AN ARCHAEOLOGICAL EVALUATION ON LAND ADJACENT TO WAGTAIL DRIVE, HEYBRIDGE, ESSEX CM9 4UD

SITE CODE: HYWD15

FEBRUARY 2016

REPORT NO. R12333

PRE-CONSTRUCT ARCHAEOLOGY

An Archaeological Evaluation on land adjacent to Wagtail Drive, Heybridge, Essex, CM9 4UD

Site Code:	**HYWD15**
Central National Grid Reference:	**TL 86477 08211**
Written by:	**Maria Buczak**
	Pre-Construct Archaeology Limited
Local Planning Authority:	**Maldon District Council**
Project Manager:	**Charlotte Matthews (MCIfA)**
Commissioning Client:	**Arcadis Consulting (UK) Limited on behalf of Essex County Council**

Contractor:	**Pre-Construct Archaeology Limited**
	Unit 54, Brockley Cross Business Centre
	96 Endwell Road
	Brockley
	London SE4 2PD
Tel:	**020 7732 3925**
Fax:	**020 7732 7896**
E-mail:	**cmatthews@pre-construct.com**
Web:	**www.pre-construct.com**

February 2016

PCA Report Number: R12333

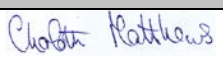
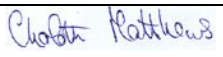
DOCUMENT VERIFICATION

LAND ADJACENT TO WAGTAIL DRIVE, HEYBRIDGE, ESSEX, CM9 4UD

ARCHAEOLOGICAL EVALUATION

Quality Control

Pre-Construct Archaeology Limited	
Project Number	K4332
Report Number	R12333

	Name & Title	Signature	Date
Text Prepared by:	Maria Buczak		04/02/16
Graphics Prepared by:	Ray Murphy		04/02/16
Graphics Checked by:	Charlotte Matthews		04/02/16
Project Manager Sign-off:	Charlotte Matthews		04/02/16

Revision No.	Date	Checked	Approved
1	11/02/16	Charlotte Matthews	Charlotte Matthews

Pre-Construct Archaeology Limited
Unit 54
Brockley Cross Business Centre
96 Endwell Road
London
SE4 2PD

CONTENTS

1 ABSTRACT 2

2 INTRODUCTION 3

3 PLANNING BACKGROUND 4

4 GEOLOGY AND TOPOGRAPHY 8

5 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND 9

6 METHODOLOGY 10

7 THE ARCHAEOLOGICAL SEQUENCE 12

8 INTERPRETATIONS AND CONCLUSIONS 14

9 ACKNOWLEDGEMENTS 15

10 BIBLIOGRAPHY 16

Appendix 1: Context Index 24

Appendix 2: Site Matrix 27

Appendix 3: OASIS Data Collection Form 28

APPENDIX 4: Essex Historic Environment Record/Essex Archaeology and History Summary Sheet 31

FIGURES

Figure 1: Site Location 17
Figure 2: Trench Locations 18
Figure 3: Sections 19

PLATES

Plate 1: SW view of Trench 3, showing modern deposits and heavily truncated natural 21
Plate 2: Natural gravel layers in Trench 3 showing clear truncation, looking NE 21
Plate 3: NW view of Trench 4, showing natural deposits, heavily truncated to the NW 22
Plate 4: NE-facing section in Trench 4, showing natural gravels truncated 22
Plate 5: View of Trench 1, entirely filled by modern deposits, looking NW 23
Plate 6: View of Trench 2, entirely filled by modern deposits, looking SW 23
Plate 7: Representative section (NE-facing) for Trenches 1 & 2, showing modern deposits 24

1 ABSTRACT

1.1 This report details the results and working methods of an archaeological evaluation that was undertaken on land adjacent to Wagtail Drive, Heybridge, Essex, CM9 4UD (TL 86477 08211).

1.2 The aims of the project were to determine the natural topography of the site, the presence, absence, nature and extent of any archaeological structures or deposits within the confines of the site, and to establish the extent of all past post-depositional impacts on the archaeological resource.

1.3 The evaluation demonstrated that the most recent underlying geological deposit to survive was sandy gravels, identified as River Terrace deposits which would have formed up to 3 million years ago, and indicate a local environment previously dominated by rivers. The only potentially archaeological remains encountered during the evaluation were two heavily truncated layers of relatively sterile made ground. These were of uncertain date and appear to represent only minimal activity in the form of dumping, possibly to build the ground up as a level surface and/or reclaim it from flooding.

1.4 All deposits surviving on site had been very heavily truncated by modern activity, in the form of a very substantial backfilled feature, which is likely to be related to the late 20th century housing development along nearby Wagtail Drive. With exclusively modern deposits revealed across the majority of the evaluated area, it is clear that this development has had a very major impact upon the survival of both natural geological deposits, and any earlier cultural remains that may once have existed on the site.

2 INTRODUCTION

2.1 This report presents the findings of an archaeological evaluation on land adjacent to Wagtail Drive, Heybridge, Essex, CM9 4UD (**Figures 1** and **2**). Planning permission (FUL/MAL/15/00944) was granted at this site for the creation of two attenuation ponds for the prevention of flood risk, dependant on various archaeological conditions being met. The archaeological evaluation was undertaken by Pre-Construct Archaeology to meet these conditions.

2.2 The site is centred on Ordnance Survey National Grid Reference TL 86477 08211. It is bounded to the south and west by various properties on Wagtail Drive, to the north by the grounds of Heybridge Primary School, and to the east by public playing fields, which form part of Drapers Farm Recreational Ground.

2.3 The site consisted of an irregularly shaped plot of ground, laid to grass as part of Drapers Farm Recreational Ground. Evaluation trial trenching was undertaken across the proposed development area for the two attenuation ponds, with four trenches excavated, as shown on **Figure 2**.

2.4 As outlined in the Written Scheme of Investigation (Matthews 2015), the primary objectives of the exercise were:

- To determine and confirm the natural topography of the site.
- To establish the presence or absence of prehistoric (particularly Iron Age), Roman or Saxon activity or finds.
- To establish the presence or absence of medieval and post-medieval activity at the site.
- To establish the nature, date and survival of activity relating to all archaeological periods at the site.
- To establish the extent of all past post-depositional impacts on the archaeological resource.

2.5 The investigation was conducted from 5th to 11th January 2016 in accordance with Essex County Council's Brief (Medlycott 2015) and the Written Scheme of Investigation (Matthews, 2015). It was supervised by Maria Buczak and was project managed by Charlotte Matthews, both of Pre-Construct Archaeology Limited. Maria Medlycott monitored progress as Historic Environment Officer for Essex County Council. The project was commissioned by James Gidman of Arcadis Consulting (UK) Limited on behalf of Essex County Council.

2.6 Following the completion of the project the site archive will be deposited in its entirety in Colchester Museum under the unique code HYWD15.

3 PLANNING BACKGROUND

3.1 The following planning policies are relevant to development on the study site.

3.2 **National Guidelines**

3.2.1 The National Planning Policy Framework (NPPF) was adopted on March 27 2012. The NPPF constitutes guidance for local planning authorities and decision-takers both in drawing up plans and as a material consideration in determining applications.

3.2.2 Chapter 12 of the NPPF concerns the conservation and enhancement of the historic environment, with the following statements being particularly relevant to the proposed development:

> 128. In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.
>
> 129. Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal

3.2.3 Additionally:

> 141. Local planning authorities should make information about the significance of the historic environment gathered as part of plan-making or development management publicly accessible. They should also require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.

