ARCHAEOLOGICAL EVALUATION ON LAND AT SUNNYDALE CLOSE, SURFLEET, LINCOLNSHIRE (SUSU20)

Work Undertaken For
Ashwood Homes

DRAFT

March 2021

Report produced by
Jonathon Smith BA (Hons), MA

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ARCHAEOLOGICAL PROJECT SERVICES

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1. SUMMARY

An archaeological evaluation was undertaken on land off Sunnydale Close, Surfleet, Lincolnshire. The evaluation was undertaken in advance of proposed residential development of the site.

The area is archaeologically sensitive, lying south of the settlement of Surfleet in a general area of known salt-making dating to the medieval period.

A previous archaeological evaluation and geophysical survey has identified medieval salt making on the western half of the Site.

The evaluation revealed a dump of burnt clay, probably associated with 14th-15th century salt making towards the north of the Site. Several ditches, probably related to water management for the salt making, were also revealed.

A large quantity of 11th-12th century pottery indicated that late Saxon and early Medieval activity was present on the site. Several sherds of later pottery, burnt clay, animal bones and slag were also recovered.

2. INTRODUCTION

2.1 Definition of an Evaluation

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An archaeological evaluation is defined as *'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present Field Evaluation defines their character and extent, quality and preservation, and it enables an assessment of their worth in a local, regional, national or international context as appropriate'* (CIfA 2014).

2.2 Planning Background

Archaeological Project Services was commissioned by Ashwood Homes to undertake an archaeological evaluation in advance of development, which was carried out between 14th and 18th December 2020, in accordance with a written scheme of investigation prepared by Archaeological Project Services and approved by the Historic Environment Officer, Lincolnshire County Council.

2.3 Topography and Geology

Surfleet is located 5.5km north of Spalding and 17.5km southwest of Boston in the South Holland district of Lincolnshire (Fig. 1). The site lies within Surfleet, approximately 300m south of the River Glen, at National Grid Reference TF 2520 2794 (Fig. 2).

Local soils are of the Romney Series, typically coarse silty gleyic brown calcareous alluvial soils (Robson 1990, 26).

The site covers approximately 3.1ha on generally level ground within the fenland of south Lincolnshire. Heights are in the region of 5m OD.

2.4 Archaeological Setting

Surfleet is first mentioned in the Domesday Survey of *c.* 1086. Referred to as *Suerefelt* the

name is derived from the Old English and means 'the sour (*sūr*) creek or inlet' (Cameron 1998, 120).

At the time of the Domesday Survey the land was held by Heppo the Arblaster who was Lord and Tennant in Chief. There were 17 households and land for four and a half ploughs. Mention is also made of two salt-production sites (Foster and Longley 1976).

Surfleet lies in the hundred of Kirton. Here, as elsewhere, areas of land were enclosed behind banks to reclaim it from the sea and the fen. These reclaimed areas formed the 'New Lands'. The main sea-bank is pre-conquest in origin. Salt production, due to the methods used, took place exclusively on the outsides of the sea-banks (Hallam 1954).

Geophysical survey identified a possible enclosure and a ditch. An area of magnetic anomalies may possibly be associated with salt-making activities and a dendritic pattern of anomalies suggest the presence of an infilled creek (Smith 2015).

A previous phase of evaluation trenches identified medieval salt making at the site (Parker 2016) and mounds visible on Lidar indicates this Site is likely to be the terminal end of an extensive salt production industry which extends northwest, along the south side of the River Glen sea bank (Smith 2020).

3. AIMS AND OBJECTIVES

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The aim of the work was to gather sufficient information for the archaeological curator to be able to formulate a policy for the management of the archaeological resources present on the site and to establish whether further archaeological excavation is required to preserve the archaeological resource by record.

The objectives were to:

- Establish the type of archaeological activity that might be present within the site,.
- Determine its likely extent, the date and function of the archaeological features present on the site, their state of preservation, spatial arrangement and the extent to which surrounding archaeological features extended into the application area.
- Establish the way in which any archaeological features identified fitted into the pattern of occupation and land-use in the surrounding landscape.

4. METHODS

Four trenches, each 1.8m wide and 35m long (Fig. 3), were excavated by mechanical excavator to the surface of archaeological deposits or the underlying natural geology, as appropriate.

Removal of topsoil and other overburden was undertaken using a toothless ditching bucket under archaeological supervision. The exposed surfaces of the trenches were then cleaned by hand and inspected for archaeological remains.

Each deposit exposed during the evaluation was allocated a unique reference number (context number) with an individual written description. A list of all contexts and their interpretations appears as Appendix 1. A photographic record was also compiled and sections were drawn at a scale of 1:10 and plans at 1:20. Recording of deposits encountered was undertaken according to standard Archaeological Project Services practice.

The location of the excavated trenches was recorded with a survey grade GPS.

Following excavation, the records were checked and a stratigraphic matrix produced.

5. RESULTS

The results of the archaeological evaluation are discussed in trench order. Archaeological contexts are described below. The numbers in brackets are the context numbers assigned in the field.

Trench 1 (Fig 4)
The earliest deposit observed in Trench 1 was a light yellowish brown silt (1006). Two distinct sequences of features were identified which overlay this. The first sequence, to the northeast, began with a second natural deposit, a light yellowish brown sandy silt (1004/1020), 0.22m thick, which sat directly on (1006). This was cut by a northeast-southwest orientated channel with shallow sides and a concave base [1019], which was 3m wide and 0.8m deep. The channel was filled by a loose mid brown silt with occasional muscle shell fragments (1021). It also held two pieces of 14th-15th century Bourne Ware and some slag fragments from a high-temperature fire (Fig 8, Section 13. Plate 1).



Plate 1. The channel [1019]. Looking northeast.

Cutting channel [1019] was a sub-circular pit with uneven sides and a concave base, *c.*1.9m in diameter and 0.86m deep [1016]. The edge of the pit was unclear in places. Two deposits lay directly on the base of the pit; a 0.11m thick light brownish grey sandy silt (1017), interpreted as side slip; and a mixed yellow, brown, grey and black silt, 0.56m thick, some of which had obviously been affected by heat (1022) (Fig 8, Section 13; Plate 2).



Plate 2. Pit [1016]. Looking northeast.

On top of the lower deposits was an irregular mass of firm red heat-affected silt (1013). The feature was at least 1.24m long, 1.2m wide and 0.53m thick (Plate 3). It was not possible to determine if this deposit was the result of a collapsed *in situ* pyrotechnic structure, or if it was a dump of material that had been broken off such a structure. Filling the gaps in the deposit was a firm mix of mid brown silt and red fired silt, 0.56m thick (1018/1004) (Fig 8, Section 13).



Plate 3. Plan view of burnt silt deposit (1013) in pit [1016]. Looking northeast.

Cutting the pit was a northwest-southeast aligned linear feature with shallow sides and a concave base. It was at least 3m long, 1.16m wide and 0.36m deep, at its deepest, where it intersected with [1016] (Fig 9, Section 13), though only 0.06m deep to the east (Fig 9, Section 7). It was filled by a loose mid yellowish brown and black ashy silt (1005/1014).

Towards the southeast of the trench the second sequence began with a northeast-southwest aligned linear feature with moderate sides and a flat base, 0.42m wide and 0.09m deep [1010]. It was filled by a firm mix of mid yellow and grey silt (1009) (Fig 8, Section 9; Plate 4). Over this feature was a layer consisting of firm dark grey and greyish brown silt with slight clay, ash and heated silt patches, 0.08m thick (1007/1008). This thin spread of material was

very similar to (1005/1014), to the northwest.

Cutting into the spread was a sub-circular pit with steep straight sides and a roughly flat base, at least 0.18m long, 0.53m wide and 0.36m deep [1012]. It was filled by a mixed light yellowish brown and dark brown silt with some organic components (1011) (Fig 8, Section 9; Plate 4).



Plate 4. Ditch [1010], pit [1012] and spread (1008). Looking southwest.

Overlying most of the features (although not ditch [1019]), was a light yellowish brown silt with occasional small shell fragments (1003). The deposit was 0.25m thick and thought to be an alluvial deposit. Over this was a light yellowish brown silt subsoil (1002), 0.25m thick, which was in turn covered by the plough soil, a dark brown silt (1001), 0.35m thick.

Trench 2 (Fig 5)
A machine-dug sondage at the northern end of the trench (Fig 8, Section 4) revealed a sequence of natural alluvial deposits. The earliest revealed was a light brownish grey silty clay with moderate shell inclusions, at least 0.31m thick (2005). This was overlain by a band of mid yellowish grey silty clay, 0.1m thick (2004), followed by a substantial mid brownish yellow silty sand deposit, 0.44m thick (2003). It was into the last alluvial layer that the features in this trench were cut.

A slightly different natural sequence was revealed in an adjacent sondage (Fig 9, Section 10; Plate 5). Here the earliest deposit was a mid yellowish brown sandy clay, at least 0.1m thick (2006). This was overlain by a mid yellowish brown sandy silt with very frequent lenses of degraded humic material and fragments of muscle shell (2015), 0.14m thick, suggesting frequent episodes of stagnant conditions in a water lain deposit. Above this, for 0.13m, the deposit became yellowish brown and the frequency of humic lenses decreased (2014). Deposit (2015) and (2014) sloped down to the northeast, suggesting these deposits were contained within a natural channel, the edges of which were not revealed during the excavation, but might correspond with a geophysical anomaly on a similar alignment (Fig 3). The channel was overlain by alluvial deposit (2003).

Into the natural (2003) a linear featured on a northwest-southeast alignment had been cut [2011] (Fig 9, Section 10; Plate 5). This had moderate convex sides and a concave base and was 2,04m wide and 0.64m deep. The feature was filled by mid bluish grey silty sand, 0.25m thick (2012), which was followed by a dark greyish brown sandy silt, 0.44m thick (2013). The upper fill contained several sherds of presumably residual 11th century pottery, 3 sherds of 18th or 19th century pottery and a post-medieval whet stone.

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Plate 5. Ditch [2011] and humic deposits (2015) and (2014).

Towards the southwestern end of the trench a pit was cut into (2003). This was a sub-circular feature had gradual concave sides and flat base, measuring 3.1m long, at least 1.6 wide and 0.51m deep [2007] (Figure 8, Section 6; Plate 6). The pit was filled by a sequence of grey clayey silts with various degrees of humic content (2008, 2009, 2010).



Plate 6. Pit [2007].

Over both features in the trench was a mid-greyish brown clayey silt subsoil, 0.13m thick (2002), which in turn was followed by dark greyish brown silty clay topsoil, (2001), 0.21m thick.

Trench 3 (Figure 6)
The earliest deposit encountered was a mid greyish brown clayey silt (3005), at least 0.26m thick. This was overlain by bands of mid brownish yellow and mid grey silt (3004), 0.18m thick. On top of this was a light yellowish brown silty sandy (3003), 0.75m thick (Figure 8, Section 1).

A large ill-defined natural channel was present towards the centre of the trench, located somewhere between Section 11 and 12. At the western end of the trench a cut was visible

which may have been the western edge of the channel, having a moderate concave side [3016], at least 0.7m deep. This was filled by a sequence of silty sands with muscle shells (3017), (3018) and (3019), the uppermost of which, (3019), had laminations indicating waterborne deposition (Figure 9, Section 11). Fill (3018) contained a sherd of 11th-12th century pottery. East of this, another deposit identified as a creek fill was noted, a light grey silty sand, 0.5m thick (3014/3015) (Figure 9, Section 8). However, it was not demonstrated in the field that this second sand deposits was part of the same feature.

Cutting the channel fill (3014) was a circular pit with steep concave sides and a concave base [3008] (Figure 9, Section 8; Plate 6). It had a diameter of 1.18m and a depth of 0.92. The bottom of the pit contained a thin 0.08m layer of light grey clayey silt, which may have been a deliberate lining (3009). The bulk of the pit was filled by a grey silty sand with a lens of black material towards the base (3010). Both fills contained a large quantity of briquetage.

