RiverOak Strategic Partners

Draft Written Scheme of Investigation

TR020002/D4/DWSI

Examination Document

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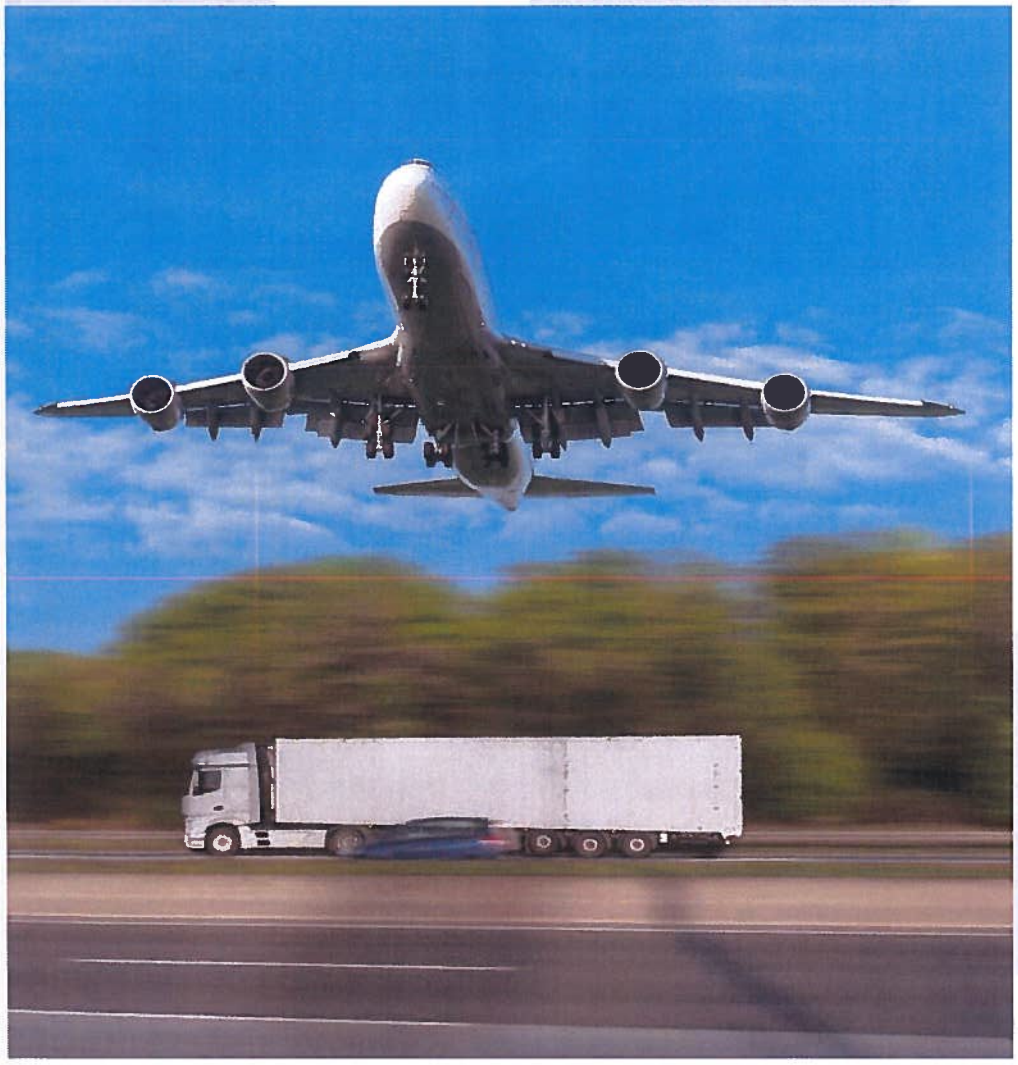
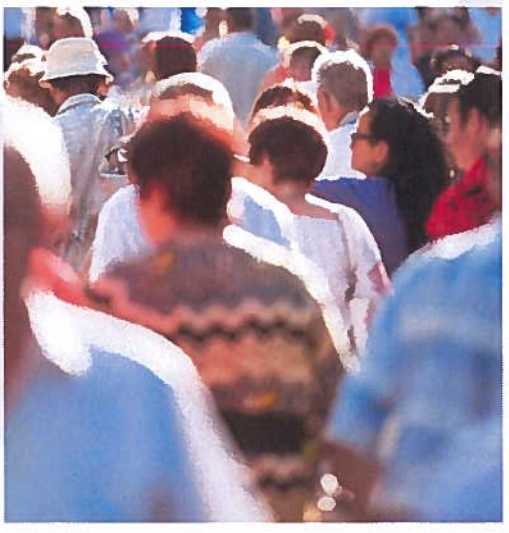
RiverOak Strategic Partners Ltd

Manston Airport DCO EIA

Archaeological Written Scheme of Investigation





Wood Environment & Infrastructure Solutions UK Limited – March 2019

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Document revisions

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Executive summary

Purpose of this report

This report has been produced for the purpose of setting out a programme of intrusive archaeological works to be carried out as mitigation of the loss of archaeological interest through the disturbance of archaeological remains within the Order Limits of the proposed Manston Airport redevelopment.

This report sets out:

- The project background;
- The archaeological and historical context of the site;
- The aims of the archaeological work, setting out linkages with established archaeological research agendas;
- An outline scope of archaeological works;
- Standards for archaeological works;
- Provisions relating to Health, Safety and Environment;
- Provisions for Monitoring of works by KCC; and
- Outline provisions for Outreach and Engagement.

Contents

1. Introduction

1.1 Background

1.1.1 This Written Scheme of Investigation (WSI) has been prepared in support of an application by RiverOak Strategic Partners Ltd (RiverOak) to re-open Manston Airport ('the site').

1.1.2 The application seeks to authorise the re-development of Manston Airport as a freight airport (hereafter referred to as the 'Proposed Development') with the capacity to handle a minimum of 10,000 air traffic movements annually.

1.1.3 This document has been produced to set out a scheme of archaeological investigation which is intended to mitigate the adverse effects of the construction of the Proposed Development.

1.1.4 This document comprises five principal elements:

- A summary of baseline archaeological knowledge, inclusive of recent field investigation (Section 2);
- A statement of the aims and objectives of the investigative works, including an archaeological research agenda (Section 3);
- A description of the scope of the proposed investigative work (Section 4);
- Standards for completion of the proposed investigative work, any post excavation analysis of artefactual material and dissemination of the results (Section 5); and
- Project management procedures (Sections 6 and 7).

1.1.5 This WSI is supported by the following figures shown in Appendix A:

- Figure 1: Site Location;
- Figure 2: Plan of areas discussed in the WSI.

1.2 Description of the Proposed Development

1.2.1 The proposals include both the use of the existing airport infrastructure and the introduction of new facilities. In summary, the Proposed Development includes:

- Upgrade of Runways (10/28) and re-alignment of the parallel taxiway (Alpha) to provide European Aviation Safety Agency compliant clearances for runway operations;
- Construction of 19 European Aviation Safety Agency compliant Code E stands for air freight aircraft with markings capable of handling Code D and F aircraft in different configurations;
- Installation of new high mast lighting for aprons and stands;
- Construction of 65,500m^2 of cargo facilities;
- Construction of a new air traffic control tower;
- Construction of a new airport fuel farm;
- Construction of a new airport rescue and firefighting service station;
- Development of the Northern Grass area for airport related businesses;

- Highway improvement works; and
- Extension of passenger service facilities including an apron extension to accommodate an additional aircraft stand and increasing the current terminal size.

1.2.2 In addition to the air freight hub, RiverOak proposes to develop:

- An aircraft maintenance, repair and overhaul facility and end-of-life recycling facilities;
- A flight training school;
- A fixed base operation for executive travel; and
- Business facilities for aviation related organisations.

1.2.3 Further details can be found in Chapter 3 of the Environmental Statement (ES) (document reference TR020002/ APP/5.2-1).

1.2.4 The site has been assessed and investigated previously. An ES was produced in 2016, followed by the production of a Historic Environment Desk-based Assessment (DBA) and ES chapter amendment were compiled subsequently. A geophysical survey was undertaken in 2016. This was followed by an archaeological evaluation on the site between November 2016 and February 2017 by AOC Archaeology Ltd (Site code FMA16).

1.3 Archaeological Response

1.3.1 This WSI sets out the archaeological response to potential disturbance of archaeological remains resulting from the construction of the Proposed Development.

1.3.2 The site can be divided, on the basis of archaeological potential and likely disturbance, into seven areas as listed below (shown on Figure 2):

- 'Northern Grass' area;
- West of Runway;
- South of Runway;
- East of Runway;
- Terminal, aircraft stands and Associated Parking;
- Apron and Freight Terminal; and
- Site entrance, taxiways and Air Traffic Control (ATC).

1.3.3 Within the 'Northern Grass' area, archaeological evaluation by geophysical survey and by trial trenching would be undertaken to inform detailed design of development proposals and to allow appropriate mitigation, whether by design or by investigation and recording, (or a combination of both approaches) to be specified and designed. Where remains requiring preservation in site are identified, the information from the evaluation will allow for an informed design response with appropriate provision for avoidance of these heritage assets. Standards for trial trenching are set out at section 5.3.3 and Appendix B.

1.3.4 Within other areas of the site, proposals for mitigation by investigation and recording are set out in principle to allow detailed mitigation design once detailed design is complete. Standards for this work are set out at section 5 and Appendix B.

2. Archaeological and Historical Context

2.1 Regional Context

2.1.1 The Proposed Development is located within a rich archaeological landscape and the present record comprises only a fraction of what survives in the area, based on chance finds, targeted investigation and techniques such as aerial photographic work that are limited by the conditions available. Experience of archaeological works on the flanks of the Wantsum and Stour Valley demonstrate that these areas were a focus for settlement and other activities from prehistoric to Saxon times and that important archaeological remains may survive. Remains that could be considered to be of national significance have been regularly encountered in the area and have arguably been observed within the site. Recently recovered remains from the Palaeolithic through to World War II (WWII) were discovered during the Thanet Earth excavations (Canterbury Archaeological Trust, 2009) and prior to the construction of the East Kent Access Road (Oxford Archaeology, 2015). Geophysical survey and subsequent archaeological evaluation undertaken within the site boundary (AOC, 2018) are discussed in further detail below.

2.1.2 The presence of previously unrecorded archaeological remains at the site may be suggested by the presence of surface finds of archaeological material, although these records could also reflect chance loss and do not presuppose the presence of related archaeological features. While it is difficult to predict the extent and significance of these deposits, comparison with the remains observed elsewhere within the site boundary suggests that any such remains are likely to represent previously unrecorded elements of asset types discussed below, and to be relatively widely distributed and to be of low or medium significance for archaeological value, although some more significant remains may be present.

2.2 Archaeological events

2.2.1 There has been an extensive and lengthy number of archaeological investigations undertaken within the study area. Archaeological work within the peninsula has revealed notable archaeological remains from all periods and provided evidence for settlement, burial, industry and agricultural production. Previous archaeological desk studies and investigations on the site and in the study area are detailed in Table 2.1 below.

Table 2.1 Previous Archaeological Investigations within the Site Boundary

Title	When	Who	Details
Manston Aerodrome 639613	1944	Ministry of Works	Bronze Age features were excavated during the 'Excavation on Defence Sites 1939-1945' project. A mostly destroyed ring ditch of a barrow and two burials were examined (TR 36 NW 34). No grave goods were recovered. Report: Grimes, W. F., 1960 *Excavations on Defence Sites 1939-1945*, Pages 1-248.

Title	When	Who	Details
Way/Manston Airfield 639598	1944	Ministry of Works	A possible Iron Age to Roman Age industrial settlement (TR 36 NW 182) was excavated after archaeological remains were identified during construction of the Monkton gas pipeline. The site included pits, a ditch, a wall foundation, and smaller finds such as a plumb bob, bronze pins, iron slag, Potin coins, and bones. Pottery dating to the late 14th century and 16th to 17th century was also found. Report: Grimes W. F., 1985, *Kent Archaeological Society, Archaeologia Cantiana: being contributions to the history and archaeology of Kent*, Vol 102, Page 59.
Thanet Gas Pipeline, Phase I EKE3995	1971	Canterbury Archaeological Trust	Excavation for North Sea gas pipeline. 30 sites were investigated, of which 28 were previously unrecorded. The sites range in date from the Iron Age to Medieval period and include the Jutish Cemetery (TR 26 NE 13). Report: Operation Gas Pipe: Thanet Section (1973) No. 30 pages 298-301.
Lord of the Manor 639618	1976-7 & 1977-82	Isle of Thanet Archaeological Unit	Excavations of a Neolithic enclosure, and Bronze Age barrow and ring ditch (TR 36 NE 132). Reports: 1977, *Kent Archaeological Society, Archaeologia Cantiana: being contributions to the history and archaeology of Kent*, Vol 92, Pages 245-5 Isle of Thanet Archaeological Unit Publication – Interim report.
Monkton Gas Pipeline: Phases III- IV EKE4199	1983-4	Isle of Thanet Archaeological Unit	This pipeline follows the southern boundary of the site and archaeological remains from the Prehistoric to Post Medieval Period were exposed during construction. Associated monuments include a Neolithic pit (TR 26 NE 86), Bronze Age blade and fragments (TR 36 NW 193), burials and a cemetery from the Roman to Early Medieval to Anglo-Saxon Periods (TR 36 NW 186, 187 and 189), a Roman Age industrial/settlement site (TR 36 NW 182), and an Iron Age settlement site (TR 36 NW 190). Reports: Perkins, D. R. J., 1984, *The Thanet gas pipeline Phase III 1983*, 78 page 180 (article in serial) and Perkins, D. R. J. 1986, *The Monkton Gas Pipeline: Phases III & IV 1983-84*, CII pages 43-69 (article in serial).
Cliffs End 639614	1984	Isle of Thanet Archaeological Unit	During excavation to lay the Monkton-Ramsgate gas pipeline remains of a late Iron Age (possibly continuing into the early Roman period) settlement were encountered (TR 36 NW 190). The pipeline construction cut through pits and exposed animal bone, shells, and pottery sherds. Report: Perkins, D. R. J., 1985, *Kent Archaeological Society, Archaeologia Cantiana: being contributions to the history and archaeology of Kent*, Vol 102, Pages 63, 64-5.
Thorne Farm 639609	1984	Isle of Thanet Archaeological Unit	A Roman cemetery and an Early Medieval cemetery were excavated during construction of the Monkton pipeline. The Roman Age cemetery included five inhumations and four cremation burials and grave goods (TR 36 NW187). The Anglo-Saxon cemetery was dated to the late 6th to mid 7th century and was three burials, with one grave covered by what may have been a small boat (TR 36 NW 186). Report: Perkins, D. R. J., 1985, *Kent Archaeological Society, Archaeologia Cantiana: being contributions to the history and archaeology of Kent*, Vol 102, Pages 52-4, 58-61, 63, 66-9.

Title	When	Who	Details
Watching Brief on the Sparrow Castle – Manston Water Pipeline/ Sparrow Castle to Manston Pipeline, Birchington EKE 8131 660252	1989	Trust for Thanet Archaeology	Iron Age, Roman period, WWII, and undated archaeological features were encountered during monitoring of pipeline construction. Significant finds include Iron Ages pits containing pottery (TR 36 NW 368), Roman enclosures (TR 36 NW 205) and Roman Pits (TR 36 NW 369). Report: Trust for Thanet Archaeology, 1989, *An Archaeological Watching Brief on the Sparrow Castle – Manston Water Main* (unpublished document).
Geotechnical work at Manston Airport EKE11465	1999	Foundation and Exploration Services	During geotechnical work associated with the cargo hangers and apron taxiways, five boreholes and ten trial pits were dug. Report: Foundation and Exploration Services, 1999, *Kent International Airport Cargo Hangers and Apron Taxiways: Factual report on ground investigation.*
Evaluation of passenger and cargo side taxiways and aprons, Manston EKE11793	2000	Trust for Thanet Archaeology	Open area and trench excavations were conducted in four areas, resulting in the identification of archaeological features dating from the Bronze Age to the Medieval Period (TR 36 NW 466-471). Report: Trust for Thanet Archaeology, 2001, *London Manston Airport, Manston, Thanet, Kent: Archaeological Evaluations and Investigations of Passenger and Cargo side Taxiways and Aprons* (unpublished document).
189 Ramsgate Road, Broadstairs 1434919	2002	Trust for Thanet Archaeology	Prehistoric features and an Iron Age site where identified during excavation of a proposed residential development. Report: Trust for Thanet Archaeology, 2002, *189 Ramsgate Road, Broadstairs, Kent: an archaeological evaluation.*
Survey of a Second World War air raid shelter, Manston EKE13134	2004	Kent Underground Research Group	While working near the Manston Airport terminal building, contractors broke though into a deep air raid shelter. A chalk cut shelter, most likely dating to 1940, was recorded (TR 36 NW 518). Report: Kent Underground Research Group, 2005, *Caves and Tunnels in South East England – Part 17* (unpublished document).
Trial trenching evaluation at the site of a new car-park, Manston Airport	2004	Swale and Thames Archaeological Survey Company	A series of multi-phase enclosures and a late Iron Age to early Roman Period settlement were encountered during excavations, which included 52 trial trenches (TR 36 NW 1176). Reports: Swale and Thames Archaeological Survey Company, 2004, *Archaeological evaluation of land east of the Kent International Airport, Manston, Isle of Thanet, Kent.*
EDF Substation Site 1410715	2005	Museum of London Archaeology Service	Five trenches were excavated across the proposed substation location and identified Bronze Age flints, an undated post hole, and an undated pit. This work was informed by an earlier desk-based assessment. Report: Museum of London Archaeology Service, 2005, *EDF Substation, Manston, Kent: an archaeological evaluation report.*
Excavation of area prior to pipe installation, Margate to Broadstairs EKE13336	2005	Wessex Archaeology	Over 600 archaeological features were recorded during work related to the construction of pipeline. The features date to all periods form the Neolithic to WWII (TR 36 NE 675, 676, and 677). Report: Wessex Archaeology, 2006, *Margate and Broadstairs Urban Wastewater Treatment Scheme.*

Title	When	Who	Details
Excavations along the route of the East Kent Access route (A256) EKE13407	2009-11	Oxford Wessex Archaeology Joint Venture	Field survey, evaluation trenching, and large-scale excavations were undertaken along the East Kent Access route. The excavations identified and recorded archaeological features and finds dating from the Palaeolithic through to WWII. Report: Oxford Wessex Archaeology Joint Venture, 2011, *East Kent Access (Phase II), Thanet Kent: Post-Excavation Assessment Volume 1.*
Survey of Buildings and Structures Associated with Manston Airport and the Surrounding Areas	2016	Kent County Council (KCC)	A survey commissioned by KCC's Heritage Group, which is designed to provide an updated historic and strategic context for Manston airport and highlight extant buildings and structures in and around Manston airfield for inclusion to the Historic Environment Record.
Geophysical survey	2016	AOC Archaeology Group	The preliminary results of a geophysical survey carried out in support of planning application OL/TH/16/0550 identified a density of potential archaeological anomalies, mainly to the far east, far west and central west of the Site. Report: WSP Parsons Brinckerhoff, 2016, *Environmental Statement, Volume 2, Appendix 10.1, Section 5.2 and Appendix C.*
Trial trenching	2016	AOC Archaeology Group	Trial trenching was carried out in support of planning application OL/TH/16/0550.

2.3 Recent Archaeological Investigations within the Site Boundary

Geophysical Survey

2.3.1 A gradiometer survey was undertaken by AOC over approximately 117ha which detected anomalies representing features previously recorded on historic mapping and aerial photography such as field boundaries and possible archaeological features. The results also identified previously unrecorded linear, curvilinear, rectilinear and pit like anomalies that possibly relate to former human activity on the site.

