
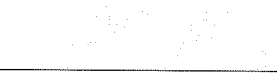

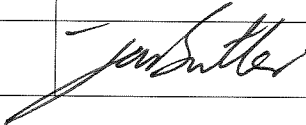


DOCUMENT VERIFICATION

KEW PALACE
 ROYAL BOTANIC GARDENS
 KEW
 LONDON BOROUGH OF RICHMOND

Watching Brief Phase 2

Quality Control

Pre-Construct Archaeology Limited			K883
	Name & Title	Signature	Date
Text Prepared by:	John Brown		March 2006
Graphics Prepared by:	Adrian Nash		March 2006
Graphics Checked by:	Josephine Brown		March 2006
Project Manager Sign-off:	Jon Butler		March 2006

Revision No.	Date	Checked	Approved

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

An Archaeological Watching at 'the Great Lawn', Kew Palace, Royal Botanic Gardens, Kew, London Borough of Richmond upon Thames

Site Code: KEW 4

Central National Grid Reference: TQ 1847 7747

Written and Researched by John Brown

Project Manager: Jon Butler

Commissioning Client: Historic Royal Palaces

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: jbutler@pre-construct.com

Website: www.pre-construct.com

© Pre-Construct Archaeology Ltd

March 2006

© The material contained herein is and remains the sole property of Pre-Construct Archaeology Limited and is not for publication to third parties without prior consent. Whilst every effort has been made to provide detailed and accurate information, Pre-Construct Archaeology Ltd cannot be held responsible for errors or inaccuracies herein contained.

CONTENTS

1	ABSTRACT	4
2	INTRODUCTION	5
3	PLANNING BACKGROUND	9
4	GEOLOGY AND TOPOGRAPHY	10
5	ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	11
6	METHODOLOGY	17
7	THE ARCHAEOLOGICAL SEQUENCE	19
8	CONCLUSIONS	44
9	BIBLIOGRAPHY	45
10	ACKNOWLEDGEMENTS	46

APPENDICES

APPENDIX 1	CONTEXT DESCRIPTIONS	47
APPENDIX 2	SITE MATRICES	49
APPENDIX 3	CATALOGUE OF POTTERY	52
APPENDIX 4	OASIS DATA COLLECTION FORM	53

FIGURES

1	Site location	7
2	Trench locations	8
3	Multi-context plan of Trench 3	27
4	Section 13, Trench 3	28
5	Multi-context plan of Trenches 4 & 6	29
6	Sections 14 & 19, Trenches 5 & 6	30
7	Multi-context plan of Trench 7	31
8	Section 15 of Trench 7	32
9	Multi-context plan of Trenches 8 & 9	33
10	Detail of masonry in Trench 8	34
11	Sections 16, 17 & 18, Trench 8	35
12	Multi-context plan of Trench 10	36
13	Map regression OS 1863 & 1894-6	37
14	Comparison of masonry features with Time Team trenches	38

PLATES

1	Floor tiles underlying stone pavoirs at the south entrance of Kew Palace	39
2	16 th - 17 th century ?boundary wall [407]	39
3	16 th – 17 th century ?boundary wall [703]	40
4	Possible Tudor hearth [809]	40
5	18 th century masonry [901]	41

6	18 th century masonry [803], [805], [806]	41
7	18 th century cobbled yard or path [808]	42
8	17 th century N-S wall [811] and 18 th century cesspit [810]	42
9	Masonry feature [816] in Trench 8	43
10	Masonry feature [412] in Trench 4	43