The pit [3008] was cut by a north-south aligned linear feature with a straight, moderate eastern slope, a steep, concave western slope and a v-shaped base [3011] (Figure 9, Section 8; Plate 7). It was 2.84m wide and 0.86m deep. The very base of the feature was filled by a dark reddish grey silty clay (3012), 0.22m thick, with the majority filled by laminated grey and black silty sand, suggestive of alluvial deposition (3013), 0.74m thick.



Plate 7. Pit [3008] and ditch [3011]. Looking north.

East of this ditch was a second linear feature, north-south aligned with shallow concave sides and a concave base, at least 1.6m long, 1.34m wide and 0.62m deep [3020]. It was filled by light yellowish grey silty sand (3021). This ditch was cut by a north-south aligned linear feature with steep irregular sides [3022]. The form of the feature suggested it was a natural creek and it was not fully exposed. It was at least 0.86m wide, 0.42m deep and filled by a compact mid grey sand (3023) (Figure 9, Section 12; Plate 8)



Plate 8. Ditch [3020], cut by creek [3022] to the left. Looking north.

Over all the features was a light greyish brown sandy silt subsoil (3002), 0.22m thick, wich was covered by a mid greyish brown sandy silt topsoil (3001), 0.2m thick.

Trench 4 (Figure 7)
The earliest deposit in this trench was a Light greyish yellow clayey silt (4005). This was cut by an irregular linear feature, aligned roughly east-west, with shallow irregular sides and an irregular base [4004] (Fig 8, Section 3; Plate 9). It was 6.8m wide, 0.27m deep and had the appearance of a natural creek. The fill was a light greyish brown silt (4003), 0.27m thick which contained 16th-17th century pottery. The feature was overlain by a patchy deposit of subsoil, a light greyish brown silt, 0.08m thick (4003).



Plate 9. Natural creek [4004]. Looking east.

The natural layer (4005) was also cut by several narrow and shallow linear features which were frequent across the trench, on north-south and east-west orientations. Only one of these [4011] was excavated and shown to have moderate concave sides, a concave base, be 0.22m wide and 0.08m deep (Figure 8, Section 5). It was filled by a light yellowish brown silt (4010). The feature was thought to be a modern agricultural intrusion, perhaps a result of deep ploughing or pan busting.

Covering the natural over much of the trench was a firm mid brown humic silt, 0.27m thick (4008/4009). This was thought to be a layer of unploughed topsoil. Above this was the plough soil, dark brown humic silt, 0.48m thick (4001). The plough soil had been cut by a sub-rectangular pit with straight, near vertical sides that was 1.5m wide and at least 1.05m deep [4007]. It had several fills which were mixtures of topsoil and redeposited natural (4015), (4014), (4013), (4006), the uppermost of which (4012) had been blended by the most recent ploughing. On this basis the pit was thought to be modern, probably a geotechnical pit (Figure 8, Section 5; Plate 10).



Plate 10. Modern pit [4007]. Looking east.

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6. DISCUSSION

The trenches revealed a variable natural geology, suggestive of complex alluvial processes prior to the medieval period. Natural creeks were detected in all trenches, some of which had finds suggesting they were still active in the medieval period and through to the 17th century.

Evidence of nearby salt making was widespread in the fragments of briquetage that were recovered across the site, although there was a strong focus towards trench 1. It is likely that some of the ditches revealed were related to water management for the salt-making process. Trench 1 contained the only potential direct evidence of salt making in the layer of burnt silt within a pit, which is highly suggestive of a pyrotechnical structure. However, the fact it is within a pit, and not the lowest element in the pit, is more indicative of disposal of a collapsed structure rather than it being *in situ*. The pit with burnt material, the nearby channel for water management, and the location, 18m from the salt-production mound visible on lidar images, all suggest salt-making took place adjacent to these features in the 14th-15th century. This is to be expected, given that the previous evaluation located a saltern mound immediately northeast of the trench.

The features in Trenches 2 and 3 cannot be assigned any definitive function, but the presence of 11th and 12th century pottery does suggest late Saxon and early medieval activity nearby. The adjacent evaluation suggested that salt-making and settlement activity occurred in this period.

Trench 4 was the only trench which did not reveal any medieval features or finds, with only natural geology and modern features present.

The features revealed and dates suggested by finds are consistent with the adjacent evaluation. However, even with the combined data, it has not been possible to map precise locations where the various phases of salt-making took place. It is possible to say that the evaporation with fire took place to the north of the site, with evidence of clay lined pits and water management extending south to Trench 3.

The regional research framework identifies establishing a chronology of salt production sites as a key research goal, especially on sites which may have their origin before the 11th century (Knight *et al*, 2012, 82). This evaluation shows the site has the potential to contribute to this research goal, as it has produced dating evidence spanning the 11th-15th century.

The finds on the site include a large number of early medieval Stamford ware fragments, a few later Bourne ware sherds and large quantity of burnt clay. Animal bone and slag was also recovered, although these proved largely undiagnostic.

7. CONCLUSIONS

Archaeological trial trenching was undertaken on land off Sunnydale Close, Surfleet, in advance of development.

The evaluation revealed a burnt clay dump, likely to be associated with 14th-15th century saltern and several linear features which may be related to water management for the salt making.

Artefacts retrieved included a large number of early medieval Stamford ware fragments, a few later Bourne ware sherds and large quantity of burnt clay.

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8. ACKNOWLEDGEMENTS

Archaeological Project Services wishes to acknowledge Ashwood Homes for commissioning the fieldwork and post-excavation analysis. The work was coordinated by Paul Cope-Faulkner who edited this report along with Mark Dymond.

9. PERSONNEL

Project Coordinator: Paul Cope-Faulkner
Site Supervisor: Fiona Walker
Site Assistants: Aca Beeby and Peter Fitzer
Finds Processing: Denise Buckley
Archivist: Denise Buckley
Photographic reproduction: Jonathon Smith
CAD Illustration: Jonathon Smith
Post-excavation Analyst: Jonathon Smith

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11. ABBREVIATIONS

AOD Above Ordnance Datum

APS Archaeological Project Services

BGS British Geological Survey

CIfA Chartered Institute for Archaeologists

OS Ordnance Survey

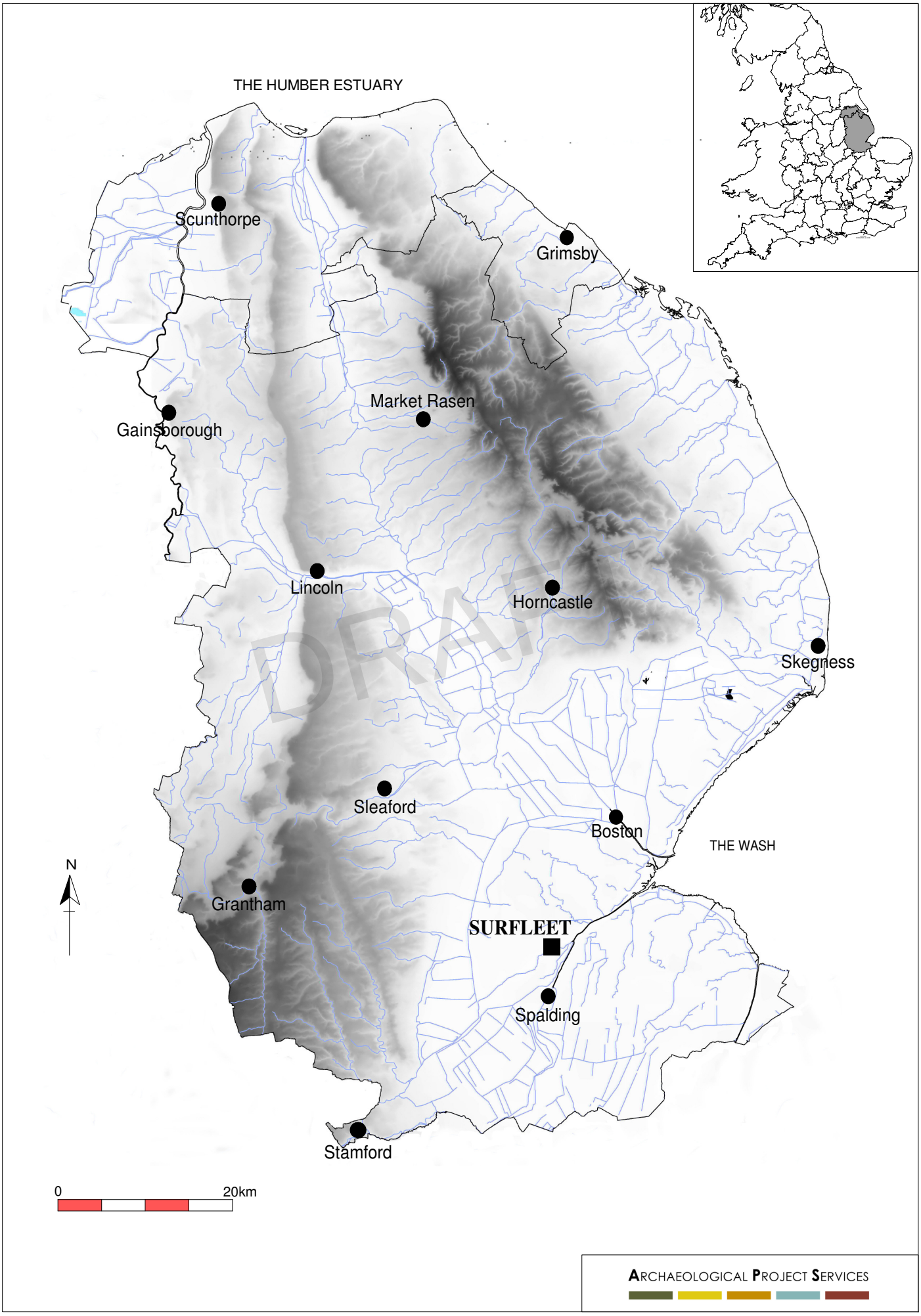


Figure 1 - General location plan



Proposed development site

0 500m

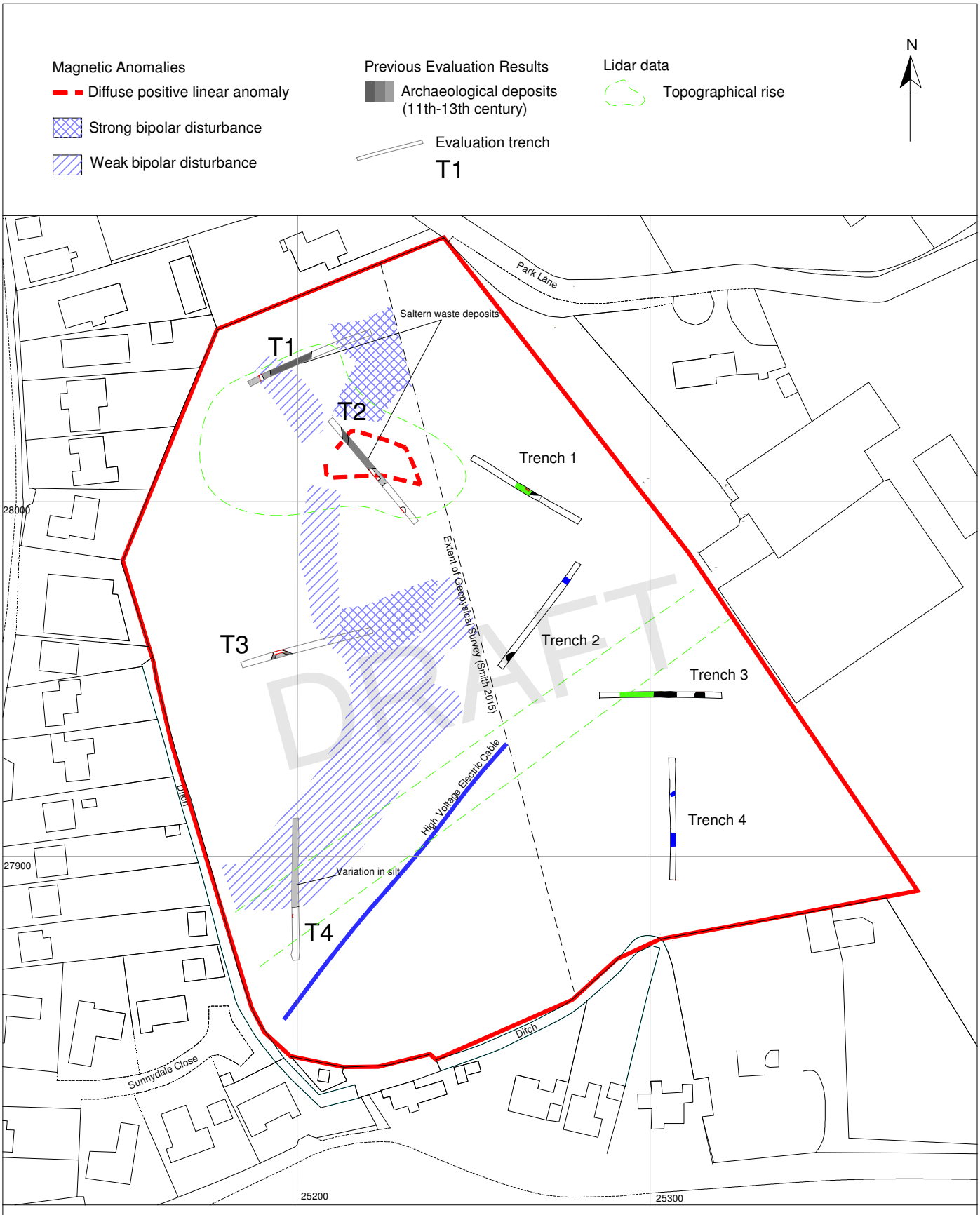
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Project Name: Sunnydale Close, Surfleet		
Scale 1:12500	Drawn by: JS	Report No: 92/20