2.3.2 Modern features are also visible within the survey results, such as buried utilities and many pieces of infrastructure and services related to the Manston Airport as well as plough lines, land drains. These have in part either destroyed or masked earlier features as its clear that across the site there is an earlier prehistoric landscape. Subsequently detailed interpretation across the site is tentative.

Archaeological Evaluation

2.3.3 An archaeological evaluation of 123 trenches over 305 hectares was carried out from November 2016 to February 2017 by AOC. Prehistoric features were rare across the site and were typically narrow boundary ditches or fence lines. However, two circular features identified within the geophysics were confirmed as ring ditches, undated but most likely to represent barrows. A coherent Romano-British agricultural landscape was identified covering a large proportion of the site. Most features formed small enclosures with pits and postholes marking the habitation zones. An L-shaped linear feature identified by the earlier geophysical survey was confirmed in the southwest of the site. This was a large defensive ditch of pre-Roman/early Romano-British date, similar in profile to recorded defensive works 3.2km to the southeast and potentially connected to the Caesarian second invasion of Britain in 54BC. A significantly larger ditch on the north-eastern side of the settlement may have delineated its extent. An oven within a Roman sunken-featured building and three other sunken buildings were identified. Other boundaries probably Roman fields around this settlement.

2.4 Protected Military Remains

2.4.1 Fourteen aircraft crash sites, which represent potential protected military remains are known within 1km of the site, 11 of which are located within the site boundary. These assets are detailed in Table 2.2 below.

Table 2.2 Potential Protected Military Remains

Reference UID	Name
DKE20136	ME109
DKE20248	BB893
DKE21799	Crash site of Messerschmitt Bf109E-4
DKE21805	Crash site of Heinkel HE 111H-2
DKE21806	Crash site of Messerschmitt BF110D
DKE21807	Crash site of Messerschmitt BF110D
DKE21808	Crash site of Supermarine Spitfire I
DKE21809	Crash site of Supermarine Spitfire I
DKE21823	Crash site of Bristol Blenheim
DKE21825	Crash site of Consolidated B24H Liberator
DKE21826	Crash site of Consolidated B24J Liberator
DKE21827	Crash site of Hawker Typhoon IB
DKE21828	Crash site of Hawker Typhoon IB
DKE21829	Crash site of Heinkel HE111H-2

2.5 Chronological Summary

Early Prehistory: Palaeolithic and Mesolithic

2.5.1 Residual evidence on the site includes a Palaeolithic flake recovered from a later feature on the southern boundary during excavations on the East Kent Access road in 2009-2011 (TR 36 NW 546); and a Lower to Middle Palaeolithic pointed implement recovered as a surface find in 1899 from the Telegraph Hill area of the site in the far southwest (TR 36 NW 55). There are no Mesolithic finds from the site, but a tranchet axe was recovered from a tree throw during the East Kent Access Route excavations in 2009-2011 (TR 36 SW 366) c. 600m to the south of the site. Most recently, a crested flint blade, interpreted as 'post-glacial', was recovered during the recent evaluation (AOC 2018, 20), though this was not clearly associated with any more substantial features and is being treated as residual.

2.5.2 The Stour Valley Characterisation project notes that most of the site (the southern side of the runway, Freight Terminal, south of Northern Grass, East of Runway and much of the centre) has a low potential for Palaeolithic and Pleistocene finds, and a low significance predicted for any finds

here due to derivation from context. The remaining areas of the site are underlain by plateau brickearth deposited during colder episodes of the Pleistocene. This has a moderate potential for Palaeolithic remains, particularly in identified areas of high points in the landscape. The site occupies an area of relatively high elevation and a moderate potential for Palaeolithic remains can be inferred on the areas covered by these deposits, specifically around the fringes of the site.

2.5.3 Archaeological remains dating from these periods from within the site are isolated lithic artefacts from the small pockets of river terrace gravels and brickearths present within the site boundary. Significant discoveries are not anticipated, in line with the limited evidence and the review undertaken as part of the Stour Valley Characterisation Project.

Later Prehistory: Neolithic

2.5.4 The Neolithic period was generally characterised by the spread of farming of crops and domestication of animals, accompanied by increasing forest clearance and the establishment of permanent settlements. These local population centres often increased and expanded during the Bronze and Iron Ages, while the local landscape was transformed by the construction of field boundaries enclosing areas of pasture and farmland and the erection of highly visible symbolic structures such as monuments to the dead (e.g. bronze age round barrows).

2.5.5 No Neolithic artefacts have been recovered from the site but there is good evidence of Neolithic activity in close proximity. In the eastern part of the study area a Neolithic settlement, containing linear features and pits with pottery was found c. 900m from the site during an evaluation in 2003 by the Trust for Thanet archaeology at the Preston Park Caravan Site (TR 36 NE 598). Neolithic pits containing both Neolithic pot sherds and flints were identified during the 2009-2011 East Kent Access Road excavations at two locations c. 500m (TR 36 SE 737) and c. 600m (TR 36 SE 737) from the site, and during a pipeline excavation by Wessex Archaeology in 1995 c. 1km to the south east of the site at Chalk Hill (TR 36 SE 319). A total of seventy struck flints were recorded across the site during the 2016/17 evaluation (AOC 2018, 70), though the dating can be refined no further than the broad Neolithic/Bronze Age at present. A polished flint axe, interpreted as diagnostic of the Neolithic period, was recovered from the southwest of the site during the same evaluation (*ibid*, 18).

2.5.6 The absence of coherent remains of material dating from this period in the evaluation suggests that it is unlikely that particularly extensive remains of this date would be present, but the presence of related features in the immediate vicinity of the site suggests that dispersed and isolated remains of limited archaeological interest may occur.

Later Prehistory: Bronze Age

2.5.7 Bronze Age activity was recorded within the southwest of the site around Telegraph Hill in 2016-2017 during a programme of archaeological trial trenching. This took the form of ring-ditches indicative of round-barrows, initially recorded through geophysical survey and confirmed by field evaluation. While the features are not securely dated they match the form of barrows present in the broader area and appear to reflect a preference for siting these monuments on higher ground (AOC 2018). Also, within the site, a Middle to Late Bronze Age ditch, containing pottery and human remains was found during an evaluation on the cargo side of the airport in 2000 (within the area identified as terminal, parking and aircraft sheds) by the Trust for Thanet Archaeology (TR 36 NW 466, application ref not available). On the southern border of the Site, an assemblage of Bronze artefacts found during the construction of a pipeline in 1984 (TR 36 NW 193) is thought to have been associated with a hoard, possibly disturbed by ploughing. A round barrow of probable Early Bronze Age date at the east end of the runway was examined in 1944 after being largely destroyed (TR 36 NW 34). It contained a primary and secondary burial. The ploughed remains of a further

probable round barrow c. 900m further east was excavated in 1985 (TR 36 NE 54). In the northeast corner of the site, Bronze Age flint tools were recovered in later features during a 2005 evaluation by Museum of London prior to the construction of the EDF Substation (TR 36 NW 487).

2.5.8 The East Kent Access Route excavations (2009-2011), also identified a Bronze Age agricultural settlement with four inhumation burials (TR 36 SW 374) and a Middle to Late Iron Age settlement (TR 36 SW 376), in addition to many other later prehistoric features along the route, which lies just to the south of the extant runway.

2.5.9 Archaeological remains of this period anticipated within the site comprise:

- The ring ditches observed at Telegraph Hill and potentially further barrows along the ridgeline south of the runway, although the absence of observations in the evaluation suggests that such remains may not be as well preserved as at Telegraph Hill;
- Further burials of this and later periods may be present in association with these ring ditches; and
- Remains of settlement activity may be present, particularly around the areas where such remains were observed in 2000 and 2005, although it is likely that these remains will have been significantly disturbed in earlier phases of construction.

Later Prehistory: Iron Age

2.5.10 Iron Age activity on the site is represented by a pit containing Iron Age pottery sherds excavated by the Trust for Thanet Archaeology during an evaluation on Laundry Road in 1995 (TR 36 NW 382), who also uncovered a scatter of Early Iron Age pottery recovered during evaluation works on the passenger side of the airport (TR 36 NW 469). A further concentration of pits was noted in the 1960s to lie under the east end of the runway (TR 36 NW 35). An extensive late Iron Age and early Roman settlement was revealed during evaluation works in advance of the construction of a new car park at the Airport (TR 36 NW 1176), with features containing a rare type of buildings and a pottery kiln, reflecting adaptation of Iron Age peoples to Roman influences. Recent trial trenches recorded a small prehistoric pottery assemblage (124 sherds), most of which was associated with the mid-to-later Iron Age. More substantial features that could conceivably have been of Iron Age date were typically identified as Romano-British.

2.5.11 The Scheduled Ancient Monument of Enclosure and ring ditches 200yds (180m) ENE of Minster Laundry (1004203) is situated c. 100m to the south of the western end of the runway on the site, with undisturbed Iron Age features identified as cropmarks on aerial photographs. The intensification of settlement and agricultural land use during this period emphasises the growing importance of the Wantsum Channel.

2.5.12 Archaeological remains of this period anticipated within the site comprise elements of settlement and industrial activity, although the relative absence of such remains in the Stone Hill Park evaluation trenching (WSP, 2016) suggests that these remains would be sparsely distributed and of limited significance, but may include elements of an agricultural landscape pre-dating observed Roman-British features.

Roman

2.5.13 The Roman occupation of Britain had a significant impact on north-east Kent and evidence of Roman activity is widespread in the study area. Recent evidence from Ebbsfleet has been interpreted as the landing point for Julius Caesar's 54BC arrival in Britain. The strategic geographic location of the area, formed by the Wantsum Channel, created an easily defensible gateway. The Roman period is characterised by dense settlement patterns and proliferation of Roman structures

throughout the south east comprising several roads, Roman forts and settlements, including the important sites at Richborough, c. 5km to the south of the site. Located at the south-eastern end of the Wantsum Channel, it was here that part of the subsequent Roman invasion force, under Senator Aulus Plautius landed in 43AD. The temporary camp initially constructed at this location developed into the Roman port, Rutupiae, c. 90AD. This was replaced in c. 270AD by one of several Saxon Shore forts in the region (List entry 1014642 and 1363256), which were fortifications built to protect against invading Saxon raiders. A similar Saxon Shore fort is located at Reculver (List entry 1018784), at the north-western end of the Wantsum Channel, c. 8km north west of the site.

2.5.14 An extensive Romano-British industrial and settlement site was found during the construction of a gas pipeline in 1984 along the southern edge of the Airport site (TR 36 NW 182). Features below the floor of the trench remain intact. Further evidence for Romano-British occupation and industrial activities were found during westward expansion of the runway during WWII (TR 36 NW 209), and a Roman pit with a hearth in the base was found during excavations on the cargo side of the airport in 2000 by the Trust for Thanet Archaeology (TR 36 NW 467). The East Kent Access Route excavations in 2009-2011 identified several Roman ditches, gullies, pits and cremations (TR 36 SW 405), while an antiquarian discovery of a Roman coin hoard in c. 1630 is reported near the site of the windmill on Telegraph Hill (TR 315 657), which is detailed on historic maps.

2.5.15 Roman activity is known from the site itself. A substantial Roman landscape forming the majority of dated features was recorded through trial-trenching between 2016 and 2017, characterised in three chief forms:

- A large ditch in the southwest of the site appears to represent a significant defensive feature at the top of a hill and is thought to be related to early military activity at Ebbsfleet, perhaps associated with the second (54 BC) Caesarian invasion;
- Settlement evidence is present in the centre of the site downslope from the ridge. The deepest features here are classed as 'sunken-featured buildings', a continental style of housing fairly common across Thanet and Sheppey. The presence of this style of structure may be associated with settlement of veterans in Colonia in the early Roma period, or with migration from the Germanic provinces during the later Roman period (AOC 2018, 69);
- Finally, Roman period settlement is represented in the form of postholes and ditches signifying the division of land for agriculture.

Early-Medieval

2.5.16 Even before the fifth century, groups of Saxons, Jutes and Angles from the European mainland were already moving into prime agricultural areas in southern England. Saxon Shore forts were built at Richborough and Reculver, at either end of the Wantsum Channel, to defend against invasion. Findspots of Anglo-Saxon artefacts on the site include an early-medieval bead and iron knife on the southern border (TR 36 NW 216), and a silver early penny ('sceat') (TR 36 NW 498), a Merovingian gold *tremiss* (TR 36 NW 499), and pottery (TR 36 NW 471) from the passenger area of the airport. At the western end of the site, a small barrow and linear features visible as cropmarks were identified as Anglo-Saxon as a result of Anglo-Saxon finds made in close proximity (TR 36 NW 214). This spatial correlation of Early-medieval and Bronze Age funerary activity has been observed elsewhere within Kent and southern England more widely. The evaluation in 2016/17 recorded shell-tempered ware in the southwest of the site in an area largely identified with Roman period activity (AOC 2018). A ditch recorded in the southwest of the site was conjectured as of early-medieval or medieval date.

2.5.17 It is not possible to confidently predict what types of features of this date may be present within the site, which seem most likely to represent scattered elements of agricultural and associated settlement activity, and potential burial remains at the western part of the site.

Medieval

2.5.18 Settlement at Manston likely dates from the 12th century (VCH, Kent, Vol 2), with the lord of the Manor of Manston holding important office during the reign of King John (The History and Topographical Survey of the County of Kent: Volume 10). Medieval trackways are visible on both historic mapping, shown as Dunstrete, and on a geophysical survey of the site recently completed in support of the planning application OL/TH/16/0550. Dunstrete was an important east-west aligned routeway across Thanet, a portion of which runs through the southern part of the site.

2.5.19 Medieval finds from the site include pottery, a medieval copper alloy buckle and features including ditches and pits indicating medieval occupation of the site (TR 36 NW 471; MKE80179; TR 36 NW 468). These features represent sparse survivals of the medieval agricultural landscape which would be of limited archaeological interest.

Post-Medieval

2.5.20 Both agricultural and quarrying activities have been encountered on the site. The farmstead of Foster's Folly, with a loose courtyard plan and buildings to two sides of the yard, formerly existed on the location of the passenger and cargo area of the airport (MKE87020), while a mid-18th Century chalk mine, known as Manston Caves, was excavated and backfilled in antiquity in the eastern area of the site (TR 36 NW 437). Supporting the agricultural industry, two flour mills are also known from the site, and are pictured on old Ordnance Survey maps of 1839 and 1972 (TR 36 NW 1107). These features represent sparse survivals of the post-medieval agricultural landscape which would be of limited archaeological interest.

Modern

2.5.21 Numerous extant buildings and features on the site reflect the Manston airfield's significant military history, including ten pillboxes (TR 36 NW 1062; TR 36 NE 2168; TR 36 NW 1076; TR 36 NW 1059; TR 36 NW 1072; TR 36 NW 1048; TR 36 NW 1041; TR 36 NW 1043; TR 36 NW 1047; TR 36 NW 1059), air raid shelters (TR 36 NW 332; TR 36 NW 518), trench systems (TR 36 NW 1220; TR 36 NW 1222), and a former WWII oil depot (TR 36 NW 1183). A trial trench excavated in 2016-2017 recorded part of a concrete mounting platform in the extreme southwest of the site.

2.5.22 The majority of these remains would be of limited archaeological interest and in some cases may present clear safety hazards resulting from the presence of live ordnance or significant contamination. However, as a whole, these remains may offer opportunities to better understand the use and development of the airfield.

3. Research Agenda

3.1 Research Aims

3.1.1 The aims of the archaeological works are:

- To develop a chronological characterisation of the changing use of the site over time;
- To identify and investigate specific activity areas within the site;
- To develop a spatial characterisation of the past use of the site and to understand the spatial relationships between contemporary activities; and
- To understand how the archaeological remains on the site contribute to a wider understanding of local and national historical and archaeological themes.

3.2 Research Themes

3.2.1 As mitigation by investigation and recording primarily mitigates loss of archaeological interest, it is important to set the results of any archaeological fieldwork into a wider framework of archaeological research and investigation. Overarching research agendas for the South East of England (SERF) and the Greater Thames Region (GTRF) set out key themes that archaeological investigation can inform. Table 3.1 maps the archaeological remains anticipated to be present within the site against these identified research agendas.

Table 3.1 Key Archaeological Themes

Anticipated remains	Key Issues	Mapping to GTRF	Mapping to SERF
Artefactual material associated with the Mesolithic and Palaeolithic	1) Understand the distribution of material evidence for human occupation of the area during the Mesolithic and Palaeolithic periods.	1A.SO3 – Identifying key areas where primary context sites might be preserved. 1A.SO4 - Developing an appreciation of the contribution made by secondary context (reworked) data to understanding the range and distribution of Lower and Middle Palaeolithic activity. 1B.SO2 - To carry out field investigation of sites which previous studies have identified as having high potential. 1B.SO3 - To develop predictive techniques to identify key areas where sites may be found and good preservational contexts 1C.SO4 - Developing appreciation of human interaction with this environment.	Draft research agenda 2013-7: - How disturbed/transported are Palaeolithic remains in fluvial contexts? - Are there levels or geographic/topographic zones within deposits that are more likely to be richer in Palaeolithic artefactual remains? - Improved mapping, longitudinal correlation and dating of terrace systems within major river valley and tributary systems (Lower Thames, Stour, Medway, Arun, Rother eastern Solent Basin, Wealden rivers). - Correlations of terrace units with each other between basins/systems. - Identification of areas of colluvial/solifluction deposits that may contain undisturbed or minimally disturbed concentrations of Palaeolithic remains (cf Red Barns). - More attention to "brickearth", and characterisation as colluvial or Aeolian (or fluvial) SERF Research Agenda conference discussion points for the Upper. Palaeolithic/Mesolithic: Colonisation and occupation issues: to what degree is the region a crossroads or a backwater in terms of UP and early Mesolithic occupation patterns.

Anticipated remains	Key Issues	Mapping to GTRF	Mapping to SERF
Features associated with Later Prehistoric occupation	1) Better understand the extent and nature of prehistoric activity within the area. 2) Consider archaeological evidence for prehistoric activity in the context of evidence from previous investigations within the area around the site.	4A.SO1 - Analysing the adaptation and evolution of settlement patterns in response to coastal change. 4A.SO9 - Analysing the pattern of settlements of all types through time as evidence of the social, economic and political evolution of the study area.	*SERF Research Agenda conference discussion points for the Middle Bronze Age/Iron Age:* - The evolution of settlement: there are major problems such as the long-term history of the land divisions laid out in the MBA/LBA; the problem of MIA settlements; the hiatus between earlier sites and those of the LIA. - The transition to the Late Iron Age: how are we to understand the important changes from MIA to LIA, including the emergence of a southern kingdom centred on west Sussex? What was the role of Kent and Surrey with regard to the emerging political structure of South-East England?
Features associated with later prehistoric ritual, funerary activity	1) Consider chronology/ extent of barrow burial features. 2) Understand relationship to contemporary/later settlement. 3) Understand whether Bronze-Age ritual activity is spatially associated with later activity. 2) Consider archaeological evidence for prehistoric activity in the context of evidence from previous investigations within the area around the site.	4A.SO9 - Analysing the pattern of settlements of all types through time as evidence of the social, economic and political evolution of the study area.	*SERF Research Agenda conference discussion points for the Middle Bronze Age/Iron Age:* - How are we to consider evidence of large scale organisation in the landscape as signified by funerary monuments? Growing evidence of field systems in conjunction with large scale barrow cemeteries in east Kent and further afield in Sussex and Essex. - Refining understanding of longevity and site complexity e.g. Ring ditch 3 at Monkton Mount Pleasant.
Features associated with Roman military occupation of the mainland	1) Understand the extent and nature of recorded activity. 2) Confirm identification of features as of military origin 3) Better understand relationship with other early-Roman activity in Thanet. 4) Consider nature of past landform and influence on settlement.	4A.SO4 - Examining the impact of the Roman Conquest on settlement patterns and the social, economic and political articulations of the landscape.	*SERF Research Agenda conference discussion points for the Roman period:* - Clarification on nature of activity between Caesarian and Claudian invasions. - Contribute to ongoing invasion route debate.

