Introduction

ORCA was commissioned to undertake an evaluation by means of excavation, of the potential features of archaeological and cultural heritage interest at North Staney Hill, Lerwick, Shetland. As part of the evaluation, a photographic and earthwork survey of features relating to the twentieth-century wartime infrastructure was also undertaken.

This scheme of work was commissioned by Hjaltland Housing Association and forms the Phase 2 archaeological evaluation in support of a planning application for a proposed housing development (Planning ref: 2014/197). The excavations and survey were undertaken between 9th and 27th of May 2016.

The project design was based on a brief provided by the Shetland Regional Archaeologist (Turner 2015) and the recommendations of an Environmental Impact Assessment (Natural Capitol 2014). Previous work undertaken on the site includes a Screening Report by the Shetland Amenity Trust (SAT 2014) and an archaeological survey (Wilson 2014). The earthwork and photographic survey included eleven features centred on a Second World War observation post and air raid shelter in the northwest quadrant of the development area. The evaluation included twelve sites identified during previous walkover surveys located throughout the development area. An additional three sites encountered during the fieldwork were added to the scheme of works.

This report is an interim data structure report detailing the results of the intrusive evaluation. A full data structure report including the results of the photographic and earthwork surveys will be issued in due course.

## 2 Site Location, Topography and Geology

The Site was situated to the northeast of Lerwick along the north, east and south sides of Staney Hill (Figure 1) between National Grid references (NGR) HU 46412 1636 in the southwest to HU 46801 41978 in the southeast and HU 46147 42060 in the northwest and HU 46725 42224 in the northeast. The hillside is mainly steeply sloping towards Bressay Sound and the Clickhimin Loch ranging between 30 and 90m above Ordnance Datum (mAOD) with small plateaus and shallow valleys. The land use is predominantly unimproved heathland with numerous outcrops of bedrock and semi-dispersed boulder fields partially concealed by the peat of the overlying blanket bog.

The underlying drift geology is glacial silt with the solid geology being Lerwick Sandstone formation including conglomerate, sandstone, siltstone and mudstone originating in the Devonian period (British Geological Survey).

### 3 Archaeological Background

There were a number of sites of archaeological interest within the immediate area of the Site, and several others within the wider landscape. These sites range in both typology and period, and provide a base line of archaeological potential for the study area.

#### 3.1 Prehistoric Period

The site is situated in close proximity to the Scheduled Ancient Monument of Clickhimin Broch (SM 90077), a complex archaeological monument with evidence dating from the Bronze Age through to the late Iron Age. The Broch is located on a peninsula of land extending into Clickhimin Loch.

Prior to the construction of the nearby new Anderson High School development immediately to the south of the site, a number of potential archaeological features were evaluated. The site of a Bronze Age or Neolithic structure located just outside of the High School development area was interpreted as the well preserved remains of a domestic structure (Moore and Wilson 2014).

During the same series of archaeological investigations, a second possible prehistoric feature was investigated and interpreted as burial cairn, likely to date to the third Millennium BC (Moore and Wilson 2014).

#### 3.2 Medieval/ Post Medieval

The site is located on the outskirts of Lerwick, which has been the capitol of Shetland since 1708. Lerwick contains two designated conservation areas; the Lerwick Oldtown and the Lerwick Central Area and Lanes, together containing a total of 124 listed building. The development is not situated within, or in close proximity to these conservation areas.

Fort Charlotte is a Scheduled Ancient Monument (SM SM90145) located approximately 1km to the east of the development. The fort is pentagonal in shape with bastions projecting from each corner. It was designed to protect British shipping from Dutch raiders during the first Anglo-Dutch War (1652-1654) and housed three hundred men. The fort was abandoned in 1668 and was largely razed in 1673 when Lerwick was burned by the Dutch. The fort was repaired in 1781 during the reign of George III at the height of the American War of Independence when Britain faced the combined threat of the Spanish and French navy as well as American privateers.

During the investigation of archaeological sites in advance of the Anderson High School development, EASE archaeology investigated a rectangular structure which was interpreted as a post medieval structure which had been partially robbed for building material (Moore and Willson 2014).

#### 3.3 Modern Period

Many of the sites are located on either side of the Cunnigham Way, which runs over Staney Hill from Clickhimin to Gremista and many of the surviving monuments are thought to be part of the Robertson Line, a defensive cordon which enclosed Lerwick during the Second World War

The most substantial elements of this infrastructure are the tank traps (NMR HU44SE 79 & HU44SE 80) which ran parallel to the South Burn of Gremista. There were also numerous examples of military structures and emplacements including a loopholed wall built across the burn on the north-west slopes of Staney Hill (NMR HU44SE83), immediately opposite the junction of Staney Hill Road and the Cunningham Way. The remains of a Turnball muzzle pivot mounting for a Vickers.303 machine gun are also still extant within this area.

The remains of mountings for spigot mortars (NMR HU44SE84) also formed part of the Robertson Line defences and were probably destroyed during the development of the Hoofields housing development to the north of the site.

The “powder house” (HU44SE146) on the south side of the Cunningham Way on the slope of Staney Hill is thought to have been an ammunition store in both the First and Second World Wars.

To the southwest of the site, the remains of an ammunition store (NMR: HU44SE88), comprised of a series of concrete hut bases, are located near the shore of the Loch of Clickhimin. Further to the north and higher in the hillside, the remains of a firing range (NMR: HU44SE144) can be seen in the form of a concrete target block and concrete filled sandbags.

## 4 Fieldwork Aims and Objectives

The principal aim of this scheme of works was twofold;

- a. Characterise the nature and archaeological potential of features by means of intrusive evaluation.
- b. Record features relating to the Second World War infrastructure by means of photography and instrument survey.

The sites targeted for intrusive evaluation were:

- 1) Vegetation Change
- 3) Structure/possible cairn
- 10) Dyke
- 11) Dyke (prehistoric) 150m long
- 16) Structure
- 19) Structure/house/cairn
- 20) Dyke
- 21) Prehistoric structure
- 31) Possible cairn

- 32) Structure
- 33) Possible cairn
- 34) Gun emplacement
- 36) Possible house/cairn

The limited nature of the archaeological evaluation makes it unreasonable to establish many specific archaeological research objectives. The archaeological brief is limited to establishing where, if at all, archaeological deposits may survive (presence/absence), recording where necessary, and to ensuring that the digging of evaluation trenches does not involve the destruction of the above. A few research questions can, however, be outlined:

- What is the nature and level (mOD) of natural topography?
- What is the character, nature, significance and depth of the deposits identified?
- If archaeological in nature what is the character, nature extent and date of this activity?
- Is there evidence for settlement in this location? If so what is the character, date, significance, nature and extent of such settlement?
- Are the features likely to be prehistoric, non-domestic or funerary in nature?
- What is the character and nature of the latest deposits identified?
- What is the extent (depth) of modern truncation (i.e. ploughing, grazing, pipelines, field drains or cables)?

## 5 Fieldwork Methodology

All works were carried out in accordance with the Written Scheme of Investigation (ORCA 2016) and the ORCA Standard operating procedures as set out in the ORCA Fieldwork Manual (2013).

All machine excavation was undertaken by ORCA staff.

All undifferentiated material of recent origin (defined as post Second World War and later) within trenches was removed down to the first archaeological horizon under archaeological supervision by ORCA staff.

The mechanical excavator was employed for turf stripping and removal of modern material and large deposits of a non-sensitive nature (i.e. deep peat deposits). All excavation by mechanical excavator was monitored by ORCA staff.

All faces of trenches requiring examination were cleaned by hand using appropriate hand tools. Investigation of archaeological horizons was undertaken by hand. Features were recorded both in plan and section. Excavation continued until archaeological levels sufficient to evaluate the nature, significance and extent of the sites were identified.

The extent of excavations was discussed during on-site consultations between the Shetland Regional Archaeologist, the ORCA Project Officer and a representative of the client.

All trenches, including those containing features of archaeological interest, were backfilled by the fieldwork staff. This was in order to ensure that the site was left in a safe condition and the features of archaeological interest were preserved.

All features and deposits of archaeological interest were recorded by means of plans, sections, field notes and pro-forma recording sheets. Site survey was undertaken by means of a paired Trimble GPS and tied into the Ordnance Survey National Grid. Heights and levels were measured in metres above Ordnance Datum. All photography was undertaken using colour digital media.

This document is Data Structure Report issued in compliance with national planning policy set out in *Scottish Planning Policy (SPP) 2010*, with the companion Planning Advice Note (PAN 2/2011): *Planning and Archaeology, The Ancient Monuments and Archaeological Areas Act 1979* and the *Scottish Historic Environment Policy 2011*.

## 6 Fieldwork Results

The results of the intrusive evaluation trenches are presented numerically below. Contexts are defined in **bold**, with the first two digits of the context number being the site number e.g. contexts numbers for Site 1 commence with **01001**, those for Site 16 with **16001** etc. All measurements are given in meters (m) with depths expressed in terms of meters below ground level (mbgl).

### 6.1 Site 01

Site 01 was characterised as vegetation change located at HU 46287 41676. The site was investigated by machine excavating a 1.6m wide by 1.6m long trench across the east edge of the vegetation change.

The excavation encountered dark brown peaty topsoil **01001** to a depth of 0.3m, directly sealing a deposit of reddish brown peat **01002**. This deposit in turn overlay and directly sealed the sandstone bedrock which sloped from the east to west at a depth of between 0.4m to 0.7mbgl. This sloping depression within the bedrock is likely to be the cause of the visible vegetation change on the surface.

### 6.2 Site 03

Site 03 was comprised of a row of boulders protruding through the heather clad peat layer at HU 46301 41682. The site was evaluated by means of a machine-excavated trench measuring 1.6m long north-south by 1.3 m wide east-west, located directly to the south of the boulders visible on the surface.

The excavation encountered peaty heather clad topsoil **03001** to a depth of 0.3mbgl throughout the trench, directly overlaying and sealing a deposit of brown peat **03002**. This deposit in turn sealed the sandstone bedrock at a depth of 0.5mbgl. The south facing section of the trench showed that the boulders were sitting within the upper 0.1m of the turf layer and not penetrating into any of the lower stratigraphic units.

### 6.3 Site 10

Site 10 was a linear arrangement of boulders, located between HU 46561 41734 and HU 46561 41734, orientated north-south along the same alignment as the existing post and wire fence line. Site 10 was investigated by means of a hand-excavated slot trench measuring 1.6m long east-west by 0.4m wide north-south.

The excavations encountered a peaty turf layer **10001** overlaying an outcropping of bedrock towards the east end of the trench at a maximum depth of 0.09mbgl. The turf layer became shallower to the east where the stone was exposed along the break-in-slope. Towards the west end of the trench the topsoil **10001** sealed a deposit of dark brown humified peat **10002**, which also overlay the bedrock and an arrangement of loosely packed sub-angular stone **10003** extending into the trench 0.35m from the west trench edge. The stone measured between 0.10 and 0.2m long, 0.10 and 0.2m wide with a thickness of between 0.10 and 0.2m, forming tabular sub-angular blocks. There was no evidence of coursing or any bonding material, and voids present between the constituents indicated that this material is likely to represent tumble. Rubble layer **10003** overlay and directly sealed a deposit of pale grey brown sandy silt **10004**, which was the limit of excavation within this trench.

### 6.4 Site 11

Site 11 consisted of a linear arrangement of boulders protruding from the heather clad peaty turf, was orientated east-west across the hillside between HU 46630 41948 and HU 46691 41926, and situated on a prominent ridge on the north side of a shallow valley. This feature was evaluated by means of four hand-excavated slot trenches.

Trench 1 was located at the west end of the visible extent of the feature at NGR HU46630 41948, and measured 1.9m long north-south by 0.5m wide east-west. This trench was targeted over an area where a series of boulders protruded through the turf layer.

The excavations encountered heather clad peaty turf layer **11001** to a maximum depth of 0.18mbgl on the north side of the dyke boulder **11004** and 0.11mbgl on the south side. The turf layer overlay and directly sealed a deposit of brown peat **11002**, which abutted the boulders forming the dyke **11004** on both the north and south side of the feature. Peat layer **11002** generally overlay sandstone bedrock at a depth of 0.35mbgl on the north side of dyke **11004** and at 0.12mbgl directly to the south of side of **11004**. The bedrock sloped away rapidly to the south to a maximum depth of 0.34mbgl. Peat layer **11002** directly sealed a deposit of grey brown sandy silt **11003**, which occupied gaps between areas of exposed bedrock at the limit of the excavation. Sandy silt deposit **11003** was directly sealed by the boulders forming the dyke **11004**, comprised of sub-rounded tabular sandstone. An upright boulder visible within Trench 1 measured 0.5m high by 0.25m thick by 1m long east-west. A second boulder was partially exposed in the east section of the trench and was also partially protruding through the turf lay 11001 to the east of Trench 1. This boulder measured 0.76m long east-west by 0.45m wide by 0.35m thick.

Trench 2 was located at HU 46647 41944 to the east of trench 1 within targeted at a location where a large upright boulder protrudes from the turf layer to 0.65m extant above ground level. The trench measured 1m long east-west by 0.5m wide north-south.

The excavation encountered peaty topsoil deposit **11001** to a maximum depth of 0.12mbgl on the south side of the dyke and 0.07mbgl on the north side. Topsoil **11001** sealed peat deposit **11002**, present throughout the trench to a depth of 0.57mbgl on the south side of the dyke where it overlay and directly sealed a deposit of pale greyish brown sandy silt **11003** and abutted upright boulder **11004**. On the north side of feature peat layer **11002** also abutted upright boulder **11004** and overlay the bedrock at a depth of 0.45mbgl, sloping to the south to a depth of 0.5mbgl directly under boulder **11004**. Peat deposit **11002** also overlay boulders of tabular conglomerate sandstone, representing toppled elements of **11004**. These boulders were partially excavated in the south and north sections of the trench.

Trench 3 was located at NGR HU 46678 41933, to the east of Trench 2, targeted over a large flat rectangular boulder protruding from the turf layer. The trench measured 1.6m long north-south by 0.5m wide east-west.

The excavation encountered peaty topsoil **11001** to a maximum depth of 0.12mbgl on both north and south sides of the feature, overlaying brown peat layer **11002** throughout the trench and abutting the dyke boulder **11004**. At a depth of 0.21mbgl peat layer **11002** overlay a deposit of pale greyish brown soft sandy silt **11003**. Dyke boulder **11004** occupied the central portion of the trench and measured 0.65m wide north-south by 0.98m long east-west by 0.35m thick, 0.15m of which was extant above the ground surface. **11004** directly sealed deposit **11003**, which had inclusions of humic peaty silt patches and occasional charcoal flecking. A kubiena tin sample of **11002** and **11003** was taken on the north side of the feature. The sandy silt deposit **11004** directly sealed bedrock in the southwest corner of the trench which was also overlain by peat layer **11002** at a depth of 0.19mbgl.

Trench 4 was located at a point where Site 11 terminates at a natural ridge in the hillside at NGR HU 46691 41926 east of Trench 3. The trench measured 1.1m long north-south by 0.6m wide east-west and encountered peaty topsoil **11001** to a depth of 0.2mbgl. The topsoil sealed brown peat layer **11002** to a depth of 0.45mbgl on the south side of the feature, overlaying a deposit of pale, greyish brown sandy silt **11003**. On the north side of the dyke, peat layer **11002** overlay bedrock present at depths between 0.45mbgl to 0.25mbgl within the northwest corner of the trench. On the southeast side of the trench, bedrock was encountered at a depth of 0.5mbgl.

Boulders of sub-rounded sandstone and conglomerate were present within peat layer **11002**, and were partially visible within the excavated area on both the north and south sides of feature within the east facing section of the trench. An upright set sub-rectangular boulder represented the continuation of dyke boulders **11004** in this location. The upright boulder measured 0.55m high by 0.2m thick and was extant above ground level to 0.05m on the east side of the trench and directly sealed the bedrock at a depth of 0.5mbgl.. The full length of the boulder was not investigated, though it was noted to extend 0.7m from the east facing section.

## 6.5 Site 16

Site 16 was comprised of a roughly circular area of tightly packed rubble measuring 1.5m in diameter and characterised as a possible structure located at NGR HU 46702 42031



A trench measuring 2.0m long by 1.0m wide orientated north-south was excavated by hand across the west half of the feature. No clearly definable structural elements identified and the excavation encountered only angular rubble **16002** comprised of sandstone and conglomerate. The stone constituents were angular to sub-angular in shape, varying in size from cobbles measuring on average 0.1m long by 0.1 wide by 0.1m thick to boulders 0.5m long by 0.4m wide and 0.2m thick. The rubble was mixed and disorganised with no clear direction of tumble or alignment. Numerous voids were observed between stones, partially bound by a matrix of peaty turf **16001**, which was inconsistent and patchy across the feature to a maximum depth of 0.05m. Abundant root material penetrated from turf layer **16001** into the lower rubble deposit **16002**.

## 6.6 Site 19

Site 19 was characterised as a possible prehistoric structure or cairn in a figure-of-eight configuration, comprised of boulders protruding from the turf layer, located at NGR HU 46582 42046.

A machine excavated trench measuring 3.0m long east-west by 2.6m wide north-south was across the northeast quadrant of this feature. The excavation encountered heather clad peaty topsoil **19001** to a maximum depth of 0.35m onto conglomerate sandstone bedrock sloping down to the west. This feature appears to be natural in origin.

## 6.7 Site 20

Site 20 represented a linear north-south arrangement of boulders located between NGR HU 46622 and HU 42170.

This feature was evaluated by excavation of a trial trench located adjacent to a large boulder protruding 0.2m from the turf layer at a 45-degree angle to the ground surface. The excavation encountered the turf layer merging with a brown peat deposit to form a homogenous layer **20001** to a maximum depth of 0.4mbgl. This deposit sealed a layer of dark brown humified peat **20002**, 0.05m thick and present to a depth of 0.5mbgl where it in turn sealed a deposit of pale grey brown stony sandy silt **20003**. This deposit represented the upper layer of the glacial till and was the limit of excavation in this trench. The large boulder seen protruding from the peat layer at the surface tapered to a point with depth, overlying **20003** at the base of the trench, with a void within the peat formation profile on the east side of the boulder on the underside of its leaning surface. This feature appears to represent a natural feature.

## 6.8 Site 21

Site 21 was characterised as a structure situated in the lee of a large outcropping of bedrock to the north of the centre of the development area (NGR HU 46470 42025). The structure was sub-rectangular in form with extant walls surviving to approximately 0.4m above ground level surrounded by an earthwork embankment. The interior of the feature was filled with rubble of the same material as the structural walls. The earthwork and the structural walls together measured 5.0m north-south by 4.0m east-west.