Figure 2 - Site Location



TF

Medieval deposit

Post-medieval or modern deposit

Undated deposit

0 50m

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Project Name: Sunnydale Close, Surfleet		
Scale 1:1500	Drawn by: JS	Report No: 10/20

Figure 3 - Trench Layout

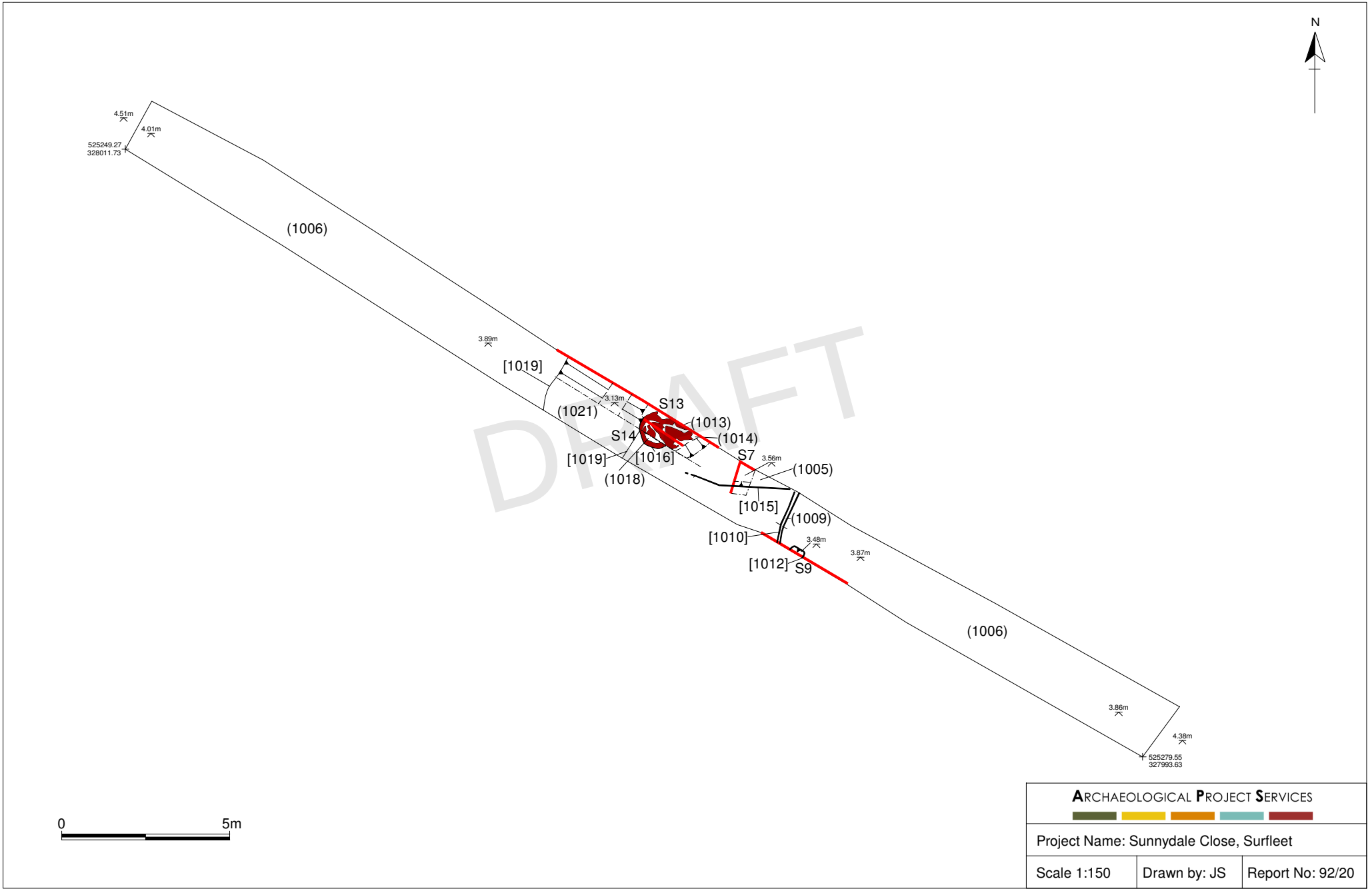


Figure 4 - Trench 1 plan

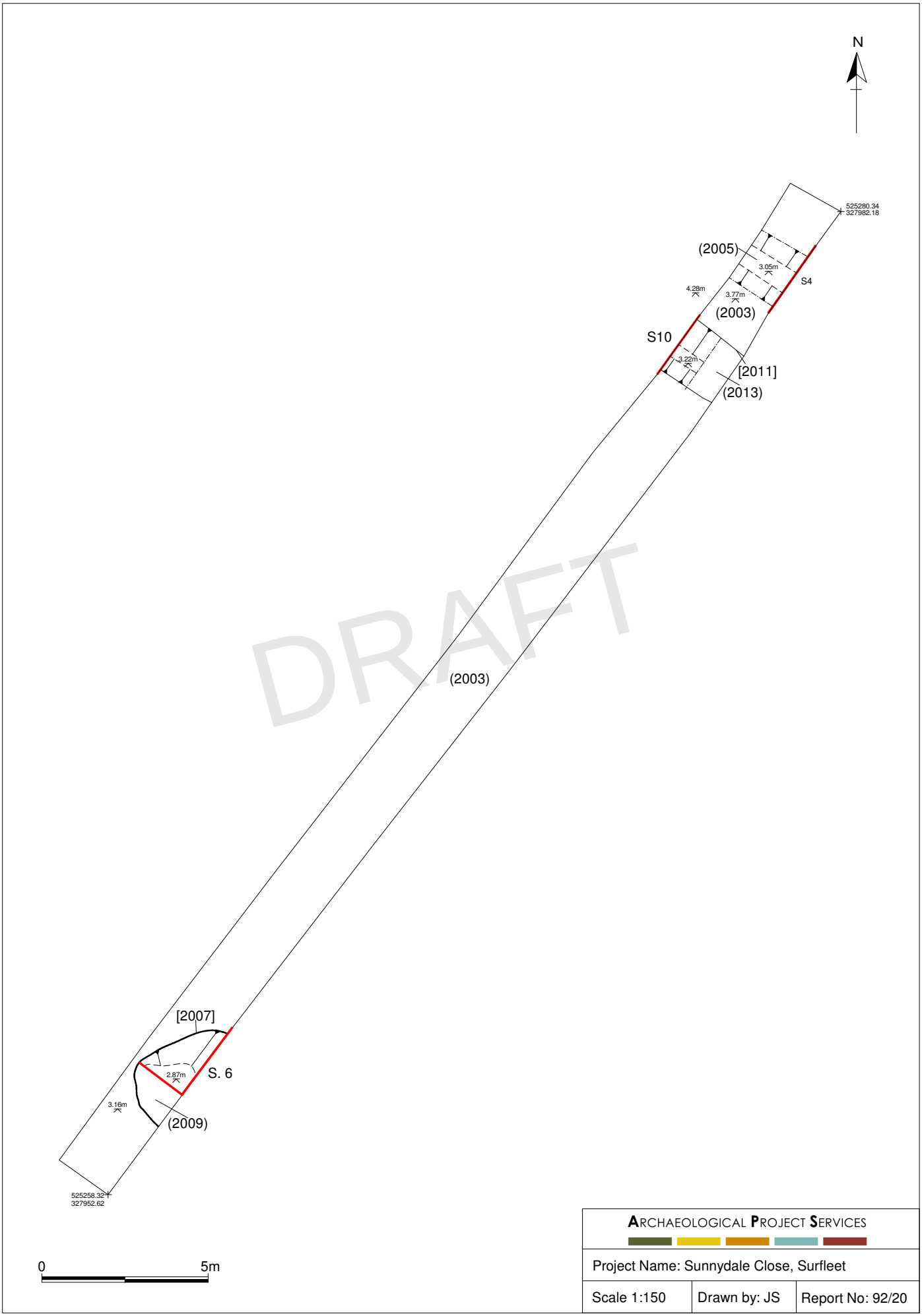


Figure 5 - Trench 2 plan

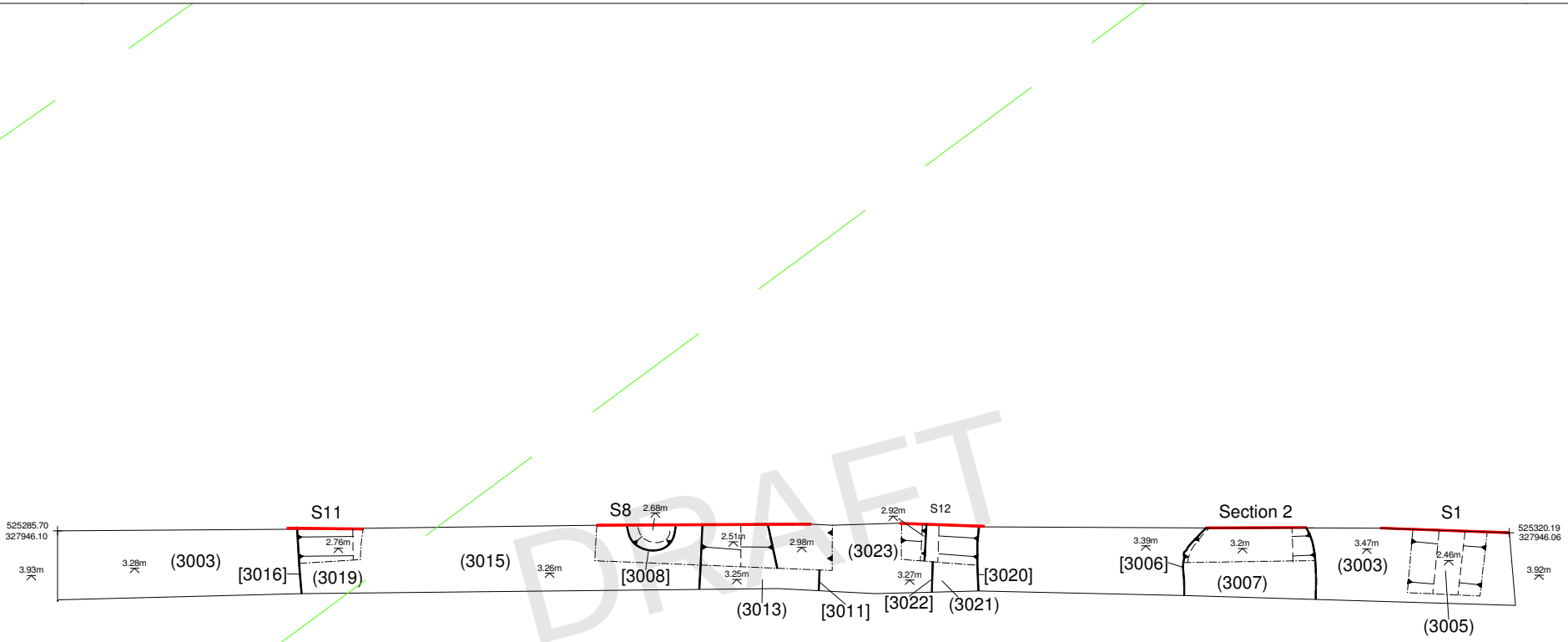


