Archaeological Services & Consultancy Ltd

# ARCHAEOLOGICAL EXCAVATION (PHASE 1): EUROPA NURSERY WEDDINGTON ASH KENT

NGR: TR 2980 5915

*on behalf of the Wight Salads Group*

Jonathan R. Hunn BA PhD MIFA

January 2009

ASC: 1092/EAK/02

Letchworth House
Chesney Wold, Bleak Hall,
Milton Keynes MK6 1NE
Tel: 01908 608989 Fax: 01908 605700
Email: office@archaeological-services.co.uk
Website: www.archaeological-services.co.uk

# Site Data

| | | | |
|---|---|---|---|
| *ASC site code:* | EAK | *Project no:* | 1092 |
| *OASIS ref:* | | *Event/Accession no:* | |
| *County:* | Kent | | |
| *Village/Town:* | Ash | | |
| *Civil Parish:* | Ash | | |
| *NGR (to 8 figs):* | TR 2980 5915 | | |
| *Extent of site:* | *c*.20ha (15.53ha currently under glass) | | |
| *Present use:* | Horticultural establishment | | |
| *Planning proposal:* | Replacement of existing greenhouses | | |
| *Planning application ref/date:* | DOV/07/01508 | | |
| *Local Planning Authority:* | Dover District Council | | |
| *Date of assessment:* | 7/7/08 | | |
| *Client:* | Wight Salads Group<br>Europa Nursery<br>Hills Court Road<br>Ash<br>Canterbury<br>Kent CT3 2AP | | |
| *Contact name:* | Brian Edwards ( mob. 07771 787413) | | |

**Internal Quality Check**

| | | | |
|---|---|---|---|
| *Primary Author:* | Jonathan R. Hunn | *Date:* | 9/1/09 |

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|---|---|---|---|
| *Revisions:* | | *Date:* | |

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| *Edited/Checked By:* | | *Date:* | |

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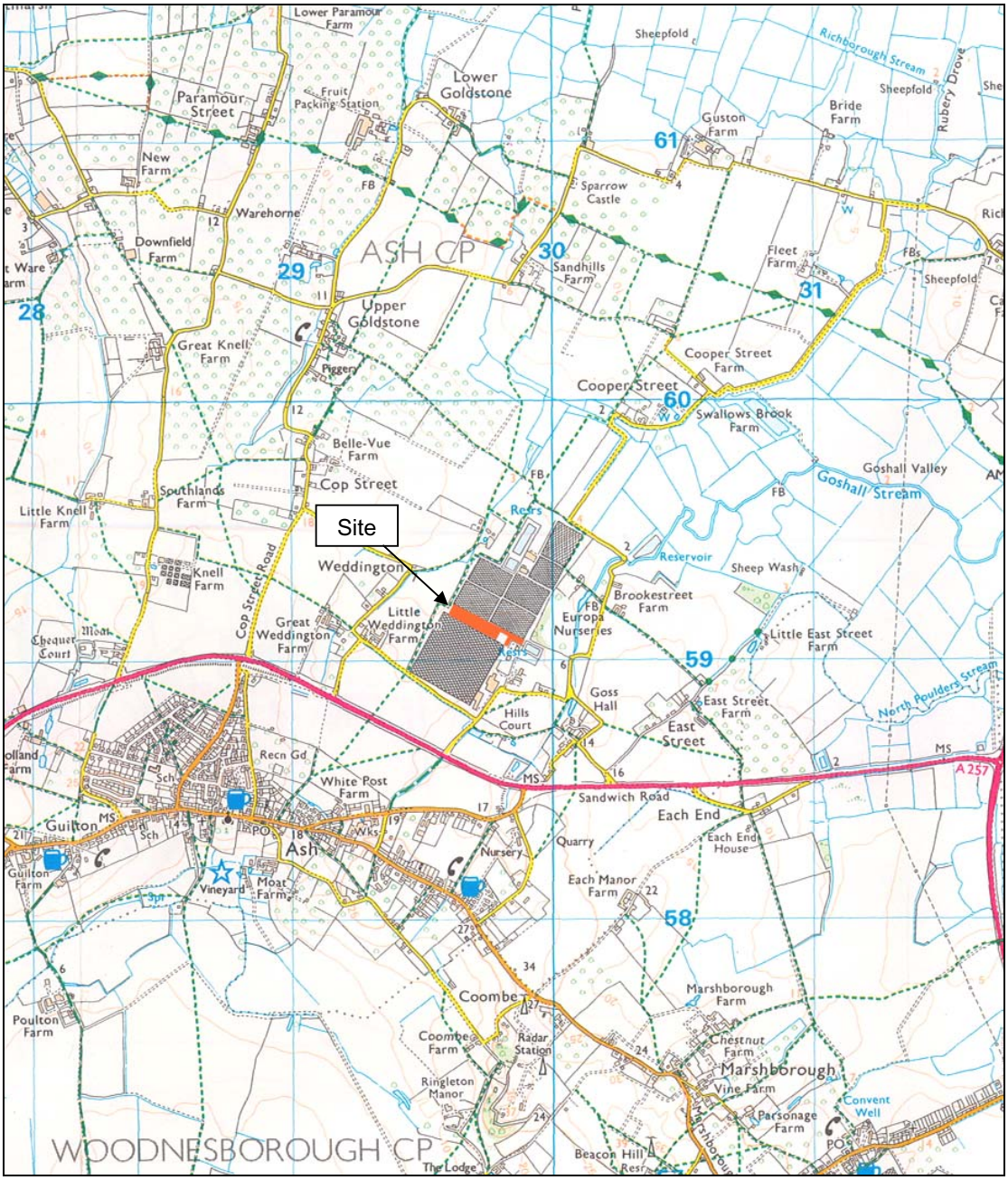


**Figure 1:** General location *(scale 1:25,000)*

# Summary

*In August and September 2008 a 'strip, record & sample excavation' was undertaken along the axis of an old reservoir and adjacent areas at Europa Nursery, Ash, near Sandwich, Kent, during large-scale earth moving for the construction of new greenhouses and associated facilities. The postulated line of a Roman road from Richborough to Canterbury crosses the western edge of the site. The excavation revealed that most of the original land surface had been removed during re-grading for the construction of greenhouses in the early 1970s. The only area that had survived was a spread of alluvium at the western end of the site. As there were no obvious signs of any features within this latter area, four trial trenches were mechanically excavated to determine whether the alluvium masked any features. One the trenches contained a short curvilinear feature sealed beneath a layer of fire-cracked flints and burnt material. This was dated to the mid/late Bronze Age, indicating that the alluvium post-dates this period.*

# 1. Introduction

1.1 In August and September of 2008 *Archaeological Services and Consultancy Ltd* (ASC) carried out a strip & record excavation at Europa Nursery, Weddington, Ash, Kent. The project was commissioned by the owners, *Wight Salads Group*, and was carried out according to a brief (Found 2008) prepared on behalf of the local planning authority (LPA), *Dover District Council,* by their archaeological advisor (AA), *Kent County Council*, and a project design prepared by ASC (Hunn 2008a). The relevant planning application reference is DOV/07/01508.

1.2 ***Planning Background***

This excavation was required under the terms of *Planning Policy Guidance Note 16* (PPG16), as a condition of planning permission for the development of the site.