The structure was evaluated by excavation of an L-shaped trench measuring 4.0m north-south across the southern wall and earthwork embankment, turning to the east and

measuring 2.05m to the edge of the structure. The trench was partially excavated by machine, with hand excavation over structural elements and interior deposits.

Peaty topsoil deposit **21009** was present across the earthwork embankment and overlay the south structural wall **21003** and a deposit of mixed stony dark grey peaty silt with patches of pale grey sand **21008** at a depth of 0.12mbgl. This deposit in turn overlay and enhanced the core formation deposit of the embankment **21007** to a maximum depth of 0.47mbgl, tapering to the south at the base of the earthwork. Wall **21003** survived to a maximum of ten courses of rough-hewn angular conglomerate sandstone with a total height of 1.21m. The full profile and extent of this wall was not investigated during the evaluation. Wall **21003** is likely to have formed a revetment on the north side of embankment with its core incorporated into the earthwork material of **21007** and **21008**.

Deposit **21007** was comprised of very dark grey firmly compacted humified peat forming the core of the earthwork embankment. This deposit was a maximum of 0.28m thick and tapering out to the south where it merges with a layer of more humified orangey brown slightly silty peat **21006** at a depth of 0.34mbgl. This deposit was a maximum of 0.11m thick and in turn sealed a deposit of homogenous peat **21005** at a depth of 0.45mbgl, excavated to a depth of 0.7mbg, which was the limit of excavation in this trench.

Wall **21003** and embankment material **21007** and **21008** abutted the east wall of the structure **21004**, which was comprised of angular rough-hewn conglomerate sandstone blocks. This wall was extant to a height of 0.55m, though the base of the wall was not reached within the evaluation trench. Wall **21004** extended 2.5m to the north of wall **21003**, where it terminated in a possible aperture, but **21004** did not extend to the south of **21003**. Wall **21004** was 0.94m wide in the excavated section and appeared to be double faced, indicating that that this element of the structure may have been free-standing.

Within the interior of Structure 21 the excavations encountered a deposit of peaty topsoil and rubble **21001**, which abutted walls **21003** and **21004**. This deposit was comprised of over 50% loose angular stone boulders and cobbles to a depth of between 0.18 and 0.27mbgl. Numerous finds of modern material including plastic, glass and iron and corrugated iron sheeting were encountered during excavation of this material.

**21002** directly sealed a mixed stony dark brown peat material with pale brown sandy pockets and patches of iron panning **21002**, which also abutted walls **21003** and **21004**. This material became more homogenous and sandy in composition with depth. Deposit **21002** was excavated to a maximum depth of 0.68mbgl, which was the limit of excavation in interior of the structure due to ingress of ground water.

## 6.9 Site 31

Site 31 was comprised of a spread of earth-fast stone located at the summit of the hill at NGR HU 46399 41985, and was characterised as a possible cairn. The feature consisted of multiple possible elements, with cellular and linear elements. A survey marker, possibly relating to the development of the WWII infrastructure along the hillside, was set in concrete in the centre of the most prominent circular feature with large amounts of exposed tabular stonework protruding through the turf layer.

The site was evaluated by means of three hand-excavated trenches. Trench 1 measured 2.0m long north-south by 2.0m wide east-west across the southeast quadrant of the circular feature. Trench 2 measured 2.0m long north-south by 1.6m wide east-west across the northwest quadrant of the circular feature. Trench 3 measured 1.8m wide east-west by 0.9m wide north-south across the south end of a possible linear feature.

The excavation of Trenches 1 and 2 encountered stony peaty topsoil **31001** overlaying the possible structural elements of the feature **31003** and **31006** and forming the matrix of a rubble deposit which appears to fill the centre of the feature **31007**. The turf layer directly sealed a concrete setting for a trig point **31002**, which covered an area approximately 0.6m in diameter. The concrete overlay and directly sealed a layer of stone filling the centre of the feature **31007**, comprised of mainly angular to sub-angular cobbles. This material was smaller and less organised than the constituents of **31003** containing it.

**31003** was characterised as a possible structural feature with wall faces curving from east-west to the north south in Trench 1 and a possible straight section orientated north-south in Trench 2 forming a sub-circular chambered feature 2.7m in diameter. The feature was surrounded by well-packed and consolidated stone **31006** spread within a matrix of peaty silt. It is possible that this material represents the degradation of the structure, though some possible coursed elements to the east of the feature suggest that it may also represent the remains of the core a structure.

Trench 3 defined a linear structural element **31004** extending to the north of feature **31002**. The excavation encountered peaty topsoil **32001**, which was excavated to a maximum depth of 0.45mbgl, abutting the upright arrangement of boulders with a possible second section of wall positioned 90-degrees to its east side, orientated east-west. The topsoil overlay a deposit of gritty grey-brown coarse-grained sandy gravel material **31005** forming a matrix between stones of tabular sandstone, forming a possible surface. This was the limit of excavation in this trench.

Further earthworks and sections of earth-fast stone are clearly visible to the west of this linear feature, extending up to 8.0m to the north.

## 6.10 Site 32

Site 32 was comprised of a rectangular structure 7.5m long north-south by 4.0m wide east-west. The site was located within a small plateau at the crest of the hillside, below a large outcrop of bedrock at NGR HU 46258 41932. The structure was divided into two roughly equal sized compartments by an east-west dividing wall. Each compartment has an apparent entrance in the northeast and southeast corners respectively.

An L-shaped trial trench was excavated spanning to the two rooms incorporating the east wall and internal dividing wall. The trench measured 3.4m long north-south by 0.8m wide east-west through the south room, turning to the east in the north room and extending 2.6m east-west by 0.8m north-south.

The east drystone constructed wall of the structure **32002** appeared to represent the front of the feature and extended 4.1m north-south by 0.8m wide, and was comprised of undressed tabular conglomerate sandstone. The base of the wall was not reached within the limit of excavation, with 8-10 courses visible within the trench. The southern extent of wall **32002**

terminates in an aperture, forming an entrance into the southern room. The wall appears to have been constructed with a wider base at this terminus **32004**, with a line of coursed material projecting 0.35m to the west into the structure and measuring 0.6m wide north-south.

The outer east face of wall **32002** was examined in the east-west section of the trench and lacked the neatly coursed construction of the west face. It appears that **32002** may be a partial revetment for the embankment on the east side of the structure.

A sondage measuring 2.5m long east-west by 1.6m wide north-south was excavated on the exterior of the structure to investigate the formation of the earthwork element of the feature.

The excavation encountered peaty topsoil deposit **32001** overlaying wall **32002** at a depth of 0.05mbgl. The topsoil also overlay and sealed a deposit of very dark brown humified peat **32006** at a depth of between 0.2mbgl at the edge of the earthwork and 0.45mbgl at the edge of wall **32002**. This deposit abutted wall **32002** and sloped away to the edge of the earthwork to the east. Deposit **32006** was sealed by and merged with a deposit forming the core of the embankment, formed from compacted stony greyish brown sandy silt with inclusions of humified peat patches **32007**. This deposit was encountered at a depth of 0.6mbgl at the edge of wall **32002** and sloped away gradually to the east. Deposit **32007** extended beneath the outer revetment of wall **32002**.

Deposit **32007** directly sealed a layer of dark orangey brown compacted clayey silt **32008** at a depth of 0.75m below the top of the earthwork feature forming a distinct band across the whole of the sondage. This deposit was characterised by abundant inclusions of roots and organic matter and in turn sealed a clearly defined deposit of dark grey humified peat **32009**, present from a depth of 0.85m from the top of the earthwork.

Deposit **32009** overlay and directly sealed the upper layer of the glacial till diamiction **32010** at a depth of 1.25m from the top of the earthwork, and was comprised of bluish grey clay sand with inclusions of large rounded cobbles.

Within the interior of the structure, a rubble deposit **32001** was encountered at a depth of between 0.1m and 0.3mbgl. This rubble was comprised of the same tabular angular material forming the extant structural features and consisted of over 50% of the deposit within a matrix of peaty turf the same as the topsoil overlaying the whole structure, and abutting both the east-west dividing wall **32003** and the north-south inner wall face of wall **32002**.

Within both the south and north compartments of the structure, deposit **32001** directly sealed a layer of dark greyish brown sandy silt with patches of dark brown peat **32005**, which also abutted walls **32002** and **32003**. This deposit is present throughout the interior of both rooms, with a more sandy composition noted in the southeast corner of the north room. This deposit was excavated to a maximum depth of 0.45mbgl, which was the limit of excavation within the interior of the structure.

Wall **32003** was tied into the west face of **32002** and was constructed of the same tabular sandstone material with a double face (north and south) and a core of well packed small angular rubble.

## 6.11 Site 33

Site 33 consisted of a well-defined mound measuring 8.0m in diameter and 1.5m in height with several earth fast stones visible protruding from the topsoil along the base of the feature. The site was located within a prominent position on the southeast facing slope of the hillside at NGR HU 46404 41876.

The feature was investigated by means of two evaluation trenches. Trench 1 was located over the southwest quadrant of the feature, and measured 4.9m long northwest-southeast by 1.5m wide northeast-south west. Trench 2 was located in the northwest quadrant of the feature, and measured 3.0m long northeast-southwest by 1.6m wide northwest-southeast.

Excavations in Trench 1 encountered peaty topsoil **33001** throughout the excavation, ranging in thickness from 0.11m at the top of the mound and tapering to less than 0.05m at the base of the mound to the east where this deposit overlay and directly sealed curvilinear stone feature **33008**. This curb feature formed the visible extent the mound to the east, measuring 4.5m from east to west and 1.2m wide within the excavated area. The curb feature was comprised of sub-angular tabular blocks of conglomerate sandstone measuring up to 0.6m long by 0.3m wide by 0.3m deep.

A 0.5m wide sondage across curb feature **33008** showed that it directly sealed a deposit of dark greyish brown peat **33002**, present throughout the excavated area to a depth of between 0.52mbgl at the highest point of the mound to 0.35mbgl at the eastern extent of the mound where it was generally overlain by turf layer **33001**. This deposit in turn sealed a discrete layer of brown humified peat **33003** at a depth of 0.54mbgl from the top of the mound and was observed in a sondage excavated along the southeast facing section of Trench 1. This deposit extended 0.4m to the southeast from the sondage edge with a maximum thickness of 0.06m thick at its greatest depth, and tapering out as the mound sloped to the east. This deposit in turn sealed a lens of very dark brown humified peat **33004**, 0.3m thick at its greatest depth and also tapering out to the east.

These discrete lenses appeared to form an isolated area of interface deposit between the overlying **33002** and a widespread layer of reddish brown peat **33005**. Deposit **32005** was generally overlain by **33002** at a depth of between 0.6mbgl at the top of the mound and 0.4mbgl near the base of the slope.

Deposit **32005** was characterised by frequent patches of dark brown humified silty material forming an abundant inclusion, generally seen to form linear bands without consistent orientation. The base of this deposit was not investigated in Trench 1, with the limit of excavation being at 0.74mbgl from the top of the mound.

Excavations in Trench 2 encountered peaty turf **33001** to a depth of between 0.1 and 0.2mbgl across the mound. This deposit in turn sealed the widespread deposit of dark greyish brown peat **33002**, present throughout the excavated area forming a deposit 0.38m thick at the top of the mound, and 0.16m thick towards the base of the mound to the southwest. Within Trench 2, this deposit directly sealed a mixed layer of well-consolidated dark greyish brown humified peat **33009** with abundant inclusions of degraded sandstone fragments and flecks of manganese panning, present throughout the excavated area of Trench 2.

A sondage was excavated to investigate deposit **33009** in the southeast corner of Trench 2. This measured 1.4m long by 0.5m wide, against the southeast trench edge. The sondage revealed that deposit was 0.12m thick towards the centre of the mound, tapering to 0.6m towards the southwest and directly sealed reddish brown peat layer **33005** at a depth of 0.68mbgl.

As within Trench 1, deposit **33005** exhibited abundant inclusions of soft, dark brown silty peat patches, seen in section to measure up to 0.4m in diameter.

Deposit **33005** directly sealed and merged with a deposit of very dark brown humified peat at a depth of 1.1mbgl from the top of the mound and present throughout the sondage to a depth of 1.2mbgl, forming a consistent 0.1m thick layer. This deposit in turn directly sealed a layer of soft grey brown sandy silt **33007** with abundant inclusions of rectangular tabular sandstone within its composition, many of which protruded into the overlying humified peat deposit **33005**. The stone within this deposit measured on average 0.3m long by 0.1m wide, possibly forming two rows placed on end in a northwest-southeast alignment, though it was not possible to confirm this within the excavated area.

## 6.12 Site 34

Site 34 was characterised as a Second World War gun emplacement, comprised of a regular sub-rectangular depression measuring 4m in length and width by 1.5m deep, situated on the north face of the hillside at NGR HU 46309 42061.

This feature was investigated due to the possibility that it represented an earlier, possibly prehistoric, structure. A trench was machine excavated through the northwest quadrant of the feature and encountered peaty topsoil deposit **34001** to an average depth of 0.3mbgl. This layer overlay and directly sealed a deposit of brown peat with abundant inclusions of angular blocks of sub-angular tabular sandstone **34002** measuring on average 0.25m long by 0.25m wide by 0.1m thick. This material filled the depression forming the centre of the feature and overlay a steeply sloping edge of bedrock which formed the western edge of the feature. At a depth of 0.5mbgl, layer **34002** sealed a deposit of yellowish brown stony sandy silt with abundant inclusions of rounded gravel and cobbles **34003**, representing the upper level of the glacial till. This deposit also lapped against the steeply sloping bedrock edge of the feature to the west and was excavated to a depth of 1.0m.

## 6.13 Site 36

Site 36 was characterised as a possible prehistoric house or cairn site comprised of a hollow measuring 5.0m long north-south by 3.0m wide east-west with stone visibly protruding from the turf layer on the western edge of the feature. The site was situated on the lower slopes of the northeast hillside at NGR HU 46714 42076.

This feature was investigated by means of a machine-excavated trench 4.4m long east-west by 1.6m wide north-south across the depression and the protruding stone. The excavation encountered peaty topsoil deposit **32001** overlaying the upper layer of the glacial till, comprised of grey brown sandy silt **36002**, within the area of the depression to a maximum depth of 0.25mbgl. Turf layer **36001** overlay conglomerate sandstone bedrock forming a north-south orientated shelf across the west side of the feature.

#### 6.14 Site 37

Site 37 was comprised of a D-shaped enclosure measuring approximately 10m in diameter located against a boundary extant dyke along the south side of the development area at NGR: HU 46241, 41844. This structure is visible on the 1855-1882 1st edition Ordnance Survey map and annotated as a sheep fold. A blocked aperture within the dyke wall into the enclosure supports the presumption that this feature was in use contemporaneously with the construction of the boundary dyke.

Traces of a possible continuation of the structural elements on the north side of the boundary wall were investigated by means of an evaluation trench located against the east side of the dyke at the point where the northwest extent of the ruinous enclosure meet the west side of the extant wall.

The evaluation trench measured 3.6m long north-south by 0.6m wide east-west incorporating a spread of rubble observed protruding from the turf layer. The excavation encountered mixed mid grey-brown peaty topsoil and rubble layer **37001** comprised of large tabular sandstone blocks, loosely packed and without any definable structural form abutting the foundation of dyke wall **37004**. This deposit was present throughout the trench to a maximum depth of 0.06mbgl and overlay a deposit of dark grey-brown compacted peat **37002** which also abutted the foundation of dyke wall **37004**. This deposit was excavated to a depth of 0.13mbgl and also contained inclusions of tabular sandstone blocks which protruded through the deposit into **37001**. Within the disorganised rubble spread constituting deposit **37002**, a more organised arrangement of tabular angular stone was observed to form a possible east-west aligned structural feature **37003**. This feature was located within the north end of the trench and formed a possible linear wall at least two courses in height and passing directly beneath the foundation of the extant dyke **37004**.

#### 6.15 Site 38

Site 38 was identified as a possible feature located on the north side of the development area NGR HU 46339 42088, comprised of loose rubble protruding from the turf layer on a steep section of the hillside.

The site was investigated by means of an evaluation trench excavated along the western edge of the feature, measuring 2.4m long north-south by 1.0m wide east-west. The loose rubble spread **38004** was observed in section to overlay the heather clad peaty topsoil ground surface **38001** without any sign of bonding material or soil matrix. **38004** occupied a hollow within the hill slope, forming a near vertical edge 0.68m high to the southwest. The peaty topsoil deposit **38001** directly sealed a layer of brown peat **68002** at a depth of 0.14mbgl which in turn sealed a compacted stony deposit of greyish brown sandy silt **38003** at a depth of 0.71mbgl, representing the upper layer of the glacial till.

#### 6.16 Site 39

Site 39 was characterised as a linear embankment surviving upto 1.0m in height in some locations and extending approximately 50m north-south in the northeast corner of the development area between NGR HU 46708 42131 in the north to HU 46678 42191 in the south.

This feature was evaluated by means of two evaluation trenches excavated east-west across the embankment. Trench 1 was located at NGR HU 46685 42177 and measured 4.3m long east-west by 1.6m wide north-south. The excavation encountered heather-clad topsoil and turf layer **39001** to a depth of 0.12mbgl across the whole trench, overlaying a deposit of dark grey brown peat **39002**, present to a depth of 0.29mbgl in the west end of the trench. Topsoil deposit **39001** also overlay an outcrop of conglomerate sandstone bedrock forming a north-south orientated ridge across the trench in the same alignment as the embankment. The bedrock slopes gradually to the west and drops steeply to the east in a near vertical face.

Peat layer **39002** was present throughout the east end of the trench to a depth of 0.67mbgl, forming around the bedrock outcrop. This deposit in turn sealed a layer of dark brown humified peat **39003** extending from the bedrock outcropping to the east edge of the excavation to a depth of between 1.0m and 1.15mbgl. This deposit in turn sealed the upper layer of glacial till, comprised of blue grey sandy silt **39004** present in patches between areas of bedrock.

Trench 2 was located to the south of Trench 1 at NGR HU 46695 42161 and measured 4.0m long east-west by 1.6m wide north-south over a section of the embankment that levels out from a break in slope of the hillside in the west before dropping steeply to east. The excavation encountered dark brown heather clad peaty topsoil **39006** to a depth of 0.2m across the whole trench and directly overlaying an outcropping of bedrock **39011** forming parallel north-south ridges at the west end of the trench and the centre of the trench. The bedrock slopes away steeply to the east and turf layer **39006** directly sealed a layer of dark brown peat **39007** present to between 0.2 and 0.4mbgl where the bedrock protrudes into the upper peaty layers at depth of 0.35mbgl.