Figure 6 - Trench 3 plan

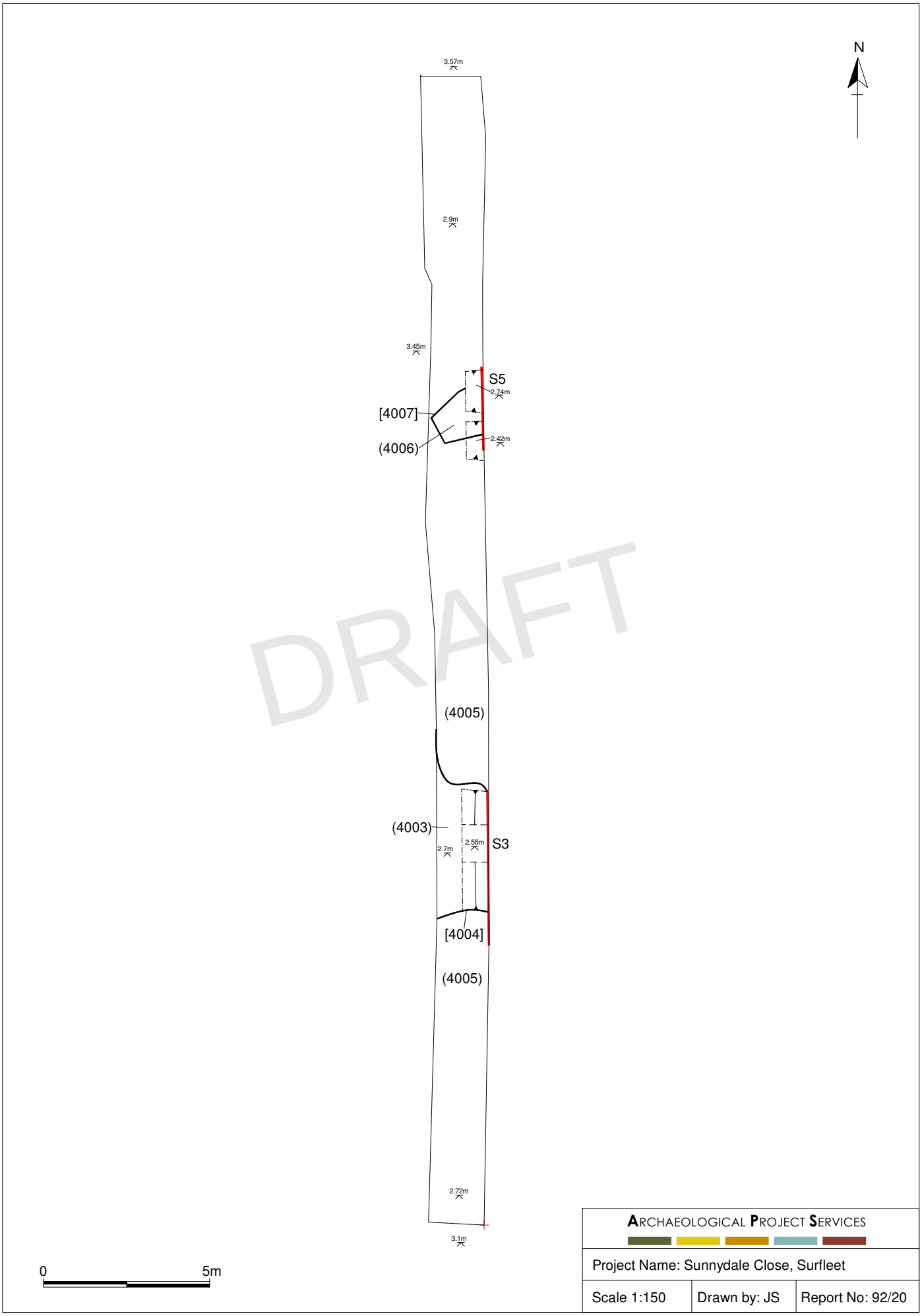
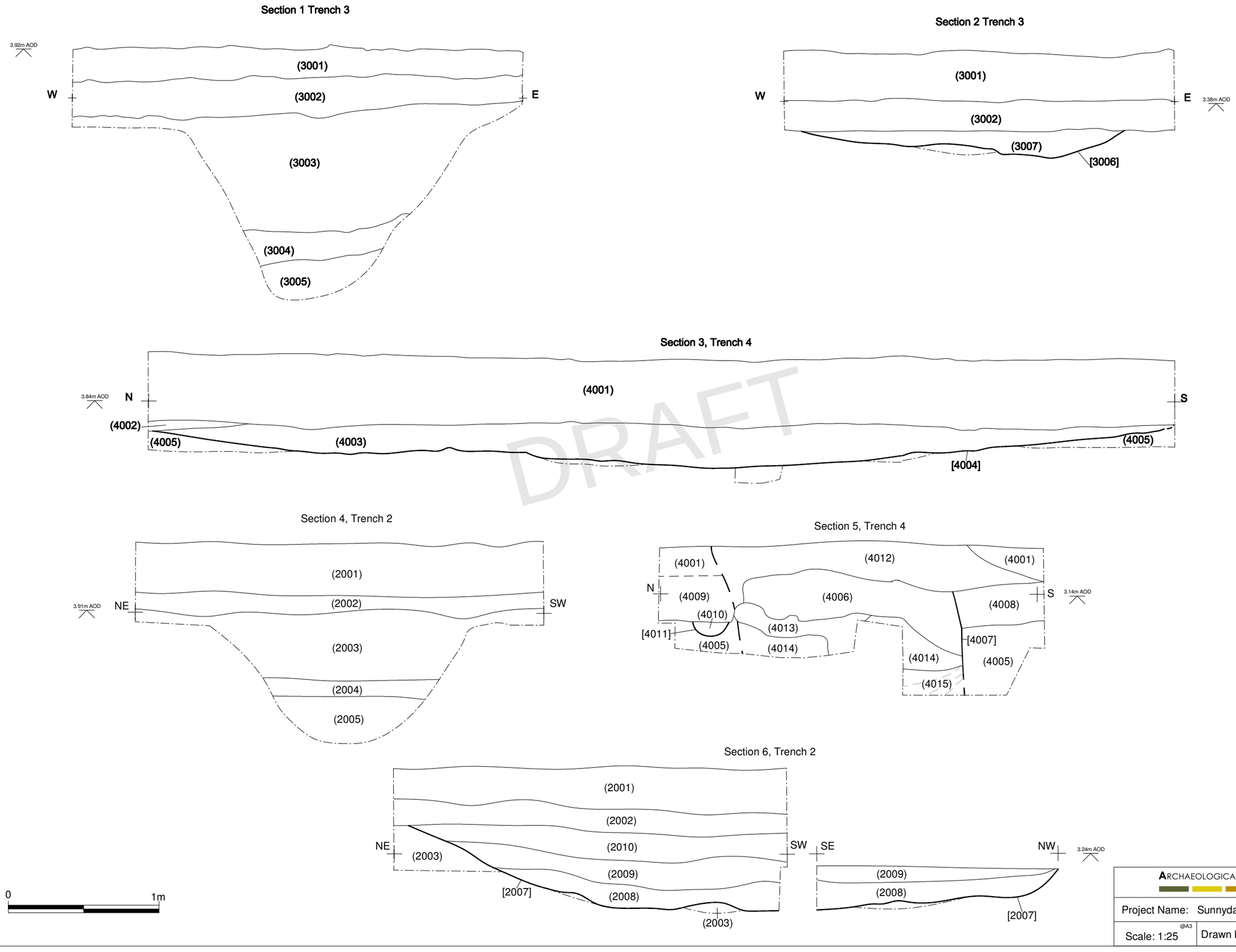
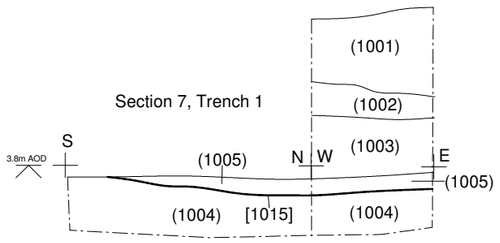


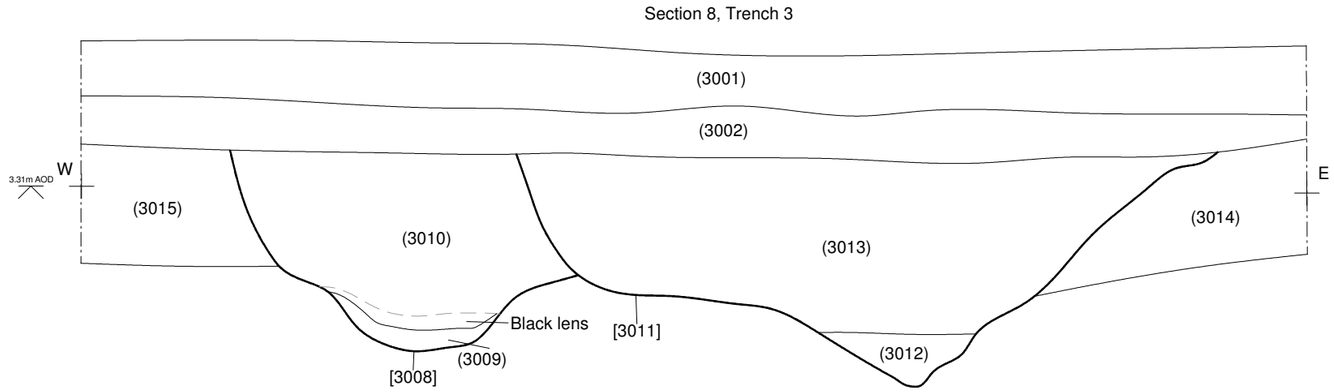
Figure 7 - Trench 4 plan

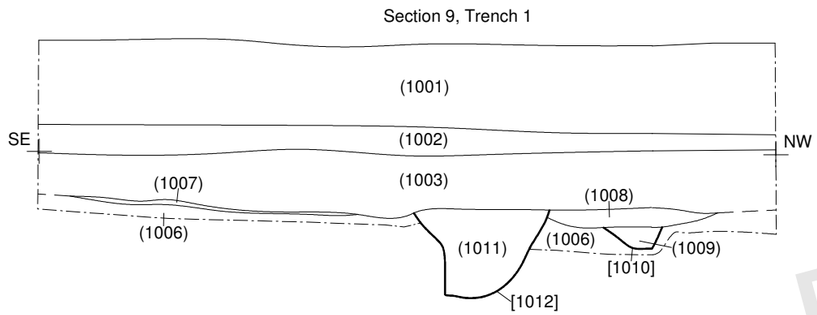


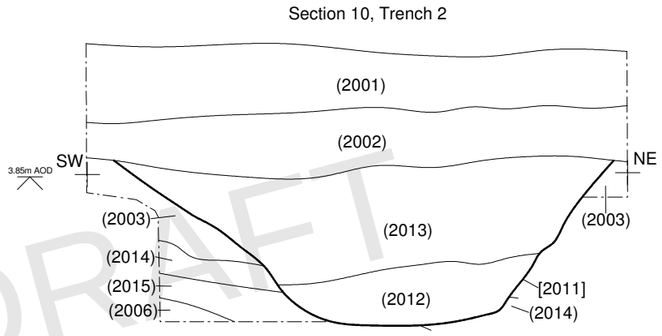
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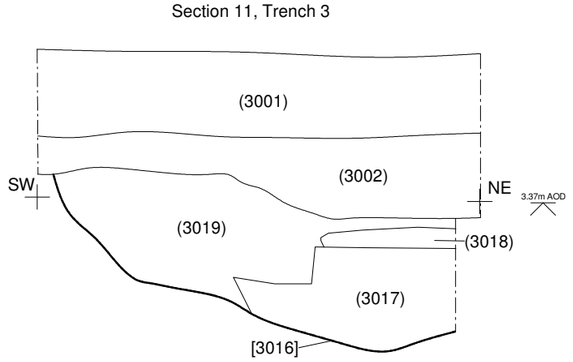
Figure 8 - Sections 1 to 6