3.2.4 In considering any planning application for development, the local planning authority will now be guided by the policy framework set by the NPPF.

3.2.5 The NPPF also states that:

> 214. For 12 months from the day of publication, decision-takers may continue to give full weight to relevant policies adopted since 2004 even if there is a limited degree of conflict with this Framework.
>
> 215. In other cases and following this 12-month period, due weight should be given to relevant policies in existing plans according to their degree of consistency with this framework (the closer the policies in the plan to the policies in the Framework, the greater the weight that may be given).

3.2.6 Where nationally important archaeological remains, whether scheduled or not, and their settings, are affected by a proposed development there should be a presumption in favour of their physical preservation.

3.2.7 If physical preservation in situ is not feasible, an archaeological excavation for the purposes of 'preservation by record' may be an acceptable alternative. From an archaeological point of view, this should be as a second best option. Agreements should also provide for subsequent publication of the results of any excavation programme.

3.2.8 The key to informed and reasonable planning decisions is for consideration to be given early, before formal planning applications are made, to the question of whether archaeological remains are known to exist on a site where development is planned and the implications for the development proposal.

3.2.9 Planning authorities, when they propose to allow development which is damaging to archaeological remains, must ensure that the developer has satisfactorily provided for excavation and recording, either through voluntary agreement with archaeologists or, in the absence of agreement, by imposing an appropriate condition on the planning permission.

3.3 **Maldon District Adopted Replacement Local Plan 2005 (saved 2008)**

'Archaeology'

6.62 The Ancient Monuments and Archaeology Areas Act 1979 requires the consent of the Secretary of State before any works are carried out within the area of a scheduled Ancient Monument. The location of Ancient Monuments in the Maldon District is listed in Appendix 3 and shown in map form on the Proposals Map. In addition to these Scheduled Monuments, the County Council maintains the Essex Heritage Conservation Record, which records the locations of Scheduled Ancient Monuments, previous archaeological finds and known archaeological sites and listed buildings. Government guidance in PPG 16 advises that not all nationally important remains meriting preservation will necessarily be scheduled. This same advice further advises that where nationally important remains, whether scheduled or not, and their settings are affected by proposed development, there should be a presumption in favour of their physical preservation.

6.63 Applications for planning permission for development affecting Scheduled Ancient Monuments and other important Archaeological Sites will normally be refused if there is an overriding case for preservation. Where there is no overriding case for preservation *in situ* of archaeological remains, planning permission may be granted subject to archaeological conditions. Any such condition will allow an appropriate mitigation strategy to be put in place and implemented.

6.64 The Coastal Zone on both the landward and seaward sides of the low water mark is a rich resource for archaeological and historical features, with the river valleys of the Chelmer, Blackwater and Crouch being a focus for early settlement.

6.65 The inter-tidal areas of the Blackwater Estuary host extensive areas of Neolithic land surface (c. 3000 BC) and the remains of large timber fish traps, many of which are of Middle Saxon date (AD 600-800). These appear as a series of posts and wattle fencing visible on low spring tides.

6.66 Much of the land adjoining the coast in the District is in agricultural use. Many areas have further archaeological features evident, including crop marks, decoy ponds and red hills, demonstrating some of the history of the area. In some cases where greenfield sites have been developed, e.g. at Elms Farm, Heybridge, excavations have revealed extensive archaeological deposits of national importance

POLICY BE17 Preservation of Sites of Nationally Important Archaeological Remains and their Settings

(a) There is a presumption in favour of the physical preservation of nationally important archaeological remains and their settings, whether scheduled or not, listed in Appendix 3 of the Maldon District Adopted Replacement Local Plan.

(b) Development will not be permitted if it fails to preserve the archaeological value and interest of the remains or their settings of the sites listed in Appendix 3 of the Maldon Local Plan.

POLICY BE18 Control of Development at a Site of Local Archaeological Value

(a) Planning permission for development which would have a detrimental effect on remains of local archaeological value will only be granted if the importance of the development outweighs the local value of the remains.

(b) If planning permission is granted, conditions will be imposed to ensure that the remains are properly recorded and evaluated and, where practicable, preserved.

3.4 Site Specific

3.4.1 Planning permission (FUL/MAL/15/00944) has been granted for the creation of two attenuation ponds on land adjacent to Wagtail Drive, subject to a number of archaeological conditions being met. Archaeological issues raised in the planning approval were set out within Conditions 7 and 8 (archaeology):

7 CONDITION

No development including any site clearance or groundworks of any kind shall take place within the site until the applicant or their agents; the owner of the site or successors in title has submitted an archaeological assessment by an accredited archaeological consultant to establish the archaeological significance of the site. Such archaeological assessment shall be approved by the local planning authority and will inform the implementation of a programme of archaeological work. The development shall be carried out in a manner that accommodates such approved programme of archaeological work.

REASON

To protect a site of archaeological interest in accordance with policy BE17 of the adopted Maldon District Replacement Local Plan.

8 CONDITION

No development including any site clearance or groundworks of any kind shall take place within the site until the applicant or their agents; the owner of the site or successors in title has secured the implementation of a programme of archaeological work from an accredited archaeological contractor in accordance with a written scheme of investigation which has been submitted to and approved in writing by the local planning authority. The development shall be carried out in a manner that accommodates the approved programme of archaeological work.

REASON

To protect a site of archaeological interest in accordance with policy BE17 of the adopted

Maldon District Replacement Local Plan.

4 GEOLOGY AND TOPOGRAPHY

4.1 The British Geological Survey indicates that the natural geological deposits across the site are London Clay Formation, overlain by River Terrace deposits of sand and gravel, locally with lenses of silt, clay or peat (BGS 2015).

4.2 The site is located on an area of relatively flat ground, although the land does rise slightly in places where tarmaced paths cross the area. The ground level across the site ranges from between 5.6m to 6m (OD).

4.3 A small watercourse runs north-south across the east of the site. An existing surface water sewer is also known to run north-south across the site slightly further to the west of the watercourse and close to the eastern ends of the proposed trenches.

4.4 The site is situated less than a mile south-east of an area of dense lakes and reservoirs, and about 2.5 miles north-east of Heybridge Basin, where several watercourses (the Rivers Chelmer, Blackwater, and the Chelmer and Blackwater Navigation Canal) converge (Figure 1).

4.5 A watching brief which monitored works conducted on the site prior to the archaeological evaluation encountered natural sand, gravel and clay deposits across the monitored area at depths of between 0.1–0.8m below ground level. Natural geological deposits were observed to be overlain by 0.1-0.8m of modern made ground, topsoil and turf, and in places truncated by the modern surface water sewer cut. No archaeological features or deposits were encountered (Alexander, 2016).

5 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

5.1 The archaeology of the Maldon and Heybridge area is exceptionally rich. The inter-tidal area on the north bank of the Blackwater Estuary preserves Neolithic land-surfaces and the gravel terraces on the north side of the estuary have extensive cropmark complexes of Bronze Age, Roman and Saxon date, some of which have been subject to large-scale excavations.

5.2 The marsh itself contains numerous Late Iron Age/Roman salterns (Red Hills). At the head of the estuary between the Rivers Chelmer and Blackwater there was the major Iron Age and Roman settlement (which is known in the archaeological literature as Elms Farm, Heybridge and has been extensively excavated).

5.3 The Iron Age and Roman settlement was followed by a period of early Saxon settlement which was not urban in nature. There was also Saxon settlement on the higher ridge of land to the south of the Chelmer. The late Saxon burh occupied a commanding position on the top of this ridge with late Saxon settlement running down the spine of the ridge between the burh and the hythe. This plan form was continued and expanded by medieval and post-medieval Maldon, with post-medieval industrial development on the low-lying marshy land at Fullbridge at the head of the estuary.