A row of loosely packed tabular sandstone boulders **39010** was located within peat layer **39007**, overlying bedrock **39011** at the edge of the central protruding ridge at a depth of 0.3mbgl. The material measured between 0.3m and 0.4m long by 0.4m wide and formed a possible north-south revetment extending across the trench in an alignment with the east edge of the embankment.

Within the hollow, 0.45m wide, formed by two exposed bedrock protrusions, deposit **39007** overlay a deposit of dark greyish brown humified peat **39008** at a depth of 0.4mbgl. This deposit in turn sealed the upper layer of the glacial till, comprised of greyish brown cemented sandy silt **39009**, visible in patches between the bedrock protrusions.



## 7 Discussion

The aims and objectives of the evaluation were to establish the nature of the sites, investigate the extent of any features or deposits of archaeological interest and assess their preservation and potential cultural heritage value.

A number of site specific research questions were also defined as stated below:

- What is the nature and level (mOD) of natural topography?
- What is the character, nature, significance and depth of the deposits identified?
- If archaeological in nature what is the character, nature extent and date of this activity?
- Is there evidence for settlement in this location? If so what is the character, date, significance, nature and extent of such settlement?
- Are the features likely to be prehistoric, non-domestic or funerary in nature?
- What is the character and nature of the latest deposits identified?
- What is the extent (depth) of modern truncation (i.e. ploughing, grazing, pipelines, field drains or cables)?

### 7.1 Site Assessment

#### 7.1.1 Site 01

Excavation over Site 1 indicated that the vegetation change noted during the walkover survey is likely to have been caused by a deepening of the natural underlying geology. The deeper peat within the area is likely to have caused a difference in the local hydrological system, leading to a marked variation in vegetation grown.

This site is of no archaeological or cultural heritage interest.

#### 7.1.2 Site 03

A row of tabular boulders observed on the surface of the heather clad peat was shown within the excavation to be present on the surface only and not relating to a sub-peat structure. It is likely that these boulders represent recent tumble from outcropping bedrock further up the steep hillside to the northwest.

This site is of no archaeological interest.

#### 7.1.3 Site 10

This site, comprised of a linear arrangement of earth fast stone in line with an modern post and wire fence, is likely to represent an accumulation of tumbled boulders associated with the erosion of the nearby exposed bedrock outcrop. This features appearance is further

enhanced by the packing at the base of the modern post and wire fence and the nature of the underlying geology, which formed a north-south orientated ridge along the base of the slope.

This site is of negligible archaeological interest.

#### 7.1.4 Site 11

This feature, comprised of a linear arrangement of boulders protruding to upto 0.5m above the turf layer, represents the remains of dyke or boundary of probable prehistoric date. The excavation of four trenches across the feature identified that the upright extant tabular sandstone boulders **11004** were set directly onto bedrock, with similar large tabular boulders within the peat formation layer **11002** likely to represent tumbled boulders and packing stones from around the base of the feature. The presence of several large slabs surviving *in situ* indicates that the feature would have formed a highly visible physical boundary standing over 1.0m in height in places. There is also evidence for the survival of a possible buried land surface associated with dyke, comprised of soft sandy silt with patches of humified peat inclusion and charcoal flecking **11003**, most visible in Trench 3. This deposit is likely to have been heavily denuded from the exposed hillside prior to the formation of peat layers in antiquity, removing evidence of possible socket cuts to house the upright boulders.

This site represents a probably prehistoric boundary, possibly dating to the Neolithic or Bronze Age, and potentially of local archaeological importance within its landscape setting.

#### 7.1.5 Site 16

The evaluation of Site 16 encompassed approximately 50% of the feature and was not able to effectively define its form. The loose rubble feature represented by deposit **16002** does not have any discernible structural elements or organisation that would indicate degradation of a structural feature. It is possible that this material has accumulated within a natural fissure forming between outcrops of bedrock, though this cannot be confirmed without fully excavating the feature investigation.

The archaeological/ cultural heritage significance of this feature is uncertain, though it is likely to be natural.

#### 7.1.6 Site 19

Excavation of deposits over this site identified that of an outcrop of bedrock protruded through the turf layer in a curvilinear arrangement, coinciding with sub circular hollows and depressions within the natural topography, giving the impression of possible sub-peat features.

This site is of no archaeological interest.

### 7.1.7 Site 20

Site 20 was defined by a row of boulders protruding through the heather clad peaty topsoil in a linear north-south arrangement. Excavation next to one of the boulders showed that they are likely to be derived from tumble from further up the slope, forming an accumulation along a plateau at the break in slope.

It was noted during the walkover survey that one boulder within this area had been carved with the initials R.L. This carving could not be located during this evaluation of the site.

This site is of no archaeological interest.

### 7.1.8 Site 21

Site 21 represented a roughly built sub-rectangular structure positioned against an exposed east facing outcropping of bedrock. The structural components of the feature were comprised of a roughly coursed freestanding drystone wall forming an outer north-south orientated wall **21004** with stone revetted earthworks forming the southern and northern sides of the feature. The composition of the earthworks indicated that it is likely that peaty turf was redeposited to form the core of the feature **21008**, which was subsequently revetted by means of roughly coursed stonework **21003**. The earthwork was further enhanced in height and structure with a mixed peaty silt deposit with sandy inclusions **21008**, which is likely to be derived from excavation of material from within the interior of the structure, possibly representing a mix of peat and glacial till deposits. The structure of the earthwork can be seen to clearly seal a layer of orangey brown peat material with high organic content **21006** at the top of a profile of homogenous brown peat **21005**. This deposit is likely to represent the land surface onto which earthwork was constructed. The interior of the structure was significantly rubble strewn with angular stone partially covered by peaty turf layer **21001** and overlaying mixed peaty material similar to the deposit forming the upper layer of the earthwork **21008**.

It is likely that this feature has been used as a temporary shelter, possibly relating to late 18<sup>th</sup> or early 19<sup>th</sup> century rough grazing within the environs. It is also possible that this feature has been used as a defensive position during the Second World War activity along the hillside, and finds including fragments of corrugated iron indicate that the feature may have been roofed. Numerous finds of modern plastic, ceramic and glass within deposit **21001** suggest that the feature has remained open and undergone the majority of its degradation in the latter half of the 20<sup>th</sup> Century.

This feature is of low archaeological interest, though it should also be interpreted in the context of its wider landscape setting of the First World War and Second World War defensive infrastructure.

### 7.1.9 Site 22

Site 22 represents a slit trench located at the mouth of a shallow valley on the northeast side of Staney Hill, located to the 18m to the northwest of Site 21. A long linear depression leading into this feature from the northwest was interpreted as a relatively recent post World

War 2 drainage ditch. The slit trench measures 7m long orientated north south and curving slightly to the west by 1m wide and on average 0.45m deep. A possible drain curving from the north end of the slit trench to the north east is also likely to be related to this feature.

Photographs dating to 1915 held by the Shetland Museum Archive (Shetland Museum and Archive 2016) depict soldiers digging slit trenches and machine gun positions in Staney Hill, and it likely that these features date to First World War defences or training exercises.

#### **7.1.10 Site 24**

Site 22 is a sub-circular cut measuring 5m in diameter x maximum 1.2m deep with a reinforced concrete loop-holed wall across the downslope side of the feature. A drain runs downslope from south-north c 13m from the lowest end of the feature. The wall measures 2.4m wide X 0.6m high. The loop-hole is a centrally located aperture measuring 0.26m wide x 0.28m high within a metal frame. The wall is extended at its west end by a roughly coursed mortared stone wall to the edge of the cut.

A rubble pile located c 5m to the northeast of the end of the drain feature is likely to represent spoil from the excavation of this feature.

This feature is likely to represent a Second World War machine gun position relating to the wider military infrastructure of the hillside. It is possible that this feature may originally have dated to the First World War activity on this hillside documented in a photographic record dating to 1915, and was reused and enhanced in the later conflict.

#### **7.1.11 Site 25**

Site 22 is a sub-circular cut measuring 6m in diameter x maximum 1.2m deep with a drain or gully running downslope from southwest-northeast c 11m from the lowest end of the feature.

This feature is likely to represent a Second World War machine gun position relating to the wider military infrastructure of the hillside. It is possible that this feature may originally have dated to the World War 1 activity on this hillside documented in a photographic record dating to 1915, and was reused in the later conflict. This features proximity to Site 26, a First World War slit trench earthwork, would support this interpretation.

#### **7.1.12 Site 26**

Site 26 represents a slit trench feature in a zig-zag arrangement measuring 20m from southwest to northeast across the northeast side of Staney Hill. The earthwork is comprised of an trench and embankment forming from the spoil of the feature creating an earthwork on average 0.8m high above ground level and 1m deep from the top of the embankment.

It is highly likely that this feature dates to the First World War activity on this hillside. A photographic record dating to 1915 (Shetland Museum and Archive 2016) depicted soldiers digging slit trenches on Staney Hill, and this feature may be one of those represented in the archive.

### 7.1.13 Site 27

Site 27 represents a probable machine gun position positioned against the steeply sloping edge of a narrow valley on the northeast side of Staney Hill directly below the observation post Site 29/30.

The embankments of the feature appear to be constructed from rubble and earth forming a sub-rectangular earthwork measuring 8m wide x 6.5m wide with a central depression c 5m in diameter. The top of the earthwork has been enhanced by means of low drystone walls which are likely to represent later features.

It is likely that this feature represents a smallcrofting enclosure later reused in the Second and possibly First World Wars as a defensive position.

### 7.1.14 Sites 28, 29 and 30

Site 29 is a Second World War observation post (Canmore ID 115440) situated on the northeast slope of North Staney Hill, constructed from concrete blockwork and reinforced poured concrete foundation platform. The facility was comprised of the observation post and subterranean accommodation/air raid shelter. The observation post has an entrance aperture on the south elevation of the structure measuring c 0.8m wide by 0.8m high. The viewing ports on the south, east and north elevations are 1m wide with two on the east side and 1 each on the north and south sides. The observation post is c 3m long north-south by 1.5 wide east-west.

There is a communicating passage between the observation post and a subterranean structure (Site 30) constructed from ribbed ironwork supports and concrete blockwork. This building is likely to have served the dual purpose of accommodation block and air raid shelter. Site 30 is also accessed via an entrance in the south facing elevation. The interior was originally divided into three compartments with a vertical access hatch at the north end. The entire structure is 9.2m long north – south x 3m wide east – west.

Sites 29 and 30 are partially surrounded and buried by made ground and exposed rubble (Site 28) which is likely to have been formed during the construction of the observation post by cutting directly into the hillside. The exposed boulders are likely to have been arranged in this manner in order to aid with the concealment of the observation post from the air and to create broken ground around the feature, acting as an obstacle to direct assault on land.

### 7.1.15 Site 31

Excavations at Site 31 indicated that there are likely to be multiple features present at the summit of the hill. The well-defined feature investigated in Trenches 1 and 2 was roughly circular with a possible straight edge along the west side, forming a possible chambered structure. The interior of the possible chamber is dominated by well packed angular rubble overlain by a concrete setting for a survey marker, which is likely to date to the WWII defensive infrastructure of the hillside. The southeast edge of the feature appears to show a possible squared corner of stonework below the curving eastern edge of the feature.

It is not possible to confidently date this structure, due to the limitations of evaluation excavations. Numerous finds of quartz pebbles were recovered from deposits forming the

soil matrix around structure **31003**, as well as a possible fragment of struck quartz. The presence of quartz within this context is not necessarily anthropogenic in nature since the inclusions of quartz frequently erode from the conglomerate bedrock. However, a concentration of numerous quartz pebbles in a single location could be interpreted as having been deliberately deposited. This activity has been noted during excavation of Neolithic and Bronze Age funerary monuments in Shetland (Cummings *et al* 2016) and would fit the general interpretation that this feature represents a cairn site.

To the north of the possible cairn feature, Trench 3 targeted a potential curvilinear feature **31004** and identified surviving *in-situ* structural elements and the potential for preservation of associated deposits. An earthwork survey of the topography surrounding this feature indicates that there may be a complex of cellular features in this area.

Again, it is not possible to confidently date these features without further investigation. It can be inferred however, due to the proximity of possible prehistoric cairn site **31003** that these features also represent the remains of prehistoric structural features.

These features are potentially of a high archaeological interest. Prehistoric settlement and funerary monuments are generally considered to be of at least regional importance and this classification depends greatly on the level of preservation of the site. In this case feature **31004** is likely to have been frequently disturbed due to its exposure within the landscape and proximity to the extensive Second World War buildings, as is shown by the presence of a concrete survey point within its structure. Feature **31004** and the associated earthworks to the west have the potential to be better preserved due to the more consolidated nature of the overlying deposits of peat encountered during the investigation.

#### 7.1.16 Site 32

Site 32 represented roughly built sub-rectangular structure featuring similar features to Site 21 investigated to the east, consisting of drystone structure within an earthwork embankment built against an exposed bedrock outcrop to the west. The structural components are comprised of well coursed tabular sandstone walls with a dividing wall **32003** keyed into the main north-south **32002** wall bisecting the structure forming two equally sized rooms.

Excavation through the earthworks around the outside of the structure indicated that they were constructed on top of naturally forming peat deposits with the former ground surface **32008**. The core of the earthwork was comprised of stony sandy silty deposit with patches of peat **32007** overlaying the peaty land surface. This deposit was most likely derived from material excavated from the interior of the structure. The earthwork appears to have been enhanced by the deposition of peaty turf over the existing deposits as seen in humified peat layer **32006**.

It is likely that this building has been used as a temporary shelter, possibly dating to the later 18<sup>th</sup> or early 19<sup>th</sup> Century, possibly utilised and existing quarry pit against the outcropping bedrock. The interior of the structure is dominated by loose unconsolidated rubble with numerous finds of modern material such as glass and plastic. This suggests that the degradation of structure has occurred in relatively modern times. The surface beneath the rubble layer **32005** was a mixed deposit of sandy silt and gravel with patches of peat, similar

to the deposits forming the core of the earthwork **32007**. It is possible that the structure was utilised as a defensive position on the hilltop during WWII.

This feature is of low archaeological interest, though its importance should be considered within the context of the wider First World War and Second World War defensive infrastructure in its landscape setting.

#### 7.1.17 Site 33

The excavation of the mound forming Site 33 identified that the feature is mainly comprised of peaty deposit **33002**, which is overlain by a curvilinear stone feature **33008** forming a curb around the southeast side of the mound. The dark grey brown peat overlays a widespread deposit of brown peat **33005**, which has large patches of loose dark brown humified peaty silt. These inclusions appear to represent extensive burrowing disturbance which is far more extensive in this area than in any other deposit excavated across the site. This may indicate that the deposit is considerably dryer than in other locations across the site. The interface between the upper peaty deposits forming the majority of the mound and the lower heavily disturbed deposits are separated by an interface layer of well consolidated humified peat with abundant inclusions of degraded sandstone fragments and manganese panning **33009**, noted most clearly in the northeast-southwest orientated Trench 2. This deposit may represent a deliberately deposited anthropogenic material forming a surface that the mound material has formed over. The presence of manganese panning within the deposit would suggest that the compaction and composition of the material has prevented leaching of minerals from the organic matter within the deposit sealing it.

Within the sondage excavated in Trench 2, peat deposit **33005** is shown to merge with a lower humified peat deposit **33006** which in turn seals a layer of greyish soft brown sand silt **33007**. Angular stone seen within this deposit appears to be set on end forming two linear east-west arrangements. This material may be a natural accumulation of stone derived from geological layers, stratified in such a way that would suggest an organised formation. However, these stones do not appear to be embedded within compacted glacial till as would be expected within a naturally forming deposit of this type.

The evaluation of this site has shown that although the feature appears to conform to the dimensions and form of a prehistoric cairn site, there is no evidence for a structural component within the excavated area of the mound. The composition of the feature and the stratigraphic relationship of the curb of stone **33008** would suggest that the site was formed relatively recently. There are several traces of relict peat cutting embankments to the southeast of Site 33's location which indicates that the landscape has been changed by what is likely to represent post-medieval and crofting period peat stripping. However, the lack of any datable material culture inhibits the confidence of this interpretation. Traces of earlier deposits within the lower portion of the mound composition also warrant consideration in terms of the sites significance.

### 7.1.18 Site 34

The excavations at Site 34 indicated that the feature was comprised of a hollow cut into the slope of the hillside, revetted by means of loose rubble stonework against the southern slope of the hillside and utilising a natural near vertical outcrop of bedrock along its west edge. The interior of the feature was filled with rubble within a matrix of soft peaty silt **34002** directly overlaying natural gravelly silty glacial till **34003**.

This feature was originally interpreted during the walkover survey of the site as a gun emplacement or dugout associated with the Second World War defensive infrastructure of the hillside. The intrusive evaluation of the feature would support that interpretation.

This feature is of negligible archaeological or cultural heritage interest, though its value should be considered within the context of the wider Second World War defensive infrastructure.

### 7.1.19 Site 35

Site 35 represented a series of three small slit trenches or possible fox holes located on the north side of Staney Hill, situated 10m to the north of Site 34. They are on an east-west alignment with the contour of the hillside spread over an area 30m in length. Each trench measures c 3.2m long by 1.2m wide and on average 0.4m deep.

Photographs dating to 1915 held by the Shetland Museum Archive (Shetland Museum and Archive 2016) depict soldiers digging slit trenches and machine gun positions in Staney Hill, and it is likely that these features date to First World War defences.

### 7.1.20 Site 36

Excavation of deposits over the possible structural feature identified at Site 36 showed that an outcrop of bedrock protruded through the turf layer in a linear arrangement, coinciding with a circular depression to the east, giving the impression of a possible sub-circular feature.

This site is of no archaeological interest.

### 7.1.21 Site 37

Site 37 was evaluated in order to assess whether a sheepfold structure situated against an extant head dyke was associated with an earlier feature. The excavation focussed on an area of earth-fast rubble situated on the east side of the dyke in an area that intersected with the alignment of the northern wall of the sheep fold on the southern side of the dyke. The excavations showed that a concentration of stone formed a trace of coursed stonework **37003** passing underneath the foundation of the extant dyke **37004** on the same east-west alignment as the sheep fold. This confirms the presence of a structural feature which predates the boundary dyke and is likely to have been modified to form a foundation course for the sheep fold.



It is difficult to interpret or date the feature from the limited investigation undertaken in this phase of work. However, the feature pre-dates the sheep fold and dyke which are depicted on the 1855 Ordnance Survey, and could represent an enclosure or structure dating to the Late Norse/Late Medieval period.