Anticipated remains	Key Issues	Mapping to GTRF	Mapping to SERF
Features associated with Romano-British settlement and agriculture	1) Understand the extent and nature of settlement and agricultural form. 2) Consider the effect of changing political, social and economic conditions on settlement over time. 4) Consider nature of past landform and influence on settlement. 5) Consider archaeological evidence for Romano-British activity in the context of evidence from previous investigations within the area around the site.	4A.SO3 Developing an understanding of early agriculture and land use on terrace gravels and brickearth 4A.SO4 Examining the impact of the Roman Conquest on settlement patterns and the social, economic and political articulations of the landscape. 4A.SO9 - Analysing the pattern of settlements of all types through time as evidence of the social, economic and political evolution of the study area	*SERF Research Agenda conference discussion points for the Roman period:* - Clarification of the characteristics of the lesser nucleated settlements, and their role in relationship to surrounding rural settlements. - The relationship of villa and non-villa settlements to each other and to the landscape.
Features associated with early-medieval settlement and burial activity	1) Identify extent and nature of early-medieval activity within the site. 2) Understand the relationship of early-medieval activity to activity in earlier and later periods. 3) Consider archaeological evidence for early-medieval activity in the context of evidence from previous investigations within the area around the site.	4A.SO5 Examining the chronology of the Anglo-Saxon migrations into the areas surrounding the Thames Estuary and the impact on existing settlement and material culture. 4A.SO6 Examining the development in the Anglo-Saxon period of new organisational and administrative frameworks based on secular and ecclesiastical estates and "territories".	*Draft research agenda 2013-7* - Harness the potential of the historic landscape to inform an understanding of the Romano-British/Anglo-Saxon transition. .... Work needs to be focused on the long term evolution of field systems and their environmental context to establish definite cases of continuity in Roman estate boundaries and land use. The potential of palaeoenvironmental studies needs to be maximised by targeting gaps in off-site sequences and by dating existing sequences more closely. - Develop and test methodologies for locating Anglo-Saxon settlements, particularly targeting the Weald and other areas where land use patterns may mask potential sites. We need to know to what extent the current distribution of excavated settlements is a true reflection of the Anglo-Saxon situation. - Enhance the existing resource by refining an understanding of the landscape context of Anglo-Saxon cemeteries, particularly their spatial relationship to sites of prehistoric and Romano-British ritual activity. Data recovered by the Portable Antiquities Scheme will be of benefit here, but more work is required to interpret the meaning of finds scatters, for example, whether they represent cemeteries or settlements. - Harness bioarchaeological assemblages to better understand key transitions in crop production, animal husbandry and the process of agricultural intensification. Areas deserving attention include the change from hulled to free-threshing wheats and the changing exploitation of wild taxa as an index of social status.

Anticipated remains	Key Issues	Mapping to GTRF	Mapping to SERF
Features associated with Medieval agriculture and settlement	1) Identify extent and nature of medieval activity within the site. 2) Understand the relationship of medieval activity to activity in earlier and later periods. 3) Consider archaeological evidence for medieval activity in the context of evidence from previous investigations within the area around the site.	4A.SO7 Examining the impact of the Norman Conquest on settlement patterns and estate organisation. 4A.SO9 Analysing the pattern of settlements of all types through time as evidence of the social, economic and political evolution of the study area. 4A.SO10 Examining the impact of the church on the historic landscape in medieval times.	Draft research agenda 2013-7: - More understanding of the landscape of primarily dispersed rural settlement in terms of development and maintenance over space and time. - Further investigation of agricultural practices (including animal husbandry) and land use through more systematic sampling and analyses than hitherto.
Features associated with post-medieval agriculture and settlement	1) Identify extent and nature of post-medieval activity within the site. 2) Understand the relationship of post-medieval activity to activity in earlier and later periods. 3) Consider archaeological evidence for post-medieval activity in the context of evidence from previous investigations within the area around the site.	4A.SO9 Analysing the pattern of settlements of all types through time as evidence of the social, economic and political evolution of the study area.	Draft research agenda 2013-7: - The study of the size of farm structures in relation to the scale of associated agriculture would help characterise agricultural landscapes. - Social aspects of rural housing, material culture, subsistence and environment, especially for the poor from the 16th to mid-20th centuries. -
Features associated with 20th-century aviation	1) Better understand development of the airfield over the course of the 20th-century. 2) Work to ensure development respects, preserves and where feasible enhances upstanding wartime structures in terms of group value and intrinsic architectural/structural interest relating to RAF and military history.	6A.SO1 - Examining the impact of changes in military technology and tactical and strategic approaches on individual defence sites and defence systems. 6A.SO2 - Developing understanding of the evolution of the estuary's defences in relation to political change. 6A.SO3 - Developing interpretations of these defences integrated with wider patterns of settlement, commerce and landscape.	Draft research agenda 2013-7: - Establish provision for Operation Overlord and Operation Fortitude, the deception plan. - There is a need to list and collate the data from the main, and minor, (Second World War) military airfields and temporary landing grounds many of which are being built on. - Aircraft crash sites (with or without war grave implications) need to be protected or subjected to proper excavation and recording. The standard of past recoveries has varied greatly and there are continuing concerns relating to the conservation of this archaeological resource. - Determine scope of post-Second World War air defence, including protection by anti-aircraft guns, especially on new sites and possible survival.

4. Likely Effects and Scope of Work

4.1.1 Likely effects of the Proposed Development have been considered in relation to potential ground disturbance and identified areas of archaeological potential to allow specific investigations to be proposed. The likely effects are summarised at Table 4.1. The detail of mitigation proposals, including the most appropriate methodology and the exact extent of any intervention, will be agreed with the Kent County Council (KCC) Archaeologist as detailed design is advanced and the extent and nature of disturbance can be more accurately predicted.

Table 4.1 Proposed Archaeological Response

Area	Location	Anticipated archaeological remains	Anticipated effects	Proposed archaeological response
A	Northern Grass	Uncertain. Potential survival of highly significant pre-modern remains and elements of the former airfield.	Potential removal of remains over larger areas resulting from construction of hardstandings, buildings and landscaping.	Further geophysical survey and trial trenching to ascertain survival, extent and significance of archaeological remains. This information will be used to inform decisions on whether remains merit preservation in situ and an appropriate design response, and appropriate mitigation strategies.
B	West of Runway	Survival of highly significant later-prehistoric and early-Roman activity. Potential elements of other periods, most notably relating to the former use of the airfield.	Localised disturbance resulting from renewal of the approach indicator lighting and associated services.	Establish location of particularly significant remains and design infrastructure to minimise any disturbance. Controlled strip on works to the approach indicator lighting.
C	South of Runway	Survival of elements of prehistoric and Romano-British occupation observed in EKAR excavations.	Localised disturbance resulting from renewal of services.	Controlled strip and/or archaeological monitoring of areas of archaeological interest.
D	East of Runway	Survival of elements of prehistoric and Romano-British occupation observed in EKAR excavations.	Localised disturbance resulting from renewal of the approach indicator lighting and associated services.	Controlled strip and/or archaeological monitoring.
E	Terminal, aircraft stands and Associated Parking	Survival of elements of late prehistoric, Romano British and early-medieval settlement remains in discrete pockets where not disturbed by previous phases of construction.	Disturbance of remains resulting from construction of buildings and hard standing.	Further trenching to ascertain extent of strip, map and sample of areas of archaeological interest.
F	Apron and Freight Terminal	Survival of elements of Romano-British agricultural landscape.	Disturbance of remains resulting from construction of buildings and hard standing.	Strip, map and sample.
G	Site entrance, taxiways and ATC	Survival of elements of Romano-British agricultural landscape.	Disturbance of remains resulting from construction of buildings and hard standing.	Strip, map and sample.

Area	Location	Anticipated archaeological remains	Anticipated effects	Proposed archaeological response
H	Historic airfield structures	Surviving above and below-ground structures.	Demolition or sealing off of structures, conversion and/or refitting.	Buildings recording.

5. Standards for Archaeological Work

5.1 General Principles

5.1.1 Archaeological work is intended to:

- Mitigate loss of archaeological interest of at-risk heritage assets; and
- Inform planning of non-archaeological (i.e. avoidance and design) mitigation.

5.1.2 All archaeological fieldwork will be planned to inform the research aims set out at Section 3.1.

5.2 General Methods

5.2.1 All archaeological mitigation will be proportionate to the significance and extent of the potential effects on archaeological remains, and will be designed to address the specific research agenda set out at Section 3.

5.2.2 In all areas identified as requiring archaeological work in this WSI, removal of topsoil, overburden and 19th/20th-century and later remains to the first significant archaeological horizon will be undertaken by a back-acting excavator fitted with a wide toothless bucket, under the continuous supervision of the archaeology contractor with the authority to halt and direct machine excavation. Spoil will be temporarily stockpiled on site at a safe distance from the trenches and other constraints, to the satisfaction of the main contractor.

5.2.3 The first significant archaeological horizon and all subsequent archaeological deposits will be cleaned by hand. Excavation of any archaeological deposits identified will proceed by hand except specifically agreed with the KCC Archaeologist.

5.2.4 Arrangements for the processing of bulk samples taken for the recovery of environmental materials and artefacts, especially carbonised plant remains and ceramics, should be confirmed. These arrangements must be sufficient to provide feedback on the character of sample assemblages concurrent with the fieldwork to enable refinement of field sample collection, as necessary to fully realise the research objectives and project aim. The advice of the Historic England Regional Science Advisor (RSA) must be sought in this regard.

5.2.5 Following completion of archaeological investigation to the satisfaction of the KCC Archaeologist and the main contractor, each trench will be backfilled with the spoil and compacted by machine to level fill, unless otherwise instructed by the main contractor.

5.2.6 The following professional standards apply:

- CIfA 2014 Standard and Guidance for Archaeological Excavation;
- CIfA 2014 Guidelines for the Collection, Documentation, Conservation and Research of Archaeological Materials;
- CIfA 2014 Code of Conduct;
- Historic England 2016 *Understanding Historic Buildings*; and
- KCC *Manual of Specifications* Part B.

5.3 Standards for Archaeological Work

Geophysical Survey

5.3.1 Geophysical survey will comprise the archaeological magnetometry survey of the area of the Northern Grass (Area C) in order to identify geomagnetic anomalies of potential archaeological origin. This survey would aim to cover the entire developable area of the Northern Grass, but would exclude any confirmed safeguarded areas, areas of demonstrable past disturbance (e.g. hardstandings and modern building footprints) and any areas where safe access cannot be confirmed.

5.3.2 Geophysical work will be carried out in line with the *EAC Guidelines for the Use of Geophysics in Archaeology* (Schmidt *et al.* 2016).

Archaeological Evaluation

5.3.3 Archaeological evaluation will comprise the excavation of an agreed area sample of the Northern Grass using 50m by 2m trenches targeted on identified geophysical anomalies. The purpose of the evaluation is to identify and characterise the nature, extent and significance of specific archaeological foci within an extensive area. This information will be used to allow more detailed proposals for mitigation in this area to be developed.

5.3.4 Additional trenching will be carried out in Area E to allow detail proposals for mitigation to be more accurately scoped.

Archaeological Monitoring

5.3.5 It is not envisaged that an archaeologist will be present throughout the construction groundworks. The risk that archaeological remains might be present will be well-established on the basis of previous stages of evaluation and/or mitigation works. The need to monitor construction works will be predictable and appropriate arrangements for inspection visits will be acceptable in most instances.

5.3.6 Where archaeological deposits are encountered, sufficient excavation will take place to allow appropriate records to be compiled, as might be reasonably achieved. Provision will be allowed for access in keeping with health and safety considerations.

5.3.7 During and after the excavation, all recovered artefacts will be stored in the appropriate materials and storage conditions to ensure minimal deterioration and loss of information (this will include controlled storage, correct packaging, and regular monitoring of conditions, immediate selection for conservation of vulnerable material).

Controlled Strip

5.3.8 Archaeological controlled strip of specified work sites will be undertaken by a suitably qualified archaeologist who will undertake the direction of the machine operator. This will allow the excavation area to be controlled by the archaeologist during the machining of the specified work area.

5.3.9 Avoidance of the excavated area is essential during the controlled strip, so that the area is not tracked over until the area is clear of archaeological remains, the supervising site archaeologist will confirm to the contractors when an area has been released from archaeological control and vehicles can track over the specified area.

Strip, Map and Sample

5.3.10 The appointed archaeological contractor will submit a Method Statement, including a detailed plan of areas to be subject to strip, map and sample.

5.3.11 The purpose of strip, map and sample is to identify specific archaeological foci within an extensive area of potential or to expose the spatial characteristics of extensive archaeological landscape elements, such as field systems, prior to selecting locations for targeted sample excavation. This work is to be undertaken within a framework of evidence based research objectives.

5.3.12 Following initial machine excavation (which will be directed and monitored by the Archaeological Contractor), the area should be examined and a plan of identified and potential archaeological features and deposits prepared at an appropriate scale. This will inform proposals for sample excavation, to be agreed with the KCC Archaeologist. Where necessary to allow construction works to continue, the release of a part of an area may be agreed with the KCC Archaeologist. In this situation, areas which have not been released will be clearly demarcated.

5.3.13 Key stages in strip-map-and-sample are:

- The careful stripping of identified areas to the appropriate level, in order to reveal the site plan;
- Immediate planning (mapping) of the area while the uncovered surface is fresh. The area should be subsequently checked to see if weathering reveals further features and the plan updated as appropriate; and
- Sample excavation will proceed, concentrating on established a relative chronology through feature intersections investigations and by attempting to establish a more precise chronology.

5.3.14 Following planning, investigation of an appropriate sample of identified features drawing on the standards set out in the KCC Manual of Specifications Part B. Key areas and nodes will be investigated in sufficient detail to understand them both in respect of themselves and also in relation to their surroundings. This work will be focused on adding to the spatial, chronological, functional and environmental context of the investigated area.

5.3.15 This requirement will be continually monitored during the course of fieldwork, and amended according to its effectiveness in meeting research objectives. In particular consideration of strip map and sample operations will be discussed with the KCC Archaeologist, with a view to extending these operations where significant archaeological remains have been observed or scaling them back operations where the potential presence of archaeological features is demonstrably low, based on:

- Identified prior truncation/disturbance;
- Absence of observed features; or
- Confirmation of prior survey results which suggest poor survival of archaeological features.

5.3.16 Any decision to scale back the scope of strip, map and sample mitigation will only be undertaken after agreement of the KCC Archaeologist has been confirmed.

5.3.17 Following completion of archaeological investigation to the satisfaction of the KCC Archaeologist the relevant area or agreed parts thereof will be released to the main contractor so that construction works may proceed.

Sample Excavation

5.3.18 Features and deposits will be sectioned and recorded in plan to the standards set out in the KCC Manual of Specifications Part B. Archaeological features will be hand cleaned prior to excavation to

provide accurate definitions. For linear features such hand cleaning will be targeted at sample excavation points. Deposits interpreted as natural subsoil should be tested by hand or machine excavation to determine the validity of this interpretation.

5.3.19 The sampling strategy will be developed throughout the investigation period in consultation with the KCC Archaeologist or their advisors in the light of the results of the field work. The sampling strategy will be kept under review during the excavation work. The excavation will normally include as a minimum:

- A robust spatial framework of excavation to provide an understanding of the distribution of past activities across the investigation area including any 'special' deposits and any patterning in artefact distribution. Such a framework will take into account the inter-relationship of major features;
- The investigation of the intersections of features of archaeological date to obtain a phasing of the site; and
- Structural remains and other areas of significant and specific activity (domestic, industrial, religious, hearths, 'special'/ patterned deposits etc.) will be excavated and recorded to a degree whereby their extent, date form, function and relationship to other features and deposits can be established.

5.3.20 All burial deposits and associated remains will be fully excavated and recorded in accordance with an agreed methodology.

5.3.21 Representative non-structural linear cut features will be sample excavated and recorded to the standards set out in the KCC Manual of Specifications Part B, in order to establish the feature's character, date and morphology and to provide information on activities taking place in close proximity to the feature.

5.3.22 The sampling excavation strategy will be reviewed continuously throughout the course of fieldwork and, if necessary, amended in order to take account of changing circumstances and understanding. Any changes or amendments will be agreed in advance of implementation with the KCC Archaeologist.

- In some cases, it will be sufficient to excavate a representative sample of long linear features (e.g. boundary ditches) or quarry pits in order to record their form, function, and date and recover artefacts and ecofacts; and
- Where insufficient dating material or information has been retrieved from a partially sectioned feature, further sampling may be undertaken, subject to consideration of residuality or other factors that might limit the integrity of archaeological data, with reference to the research objectives and in consultation with the KCC Archaeologist.

Recording

5.3.23 A full and proper record (written, graphic and photographic, as appropriate) will be made for all work in line with the standards set out in The KCC Manual of Specifications Part B. A continuous numbering system will be used and the following registers kept on standardised forms: contexts; sections; plans; and photographs. The recording system to be used will be stated in the contractor's method statement and if requested copies of the manual to that system will be provided to the KCC Archaeologist.

Environmental Sampling

5.3.24 A detailed sampling policy will be decided in consultation with the Historic England (formerly English Heritage) Regional Scientific Advisor. This will detail specific categories of material that are of interest and identify a programme of work to support the research objectives set out in the Project Design, which will be revised as appropriate throughout the excavation and post-excavation phases.

5.3.25 The on-site sampling policy will be inclusive, as the significance of individual features may not be fully understood until wider patterns of spatial distribution and phasing are understood. As set out in the general methods above, arrangements for the processing of bulk samples taken for the recovery of environmental materials should be confirmed. The final sampling and discard policy will be agreed in consultation with the project environmental specialist, the KCC Archaeologist and the Regional Scientific Advisor.

5.3.26 Archaeological deposits will be sampled systematically in bulk samples. All samples will be collected from the fills of cut features, and from any other securely stratified deposits that have the potential to provide environmental or economic information, such as occupation layers or material accumulating on use surfaces. Particular emphasis will be placed on contexts that may supply material suitable for scientific dating of potential early medieval and prehistoric features. Decisions on sampling must also take account of stratigraphic factors and consider the opportunity to employ chronological and spatial controls in the recovery of samples in order to generate environmental information of sufficient quality to meet the research objectives.

5.3.27 Provision will be made for column and other appropriate samples to be taken for geoarchaeological assessment and analysis as appropriate and in line with technical guidance. Due consideration will be given to the collection of samples suitable for microfossil analysis and other specialised analysis from suitable deposit sequences, that might inform the pattern of changing environmental conditions over time. Waterlogged and cess deposits will be specifically sampled for microfaunal and invertebrate analysis. Bulk samples will also be taken from any waterlogged deposits present for assessment of organic remains. Any organic artefacts that are retrieved during the excavation will be stored in appropriate conditions and assessed by a qualified archaeological conservator.

5.3.28 Industrial residues and waste from craft and manufacturing processes will also be routinely sampled.

Artefact Recovery

5.3.29 The recovery of material that can adequately date major archaeological phases is a key requirement. It is recognised that the incidence of artefacts may limit the quality of datable assemblages, and measures for scientific dating are also set out below. However, artefacts remain a key source of dating information.

5.3.30 Bulk finds such as pottery and animal bone will normally be collected by context. Where it is appropriate and following additional instruction, soil samples will also be recovered for sieving, specifically for the purpose of:

- Providing statistically controlled samples; and
- Enhanced recovery techniques.

5.3.31 As set out in the general methods above, arrangements for the processing of bulk samples taken for the recovery of artefacts should be confirmed.

5.3.32 Finds will be temporarily stored on site and removed from site to a secure location as required. All finds that are retained will be washed, marked and bagged in a manner suitable for long-term storage.