1.3 ***Archaeological Services & Consultancy Ltd***

*Archaeological Services & Consultancy Ltd* (ASC) is an independent archaeological practice providing a full range of archaeological services including consultancy, field evaluation, mitigation and post-excavation studies, historic building recording and analysis. ASC is recognised as a *Registered Archaeological Organisation* by the Institute of Field Archaeologists, in recognition of its high standards and working practices.

1.4 ***Management***

The project was managed and led for ASC by Jonathan Hunn BA PhD MIFA.

1.6 ***The Site***

1.6.1 *Location & Description*

The site is located at Weddington, near Ash, in the administrative district of Dover, Kent. It lies *c.*0.5km northeast of Ash and is centred on Ordnance Survey National Grid Reference TR 2980 5915 (Fig. 1).

The land surrounding the site is arable. The site comprises a subrectangular area, aligned on a northeast to southwest access, and covers and area of *c.*22 hectares. It is occupied by large glasshouses used for growing salad crops. A detailed description of the site appears in Section 4 of the Archaeological Impact Assessment (Hunn 2008).

1.6.2 *Geology & Topography*

The site is situated on flat to gently undulating terrain at an elevation of less than 10m OD. It lies above Tertiary bedrock, at the southern margin of the Richborough (Wantsum) syncline. The *British Geological Survey* Solid and Drift map (Sheet 290), shows these Tertiary deposits to be outcrops of the Thanet and Woolwich beds. The unmodified soils in the area are of the Newchurch 2 Association, described as '*deep mainly calcareous clayey soils. Groundwater controlled by ditches and pumps. Flatland. Risk of flooding in places'* (Soil Survey 1983, 813c).

1.6.3 *Proposed Development*

The development (Fig. 3) comprises the erection of two replacement glasshouses covering 4.68 and 5.74 hectares respectively. Associated ancillary works include infilling and extension of existing reservoirs, construction of service roads and reservoirs, resiting of mobile homes and provision of services.

The sites of the new glasshouses were subject to initial levelling, comprising both cut and fill. The foundations for each glasshouse consisted of a concrete ring beam, set on 400mm dia. concrete piles, 1.42m deep. Intermediate supports were set on a 5.0 × 8.0m grid within the glasshouse, and comprised 600 × 600 × 400mm concrete anchor blocks with projecting dollies, buried to a depth of 0.8m (1.14m depth for cross-bracing dollies). This entailed the excavation of several thousand 0.6m-square holes for the two greenhouses (Hunn 2008b, fig. 13).

## 1.7 ***Previous Archaeological Work***

An archaeological impact assessment has been prepared in support of this development (Hunn 2008b). No previous investigative archaeological work has been undertaken on this site.