#### 7.1.22 Site 38

Site 38 consisted of a spread of rubble **38004** within a hollow or small embankment within the northern slope of the hillside. The evaluation of the feature showed that the material was loosely deposited and had no structural form. The rubble was also shown to be situated stratigraphically above naturally forming peat deposits **38002**. The loose and unconsolidated nature of the rubble along with its stratigraphic location would indicate that it is most likely to have been deposited in modern times. This feature is situated immediately to the north of Second World War gun position Site 24 and is likely to represent spoil from the excavation of this dugout.

This site is of negligible archaeological or cultural heritage interest.

#### 7.1.23 Site 39

A linear embankment identified in the northeast corner of the site was investigated by means of two evaluation trenches. Both trenches identified that the break in slope defining the embankment coincides with the presence of a north-south orientated linear ridge of outcropping bedrock. Within Trench 2, traces of a low stone wall **39010** along with a distinct thickening of the turf layer over the bedrock suggests that the natural feature may have been enhanced in order to construct a barrier or steeper embankment.

There is limited evidence available to date this feature, and there is no corresponding land division depicted on the 1<sup>st</sup> (six-inch 1881 sheet L1III) or 2<sup>nd</sup> (six-inch 1928 sheet LIISW) edition OS maps. It is possible that it this feature either does not represent a formal and division, or fell into degradation prior to the drawing of the 1881 OS map.

This site is of low archaeological interest.

## 7.2 Interpretive Issues

Where archaeological features were encountered, they have investigated without causing damage to features which should, in the first instance, be left in situ in order facilitate their continued preservation. This has prohibited more intrusive investigation.

Sites which represent potentially complex archaeological features, such as possible cairn Site 31, cannot be fully interpreted within the limited remit of an evaluation. As such, the results of this evaluation in should be considered preliminary interpretations with the potential enhance our understanding of the nature and date of with further investigation.

Where significant archaeological features are encountered within limited excavation areas, it was not possible to investigate the full depth of stratigraphic sequences sealed by these features without compromising the preservation of feature *in situ*.

## 8 Conclusions and Recommendations

This section will summarise the findings of the evaluation, identify potential cultural heritage constraints and suggest potential options for managing these features in the context of the proposed development.

At the time of this reports production, the layout of the proposed housing within the development area was not defined.

A number of sites investigated within the development area were shown to be of no archaeological interest. **Sites 1, 3, 10, 19, 20 and 36** are natural features relating to bedrock outcropping, topographic undulation and boulders accumulating due to slope erosion. This report recommends that no further action is required in relation to these sites.

Several sites relating to the First and Second World War defensive infrastructure of the hillside have been investigated and recorded by means of intrusive evaluation, detailed earthwork survey and photography. Site including **22, 23, 24, 25, 26, 27, 28, 29, 30, 34 and 35** have been recorded and documented to ensure their preservation in record. This report recommends that an archaeological watching brief accompany any ground disturbing works which are likely to destroy these features in order to record any additional information pertaining to their function, date and construction, and to ascertain whether they have incorporated any earlier features.

**Site 21** is a structural feature, likely to represent a temporary shelter or enclosure related to crofting activity dating the late 19<sup>th</sup> or early 20<sup>th</sup> Century. It is also possible that the feature was in use as part of the First World War and Second World War defensive infrastructure of the site. The evaluation of the feature adequately investigated its form of construction and extent. It is recommended that an archaeological watching brief accompany any ground disturbing works which are in close proximity or likely to destroy this feature in order to record any additional information pertaining to its function, date and construction.

**Site 32** represents a similar feature to Site 21, though exhibiting more elaborate structural qualities and quality of construction, implying a more permanent form of shelter or small enclosure. This feature is also likely to relate to later crofting period activity and/or the First World War and Second World War defensive infrastructure of the hillside.

It is recommended that this site be preserved *in situ* by means of an exclusion zone no less than 10m from the edge of the earthwork feature. This exclusion zone should form a permanent boundary around the site in order to ensure its long term preservation following the completion of the development. If it is not feasible or desirable to avoid this site during construction activity or it is considered that the feature would be at increased risk of further disturbance following the development, it recommended that the site be fully excavated in order to ensure its preservation in record prior to any ground disturbing works which may lead to the site's destruction.

**Site 11** represents a probably prehistoric boundary dyke, with potential for preservation of associated soil deposits containing evidence pertaining to past environments. It is recommended that sample 001 recovered from soil deposit associated with this feature be subject to an assessment report in order identify the potential for further analysis (i.e. C14 radiocarbon dating and soil micromorphology).

It is also the recommendation of this report that this site be preserved *in situ* by means of permanent exclusion zone established at least 10m from the edge of this feature in all directions. . If it is not feasible or desirable to avoid this site during construction activity or it is considered that the feature would be at increased risk of further disturbance following the development, it recommended that the site be fully excavated in order to ensure its preservation in record prior to any ground disturbing works which may lead to the sites destruction.

**Site 31** is likely to represent the remains of series of structural features, potentially dating to the early prehistoric period (Neolithic/Bronze Age). The sub-circular feature at the summit of the hill may represent remains of a chambered cairn, with a possible complex of cellular features located to the northwest. Earthwork surveys of the area indicate that this feature is likely to be spread out over an area at least 16m in diameter.

It is not anticipated that this feature will be within the footprint the final development. However, there are likely to be unavoidable peripheral impact to the site. The potential risks to the site's continued preservation *in situ* relate to;

- a) Construction activity such as storage of materials and tracking of heavy plant and machinery.
- b) Proximity to areas of potential ground disturbing works which may encroach upon undisturbed previously unrecorded structural features or deposit (such as the demolition of nearby WWII observation post and shelter Sites 29 and 30.
- c) Increased pressure from pedestrian traffic within the area once the development has been completed

It is recommendation of this report that a permanent exclusion zone be established around the site at least 10m from the recorded edge of the identified features in all directions in order to prevent access during the construction phase and limit pedestrian traffic across the site following completion.

This option would require an archaeological watching brief to accompany any ground breaking works within close proximity to the site.

If avoidance of this feature to the above parameters is not possible, or the peripheral and cumulative impact of the development is considered to be unavoidable, it is recommended that the feature be fully excavated in order to ensure its preservation in record and remove archaeological constraints for this area.

Investigation of **Site 33** indicated this is feature is *unlikely* to represent a prehistoric cairn site, as originally interpreted and the site's date potential importance should be considered unknown at this stage.

The evaluation was effective in establishing the extent of the site to the south and east, showing that the formation deposits of the mound extend beyond the visible break in slope at the features base.

It is the recommendation of this report that this site be preserved *in situ* by means of an exclusion zone extending no less than 10m from the base of the slope of the mound in all

directions. All ground breaking works within close proximity to this exclusion zone should be accompanied by a continuous archaeological watching brief

If it is not possible to avoid this feature and preserve its setting, it is recommended that that the site be fully excavated in advance of any ground disturbing works associated with this development in order to ensure preservation in record.

**Site 37** was shown to represent a structural feature pre-dating the construction of the boundary dyke. This feature is likely to represent an enclosure of unknown date which extends further to the east of the site into the development area.

It is recommended that this site be preserved *in situ* by means of an exclusion zone extending no less than 10m from the edge of the feature, corresponding to the extant remains visible on the west side of the boundary dyke. All ground breaking works within close proximity to this exclusion zone should be accompanied by a continuous archaeological watching brief.

If avoidance of this feature is not possible it is advised that the site be fully excavated in order to ensure its preservation in record.

**Site 16** represents a feature comprised of a spread of boulders and angular stone of unknown date. Approximately 50% of the area of the feature was investigated during the evaluation and it is likely that it is natural in origin. However, concern was raised during the Regional Archaeologist's monitoring visit that it has the potential to represent a feature of archaeological interest.

It is recommended that this site be preserved *in situ* by means of an exclusion zone extending no less than 10m from the edge of the feature in all directions.

If avoidance of this feature is not possible, it is recommended that this site be fully excavated in order to ensure its preservation in record.

All features within this evaluation were assessed to a sufficient degree to assess their archaeological potential. Although the investigations undertaken to date (including the previous walkover and instrument surveys) have been extensive, they have not been exhaustive. The potential for further features of archaeological or cultural heritage interest surviving with the proposed development area is considered likely, given the nature of the blanket peat moorland dominating the site.

In addition to the specific findings and recommendations of this report, it is advised that a full archaeological management strategy be devised in consultation with the Shetland Regional Archaeologist and in accordance with local and regional planning policy and advisory documents (see below).

An Archaeological Management Strategy should take into account residual impact of the development of upon sites of *known* archaeological interest within the development area.

The Archaeological Management Strategy should also take into account the potential for disturbance of *unknown* sites of archaeological interest during the development process and propose appropriate mitigation. This could include a combined strategy of archaeological

prospection, archaeological watching briefs and a system for reporting discoveries of archaeological interest by contractors.

Any exclusion zones should be established under archaeological supervision to NGR coordinates for each site set out in the Archaeological Management Strategy.

All recommendations made by this report are guidance notes only. The final decision as to the requirement for further work on the site rests with the Local Authority's designated Planning Archaeologist Dr Val Turner.

## 9 References

### 9.1 Policy and Advisory Documents

Chartered Institute for Archaeologists (CIfA). 2014. *By-Laws, Standards and Policy Statements of the Institute for Archaeologists: Standards and guidance for the collection, documentation conservation and research of archaeological materials*.

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Planning Advice Note 2/2011: Planning and Archaeology, Edinburgh

Scottish Planning Policy (SPP) 2014

### 9.2 Bibliographic References

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Wilson, G. 2014. *Staney Hill Development, Lerwick, Shetland. Report on Archaeological Survey*. Unpublished EASE Archaeology report.

**10 NMRS OASIS form**

OASIS ID: orkneyre1-224196

**Project details**

|                                  |   |
|----------------------------------|---|
| Project name                     | Staney Hill   |
| Short description of the project | Evaluation of sites identified during walkover survey by means of intrusive excavation and survey of WW1 and WW2 earthworks and structures. |
| Project dates                    | Start: 09-05-2016 End: 27-05-2016   |
| Previous/future work             | Walkover survey and instrument survey / Not known   |
| Type of project                  | Field evaluation, Earthwork Survey, Photographic Survey, Archival Research  |
| Site status                      | None  |
| Current Land use                 | Unimproved rough grazing  |
| Monument type                    | STRUCTURE Prehistoric   |
| Monument type                    | MOUND Uncertain   |
| Monument type                    | STRUCTURE Post Medieval   |
| Monument type                    | UNCERTAIN   |
| Monument type                    | STRUCTURE Post Medieval   |
| Monument type                    | DYKE Prehistoric  |
| Monument type                    | STRUCTURE Modern  |
| Monument type                    | STRUCTURE Modern  |
| Monument type                    | EARTHWORK Modern  |
| Monument type                    | EARTHWORK Modern  |
| Monument type                    | EARTHWORK Modern  |
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| Monument type                    | EARTHWORK Modern  |
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| Monument type                    | EARTHWORK Modern  |
| Monument type                    | EARTHWORK Modern  |
| Monument type                    | EARTHWORK Modern  |
| Significant Finds                | FLAKE Uncertain/prehistoric   |

**Project location**

|               |                          |
|---------------|--------------------------|
| Country       | Scotland                 |
| Site location | SHETLAND ISLANDS LERWICK |

|                   |                        |
|-------------------|------------------------|
| Postcode          | ZE2 0QG                |
| Study area        | c 675000m <sup>2</sup> |
| Site coordinates  | HU 46495 41760         |
| Height OD / Depth | Min: 25m Max: 18.5m    |

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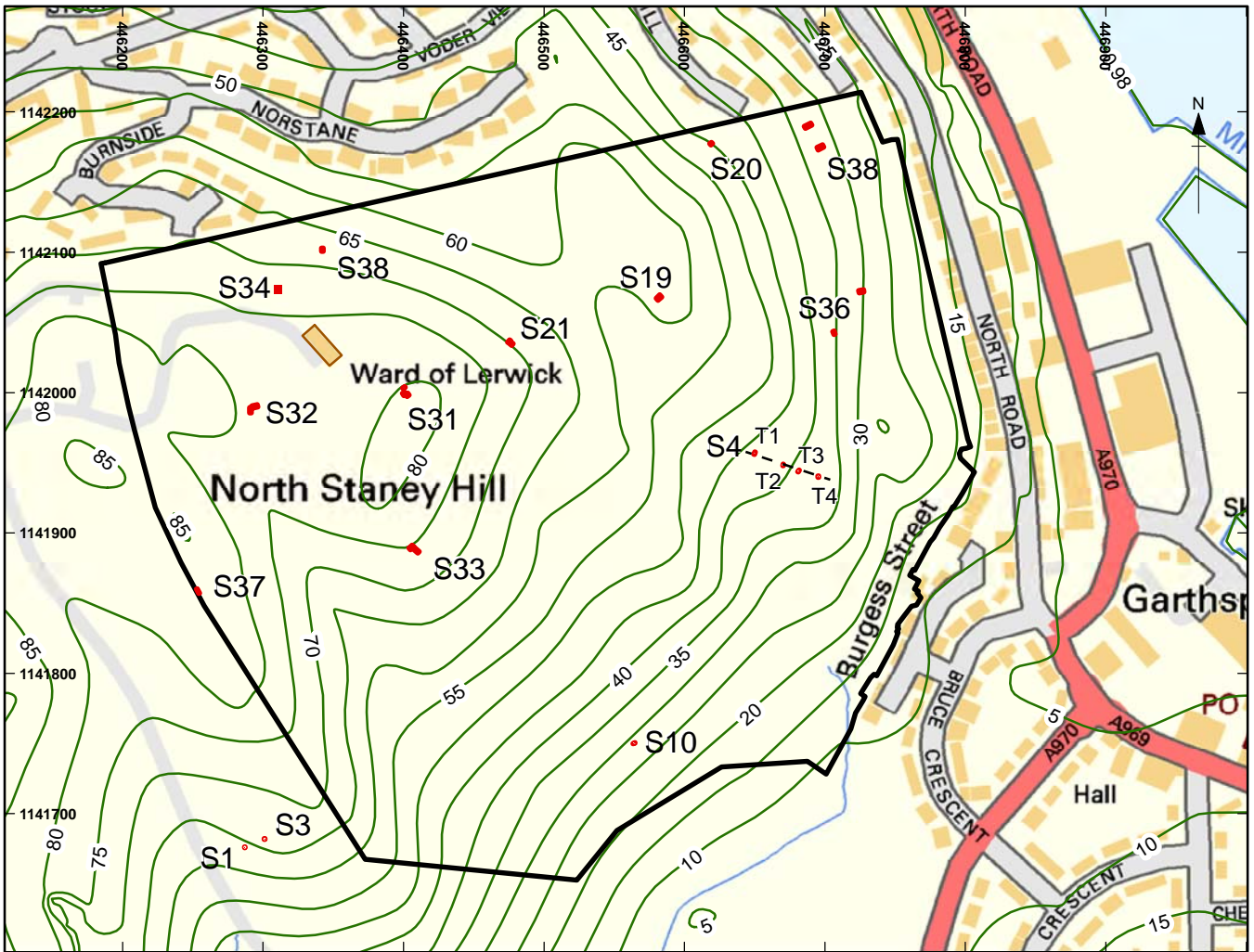
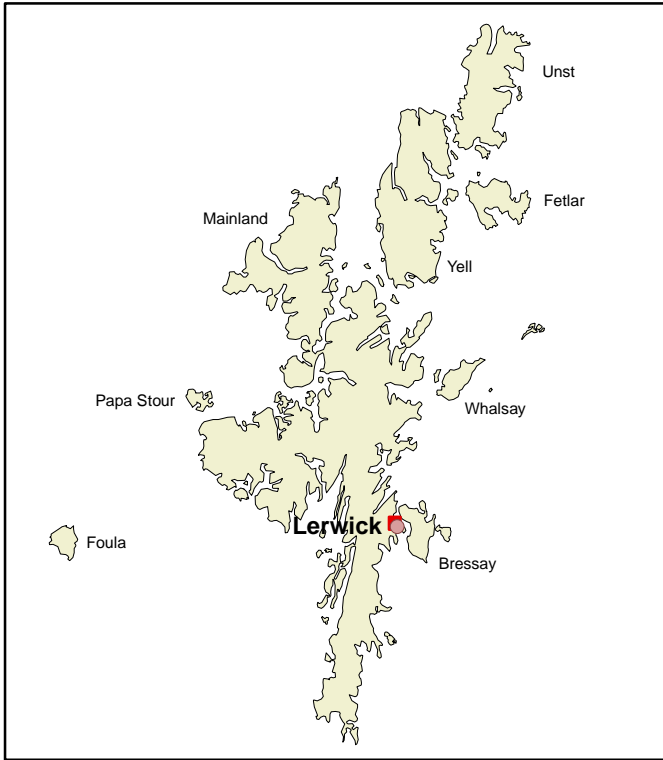
**Project creators**

|                              |  |
|------------------------------|--|
| Name of Organisation         | Orkney Research Centre for Archaeology         |
| Project brief originator     | Shetland Regional Archaeologist- Dr Val Turner |
| Project design originator    | Orkney Research Centre for Archaeology         |
| Project director/manager     | Nick Card                                      |
| Project supervisor           | Richard Barton                                 |
| Type of sponsor/funding body |  |
| Name of sponsor/funding body | Hjaltland Housing                              |

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|            |                                   |
|------------|-----------------------------------|
| Entered by | Richard Barton (OR01RB@uhi.ac.uk) |
|------------|-----------------------------------|





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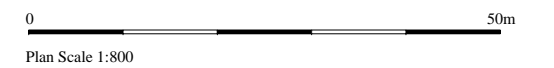
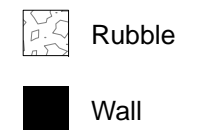
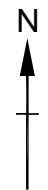
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**Figure 1. Site location**

|                      |                    |
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| <b>Initial:</b>      | CB                 |
| <b>Rev. No.</b>      | 1.0                |