5.3.33 A sampling strategy for the recovery and recording of waterlogged wood and timber will be agreed with the KCC Archaeologist, where significant quantities of such materials are observed.

5.3.34 All finds and samples will be exposed, lifted, cleaned, conserved, marked, bagged, boxed and stored in accordance with the CIfA Guidelines for Finds Work, the guidelines in the UKIC Conservation Guidelines No. 2 and the requirements of the recipient museum.

5.3.35 A discard policy acceptable to the relevant receiving museum will only be implemented following quantification, assessment and recommendation from artefactual and environmental specialists. Certain classes of material, such as post-medieval pottery and building material, may be discarded after recording if a representative sample is kept, but no finds will be discarded without the prior approval of the KCC Archaeologist and the receiving museum.

Conservation

5.3.36 Procedures for the recovery, packing and transportation of artefacts will follow First Aid for Finds (2nd Edition) and UKIC's Conservation Guidelines No. 2. Where delicate artefacts are uncovered, appropriate immediate measures will be taken, and the artefacts transferred to the appropriate Conservator. If particularly complex conservation requirements become apparent, the conservator will be called to site to excavate and package the object.

Scientific Dating

5.3.37 Achieving a coherent chronology across all phases of activity is a key objective, as this may help resolve problems in the identification of cultural activity during period when ceramics were not generally available to communities in Kent, i.e. later prehistory and early medieval. A strategy for the selection of samples for scientific dating will be required, taking into consideration statistical procedures designed to enhance the accuracy of site chronologies, for instance the use of Bayesian techniques.

5.3.38 Samples of material suitable for scientific dating techniques including AMS C14 dating, archaeomagnetism (for example, charred seeds or in situ burnt clay from appropriate contexts) or thermoluminescence will be collected where available.

5.3.39 Scientific dating will be a significant consideration during the post-excavation assessment and will inform the Updated Project Design.

Archaeological Buildings Recording

5.3.40 Where historic airfield buildings are proposed to be demolished or significantly altered, it will be necessary to make a record of these structures. Recording should be carried out to Level 2 or 3 as set out in Historic England 2016 *Understanding Historic Buildings*. This record will comprise photographic and drawn records, and the exact level of recording will be agreed with the KCC Archaeologist taking into account the significance of the buildings and the extent of alteration/demolition.

5.3.41 Where historic airfield buildings are to be retained, it is proposed that recording to Level 2 as set out in Historic England 2016 *Understanding Historic Buildings* will be carried out to ensure that the appearance of the structures in their present setting can be recorded.

5.4 Procedures in Respect of Statutorily Designated Remains

Human Remains

5.4.1 In the event of human remains being encountered they will be left in situ, covered and protected and the Coroner, the KCC Archaeologist will be informed.

5.4.2 The Archaeological Contractor will arrange receipt of the appropriate documentation and license from the Department of Justice to enable the legal removal of any human remains encountered in the works. The Archaeological Contractor is to comply with the conditions of any issued License.

5.4.3 If removal is agreed, all subsequent work will comply with relevant regulations (including local authority environmental health regulations) and technical guidance.

5.4.4 The Archaeological Contractor will have available within the team or on call an appropriately qualified and experienced osteo-archaeologist to supervise the excavation and removal of human remains from the site. The Archaeological Contractor will use an appropriately qualified and experienced archaeological conservator to assist where appropriate in the lifting of human remains and grave goods / cremation vessels.

Protected Military Remains

5.4.5 The 1986 Protection of Military Remains Act (PMRA) applies to any aircraft which have crashed while in military service and to certain wrecks of vessels which were wrecked while in military service. PMRA makes it an offence to disturb, move or unearth military remains which have been designated.

5.4.6 There are no designated protected areas or controlled sites within the site boundary, and there are no records of military vessels or aircraft having been lost within the site boundary.

5.4.7 There are records of military aircraft crash site within the site boundary, although these are likely to have been cleared at the time of the crash. Surviving remains of these or any unrecorded crash sites could be protected under the act and should be treated as controlled sites until their status has been confirmed with the Ministry of Defence and any appropriate licences for excavation granted.

5.4.8 Where remains are observed during archaeological investigation or construction work, intrusive work should cease and the site be secured while consultation with the Ministry of Defence is undertaken.

Treasure

5.4.9 Any items which are recovered which could be deemed as treasure will be subject to the provisions of the Treasure Act 1996 and the Treasure (Designation) Order 2002. Such material shall normally be removed from site to a secure location at the end of the working day on which it is found. In addition to the statutory authorities, the relevant Portable Antiquities Officer should be informed.

5.5 Post-Excavation Work, Reporting and Dissemination

Finds

5.5.1 All finds processing, conservation work and storage of finds must be carried out in compliance with the CIfA Guidelines for the collection, documentation, conservation and research of archaeological materials (2008) and those set by UKIC (1990).

5.5.2 The deposition and disposal of artefacts must be agreed with the legal owner and recipient museum prior to the work taking place. Where the landowner decides to retain artefacts, adequate provision must be made for recording them. Details of land ownership should be provided by the developer.

5.5.3 All retained artefacts must be cleaned and packaged in accordance with the requirements of the recipient museum.

Site Archive

5.5.4 Before the commencement of fieldwork, contact should be made with the landowners and recipient Museum to make the relevant arrangements. Details of land ownership should be provided by the developer. Details of the appropriate museum to be confirmed.

5.5.5 The archaeological contractor will specify the receiving museum and confirm that arrangements for receipt of archaeological material and site archives have been agreed before the commencement of fieldwork.

5.5.6 The archive and the finds must be deposited in the receiving museum, within six months of completion of the post-excavation work and report.

5.5.7 The KCC Archaeologist will require confirmation that the archive has been submitted in a satisfactory form to the receiving museum.

Post-excavation Reporting

5.5.8 An initial assessment of the results will be undertaken and an Interim Report produced within 4 weeks of the completion of onsite work. Post-excavation Assessment (PXA) report following all excavation and/or strip, map and sample works (as identified in Section 4) and Updated Project Design (UPD) will be submitted to the KCC Archaeologist. This will be followed by further analysis, as required. The PXA and UPD will be written in accordance with the KCC specification and subsequent PXA and reporting/ publication stages will follow as set out in the KCC specification (Manual of Specification Part B – Strip, Map and Sample Requirements).

5.5.9 The purposes of the interim report are to:

- Confirm the completion of fieldwork;
- Provide an indicative timetable for detailed post-excavation assessment and reporting; and
- Signpost any significant findings to inform research and development management pending the production of the full report.

5.5.10 This interim summary reporting will incorporate the following:

- Mapping of the results of the excavation work undertaken;
- Scope of work identifying the investigative techniques used at each work location; this may be set out as a table;
- Key findings set out as bullet points highlighting any key observations and implications for the agreed Research Agenda;
- An updated project design with indicative timetable compiled and agreed for post-excavation assessment and full reporting; and
- Indicative scope of PXA.

5.5.11 It is intended that the interim report presents only a very brief synthesis of the results of the fieldwork to allow for early dissemination of summary results and project planning. Tables or bullet points should be used to provide a concise but intelligible summary. Detailed Plans and maps or analysis of stratigraphic, artefactual or ecofactual material should not be included.

5.5.12 Where different elements of the archaeological fieldwork are undertaken by different specialist contractors, the summary reporting may be divided thematically to reflect the scope of works undertaken by different contractors. Where appropriate, the format and scope of each individual summary will be agreed with the KCC and CCC archaeologists.

Post-Excavation Assessment

Purpose

5.5.13 The intention of carrying out a Post Excavation Assessment (PXA) is to provide a rapid summary of the material recovered during the excavation and to allow costed recommendations to be made for the final reporting, which will be carried out following the completion of all of the archaeological fieldwork.

5.5.14 The PXA is intended to be a summary document rather than a detailed record. As such, the level of reporting will provide sufficient detail to allow recommendations to be made and justified.

5.5.15 Where works are carried out by multiple archaeological contractors, arrangements for coordination of separate PXAs or production of a single collated PXA must be agreed with the KCC Archaeologist in advance of fieldwork commencing.

Form

5.5.16 The PXA will comprise:

- Introduction:
  - Scope of the project;
  - Circumstances and dates of fieldwork and previous work; and
  - Comments on the organisation of the report.
- Original research aims;
- Summary of the documented history of the site(s);
- Interim statement on the results of fieldwork.
- Summary of the site archive and work carried out for assessment:
  - Site records: quantity, work done on records during post-excavation assessment;
  - Finds: factual summary of material and records, quantity, range, variety, preservation, work done during post-excavation assessment;
  - Environmental material: factual summary of human and animal bone, shell and each type of sample (e.g. bulk organic, dendrochronological, monolith), quantity, range, variety, preservation, work done on the material during the PXA; and
  - Documentary records: list of relevant sources discovered, quantity, variety, intensity of study of sources during post-excavation assessment.

5.5.17 Potential of the Data:

- An appraisal of the extent to which the site archive might enable the data to meet the research aims of the project, sub-divided according to the research aims of the project rather than the form of the data;
- A statement of the potential of the data in developing new research aims, to contribute to other projects and to advance methodologies; and
- A summary statement of the significance of the data.

- Additional information will normally include:
  - Supporting illustrations at appropriate scales;
  - Sufficient supporting data, tabulated or in appendices, and/or details of the contents of the project archive, to permit the interrogation of the stated conclusions; and
  - Index, references and disclaimers.

OASIS

5.5.18 The overall aim of the Online Access to the Index of Archaeological Investigations (OASIS) project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large scale developer funded fieldwork. The archaeological consultant or contractor must therefore complete the online OASIS form (available at http://ads.ahds.ac.uk/project/oasis/). Once a report has become a public document by submission to or incorporation into the Kent Historic Environment Record (HER), Kent HER will validate the OASIS form thus placing the information into the public domain on the OASIS website. The archaeological contractor must indicate that they agree to this procedure within the method statement submitted to KCC.

Publication

5.5.19 Formal publication of the results of the fieldwork will be required. It is intended that the results of the works as a whole will be reviewed and decisions taken on the scope and level of any publication(s) following the submission of the PXA reports and review.

6. Health, Safety, Security and Environment

6.1.1 Health, Safety, Security and Environment (HSSE) will take priority over all other requirements. A conditional aspect of all archaeological work is both safe access to the area of work and a safe working environment. All relevant Health and Safety legislation, regulations and codes of practice should be respected and adhered to. Site-specific risk assessments will be carried out in respect of each element of the mitigation fieldwork prior to commencement of the fieldwork and copies sent to the representatives of the client for approval.

6.1.2 The project will be carried out in accordance with safe working practices and under the defined Health, Safety and Environmental Policy.

6.1.3 Copies of the successful contractor's insurance policies will be required in advance by the client or their nominated representative.

6.1.4 The appointed sub-contractor/s will take responsibility for securing the excavation areas (e.g. by fencing), provision of welfare, backfilling and reinstatement of the excavation areas and the removal of materials brought onto the site during the excavation.

6.1.5 Service plans and plans of buried restrictions will be supplied by the appointed Principal Contractor. Any archaeological intervention must respect all requirements for safe stand-off distances and working practices in regard of these features.

7. Monitoring

7.1.1 The KCC Archaeologist must be informed of the start date and timetable in advance of work commencing.

7.1.2 Reasonable access to the site must be afforded to the KCC Archaeologist or their nominee at all times, for the purposes of monitoring the archaeological excavations.

7.1.3 Regular communication between the archaeological contractor, the KCC Archaeologist, client and other interested parties must be maintained to ensure the project aims and objectives are achieved.

8. Heritage Outreach and Engagement

8.1.1 It is anticipated that archaeological works within the site will be the subject of significant public interest within the local community and specialist interest groups more widely.

8.1.2 A Heritage Outreach Scheme will be agreed with the KCC Archaeologist separately to this Written Scheme of Investigation, and this section is intended to provide a general scope for that scheme. It is anticipated that this would comprise a range of activities intended to publicise the process and findings of archaeological work within the proposed development, and to provide a lasting legacy that would persist through the operation of the proposed development.

8.1.3 Potential themes for the Heritage Outreach Strategy could include:

- Prehistoric Thanet;
- The Roman Invasion of Britain;
- Anglo-Saxon Thanet;
- Manston Airfield;
- Invasion and the Defence of Britain;
- Historic Trade and Contact.

8.1.4 Methods should include :

- Participation to include (where safety and security permits) involvement of volunteer or educational groups within site investigations, finds and environmental processing or documentary research;
- Engagement to include provision of regular updates on archaeological works as they progress using internet-based materials (e.g. blogs and social media) in addition to more conventional talks and site tours or open days;
- Provision of interpretation material in publicly accessible parts of the site or public access land near the site following completion of the construction programme;
- Partnership with the Museums in order to provide space for displays of material or a location for events.

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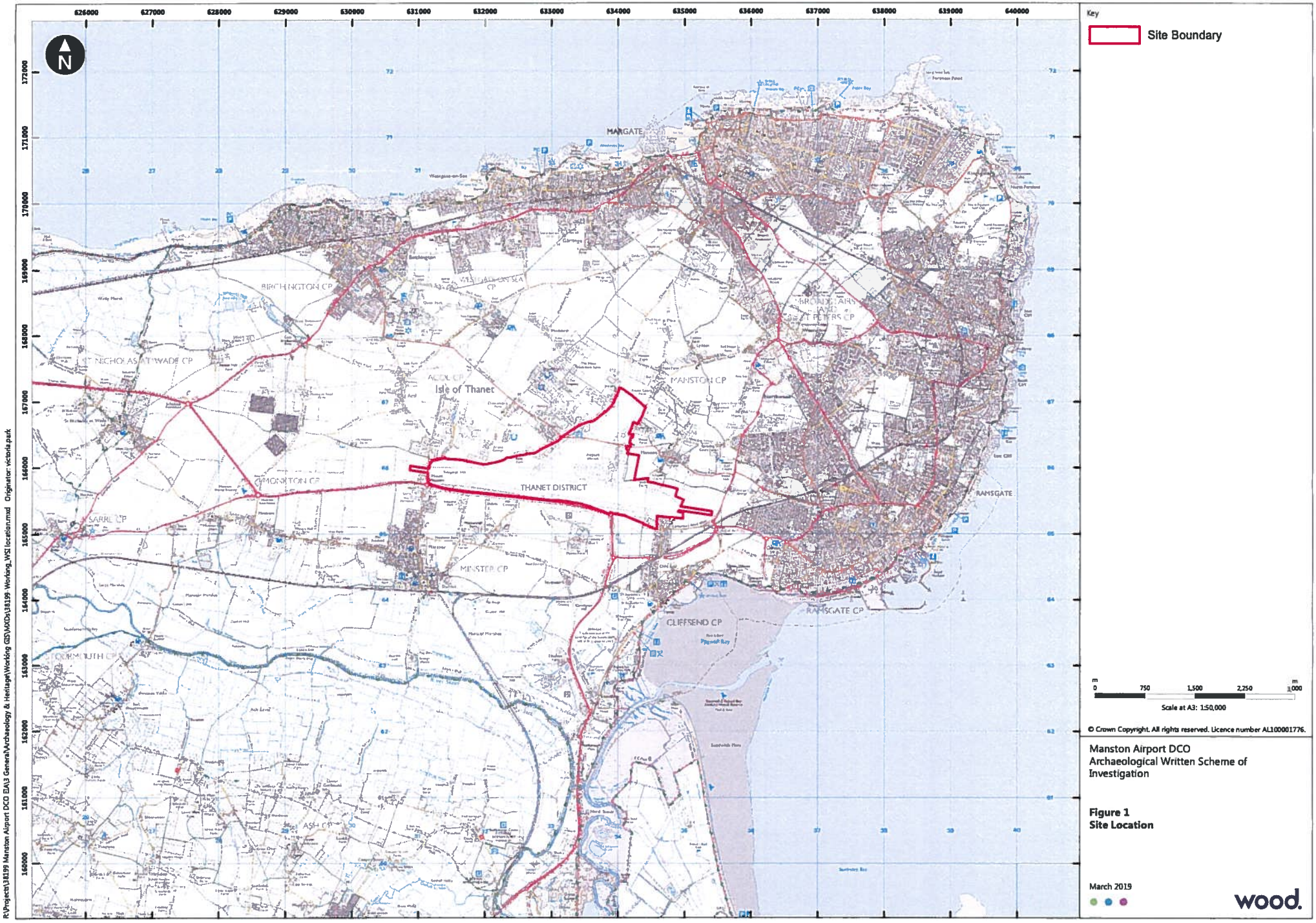
Appendix A
Figures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RAMSGATE CP
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Manston Airport DCO
Archaeological Written Scheme of Investigation
Figure 1
Site Location
March 2019
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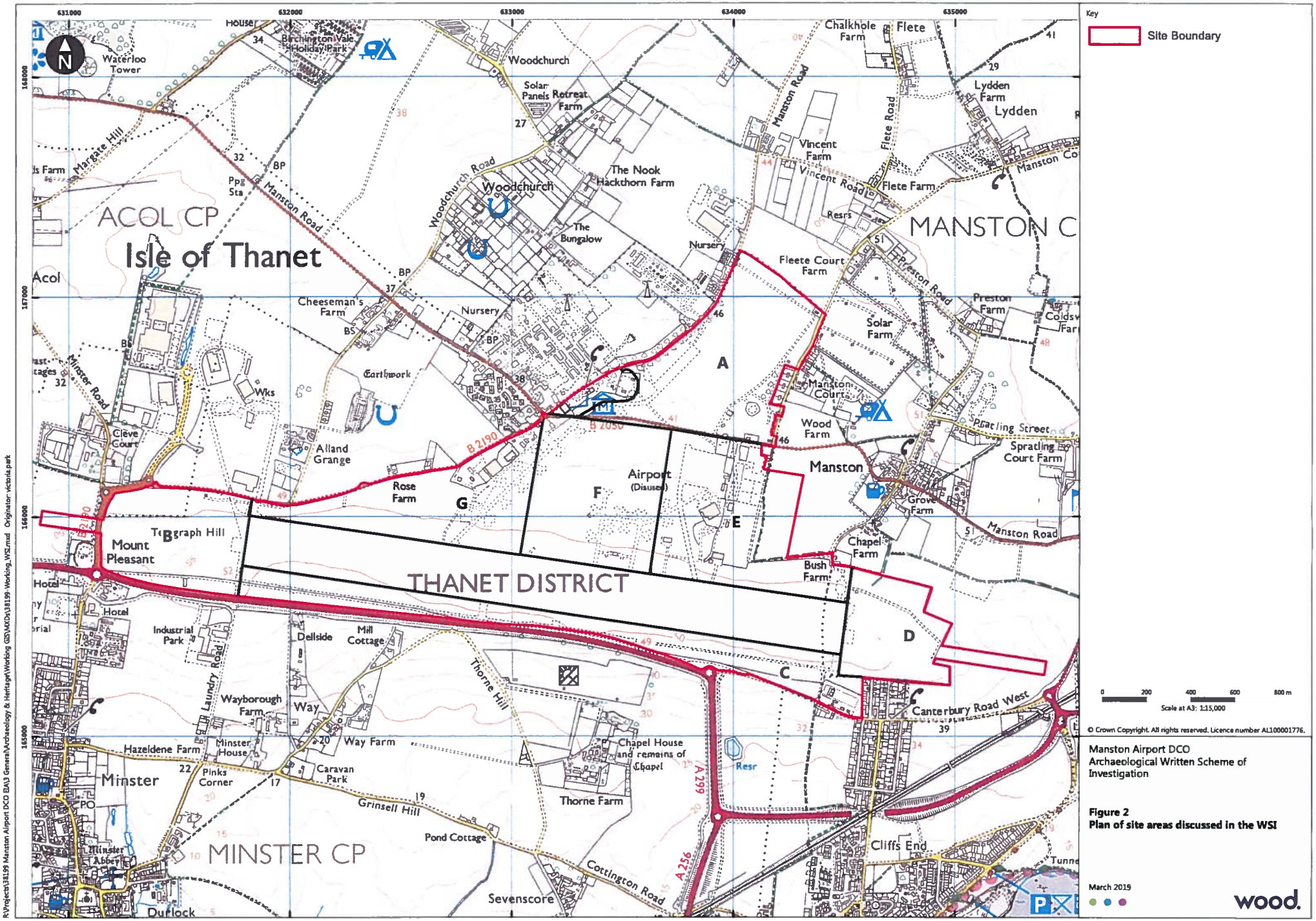
Key
Site Boundary
ACOL CP
Isle of Thanet
MANSTON C
THANET DISTRICT
MINSTER CP
A
B
C
D
E
F
G
Woodchurch
Woodchurch Road
Solar Panels Retreat Farm
The Nook
Hackthorn Farm
The Bungalow
Nursery
Fleete Court Farm
Fleete Farm
Vincent Farm
Vincent Road
Manston Road
Fleete Road
Lydden Farm
Lydden
Chalkhole Farm
Flete
Preston Road
Preston Farm
Solar Farm
Manston Court
Wood Farm
Manston
Grove Farm
Sprating Street
Sprating Court Farm
Chapel Farm
Bush Farm
Airport (Disused)
Rose Farm
Alland Grange
Cheeseman's Farm
Earthwork
Cleve Court
Minster Road
Margate Hill
Acol
Mount Pleasant
Telegraph Hill
Industrial Park
Laundry Road
Dellside
Mill Cottage
Wayborough Farm
Way Farm
Hazeldene Farm
Minster House
Pinks Corner
Caravan Park
Minster
Minster Abbey
Grinsell Hill
Pond Cottage
Thorne Hill
Thorne Farm
Chapel House and remains of Chapel
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Sevenscore
Duflock
Cliffs End
Canterbury Road West
A299
A256
B2190
B2050
Waterloo Tower
Birchington Vale Holiday Park
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Manston Airport DCO
Archaeological Written Scheme of Investigation
Figure 2
Plan of site areas discussed in the WSI
March 2019
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Appendix B
KCC Standards for Archaeological Work (From *Manual of Specifications* Part B)

EVALUATION – TRIAL TRENCHING REQUIREMENTS

1. Introduction

1.1 Archaeological trial trenching involves the sampling of a site to determine whether archaeological remains are present and if so, to assess their character, extent, date, condition and potential importance. Trial trenching will aim to determine, as far as is practicable and without comprising the integrity of important archaeological deposits, the full stratigraphic sequence at the site, including information on the 'natural' substrate and soil conditions.