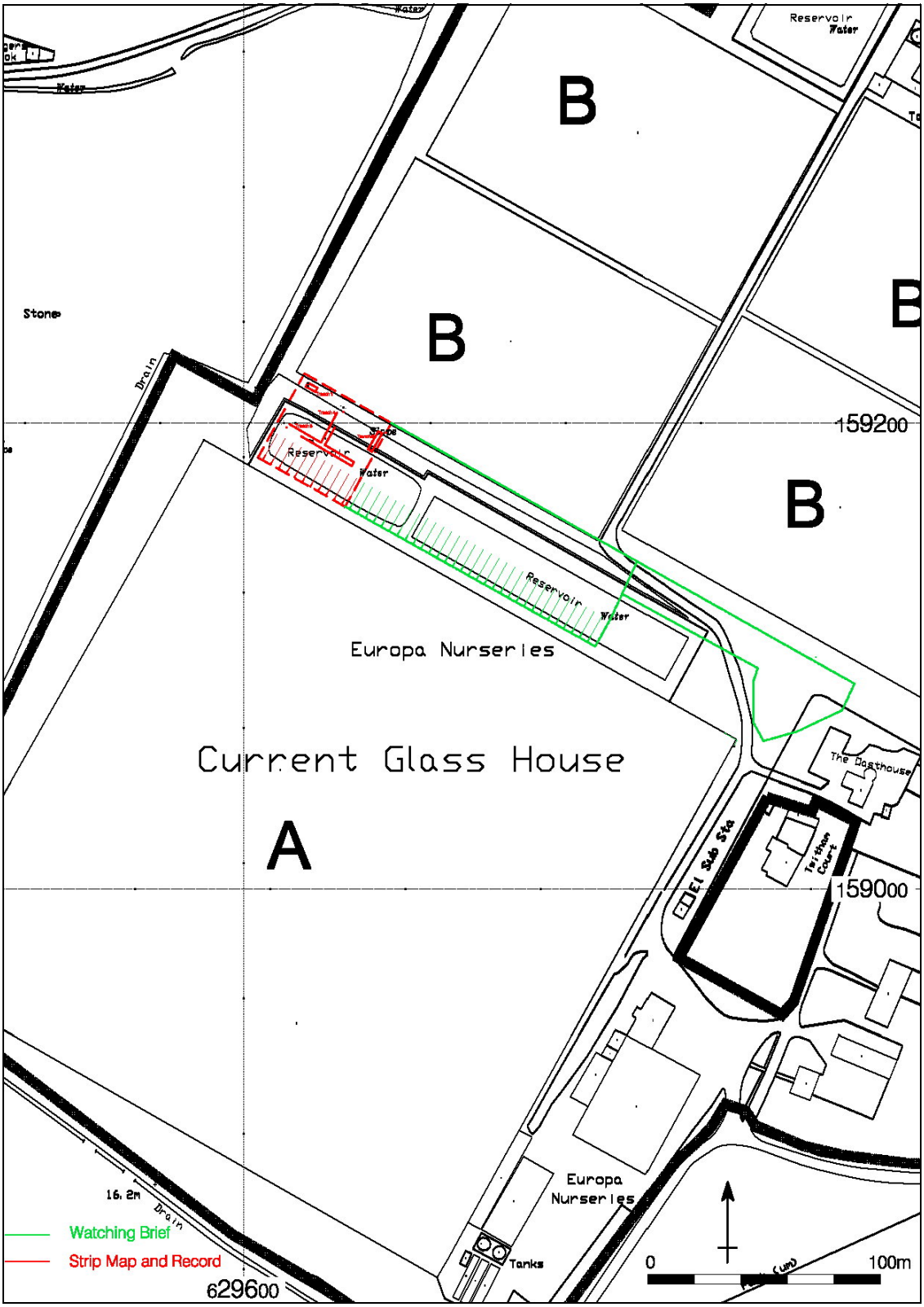


**Figure 2:** Site plan, showing areas examined *(scale 1:1250)*

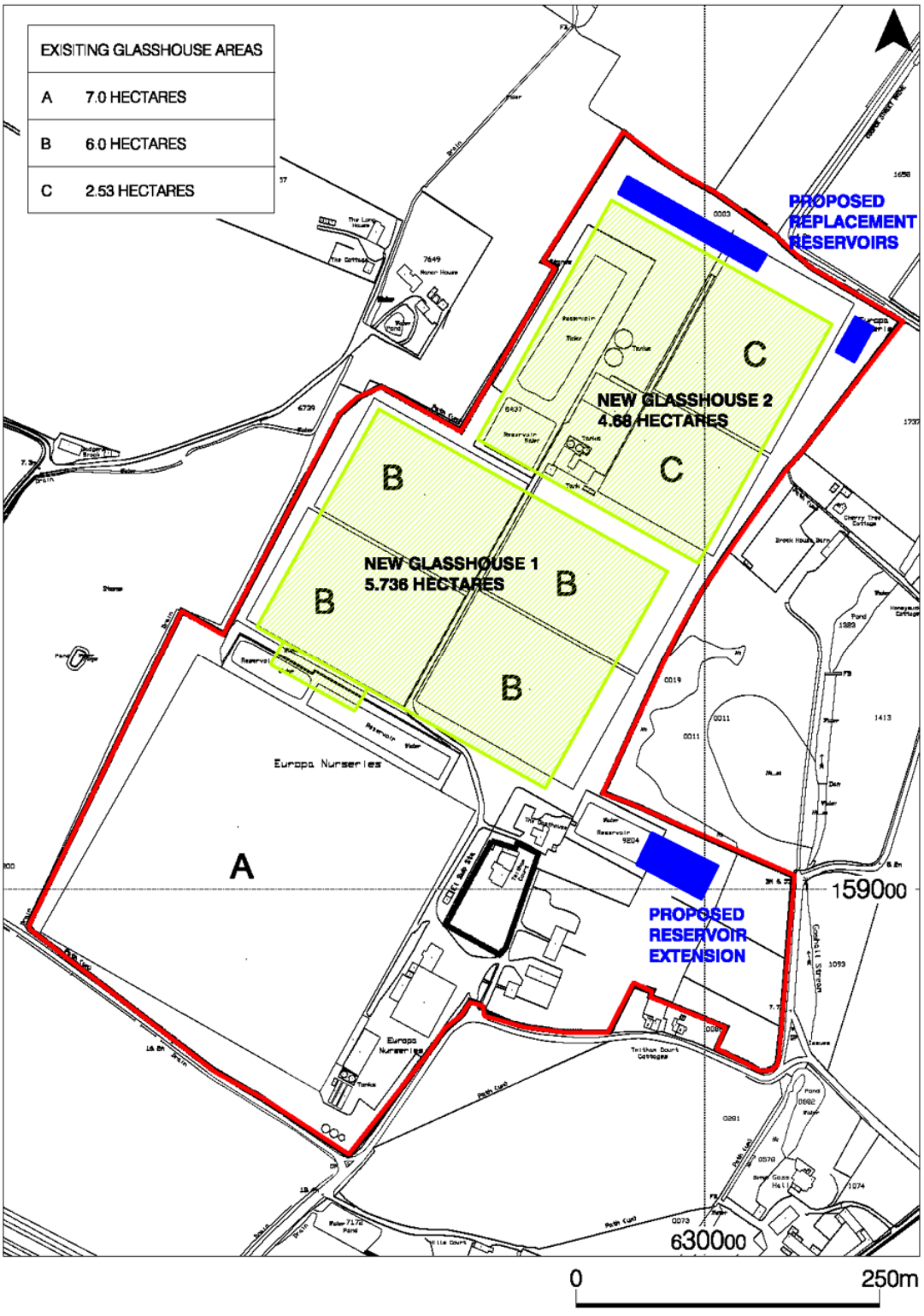


**Figure 3:** Plan of proposed redevelopment *(scale 1:5,000)*

# 2. Aims & Methods

## 2.1 *Aims*

As described in the brief, the aims of the excavation were:

- to establish a broad phased plan of any archaeological remains revealed following the stripping of the site
- to provide a refined chronology of the archaeological phasing
- to investigate the function of structural remains and the activities taking place within and close to the site.
- to establish the presence or absence of the projected alignment of the Roman road from Richborough to Canterbury, and to characterise and date the construction, use and abandonment of this road
- to establish whether there is any evidence for contemporary Roman roadside activity and to characterise the nature, extent, spatial organisation and date of such activity
- to establish the character, extent and date of prehistoric and medieval activity at the site and place this within the context of the wider environment and landscape of the site
- to understand the character, form, function and date of activities indicated in this area by the archaeological remains on the site
- to investigate the context of the activities present within the wider landscape
- to analyse the spatial organisation of activities on the site through examination of the distribution of artefactual and environmental assemblages
- to place the activities/remains in the wider archaeological framework
- to contribute to an understanding of the environmental history of the Weddington area
- more specific aims may need to be agreed following stripping and mapping and as excavation progresses.

## 2.2 *Standards*

The work conformed to the project design, to the relevant sections of the Institute of Archaeologists' *Code of Conduct* (IFA 2000) and *Standard & Guidance Notes* (IFA 2001), and *Code of Conduct* (IFA 2000a), to current English Heritage guidelines (EH1991; EH 1995), and to the relevant sections of ASC's own *Operations Manual.*

## 2.3 *Methods*

The work was carried out according to the project design (section 3.3). In outline, this comprised the following procedures:

- Removal of soil by mechanical means under archaeological supervision.
- Appropriate investigation and recording of any archaeological remains present.
- Full analysis and publication of the findings

## 2.4 *Constraints*

In terms of the practical implementation of the project the principal factor was the presence of large quantities of soil comprising the 1970s reservoir. The eastern end of

this reservoir was remodelled to form a new open reservoir. The remaining two-thirds of the site, between Glasshouse zones A and B, was mechanically removed in spits and monitored by the author (Fig. 2). This exposed a small area of alluvium at the western end of the site. Following a site meeting with the KCC planning archaeologist on August 24th it was agreed that the alluvium would be examined by means of a limited number of evaluation trenches. The results of the trenching form the principal element of this report.

Another variation to the project was that work was not undertaken to the north between Glasshouse zones B and C (Fig. 3), as this element of the development has been postponed until a later date.

# 3. Archaeological & Historical Background

3.1 This section comprises a summary of the Archaeological Impact Assessment (Hunn 2008b).

3.2 Ash is an area of considerable archaeological and historical interest, and the site has the potential to reveal remains of a variety of periods. Archaeological remains are not currently known from the site, but it has been suggested a Roman road linking *Cantiacum* (Canterbury) and *Rutupiae* (Richborough) may pass through, or close to, the west side of the site. The site probably comprised largely open land until the construction of the existing glasshouses during the 1960s and 1970s.

3.3 A number of archaeological sites are known from the area surrounding the site. These range in date from the Mesolithic (early prehistoric) to medieval, and indicate that the area has been a focus for settlement and/or activity for over two millennia.

# 4. Stratigraphic Report

## 4.1 *General*

The first part of this section describes the initial monitoring and recording phase of the groundworks, which proved largely negative. The second part describes the excavation of four trial trenches on the western side of the site, in the area covered by alluvial deposits (Fig. 3, shown in red: Fig. 4).

## 4.2 *Monitoring & Recording*

Groundworks began in the middle and eastern side of the site, between Glasshouse A and the proposed site of Glasshouse B. The ground on the eastern side was graded down from a depth of about 0.5m to *c.* 2m on its northern edge (monitoring sheet for 21/08; Plates 1 & 2). Here, the upper horizon consisted of yellowish brown, stoneless sandy clay (Mun. 10YR 5/6) *c.*1.2m thick. This merged gradually into light olive brown, stoneless sandy silt (Mun. 2.5 YR 5/4), maximum depth 1.1m. At the base of these horizons was a similar deposit, containing a greater quantity of gravel along its northern edge. Where the access road curved round to the west, passing the circular tanks, the ground was reduced by 3-4m (Plate 3). To the west of these tanks, the old reservoir cover was progressively removed (Plates 4 & 5). None of the original upper soil horizons were identified, nor were any artefacts observed or recovered.