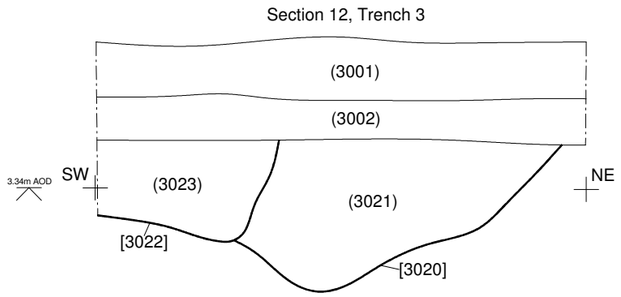


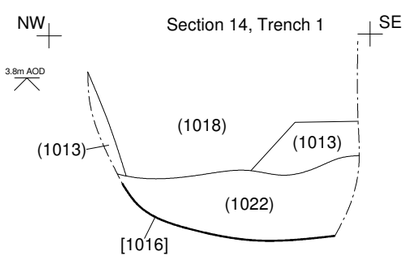


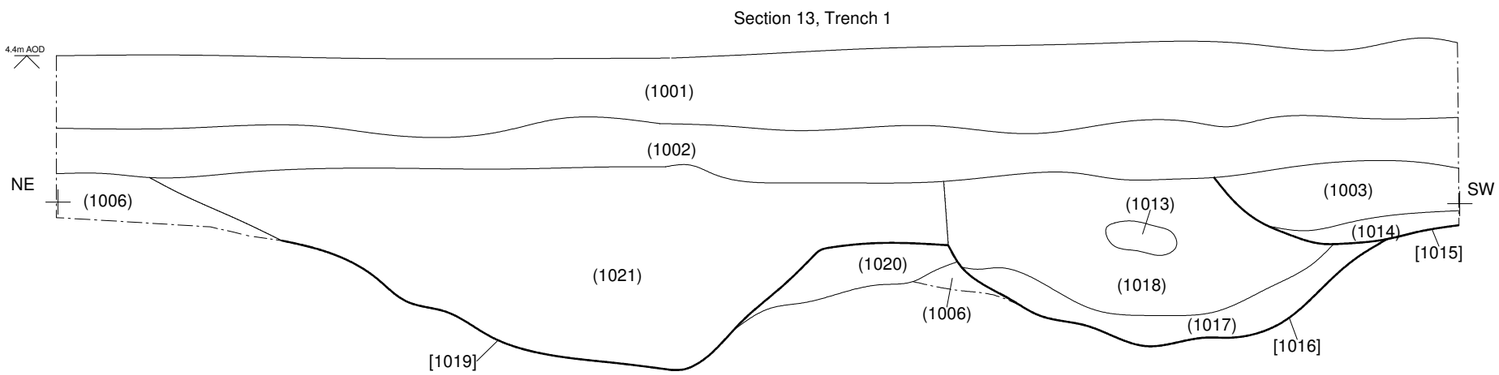












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ARCHAEOLOGICAL PROJECT SERVICES

Project Name: Sunnydale Close, Surfleet		
Scale: 1:25 @A3	Drawn by: JS	Report No: 92/20

Figure 9 - Sections 7 to 14

Appendix 1

CONTEXT DESCRIPTIONS

Context no.	Description	Interpretation
Trench1		
1001	Loose crumbly, mid- dark brown silt. Deposit 0.35m thick.	Topsoil layer
1002	Loose, light yellowish brown silt with moderate patches of topsoil. Deposit 0.25m thick.	Subsoil layer
1003	Loose, light yellowish brown silt with occasional small shell fragments. Deposit 0.25m thick.	Alluvial layer
1004	Moderate, light yellowish brown- light brown silt with some fine sand and small shell fragments. Deposit 0.25m thick.	Natural silt layer
1005	Moderate, mixed dark brown and yellowish brown organic silt, silt and fired silt with possible kiln residue or fired base waste. Deposit 0.07m thick.	Possible activity layer/ fill of shallow hollow- linear
1006	Moderate, light yellowish brown- light brown silt with some fine sand and small shell fragments. At least 0.12m thick.	Natural silt layer
1007	Moderate, dark grey black organic silt with fired silt flecks and lumps. \deposit 0.03m thick.	Spread/ possible activity layer/ fill of shallow hollow- linear
1008	Moderate, dark grey black and greyish brown silt with slight clay, ash and degraded heated silt patches. Deposit 0.08m thick.	Spread/ possible activity layer/ fill of shallow hollow- linear
1009	Firm, mixed mid yellow and mid grey heat affected silt. Deposit 0.09m thick.	Fill of [1010].
1010	Linear cut, 1m length seen, 0.42m wide and 0.09m deep. Gradual – steep smooth sides and flat base. Orientated c. north- south.	Small gulley.
1011	Moderate, mixed light yellowish brown and dark brown silt with some organic. Deposit 0.36m thick.	Fill of [1012]
1012	?Sub-circular cut, seen 0.18m by 0.53m wide and 0.36m deep. Steep- vertical sides and roughly flat base. Cuts (1007)(1008).	Small pit or post hole.
1013	Solid- moderate, red- pinkish red fire/ heated silt, appears to be directional heat and may be structural. Deposit 0.53m thick.	Possible kiln structure/ dumped activity material within [1016]
1014	Loose, mid yellow brown and black grey ashy silt with heated grey fired silt lumps. Deposit 0.06m thick.	Spread/ possible activity layer/ fill of shallow hollow- linear
1015	Sub linier cut, 1m+ long, 2.1m wide and 0.36m deep. Gentle undulating sides and broad gently undulating base. Orientated possibly northwest- southeast.	Possible ditch, creek or pond.
1016	Sub-circular to oval cut, seen 1.9m by c.1.8m and 0.68m deep. Moderate- steep sides and concave base. Possibly orientated northwest- southeast. Cut by [1015] and unclear relationship with [1019].	Pit, ?for kiln structure/ rubbish pit
1017	Soft- moderate, light brownish grey sandy silt. Deposit 0.11m thick.	Fill/ settling in [1016].
1018	Moderate- firm, mixed mid brown and red silt and fired silt. Deposit 0.56m thick.	Dump/ collapsed structure in [1016].
1019	Linear cut, 1.6m+ long, c. 3m wide and 0.8m deep. Gradual sides and gently concave base. Orientated northeast-southwest.	Ditch or channel.
1020	Moderate, light- mid yellowish brown silt with some sand. Deposit 0.22m thick.	Alluvial layer

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1021	Loose, mid brown silt with occasional mussel shell fragments. Deposit 0.8m thick.	Fill of [1019].
1022	Loose, mixed red, yellow brown, grey and black lenses of burnt/ heated material, ash, silt and burnt silt. Deposit 0.56m thick.	Fill of [1016]
Trench 2		
2001	Loose, dark greyish brown silty clay. Deposit 0.23m thick	Topsoil layer
2002	Friable, mid greyish brown clayey silt with rare sub-angular stones. Deposit 0.13m thick	Subsoil layer
2003	Friable, mid brownish yellow silty sand. Deposit 0.44m thick.	Natural layer
2004	Friable, mid yellowish grey silty clay with some mineral lumps and stains. Deposit 0.1m thick.	Natural layer
2005	Firm, light brownish grey silty clay with moderate shell. At least 0.31m thick.	Natural layer
2006	Firm, mid brownish yellow sandy clay. Deposit seen to 0.08m thickness.	Natural layer
2007	Sub circular cut, 1.6m+ by 3.1m and 0.51m deep. Gradual concave sides and flat base. Orientated northeast-southwest.	Pit or linear terminus.
2008	Friable mid greyish blue clayey silt with frequent degraded organic material, moderate natural lenses and occasional charcoal flecks, 0.2m thick.	Alluvial deposit in pit [2007]
2009	Friable mid brownish grey clayey silt with moderate lenses of natural and frequent degraded organic material, 0.21m thick.	Alluvial deposit in pit [2007]
2010	Compact mid greyish brown silty clay with occasional charcoal flecks, 0.18m thick	Alluvial deposit in pit [2007]
2011	Cut of a northwest-southeast aligned linear feature with moderate convex sides and a concave base, at least 1.6m long, 2,04m wide and 0.64m deep.	Ditch
2012	Friable mid bluish grey silty sand with occasional charcoal flecks, 0.25m thick.	Alluvial deposit in ditch [2011]
2013	Firm dark greyish brown sandy silt with occasional charcoal flecks, 0.44m thick.	Alluvial deposit in ditch [2011]
2014	Friable mid yellowish grey sandy silt with frequent lenses of degraded organic material. 0.13m thick.	Natural fluvial marsh deposits
2015	Friable mid yellowish brown sandy silt with very frequent lenses of degraded organic material and mussel shells. 0.14m thick.	Natural fluvial marsh deposits
Trench3		
3001	Loose mid greyish brown sandy silt, 0.2m thick	Plough soil
3002	Friable light greyish brown sandy silt, 0.22m thick	Subsoil
3003	Friable light yellowish brown silty sandy	Natural
3004	Bands of mid brownish yellow and mid grey silt, 0.18m thick	Alluvial deposit
3005	Mid greyish brown clayey silt, at least 0.26m thick	Natural
3006	Possibly oblong cut aligned northeast-southwest, with shallow concave side and a flat base, at least 1.6m long, 2.1m wide and 0.18m deep.	Elongated pit.
3007	Loose mid blueish grey silty sand, 0.18m thick	Fill in pit [3006]
3008	Circular cut with steep concave sides and a concave base. Diameter 1.18m, depth 0.92.	Pit or possibly a terminus
3009	Friable light grey clayey silt, with briquetage 0.08m thick.	Lining of pit [3008]?
3010	Friable grey silty sand with a lens of black material towards the base and frequent briquetage, 0.71m thick.	Fill in pit [3008]
3011	North-south aligned linear feature with a straight, moderate eastern slope, a steep, concave western slope and a v-	Ditch

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	shaped base. At least 1.6m long, 2.84m wide and 0.86m deep.	
3012	Friable dark reddish grey silty clay, 0.22m thick	Fill in ditch [3011]
3013	Loose mixed grey and black silty sand, 0.74m thick. Black lensing concentrates towards centre of the feature.	Fill in ditch [3011]. Waterborne deposit.
3014	Loose light grey silty sand, 0.5m thick. Width greater than 6.6m. Located between Section 11 and 12.	Fill of a large creek?
3015	Same as (3014)	Same as (3014)
3016	North-south aligned linear feature with moderate concave sides. Not fully excavated. At least 0.7m deep. May be related to (3014).	Possible creek
3017	Friable dark blueish grey silty sand with occasional shells, 0.41m thick. Unusual interface with (3019)	Fill in creek [3016]
3018	Friable light yellowish grey silty sand with very frequent mussel shells, 0.08m thick.	Fill in creek [3016]
3019	Friable mid yellowish grey silty sand, 0.64m thick.	Alluvial fill in creek [3016]
3020	North-south aligned linear cut with shallow concave sides and a concave base, at least 1.6m long, 1.34m wide and 0.62m deep. Western edge truncated by [3022].	Ditch
3021	Friable light yellowish grey silty sand, 0.62m thick.	Fill in ditch [3020]
3022	Cut of a north-south aligned linear feature, with steep irregular sides. At least 1.6m long, at least 0.86m wide and 0.42m deep. Unknown western edge.	Creek
3023	Compact mid grey sand, 0.42m thick.	Fill in [3022]
Trench 4		
4001	Loose dark brown humic silt, 0.48m thick.	Plough soil
4002	Soft light greyish brown silt, 0.08m thick.	Subsoil
4003	Loose light greyish brown silt, 0.27m thick	Fill in [4004]
4004	Irregular linear feature, aligned roughly east-west, with shallow irregular sides and an irregular base. At least 1.6m long, 6.8m wide and 0.27m deep.	Natural creek.
4005	Light greyish yellow clayey silt	Natural
4006	Loose light brownish yellow sand	Redeposited natural in pit [4007].
4007	Sub-rectangular cut with straight, near vertical sides. At least 1.5m long, 1.5m wide and at least 1.05m deep.	Mechanically dug hole. Possibly a geotechnical pit.
4008	Firm mid brown humic silt, 0.27m thick	Topsoil below plough line
4009	Same as (4008)	Same as (4008)
4010	Firm light yellowish brown silt, 0.08m thick.	Fill of [4011]
4011	Linear cut with an east-west alignment, moderate concave sides and a concave base. At least 1.6m long, 0.22m wide and 0.08m deep.	Agricultural feature, perhaps deep ploughing or pan busting.
4012	Loose mix of mid brown humic silt and light yellow sand, 0.25m thick	Ploughed portion of (4006)
4013	Firm dark brown turf and humic silt with yellow sand patches.	Backfill in [4007]
4014	Soft mix of mid brown humic silt and yellow brown sand, 0.35m thick.	Backfill in [4007]
4015	Light yellowish brown silt with some humic lenses	Backfill in [4007]