5.4 Heybridge was originally called *Tidwalditun*. The name Heybridge came from the high bridge that was built over the River Blackwater in the Middle Ages, at Heybridge Square (the junction of Heybridge Street, Holloway Road, and the Causeway). This was a 5-arched stone bridge and it was replaced in 1870 by a 2-arched brick one. Much of the water flow down this part of the river had, by then, been diverted into the River Chelmer by diversion work done during construction of the Chelmer and Blackwater Navigation

5.5 Heybridge has a number of residential areas, most recognisable is the newer Bovis housing estates to the west of the town, which were built in 1995. Before building commenced, archaeological excavation uncovered the remains of an important Iron Age settlement and ritual complex, a large Roman settlement and a succeeding Saxon settlement, as well as scattered prehistoric remains.

5.6 The proposed development site itself is sited immediately to the south of extensive cropmarks (EHER 16407) largely comprising linear features. Excavation in advance of a new classroom at Heybridge Primary School dated at least one of the cropmarks to the Late Iron Age and associated finds and features suggest the presence of an extensive settlement site.

5.7 An online study of available historic and Ordnance Survey maps of the area indicate that the site has lain as a vacant area of flat land in either fields or public ground from 1874 to the present day (Old-Maps, 2016).

5.8 An archaeological watching brief in November 2015 during the excavation of three slit trenches to locate the water surface water sewer, a trench for a drainage pipe and the removal of recently mounded construction material at the site did not uncover any archaeological features, artefacts or deposits.

6 METHODOLOGY

6.1.1 The evaluation comprised four trenches excavated across the two proposed attenuation ponds (**Figure 2**). These trenches measured 5m in width and, in length, 22m (Trenches 1 and 2), 12m (Trench 3) and 20m (Trench 4). The width of the trenches allowed them to be stepped to reach a maximum depth of 1.9m below ground level: the maximum impact of the proposed attenuation ponds. The base of each trench measured roughly 1.8m in width. The trenches were located to avoid the known surface water sewer running across the site.

6.1.2 The trenches were excavated by an excavator supplied by the Clients' groundworks contractor (Jacksons). The machine was fitted with a flat bladed grading bucket to excavate trenches under the supervision of the attending archaeologist. This proceeded by the removal of spits over the digging reach of the machine in a stationary position of no more than 100mm at each pass.

6.1.3 Machine excavation was to continue in spits of 100mm at a time until either significant archaeological strata were found or natural geological deposits exposed. Following machine excavation, relevant faces of the trench that required examination or recording were cleaned using appropriate hand tools. This archaeological investigation required some work by 'pick and shovel' and occasionally by further use of the machine. Such techniques were used only for the removal of homogeneous and 'low grade' layers where it can reasonably be argued that more detailed attention would not produce information of value.

6.1.4 Due to heavy rainfall and the loose nature of deposits within the trench, the trench sides became increasingly unstable and prone to collapse during the course of the evaluation, eventually rendering some of them unsafe to enter. The trenches were thus cleaned only as thoroughly as the necessary safety precautions allowed.

6.1.5 Following cleaning, examination and recording was undertaken both in plan and in section. Any natural and archaeological remains encountered (stratigraphical layers, cuts, fills, structures) were evaluated by hand tools and recorded in plan at 1:50 and in section at 1:10 using standard single context recording methods. All significant remains were recorded on *pro forma* context sheets and a full digital photographic record was compiled.

6.1.6 Deposits or the removal of deposits judged by the excavating archaeologist to constitute individual events were each assigned a unique record number (often referred to within British archaeology as 'context numbers') and recorded on individual pre-printed forms (Taylor and Brown 2009). Archaeological processes recognised by the deposition of material are signified in this report by round brackets (thus), while events constituting the removal of deposits are referred to here as 'cuts' and signified by square brackets [thus]. The record numbers assigned to cuts and deposits are entirely arbitrary and in no way reflect the chronological order in which events took place. All features and deposits recorded during the monitoring are listed in **Appendix 1**.

6.1.7 The trenches were located with a hand held GPS by a surveyor from Jacksons, using co-ordinates supplied by PCA. The trenches could then be tied into the Ordnance Survey Grid.

6.1.8 Levels were obtained from two Temporary Bench Marks with values of 5.87m ('TBM 4') and 5.7m ('TBM 5') in the southern half of the site. They were established by the surveyor for Jacksons through the use of a hand held GPS. Levels on relevant strata were taken from this through the use of a dumpy level.

6.1.9 The completed site archive, comprising written and photographic records, will be deposited at Colchester Museum under the site code HYWD15.

6.1.10 As detailed in the Written Scheme of Investigation (Matthews 2015), the evaluation was undertaken in accordance with guidelines issued by the Chartered Institute for Archaeologists (CIfA 2014).

6.1.11 The evaluation aimed to determine, as far as was reasonably possible, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed groundworks. The trenches were located to thus allow the study of an adequate representative sample of all areas threatened. In addition to the

excavation of human made deposits assessment of 'naturally deposited' levels was also undertaken.

7 THE ARCHAEOLOGICAL SEQUENCE

7.1 Phase 1: Natural Geological Deposits (33) - (36) (Trenches 3 & 4, Figure 3, Plates 1 to 4)

7.1.1 Natural geological deposits were encountered at the base of the sequence in both Trenches 3 and 4. In Trench 3, they comprised a number of layers of sandy gravels, each of which varied somewhat in colour and composition. The lowest layer consisted of a deposit of loose, light reddish-grey sandy gravel (36) which had an observed thickness of 0.35m. This lay beneath a 0.5m thick layer of loose, light bluish-grey clayey sandy gravels (35), which was in turn overlain by a layer of loose, dark reddish-brown sandy gravel (34) with an observed thickness of 0.3m (**Figure 3**).

7.1.2 Natural geological deposits in Trench 3 were only encountered at the very north-eastern end of the trench where they were observed to have been heavily truncated by a large cut filled with modern deposits (**Figure 3**; **Plates 1** and **2**). All natural geological deposits further west within the trench had been entirely removed by this truncation. Due to this heavy modern truncation, it is unknown at what level these natural gravels would have originally existed, nor whether any archaeological features of deposits had ever truncated, or been deposited upon, them.

7.1.3 In Trench 4, natural geological deposits appeared to consist of one thick, homogenous layer of loose, mid reddish-brown sandy gravel (33) (**Figure 3**). With an observed thickness of 1.08m, this deposit was recorded over an area measuring 3.25m (north-west to south-east) by 2m (north-east to south-west), at the very south-eastern end of the trench (**Plate 3**). Further to the north-west, the deposit had again been very heavily truncated by a large, near-vertical cut filled by modern deposits (**Figure 3**; **Plate 4**). This truncation had entirely removed all natural geological deposits across the remainder of the trench to the north-west (**Plate 3**).

7.1.4 The natural geological deposits, which survived at the south-east end of Trench 4, lay at a height of 4.84m OD (0.76m below ground level) and may represent the original level of these gravels as there was no obvious truncation of them in this location. Nevertheless, no archaeological features were encountered cutting into this highest surviving area of natural geological deposits.

7.1.5 Similar natural reddish brown flint gravels (2), (3) and (5) were found during the watching brief roughly at heights of 3.78, 4.62 and 4.67mOD, respectively (Alexander, 2016).