On the western side of the site the area was also reduced in stages. The upper levels were entirely man-made. However, beneath the base of the reservoir a deposit of dark grey, silty clay (Mun 5Y 4/1) was encountered, covering an area of *c.*22 × 45m. This was interpreted as the remains of residual alluvium (Plate 6).

## 4.4 *Trenching*

In order to evaluate the significance of the alluvium, four trial trenches were excavated (Fig. 4).

### 4.4.1 *Trench 1*

An east-west trench (4.3 × 1.85m) was excavated in the north-west corner of the area of alluvium. This was abandoned at a depth of 0.6m due to the presence of a large white pipe, which ran along the axis of the trench. The depth of the alluvium in this trench was no more than 0.2m thick.

### 4.4.2 *Trench 2*

A north-south trench (6.0 × 1.85m) was opened in the east corner of the area. It was excavated to a depth of 0.22m, cutting homogenous greyish brown silt, except at its southern end where the soils became paler brown in colour (Plate 7).

### 4.4.3 *Trench 3*

This east-west trench measured 35.0 × 1.85m wide (Plate 8). At its east end it was 0.2m deep, while at its west end it was excavated to a depth of 1.22m. The upper horizon (3.2) was dark grey, plastic silt (Mun 5Y 4/1), 0.95m thick. This sealed a black deposit (3.3) containing small fire-cracked pebbles. It was no more than 0.21m thick and extended about 1.3m east to west (Plate 9). A

sample taken from this deposit was subjected to radiocarbon dating, which gave a date range of 3285 ± 40 BP (Appendix 2).

Deposit 3.3 in turn overlaid olive grey silt 3.4 (Mun 2.5Y 5/2), 0.2m thick. The latter appeared to have been cut by (3.1), a semi-circular feature lying along the axis of the trench on its southern side. It was 3.7m long and at least 0.87m wide, disappearing into the southern baulk of the trench (Plates 10 & 11). A small section excavated across it (Fig. 5, Section 3.3) showed the feature to be V-shaped in profile and no more than 0.35m deep on its western side. The eastern section of this cut (Fig. 5, Section 3.2) was shallower and more irregular. The feature was filled with Context 3.4, a homogenous, greyish brown silty clay (Mun 2.5Y 5/2).

Two untouched flint flakes were found in Context 3.4. In addition some minute fragments of bone, possibly from a skull, were found within the same fill and retrieved for radiocarbon dating. The quantity of bone retrieved proved insufficient for dating purposes.

4.4.4 *Trench 4*

This was *c.* 18.0 × 1.85m wide and was centrally located, north of Trench 3. It was excavated a depth that varied between 0.85m and 1.3m. The upper 0.8m consisted of olive grey silt: below this was a light olive brown silty clay (Plate 12). Apart from a 19th-century land drain and an alignment of wooden stakes associated with previous horticultural activity, no pre-modern features were noted.