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Appendix 2

THE FINDS

POST ROMAN POTTERY
By Jane Young and Johanna Gray

Introduction
Thirty-one sherds of post-Roman pottery representing twenty-three vessels and weighing 0.501kgs were examined for this report. The pottery ranges in date from the late Saxon to early modern periods. The material was examined both visually and under a x20 binocular microscope and then recorded using the fabric codenames (CNAME) of the City of Lincoln Archaeology Unit (Young et al 2005). The assemblage was quantified by three measures: number of sherds, vessel count and weight with the resulting archive being entered onto an Access database (Table 1). Recording of the assemblage was in accordance with the guidelines laid out in Slowikowski, *et al.* (2001) and a Standard for Pottery Studies in Archaeology (2016) and complies with the Lincolnshire County Council's *Archaeological Handbook* (sections 13.4 and 13.5).

Condition
The material is in a slightly abraded to abraded and stable condition. Concretions on many of the recovered sherds together with some discoloration indicate exposure to a waterlain or waterlogged environment at some stage. Individual sherd size varies from 1 gram to 110grams.

The Material
In total twenty-eight sherds from twenty vessels of late Saxon to post-medieval date from local and regional sources and three early modern vessels were recovered from the site (Table1).

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Table 1, *Pottery types from the site with total quantities by sherd, vessel count and weight in grams*

Codename	Full name	Earliest date	Latest date	Total sherds	Total vessels	Total weight
BERTH	Brown glazed earthenware	1550	1800	1	1	2
BL	Black-glazed wares	1550	1750	3	1	89
BOU	Bourne D ware	1350	1650	1	1	21
BOUA	Bourne-type Fabrics A, B and C	1150	1400	2	1	170
EST	Early Stamford ware	870	1010	10	5	101
LERTH	Late earthenwares	1750	1900	1	1	3
PEARL	Pearlware	1770	1900	1	1	1
SLSNT	South Lincolnshire St. Neots-type	980	1100	1	1	16
ST	Stamford Ware	970	1200	9	9	87
STAMT	Stamford-type variants	950	1200	1	1	6
WHITE	Modern whiteware	1850	1900	1	1	5

Late Saxon to Saxo-Norman
Twenty-one sherds representing sixteen vessels in four ware types are of late Saxon or Saxo-Norman type. Thirteen of these vessels are of certain pre-conquest date. The ten sherds representing five vessels of Early Stamford type (EST) are from four unglazed jars and a small jar/bowl in a reduced light firing iron-rich variant of Fabric A (Kilmurry 1980 and Leach 1987) These vessels are most likely to be of late 10th to early/mid 11th century date. Nine sherds in a range of fabrics are of Saxo-Norman Stamford type (ST). Four oxidised glazed sherds are in an iron-rich fabric similar to Stamford ware Fabric G. The sherds are unlike most 11th century vessels in Fabric G, having not only an iron-rich fabric but thicker vessel walls and thick almost opaque glazes of green to yellowish-brown hue. Visually these sherds are more akin to 'Stamford ware' type vessels thought to have been produced in Denmark between the late 10th and early 11th centuries (Christensen et al. 1994), although the fabric of the vessels recovered from this site does not immediately suggest a source other than Stamford. The thinner walled essentially fineware vessels usually found in Fabric G that first appear in Ceramic

Horizon ASH12 deposits (early to early/mid 11th century) deposits in Lincoln becoming common by Horizon ASH13 (early/mid to mid/late 11th century) (Young, Vince and Nailor 2005) are represented by a single basal sherd from a jar, pitcher or bowl found in fill (2009) of pit [2007]. The fabric at magnification, despite the lack of iron-rich grains, still suggests an early date for the vessel (early to mid 11th century). An unglazed sherd from a small jar in reduced/oxidised Fabric A/G + iron-rich grains is also likely to date to between the late 10th and early/mid 11th centuries, whereas a neck sherd (also in Fabric A/G) lacking the iron-rich grains is from an unglazed bowl of generic 11th century date with a folded flanged rim. A small unglazed jar sherd in Fabric A can only be dated to between the 11th and mid 12th centuries. The latest of the identifiable Stamford ware sherds is from a thinly glazed jar or pitcher in Fabric B.

A light-firing sherd recovered from fill (2013) of ditch [2011] in Trench 2 has been classified as a Stamford-type (STAMT). Visually the sherd is similar to light firing Early Stamford ware (EST) vessels in Fabrics A or D, but examination at x20 magnification shows that the fine quartz tempered is more like that of a Medieval Bourne ware product (BOUA) in Fabric A. Due to Covid 19 restrictions it has not been possible to directly compare either coarse Early Stamford ware or fine Bourne ware fabrics with the recovered sherd. The form suggests a large Stamford ware Type 1 jar or bowl of 11th or 12th century date.

The only shell-tempered sherd found on the site comes from the base of a small South Lincolnshire St Neots-type of late 10th to 11th century date found n fill (2009) of pit [2007].

Medieval
Two sherds from a single jug of Medieval Bourne-type (BOUA) are the only medieval sherds to be recovered from the site. The jug is unusual being in form and rim shape more like a Late Medieval Toynton type. The fabric which is closest to that of Fabric B produced at Bourne is composed of quite coarse rounded quartz grains with additional sparse calcareous grains. It is possible that this jug may have been produced at another production site most probably between the 14th and mid 15th centuries.

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Post-Medieval
Five sherds from three vessels are of post-medieval type. An unusual sherd in a late fine calcareous Bourne fabric (BOU) is from a large jar or bowl with an external yellow glaze over a thick white slip. There is an external red slip suggesting that this may have had a 'bichrome' effect with a black or dark brown external glaze. Little is known about the late products of the Bourne kilns but this vessel is likely to date to between the 16th and mid 17th centuries. A small Brown-glazed Earthenware sherd (BERTH) is from a small hollow vessel, possibly a cup, of mid 16th to 17th century date. Three Black-glazed Earthenware sherds (BL) are from a single large bowl of late 18th to mid 20th century date.

Early Modern
Three sherds are of early modern date. A fine earthenware sherd (LERTH) is from a small flowerpot of late 19th to 20th century date. The Pearlware sherd (PEARL) from a small hollow vessel dates to between the late 18th and mid 19th centuries whilst a Whiteware sherd of 19th or 20th century date is from a jar.

The Site Sequence
The pottery was recovered from eight deposits in four trenches. In Trench 1 fill (1021) of channel [1019] produced two fairly large sherds from a single Medieval Bourne-type jug of probable 14th to mid 15th century date. The only other sherd to be recovered from this trench is from a small late 19th to 20th century flowerpot (LERTH) found in plough soil layer (1001).

Post-Roman pottery was recovered from two deposits in Trench 2. The small group of six sherds found in fill (2013) of ditch [2011] represents four vessels of mixed date. The latest three sherds come from a single large Black-glazed Earthenware bowl of late 18th to mid 20th century date. The other sherds are of residual Saxo-Norman type. Pit [2007] produced a small group of seventeen sherds representing twelve vessels found in fill (2009). The late Saxon group contains a number of vessels in unusual fabrics and of unusual appearance. The five unglazed Early Stamford ware vessels (EST) comprise four jars and a jar or bowl in an iron-rich fabric similar to Fabric A found at Stamford. Six glazed Stamford ware (ST) jars or pitchers are in an iron-rich light firing oxidised fabric similar to early examples of Fabric G at Stamford. These vessels are unusually glazed with a thick almost opaque green to yellowish-brown glaze. Two other Stamford ware vessels, a small unglazed jar

in an iron-rich Fabric A/G and a glazed base in early Fabric G from a jar/pitcher or bowl. The only non-Stamford type sherd in the group is the base of a South Lincolnshire St Neots-type jar. The recovered pottery appears to represent a contemporary group of early to early/mid 11th century date and for this date is unusual in the high number of glazed vessels present.

A single sherd recovered from Trench 3 was found in fill (3018) of channel [3016]. The sherd is from a glazed Stamford ware jar or pitcher of mid/late 11th to 12th century date.

Three deposits in Trench 4 produced sherds of post-Roman pottery. Linear feature [4003] produced a sherd from a large Post-medieval Bourne-type (BOU) jar or bowl of potential 16th to mid 17th century date. The single sherds recovered from fill (4006) of pit [4007] and topsoil layer (4009) are of respective 19th to 20th and late 18th to mid 19th century date.

Summary and Recommendations
A small but potentially important group of post-Roman pottery containing a number of atypical vessels was recovered from the site. The assemblage suggests activity in the Saxo-Norman, medieval, post-medieval and early modern periods with a small group of early to early/mid 11th century date providing a focal date for some of the Saxo-Norman activity. This small group found in pit [2007] contains Stamford-type vessels in previously unclassified iron-rich fabrics that may have been produced at Stamford itself or at another centre. Production of Stamford-type pottery in the late 10th to 11th centuries is known both within England at Pontefract in Yorkshire (Cumberpatch and Roberts 2013 and Roberts et al. 2013) and in Denmark (Christensen et al. 1994). The only medieval vessel (BOUA) and one of the post-medieval vessels (BOU) are of unusual Bourne-type. They may have been produced at Bourne or another centre within South Lincolnshire or North Cambridgeshire.

Ten sherds have been removed to the County Fabric Type Series. The early modern pottery could be discarded as a full archive record has been made and it is highly unlikely that it would be selected for future study. The remaining sherds should be retained.

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THE SALTMAKING FINDS
By Tom Lane

Introduction
A total of 36 pieces of fired clay was submitted for Assessment. The items were collected during trenching ahead of development at a known saltern site in Surfleet. Most of the pieces are from Trench 1, in particular from Context (1013), in the remains of a possible hearth feature some 1.24m long (minimum) by 1.32m wide. The material was recorded in March 2021.

Archaeological Background
Medieval salterns are known in the area of the river Glen north of Spalding (eg Healey 1993). The date of the first salterns in the area is unknown but two were recorded at Surfleet at Domesday. In the late 12th century saltmaking was active at Surfleet, as gifts of salt or salterns were made to Lincoln Cathedral and Thorney Abbey (Lane 2018, Table 3). A saltern mound at Surfleet Seas End was evaluated in 2001 when parts of filtration units were recorded and said to be lined with lime mortar (Rylett 2001). Pottery from among the industrial debris suggested a 13th century date for the salt working there, with abandonment of the mound coming shortly after.