7.2 Phase 2: Undated Cultural Layers (31) and (32) (Trench 4, Figure 3, Plates 3 and 4)

7.2.1 Lying immediately above natural geological deposit (33) in Trench 4, and also heavily truncated by the modern cut to the north-west, were two layers of silty clay ((31) and (32); **Figure 3**; **Plate 4**). Although their physical relationship was not demonstrable within the trench, they are likely to have originally been the same layer, given the similarities between them.

7.2.2 Both deposits comprised a roughly 0.4-0.5m thick layer of firm, silty clay, although deposit (31) was mid bluish-grey in colour, while (32) was more of a mid greyish-brown. Although generally quite 'clean' or sterile deposits, the layers did contain some inclusions of sub-angular flints (some burnt), coal fragments, and flecks of CBM (ceramic building material), chalk and charcoal, in varying frequencies. No closely datable artefacts were recovered from the deposits.

7.2.3 Although the date of these deposits is thus uncertain, the presence of CBM (ceramic building material) indicates they are post-prehistoric, whilst the presence of coal is suggestive, although certainly not proof of, a relatively recent date (late post-medieval to modern?). In any case, the nature of these deposits is not suggestive of very substantial or significant activity; the paucity of finds and their largely sterile nature would indicate no settlement or other major activity in the vicinity, as such activity is likely to have resulted in the dumping of a far more significant amount of rubbish/waste.

7.2.4 These deposits would thus rather appear to represent layer(s) of made ground; fairly clean material intentionally redeposited to build up the land. This may have been done to reclaim the land from water (not an unlikely theory given the evident risk of flooding in the area) or

perhaps even as preparation for the instatement of the current Recreational Ground. Without dating evidence it is, of course, impossible to verify these theories.

7.2.5 Similar types of deposit, a reddish clay layer (1) and a yellowish sand (4), were found during the watching brief roughly at heights of 4.93 and 4.82mOD, respectively (Alexander, 2016). These were interpreted as natural River Terrace gravels during the watching brief although they may be layer(s) of made ground; fairly clean material intentionally redeposited to build up the land. To the east of the Site, further silty clay deposits (6) to (11) were found just below the topsoil during the watching brief and interpreted as natural River Terrace deposits.

7.3 Phase 3: Modern (Late 20th – Early 21st Century) Cut [37] and [38] and Deposits (39) to (44) (Trenches 1 to 4, Figure 3, Plates 1 to 7)

7.3.1 Large, deep cuts [37] and [38] were observed to truncate natural geological deposits in both Trenches 3 and 4, respectively (**Figure 3**; **Plates 1** to **4**). Although only one cut edge was observable in each trench, both were filled by the same modern deposit (39), (40) and (42), suggesting they may be part of the same large feature. Indeed, this very substantial feature would appear to have occupied most of the area of the proposed attenuation ponds, as this same modern fill (44) and (45) was also observed to cover the entire area and depth of trenches 1 and 2 further north (**Figure 3**; **Plates 5** to **7**).

7.3.2 The modern backfill itself comprised a thick deposit of re-deposited bluish-grey alluvium mixed with much modern building waste (plastic bags and sheeting, wood, concrete, frogged bricks, polystyrene and scrap metal) which is very likely waste from the late 20th century housing development which took place along Wagtail Drive immediately south and west of the site (**Figure 2**).

7.3.3 Although entirely filled with modern deposits, the feature itself may potentially be earlier, for example an earlier gravel quarry pit. Another credible theory is the feature's former use as some kind of pond or reservoir, as the large amount of re-deposited alluvium which has been used to backfill it would suggest that a substantial quantity of water-lain or waterlogged deposits was previously present in the vicinity.

7.3.4 Historic Ordnance Survey maps (available online between 1874 and 1991) do not show any large features extant upon the site, but rather that the site remained a vacant, flat area within fields/public land throughout this period (Old-Maps, 2016). This might suggest that the feature was not open for very long, at least not long enough to be included upon any map. If so, the feature is likely to date to roughly the same time as its backfill (i.e. also around the time of the Wagtail Drive housing development) and may even have been expressly excavated for the disposal of building waste and excavated ground produced during this development. The gravel that would have been excavated to create the feature may in turn have been sold or used within the housing development as it has clearly not been re-deposited within the feature.

7.3.5 Finally, lying across the majority of the trenches, above all other deposits, was a further modern layer of mid reddish-brown silty clay (41) and (43), also containing much modern building waste. Capping the large backfilled feature, it represents a 0.2-0.7m thick layer of made ground which formed a flat surface across the site. This flat surface had recently been created following the removal of two mounds on the Site in approximately the location of the two proposed attenuation ponds. Each mound was approximately 5m high at the time of the previous archaeological watching brief (Alexander, 2016).

7.3.6 Similar overlying modern made ground (12), (16) and (17) were found during the watching brief roughly at heights of 5.48, 5.27 and 5.32mOD, respectively (Alexander, 2016). The cut for the large modern feature was not observed during the watching brief.

8 INTERPRETATIONS AND CONCLUSIONS

8.1.1 The results of this evaluation have enabled the research questions that were set out in the Written Scheme of Investigation to be addressed:

- To determine the natural topography of the site, and the height at which it survives:

8.1.2 The evaluation encountered natural sand and gravel deposits identified as River Terrace deposits, deposited through river action up to 3 million years ago, and comprise the expected superficial geology for the site. These deposits were encountered at a highest level of 4.84m (OD) across one small area within Trench 4, where they survived apparently undisturbed. Generally, however, natural geological deposits had witnessed extremely heavy truncation by modern activity. Across most of the evaluated area natural geological deposits had been entirely removed down to the impact depth of the proposed attenuation ponds.

- To establish the presence/absence, survival, nature and date of activity relating to any archaeological period:

8.1.3 The only potentially archaeological deposits encountered during the evaluation were two layers of made ground, also heavily truncated by modern activity. Although it was not possible to date these deposits precisely, they certainly post-date the prehistoric period and may well have a relatively recent date (i.e. late post-medieval – modern). Representing fairly sterile layers of made ground, they may have been deposited to reclaim land from flooding, or may be related to the preparation of the ground for its use as recreational space.

8.1.4 No other evidence of activity from any other archaeological period was encountered. Across the majority of the site any archaeological remains that may have existed may have been removed by modern activity, whilst the small area of the original natural surface of the site that did survive (in Trench 4) was clearly devoid of any other features or deposits.

- To establish the extent of all past post-depositional impacts on the archaeological resource:

8.1.5 Modern activity has had a very major impact across the site upon the survival of both natural geological deposits, and any potential archaeological remains that may originally have existed.

8.1.6 This modern activity took the form of a large and very deep feature which appears to occupy nearly the entire area of the proposed attenuation ponds. Possibly water-filled, this feature may originally have been some kind of pond, reservoir or (flooded?) quarry which – regardless of the date it was cut - was clearly backfilled during the modern period. The feature was filled in with a mixture of re-deposited alluvium (hence the theory of an originally waterlogged feature) and modern building waste, making it likely that this backfilling episode relates to the late 20th century housing development on Wagtail Drive, immediately beyond the site's southern and western boundaries.

8.1.7 The fact that such a feature is not recorded on the site on any cartographic sources between 1874 and the present day could suggest the feature was excavated only a short time before it was backfilled, and so raises the possibility that it was excavated expressly for the disposal of building waste and excavated ground produced during the Wagtail Drive housing development.