**Plate 1:**Eastern end of strip & record area looking west

**Plate 2:** Reduced level of eastern end of strip & record area, looking SW

**Plate 3:** Detail of section by storage tanks

**Plate 4:** Removal of old reservoir looking west


**Plate 5:** Reduction of east end of reservoir area

**Plate 6:** Area of alluvium looking WNW

**Plate 7:**Trench 2 looking north

**Plate 8:** Trench 3 looking west

**Plate 9:** Trench 3, burnt deposit 3.3 in section, looking south

**Plate 10:** View of Feature 3.1 looking west


**Plate 11:** Trench 3 and Feature 3.1 in foreground looking east

**Plate 12:** Trench 4 looking north

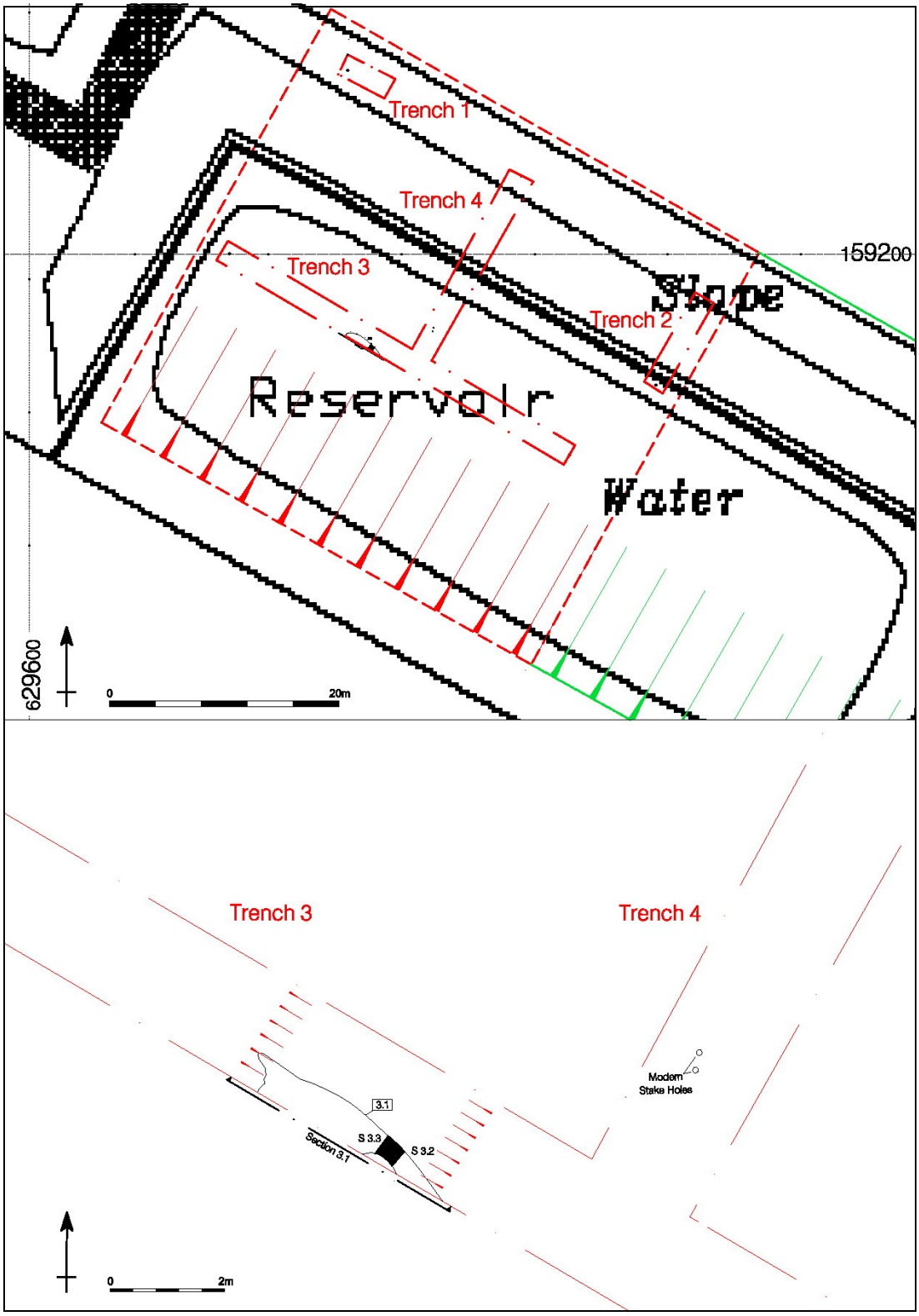


**Figure 4:** Detail of Feature 3.1 in Trench 3 (*scales as shown*)

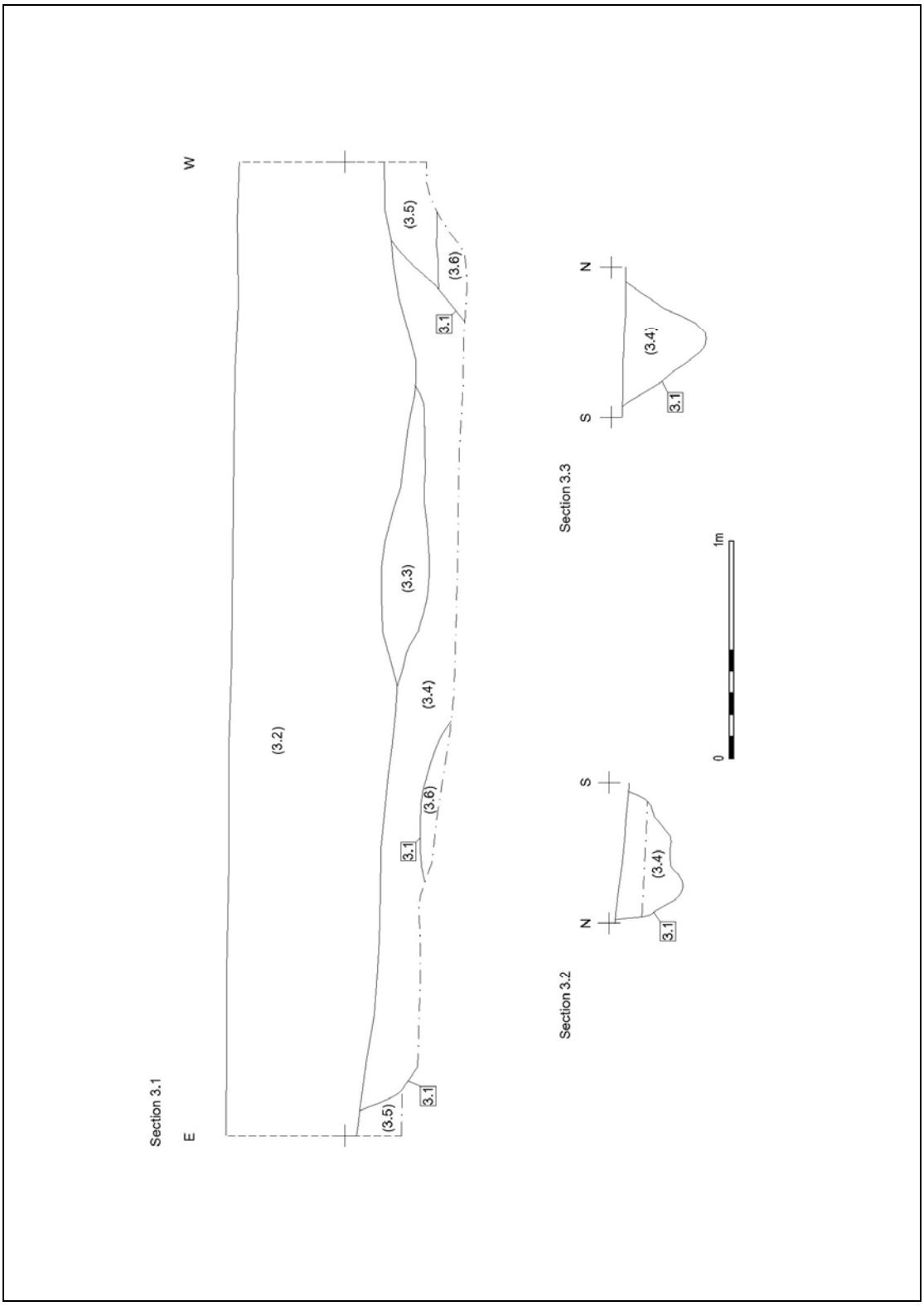


**Figure 5:** Section drawings in Trench 3 (*scale as shown*)

# 5. Flint Report

5.1 Two struck flint flakes (7g) were recovered from context 3.4, from the curvilinear feature within Trench 3. One was 20mm wide and 30mm in length and no more than 5mm thick; it had a bulb of percussion but no sign of re-touching (not illustrated). The second flake 19mm wide by 29mm in length and 4mm thick. There was evidence that it had been re-struck at least twice and the absence of a bulb of percussion and character of one end suggests it had snapped during the fashioning process (not illustrated). The sharpness of the flakes suggests that they were deposited soon after manufacture.

# 6. Environmental Assessment

*Janice Macleish*

## 6.1 *Introduction*

During developments at Europa Nursery, archaeological observations by ASC led to the collection of two environmental bulk soil samples from curvilinear feature [3.1] (Table 1). The samples were processed in-house, subsequent sorted material being retained for any further analysis. Two subsamples have been sent to SUERC for C14 dating.

## 6.2 *Methods*

Two soil samples were processed in the following way. Sample volume and weight was measured prior to processing. The samples were then processed in a modified 'Siraf' tank using an internal wet sieve mesh of 500 micron for the residue and a flotation sieve of 500 microns. Both the flot and coarse residue were rinsed and placed in paper trays to air dry. Neither was re-floated.

Once dried, the coarse residue was passed through a 4mm riddle in order to produce a fine fraction residue of less than 4mm, and a coarse fraction residue of greater than 4mm. The residues were then sorted by eye to recover any archaeological and environmental material, which was then recorded on the assessment sheet and placed into self-seal labelled bags. A magnet was run through the residues in order to recover any magnetised material, which was then recorded and bagged as above. The coarse fraction residue was discarded at this point and the remaining fine fraction residue bagged and retained along with the flot residue in appropriately labelled self-seal bags.

## 6.3 *Results*

**Sample 1 Context (3.3) Volume: 10 Litres, Weight: 7820g**

This consisted of brownish black silty clay with flint, charcoal and sub-rounded stone inclusions, which washed down to produce a large volume of coarse fraction residue (2275g) consisting primarily of fire cracked flint and occasional charcoal fragments (2g). The fine fraction residue (275g) consisted of loosely mixed fire cracked flint, charcoal, chalk and occasional root material. The flotation residue (1g) is comprised mainly of intrusive root material with a single charcoal fragment and very little other obvious environmental material. Magnetised material (<1g) was recovered from the fine fraction residue. All residues have been retained. The charcoal has been sent for C14 dating.