2. General Requirements

2.1 Trial trenching will be carried out by archaeological organisations (from here on referred to as 'the Archaeological Contractor') acceptable to the relevant Local Planning Authority, with recognised experience and expertise in the specified type of work to be undertaken. Registration with the Institute of Field Archaeologists (IFA) as a Registered Archaeological Organisation (RAO) will normally be considered as an indicator, but not a prerequisite, of such expertise and experience. A good working knowledge of the archaeology of Kent will also be considered highly desirable.

2.2 Prior to any work being undertaken the Archaeological Contractor will inform the County Archaeologist and communicate details of the proposed team, including (if required) CVs for senior staff and specialists. Senior staff and specialists will need to demonstrate an appropriate level of experience and expertise and should preferably be, where appropriate, Members of the Institute of Field Archaeologists (IFA).

2.3 Prior to undertaking the trial trenching the Archaeological Contractor will need to demonstrate that the necessary resources are in place to undertake the work, through to reporting. The Archaeological Contractor will have available appropriate specialists necessary to support the successful completion of the archaeological fieldwork and post-excavation work.

2.4 The work will be supervised on site at all times by a member of staff with the required level of experience and who will be responsible for the conduct of on-site work.

3. Pre-site Requirements

3.1 Prior to undertaking trial trenching the Archaeological Contractor will have gathered and considered the following information:

- Relevant information on the County Historic Environment Record (HER) held by Kent County Council and maintained by the Heritage Conservation Team;
- Any earlier reports of fieldwork relevant to the site;

- Solid and drift geology;
- Geotechnical site investigation data (if available);
- Any desk-based studies of the site.

3.2 In certain circumstances the following will also be considered:
- Relevant published secondary sources
- Relevant historic maps held at the Centre for Kentish Studies
- Aerial photographs where cropmarks are considered to indicate archaeology on or close to the site.

3.3 The Archaeological Contractor will ensure that all reasonable measures have been taken to identify any constraints to undertaking the evaluation trenching. The Archaeological Contractor will seek information on the presence of services, any ecological constraints, the presence of Public Rights of Way, the presence of contaminated land or any other risks to health and safety.

3.4 The Archaeological Contractor will make provisional arrangements for the deposition of the site archive with an appropriate museum or suitable repository agreed with the County Archaeologist. The Archaeological Contractor will obtain a provisional accession number for the site archive from the recipient museum (except where the museum prefers to issue an accession number following completion of fieldwork) and any guidelines from the recipient museum regarding deposition of the site archive.

3.5 Full copies of the Specification must be issued to the field officer responsible for on-site work and a copy of the agreed Specification and any additional method statements must be available on site at all times. The team carrying out the trial trenching must be familiar with the Specification and have access on site to any previous evaluation or survey reports.

3.6 The Archaeological Contractor will inform the County Archaeologist of the start date of the work (at least five working days before) and arrange for monitoring visits to be undertaken, using the Site Fieldwork Notification Form (see Appendix II). The Archaeological Contractor will continue to keep the County Archaeologist informed of the progress of work and will notify the County Archaeologist immediately if particularly important archaeological remains are encountered.

4. Objectives

4.1 The purpose of the evaluation is to establish whether there are any significant archaeological deposits at the site that may be affected by the proposed development.

4.2 The evaluation is thus to
a) ascertain the extent, depth below ground surface, depth of deposit, character, date, significance and condition of any archaeological remains on site;

b) establish the extent to which previous development and/or other processes have affected archaeological deposits at the site; and
c) establish the likely impact on archaeological deposits of the proposed development.

5. Scope of trial trenching

5.1 The layout and number of trenches excavated will be in accordance with the Specification, details of which are given in Part A. Any amendment to trench design due to on-site constraints will be agreed with the County Archaeologist in advance of the work being undertaken.

5.2 Particular issues that will be addressed by the evaluation are set out in part A of this specification.

6. Machine and Hand Excavations

6.1 All machine excavation of trial trenches will be carried out under constant archaeological direction by a suitably experienced archaeologist familiar with the ground conditions anticipated on the investigation site.

6.2 Machine excavation of trial trenches will be undertaken by a mechanical excavator using a flat-bladed bucket. No mechanical excavators, earthmoving or other vehicles will travel within any excavated trench until it has been signed off by the County Archaeologist or specific agreement has been reached to enable re-stripping.

6.3 The Archaeological Contractor will maintain a constant watch and closely inspect on an ongoing basis surfaces exposed during the course of machining. Surfaces will be maintained clear of loose spoil.

6.4 Subject to additional requirements of the landowner or client, turf, topsoil and other distinct deposits will be stored separately and at least 1 metre from the edge of the evaluation trench.

6.5 Machine-excavated deposits and the exposed surface will be regularly scanned for the presence and collection of artefacts. Exposed surfaces and excavated spoil will be scanned by metal detector.

6.6 The excavation by machine is to be taken down to the top of any significant archaeological level or to the top of 'natural' subsoil where no archaeological deposits have been found at a higher level. In the event of significant archaeological deposits being encountered the County Archaeologist is to be informed immediately. Some further limited excavation may be required to clarify the nature, character and date of the archaeological deposits but the primary objective is to establish the presence/absence of archaeological deposits, their depth and extent.

6.7 Where complex archaeological stratification is encountered, deposits will be left in situ and measures to assess the depth of this stratification agreed with the County Archaeologist. Where modern features are seen to truncate the archaeological stratification, then these will be carefully removed without damage to surrounding deposits to enable the depth of stratification to be assessed.

6.8 If archaeological remains of limited significance are found to be present cutting through or overlying soils (e.g. colluvium) which conceal lower archaeological horizons then these will need to be recorded and investigated prior to removal of the underlying soil with the agreement of the County Archaeologist.

6.9 Machine excavation from the surface must be taken down in spits of no more than 100mm thickness to ensure that deposits and features are not over-excavated and that any artefacts/biological evidence in the soil are recorded.

6.10 Test sondages may need to be excavated through 'natural' subsoil in trial trenches to confirm that the solid geology has been reached. Such sondages will be positioned to avoid damage to archaeological remains.

7. Investigation and Sampling Strategy

7.1 Archaeological features will generally only be sampled sufficiently to characterise and date them. Full excavation of features will not be undertaken at this stage unless otherwise agreed with the County Archaeologist. Care will be taken not to damage archaeological deposits through excessive use of mechanical excavation.

7.2 Where necessary the surface and sections of trenches will be hand cleaned to define archaeological deposits and features clearly.

7.3 Measures will be taken to protect particularly significant, valuable or sensitive archaeological remains from exposure, accidental damage and / or theft.

7.4 Exposed surfaces will be left for a minimum of 48 hours to allow weathering-out of features to occur. No trenches will be backfilled until agreed with the County Archaeologist.

Burial Remains

7.5 Inhumation and cremation burials will normally be left in-situ for the purposes of evaluation. Subject to agreement with the County Archaeologist, graves may be partially excavated to confirm the presence of human remains and their state of preservation but skeletal remains will be left in situ. Graves will be scanned by metal detector to assess whether any grave objects are likely to be present.

7.6 Inhumation and cremation burials which are in a fragile state and are likely to

be damaged by the reinstatement of evaluation trenches will be excavated and lifted subject to agreement with the County Archaeologist.

7.7 The Archaeological Contractor will put in place arrangements to ensure the security, protection from deterioration and damage, and the respectful treatment of human remains and burial goods.

7.8 On sites where burial remains are expected the Archaeological Contractor will submit to and agree with the County Archaeologist detailed procedures for the assessment, recording and, where necessary, the excavation of inhumation and cremation burials.

7.9 The Archaeological Contractor will have available within the team or on call an appropriately qualified and experienced osteoarchaeologist to supervise the excavation and removal of any human remains (where this is necessary) from the site. The Archaeological Contractor will use an appropriately qualified and experienced archaeological conservator to assist, where appropriate, the lifting of human remains and grave goods / cremation vessels.

7.10 In the event that human burials are discovered, a Ministry of Justice Licence will be required (in accordance with Section 25 of the Burial Act 1857) before the remains can be lifted. The need for a Ministry of Justice Licence applies to both inhumation and cremated remains. Application for a Licence will be made by the Archaeological Contractor. The Archaeological Contractor is to comply with the conditions of the Licence and discuss any requirements of that Licence which conflict with the agreed method of investigation with the County Archaeologist.

8. Finds recovery processing and treatment

8.1 All artefacts recovered during the excavations on the site are the property of the Landowner. They are to be suitably bagged, boxed and marked in accordance with the United Kingdom Institute for Conservation, *Conservation Guidelines no.2* and on completion of the archaeological post-excavation programme the landowner will arrange for them to be deposited in a museum or similar repository agreed with the County Archaeologist and the Local Planning Authority.

8.2 Artefacts will be excavated carefully by hand. The Archaeological Contractor will use an appropriately qualified and experienced archaeological conservator to assist in the lifting of fragile finds of significance and / or value.

8.3 Artefacts will be collected and bagged by archaeological context. The location of special finds will be recorded in three dimensions. Three-dimensional recording of in-situ flint working deposits will be carried out.

8.4 Where appropriate to address the research objectives of the archaeological evaluation, sieving of deposits will be undertaken to maximise recovery of

small artefacts. A strategy for such sieving will be agreed in advance with the County Archaeologist.

8.5 Records of artefact assemblages will clearly state how they have been recovered, sub-sampled and processed.

8.6 Excavated artefacts will be bagged upon recovery or placed in finds trays. They must not be left loose on site.

8.7 **Treatment of treasure -** Finds, discovered by the Archaeological Contractor, falling under the statutory definition of Treasure (as defined by the Treasure Act of 1996 and its revision of 2002) will be reported immediately to the relevant Coroner's Office, the Kent Finds Liaison Officer (FLO) who is the designated treasure co-ordinator for Kent, the landowner and the County Archaeologist. A Treasure Receipt (obtainable from either the FLO or the DCMS website) must be completed and a report submitted to the Coroner's Office and the FLO within 14 days of understanding the find is Treasure. Failure to report within 14 days is a criminal offence. The Treasure Receipt and Report must include the date and circumstances of the discovery, the identity of the finder (put as unit/contractor) and (as exactly as possible) the location of the find.

8.8 All metal objects, other than late post medieval objects, will be X-rayed unless otherwise agreed with the County Archaeologist.

9. Archaeological Science and Environmental Sampling

9.1 A structured programme of environmental sampling appropriate to the aims of the evaluation will be implemented. The strategy and methodology for the sampling, recording, processing, assessment, analysis and reporting of deposits with environmental archaeology potential will be in accordance with English Heritage Centre for Archaeology Guidelines "Environmental Archaeology – A guide to the theory and practice of methods, from sampling and recovery to post-excavation" (March 2002). Any variation to this guidance will be agreed in advance with both the County Archaeologist and the English Heritage Regional Scientific Advisor. Particular note will be taken of the following requirements.

9.2 The Archaeological Contractor will use an appropriately qualified and experienced geo-archaeologist to record any deposits of particular significance such as buried soils or advise on depositional processes.

9.3 An appropriately qualified and experienced environmental archaeologist will devise and supervise the implementation of the environmental sampling strategy.

9.4 The advice of the English Heritage Regional Scientific Advisor is to be sought regarding specialist sampling requirements and any scientific applications relevant to the archaeological evaluation of this site.

9.5 Where deposits are dry, bulk samples for the recovery of charred plant remains, small bones and finds, will be taken from sealed and datable features such as pits, ditches, hearths and floors. Each context will normally be sampled. The size of the sample is expected to be in the range of 40-60 litres per context or 100% of smaller contexts. Samples will not be taken from the intersection of features.

9.6 For large features / spreads appropriate consideration will be given to sampling on a grid system if this fits in with the aims of the evaluation.

9.7 Where good conditions for the preservation of bone have been identified, all large bones will be collected by hand and sieving of bulk samples up to 100 litres will be undertaken as appropriate.

9.8 Mollusc samples of 2 litres each will be taken vertically from appropriate sections to investigate the changes of vegetation through time.

9.9 Where deposits are wet, waterlogged or peaty, monoliths will be taken along cleaned vertical surfaces for the retrieval of pollen, diatoms, ostracods and foraminifera. The numbers to be taken will be agreed with the County Archaeologist.

9.10 For wet, waterlogged or peaty deposits, bulk samples of 20 litres will be taken from visible layers or spits for the retrieval of plant macro-remains and insects.

9.11 Environmental samples from dry deposits will normally be processed by flotation following the evaluation fieldwork and the residues will be sorted to retrieve small bones, small finds and charcoal that has not floated. Environmental samples from wet deposits will normally be sent to specialists for processing in laboratory conditions. The Archaeological Contractor will agree with the County Archaeologist any necessary delay in completion of the reporting of the evaluation to enable provisional results to be included.

9.12 The Archaeological Contractor will make appropriate provision for the application of scientific dating techniques such as radiocarbon, dendrochronology, archaeomagnetic dating, OSL and thermoluminescence dating. The advice of the English heritage regional Scientific Advisor will be sought in advance of the application of these techniques. The Archaeological Contractor will agree with the County Archaeologist any necessary delay in completion of the reporting of the evaluation to enable provisional results to be included.

9.13 Where appropriate the guidance in the following English Heritage papers will be followed:

- "Guidelines on the recording, sampling, conservation, and curation of waterlogged wood" 1996

- "Dendrochronology – guidelines on producing and interpreting dendrochronological dates" 1997
- "Archaeometallurgy" 2001
- "Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation" 2002
- "Human bones from Archaeological Sites: Guidelines for Producing Assessment Documents and Analytical Reports" 2004
- "Geoarchaeology" 2004
- "Wet Wood and Leather"
- "Archaeomagnetic Dating: Guidelines on producing and interpreting archaeomagnetic dates" 2006
- "Guidelines on the X-radiography of archaeological metalwork" 2006

10. Recording

10.1 All trenches, structures, deposits and finds will be recorded according to accepted professional standards. Sufficient data must be recorded to allow the required level of assessment and reporting (see section 11).

10.2 Recording must be carried out to a sufficiently high standard to provide a full record of the deposits evaluated, including in trenches where no archaeology is identified.

10.3 All features, deposits and finds are to be recorded according to accepted professional standards.

10.4 All archaeological contexts are to be recorded individually on context record sheets. A further more general record of the work, comprising a description and discussion of the archaeology, is to be maintained as appropriate. Context sheets are to be primarily filled in by the archaeologist excavating the feature or deposit.

10.5 A plan to indicate the location of the boundaries of the evaluated area and the site grid is to be drawn at a scale of 1:1250 (or a similar appropriate scale). Plans indicating the location of the excavated trenches and the location of all archaeological features encountered are to be drawn at an appropriate scale. An overall site plan is to be maintained at a scale of 1:100 or larger scale where appropriate. Sections will be drawn at a scale of 1:10. Significant archaeological features will normally be drawn in plan at a scale of 1:20 or 1:10 if appropriate. All detailed plans and sections are to be related to the 1:100 or 1:1250 plans. The 1:1250 and 1:100 plans are to be accurately related to the National Grid.

10.6 Long Sections indicating the full stratigraphic sequence will be drawn for all trenches. Where a very simple sequence is revealed representative sections (minimum 1m wide) at each end of the trench will be sufficient, but where more complex stratigraphy is encountered, complete trench sections will be drawn. In the case of complex stratigraphy, all four sections will be drawn.

10.7 All plans and sections are to be levelled with respect to OD.

10.8 All plans and sections are to be drawn on polyester based drafting film and clearly labelled.

10.9 A full black and white and colour (35mm transparency) photographic record of the work is to be kept. The photographic record is to be regarded as part of the site archive.

10.10 The Archaeological Contractor will keep a day to day digital photographic record of the investigation.

10.11 The Archaeological Contractor will ensure that the complete site archive including finds and environmental samples are kept in a secure place throughout the period of evaluation and post excavation works.

10.12 The site archive is to be consolidated after completion of the evaluation, with all site drawings inked-in, and records and finds collated and ordered as a permanent record.

11. Reinstatement and completion of fieldwork

11.1 On completion, trenches will be backfilled, reinstated and left in a safe state to the requirements of the landowner / client.

11.2 Where vulnerable archaeological deposits remain within trial trenches these will be appropriately protected from damage as part of the reinstatement. Consideration will be given to providing a marker in backfilled trenches to highlight vulnerable archaeological deposits should re-excavation be necessary.

11.3 On completion of fieldwork the Archaeological Contractor will complete the relevant section of the Fieldwork Notification Form and submit it to the County Archaeologist.

12. Reporting

12.1 Within three weeks of completion of the evaluation fieldwork (or longer in case of complex sites as agreed with the County Archaeologist) the Archaeological Contractor will produce a report, copies of which (as a minimum) are to be provided to:

- the Developer
- the County Archaeologist
- the Local Planning Authority
- the Local Archaeological Society

12.2 When submitting the report to the County Archaeologist the Archaeological Contractor will provide written confirmation that the report has been submitted to the above parties.

12.3 If the Archaeological Contractor is required, contractually, only to submit reports directly to the developer or their agent, the Archaeological Contractor must inform the County Archaeologist in writing that they have completed the report and whom it has been forwarded to. The Archaeological Contractor must ensure that the developer is made aware of the need to circulate the report as in 12.1 above.