9 ACKNOWLEDGEMENTS

9.1 Pre-Construct Archaeology Limited would like to thank James Gidman, Senior Archaeological Consultant of Arcadis Consulting (UK) Limited for commissioning the project on behalf of Essex County Council. Maria Medlycott, Historic Environment Officer for Essex County Council, is also thanked for monitoring the progress of the work. Lee Dunne of Jacksons and his team on site are thanked for their constant willingness to help and the great assistance they provided during the entire evaluation.

9.2 The author would like to thank Poppy Alexander for her proficient assistance with the excavation and recording, and Charlotte Matthews of Pre-Construct Archaeology for her project management and editing. Thanks also to Ray Murphy for the illustrations, and John Joyce and Wayne Richards for technical and logistical support.

10 BIBLIOGRAPHY

Alexander, P. 2016 *Archaeological Monitoring at Land Adjacent to Wagtail, Drive, Heybridge, Essex, CM9 4UD.* PCA Unpublished Report

British Geological Survey, 2016 *Maps and Viewers* (online source) http://www.bgs.ac.uk/data/mapViewers/home.html

Department for Communities and Local Government, 2012 *National Planning Policy Framework* (online source) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/60772116950.pdf

English Heritage (EH), 2008 *Advice and Guidance* (online source) http://www.english-heritage.org.uk/learn /conservation/collections/advice-and-guidance/

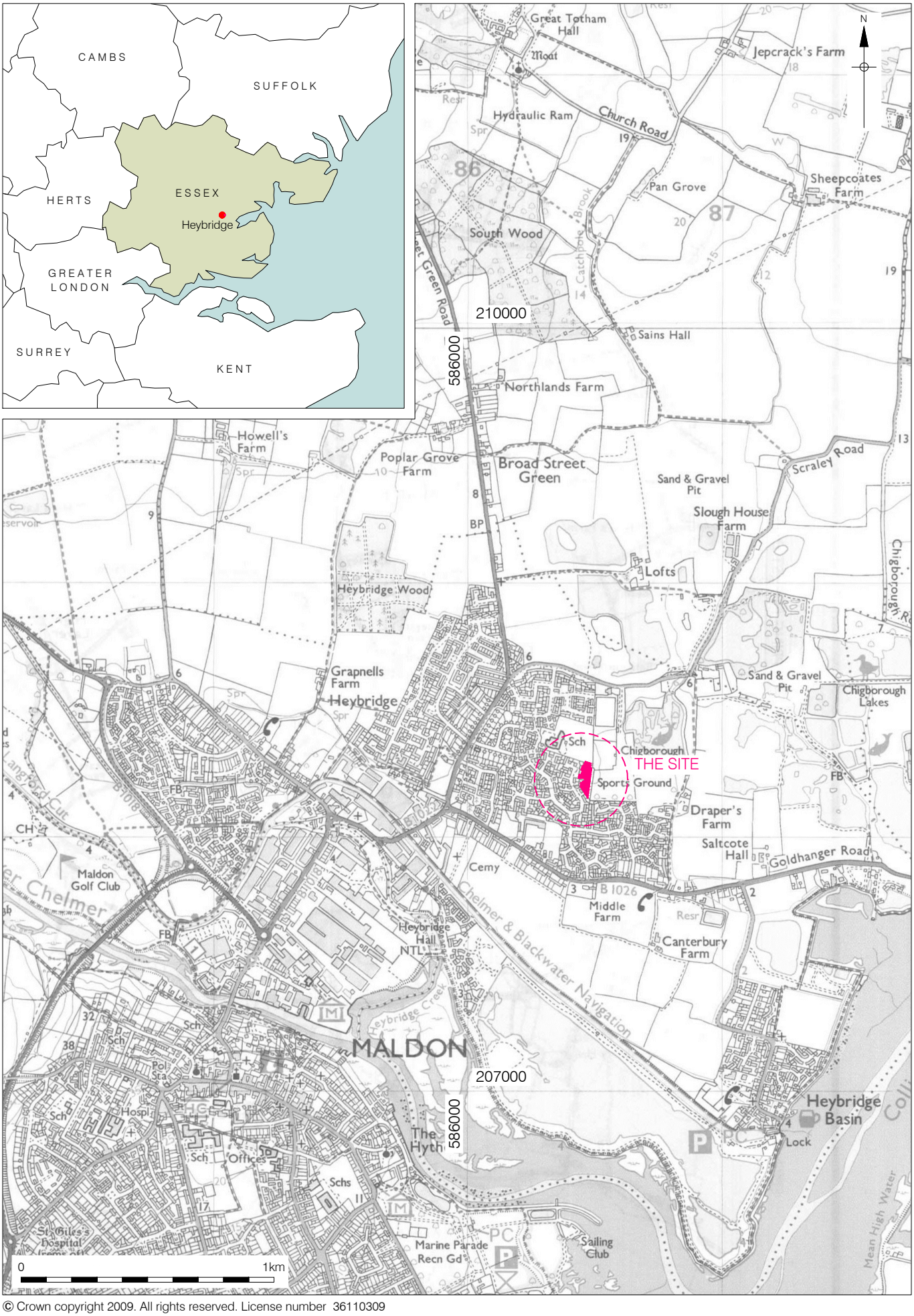
Chartered Institute for Archaeologists (CIfA), 2014 (online source) http://www.archaeologists.Net/codes /ifa

Maldon District Council, 2005 *Maldon District Adopted Replacement Local Plan 2005* (online source) http://www.maldon.gov.uk/downloads/file/2049/maldon_district_adopted_replacement_local_plan_2005

Matthews, C. 2015 *Land Adjacent to Wagtail, Drive, Heybridge, Essex: Written Scheme of Investigation for an Archaeological Evaluation.* PCA Unpublished Report