**Sample 2 Context (3.4) Volume: 5 Litres, Weight: 4402g**

This consisted of light greyish brown fine silty clay, which washed down to produce a very small volume of fine fraction residue (28g) containing unidentified degraded bone (7g) and very small particles of degraded bone mixed with small intrusive root material and chalky gravel (21g). The flotation residue (<1g) appears to contain some intrusive root material with very little obvious environmental material. In addition, two struck flints were also recovered, each weighing *c*.3g. No magnetised material

was recovered. All residues have been retained. The bone fragments have been sent for C14 dating.

**Table 1:** Samples recovered for environmental assessment

| Sample No | Context | Sample Vol (L) | Sample Weight (g) | Magnetic Weight (g) | Description | Provisional Date | Awaiting Further Analysis |
|---|---|---|---|---|---|---|---|
| 1 | 3.3 | 10 | 7820 | <1 | Brownish black silty clay with flint, charcoal and subrounded stone inclusions | TBA | C14 |
| 2 | 3.4 | 5 | 4402 | - | Light greyish brown fine silty clay with bone inclusions | TBA | C14 |

# 7 Conclusions

7.1 Apart from the presence of alluvium at the western end of the 'watching brief' site, the ground was composed of sandy silts belonging to the Thanet and Woolwich beds. The alluvium becomes thicker to the west. Its eastern edge was evident in Trench 3, though its southern extents was never defined. To judge from Trench 1 the alluvium became shallower to the north. The alluvium sealed a small curvilinear feature (3.1), cut through light olive brown silt that probably represented discolouration of the natural strata. The contexts of this feature (3.4) were not dated. However, it was sealed by a burnt deposit containing fire-cracked pebbles. This was dated to the mid/late Bronze Age (3285 ± 40 BP).

7.2 The curvilinear feature (3.1) in Trench 3 was originally thought to be the remains of a possible tree-throw hollow. However, the excavated section indicates that it is probably a shallow gully. The presence of animal bone fragments and two flint flakes are indicative of human activity in the area. This evidence was sealed beneath a deposit of alluvium, which was originally about one metre thick. This looks like the 'marine alluvium' of the Newchurch 2 Association, described as a 'pelo-calcareous alluvial gley soil' (Soil Survey of England and Wales 1983, 814c). This deposit clearly post-dates the mid/late Bronze Age and, on the analogy with the evidence of Romney Marsh, may have continued to accumulate at least up to the early medieval period (Cunliffe 1980; Allen 1999). The area was then brought under pastoral management which continued until the 19th century when, with improved drainage, arable cultivation superseded traditional methods of agriculture.

7.3 In the area examined there was no evidence for the presence of the putative Roman road. In theory, the road alignment shown in the impact assessment (Hunn 2008b, 13, Fig. 3) could have been missed by the current development. However, the presence of marine alluvium argues against such a hypothesis. The evidence suggests that the swathe of marshland shown on the Cassini map of 1816-19 must have extended more to the west prior to the 19th century (Cassini 2006). Indeed, the early 19th-century cartographic evidence shows that marsh/pasture land extended to the north of the present site, on either side of Cooper Street (*ibid.*). The presence of ceramic land drains at the base of the alluvium is indicative of mid 19th century land improvement.

7.4 The reconstruction of the Roman coast and infrastructure shows that the port at Richborough was served by a single road (Millet 2007, 145, Fig. 5.7). The island location of Richborough and the presence of the Wantsum channel to the north had a determining influence on the course of this road. However, the impact of later drainage works has made it difficult to distinguish the original land divisions and usage of the area. This is further compounded by an absence of a detailed study of the topography around Richborough. A cursory examination of the cartographic evidence suggests a strong WNW-ESE alignment running more or less parallel to the river Stour to the north. This can be seen in the course of the Stour Valley Walk between Richbourgh and West Stourmouth. This follows a well-established 19th-century footpath whose existence may be no more than a coincidence. Alternatively, there is a pattern there that has been influenced by a pre-existing communications system. All we can be certain about at present is that we lack reliable information on which a reconstruction of the Roman landscape can be based.

# 8 Acknowledgements

The excavation was commissioned by Brian Edwards, General Manager of Wight Salads Group. The writer is grateful to him for his assistance during the course of the project. The project was monitored by Ben Found and Adam Singleof the *Heritage Conservation Group* of *Kent County Council,* on behalf of Dover District Council. Thanks are also due to Nick Ovenden, the groundworks contractor for his co-operation.

The project was managed and led for ASC by Jonathan Hunn BA PhD MIFA. Fieldwork was carried out by Jonathan Hunn and Ralph Brown. Specialist contributions were provided by Janice Mcleish and the Scottish Universities Environmental Research Centre (SUERC), Glasgow University. The report was prepared by Jonathan Hunn with graphics support by R. Brown, and edited by Bob Zeepvat BA MIFA.

# 9 Archive

9.1 The project archive will comprise:

1. Brief
2. Project Design
3. Archaeological Impact Assessment
4. Initial Report
5. Clients site plans
6. Site records
7. Sample records
8. Site record drawings
9. List of photographs
10. B/W prints & negatives
11. Original specialist reports and supporting information
12. CDROM with copies of all digital files.

9.2 The archive will be deposited with Dover Museum.

# 10 References

***Standards & Specifications***

EH 1991 *The Management of Archaeological Projects, 2nd edition.* English Heritage (London).

Found, B. 2008: *Mitigation – strip, map and sample requirements*. Kent County Council

Hunn JR 2008a *Europa Nursery, Weddington, Ash, Kent: Project Design for Archaeological Excavation.* ASC doc. ref 1092/EAK/2.

IFA 2000a Institute of Field Archaeologists' *Code of Conduct.*

IFA 2001 Institute of Field Archaeologists' *Standard & Guidance* documents *(Desk-Based Assessments, Watching Briefs, Evaluations, Excavations, Investigation and Recording of Standing Buildings, Finds)*.

***Secondary Sources***

Allen, J.R.L. 1999: The Rumensea Wall and the early settled landscape of Romney Marsh. *Landscape History* 21, 5-18.

BGS British Geological Survey 1:50,000 Series, Solid & Drift Geology. Sheet no. 290

Cassini 2006: Cassini Historical Map (Old Series 1816-1819). Canterbury & East Kent. Ordnance Survey (Southampton).

Cunliffe, B.W. 1980: 'The Evolution of Romney Marsh: a preliminary statement' in Thompson F.H. (ed) *Archaeology and Coastal Change,* 37-55. Society of Antiquaries (London).

Hunn, J.R. 2008b: *Archaeological Impact Assessment: Europa Nursery, Ash, Kent.* ASC doc. ref. 1092/EAK/1.

Soil Survey 1983 *1:250,000 Soil Map of England and Wales, and accompanying legend* (Harpenden).