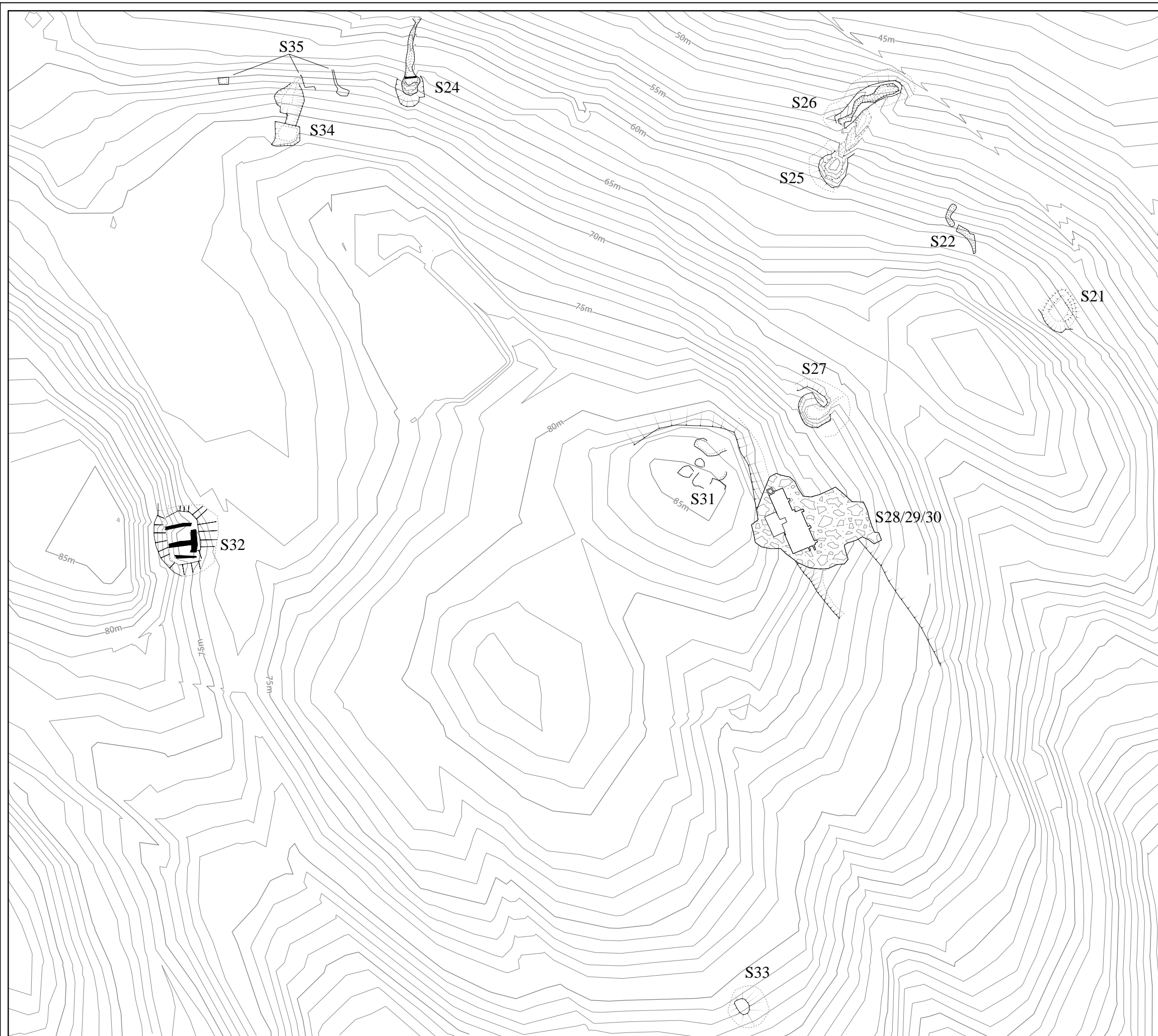


**Figure 2. Earthwork Survey**

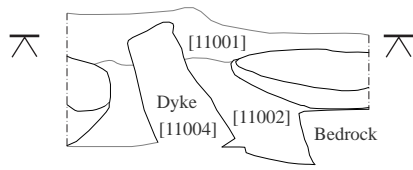
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| <b>Project No.</b>      | 686                 |
| <b>Date</b>             | 01/09/2016          |
| <b>Creator</b>          | CB                  |
| <b>Scale 1:800 @ A3</b> | Revision No.1.1     |

ORCA, Orkney College, East Road, Kirkwall, KW15 1LX

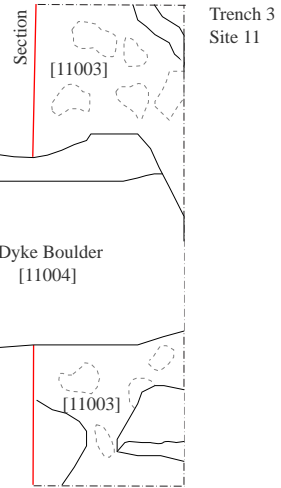
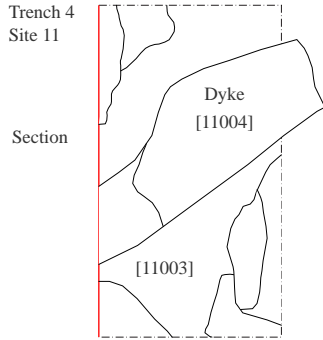
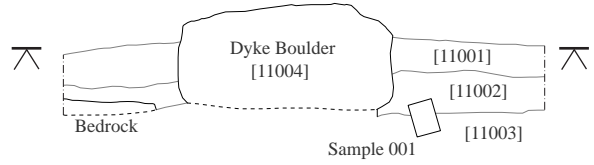
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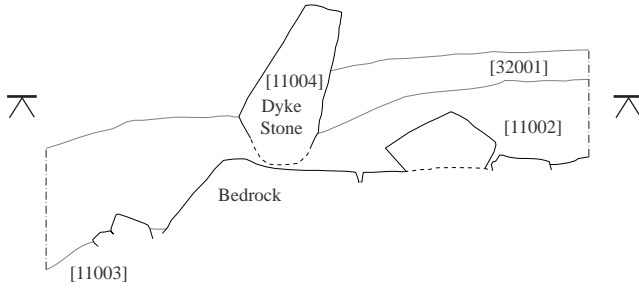
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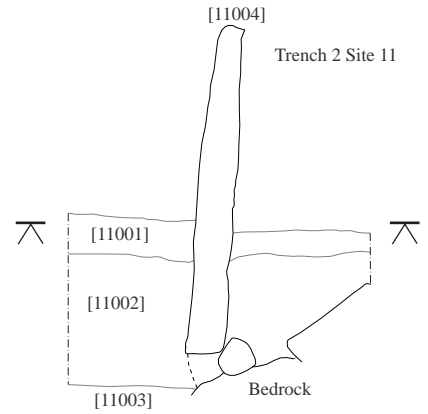
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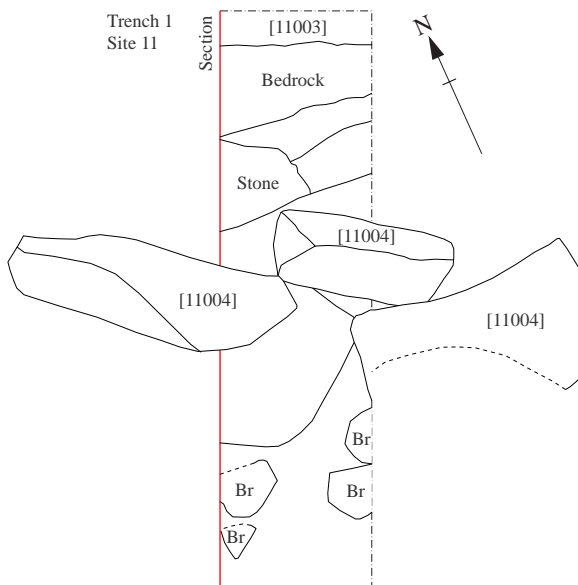
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Trench 2 Site 11



Trench 1 Site 11



Trench 2 Site 11

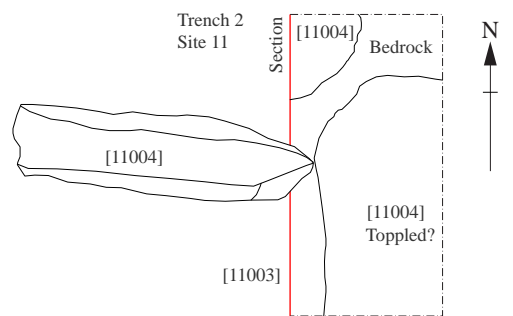
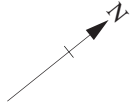
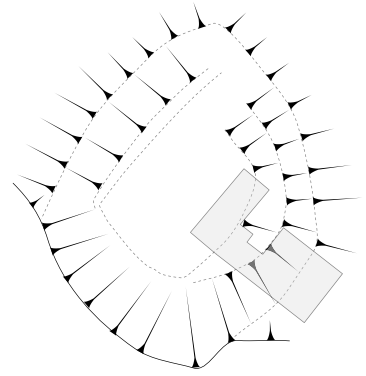


Figure 3. Site 11

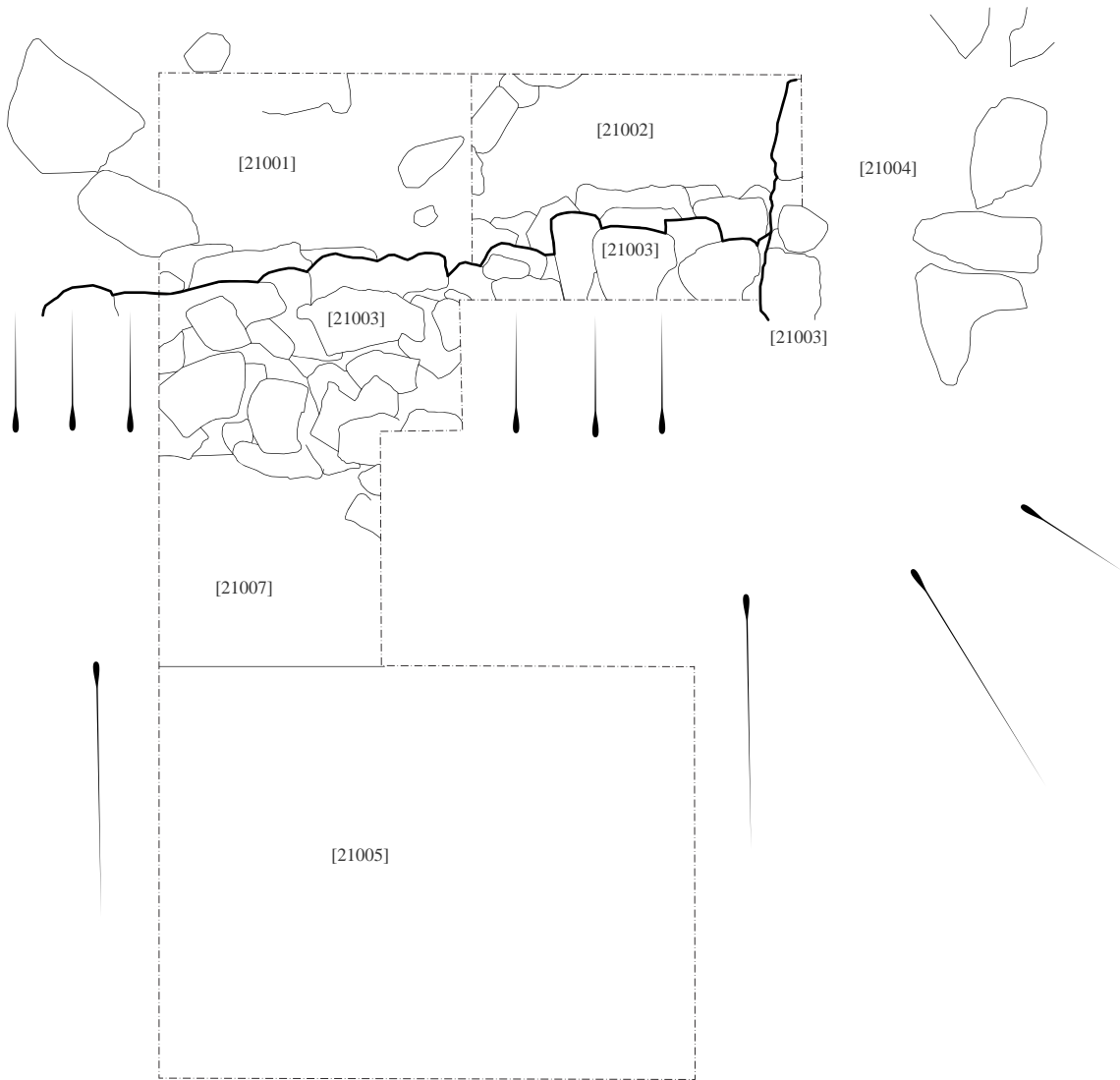
|   |
|---|
| <b>Project Name:</b> Staneyhill Lerwick                         |
| <b>Project No:</b> 686 <b>Scale:</b> 1:25@A4                    |
| <b>Mon Year:</b> 08/16 <b>Initials:</b> CB <b>Rev. No.:</b> 1.0 |



Site 21



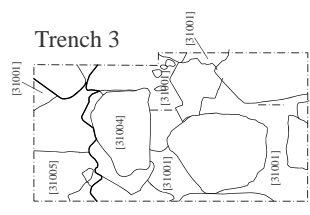
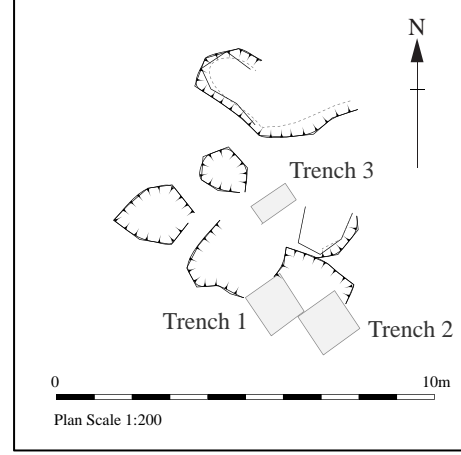
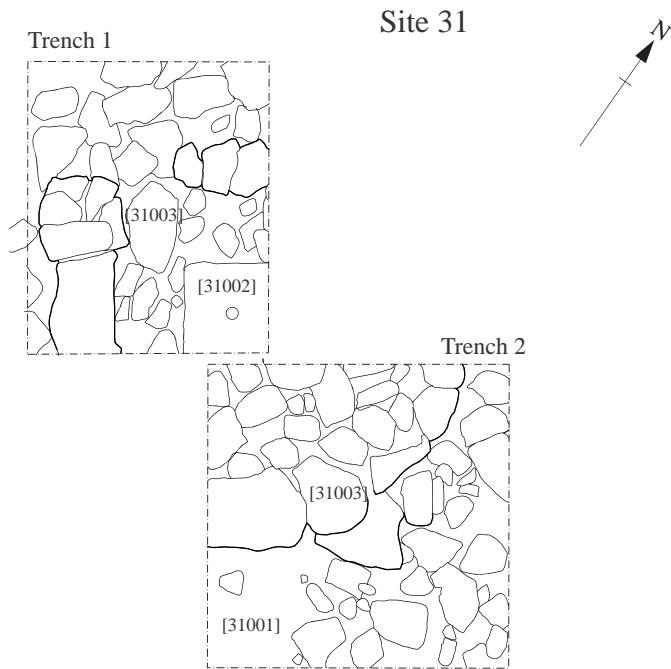
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Plan Scale 1:200



0 1.00m

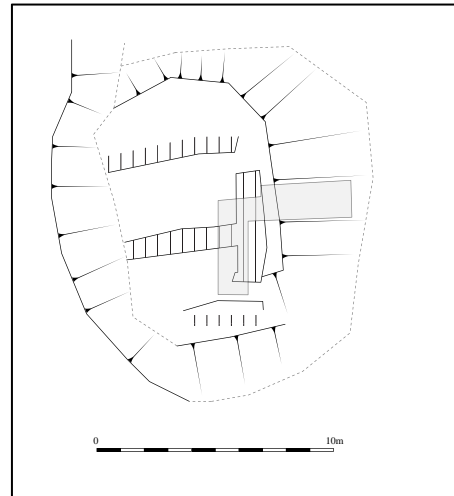
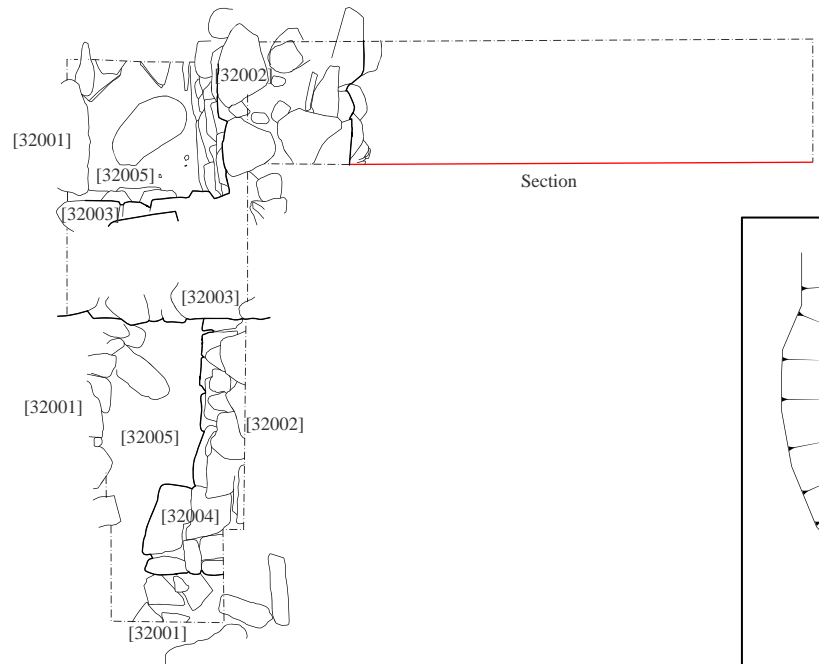
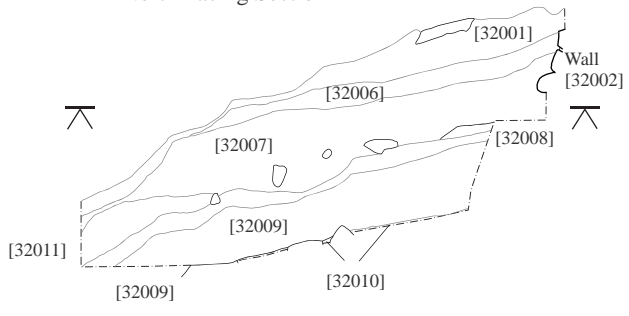
Figure 4. Site 21

|   |
|---|
| <b>Project Name:</b> Stoneyhill Lerwick                         |
| <b>Project No:</b> 686 <b>Scale:</b> 1:25@A4                    |
| <b>Mon Year:</b> 08/16 <b>Initials:</b> CB <b>Rev. No.:</b> 1.1 |