12.4 The Archaeological Contractor may determine the general style and format of the evaluation report but it must be completed in accordance with this specification. The report must provide sufficient information and assessment to enable the County Archaeologist and the Local Planning Authority to reach an informed decision regarding any further mitigation measures that may be required and to stand as an appropriately detailed report on the archaeological fieldwork for future research.

12.5 Reports that do not provide sufficient information or that have not been compiled in accordance with the relevant sections of this specification will be returned to the Archaeological Contractor for revision and resubmission.

12.6 The report will be submitted to the County Archaeologist in a heat-bound hard-copy and in digital format. The digital copy will be supplied in .pdf format and will contain all text, images and plans present in the hard-copy report in a single .pdf file. The medium will be a CD-ROM formatted according to ISO 9660:1999.

12.7 **Report Format** - The final evaluation report will include as a minimum:

12.7.1 An **Abstract** summarising the scope and results of the archaeological evaluation.

12.7.2 An **Introduction** including:

- the location of the site with a National Grid Reference for the centre sufficient to locate the site to 1m accuracy (e.g. TQ 55555 77777 or easting: 555555, northing: 177777);
- an account of the background and circumstances of the work;
- a description of the development proposals, planning history and planning reference together with the archaeological condition (where appropriate);
- the nature of potential impacts arising from the proposals;
- the scope and date of the fieldwork, the personnel involved and who commissioned it;

12.7.3 An account of the **Archaeological Background** of the development site including:

- geology, soils and topography;

- any known existing disturbances on the site;
- background archaeological potential of the site. This will include a summary of the known Historic Environment Record entries within 500m of the boundaries of the site (or wider where appropriate). The HER entries will be quoted with their full KHER identifier (e.g. TR 36 NW 12);
- summary of any previous phases of archaeological investigation at the development site;

12.7.4 The **Methodology** employed during the evaluation must be detailed in the report. Any aims and objectives specified in the specification will be included as will any further objectives identified during the course of the evaluation. Constraints on the evaluation will also be described.

12.7.5 The report will include a quantification of the project archive contents, their state and future location.

12.7.6 The **Results** of the evaluation field work will be described trench by trench. This description must include for each trench:

- the dimensions of the trench;
- the nature and depth of overburden soils encountered;
- description of all archaeological features and finds encountered in each trench, their dimensions, states of preservation and interpretation;
- a description of the geological subsoil encountered in each trench;
- heights related to Ordnance Datum for a sufficient number of features and deposits. Where the trench results are complex a table showing the dimensions and heights of features and deposits will be included for each trench.
- for complex stratigraphy a Harris Matrix diagram.

12.7.7 The **Finds** recovered during the course of the evaluation will be described, quantified and assessed by artefact type within the evaluation report. The report will also provide an indication of the potential of each category of artefact for further analysis and research. For each category of artefact the report will describe the method of processing, any sub-sampling, conservation and assessment undertaken. Where appropriate local reference collections will be referred to for descriptive and analytical consistency. Any implications for future archive, conservation or discard of the artefacts will also be set out.

12.7.8 The report will include a table showing, per trench, the contexts, classes and quantity of artefacts recovered, together with their date and interpretation.

12.7.9 The evaluation report will include an assessment of the **Environmental** potential of the site. Details will be provided of any environmental sampling undertaken in connection with the fieldwork and the results of any processing and assessment of the samples. The report will describe the method of processing, any sub-sampling and assessment. Any potential for future analysis of the samples or environmental remains recovered from the evaluation will be described. Implications for future archive, conservation or discard of environmental samples or remains will be detailed.

12.7.10 The report will include, as appropriate, tables summarising environmental samples taken, together with the results of processing and assessment.

12.7.11 Any results from the application of archaeological scientific techniques e.g. specialist dating will be included in the evaluation report.

12.7.12 An **Interpretation** of the archaeology of the site will be provided, including its location, extent, date, condition, significance and importance. This will be a synthesis of the stratigraphic, finds and environmental results of the investigation and will include, even if no archaeology is identified as present on the site, description of areas of disturbance, non-archaeological deposits and changes in geological subsoil where appropriate. This section of the report will be supported by a phased interpretative plan of the site, clearly showing the major areas and periods of archaeological activity.

12.7.13 An **Impact Assessment** will consider the potential effects of the development on the archaeological remains. This will summarise the archaeological results, describe how any identified archaeological potential identified relates to the site and how the development proposals will affect that archaeology. The report will highlight any areas of sensitivity within the site. Particular note will be made of any variations in the depth of overburden covering any archaeological deposits revealed.

12.7.14 The **Conclusion** will summarises the method, results, interpretation and impact assessment.

12.7.15 The evaluation report will assess the potential for preservation at the site to inform decisions about mitigation strategies. It will not include any recommendations on preservation measures or further work unless otherwise agreed with the County Archaeologist.

12.7.16 The evaluation report will include comments on the effectiveness of the methodology employed and the confidence of the results and interpretation.

12.7.17 **Figures / illustrations** – The report will include sufficient illustrations to support descriptions and interpretations within the report text. Figures are to be fully cross-referenced within the document text. As a minimum the evaluation report will include the following figures:

- a site location plan tied into the Ordnance Survey at 1:1250. The plan will also include at least two National Grid points to 1m accuracy and show the site boundary;
- trench location plans at an appropriate scale showing the layout of archaeological features, coloured by phases or period. The plan will show the location of all trenches and features. A copy of the plan will be overlain on the proposed development plan where this is known. Where possible, projection of archaeological features outside of the trench areas will be included on the plan. This plan will also include two National Grid points;

- plans of the features revealed in each of the trenches at a larger scale e.g. 1:20 or 1:50; such plans are to also illustrate areas of disturbance, change in subsoil and location of sections; The location of significant finds and samples taken will also be indicated;
- relevant section drawings and trench soil profiles as appropriate;
- illustrations and/or photographs of significant finds.

12.7.18 All report illustrations must be fully captioned and scale drawings must include a bar scale. Standard archaeological drawing conventions must be used. Plan and section illustrations must include the numbers of all contexts illustrated. North must be included on all plans and will be consistent. Sections must indicate the orientation of the section and the Ordnance Datum height of the section datum.

12.7.19 Black & White or Colour photographs will be included to illustrate key archaeological features, trenches and site operations. All photographs will be appropriately captioned.

13. Archive Preparation & Deposition

13.1 The site archive, to include all project records and cultural material produced by the project, is to be prepared in accordance with *Guidelines for the preparation of excavation archives for long-term storage (UKIC 1990)*. On completion of the project the Archaeological Contractor will arrange for the archive to be deposited in accordance with the provisional arrangements made with a suitable museum or repository at the onset of fieldwork. Any alternative arrangements will be agreed with the County Archaeologist and the Local Planning Authority.

14 Monitoring and Liaison

14.1 The Archaeological Contractor is to allow the site records to be inspected and examined at any reasonable time, during or after the evaluation fieldwork, by the client/developer, the County Archaeologist or any designated representative of the Local Planning Authority

14.2 Once the trenches have been evaluated and an initial assessment of the archaeology carried out, there will be an on-site meeting with the County Archaeologist to determine if further evaluation work is appropriate in order to meet the objectives.

14.3 The Archaeological Contractor will liaise closely with the County Archaeologist throughout the course of the evaluation and will arrange for on-site meetings at key decision points.

14.4 The Archaeological Contractor is to make contact with the local archaeological society and keep them informed on the progress of the evaluation. Subject to

health and safety constraints the Archaeological Contractor will afford opportunity to the local archaeological society to visit the evaluation site. Copies of all reports will be provided to the local archaeological society.

14.5 The Archaeological Contractor is to circulate a completed Fieldwork Notification Form (Appendix 2) at the start and completion of fieldwork and at the completion of post excavation reporting stages.

15. Copyright and data protection

15.1 Information submitted to the County Archaeologist in conjunction with planning applications automatically becomes publicly accessible and can be viewed by anyone at any time. In addition, the Local Planning Authority and Kent County Council are subject to the requirements of the Freedom of Information Act (2000) and Environmental Information Regulations (2004). Information may be subject to FoI or EIR requests and any documentation submitted in connection with the project may be made publicly available unless doing so contravenes the Data Protection Act (1998).

15.2 While copyright of reports and other information arising from the fieldwork remains with the originator, the Archaeological Contractor will undertake to make this information available to interested parties. The Archaeological Contractor will agree to allow reports of the fieldwork to be copied and made available to interested parties for archaeological research. The reports may be made available on the Internet no sooner than three months after the submission of the report. Archaeological Contractors who believe that there are special reasons for not publishing the report on the Internet should reach a separate agreement with the County Archaeologist.

16. Health and Safety

16.1 The Archaeological Contractor will conduct the work in compliance with the Health and Safety at Work etc Act 1974. The Archaeological Contractor will also follow the guidance set out in "Health and Safety in Field Archaeology" Standing Conference of Archaeological Unit Managers 1997.

16.2 The Archaeological Contractor is expected to maintain a Health and Safety Policy and a procedures manual and have available appropriate expertise in Health and Safety advice. Site staff will have an appropriate level of training to enable them to carry out fieldwork safely.

16.3 The Archaeological Contractor will maintain the site in a safe condition. All hazards will be appropriately identified and managed. Deep excavations will be appropriately fenced.

16.4 The Archaeological Contractor will carry out a risk assessment prior to commencement of fieldwork and where appropriate a COSHH assessment.

Risks and measures to reduce risk will be communicated to all working on and visiting the site.

16.5 The Archaeological Contractor will have available suitable site accommodation, welfare and toilet facilities.

17. KCC HER

17.1 The Archaeological Contractor is to provide the Kent Historic Environment Record with copies of all reports in both heat-bound hard-copy and digital format (see 12.6 above).

17.2 Upon completion of the excavation the Archaeological Contractor will supply the Kent Historic Environment Record with a completed HER form (see Appendix 1)

17.3 The Archaeological Contractor will supply the Kent Historic Environment Record with the following digital datasets:

- A .dxf file containing polygon data that describes in detail all excavated/ watched area boundaries, whether trenches, test pits, excavated areas or areas examined by watching brief. This .dxf file must be internally geo-referenced (i.e. the co-ordinate system used in the file must be the Ordnance Survey co-ordinate system).
- A separate .dxf file that contains a number of Layers. Each Layer should represent a different phase of the archaeological remains on site. The name of each Layer must be the phase number used on the site accompanied by a date range (e.g. "2, from –2000 to –800", "7A, from 410 to 700" etc). Each layer must contain only the features relevant to that phase digitized as polylines. Where the dating is based on scientific dating methods such as radiocarbon, the dates must be calibrated calendar dates.

17.4 A guidance document has been produced for Kent County Council that will inform contractors as to how this information can be produced within AutoCad. This document is available from the County Archaeologist and Kent County Council Historic Environment Record.

17.5 The Archaeological Contractor should also provide a representative selection of digital site photographs illustrating the archaeology of the site and the operations of the investigation. These will be in .jpg format at a minimum 300dpi. These will be deposited with the County HER and will be used for presentations on aspects of the archaeology of Kent.

17.6 It is to be understood that photographs and notes taken by KCC Archaeological Officers in connection with the work that do not identify individuals or site locations may be used by KCC for outreach and publicity purposes, including on social media sites such as Facebook, Twitter etc. The Archaeological

Contractor should, **preferably in advance** of the works, raise with the KCC Archaeological Officer any concerns that they or their client may have over the use and dissemination of images or information for outreach purposes. In such cases the Archaeological Contractor and their client will agree a protocol with the KCC Archaeological Officer for the appropriate dissemination and use of images and information which balances the concerns of the contractor and/or client with the objective of ensuring that the people of Kent are kept informed of the archaeological discoveries in the county.'

18 General

18.1 In carrying out the work the Archaeological Contractor is to abide by:

- all statutory provisions and by-laws relating to the work in question,
- the Institute of Field Archaeologists *Code of Conduct,*
- the Institute of Field Archaeologists *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*.

APPENDIX 1 Kent County Council HER summary form

Site Name:	
Site Address:	
Summary: (50 words max)	
District/Unitary:	Parish:
Period(s):	
NGR (centre of site : 8 figures): (NB if large or linear site give multiple NGRs)	
Type of archaeological work (underline) Evaluation: Watching Brief Field Walking Documentary study Building recording Earthwork survey Excavation: Geophysical Survey Field Survey Geoarchaeological investigation	
Date of Recording:	
Unit undertaking recording:	
Geology:	
Title and author of accompanying report:	
Summary of fieldwork results (begin with earliest period first, add NGRs where appropriate) (200 words max) (cont on attached sheet)	
Location of archive/finds:	

Contact at Unit:	Date:

APPENDIX 2 - FIELDWORK NOTIFICATION FORM

Guidance for Completing the Kent Archaeological Fieldwork Notification Form

Purpose

The purpose of the form is to improve the notification, tracking and monitoring of archaeological fieldwork in Kent. Its primary purpose relates to archaeological work being undertaken for the purposes of planning and development but it is hoped that it will be also usable by archaeological societies and other bodies undertaking fieldwork in the county.

Approach

- The archaeological body undertaking the fieldwork should fill in the form. Sections A and B should be filled in before fieldwork starts and submitted to the County Archaeologist. This may be submitted in digital copy to speed things along but a signed copy should follow in the post.

- Section A contains details of the project while Section B refers specifically to the onset of the phase of fieldwork. In signing section B the Archaeological Contractor is confirming that the necessary funds and resources to complete the works to the specification have been made available.

- The form should not be filled in separately for each period of an intermittent watching brief but should be filled in for major stages of fieldwork, for example separate phases of evaluation and excavation.

- Section C should be submitted at the completion of the fieldwork stage and should if known indicate whether further work is anticipated. This section sets out a brief summary of findings and what reports are to be submitted. For excavations these will include interim, assessment and full reports. Again the form may be submitted digitally with a signed copy to follow in the post. (The details of Sections A and B should remain filled in on the same form).

- Section D should be submitted as reports are submitted to the County Archaeologist. For excavations the form need not be submitted with interim reports but should be submitted with assessment and full reports.

MITIGATION – STRIP, MAP AND SAMPLE REQUIREMENTS

1. Introduction

1.1 A key objective of field archaeology is to see how sites and features relate to each other spatially and chronologically - the dynamics of settlement evolution. At one level it is about sites and features and their immediate surroundings but it can be about the wider use of the landscape. Accordingly in undertaking archaeological investigations of more extensive sites it is important to relate site-specific work to a broader context. Here Strip, Map and Sample archaeological excavation is a key tool.

1.2 In Strip, Map and Sample a major focus of the investigation will be on removing the overburden and establishing a phased plan of the archaeology which has been revealed, with further work then being based on an appreciation of this complete plan rather than on those more limited insights revealed from trial trenching and limited area excavation. The overall phased plan is paramount and subsequent sampling will be targeted to answering questions about the chronology and function of the component elements of the site and how they relate to each other. Relatively blank areas may also be significant.

1.3 Key stages in Strip, Map and Sample, all to be agreed with the curator, are:

- The careful stripping of the site to the agreed level, in order to reveal the site plan.
- Immediate planning of the site while the uncovered surface is fresh. The site should be regularly checked subsequently to see if weathering reveals further features and the plan updated.
- Following planning, sampling should proceed. Initially this is likely to concentrate on establishing a relative chronology through the investigation of feature intersections. Secondly an attempt should be made to establish a more precise chronology.
- Key areas and nodes should then be investigated in sufficient detail to understand them both in respect of themselves and also in relation to their surroundings.
- Additional work should be focused on adding to the spatial, chronological, functional and environmental context of the investigated area.

1.4 Excavation should be an iterative process relating to an agreed strategy which will be refined as new information emerges. At all stages of the investigation it is essential that an overall phase plan is maintained, incorporating what is being revealed through excavation.

2. General Requirements

2.1 Strip, Map and Sample archaeological excavation will be carried out by archaeological organisations (from here on referred to as 'the Archaeological Contractor') acceptable to the relevant Local Planning Authority, with recognised experience and expertise in the specified type of work to be undertaken. Registration with the Institute of Field Archaeologists (IFA) as a Registered Archaeological Organisation (RAO) will normally be considered as an indicator, but not a prerequisite, of such expertise and experience. A good working knowledge of the archaeology of Kent will also be considered necessary.

2.2 Prior to any work being undertaken in Kent, the Archaeological Contractor will

inform the County Archaeologist and communicate details of the proposed team, including (if required) CVs for senior staff and specialists. Such staff will be able to demonstrate an appropriate level of experience and expertise and should preferably, where appropriate, be Members of the Institute of Field Archaeologists (IFA).

2.3 Prior to undertaking the Strip, Map and Sample the Archaeological Contractor will demonstrate that appropriate provision has been made for the resources needed to undertake the work, through to and completion of reporting. The Archaeological Contractor will have available appropriate specialists necessary to support the successful completion of the archaeological fieldwork and post excavation work.

2.4 During fieldwork, the Archaeological Contractor will be represented on site at all times by a member of staff with the required level of experience and who will be responsible for the conduct of on-site work.

3. Pre-fieldwork Requirements

3.1 Prior to undertaking the investigation the Archaeological Contractor will have gathered and considered the following information:

- Relevant information on the Kent County Council Historic Environment Record (HER) maintained by the Heritage Conservation Team;
- Any earlier reports of fieldwork relevant to the site;
- Solid and drift geology;
- Geotechnical site investigation data (if available);
- Any desk based studies of the site.

3.2 In certain circumstances the following will also be considered:

- Relevant published secondary documentary sources;
- Relevant historic maps held at the Centre for Kentish Studies, Maidstone;
- Aerial photographs where cropmarks are considered to indicate archaeology on or close to the site.

3.3 The Archaeological Contractor will ensure that all reasonable measures have been taken to identify any constraints to undertaking the investigation. The Archaeological Contractor will seek information on the presence of services, any ecological constraints, the presence of Public Rights of Way, the presence of contaminated land or any other risks to health and safety.

3.4 The Archaeological Contractor will make provisional arrangements for the deposition of the site archive with an appropriate museum or suitable repository agreed with the County Archaeologist. The Archaeological Contractor will obtain a provisional accession number for the site archive from the recipient museum (except where the museum prefers to issue an accession number following completion of fieldwork) and any guidelines from the recipient museum regarding deposition of the site archive.

3.5 Full copies of the Specification must be issued to the field officer responsible for on-site work and a copy of the agreed Specification and any additional method statements must be available on site at all times. The team carrying out the investigation must be familiar with the Specification and have access on site to any previous evaluation or

survey reports.

3.6 The Archaeological Contractor will inform the County Archaeologist of their appointment, the start date (at least two working weeks before) and arrange for monitoring visits to be undertaken, using the Site Fieldwork Notification Form (see Appendix II). The Archaeological Contractor will continue to keep the County Archaeologist informed of the progress of work and will notify the County Archaeologist immediately if particularly important archaeological remains are encountered.

4. Objective

4.1 The objective of the archaeological mitigation is to identify, excavate, record and analyse any significant archaeological remains that will be disturbed by the proposed development. The physical archaeological remains will be replaced by a detailed record and a better understanding of the past activities that have taken place on the site, thereby contributing to an increased knowledge of Kent's past and providing a resource for future research and education.

4.2 The objective of the Strip, Map and Sample approach is to understand the broad pattern of settlement dynamics and how key elements of the archaeological landscape (sites, activities, deposits and finds) relate to each other spatially, functionally and chronologically.

4.3 Strip, Map and Sample will seek to :

- Establish a broad phased plan of the archaeology revealed following the stripping of the site;
- Provide a refined chronology of the archaeological phasing;
- Investigate the function of structural remains and the activities taking place within and close to the site.

4.4 The archaeological investigation will seek to understand the context of the findings in relationship to the wider settlement pattern, landscape, economy and environment.