Results
Table 2, Fired Clay Archive

Cxt	FeatureType	Fabric	Quantity	Artefact type	Bleaching	Description	Weight (g)
1001	Topsoil		4	Fired Clay	nil	Amorphous Fired Clay	83
1008	Fill of shallow Hollow		2	Fired Clay	light	Amorphous fired clay. One piece with straight edge which has slight bleaching	32

Cxt	FeatureType	Fabric	Quantity	Artefact type	Bleaching	Description	Weight (g)
1005	Fill of shallow linear		1	Fired Clay	nil	Amorphous Fired Clay	2
1018	Dump		4	Fired clay/silt	nil	Amorphous calcareous fired clay/silt	29
1018	Dump		8	Fired Clay	nil	Amorphous Fired Clay	80
1021	Fill of ditch or channel		1	Fired clay/silt	nil	Amorphous calcareous fired clay/silt	10
1021	Fill of ditch or channel		2	Fired Clay	nil	Amorphous fired clay	19
1013	Pit containing kiln waste		11	Fired clay	nil	Amorphous fired clay. 4 pieces with partial straight edge.	592
2009	Alluvial Deposit in pit		2	Fired clay/silt	nil	Amorphous calcareous fired clay/silt	191
4009	Topsoil below ploughsoil		1	Fired clay	nil	Amorphous fired clay	36
Totals			36				1074

Discussion
While it is highly likely that the site was on a former saltern mound it is unfortunate that none of the identifiable features associated with medieval salt making were revealed. Aside from the Surfleet Seas End site noted above, where parts of filtration units typical of salterns of the period were recorded, the nearest excavated saltern is at Quadring, in Bicker Haven where a date of early 14th century was reported (Healey 1999, 98). The in-situ hearths there were each 1.37m long by 0.38m wide.

Saltmaking in the medieval period involved the collection of salt impregnated muds from the foreshore or estuary, its filtration using fresh water through turves, collection in a vat and the boiling of the resultant strengthened brine in lead pans over a hearth. Sometimes this was conducted on the mounds and sometimes on the adjacent land surface.

Further work on the site would be likely to reveal the former hearths and filtration units, along with the salt cote, the rough shelter housing the boiling process.

FAUNAL REMAINS
By Nathan Sleaford

Introduction
Twenty fragments of animal bone, weighing 430g, and a single fragment of marine shell, weighing 2g, were recovered by hand from seven contexts during excavation at Sunnydale Close, Surfleet.

The assemblage was recorded in Microsoft Excel, with the faunal remains laid out in context order. Identification was undertaken using published catalogues (i.e. Schmid 1972, Cohen and Serjeantson 1996, Hillson 2003), and the author's own reference collection. All of the animal remains were counted and weighed, assigned a unique record number, and, where possible, identified to taxon, element and side. Conjoining fragments were flagged as such and assigned the same record number to help distinguish between raw fragment counts and individual specimens (NISP). Ribs and vertebrae were only recorded to taxa when they were substantially complete and could be accurately identified. Where the taxon could not be determined, fragments were instead recorded as micro (mouse-size), small (rabbit-size), medium (sheep-size) or large (cattle-size). The condition of the bone was also noted with reference to Lyman (1996) and graded from 0-5 accordingly, with grade 0 being the best preserved and grade 5 representing bone that had deteriorated to the point of being unrecognisable.

To assess body part representation and fragmentation, specimens were recorded as whole, proximal or distal elements; depending on how much of a given element was present, specimens were recorded as either less

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than or greater than 50% 'complete'. Specimens were also recorded as being measureable or non-measureable (after von den Driesch 1976) to assess their potential for biometrical analysis and give a further indication of fragmentation. Fusion data, butchery marks, gnawing, burning and pathological changes were also recorded where present. Tooth wear and eruption could not be recorded due to the lack of suitable specimens.

The assemblage was assessed in March 2021.

Summary
Of the 20 fragments of bone in the faunal assemblage, ten were identifiable, with refitting pieces bringing the individual specimen count to seven. Five fragments of bone from medium-sized mammals, one from a large-sized mammal, and four indeterminate pieces, made up the rest of the assemblage. The assemblage is summarised by context below.

(1008)
This diffuse context produced a single specimen: a right-sided upper cattle premolar.

(1021)
Two conjoining fragments of the proximal end of a right radius-ulna of a horse were recovered from the fill of ditch [1019]. The proximal epiphysis of the radius had fused. A fragment of rib from a large mammal was also recorded.

(2009)
Two fragments of long bone from medium-sized mammals were recovered from this pit [2007] deposit.

(2013)
Four specimens were recovered from an alluvial deposit within ditch [2011]. These included an unfused distal epiphysis from the left femur of a horse, and the distal portion of a sheep/goat right tibia with a fused epiphysis. A fragment of medium-sized mammal bone and one indeterminate bone were also recorded.

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(3021)
Two conjoining fragments of the body of a dog right mandible were recovered from the fill of ditch [3020]. The mandible retained the permanent second and fourth premolar, and part of the first molar. A loose dog canine was also recovered, as well as a small fragment of indeterminate bone.

(4003)
Five fragments were recovered from the fill of a natural creek [4004]. Two conjoining fragments constituted the distal portion of a left pig humerus. Two fragments of medium-sized mammal bone and one indeterminate bone were also recorded.

This context also produced a small fragment of marine shell from European Flat Oyster (*O. edulis*), which may have been deposited through alluvial processes.

(4009)
A single piece of indeterminate burnt bone was recovered from this topsoil layer.

Conclusion
A range of domestic mammals - cattle, sheep/goat, horse, dog, and pig - are represented in the assemblage. While this might indicate a standard domestic refuse assemblage, interpretation is problematic with such a small sample size. An understanding of the spatial and temporal aspects of the assemblage is further complicated due to the lack of concentrated deposits of bone and evidence of alluvial activity indicating that at least some of the assemblage may have been disturbed or deposited through non-anthropogenic processes.

No evidence of butchery, or pathological or taphonomic alterations, were noted on the remains, and age-at-death evidence is limited. No measureable specimens were present in the assemblage.

Overall, the bone and shell assemblage from Sunnydale Close is of limited significance and offers little potential for further interpretation. There is no need to retain the material and it may be safely discarded or incorporated into teaching or reference material as appropriate.

THE SLAG

By Charles Simpson

Introduction

A program of archaeological evaluation trenching was carried out by Archaeological Project Services on land off Sunnydale Close, Surfleet in the county of Lincolnshire. This work was carried out in advance of proposed residential development of the site. The area is archaeologically sensitive, lying south of the settlement of Surfleet in a general area of known salt-making dating to the medieval period. A previous archaeological evaluation and geophysical survey has identified medieval salt making on the western half of the Site. Six items listed as slag were recovered from a single context (1021) during archaeological excavations and post excavation processing. These were submitted for analysis and reporting. There was no dating evidence available at the time of writing from ceramics evidence.

Methodology

The assemblage was cleaned of surface debris, counted, weighed and macroscopically examined to identify diagnostic material and features. Exceptionally encrusted fragments were washed and dried in line with recommendations from Dungworth (pers.comm.) to reveal diagnostic surface features if present. Full reference was made to published guides (Crew 1995 & 1996; Dungworth et. al. 2012 (a),(b) & (c); Historic England 2015; HMS 2009; Paynter 2011) and reference material.

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Results

A summary of the assemblage is recorded below in the table below.

Table 3, Slag Archive

Context No.	Material	Date	No. Pieces	Mass (g)	Comments
1021	furnace slag	-	1	64	Dense, non-vesicular, magnetic, furnace slag.
1021	fuel ash slag	-	5	134	Very low density, highly vesicular, non-magnetic, fuel ash slag.

Discussion

The assemblage was quite small in terms of overall numbers of fragments (6). Five of the six pieces from context (1021) are very low density, highly vesicular and non-magnetic. Their semi-vitreous nature, very low mass and lighter colours (whitish-grey to grey-brown) are suggestive of high temperatures yielding this fuel ash slag. Fuel ash slag (fas) is created in reactions between alkaline fuel ash and other material such as a clay lining or ore matrix (Keys 2012). With the prevalence of salt production in the area this material is possibly the result of fires linked to salt making. Such fires could potentially show the same reaction between the fuel ash and the silicate nature of briquetage fabric or the nearby silty deposits, such as those in deposits (1018) and (1022) which also show evidence of being heat affected. Whilst it is uncommon to have temperatures sufficiently high to cause the production of fuel ash slag associated with salt production, it cannot be ruled out. Either way, there is insufficient evidence to positively confirm either scenario.

The final fragment of slag recovered from context (1021) was mid grey in coloration, magnetic, and non-vesicular furnace slag and as such was undiagnostic. The shape and lack of visible abrasion on all of the slag fragments recovered, especially the fuel ash slag which is very brittle and easily damaged, suggests they have not travelled far once deposition occurred. The high degree of visual similarity and identical composition between all fragments of fuel ash slag from this context suggest they stemmed from a single event. The date

of each piece is also highly likely to be the same. More accurate dating of these fragments without further supplementary investigation (via XRD / XRF analysis) is not possible at this time.

Recommendations
No further work is recommended at this stage. The six fragments of slag forming this assemblage need not be retained as part of the archive and may be disposed of. Any environmental samples taken from the features or deposits that produced slags, should be scanned for small fragments of metalworking debris such as hammerscale, which may indicate any associated industrial activity in the vicinity. Should further investigations be undertaken at any of the monitored locations, it would be advisable to seek appropriate advice on any sampling strategies.

Conservation
The slag samples submitted for analysis have no particular conservation requirements.

Retention and disposal
All samples have been returned to Archaeological Project Services for their retention / disposal.

Archive
An electronic copy of this report has been supplied to Archaeological Project Services and a copy of the electronic records pertaining to the work have been kept by Charles Simpson.

OTHER FINDS
By Denise Buckley and Paul Cope-Faulkner

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Introduction
Two items, together weighing 137g, were recovered during archaeological works at Sunnydale Close, Surfleet. The material was recorded in March 2021.

Condition
Although fragments, both items are in good, stable condition.

Results
Table 4, Other Materials

Cxt	Material	Description	NoF	W (g)	Date
2013	Worked stone	Hone fragment; square profile; 43mm x 40mm.	1	133	Post med
4009	Fire residue	Coal. Discard.	1	4	
Total			2	137	

Range
Alluvial deposit (2013) in ditch [2011] produced a fragment of a hone, or whetstone, dating to the post medieval period. It is in a coarse sandstone, possibly Carboniferous. It could have originated in Nottinghamshire or Derbyshire. Topsoil layer (4009) produced a piece of coal.

Summary and Recommendations
The coal is of no further potential and has been discarded. The hone fragment should be retained and should pose no problems for long term storage.

SPOT DATING
The dating in Table 5 is based on the evidence provided by the finds detailed above.