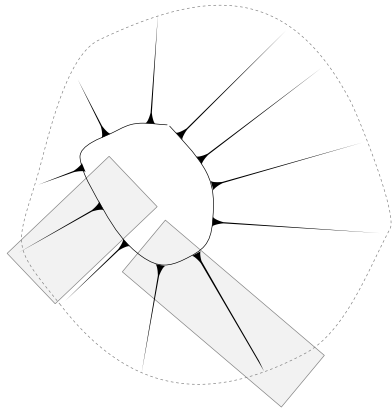


**Site 32**

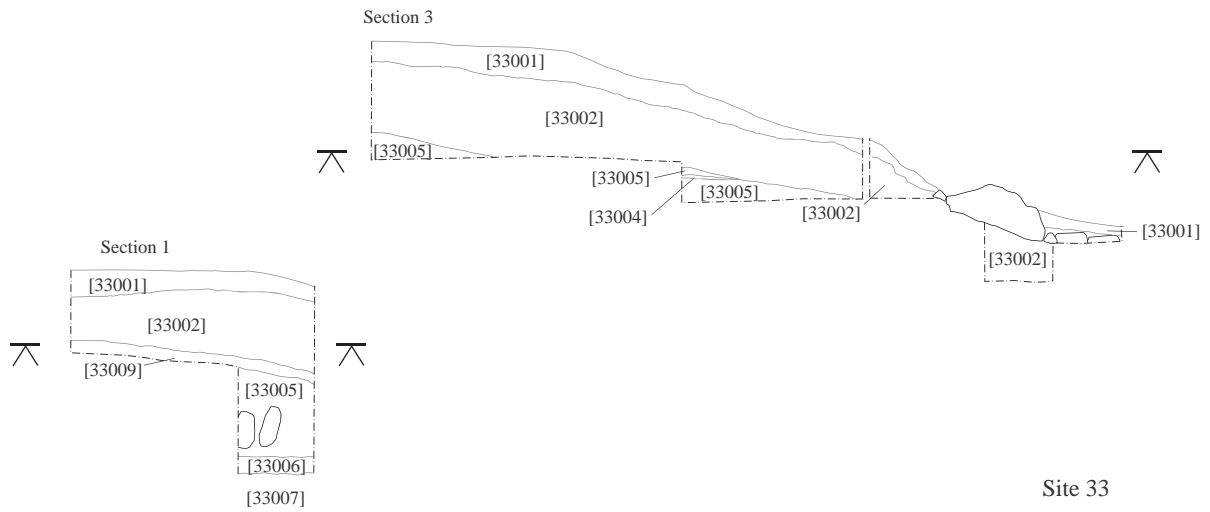
**North Facing Section**



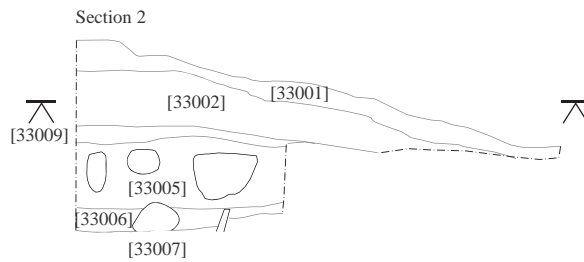
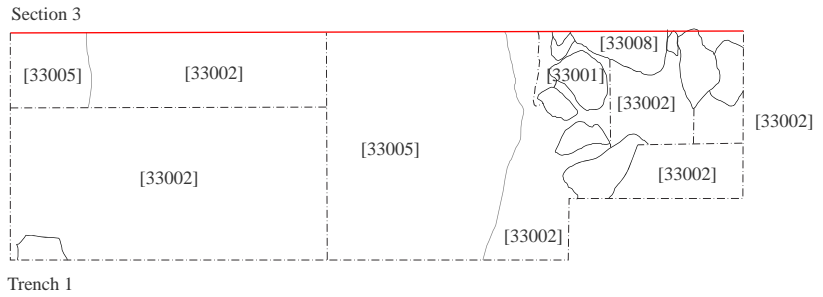
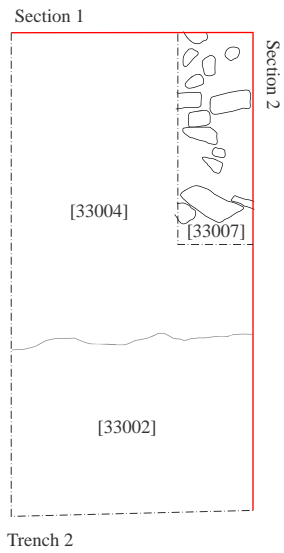
**Figure 5. Sites 31 and 32**



Site 33



Site 33



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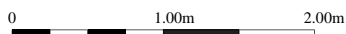
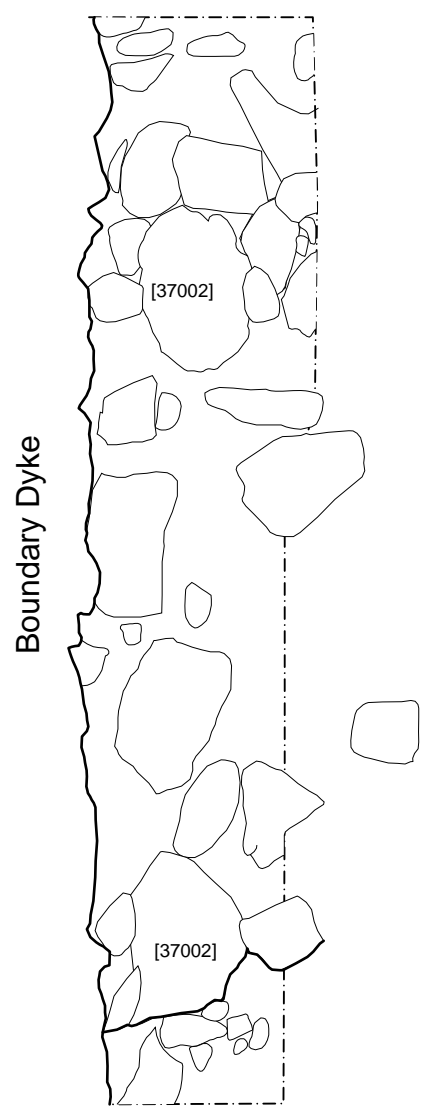


Figure 6. Site 33

|   |
|---|
| <b>Project Name:</b> Staneyhill Lerwick                         |
| <b>Project No:</b> 686 <b>Scale:</b> 1:50@A4                    |
| <b>Mon Year:</b> 08/16 <b>Initials:</b> CB <b>Rev. No.:</b> 1.0 |

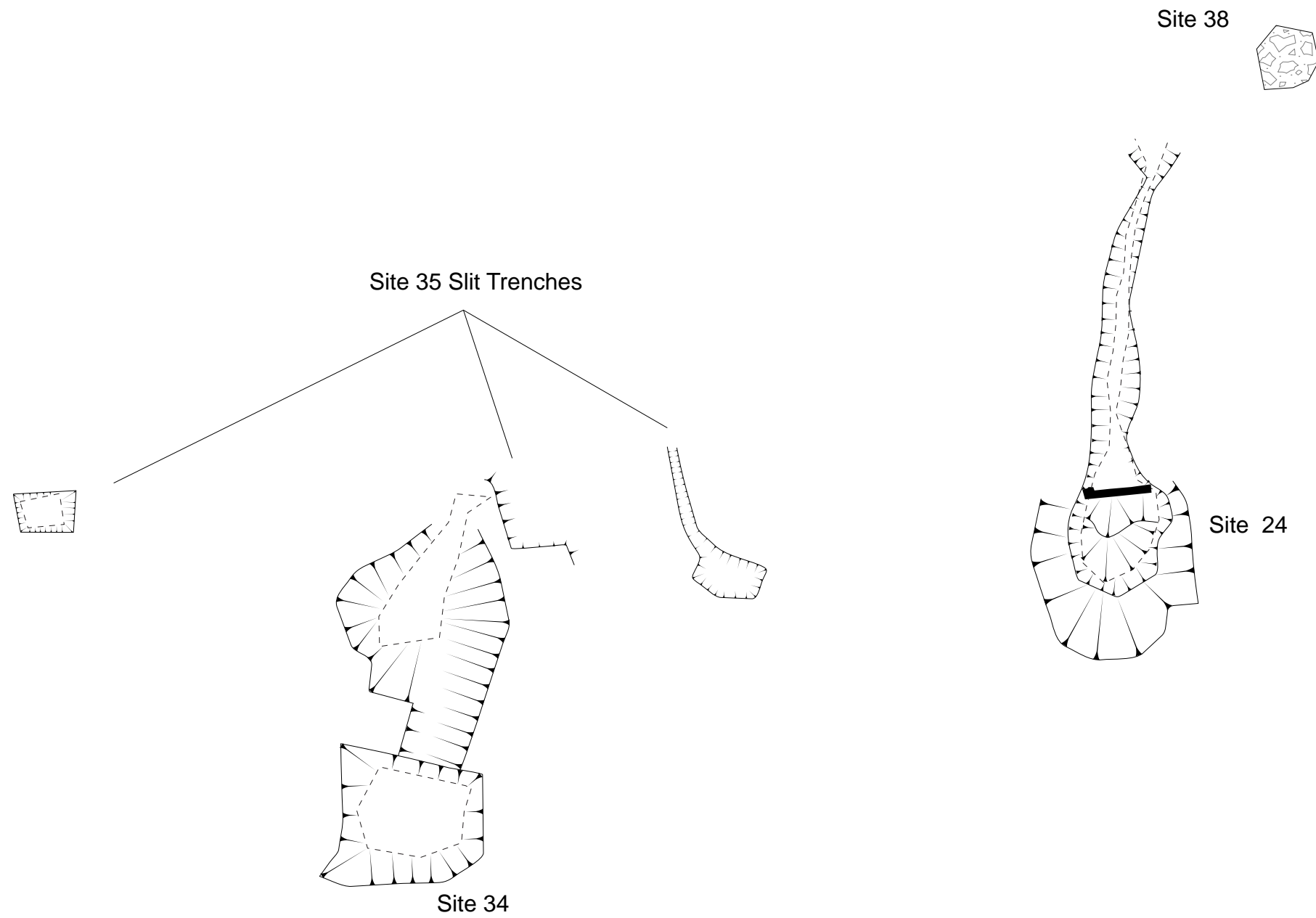



### Site 37



### Figure 7. Site 37

|  |
|--|
| <b>Project Name:</b> Staneyhill Lerwick      |
| <b>Project No:</b> 686 <b>Scale:</b> 1:25@A4 |
| Mon Year 08/16 Initials CB Rev. No. 1.0      |



 Rubble

0  10m  
Plan Scale 1:200

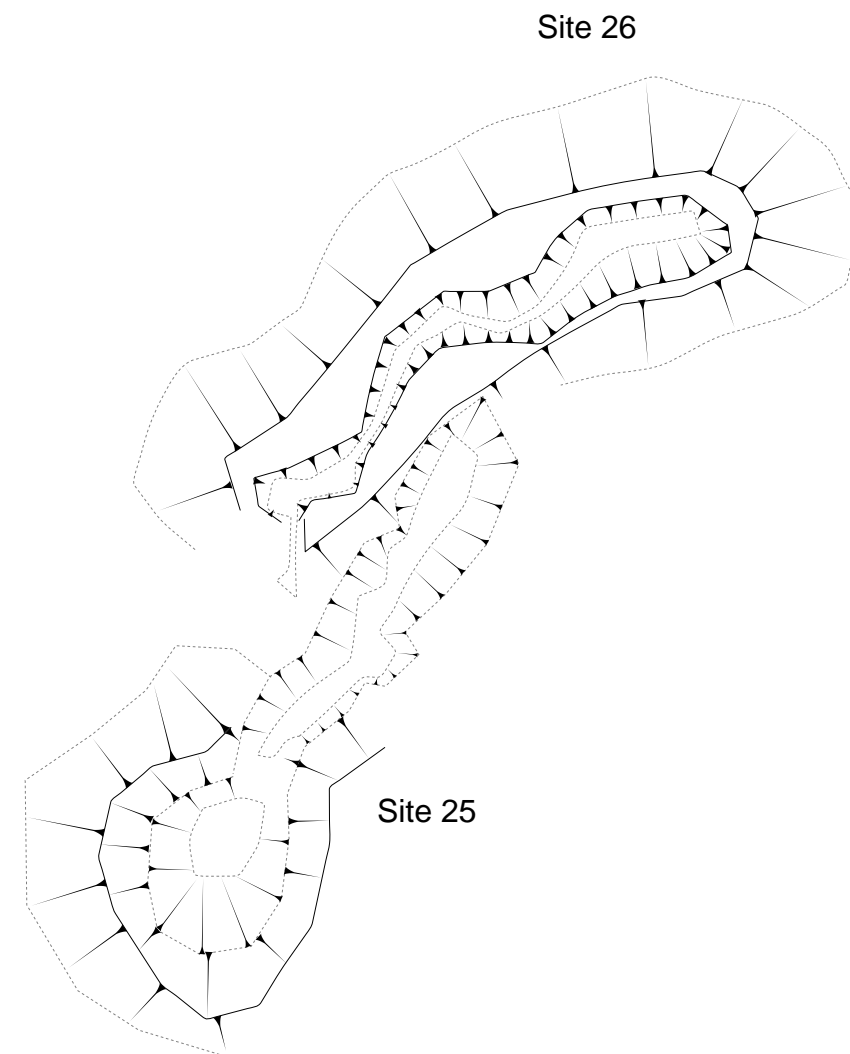
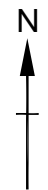
**Figure 8. Sites F24, F34, F35 and F38 Earthwork Detail**

|                         |                     |
|-------------------------|---------------------|
| <b>Project Name</b>     | Staneyhill, Lerwick |
| <b>Project No.</b>      | 686                 |
| <b>Date</b>             | 01/09/2016          |
| <b>Creator</b>          | CB                  |
| <b>Scale 1:200 @ A3</b> | Revision No.1.0     |

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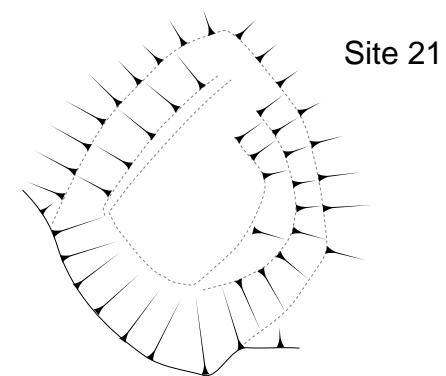
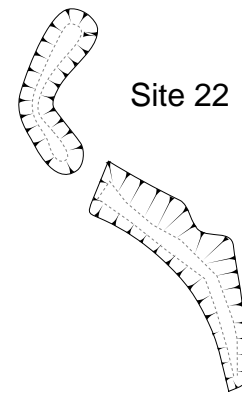
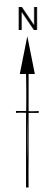
0 10m  
Plan Scale 1:200

**Figure 9. Sites 25 and 26,  
Earthwork Details**

|                         |                     |
|-------------------------|---------------------|
| <b>Project Name</b>     | Staneyhill, Lerwick |
| <b>Project No.</b>      | 686                 |
| <b>Date</b>             | 01/09/2016          |
| <b>Creator</b>          | CB                  |
| <b>Scale 1:200 @ A3</b> | Revision No.1.0     |

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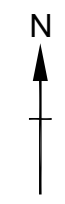
0 10m  
Plan Scale 1:200




**Figure 10. Sites 21 and 22,  
Earthwork Detail**

|                         |                     |
|-------------------------|---------------------|
| <b>Project Name</b>     | Staneyhill, Lerwick |
| <b>Project No.</b>      | 686                 |
| <b>Date</b>             | 01/09/2016          |
| <b>Creator</b>          | CB                  |
| <b>Scale 1:200 @ A3</b> | Revision No.1.0     |

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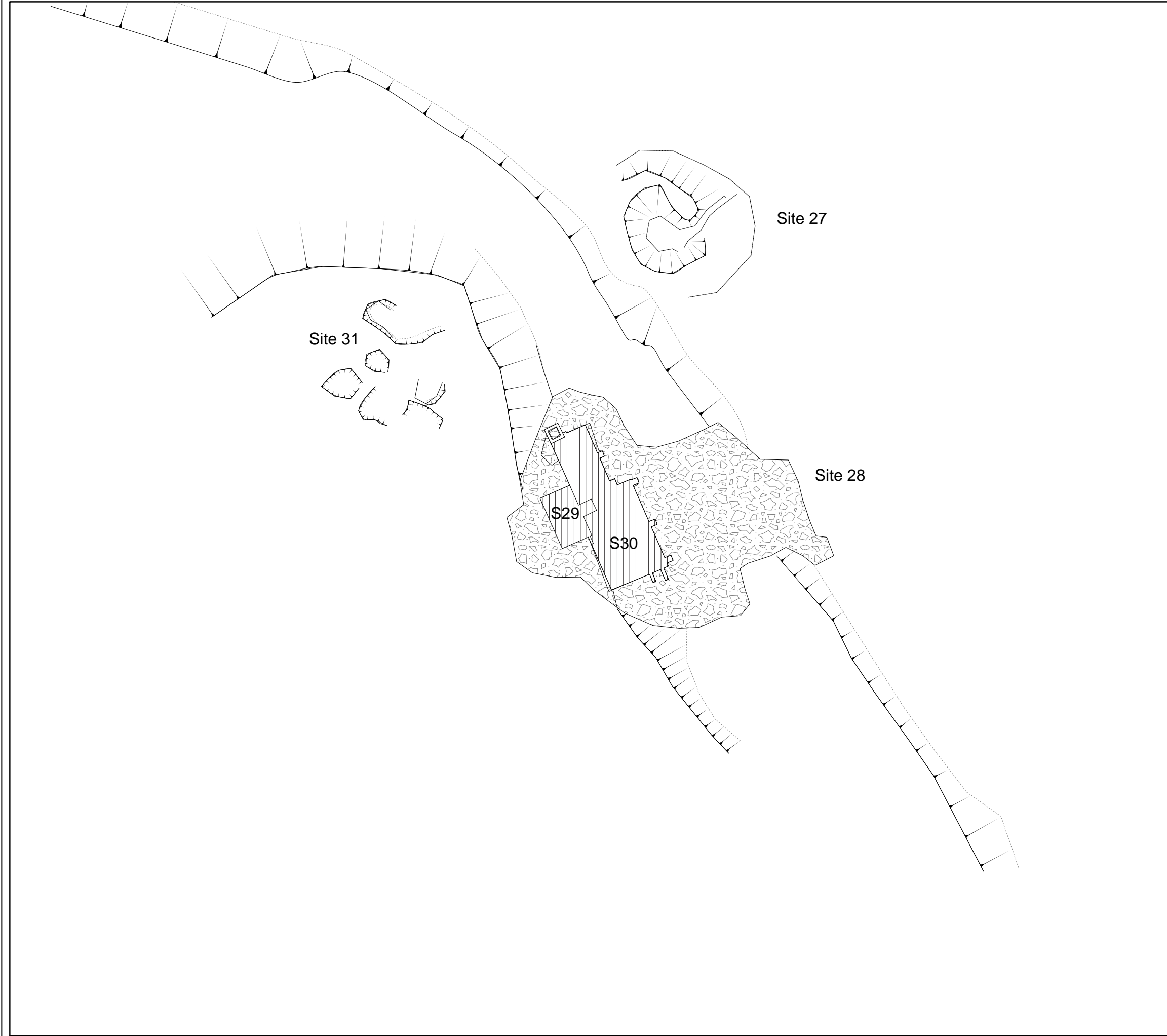
-  Building
-  Rubble/made ground
-  Structure