# Appendix 1: List of Photographs

| **SITE NAME:** Europa Nursery, Weddington, Ash, Kent | | | **SITE NO/CODE:** EAK/1092 |
|---|---|---|---|
| Shot | B&W | Digital | Subject |
| 1 | | 4996 | Old reservoir prior to removal **30/6/08** |
| 2 | | 5647 | View west of eastern end of strip & record area **21/8/08** |
| 3 | 1 | 5648 | View SW of eastern end of strip & record area |
| 4 | | 5649 | Detail of soil profile in area of 5648 |
| 5 | | 5650 | Area of cleared green houses looking NW |
| 6 | | 5651 | Removal stage of old reservoir view west |
| 7 | | 5652 | View SW of eastern end of strip & record area |
| 8 | | 5653 | Replicate of 5648 |
| 9 | | 5654 | Close up of 5653 |
| 10 | | 5655 | Character of subsoil |
| 11 | | 5656 | View NW of work in progress at east end of strip & record area |
| 12 | | 5657 | Old boiler house and reservoir looking east |
| 13 | | 5659 | View east of work on old reservoir area |
| 14 | 2 | 5671 | Removal of ground beneath old reservoir looking west **22/8/08** |
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| 16 | | 5673 | View west of reduced level of E end of strip & record area |
| 17 | 4 | 5715 | Reduction of east end of reservoir area |
| 18 | | 5716 | Detail of 5715 |
| 19 | 5 | 5717 | View north with old reservoir in foreground and old green houses beyond |
| 20 | | 5718 | View of E of eastern end of old reservoir |
| 21 | | 5720 | Section by storage tanks |
| 22 | | 5721 | View south of east end of strip & record area |
| 23 | | 5722 | Detail of section by storage tanks |
| 24 | 6 | 6081 | View ENE of west end of strip & record **24/9/08** |
| 25 | | 6082 | View north of west end of strip & record |
| 26 | | 6083 | View east of flooded western end of strip & record area |
| 27 | | 6086 | View west along T. 3 at commencement of mechanical excavation |
| 28 | 7 | 6087 | Detail of middle section of strip & record looking east |
| 29 | | 6088 | West end of strip & record |
| 30 | | 6089 | View NE across west end of strip & record area |
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| 33 | | 6092 | Trench 3 looking west |
| 34 | | 6093 | Detail of sondage within T.3 looking west |
| 35 | 8 | 6095 | Trench 3 & 4 looking north |
| 36 | | 6097 | Trench 4 looking north |
| 37 | | 6120 | Land drain *in situ* in Trench 3. **29/9/08** |
| 38 | | 6121 | View south of machining underway |
| 39 | | 6122 | View NE of machining in Trench 3 and 4 |
| 40 | | 6123 | View north of machining in Trench 4 |
| 41 | 9 | 6124 | View WNW of machining in Trench 4 |
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| 45 | | 6130 | View south of machine cut section in Trench 3 |
| 46 | | 6131 | Detail of 6130 |

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| 47 | 11 | 6132 | Detail of stake-holes in Trench 4 looking north |
| 48 | | 6133 | Trench 4 looking north |
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| 52 | | 6146 | Trench 4 with 4.1 in foreground looking east |
| 53 | | 6147 | Land drain *in situ* in Trench 4 looking west |
| 54 | 12 | 6148 | Detail of section across 4.1 looking east |
| 55 | | 6149 | Detail of section across 4.1 looking west |
| 56 | | 6150 | View east of modern fence alignment |
| 57 | | 6151 | As 6150 |
| 58 | | 6152 | Ditto and west facing section of Trench 4 |
| 59 | | 6153 | Detail of crumbly bone in clay fill 4.4 looking east **3/10/08** |

# Appendix 2: Radiocarbon Dating Report

Scottish Universities Environmental Research Centre
Director: Professor A B MacKenzie Director of Research: Professor R M Ellam
Rankine Avenue, Scottish Enterprise Technology Park,
East Kilbride, Glasgow G75 0QF, Scotland, UK
Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

19 December 2008

| | |
|---|---|
| **Laboratory Code** | SUERC-21594 (GU-17855) |
| **Submitter** | Harriet Anne Jacklin/ Alastair Hancock<br>Archaeological Services & Consultancy<br>Letchworth House<br>Chesney Wold, Bleak Hall<br>Milton Keynes MK6 1NE |
| **Site Reference** | Europa Nursery |
| **Sample Reference** | EAK 08/3.4 |
| **Material** | Bone : Species not identified |
| **$\delta^{13}C$ relative to VPDB** | |
| **Radiocarbon Age BP** | Failed – Insufficient Carbon |

**N.B.**

1. The above $^{14}C$ age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Scottish Universities Environmental Research Centre
Director: Professor A B MacKenzie Director of Research: Professor R M Ellam
Rankine Avenue, Scottish Enterprise Technology Park,
East Kilbride, Glasgow G75 0QF, Scotland, UK
Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

# RADIOCARBON DATING CERTIFICATE

19 December 2008

| | |
|---|---|
| **Laboratory Code** | SUERC-21595 (GU-17856) |
| **Submitter** | Harriet Anne Jacklin/ Alastair Hancock<br>Archaeological Services & Consultancy<br>Letchworth House<br>Chesney Wold, Bleak Hall<br>Milton Keynes MK6 1NE |
| **Site Reference** | Europa Nursery |
| **Sample Reference** | EAK 08/3.3 |
| **Material** | Charcoal : Species not identified |
| **$\delta^{13}C$ relative to VPDB** | -25.2 ‰ |
| **Radiocarbon Age BP** | 3285 ± 40 |

**N.B.**

1. The above $^{14}C$ age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

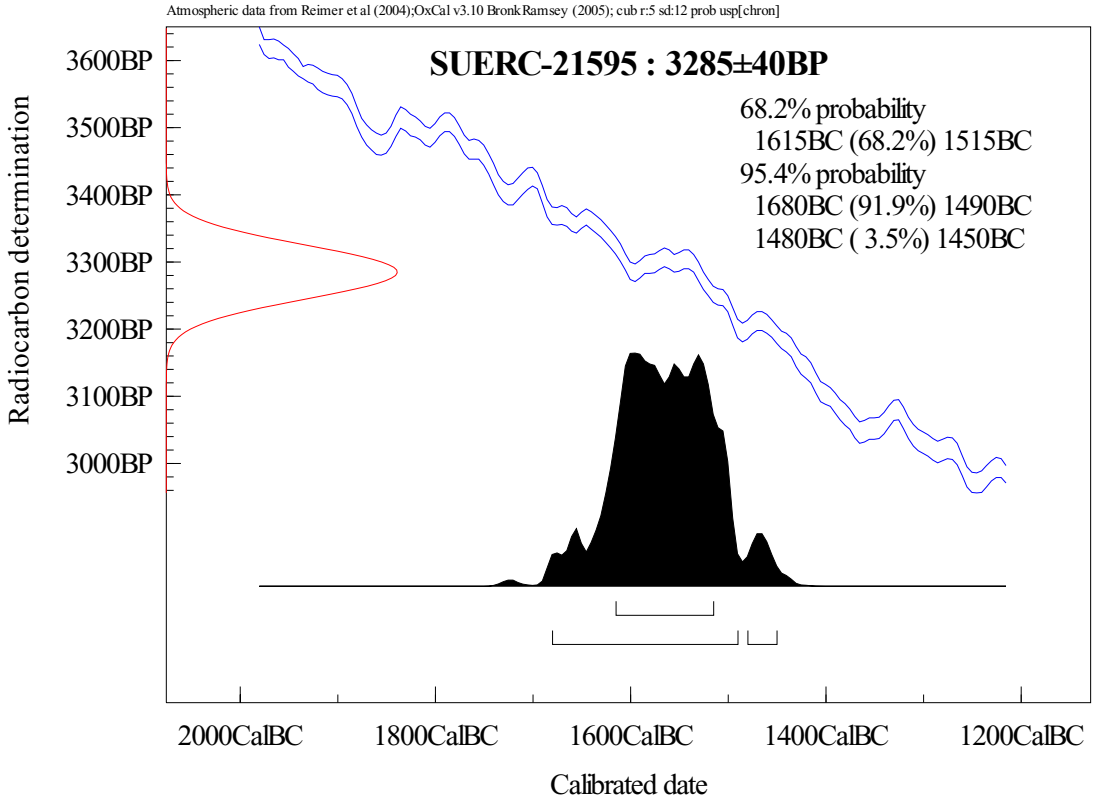
2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