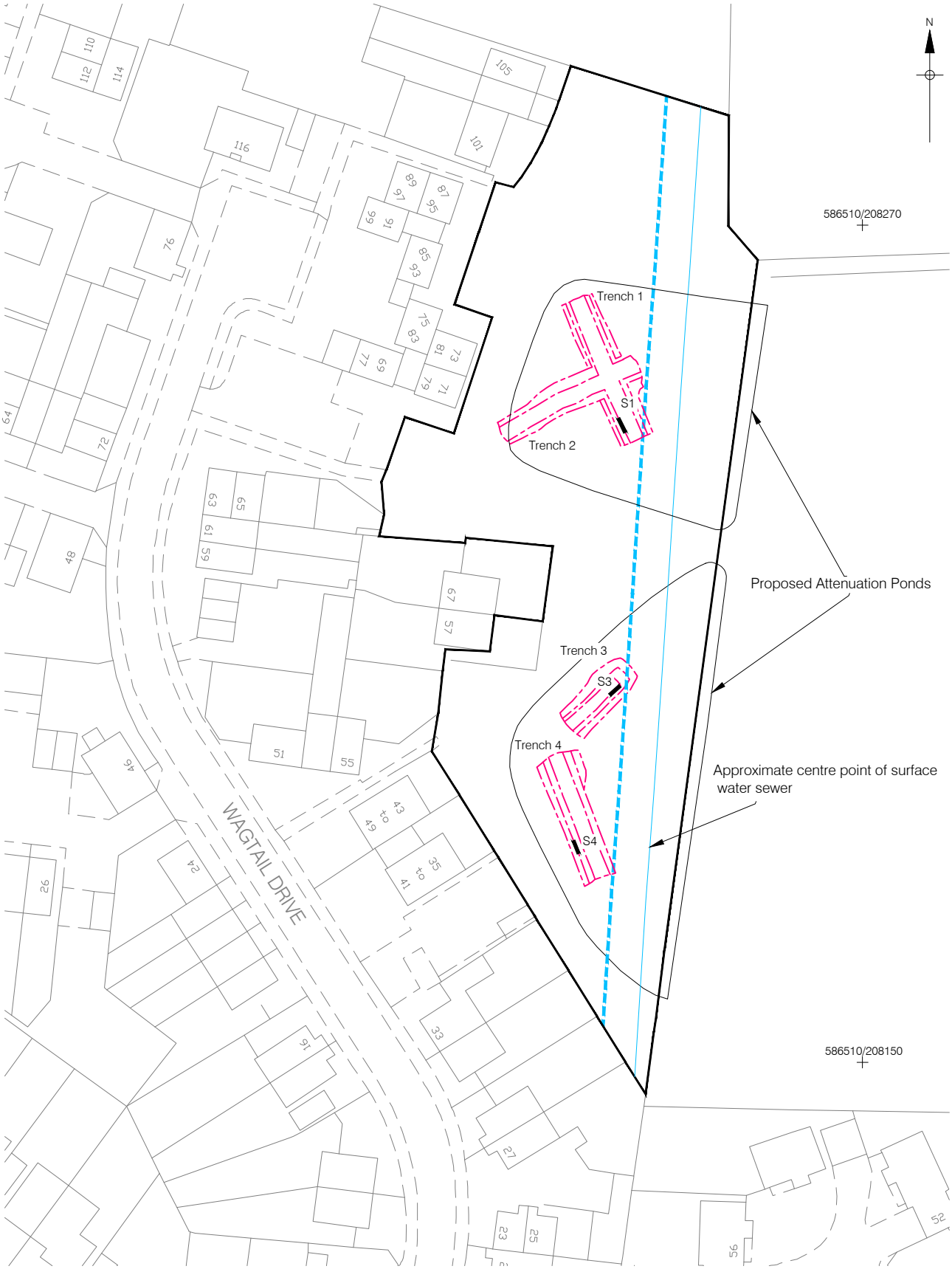
Medlycott, M. 2015 *Brief for archaeological trial-trenching at Land adjacent to Wagtail Drive, Heybridge.* Essex County Council Unpublished Report

Old-Maps, 2016 *Old-Maps.co.uk* (online source) https://www.old-maps.co.uk/#/



12/01/16 RM

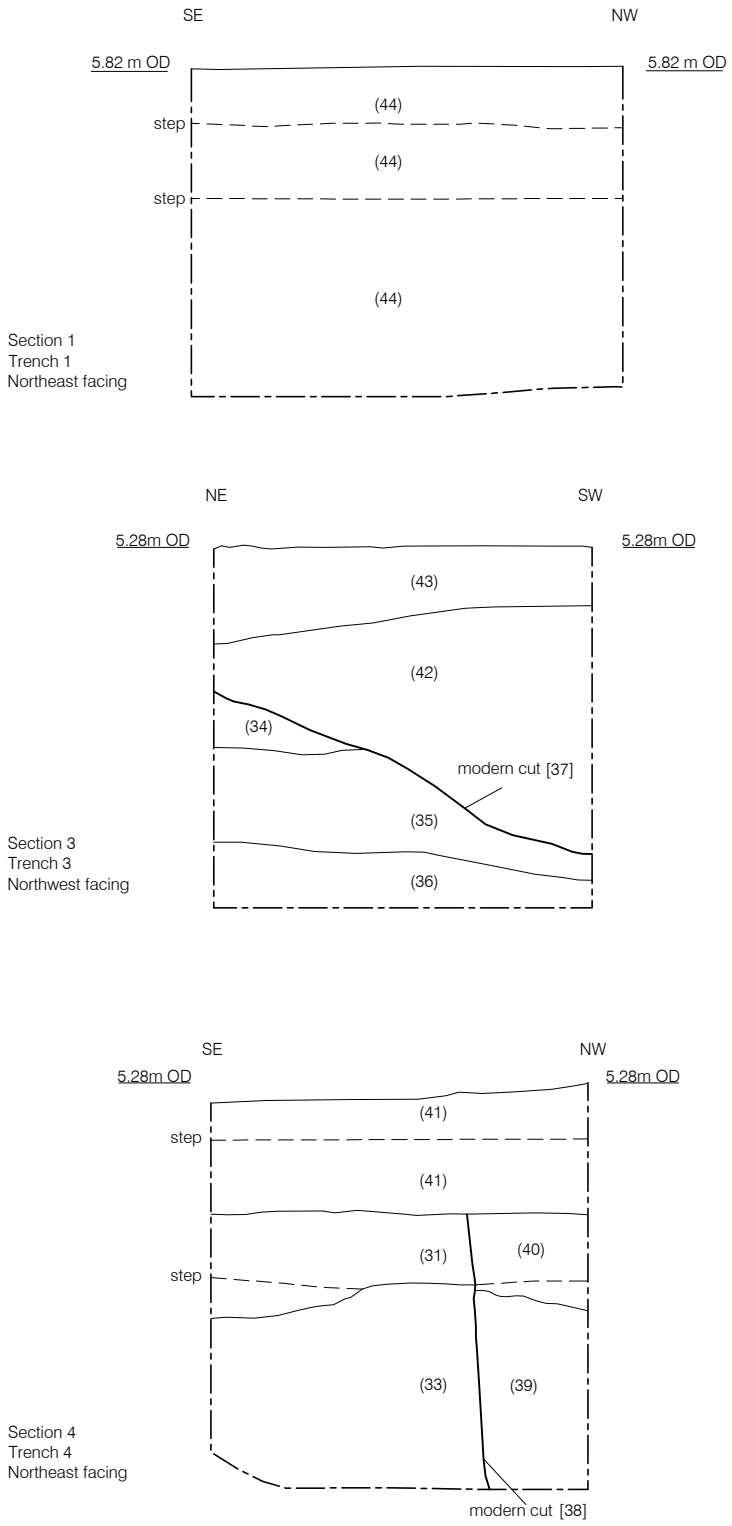
Figure 1
Site Location
1:2,000,000 & 1:20,000 at A4



Proposed Flood Alleviation Scheme plan based on drawing 0002/UA008258 supplied by Essex County Council, 2015

13/01/16 RM

Figure 2
Trench Locations
1:800 at A4



13/01/16 RM

Figure 3
Sections
1:40 at A4

Plate 1: South-west view of Trench 3, showing mostly modern deposits with just one small patch of heavily truncated natural surviving in the north-east corner

Plate 2: Natural gravel layers in Trench 3 showing clear modern truncation in section, looking north-east