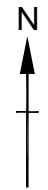


**Figure 11. Site 27, 28, 29, 30 and 31 Earthwork Detail**

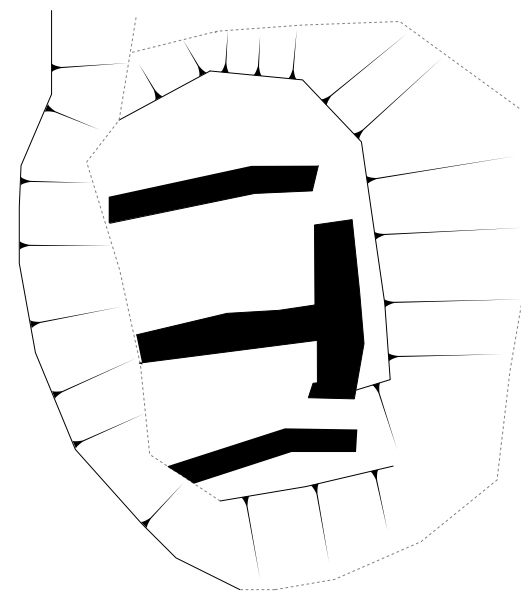
|                         |                     |
|-------------------------|---------------------|
| <b>Project Name</b>     | Staneyhill, Lerwick |
| <b>Project No.</b>      | 686                 |
| <b>Date</b>             | 01/09/2016          |
| <b>Creator</b>          | CB                  |
| <b>Scale 1:200 @ A3</b> | Revision No.1.0     |

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Site 32



**Figure 12. Site 32, Earthwork  
Detail**

|                         |                     |
|-------------------------|---------------------|
| <b>Project Name</b>     | Staneyhill, Lerwick |
| <b>Project No.</b>      | 686                 |
| <b>Date</b>             | 01/09/2016          |
| <b>Creator</b>          | CB                  |
| <b>Scale</b> 1:200 @ A3 | Revision No.1.0     |

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Plate 1: Site 31, Trench 1 post excavation facing east



Plate 2: Site 31, Trench 2 post excavation facing north



Plate 3: Site 31, Trench 3 post excavation facing west



Plate 4: Site 16 post excavation facing east



Plate 5: Site 32 post excavation facing east



Plate 4: Site 32 north facing section of earthwork



Plate 7: Site 21 east facing section through earthwork



Plate 8: Site 21 post excavation facing south





Plate 9: Site 33, Trench 1 northeast facing section



Plate 10: Site 33, Trench 2 northeast facing section



Plate 11: Site 37 post excavation facing southwest



Plate 12: Site 37 post excavation facing south



Plate 13: Site 11, Trench 1 facing northeast



Plate 14: Site 11, Trench 2 facing northwest



Plate 15: Site 11, Trench 3 facing northwest



Plate 16: Site 11, Trench 4 facing southwest



Plate 17: Interior of Site 30- north elevation



Plate 18: Interior of Site 29  
southeast corner and communicating  
passage to Site 30



Plate 19: Interior of Site 30  
south entrance



Plate 20: Sites 29 and 30 north facing elevations



Plate 21: Site 28 and 29 - view facing southeast



Plate 22: Sites 29 and 30, south facing elevation



Plate 23: Site 30, view facing east



Plate 24: Site 29, south facing elevation



Plate 25: view overlooking Site 29, facing southeast



Plate 26: Site 29, north facing elevation



Plate 27: Site 29, view facing northwest



Plate 28: View overlooking site 30, facing southeast





Plate 29: View overlooking site 29 and 30, facing east



Plate 30: View overlooking site 29, facing southeast



Plate 31: View up to sites 28, 29 & 30 from Site 27,  
facing west



Plate 32: View overlooking Site 26, facing northeast



Plate 33: Site 22, view facing south



Plate 34: Site 25, view facing southwest



Plate 35: Site 26, View facing northeast



Plate 36: Site 21, view facing southeast



Plate 37: Site 21, view facing east



Plate 38: Site 27, view facing southeast



Plate 39: Site 32, view facing east



Plate 40: Site 24, view facing northwest



Plate 41: Site 34, view facing southwest



Plate 42: Site 35, view facing north



Plate 43: Site 35, view facing north

## 11 Appendices

### 11.1 Context Register

| Context | Site Sub-division | Type      | Description   |
|---------|-------------------|-----------|---|
| 01001   | Site 01           | Layer     | Peaty topsoil/turf layer                            |
| 01002   | Site 01           | Layer     | Peat deposits overlaying bedrock                    |
| 03001   | Site 03           | Layer     | Peaty topsoil/turf layer                            |
| 03002   | Site 03           | Layer     | Peat deposits overlaying bedrock                    |
| 10001   | Site 10           | Layer     | Peaty topsoil/turf layer                            |
| 10002   | Site 10           | Layer     | Dark greyish brown humified peat                    |
| 10003   | Site 10           | Layer     | Pale greyish brown sandy silt                       |
| 10004   | Site 10           | Layer     | Loosely packed rubble spread                        |
| 11001   | Site 11           | Layer     | Peaty turf layer                                    |
| 11001   | Site 11           | Layer     | Brown peat  |
| 11001   | Site 11           | Layer     | Pale brown soft sandy silt                          |
| 11001   | Site 11           | Structure | Linear arrangement of upright boulders forming dyke |
| 16001   | Site 16           | Layer     | Topsoil/turf layer                                  |
| 16001   | Site 16           | Layer     | Spread of loosely packed angular rubble             |
| 19001   | Site 19           | Layer     | Peaty topsoil overlaying bedrock                    |
| 20001   | Site 20           | Layer     | Peaty topsoil/turf layer                            |
| 20002   | Site 20           | Layer     | Dark brown peat deposit and boulders                |
| 20003   | Site 20           | Layer     | Grey brown stony sandy silt                         |
| 21001   | Site 21           | Layer     | Peaty Topsoil and turf layer containing rubble      |
| 21002   | Site 21           | Layer     | Mixed peaty, sandy material                         |
| 21003   | Site 21           | Structure | South wall of structure                             |
| 21004   | Site 21           | Structure | East wall of structure                              |
| 21005   | Site 21           | Layer     | Brown peat layer forming earthwork                  |
| 21006   | Site 21           | Layer     | Peaty silt layer forming earthwork                  |
| 21007   | Site 21           | Layer     | Dark brown peat layer forming embankment            |
| 21008   | Site 21           | Layer     | Mixed grey brown sandy peaty gavel in embankment    |
| 21009   | Site 21           | Layer     | Peaty topsoil/turf layer overlaying embankment      |

| Context | Site Sub-division | Type      | Description   |
|---------|-------------------|-----------|---|
| 31001   | Site 31           | Layer     | Topsoil/turf layer  |
| 31002   | Site 31           | Structure | Concrete trig point within chambered structure                |
| 31003   | Site 31           | Structure | Stonework forming possible chambered cairn                    |
| 31004   | Site 31           | Structure | Linear structural feature to north of cairn                   |
| 31005   | Site 31           | Layer     | Grey brown coursed sandy gritty material                      |
| 31006   | Site 31           | Layer     | Possible structural elements of chambered feature             |
| 31007   | Site 31           | Layer     | Rubble material within possible chambered feature             |
| 32001   | Site 32           | Layer     | Topsoil/turf layer and rubble layer                           |
| 32002   | Site 32           | Structure | North-south wall of structure                                 |
| 32003   | Site 32           | Structure | East-west partition wall                                      |
| 32004   | Site 32           | Structure | Terminus at south end of wall <b>32003</b>                    |
| 32005   | Site 32           | Layer     | Mixed topsoil and sand deposit                                |
| 32006   | Site 32           | Layer     | Dark brown humified peat                                      |
| 32007   | Site 32           | Layer     | Mixed peaty gravel deposit                                    |
| 32008   | Site 32           | Layer     | Organic layer in embankment; former ground surface            |
| 32009   | Site 32           | Layer     | Dark grey brown humified peat sealing <b>32010</b>            |
| 32010   | Site 32           | Layer     | Blueish grey clay sand – glacial till                         |
| 33001   | Site 33           | Layer     | Peaty Topsoil/ turf layer                                     |
| 33002   | Site 33           | Layer     | Dark brown peat layer forming mound                           |
| 33003   | Site 33           | Layer     | Humified peat layer   |
| 33004   | Site 33           | Layer     | Dark grey brown peat deposit forming interface                |
| 33005   | Site 33           | Layer     | Reddish brown peat deposit, disturbed by burrowing            |
| 33006   | Site 33           | Layer     | Grey brown humified peat deposit sealed by <b>33005</b>       |
| 33007   | Site 33           | Layer     | Pale grey brown sandy silt sealed by <b>33006</b>             |
| 33008   | Site 33           | Structure | Curb of stone around the east base of mound site 33           |
| 33009   | Site 33           | Layer     | Compacted deposit; interface of <b>33005</b> and <b>33002</b> |
| 34001   | Site 34           | Layer     | Peaty topsoil/turf layer                                      |
| 34002   | Site 34           | Layer     | Brown peat and loose rubble infill of hollow                  |
| 34003   | Site 34           | Layer     | Yellowish brown gravelly sandy silt                           |

| Context | Site Sub-division | Type      | Description  |
|---------|-------------------|-----------|--|
| 36001   | Site 36           | Layer     | Peaty topsoil/turf layer                               |
| 36002   | Site 36           | Layer     | Dark greyish brown humic silt overlaying bedrock       |
| 37001   | Site 37           | Layer     | Peaty topsoil/turf layer                               |
| 37002   | Site 37           | Layer     | Peat layer within rubble matrix sealed by <b>37001</b> |
| 37003   | Site 37           | Structure | Possible stonework of E-W orientated structural wall   |
| 37004   | Site 37           | Structure | Foundation of extant boundary dyke                     |
| 38001   | Site 38           | Layer     | Peaty topsoil/turf layer                               |
| 38002   | Site 38           | Layer     | Brown homogenous peat                                  |
| 38003   | Site 38           | Layer     | Light greyish brown sandy silt – glacial till          |
| 39001   | Site 39           | Layer     | Trench 1; Peaty topsoil/turf layer                     |
| 39002   | Site 39           | Layer     | Trench 1; Dark grey homogenous peat                    |
| 39003   | Site 39           | Layer     | Trench 1; Dark grey brown humified peat                |
| 39004   | Site 39           | Layer     | Trench 1; Bluish grey stony sandy silt – glacial till  |
| 39005   | Site 39           | Layer     | Trench 1; Bedrock outcrop                              |
| 39006   | Site 39           | Layer     | Trench 2; Peaty topsoil/turf layer                     |
| 39007   | Site 39           | Layer     | Trench 2; Dark brown homogenous peat                   |
| 39008   | Site 39           | Layer     | Trench 2; Dark grey brown humified peat                |
| 39009   | Site 39           | Layer     | Trench 2; Yellowish grey sandy silt – glacial till     |
| 39010   | Site 39           | Structure | Trench 2; Linear arrangement of angular boulders       |
| 39011   | Site 39           | Layer     | Trench 2; Bedrock outcrop                              |

## 11.2 Drawing Register

| Drawing Number | Drawing Type | Site Sub-division | Description                        | Sheet Number | Scale |
|----------------|--------------|-------------------|------------------------------------|--------------|-------|
| 01             | Plan         | Site 31           | Plan of trenches 1 and 2           | 1            | 1:20  |
| 02             | Plan         | Site 31           | Plan of trench 3                   | 2            | 1:20  |
| 03             | Plan         | Site 32           | Plan of trenches 1 and 2           | 3            | 1:20  |
| 04             | Plan         | Site 21           | Plan of trench 1                   | 4            | 1:20  |
| 05             | Plan         | Site 37           | Plan of stone feature <b>37003</b> | 5            | 1:20  |
| 06             | Section      | Site 33           | Trench 1 southwest facing section  | 6            | 1:20  |
| 07             | Section      | Site 33           | Trench 2 southwest facing section  | 6            | 1:20  |



| Drawing Number | Drawing Type | Site Sub-division | Description                       | Sheet Number | Scale |
|----------------|--------------|-------------------|-----------------------------------|--------------|-------|
| 08             | Plan         | Site 33           | Plan of trenches 1 and 2          | 7            | 1:20  |
| 09             | Section      | Site 33           | Trench 2 northwest facing section | 7            | 1:20  |
| 10             | Section      | Site 32           | Northwest facing section          | 8            | 1:10  |
| 11             | Section      | Site 11           | Trench 1 east facing section      | 9            | 1:10  |
| 12             | Plan         | Site 11           | Plan of trench 1                  | 9            | 1:20  |
| 13             | Section      | Site 11           | Trench 2 east facing section      | 10           | 1:10  |
| 14             | Plan         | Site 11           | Plan of trench 2                  | 10           | 1:20  |
| 15             | Section      | Site 11           | Trench 3 east facing section      | 11           | 1:10  |
| 16             | Plan         | Site 11           | Plan of trench 3                  | 11           | 1:20  |
| 17             | Section      | Site 11           | Trench 4 east facing section      | 11           | 1:10  |
| 18             | Plan         | Site 11           | Plan of trench 4                  | 11           | 1:20  |
| 19             | Section      | Site 10           | East facing section               | 11           | 1:10  |
| 20             | Plan         | Site 10           | Plan of trench                    | 11           | 1:20  |

### 11.3 Sample Register

| Sample Number | Sample Type                     | Context Number |
|---------------|---------------------------------|----------------|
| 001           | Kubiena tin – soil thin section | 11002/ 11003   |

### 11.4 Photographic Register

| Frame | Site Subdivision | Description                  | Direction of shot |
|-------|------------------|------------------------------|-------------------|
| 1     | Site 32          | General shot; pre-excavation | W                 |
| 2     | Site 32          | General shot; pre-excavation | W                 |
| 3     | Site 32          | General shot; pre-excavation | N                 |
| 4     | Site 34          | General shot; pre-excavation | SW                |
| 5     | Site 21          | General shot; pre-excavation | W                 |
| 6     | Site 33          | General shot; pre-excavation | S                 |
| 7     | Site 33          | General shot; pre-excavation | S                 |
| 8     | Site 33          | General shot; pre-excavation | NE                |
| 9     | N/A              | General landscape shot       | NE                |
| 10    | N/A              | General landscape shot       | E                 |
| 11    | N/A              | General landscape shot       | SE                |

| Frame | Site Subdivision | Description                              | Direction of shot |
|-------|------------------|--|-------------------|
| 12    | N/A              | General landscape shot                   | S                 |
| 13    | N/A              | General landscape shot                   | SW                |
| 14    | N/A              | General landscape shot                   | W                 |
| 15    | Site 31          | Working shot                             | S                 |
| 16    | Site 31          | Trench 1 – general shot; post excavation | NW                |
| 17    | Site 31          | Trench 1 – general shot; post excavation | W                 |
| 18    | Site 31          | Trench 1 – general shot; post excavation | W                 |
| 19    | Site 31          | Trench 2 – general shot; post excavation | N                 |
| 20    | Site 31          | Trench 2 – general shot; post excavation | W                 |
| 21    | Site 31          | Trench 2 – general shot; post excavation | E                 |
| 22    | Site 19          | General shot; pre-excavation             | N                 |
| 23    | Site 19          | General shot; pre-excavation             | N                 |
| 24    | Site 19          | General shot; pre-excavation             | S                 |
| 25    | Site 36          | General shot; pre-excavation             | W                 |
| 26    | Site 36          | General shot; pre-excavation             | N                 |
| 27    | Site 36          | General shot; post-excavation            | E                 |
| 28    | Site 36          | General shot; post-excavation            | W                 |
| 29    | Site 36          | General shot; post-excavation            | S                 |
| 30    | Site 19          | General shot; post-excavation            | E                 |
| 31    | Site 19          | General shot; post-excavation            | E                 |
| 32    | Site 19          | General shot; post-excavation            | S                 |
| 33    | Site 16          | General shot; post-excavation            | S                 |
| 34    | Site 16          | General shot; post-excavation            | N                 |
| 35    | Site 16          | General shot; post-excavation            | S                 |
| 36    | Site 16          | General shot; post-excavation            | W                 |
| 37    | Site 16          | General shot; post-excavation            | E                 |
| 38    | Site 31          | Trench 3 general shot; post-excavation   | N                 |
| 39    | Site 31          | Trench 3 general shot; post-excavation   | S                 |
| 40    | Site 31          | Trench 3 general shot; post-excavation   | W                 |
| 41    | Site 31          | Trench 3 general shot; post-excavation   | E                 |
| 42    | Site 20          | General shot; post-excavation            | N                 |
| 43    | Site 20          | General shot; post-excavation            | E                 |
| 44    | Site 32          | General shot; excavations in south room  | N                 |
| 45    | Site 32          | General shot; excavations in south room  | N                 |