Table 5, Spot dates

Cxt	Date	Comments
1001	Late 19th to 20th	
1021	14th to mid 15th	

2009	Early to early/mid 11th on present evidence	
2013	Late 18th to mid 20th	
3018	Mid/late 11th to 12th	
4003	16th to mid 17th	
4006	19th to 20th	
4009	Late 18th to mid 20th	

ABBREVIATIONS

ACBMG	Archaeological Ceramic Building Materials Group
BS	Body sherd
CBM	Ceramic Building Material
CXT	Context
LHJ	Lower Handle Join
NoF	Number of Fragments
NoS	Number of sherds
NoV	Number of vessels
PCRG	Prehistoric Ceramic Research Group
TR	Trench
UHJ	Upper Handle Join
W (g)	Weight (grams)

PCRG	Prehistoric Ceramics Research Group
SGRP	Study Group for Roman Pottery
MPRG	Medieval Pottery Research Group

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ARCHIVE CATALOGUES

Archive catalogue 1, Post Roman Pottery

Tr. No.	Cxt	cname	full name	sub fabric	form type	No.S	No. V	W (g)	Dec	part	description	date
1	1001	LERTH	Late earthen wares	red fine sandy	small flowerpot	1	1	3		BS	Discard	late 19th to 20th
1	1021	BOUA	Bourne-type Fabrics A, B and C	Fabric B ?	large jug	2	1	170		rim with handle	slightly ridged strap handle; wedge rim; plugged upper handle upper handle join; probably not a Bourne product; upper finger pressings at UHJ; form as TOYII; internal wear ?; **County Fabric Type Series**	14th to mid 15th ??
2	2009	ST	Stamford Ware	Fabric early G + fe	jar/ pitcher	1	1	4		BS	thick deep yellow glaze; concretions incl breaks; fresh break no joining sherds	early to early/mid 11th
2	2009	SLSNT	South Lincolnshire St. Neots-type		small jar	1	1	16		base	soot on underbase & lower walls; fabric incl abundant fine shell & rare rounded quartz up to 1mm;thin shell as NEOT but no punctate; untrimmed base; concretions incl breaks	late 10th to 11th
2	2009	EST	Early Stamford ware	Fabric A+ fe	jar	5	1	65		BS	ext soot; reduced fabric; fresh breaks no joining sherds; concretions	late 10th to early/mid 11th
2	2009	EST	Early Stamford ware	Fabric A+ fe	jar	1	1	10		BS	ext soot patches & part breaks; concretions	late 10th to early/mid 11th
2	2009	EST	Early Stamford ware	Fabric A+ fe	small jar/ bowl	2	1	5		BS	fe in fabric incl ? Slag; thin walled - almost an ST; ext soot; concretions	late 10th to early/mid 11th
2	2009	EST	Early Stamford ware	Fabric A+ fe	jar	1	1	3		BS	concretions incl breaks; reduced	late 10th to early/mid 11th
2	2009	EST	Early Stamford ware	Fabric A+ fe	jar	1	1	18		BS	ext soot; fe includes ? Slag; concretions incl breaks. **County Fabric Type Series**	late 10th to early/mid 11th
2	2009	ST	Stamford Ware	Fabric A/G + fe	small jar	1	1	7		BS	soot specks; oxid int surface; concretions incl breaks. **County Fabric Type Series**	late 10th to early/mid 11th

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2	2009	ST	Stamford Ware	Fabric early G	jar/ pitcher/ bowl	1	1	33		base	ext pale yellow gaze; concretions	early to mid 11th
2	2009	ST	Stamford Ware	Fabric early G + fe	jar/ pitcher	1	1	3		BS	thick green bleeding orange glaze; concretions; int brown deposit; fresh break no joining sherds. **County Fabric Type Series**	early to early/mid 11th
2	2009	ST	Stamford Ware	Fabric early G + fe	jar/ pitcher	1	1	9		BS	thick misfired orange-yellow glaze with fe spots in glaze; **County Fabric Type Series**	early to early/mid 11th
2	2009	ST	Stamford Ware	Fabric early G + fe	Jar/ pitcher	1	1	8		BS	unusual; thick ext yellow-brown glaze; fresh breaks no joining sherds. **County Fabric Type Series**	early to early/mid 11th
2	2013	ST	Stamford Ware	Fabric A	small jar	1	1	6		BS	concretions	11th to mid 12th
2	2013	STAMT	Stamford-type variants	fine light firing sandy	large jar/ bowl	1	1	6		rim	everted/flanged rim; form as ST Type 1 bowl ?;fabric similar to fine BOUA Fabric A. **County Fabric Type Series**	11th to 12th ?
2	2013	ST	Stamford Ware	Fabric A/G	bowl	1	1	2		neck	folded flange rim missing; concretions	11th
2	2013	BL	Black-glazed wares	coarse orange	large bowl	3	1	89		rim & BS	late 18th to mid 20th;int glaze over red slip; hooked flange rim; ext red slip; fresh break no joining sherds	late 18th to mid 20th
3	3018	ST	Stamford Ware	Fabric B	jar/ pitcher	1	1	15		BS	ext thin glaze; concretions	mid/late 11th to 12th
4	4003	BOU	Bourne D ware	oxid fine calcareous	large jar/ bowl	1	1	21		BS	int misfired yellow glaze over thick white slip; ext red slip;? A bichrome slip ware?;concretions. **County Fabric Type Series**	16th to mid 17th ?
4	4006	WHITE	Modern whiteware		jar ?	1	1	5	? Traces dec	BS	wear around int neck. Discard.	19th to 20th
4	4009	BERTH	Brown glazed earthenware	orange fine-med sandy	small hollow	1	1	2		BS	int & ext glaze	mid 16th to 17th
4	4009	PEARL	Pearlware		small hollow	1	1	1	? Traces dec	BS	Discard	late 18th to mid 19th

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Archive catalogue 2, Faunal Remains

BONE ID	CXT	TAXA	ELEMENT	REGION	COMP	SIDE	WGT (g)	No.F	AGING	MEASURABLE	COND	TAPHONOMY /PATHOLOGY	CONJOIN?	OTHER
001	1008	Bos	Maxillary Tooth	P1/2	>	?R	5	1	n/a	NM	2	n/a	n/a	n/a
002	2009	Medium Mammal	LBF	Shaft	<	UNID	2	1	n/a	NM	2	n/a	n/a	n/a
003	2009	Medium Mammal	?Tibia	Shaft	<	UNID	16	1	n/a	NM	2	n/a	n/a	n/a
004	4003	?Sus	Humerus	Distal	<	?L	34	2	n/a	NM	2	n/a	Y	n/a
005	4003	Indet	UNID	UNID	<	UNID	0	1	n/a	NM	2	n/a	n/a	n/a
006	4003	Medium Mammal	Skull	Orbit	<	UNID	18	1	n/a	NM	2	n/a	n/a	n/a
007	4003	Medium Mammal	UNID	UNID	<	UNID	11	1	n/a	NM	3	n/a	n/a	n/a

008	1021	Large Mammal	Rib	Body	<	UNID	5	1	n/a	NM	1	n/a	n/a	n/a
009	1021	Equid	Radius-Ulna	Proximal	>	R	104	2	Pf	NM	2	n/a	Y	n/a
010	2013	Medium Mammal	Rib	Body	<	UNID	6	1	n/a	NM	3	n/a	n/a	n/a
011	2013	Equid	Femur	Distal	>	L	187	1	Du	NM	2	n/a	n/a	n/a
012	2013	Indet	UNID	UNID	<	UNID	12	1	n/a	NM	4	n/a	n/a	n/a
013	2013	Ovicaprine	Tibia	Distal	>	R	15	1	Df	Partial	0	n/a	n/a	n/a
014	4009	Indet	UNID	UNID	<	UNID	0	1	n/a	NM	2	Calcined	n/a	n/a
015	3021	Indet	UNID	UNID	<	UNID	0	1	n/a	NM	4	n/a	n/a	n/a
016	3021	Dog	Mandible	Body	<	R	13	2	n/a	NM	3	n/a	Y	P2, P4, M1
017	3021	?Dog	?Mandibular Tooth	?Canine	<	UNID	2	1	n/a	NM	3	n/a	n/a	n/a
018	4003	Flat Oyster (*O. edulis*)	Shell	n/a	<	UNID	2	1	n/a	NM	3	n/a	n/a	n/a

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Appendix 3

GLOSSARY

Alluvium Deposits laid down by water. Marine alluvium is deposited by the sea, and fresh water alluvium is laid down by rivers and in lakes.

Context An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretation of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, *e.g.* [004].

Cut A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, *etc*. Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded**.**

Creek A minor stream or a channel in a marsh.

Domesday Survey A survey of property ownership in England compiled on the instruction of William I for taxation purposes in 1086 AD.

Drift Material that has been eroded, transported or deposited by glaciers (or their melt water). The term 'drift' is commonly used to describe any deposits of Quaternary age.

Fill Once a feature has been dug it begins to silt up (either slowly or rapidly) or it can be back-filled manually. The soil(s) that become contained by the 'cut' are referred to as its fill(s).

Geophysical Survey Essentially non-invasive methods of examining below the ground surface by measuring deviations in the physical properties and characteristics of the earth. Techniques include magnetometry and resistivity survey.

Layer A layer is an accumulation of soil or other material that is not contained within a cut

Lidar An aircraft-based method of survey using analysis of pulses of laser light reflected from the surfaces of the ground and buildings. It is cable of identifying subtle differences in topography.

Medieval The Middle Ages, dating from approximately AD 1066-1500.

Modern The current period, dating from around AD 1900 to the present time.

Natural Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity

Old English The language used by the Saxon (*q.v.*) occupants of Britain.

Post-medieval The period following the Middle Ages, dating from approximately AD 1500-1900.

Redeposited An artefact that is redeposited is one that has been removed in the past from its original place of deposition. Redeposition can introduce earlier artefacts into later deposits, *e.g.* medieval or post-medieval ditch or pit digging may have invaded Roman levels, bringing Roman artefacts to the surface. When the

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medieval/post-medieval features are infilled the Roman artefacts become incorporated with those deposits; these Roman artefacts are said to be redeposited. If the age differences within an assemblage are not great it is sometimes difficult to determine if an artefact is redeposited or residual (*q.v.*).

Residual Artefacts that are noticeably earlier than others in an assemblage are often described as residual. Residual artefacts may be ones that were used for a very long time, or items that were maintained as heirlooms/antiques. If the dates of artefacts within a group do not exhibit major differences it can be difficult to determine if an artefact is residual or redeposited (*q.v.*)

Saxon Pertaining to the period dating from AD 410-1066 when England was largely settled by tribes from northern Germany, Denmark and adjacent areas.

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Appendix 4

THE ARCHIVE

The archive consists of:

4	Trench record sheets
53	Context record sheets
2	Photographic record sheets
1	Section record sheet
1	Plan record sheet
5	Daily record sheets
11	Sheets of scale drawings

All primary records are currently kept at:

Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincolnshire
NG34 9RW

The ultimate destination of the project archive is:

The Collection
Art and Archaeology in Lincolnshire
Danes Terrace
Lincoln
LN2 1LP

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Accession Number	LCNCC:2020.152
Archaeological Project Services Site Code:	SUSU20
Oasis record no:	archaeol1-418611

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the development site but away from the areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is of a similar character to that revealed during the current investigation.

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Appendix 5

OASIS Summary

OASIS ID: archaeol1-418611

Project details	
Project name	ARCHAEOLOGICAL EVALUATION ON LAND AT SUNNYDALE CLOSE, SURFLEET, LINCOLNSHIRE (SUSU20)
Short description of the project	The evaluation revealed a dump of burnt clay, probably associated with 14th-15th century salt making towards the north of the Site. Several ditches, probably related to water management for the salt making, were also revealed. A large quantity of 11th-12th century pottery indicated that late Saxon and early Medieval activity was present on the site.
Project dates	Start: 14-12-2020 End: 18-12-2020
Previous/future work	Yes / Not known
Any associated project reference codes	SUSU20 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 3 - Operations to a depth more than 0.25m
Monument type	SALTERN Medieval
Monument type	DITCH Medieval
Monument type	DITCH Early Medieval
Significant Finds	POT Medieval
Significant Finds	POT Early Medieval
Methods & techniques	"Targeted Trenches"
Development type	Housing estate
Prompt	Voluntary/self-interest
Position in the planning process	Not known / Not recorded

Project location	
Country	England
Site location	LINCOLNSHIRE SOUTH HOLLAND SURFLEET Sunnydale Close
Postcode	PE11 4BS
Study area	3.1 Hectares
Site coordinates	TF 2520 2794 52.834069392686 -0.141265798832 52 50 02 N 000 08 28 W Point

Project creators

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Name of Organisation	Archaeological Project Services
Project brief originator	Conservation Officer
Project design originator	Paul Cope-Faulkner
Project director/manager	Paul Cope-Faulkner
Project supervisor	Fiona Walker
Type of sponsor/funding body	Developer

Project archives

Physical Archive recipient	The Collection
Physical Contents	"Animal Bones","Ceramics","Worked stone/lithics"
Digital Archive recipient	The Collection
Digital Contents	"Animal Bones","Ceramics","Worked stone/lithics"
Digital Media available	"Images raster / digital photography","Images vector","Survey","Text"
Paper Archive recipient	The Collection
Paper Contents	"Animal Bones","Ceramics","Worked stone/lithics"
Paper Media available	"Context sheet","Diary","Plan","Report","Section","Survey "

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	ARCHAEOLOGICAL EVALUATION ON LAND AT SUNNYDALE CLOSE, SURFLEET, LINCOLNSHIRE (SUSU20)
Author(s)/Editor(s)	Smith, J.
Other bibliographic details	92/20
Date	2021
Issuer or publisher	Archaeological Project Services
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Description	A4 booklet

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