4.5 Specific aims are detailed in Part A of this specification.

5. Scope of Strip, Map and Sample Archaeological Excavation

5.1 The site area subject to Strip, Map and Sample, as set out in Part A of this specification will be machine-stripped of overburden and mapped and then archaeologically investigated following an agreed sample excavation strategy. Any amendment to the area proposed for stripping due to on-site constraints must be agreed with the County Archaeologist in advance of the work being undertaken.

5.2 Particular issues that will be addressed during the course of the Strip, Map and Sample archaeological excavation are set out in Part A of this specification.

6. Machine Stripping

6.1 All machine stripping of overburden soils will be carried out under constant archaeological direction by a suitably experienced archaeologist familiar with the ground conditions anticipated on the investigation site.

6.2 A mechanical excavator using a large flat bladed, toothless, bucket of no less than 1.8m-width will carry out machine stripping of overburden soils. The machine stripping will be carried out by one or more large 360^0 tracked excavators working back from one or several fronts.

6.3 No mechanical excavators, earthmoving and other vehicles will travel on the freshly stripped subsoil surface and any identified areas of archaeological investigation until these areas have been signed off by the County Archaeologist or specific agreement has been reached to enable re-stripping.

6.4 Care will be taken to avoid damage to buried surfaces by manoeuvring of plant on unstripped areas of the site. The supervising archaeologist will monitor the effects of plant manoeuvring on the site and will suspend operations that are potentially damaging to underlying archaeological deposits.

6.5 The excavation by machine is to be taken down to the top of the archaeological level or to the top of 'natural' subsoil where no archaeological deposits are found at a higher level. Care will be taken not to damage archaeological deposits through excessive use of mechanical excavation. Machine excavation from the surface must be taken down in spits of no more than 100mm thickness to ensure that deposits and features are not over-excavated and that any artefacts/biological evidence in the soil are recorded.

6.6 The Archaeological Contractor will maintain a constant watch and regularly closely inspect exposed surfaces during the course of machining. If archaeological remains are found to be present cutting through soils (e.g. colluvium) which conceal lower archaeological horizons then the upper levels will be mapped and investigated prior to removal of deposits overlying the lower levels.

6.7 Topsoil and subsoil and fills from archaeological features will be removed from the excavation area and stored in areas agreed with the developer and the County Archaeologist (where appropriate). Spoil heaps will be set back at least 1 metre from the edge of excavation areas.

6.8 Machine-excavated deposits and the exposed surface will be regularly scanned for the presence and collection of artefacts. Exposed surfaces and excavated spoil will be regularly scanned by metal detector.

6.9 The supervising archaeologist will ensure that the machine exposed surface has been left in a clean state suitable for the proper identification of archaeological features. If following the stripping, there remain any areas where it is not clear that archaeological features have been adequately exposed or defined these will be hand cleaned to further define the archaeology.

6.10 Mechanical excavators will not be used to re-clean areas of excavation that have been obscured through weathering. Such areas will be cleaned by hand tools.

6.11 Measures will be taken to protect particularly significant, valuable or sensitive archaeological remains from exposure, accidental damage and / or theft.

7. Mapping

7.1 A site grid is to be established, using an EDM or theodolite, and this tied into the Ordnance Survey National Grid at the outset of the project.

7.2 On completion of, or during, machine-stripping, the resultant surface will be accurately planned at an appropriate scale (1:50 or 1:100 dependent upon complexity). Some hand-cleaning may be necessary to clarify features, particularly in areas of complexity, but generally it is hoped that a sufficiently clear surface can be gained from machine stripping.

7.3 The archaeological team is to be structured to ensure that the hand-cleaning and planning operations run in close sequence. The exposing and planning of archaeological features is to be undertaken on the same or consecutive days while the uncovered surface is fresh, whether or not those features are exposed by machine or handcleaning. Where particularly vulnerable deposits are apparent such as graves or cremations these will be given special priority.

7.4 The exposed surface will be regularly monitored during the course of the investigation to identify any further features that may appear due to weathering. Any additional features revealed will be added to the overall pre-excavation site plan.

7.5 Use will be made of spray line paint marker to record the unexcavated form of features prior to mapping.

7.6 Where initial plan data for a stripped site is captured electronically, through use of EDM, Total Stations, theodolite or GPS, the Archaeological Contractor will ensure that sufficient points are taken on any feature to provide a true reflection of its form in plan. A print out of the plan will be checked for accuracy on site.

7.7 In addition to capturing plan data, sufficient levels will be taken across the stripped surface to support future topographic modelling of the investigation site.

7.8 An overall plan of the stripped site will be prepared and provided to the County Archaeologist within one week of the completion of machine stripping. The plan is an essential pre-requisite of agreeing a suitable sampling strategy for the exposed archaeology.

8. Investigation and Sampling Strategy

8.1 The excavation strategy will be agreed with the County Archaeologist following a site meeting on the completion of machine stripping and provision of a suitable site mapping plan. A written record of the agreed strategy should be provided by the Archaeological

Contractor to the County Archaeologist within one week of agreement.

8.2 The revealed features will be excavated and recorded in accordance with the agreed excavation sampling strategy. The sampling strategy will continue to be developed throughout the investigation period in consultation with the County Archaeologist in light of the results of the field work. The excavation will include initially as a minimum:

- The investigation of the intersections of features of archaeological date to obtain a phasing of the site;
- A robust spatial framework of excavation to provide an understanding of the spatial distribution of past activities across the investigation area including any 'special' deposits and any patterning in artefact distribution. Such a framework will take into account the inter-relationship of major features.
- Structural remains and other areas of significant and specific activity (domestic, industrial, religious, hearths, 'special'/ patterned deposits etc) will be fully excavated and recorded.
- Where appropriate, for instance where the stratigraphy is complex, single context planning will be used.
- Non-structural linear cut features will be sample excavated and recorded with a sufficient number of sections to establish the feature's character, date and morphology and to provide information on activities taking place in close proximity to the feature. All terminal ends will be investigated. Sections will normally be at least 1m wide.
- Non-structural pits will be half-sectioned unless the character, number or size of the pits makes this unpractical. For instance, if a pit contains several intersections and re-cuts, it would not always be appropriate to half-section it. In this situation, the Archaeological Contractor will consider 'quadranting' or single context planning. Equally if 'special' deposits are expected pits may need to be excavated in plan rather than being half-sectioned. The strategy will need to be agreed with the County Archaeologist.
- Non-structural post and stake-holes will be half-sectioned sufficiently to clarify character, relationships and chronology.
- All burial deposits and associated remains will be fully excavated and recorded in accordance with an agreed methodology (see below).

8.3 The sampling excavation strategy will be reviewed continuously throughout the course of fieldwork and, if necessary, amended in order to take account of changing circumstances and understanding. Any changes or amendments will be agreed in advance of implementation with the County Archaeologist.

8.4 Where insufficient dating material or information has been gathered from a partially or half-sectioned feature, further sampling will be undertaken unless agreed otherwise with the County Archaeologist.

8.5 Archaeological features will be hand cleaned prior to excavation to provide a more accurate dimension than was obtained through the initial mapping. For linear features such hand cleaning will be targeted at sample excavation points.

Burial Remains

8.6 Inhumation and cremation burials will be fully excavated by hand within 24 hours of exposure unless otherwise agreed with the County Archaeologist.

8.7 The Archaeological Contractor will put in place arrangements to ensure the security, protection from deterioration and damage, and the respectful treatment of human remains and burial goods.

8.8 Where burial remains are expected the Archaeological Contractor will submit to and agree with the County Archaeologist detailed procedures for the excavation and recording of inhumation and cremation burials.

8.9 The Archaeological Contractor will have available within the team or on call an appropriately qualified and experienced osteoarchaeologist to supervise the excavation and removal of human remains from the site. The Archaeological Contractor will use an appropriately qualified and experienced archaeological conservator to assist where appropriate in the lifting of human remains and grave goods / cremation vessels.

8.10 In the event that human burials are discovered, a Ministry of Justice Licence will be required (in accordance with Section 25 of the Burial Act 1857) before the remains can be lifted. The need for a Ministry of Justice Licence applies to both inhumation and cremated remains. Application for a Licence will be made by the Archaeological Contractor. The Archaeological Contractor is to comply with the conditions of the Licence and discuss any requirements of that Licence which conflict with the agreed method of investigation with the County Archaeologist.

9. Finds recovery processing and treatment

9.1 All artefacts recovered during the excavations on the site are the property of the Landowner. They are to be suitably bagged, boxed and marked in accordance with the United Kingdom Institute for Conservation, *Conservation Guidelines no.2* and on completion of the archaeological post-excavation programme the landowner will arrange for them to be deposited in a museum or similar repository agreed with the County Archaeologist and the Local Planning Authority.

9.2 Artefacts will be excavated carefully by hand. The Archaeological Contractor will use an appropriately qualified and experienced archaeological conservator to assist where appropriate in the lifting of fragile finds of significance and / or value.

9.3 Artefacts will be collected and bagged by archaeological context. The location of special finds will be recorded in three dimensions. Three-dimensional recording of in-situ flint working deposits will be carried out.

9.4 Where appropriate to address the research objectives of the archaeological investigation, sieving of deposits will be undertaken to maximise recovery of small artefacts. A strategy for such sieving will be agreed in advance with the County Archaeologist.

9.5 Records of artefact assemblages will clearly state how they have been recovered, sub-sampled and processed.

9.6 Excavated artefacts will be bagged upon recovery or placed in finds trays. They must not be left loose on site.

9.7 **Treatment of treasure** - Finds, discovered by the Archaeological Contractor, falling under the statutory definition of Treasure (as defined by the Treasure Act of 1996 and its revision of 2002) will be reported immediately to the relevant Coroner's Office, the Kent Finds Liaison Officer (FLO) who is the designated treasure co-ordinator for Kent, the landowner and the County Archaeologist. A Treasure Receipt (obtainable from either the FLO or the DCMS website) must be completed and a report submitted to the Coroner's Office and the FLO within 14 days of understanding the find is Treasure. Failure to report within 14 days is a criminal offence. The Treasure Receipt and Report must include the date and circumstances of the discovery, the identity of the finder (put as unit/contractor) and (as exactly as possible) the location of the find.

9.8 Finds processing will normally be carried out during the course of the archaeological fieldwork and provisional spot dating fed back to inform investigation strategy.

9.9 All metal objects, other than late post medieval objects, will be X-rayed unless otherwise agreed with the County Archaeologist.

10. Archaeological Science and Environmental Sampling

10.1 An appropriate and structured programme of environmental sampling will be implemented. The strategy and methodology for the sampling, recording, processing, assessment, analysis and reporting of deposits with environmental archaeology potential will be in accordance with English Heritage Centre for Archaeology Guidelines "Environmental Archaeology – A guide to the theory and practice of methods, from sampling and recovery to post-excavation" March 2002. Any variation to this guidance will be agreed in advance with both the County Archaeologist and the English Heritage Regional Scientific Advisor. Particular note will be taken of the following requirements.

10.2 The Archaeological Contractor will use an appropriately qualified and experienced geo-archaeologist to record any deposits of particular significance such as buried soils or advise on depositional processes.

10.3 An appropriately qualified and experienced environmental archaeologist will devise and supervise the implementation of the environmental sampling strategy.

10.4 The advice of the English Heritage Regional Scientific Advisor is to be sought regarding specialist sampling requirements and any scientific applications relevant to the archaeological investigation of this site.

10.5 Where deposits are dry, bulk samples for the recovery of charred plant remains, small bones and finds, will be taken from sealed and datable features such as pits, ditches, hearths and floors. Each context will normally be sampled. The size of the sample is expected to be in the range of 40-60 litres per context or 100% of smaller contexts.

Samples will not be taken from the intersection of features.

10.6 For large features / spreads appropriate consideration will be given to sampling on a grid system.

10.7 Where good conditions for the preservation of bone have been identified, all large bones will be collected by hand and sieving of bulk samples up to 100 litres will be undertaken as appropriate.

10.8 Mollusc samples of 2 litres each will be taken vertically from appropriate sections to investigate the changes of vegetation through time.

10.9 Where deposits are wet, waterlogged or peaty, monoliths will be taken along cleaned vertical surfaces for the retrieval of pollen, diatoms, ostracods and foraminifera. The numbers to be taken will be agreed with the County Archaeologist.

10.10 For wet, waterlogged or peaty deposits, bulk samples of 20 litres will be taken from visible layers or spits for the retrieval of plant macro-remains and insects.

10.11 Environmental samples from dry deposits will normally be processed by flotation during the course of the archaeological fieldwork and the residues will be sorted to retrieve small bones, small finds and charcoal that has not floated. Environmental samples from wet deposits will normally be sent to specialists for processing in laboratory conditions. Provisional results should be fed back to the on site team to inform subsequent investigation strategy.

10.12 The Archaeological Contractor will make appropriate provision for the application of scientific dating techniques such as radiocarbon, dendrochronology, archaeomagnetic dating, OSL and thermoluminescence dating. The advice of the English heritage regional Scientific Advisor will be sought in advance of the application of these techniques.

10.13 Where appropriate the guidance in the following English Heritage papers will be followed:

- "Guidelines on the recording, sampling, conservation, and curation of waterlogged wood" 1996
- "Dendrochronology – guidelines on producing and interpreting dendrochronological dates" 1997
- "Archaeometallurgy" 2001
- "Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation" 2002
- "Human bones from Archaeological Sites: Guidelines for Producing Assessment Documents and Analytical Reports" 2004
- "Geoarchaeology" 2004
- "Wet Wood and Leather"
- "Archaeomagnetic Dating: Guidelines on producing and interpreting archaeomagnetic dates" 2006
- "Guidelines on the X-radiography of archaeological metalwork" 2006

11. Recording

11.1 All features, deposits and finds are to be recorded according to accepted professional standards.

11.2 All archaeological contexts are to be recorded individually on context record sheets. A further more general record of the work comprising a description and discussion of the archaeology is to be maintained as appropriate. Context sheets are to be primarily filled in by the archaeologist excavating the feature or deposit.

11.3 A plan to indicate the location of the boundaries of the excavated area and the site grid is to be drawn at a scale of 1:1250 (or a similar appropriate scale). Sections will be drawn at a scale of 1:10. Significant archaeological features will normally be drawn in plan at a scale of 1:20 or 1:10 if appropriate. All detailed plans and sections are to be related to the 1:100 plan (see 7.2 above). The 1:1250 and 1:100 plans are to be related accurately to the National Grid.

11.4 All plans and sections are to be levelled with respect to OD.

11.5 All plans and sections are to be drawn on polyester based drafting film and clearly labelled.

11.6 A full black and white and colour (35mm transparency) photographic record of the work is to be kept. The photographic record is to be regarded as part of the site archive.

11.7 The Archaeological Contractor will keep a day to day digital photographic record of the investigation. Consideration will be given to maintaining a video record of key features, findings and operations during the fieldwork

11.8 The Archaeological Contractor will ensure that the complete site archive including finds and environmental samples are kept in a secure place throughout the period of excavation and post excavation works.

11.9 The site archive is to be consolidated after completion of the whole project, with all site drawings inked-in, and records and finds collated and ordered as a permanent record.

12. Completion of fieldwork

12.1 On completion of fieldwork the site will be left in a safe state and in accordance with the requirements of the landowner / client.

12.2 On completion of fieldwork the Archaeological Contractor will complete the relevant section of the Fieldwork Notification Form and submit to the County Archaeologist.

13. Reporting

13.1 Within 4 weeks of completion of the work on site, the Archaeological Contractor will carry out an initial assessment of the results and produce an **Interim Report**. This will comprise a basic description of the archaeology and a plan at an appropriate scale (e.g.

1:500), one copy of which will be provided to:

- the County Archaeologist,
- the site developer
- the Local Planning Authority.
- Local Archaeological Society

13.2 Within 3 months of completion of the work on the site the Archaeological Contractor will carry out an assessment of the results and produce a MAP2 **'Post-excavation Assessment Report'**, copies of which are to be provided as in 13.1 above. An additional copy will be provided to the English Heritage Regional Scientific Advisor. This report will include a **'Proposal'** to be agreed with the County Archaeologist that sets out a programme of post excavation analysis through to completion of a **'Full Report'** and **'Publication'** of the findings.

13.3 The Archaeological Contractor may determine the general style and format of the **'Post-excavation Assessment Report'** and the **'Full Report'** but they must be completed in accordance with this specification. The reports must provide sufficient information and assessment to stand as a detailed report on the archaeological fieldwork for future research and to inform on further stages of the post excavation programme.

13.4 Reports that do not provide sufficient information or that have not been compiled in accordance with the relevant sections of this specification will be returned to the Archaeological Contractor for revision and resubmission.

13.5 The **Post Excavation Assessment Report** is to include as a minimum:

13.5.1 An **Abstract** summarising the scope and results of the archaeological investigation.

13.5.2 An **Introduction** including:

- the location of the site including a National Grid Reference for the centre sufficient to locate the site to 1m accuracy (e.g. TQ 55555 77777 or easting: 555555, northing: 177777);
- an account of the background and circumstances of the work;
- a description of the development proposals, planning history and planning reference together with the planning condition (where appropriate);
- the nature of potential impacts arising from the proposals;
- the scope and date of the fieldwork, the personnel involved and who commissioned it;

13.5.3 An account of the **Archaeological Background** of the development site including:

- geology, soils and topography;
- any known existing disturbances on the site;
- background archaeological potential of the site. This will include a summary of the known Historic Environment Record entries within 500m of the boundaries of the site (or wider where appropriate). The HER entries should be quoted with their full KHER identifier (e.g. TR 36 NW 12);

- summary of any previous phases of archaeological investigation at the development site;
- any constraints on the archaeological investigation.

13.5.4 The **Methodology** employed during the investigation must be detailed in the report. Simply referring to the methodology outlined in the specification is not acceptable. Any aims and objectives specified in the specification will be included, as will any further objectives identified during the course of the investigation.

13.5.5 The report will include a quantification of the archive contents, their state and future location.

13.5.6 A description of the **Results** of the archaeological investigation. This description must include:

- the nature and depth of overburden soils encountered;
- a description of the geological subsoil encountered across the site;
- description of all archaeological features and finds encountered, their dimensions, states of preservation and interpretation;
- heights related to Ordnance Datum will be provided for each feature and deposit.
- For complex remains a Harris Matrix diagram will be provided

13.5.7 The **Finds** recovered during the course of the investigation will be described, quantified and assessed by artefact type within the report. The report will also indicate the potential of each category of artefact for further analysis and research. For each category of artefact the report will describe the method of processing, any sub-sampling, conservation and assessment undertaken. Where appropriate local reference collections will be referred to for descriptive and analytical consistency. Any implications for future archive, conservation or discard of the artefacts will also be detailed.

13.5.8 The report will include a table showing the contexts, classes and quantity of artefacts recovered, together with their date and interpretation.

13.5.9 The report will include an assessment of the **Environmental** potential of the site. Details will be provided of any environmental sampling undertaken in connection with the fieldwork and the results of any processing and assessment of the samples. The report will describe the method of processing, any sub-sampling and assessment. Any potential for future analysis of the samples or environmental remains recovered from the investigation will be described. Implications for future archive, conservation or discard of environmental samples or remains will be detailed.

13.5.10 The report will include, as appropriate, tables summarising environmental samples taken, together with the results of processing and assessment.

13.5.11 Any results from the application of archaeological scientific techniques e.g. specialist dating will be included in the assessment report.

13.5.12 An **Interpretation** of the archaeology of the site. This will be a synthesis of the stratigraphic, finds and environmental results of the investigation and a consideration

of the site in its wider context as appropriate. This section will be supported by a phased interpretative plan of the site, clearly showing the major areas and periods of archaeological activity.

13.5.13 The report will include an assessment of the results of the archaeological investigations and their potential to address both the original research aims and objectives of the project and any further research objectives identified during the course of the on-site and post excavation works.