# Calibration Plot



# Appendix 3: Trench Record Sheets

## Trench 1

| Max Dimensions (m) | | | | | |
|---|---|---|---|---|---|
| **Length** | 4.30 | **Width** | 1.85 | **Depth** | 0.6 |

| Levels | |
|---|---|
| **Trench base north** | abandoned |
| **Trench top north** | ditto |
| **Trench base south** | |
| **Trench top south** | |

| NGR Co-ordinates | | | |
|---|---|---|---|
| **TR** | 29614-59183 | **TR** | 29618-59183 |
| **Orientation** | | WNW-ESE29544-59197 | |
| **Reason for Trench** | | Planning condition | |

| Context | Type | Description and Interpretation | Width (max: m) | Thickness (max: m) | Depth (BGL: m) |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

## Trench 2

| Max Dimensions (m) | | | | | |
|---|---|---|---|---|---|
| **Length** | 6.0 | **Width** | 1.85 | **Depth** | 0.22 |

| Levels | |
|---|---|
| **Trench base north** | |
| **Trench top north** | |
| **Trench base south** | |
| **Trench top south** | |

| NGR Co-ordinates | | | |
|---|---|---|---|
| **TR** | 29544-59197 | **TR** | 29547-59203 |
| **Orientation** | | NNW-SSE | |
| **Reason for Trench** | | Planning Condition | |

| Context | Type | Description and Interpretation | Width (max: m) | Thickness (max: m) | Depth (BGL: m) |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

## Trench 3


| Max Dimensions (m) | | | | | |
|---|---|---|---|---|---|
| **Length** | 35.00 | **Width** | 1.85 | **Depth** | 1.22 |

| Levels | |
|---|---|
| **Trench base north** | 9.05m OD |
| **Trench top north** | 10.41m OD |
| **Trench base south** | 9.98m OD |
| **Trench top south** | 10.40m OD |

| NGR Co-ordinates | | | |
|---|---|---|---|
| **TR** | 29617 59200 | **TR** | 26647 59183 |
| **Orientation** | | NW-SE | |
| **Reason for Trench** | | Planning condition | |

| Context | Type | Description and Interpretation | Width (max: m) | Thickness (max: m) | Depth (BGL: m) |
|---|---|---|---|---|---|
| 3.2 | Layer | Plastic, Dark brown grey silty clay | >1.85 | 0.75 | - |
| 3.3 | Fill | Black sandy silt | >0.50 | 0.21 | 0.70 |
| 3.4 | Fill | Greyish brown silt | >0.85 | 0.72 | 0.70 |
| 3.1 | Cut | Tree throw, irregular semi circular | >0.85 | 0.72 | 0.70 |
| 3.5 | Layer | Subsoil-Olive grey clay silt | 35.00 | 0.24 | 0.70 |
| 3.6 | Layer | Natural-Mid orange silty clay firm | >1.85 | - | 0.93 |

## Trench 4


| Max Dimensions (m) | | | | | |
|---|---|---|---|---|---|
| **Length** | 18.00 | **Width** | 1.85 | **Depth** | 1.30 |

| Levels | |
|---|---|
| **Trench base north** | 9.45m OD |
| **Trench top north** | 10.40m OD |
| **Trench base south** | 9.63m OD |
| **Trench top south** | 10.42m OD |

| NGR Co-ordinates | | | |
|---|---|---|---|
| **TR** | 29634 59192 | **TR** | 29642 599207 |
| **Orientation** | | NE-SW | |
| **Reason for Trench** | | Planning Condition | |

| Context | Type | Description and Interpretation | Width (max: m) | Thickness (max: m) | Depth (BGL: m) |
|---|---|---|---|---|---|
| 4.1 | Layer | Plastic, Dark brown grey silty clay | >1.85 | 0.80 | |
| 4.2 | Layer | Subsoil-Olive grey clay silt | >1.85 | 0.18 | |
| 4.3 | Layer | Natural-Mid orange silty clay firm | >1.85 | | |

# Appendix 4: ASC OASIS Form

| PROJECT DETAILS | | | |
|---|---|---|---|
| Project Name: | Europa Nursery, nr Weddington, Ash, Kent | | |
| Short Description: | *In August and September 2008 a 'strip, record & sample excavation' was undertaken along the axis of an old reservoir and adjacent areas at Europa Nursery, Ash, near Sandwich, Kent, during large-scale earth moving for the construction of new greenhouses and associated facilities. The postulated line of a Roman road from Richborough to Canterbury crosses the western edge of the site. The excavation revealed that most of the original land surface had been removed during re-grading for the construction of greenhouses in the early 1970s. The only area that had survived was a spread of alluvium at the western end of the site. As there were no obvious signs of any features within this latter area, four trial trenches were mechanically excavated to determine whether the alluvium masked any features. One the trenches contained a short curvilinear feature sealed beneath a layer of fire-cracked flints and burnt material. This was dated to the mid/late Bronze Age, indicating that the alluvium post-dates this period.* | | |
| Project Type: | Field monitoring and Trial Trenching | | |
| Site status: | none | Previous work: | None apart from dba |
| Current land use: | Horticultural use | Future work: | yes |
| Monument type: | N/a | Monument period: | |
| Significant finds: | none | | |
| **PROJECT LOCATION** | | | |
| County: | Kent | OS reference: (8 figs min) | TR 2980 5915 |
| Site address: | Europa Nursery, Weddington near Ash, Kent | | |
| Study area: (sq. m. or ha) | *c.*20ha (15.53ha currently under glass) | Height OD: (metres) | 10m |
| **PROJECT CREATORS** | | | |
| Organisation: | Archaeological Services & Consultancy Ltd | | |
| Project brief originator: | Ben Found (KCC) | Project design originator: | Jonathan Hunn |
| Project Manager: | Jonathan Hunn | Director/Supervisor: | Jonathan Hunn |
| Sponsor / funding body: | Wight Salad Group | | |
| **PROJECT DATE** | | | |
| Start date: | 21/8/08 | End date: | 29/12/08 |
| **PROJECT ARCHIVES** | | | |
| | Location (Accession no.) | Content (eg. pottery, animal bone, files/sheets) | |
| Physical: | Dover Museum | 2 flint flakes | |
| Paper: | | Brief, project design, reports, plans, site records etc | |
| Digital: | | yes | |
| **BIBLIOGRAPHY** (Journal/monograph, published or forthcoming, or unpublished client report) | | | |
| Title: | Archaeological Excavation (phase 1): Europa Nursery, Weddington, Ash, Kent | | |
| Serial title & volume: | ASC: 1092/EAK/02 | | |
| Author(s): | Jonathan R. Hunn | | |
| Page nos | 31 | Date: | 12th January 2009 |