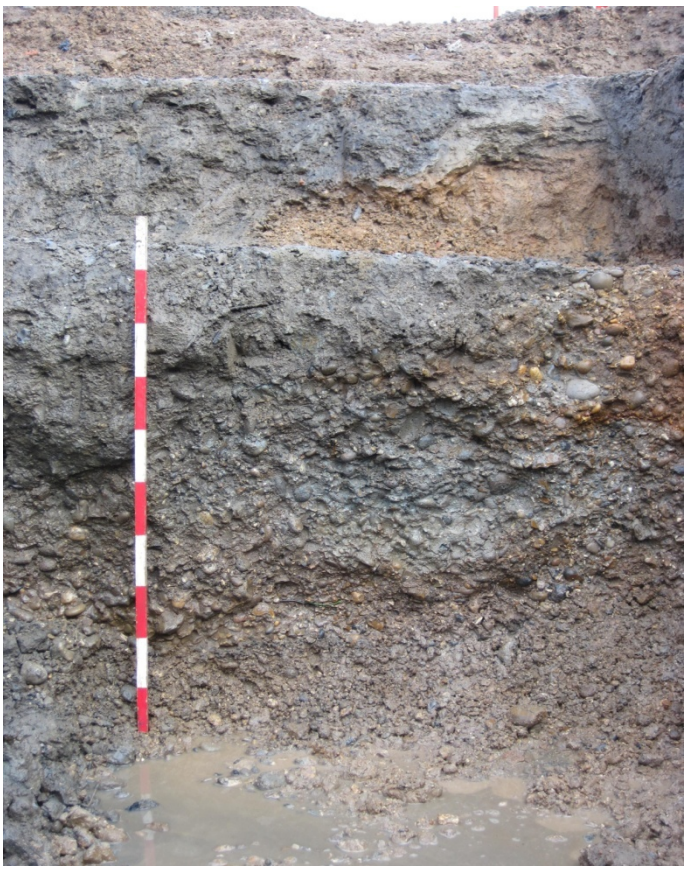


Plate 3: North-west view of Trench 4, showing natural geological deposits surviving at a high level in the south-east, but heavily truncated by modern cut and fills to the north-west

Plate 4: North-east facing section in Trench 4, showing natural gravel overlain by other deposits and truncated by modern cut and fills

Plate 5: View of Trench 1, entirely filled by modern deposits of redeposited alluvium and modern waste, looking north-west

Plate 6: View of Trench 2, entirely filled by modern deposits of redeposited alluvium and modern waste, looking south-west

Plate 7: Representative section (north-east facing) for Trenches 1 and 2, showing the trench filled by exclusively modern deposits

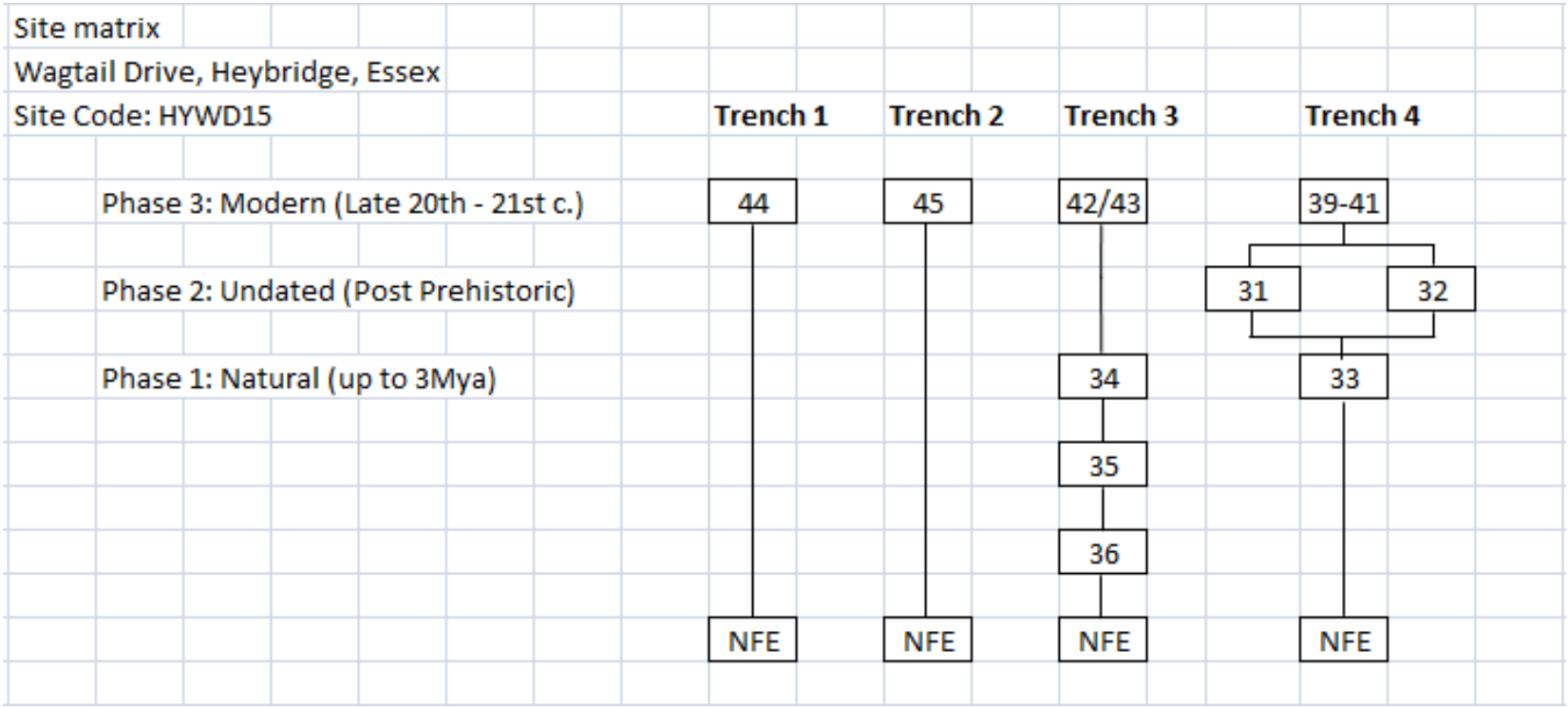
Appendix 1: Context Index

Context No	Type	Interpretation	Trench No.	Plan No.	Section No.	Levels (m OD)		Dimensions (as recorded within the confines of the trench)			Period	Phase
						Highest	Lowest	Max. Length	Max. Width	Max. Depth / Thickness		
31	Layer	Bluish-grey layer of made ground (unknown date)	4	Tr. 4	4	5.22	5.19	5.00m	1.00m	0.55m	Undated (Post Prehistoric)	2
32	Layer	Greyish-brown layer of made ground (unknown date)	4	Tr. 4	4	4.98	4.98	3.00m	1.00m	0.50m	Undated (Post Prehistoric)	2
33	Layer	Natural reddish-brown sandy gravel in trench 4. Equals deposit (5) in the watching brief	4	Tr. 4	4	4.84	4.55	3.25m	2.00m	1.08m	Up to 3Mya	1
34	Layer	Natural reddish-brown sandy gravel in trench 3	3	Tr. 3	3	4.58	4.28	2.50m	1.00m	0.30m	Up to 3Mya	1
35	Layer	Natural bluish-grey clayey sandy gravel in trench 3	3	N/A	3	4.28	3.72	N/A	N/A	0.50m	Up to 3Mya	1
36	Layer	Natural reddish-grey sandy gravel in trench 3	3	Tr. 3	3	3.78	3.58	3.00m	1.50m	0.35m	Up to 3Mya	1
37	Cut	Cut of large modern feature (trench 3)	3		3						Late C20	3

Context No	Type	Interpretation	Trench No.	Plan No.	Section No.	Levels (m OD)		Dimensions (as recorded within the confines of the trench)			Period	Phase
38	Cut	Cut of large modern feature (trench 4)	4		4						Late C20	3
39	Layer	Re-deposited bluish-grey alluvium mixed with much modern building waste (plastic bags and sheeting, wood, concrete, frogged bricks, polystyrene and scrap metal)	4		4						Late C20	3
40	Layer	Re-deposited bluish-grey alluvium mixed with much modern building waste (plastic bags and sheeting, wood, concrete, frogged bricks, polystyrene and scrap metal)	4		4						Late C20	3
41	Layer	Mid reddish-brown silty clay, also containing much modern building waste	4		4					0.7m	Late C20	3
42	Layer	Re-deposited bluish-grey alluvium mixed with much modern building waste (plastic bags and sheeting, wood, concrete, frogged bricks, polystyrene and scrap metal)	3		3						Late C20	3