13.5.14 The report will include a detailed proposal for any further analysis necessary on the project records, artefact and environmental assemblages to achieve the research potential of the site. A justification will be included for each analysis proposed.

13.5.15 The proposal will set out a timetable for completion of analysis and reporting, detailing all individual tasks to be completed, resources required and the key personnel involved. The proposal will set out arrangements for monitoring of the post excavation process.

13.5.16 The report will include a synopsis of the proposed **'Full Report'** and **'Publication'** and identify the likely destination of the publication.

13.5.17 Figures - as a minimum the assessment report will include the following figures:

- a site location plan tied into the Ordnance Survey at 1:1250 or in the case of larger sites at 1:2500. The plan will also include at least two National Grid points and show the site boundary;
- a plan at 1:1250, or a scale to be agreed with the County Archaeologist, showing the layout of the development groundworks clearly indicating the areas investigated. The plan will show significant archaeological features, coloured by phases or period as related to the development site. This plan will also include two National grid points;
- plans of the features revealed in each of the investigation areas at a larger scale e.g. 1:20 or 1:50; such plans are to also illustrate areas of disturbance, change in subsoil and location of sections; The location of significant finds and samples taken will also be indicated;
- relevant section drawings and soil trench profiles as appropriate;
- illustrations and/or photographs of significant finds will be included where appropriate.

13.5.18 All report illustrations must be fully captioned and scale drawings must include a bar scale. Standard archaeological drawing conventions must be used. Plan and section illustrations must include the numbers of all contexts illustrated. North must be included on all plans. Sections must indicate the orientation of the section and the Ordnance Datum height of the section datum.

13.5.19 Black & White or Colour photographs will be included to illustrate the archaeology of the site, the development operations or the range of soil profiles encountered. All photographs will be appropriately captioned.

13.6 The report will be submitted to the County Archaeologist in a heat-bound hard-copy and in digital format. The digital copy will be supplied in .pdf format and will contain all text, images and plans present in the hard-copy report in a single .pdf file. The

medium should be a CD-ROM formatted according to ISO 9660:1999.

13.7 **Full Report and Publication** – Following submission of the Assessment Report and proposal for analysis and publication, the Archaeological Contractor will discuss and agree with the County Archaeologist the scope of the Full Report and the format and destination of subsequent publication(s) arising from excavation and post-excavation work on the site. The Archaeological Contractor will be expected to produce a paper suitable for publication within 18 months of completion of work on the site.

14. Archive Preparation & Deposition

14.1 The site archive, to include all project records and cultural material produced by the project, is to be prepared in accordance with *Guidelines for the preparation of excavation archives for long-term storage (UKIC 1990)*. On completion of the project the Archaeological Contractor will arrange for the archive to be deposited in accordance with the provisional arrangements made with a suitable museum or repository at the onset of fieldwork. Any alternative arrangements will be agreed with the County Archaeologist and the Local Planning Authority.

15 Monitoring and Liaison

15.1 The Archaeological Contractor is to allow the site records to be inspected and examined at any reasonable time, during or after the excavation, by the client/developer, the County Archaeologist or any designated representative of the Local Planning Authority

15.2 Once the site has been stripped and mapped and an initial assessment of the archaeology carried out, there will be an on-site meeting with the County Archaeologist to determine the scope of subsequent investigation.

15.3 The Archaeological Contractor will liaise closely with the County Archaeologist throughout the course of the investigation and will arrange for on-site meetings at key decision points.

15.4 The Archaeological Contractor is to make contact with the local archaeological society and keep them informed on the progress of the investigation. Subject to health and safety constraints the Archaeological Contractor will afford opportunity to the local archaeological society to visit the investigation site. Copies of all reports will be provided to the local archaeological society.

15.5 The Archaeological Contractor is to circulate a completed Fieldwork Notification Form (Appendix 2) at the start and completion of fieldwork and at the completion of post excavation reporting stages.

16. Copyright and data protection

16.1 Information submitted to the County Archaeologist in conjunction with planning applications automatically becomes publicly accessible and can be viewed by anyone at any time. In addition, the Local Planning Authority and Kent County Council are subject to the requirements of the Freedom of Information Act (2000) and Environmental

Information Regulations (2004). Information may be subject to FoI or EIR requests and any documentation submitted in connection with the project may be made publicly available unless doing so contravenes the Data Protection Act (1998).

16.2 While copyright of reports and other information arising from the fieldwork remains with the originator, the Archaeological Contractor will undertake to make this information available to interested parties. The Archaeological Contractor will agree to allow reports of the fieldwork to be copied and made available to interested parties for archaeological research. The reports may be made available on the Internet no sooner than three months after the submission of the report. Archaeological Contractors who believe that there are special reasons for not publishing the report on the Internet should reach a separate agreement with the County Archaeologist.

17. Health and Safety

17.1 The Archaeological Contractor will conduct the work in compliance with the Health and Safety at Work etc Act 1974. The Archaeological Contractor will also follow the guidance set out in "Health and Safety in Field Archaeology" Standing Conference of Archaeological Unit Managers 1997.

17.2 The Archaeological Contractor is expected to maintain a Health and Safety Policy and a procedures manual and have available appropriate expertise in Health and Safety advice. Site staff will have an appropriate level of training to enable them to carry out fieldwork safely.

17.3 The Archaeological Contractor will maintain the site in a safe condition. All hazards will be appropriately identified and managed. Deep excavations will be appropriately fenced.

17.4 The Archaeological Contractor will carry out a risk assessment prior to commencement of fieldwork and where appropriate a COSHH assessment. Risks and measures to reduce risk will be communicated to all working on and visiting the site.

17.5 The Archaeological Contractor will have available suitable site accommodation, welfare and toilet facilities.

18. General

18.1 In carrying out the work the Archaeological Contractor is to abide by:

- all statutory provisions and by-laws relating to the work in question,
- the Institute of Field Archaeologists *Code of Conduct*
- the Institute of Field Archaeologists *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*.

19. KCC HER

19.1 The Archaeological Contractor is to provide the Kent Historic Environment Record with copies of all reports in both heat-bound hardcopy and digital format (see 13.6 above).

19.2 Upon completion of the excavation the Archaeological Contractor will supply the Kent Historic Environment Record with a completed HER form (see Appendix 1)

19.3 The Archaeological Contractor will supply the Kent Historic Environment Record with the following digital datasets:

- A .dxf file containing polygon data that describes in detail all excavated/ watched area boundaries, whether trenches, test pits, excavated areas or areas examined by watching brief. This .dxf file must be internally geo-referenced (i.e. the co-ordinate system used in the file must be the Ordnance Survey co-ordinate system).
- A separate .dxf file that contains a number of Layers. Each Layer should represent a different phase of the archaeological remains on site. The name of each Layer must be the phase number used on the site accompanied by a date range (e.g. "2 from –2000 to –800", "7A from 410 to 700" etc). Each layer must contain only the features relevant to that phase digitized as polylines. Where the dating is based on scientific dating methods such as radiocarbon, the dates must be calibrated calendar dates.

19.4 A guidance document has been produced for Kent County Council that will inform contractors as to how this information can be produced within AutoCad. This document is available from the County Archaeologist and Kent County Council Historic Environment Record.

19.5.1 The Archaeological Contractor should also provide a representative selection of digital site photographs illustrating the archaeology of the site and the operations of the investigation. These will be in .jpg format at a minimum 300dpi. These will be deposited with the County HER and will be used for presentations on aspects of the archaeology of Kent.

19.6 It is to be understood that photographs and notes taken by KCC Archaeological Officers in connection with the work that do not identify individuals or site locations may be used by KCC for outreach and publicity purposes, including on social media sites such as Facebook, Twitter etc. The Archaeological Contractor should, **preferably in advance** of the works, raise with the KCC Archaeological Officer any concerns that they or their client may have over the use and dissemination of images or information for outreach purposes. In such cases the Archaeological Contractor and their client will agree a protocol with the KCC Archaeological Officer for the appropriate dissemination and use of images and information which balances the concerns of the contractor and/or client with the objective of ensuring that the people of Kent are kept informed of the archaeological discoveries in the county.

APPENDIX 1 Kent County Council HER summary form

Site Name:	
Site Address:	
Summary: (50 words max)	
District/Unitary:	Parish:
Period(s):	
NGR (centre of site : 8 figures): (NB if large or linear site give multiple NGRs)	
Type of archaeological work (underline) Evaluation: Watching Brief Field Walking Documentary study Building recording Earthwork survey Excavation: Geophysical Survey Field Survey Geoarchaeological investigation	
Date of Recording:	
Unit undertaking recording:	
Geology:	
Title and author of accompanying report:	
Summary of fieldwork results (begin with earliest period first, add NGRs where appropriate) (200 words max) (cont on attached sheet)	
Location of archive/finds:	
Contact at Unit:	Date:

APPENDIX 2 - FIELDWORK NOTIFICATION FORM

Guidance for Completing the Kent Archaeological Fieldwork Notification Form

Purpose

The purpose of the form is to improve the notification, tracking and monitoring of archaeological fieldwork in Kent. Its primary purpose relates to archaeological work being undertaken for the purposes of planning and development but it is hoped that it will be also used by archaeological societies and other bodies undertaking fieldwork in the county.

Approach

- The archaeological body undertaking the fieldwork should fill in the form. Sections A and B should be filled in before fieldwork starts and submitted to the County Archaeologist. This may be submitted in digital copy to speed things along but a signed copy should follow in the post.

- Section A contains details of the project while Section B refers specifically to the onset of the phase of fieldwork. In signing section B the Archaeological Contractor is confirming that the necessary funds and resources to complete the works to the specification have been made available.

- The form should not be filled in separately for each period of an intermittent watching brief but should be filled in for major stages of fieldwork, for example separate phases of evaluation and excavation.

- Section C should be submitted at the completion of the fieldwork stage and should if known indicate whether further work is anticipated. This section sets out a brief summary of findings and what reports are to be submitted. For excavations these will include interim, assessment and full reports. Again the form may be submitted digitally with a signed copy to follow in the post. (The details of Sections A and B should remain filled in on the same form).

- Section D should be submitted as reports are submitted to the County Archaeologist. For excavations the form need not be submitted with interim reports but should be submitted with assessment and full reports.

HISTORIC BUILDING RECORDING REQUIREMENTS – BASIC PHOTOGRAPHIC SURVEY FOR APPRAISAL

1. Introduction

1.1 The following specification sets out a set of standards and requirements for the completion of a basic photographic survey for appraisal purposes. The intention is to provide an initial record of historic buildings, structures and other features to inform decision making. More detailed forms of photographic recording for both appraisal and mitigation purposes are covered by separate specifications. The basic survey comprises three elements:

- A basic written description
- An annotated ground plan
- General photographic coverage and selected detailed photographs

2. General Requirements

2.1 The survey will be carried out by an individual or organisation (from here on referred to as 'the Surveyor') acceptable to the relevant Local Planning Authority, with recognised experience and expertise in the type of survey to be undertaken. A good working knowledge of the type of buildings or structures to be surveyed will also be considered highly desirable.

3. Pre-survey Requirements

3.1 Prior to undertaking the photographic survey, the Surveyor will confirm with the Local Planning Authority's Conservation Officer and / or the County Archaeologist (whichever is appropriate) the level of survey work that is required and specific aspects that should be recorded by the survey.

3.2 The Surveyor will ensure that all reasonable measures have been taken to identify any constraints to undertaking the photographic survey. The Surveyor will seek information on any risks to health and safety.

3.3 Full copies of the Specification must be issued to the Surveyor.

4. Objectives

4.1 The purpose of the survey is to provide a basic descriptive record of historic buildings, structures and other features that may be affected by development proposals. Sufficient information should be recorded and described to be able to inform planning decisions and the development design process where appropriate.

5. Scope of Survey

5.1 The survey will comprise a written, drawn and photographic record. The following

sections detail general standards and requirements for recording and reporting that should be followed.

5.2 Particular issues that will be addressed by the survey are set out in Part A of this specification.

5.3 Any amendment to the scope of the survey should be agreed with the Conservation Officer / County Archaeologist in advance of the work being undertaken.

6. Photographic Survey

6.1 Photographs will be taken to not only show a building or structure's appearance but also to record the evidence on which the analysis of it historic development is based.

6.2 Photographs will normally be taken in 35mm format, although good definition digital photography may be adequate for assessment purposes. While black and white photography is preferable for permanent, archival purposes, colour photography should be used to record decoration and significant structural detail. Where digital photography is used image resolution must exceed five megapixels.

6.3 The survey will include:

- Photographs of each building or structure in its setting;
- Oblique photographs of all principal exterior elevations;
- Where an exterior elevation embodies complex historical information, photographs taken at right angles to the elevation.
- Photographs to demonstrate the overall appearance of the principal rooms and circulation areas.
- Photographs to illustrate specific historic details or features relevant to the proposals under consideration. These should include relevant details of construction, fittings, machinery, architectural detailing and finishes.

6.4 Each photograph should be printed on archival quality photographic paper and clearly labelled with the subject, the orientation and date taken. The photograph should be cross-referenced to a negative or digital file name.

7. Drawn Survey

7.1 Wherever possible, the Surveyor should make use of existing plans available for the site and building.

7.2 A site location plan tied into the Ordnance Survey at a scale of 1:1250 should be drawn.

7.3 A site plan at a scale of 1:500 or better should be produced showing the principal buildings and structures and clearly identifying those included within the photographic survey.

7.4 A site plan at a scale of 1:500 or better showing the position from which photographs have been taken and their direction of view.

7.5 Internal plans of buildings at a scale of 1:200 or better showing the position from which photographs have been taken and their direction of view.

7.6 All plans are to be drawn on polyester based drafting film and clearly labelled.

7.7 Plans must be fully captioned and scale drawings must include a bar scale. Standard drawing conventions must be used. North must be included on all plans and will be consistent.

8. Written Survey

8.1 A general written description should be made for each building, structure, room or feature identified in the survey. The written description should include the type of building or structure; its scale / approximate size; its place in the wider site; materials used in its construction, any visible alterations or additions.

8.2 A register of photographic images should be maintained.

9. Reporting

9.1 The site archive is to be consolidated after completion of the survey, with all site drawings inked-in, and records and finds collated and ordered as a permanent record.

9.2 Within three weeks of completion of the survey (or longer in case of complex sites as agreed with the Conservation Officer / County Archaeologist) the Surveyor will produce a report, copies of which (as a minimum) are to be provided to:

- the Developer
- the County Archaeologist
- the Local Planning Authority's Conservation Officer / Planning Team
- a copy should remain with the project archive

9.3 When submitting the report to the Local Planning Authority / County Archaeologist the Surveyor will provide written confirmation that the report has been submitted to the above parties.

9.4 If the Surveyor is required, contractually, only to submit reports directly to the developer or their agent, the Surveyor must inform the Local Planning Authority / County Archaeologist in writing that they have completed the report and whom it has been forwarded to. The Surveyor must ensure that the developer is made aware of the need to circulate the report as in 9.2 above.

9.5 The Surveyor may determine the general style and format of the report but it must be completed in accordance with this specification. The report must provide sufficient

information to enable the County Archaeologist and the Local Planning Authority to reach an informed decision regarding any further mitigation measures that may be required and to stand as an appropriately detailed report on the survey of the property for future research.

9.6 Reports that do not provide sufficient information or that have not been compiled in accordance with the relevant sections of this specification will be returned to the Surveyor for revision and resubmission.

9.7 The report will be submitted to the Local Planning Authority / County Archaeologist in a heat-bound hard-copy and in digital format. The digital copy will be supplied in .pdf format and will contain all text, images and plans present in the hard-copy report in a single .pdf file. The medium will be a CD-ROM formatted according to ISO 9660:1999.

9.8 **Report Format** - The final survey report will include as a minimum:

9.8.1 An **Abstract** summarising the scope and results of the survey.

9.8.2 An **Introduction** including:

- the location of the site with a National Grid Reference for the centre sufficient to locate the site to 1m accuracy (e.g. TQ 55555 77777 or easting: 555555, northing: 177777);
- an account of the background and circumstances of the work;
- a description of the development proposals, planning history and planning reference together with a planning condition (where appropriate);
- the nature of potential impacts arising from the proposals;
- the scope and date of the survey, the personnel involved and who commissioned it;

9.8.3 A brief account of the **Historical Background** of the development site including any designations. A map regression using readily available historic maps of the development site (including as a minimum all available Ordnance Survey editions and the Tithe Map) should be included in the report and the site development described.

9.8.4 The **Methodology** employed during the survey must be detailed in the report. Any aims and objectives specified in the specification will be included as will any further objectives identified during the course of the survey. Constraints on the survey will also be described.

9.8.5 The report will include a quantification of the project archive contents, their state and future location.

9.8.6 The report will include a descriptive summary of the site layout and topography.

9.8.7 The report will include a general description of each building, structure or identified feature (see section 8.1 above) cross referenced to plans and illustrations.

9.8.8 A short narrative **Discussion** of the site describing the significance of the findings and the potential impact of development proposals on historic elements.

9.8.9 **Figures** – The report will include copies of the maps and plans detailed above in sections 7.2 to 7.5 above. Figures are to be fully cross-referenced within the document text. Any relevant historic maps should also be included.

9.8.10 Photographs illustrating the general descriptions (see 10.8.7 above) of each historic building, structure or feature will be selected from the survey archive and reproduced in the report. All photographs will be appropriately captioned.

9.8.11 Photographs not illustrated in the report will be listed, with subject matter, as an appendix to the report. Copies of all photographs should be provided separately in digital format on CD-ROM or alternatively on a printed contact sheet.

10. Archive Preparation & Deposition

10.1 The site archive, to include all project records, is to be prepared in accordance with *Guidelines for the preparation of excavation archives for long-term storage (UKIC 1990)*. On completion of the project the Surveyor will arrange for the archive to be deposited with a suitable record office. Any alternative arrangements will be agreed with the County Archaeologist and the Local Planning Authority.

11 Monitoring and Liaison

11.1 The Surveyor will liaise closely with the Local Planning Authority / County Archaeologist throughout the course of the survey and will arrange for on-site meetings if clarification on any particular issue is required.

12. Copyright and data protection

12.1 Information submitted to the Local Planning Authority / County Archaeologist in conjunction with planning applications automatically becomes publicly accessible and can be viewed by anyone at any time. In addition, the Local Planning Authority and Kent County Council are subject to the requirements of the Freedom of Information Act (2000) and Environmental Information Regulations (2004). Information may be subject to FoI or EIR requests and any documentation submitted in connection with the project may be made publicly available unless doing so contravenes the Data Protection Act (1998).

12.2 While copyright of reports and other information arising from the survey remains with the originator, the Surveyor will undertake to make this information available to interested parties. The Surveyor will agree to allow reports of the survey to be copied and made available to interested parties for historical research. The reports may be made available on the Internet no sooner than three months after the submission of the report. Surveyors who believe that there are special reasons for not publishing the report on the Internet should reach a separate agreement with the Local Planning Authority / County

Archaeologist.

12.3 It is to be understood that photographs and notes taken by KCC Archaeological Officers in connection with the work that do not identify individuals or site locations may be used by KCC for outreach and publicity purposes, including on social media sites such as Facebook, Twitter etc. The Archaeological Contractor should, **preferably in advance** of the works, raise with the KCC Archaeological Officer any concerns that they or their client may have over the use and dissemination of images or information for outreach purposes. In such cases the Archaeological Contractor and their client will agree a protocol with the KCC Archaeological Officer for the appropriate dissemination and use of images and information which balances the concerns of the contractor and/or client with the objective of ensuring that the people of Kent are kept informed of the archaeological discoveries in the county.'

13. Health and Safety

13.1 The Surveyor will conduct the work in compliance with the Health and Safety at Work etc Act 1974 and will carry out a risk assessment before commencing survey work.

14. KCC HER

14.1 The Surveyor is to provide the Kent Historic Environment Record with copies of all reports in both heat-bound hard-copy and digital format (see above).

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