| Frame | Site Subdivision | Description   | Direction of shot |
|-------|------------------|---|-------------------|
| 46    | Site 32          | Detail shot; south room - <b>32002</b>                  | E                 |
| 47    | Site 32          | Detail shot; north and south rooms - <b>32002</b>       | E                 |
| 48    | Site 32          | Detail shot; north and south rooms – <b>32002</b>       | E                 |
| 49    | Site 32          | Detail shot; west face of wall – <b>32002</b>           | E                 |
| 50    | Site 32          | Detail shot; dividing wall – <b>32003</b>               | N                 |
| 51    | Site 32          | Detail shot; north facing section of earthwork          | S                 |
| 52    | Site 32          | Detail shot; north room – wall <b>32003</b>             | S                 |
| 53    | Site 32          | Detail shot; north facing section and wall <b>32003</b> | S                 |
| 54    | Site 32          | Detail shot; east face of wall <b>32002</b>             | W                 |
| 55    | Site 32          | Detail shot; top of wall <b>32002</b>                   | S                 |
| 56    | Site 32          | Detail shot; top of wall <b>32002</b>                   | S                 |
| 57    | Site 21          | Detail shot; east facing section of earthwork           | W                 |
| 58    | Site 21          | Detail shot; east facing section of earthwork           | W                 |
| 59    | Site 21          | Detail shot; east facing section of earthwork           | NW                |
| 60    | Site 21          | Detail shot; east facing section of earthwork           | NW                |
| 61    | Site 21          | Detail shot; interior deposits of structure             | W                 |
| 62    | Site 21          | Detail shot; interior deposits of structure             | W                 |
| 63    | Site 21          | Detail shot; north facing wall <b>21003</b>             | S                 |
| 64    | Site 21          | Detail shot; top of wall <b>21003</b>                   | S                 |
| 65    | Site 21          | Detail shot; north facing wall <b>21003</b>             | S                 |
| 66    | Site 21          | Detail shot; interior deposits of structure             | E                 |
| 67    | Site 37          | General shot; pre-excavation                            | SW                |
| 68    | Site 37          | General shot; pre-excavation                            | S                 |
| 69    | Site 38          | General shot; pre-excavation                            | S                 |
| 70    | Site 39          | General shot; pre-excavation                            | SE                |
| 71    | Site 39          | General shot; pre-excavation                            | SE                |
| 72    | Site 39          | General shot; pre-excavation                            | NW                |
| 73    | Site 03          | General shot; pre-excavation                            | N                 |
| 74    | Site 03          | General shot; pre-excavation                            | N                 |
| 75    | Site 01          | General shot; pre-excavation                            | E                 |
| 76    | Site 01          | General shot; pre-excavation                            | SE                |
| 77    | Site 03          | General shot; post excavation                           | N                 |
| 78    | Site 03          | General shot; post excavation                           | N                 |
| 79    | Site 03          | General shot; post excavation                           | N                 |

| Frame | Site Subdivision | Description   | Direction of shot |
|-------|------------------|---|-------------------|
| 80    | Site 01          | General shot; post excavation                         | E                 |
| 81    | Site 01          | General shot; post excavation                         | E                 |
| 82    | Site 01          | General shot; backfilled                              | E                 |
| 83    | Site 03          | General shot; backfilled                              | E                 |
| 84    | Site 40          | General shot; Possible cairn/structure                | S                 |
| 85    | Site 34          | General shot; post excavation                         | N                 |
| 86    | Site 34          | General shot; post excavation                         | NW                |
| 87    | Site 33          | Detail shot; Trench 2 - boulders in peat <b>33002</b> | E                 |
| 88    | Site 33          | Detail shot; Trench 2 - boulders in peat <b>33002</b> | N                 |
| 89    | Site 33          | Detail shot; Trench 2 – deposit <b>33009</b>          | N                 |
| 90    | Site 33          | Detail shot; Trench 2 – deposit <b>33009</b>          | N                 |
| 91    | Site 33          | Detail shot; Trench 1 – south facing section          | N                 |
| 92    | Site 33          | Detail shot; Trench 1 – south facing section          | N                 |
| 93    | Site 33          | Detail shot; Trench 1 – south facing section          | N                 |
| 94    | Site 33          | Detail shot; Trench 1 – south facing section          | N                 |
| 95    | Site 33          | Detail shot; Trench 2 – deposit <b>33005</b>          | N                 |
| 96    | Site 33          | Detail shot; Trench 2 – deposit <b>33005</b>          | E                 |
| 97    | Site 33          | Detail shot; Trench 2 – S facing section              | NE                |
| 98    | Site 33          | Detail shot; Trench 2 – W facing section              | SE                |
| 99    | Site 33          | General working shot                                  | SE                |
| 100   | Site 33          | General working shot                                  | SE                |
| 101   | Site 33          | Detail shot; Trench 2 sondage NW facing section       | SE                |
| 102   | Site 33          | Detail shot; Trench 2 sondage NW facing section       | SE                |
| 103   | Site 33          | Detail shot; Trench 2 sondage SW facing section       | NE                |
| 104   | Site 33          | Detail shot; Trench 2 base of sondage                 | N/A               |
| 105   | Site 33          | Detail shot; Trench 2 base of sondage                 | N/A               |
| 106   | Site 33          | Detail shot; Trench 2 sondage NW facing section       | SE                |
| 107   | Site 39          | General shot; Trench 1 south facing section           | N                 |
| 108   | Site 39          | General shot; Trench 1 south facing section           | N                 |
| 109   | Site 39          | General shot; Trench 1 south facing section           | W                 |
| 110   | Site 39          | General shot; Trench 1 south facing section           | W                 |
| 111   | Site 39          | General shot; Trench 1 south facing section           | W                 |
| 112   | Site 39          | General shot; Trench 2 north facing section           | S                 |
| 113   | Site 39          | General shot; Trench 2 north facing section           | S                 |

| Frame | Site Subdivision | Description                                       | Direction of shot |
|-------|------------------|---|-------------------|
| 114   | Site 39          | General shot; Trench 2 north facing section       | S                 |
| 115   | Site 39          | General shot; Trench 2                            | W                 |
| 116   | Site 39          | Detail shot; Trench 2 – boulders <b>39010</b>     | W                 |
| 117   | Site 37          | General shot; boulders on north side of dyke      | N                 |
| 118   | Site 37          | General shot; boulders on north side of dyke      | N                 |
| 119   | Site 37          | General shot; boulders on north side of dyke      | S                 |
| 120   | Site 37          | General shot; boulders on north side of dyke      | S                 |
| 121   | Site 37          | General shot; post excavation                     | W                 |
| 122   | Site 37          | General shot; post excavation                     | W                 |
| 123   | Site 37          | General shot; post excavation                     | W                 |
| 124   | Site 37          | General shot; post excavation                     | SW                |
| 125   | Site 29          | Observation post interior north elevation         | N                 |
| 126   | Site 29          | Observation post interior east elevation          | NE                |
| 127   | Site 29          | Observation post interior northeast elevation     | NW                |
| 128   | Site 29          | Observation post interior south elevation         | S                 |
| 129   | Site 29          | Observation post interior south + east elevation  | SE                |
| 130   | Site 29          | Observation post interior west elevation          | SW                |
| 131   | Site 30          | Entrance from Site 29 into site 30                | E                 |
| 132   | Site 30          | Air raid shelter general shot from south entrance | N                 |
| 133   | Site 30          | Air raid shelter north elevation                  | N                 |
| 134   | Site 30          | Air raid shelter southwest corner                 | SW                |
| 135   | Site 30          | Air raid shelter east wall                        | NE                |
| 136   | Site 30          | Air raid shelter general shot                     | N                 |
| 137   | Site 30          | Air raid shelter detail shot of ironwork girders  | E                 |
| 138   | Site 30          | Air raid shelter detail shot - end room           | N/A               |
| 139   | Site 30          | Air raid shelter detail shot - south entrance     | S                 |
| 140   | Site 32          | Detail shot – section through earthwork           | S                 |
| 141   | Site 32          | Detail shot – section through earthwork           | S                 |
| 142   | Site 32          | Detail shot – section through earthwork           | S                 |
| 143   | Site 11          | Trench 1; general shot                            | NE                |
| 144   | Site 11          | Trench 1; general shot                            | SW                |
| 145   | Site 11          | Trench 1; general shot                            | SW                |
| 146   | Site 11          | Trench 1; detail shot – southeast facing section  | NW                |
| 147   | Site 11          | Trench 1; detail shot – northwest facing section  | SE                |

| Frame | Site Subdivision | Description                                      | Direction of shot |
|-------|------------------|--|-------------------|
| 148   | Site 11          | Trench 2; general shot                           | NE                |
| 149   | Site 11          | Trench 2; general shot                           | SW                |
| 150   | Site 11          | Trench 2; detail shot – southeast facing section | NW                |
| 151   | Site 11          | Trench 2; detail shot – southeast facing section | NW                |
| 152   | Site 11          | Trench 2; detail shot – northwest facing section | SE                |
| 153   | Site 11          | Trench 3; general shot                           | NE                |
| 154   | Site 11          | Trench 3; general shot                           | NW                |
| 155   | Site 11          | Trench 3; general shot                           | SW                |
| 156   | Site 11          | Trench 3; general shot                           | SE                |
| 157   | Site 11          | Trench 4; general shot                           | SW                |
| 158   | Site 11          | Trench 4; general shot                           | NW                |
| 159   | Site 11          | Trench 4; general shot                           | SE                |
| 160   | Site 10          | Detail shot; southeast facing section            | NW                |
| 161   | Site 10          | General shot; post excavation                    | W                 |
| 162   | Site 10          | Detail shot; north facing section                | S                 |
| 163   | Site 38          | General shot; section                            | E                 |
| 164   | Site 38          | General shot; section                            | S                 |
| 165   | Site 38          | General shot; section                            | SE                |
| 166   | Site 38          | General shot; section                            | SE                |
| 167   | Site 35          | General shot; western slit trench                | S                 |
| 168   | Site 35          | General shot; central slit trench                | S                 |
| 169   | Site 35          | General shot; central slit trench                | S                 |
| 170   | Site 35          | General shot; central slit trench                | N                 |
| 171   | Site 35          | General shot; eastern slit trench                | S                 |
| 172   | Site 35          | General shot; eastern slit trench                | S                 |
| 173   | Site 35          | General shot; eastern slit trench                | N                 |
| 174   | Site 24          | Detail shot; concrete wall component             | S                 |
| 175   | Site 24          | Detail shot; concrete wall component             | E                 |
| 176   | Site 24          | Detail shot; concrete wall component             | N                 |
| 177   | Site 24          | Detail shot; concrete wall component             | N                 |
| 178   | Site 24          | Detail shot; concrete wall component             | NW                |
| 179   | Site 24          | Detail shot; concrete wall component             | W                 |
| 180   | Site 24          | Detail shot; concrete wall component             | N                 |
| 181   | Site 25          | General shot; earthwork survey                   | SW                |

| Frame | Site Subdivision | Description                    | Direction of shot |
|-------|------------------|--------------------------------|-------------------|
| 182   | Site 25          | General shot; earthwork survey | SW                |
| 183   | Site 25          | General shot; earthwork survey | NE                |
| 184   | Site 26          | General shot; earthwork survey | N                 |
| 185   | Site 26          | General shot; earthwork survey | NE                |
| 186   | Site 26          | General shot; earthwork survey | SE                |
| 187   | Site 26          | General shot; earthwork survey | E                 |
| 188   | Site 26          | General shot; earthwork survey | NE                |
| 189   | Site 26          | General shot; earthwork survey | N                 |
| 190   | Site 26          | General shot; earthwork survey | NE                |
| 191   | Site 26          | General shot; earthwork survey | NW                |
| 192   | Site 26          | General shot; earthwork survey | W                 |
| 193   | Site 26          | General shot; earthwork survey | W                 |
| 194   | Site 26          | General shot; earthwork survey | SW                |
| 195   | Site 26          | General shot; earthwork survey | S                 |
| 196   | Site 26          | General shot; earthwork survey | SE                |
| 197   | Site 26          | General shot; earthwork survey | E                 |
| 198   | Site 26          | General shot; earthwork survey | W                 |
| 199   | Site 21          | General shot; earthwork survey | W                 |
| 200   | Site 21          | General shot; earthwork survey | S                 |
| 201   | Site 21          | General shot; earthwork survey | E                 |
| 202   | Sites 28-30      | General shot; earthwork survey | W                 |
| 203   | Site 21          | General shot; earthwork survey | E                 |
| 204   | Site 21          | General shot; earthwork survey | N                 |
| 205   | Site 22          | General shot; earthwork survey | N                 |
| 206   | Site 22          | General shot; earthwork survey | W                 |
| 207   | Site 22          | General shot; earthwork survey | E                 |
| 208   | Site 22          | General shot; earthwork survey | NE                |
| 209   | Site 27          | General shot; earthwork survey | W                 |
| 210   | Site 27          | General shot; earthwork survey | N                 |
| 211   | Site 27          | General shot; earthwork survey | E                 |
| 212   | Site 27          | General shot; earthwork survey | SE                |
| 213   | Site 27          | General shot; earthwork survey | SE                |
| 214   | Site 27          | General shot; earthwork survey | E                 |
| 215   | Site 27          | General shot; earthwork survey | E                 |

| Frame | Site Subdivision | Description  | Direction of shot |
|-------|------------------|--|-------------------|
| 216   | Sites 28-30      | General shot; building survey                      | SE                |
| 217   | Sites 28-30      | General shot; building survey                      | SE                |
| 218   | Site 29-30       | Detail shot; north elevations                      | SE                |
| 219   | Site 29          | Detail shot; north elevation                       | SE                |
| 220   | Site 29          | Detail shot; north elevation                       | SE                |
| 221   | Site 29          | Detail shot; north elevation                       | SE                |
| 222   | Site 29          | Detail shot; north elevation                       | W                 |
| 223   | Site 30          | Detail shot; east elevation                        | W                 |
| 224   | Site 28          | General shot; rubble spread                        | W                 |
| 225   | Site 29          | Detail shot; edge of concrete structure            | N                 |
| 226   | Site 29          | Detail shot; edge of concrete structure            | SE                |
| 227   | Site 29          | Details shot; exposed east edge of shelter         | W                 |
| 228   | Site 29          | Details shot; exposed east edge of shelter         | NW                |
| 229   | Site 29          | Detail shot; south elevations and entrance         | N                 |
| 230   | Site 29          | Detail shot; south elevations and entrance         | N                 |
| 231   | Sites 29-30      | Detail shot; south elevations and entrance         | N                 |
| 232   | Sites 29-30      | Detail shot; south elevations and entrance         | N                 |
| 233   | Sites 29-30      | Detail shot; roof of site 29 + entrance to site 30 | E                 |
| 234   | Sites 29-30      | Detail shot; south elevations                      | N                 |
| 235   | Site 30          | Detail shot; south elevation                       | N                 |
| 236   | Site 30          | Detail shot; south elevation                       | N                 |
| 237   | Sites 29-30      | Detail shot; communicating passage site 29-30      | N                 |
| 238   | Site 30          | Detail shot; observation post west elevation       | E                 |
| 239   | Site 30          | Detail shot; observation post west elevation       | SE                |
| 240   | Site 30          | Detail shot; observation post west elevation       | SE                |
| 241   | Site 30          | Detail shot; observation post north elevation      | SE                |
| 242   | Site 30          | Detail shot; observation post north elevation      | SE                |
| 243   | Site 30          | Detail shot; observation post north elevation      | SE                |
| 244   | Site 30          | Detail shot; observation post east elevation       | W                 |
| 245   | Site 30          | Detail shot; observation post east elevation       | NW                |
| 246   | Site 30          | General shot; building survey – observation post   | NW                |
| 247   | N/A              | General landscape shot from Site 30                | E                 |
| 248   | N/A              | General landscape shot from Site 30                | NE                |
| 249   | N/A              | General landscape shot from Site 30                | SE                |



| Frame | Site Subdivision | Description                                      | Direction of shot |
|-------|------------------|--|-------------------|
| 250   | Site 29          | General shot; exposed roof of shelter            | SE                |
| 251   | Site 29          | General shot; exposed roof of shelter            | SE                |
| 252   | N/A              | General landscape shot from Site 30              | SE                |
| 253   | Site 30          | General shot; building survey – observation post | E                 |
| 254   | Site 30          | General shot; building survey – observation post | SE                |
| 255   | Site 30          | General shot; building survey – observation post | SE                |
| 256   | Site 31          | General shot; earthwork survey                   | N                 |
| 257   | Site 31          | General shot; earthwork survey + survey point    | E                 |
| 258   | Site 31          | General shot; earthwork survey                   | SE                |
| 259   | Site 31          | General shot; earthwork survey                   | E                 |
| 260   | Site 31          | General shot; earthwork survey                   | SE                |
| 261   | Site 31          | General shot; earthwork survey                   | S                 |
| 262   | Site 31          | General shot; earthwork survey                   | W                 |
| 263   | Site 32          | General shot; earthwork survey                   | S                 |
| 264   | Site 32          | General shot; earthwork survey                   | E                 |
| 265   | Site 32          | General shot; earthwork survey                   | E                 |
| 266   | Site 32          | General shot; earthwork survey                   | NW                |
| 267   | Site 32          | General shot; earthwork survey                   | S                 |
| 268   | Site 37          | General shot; backfilled                         | E                 |
| 269   | Site 21          | General shot; backfilled                         | NE                |
| 270   | Site 21          | General shot; backfilled                         | S                 |
| 271   | Site 32          | General shot; backfilled                         | SW                |
| 272   | Site 33          | General shot; earthwork survey                   | S                 |
| 273   | Site 33          | General shot; earthwork survey                   | SE                |
| 274   | Site 33          | General shot; earthwork survey                   | NE                |
| 275   | Site 33          | General shot; earthwork survey                   | W                 |
| 276   | Site 33          | General shot; backfilled                         | NW                |
| 277   | Site 33          | General shot; backfilled                         | NE                |
| 278   | Site 33          | General shot; backfilled                         | NE                |
| 279   | Site 31          | General shot; backfilled                         | NE                |
| 280   | Site 31          | General shot; backfilled                         | NE                |
| 281   | Site 31          | General shot; backfilled                         | NE                |
| 282   | Site 37          | General shot; backfilled                         | S                 |
| 283   | Site 37          | General shot; backfilled                         | SW                |

| <b>Frame</b> | <b>Site Subdivision</b> | <b>Description</b>                             | <b>Direction of shot</b> |
|--------------|-------------------------|--|--------------------------|
| 284          | Site 20                 | General shot; backfilled                       | N                        |
| 285          | Site 11                 | Detail; Trench 3 – E facing section Sample 001 | W                        |
| 286          | Site 11                 | Detail; Trench 3 – E facing section Sample 001 | W                        |
| 287          | Site 11                 | Detail; Trench 3 – E facing section Sample 001 | W                        |
| 288          | Site 11                 | General shot; Trench 3 backfilled              | E                        |
| 289          | Site 11                 | General shot; Trench 4 backfilled              | E                        |
| 290          | Site 11                 | General shot; Trench 2 backfilled              | SW                       |
| 291          | Site 11                 | General shot; Trench 1 backfilled              | W                        |
| 292          | Site 36                 | General shot; backfilled                       | E                        |
| 293          | Site 19                 | General shot; backfilled                       | S                        |
| 294          | Site 39                 | General shot; Trench 1 backfilled              | E                        |
| 295          | Site 39                 | General shot; Trench 2 backfilled              | E                        |