Context No	Type	Interpretation	Trench No.	Plan No.	Section No.	Levels (m OD)		Dimensions (as recorded within the confines of the trench)			Period	Phase
43	Layer	Mid reddish-brown silty clay, also containing much modern building waste	3		3					0.7m	Late C20	3
44	Layer	Re-deposited bluish-grey alluvium mixed with much modern building waste (plastic bags and sheeting, wood, concrete, frogged bricks, polystyrene and scrap metal)	1		1						Late C20	3
45	Layer	Re-deposited bluish-grey alluvium mixed with much modern building waste (plastic bags and sheeting, wood, concrete, frogged bricks, polystyrene and scrap metal)	2								Late C20	3

Appendix 2: Site Matrix



Appendix 3: OASIS Data Collection Form

OASIS ID: preconst1-238109

Project details

Project name	An Archaeological Evaluation on land adjacent to Wagtail Drive, Heybridge, Essex, CM9 4UD
Short description of the project	An archaeological evaluation was undertaken on land adjacent to Wagtail Drive, Heybridge, Essex, CM9 4UD (TL 86477 08211) in January 2016 in advance of the creation of two large attenuation ponds. The trial trench evaluation demonstrated that the most recent underlying geological deposit to survive was sandy gravels, identified as River Terrace deposits. The only potentially archaeological remains encountered during the evaluation were two heavily truncated layers of relatively sterile made ground. These were of uncertain date and appear to represent only minimal activity in the form of dumping, possibly to build the ground up as a level surface and/or reclaim it from flooding. All deposits surviving on site had been very heavily truncated by modern activity, in the form of a very substantial backfilled feature, which is likely to be related to the late 20th century housing development along nearby Wagtail Drive. With exclusively modern deposits revealed across the majority of the evaluated area, it is clear that this development has had a very major impact upon the survival of both natural geological deposits, and any earlier cultural remains that may once have existed on the site.
Project dates	Start: 05-01-2016 End: 11-01-2016
Previous/future work	Yes / No
Any associated project reference codes	FUL/MAL/15/00944 - Planning Application No.
Any associated project reference codes	HYWD15 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Other 14 - Recreational usage
Monument type	FEATURE Modern
Monument type	LAYER Uncertain
Significant Finds	- None
Significant Finds	- None
Methods & techniques	'"Targeted Trenches"'
Development type	Service infrastructure (e.g. sewage works, reservoir, pumping station, etc.)
Prompt	Planning condition
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England

Site location	ESSEX MALDON HEYBRIDGE Wagtail Drive, Heybridge, Essex
Postcode	CM9 4UD
Study area	380 Square metres
Site coordinates	TL 58640 20802 51.862777777778 0.304166666667 51 51 46 N 000 18 15 E Point
Height OD / Depth	Min: 3.58m Max: 4.84m

Project creators

Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	Maria Medlycott
Project design originator	Charlotte Matthews
Project director/manager	Charlotte Matthews
Project supervisor	Maria Buczak
Type of sponsor/funding body	County Council
Name of sponsor/funding body	Essex County Council

Project archives

Physical Archive Exists?	No
Digital Archive recipient	Colchester Museum
Digital Contents	"Metal","Stratigraphic","Wood","other"
Digital Media available	"Database","Images raster / digital photography","Spreadsheets","Survey","Text"
Paper Archive recipient	Colchester Museum
Paper Contents	"Stratigraphic"
Paper Media available	"Context sheet","Map","Matrices","Photograph","Plan","Report","Section","Unpublished Text"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	An Archaeological Evaluation on land adjacent to Wagtail Drive, Heybridge, Essex, CM9 4UD

Author(s)/Editor(s)	Buczak, M.
Other bibliographic details	R12333
Date	2016
Issuer or publisher	PCA
Place of issue or publication	London
Description	Unpublished client report
URL	http://www.oasis.ac.uk
Entered by	Charlotte Matthews (cmatthews@pre-construct.com)
Entered on	4th February 2016

APPENDIX 4: ESSEX HISTORIC ENVIRONMENT RECORD/ESSEX ARCHAEOLOGY AND HISTORY SUMMARY SHEET

Site name/Address: Land Adjacent to Wagtail Drive, Heybridge, Essex, CM9 4UD	
Parish: Heybridge	***District:*** Maldon
NGR: TL 86477 08211	***Site Code:*** WDHY15
Type of Work: Archaeological Evaluation	***Site Director/Group:*** Maria Buczak/Pre-Construct Archaeology
Date of Work: 5th to 11th January 2016	***Size of Area Investigated:***
Location of Finds/Curating Museum: Colchester Museum	***Funding source:*** Essex County Council
Further Seasons Anticipated?: No	***Related HER No.s:***
Final Report: Buczak, P. 2016 *An Archaeological Evaluation on land adjacent to Wagtail Drive, Heybridge, Essex, CM9 4UD* Pre-Construct Archaeology	
Periods Represented: 20th century	
SUMMARY OF FIELDWORK RESULTS: An archaeological evaluation was undertaken on land adjacent to Wagtail Drive, Heybridge, Essex, CM9 4UD (TL 86477 08211) in January 2016 in advance of the creation of two large attenuation ponds. The trial trench evaluation demonstrated that the most recent underlying geological deposit to survive was sandy gravels, identified as River Terrace deposits. The only potentially archaeological remains encountered during the evaluation were two heavily truncated layers of relatively sterile made ground. These were of uncertain date and appear to represent only minimal activity in the form of dumping, possibly to build the ground up as a level surface and/or reclaim it from flooding. All deposits surviving on site had been very heavily truncated by modern activity, in the form of a very substantial backfilled feature, which is likely to be related to the late 20th century housing development along nearby Wagtail Drive. With exclusively modern deposits revealed across the majority of the evaluated area, it is clear that this development has had a very major impact upon the survival of both natural geological deposits, and any earlier cultural remains that may once have existed on the site.	
Previous Summaries/Reports: Alexander, P. 2016 *Archaeological Monitoring at Land Adjacent to Wagtail, Drive, Heybridge, Essex, CM9 4UD.* PCA Unpublished Report	
Author of Summary: Maria Buczak	***Date of Summary:*** 04/02/2016

P C A

PCA SOUTH
UNIT 54
BROCKLEY CROSS BUSINESS CENTRE
96 ENDWELL ROAD
BROCKLEY
LONDON SE4 2PD
TEL: 020 7732 3925 / 020 7639 9091
FAX: 020 7639 9588
EMAIL: info@pre-construct.com

PCA NORTH
UNIT 19A
TURSDALE BUSINESS PARK
DURHAM DH6 5PG
TEL: 0191 377 1111
FAX: 0191 377 0101
EMAIL: info.north@pre-construct.com

PCA CENTRAL
THE GRANARY, RECTORY FARM
BREWERY ROAD, PAMPISFORD
CAMBRIDGESHIRE CB22 3EN
TEL: 01223 845 522
FAX: 01223 845 522
EMAIL: info.central@pre-construct.com

PCA WEST
BLOCK 4
CHILCOMB HOUSE
CHILCOMB LANE
WINCHESTER
HAMPSHIRE SO23 8RB
TEL: 01962 849 549
EMAIL: info.west@pre-construct.com

PCA MIDLANDS
17-19 KETTERING RD
LITTLE BOWDEN
MARKET HARBOROUGH
LEICESTERSHIRE LE16 8AN
TEL: 01858 468 333
EMAIL: info.midlands@pre-construct.com