1 ABSTRACT

- 1.1 This report details the results and working methods of an archaeological watching brief undertaken at 'The Great Lawn', Kew Palace, Royal Botanic Gardens, Kew, London Borough of Richmond upon Thames. The work was in advance of the realignment of pathways serving Kew Palace to a 19th century alignment (fig.1). The site is centred at National Grid Reference TQ 1847 7747. Lee Prosser (Curator – Historic Buildings) commissioned the project on behalf of Historic Royal Palaces and Pre-Construct Archaeology Ltd undertook the watching brief between the 5th September 2005 and 2nd February 2006.
- 1.2 Trench 3 represented the hand removal of flagstones by specialist contractors on the area of the south entrance steps, which were cleaned and recorded archaeologically. Trenches 4, 5 and 6 were machine dug by contractors through previous areas of lawn and planting beds. Trench 7 was dug by hand by contractors, and left open for inspection by the archaeologist. Stripping of existing hard standing paths formed Trenches 8, 9 and 10.
- 1.3 Early post-medieval features were encountered on site, particularly a potential Tudor ?hearth and 16th-17th century wall foundations. 18th century wall foundations and a cobbled path discovered in Trench 8 are likely to represent the remains of the stable yard associated with the White House, constructed in 1732. The majority of the features encountered were from the post-medieval period, mostly relating to the development of the area from the 18th century and subsequent demolition of the royal complex in the 19th and 20th centuries.
- 1.4 The watching brief demonstrated that archaeological deposits survived in all of the trenches, particularly Trenches 3, 7 and 8. In several instances archaeological cut features continued beyond the depth of excavation c.0.45m below the current ground surface. The watching brief was intended as a complimentary phase of work to previous evaluation and watching brief of the archaeological deposits on site¹ and the consequent results suggest that significant archaeological remains of the post-medieval period exist on site.
- 1.5 Areas to the south of the palace (Trench 10, northern end of Trench 8) have clearly been impacted on by the construction of drains and services associated with the late 19th century and 20th century. In this case little in the way of archaeological features were observed.

¹ Bradley 2004, Brown 2005.

2 INTRODUCTION

- 2.1 This report details the results and working methods of an archaeological watching brief undertaken at 'The Great Lawn', Kew Palace, Royal Botanic Gardens, Kew, London Borough of Richmond upon Thames. The work was in advance of the realignment of pathways serving Kew Palace to a 19th century alignment (Fig.1). The site is centred at National Grid Reference TQ 1847 7747. Lee Prosser (Curator – Historic Buildings) commissioned the project on behalf of Historic Royal Palaces and Pre-Construct Archaeology Ltd undertook the watching brief between the 5th September 2005 and 2nd February 2006.
- 2.2 Kew Palace is a Scheduled Ancient Monument and is Grade 1 listed. In addition, it lies within the newly inscribed Royal Botanic Gardens World Heritage Site and has been designated as a Conservation Area under the Unitary Borough Local Plan.
- 2.3 In August 2003 Historic Royal Palaces carried out an archaeological desk-based assessment at Kew Palace, prepared by Lee Prosser (Curator-Historic Buildings), prior to fieldwork². The assessment was carried out by the curatorial section of the Conservation Department, following a request by the Surveyor of the Fabric. The assessment was completed in order to support the Scheduled Ancient Monument Consent application for the construction of a lift-shaft adjacent to the historic building.
- 2.4 Pre-Construct Archaeology Ltd. undertook an archaeological evaluation in 2004 supervised by Timothy Bradley³. This revealed natural terrace gravel into which two broadly parallel N-S linear features had been cut. These features preceded the large-scale development of the area with the construction of a kitchen wing to the west of the main house in the early 18th century. A truncated drain, dated to the 18th century, was thought to be broadly contemporary with a foundation wall and the southern breast of a fireplace. The northern breast had been entirely removed by the insertion of a brick soakaway in the 19th century, possibly constructed immediately after the demolition of the service block in 1880. A further 19th century drain was recorded at the southern end of the trench, which may have partially reused an earlier 18th century wall. The existing courtyard surface and associated make-up and levelling layers were constructed in the 1960's.
- 2.5 A watching brief supervised by John Brown of Pre-Construct Archaeology Ltd was undertaken from 9th March to 20th April 2005, prior to the construction of the lift shafts

² Prosser 2003

³ Bradley 2004

on the west side of the building⁴. The watching brief revealed early post-medieval features, particularly the Tudor foundations upon which the extant 17th palace building was constructed. The majority of the features encountered were from the post-medieval period, mostly relating to the construction of the 18th century extension and its subsequent demolition in the late 19th century.

- 2.6 Further renovation works were planned, including raising the height of the South entrance steps and the building of a ramp to allow for disabled access. Additionally a new path scheme was initiated, returning existing hard standing paths to turf on 'the Great Lawn' and re-establishing the line of the 19th century pathways and vista from the Kew Palace to the Nash Conservatory to the east. An archaeological watching brief was undertaken on these areas, designated Trenches 3 to 10 (fig. 2), from the 5th September 2005 to the 2nd February 2006.
- 2.7 Trench 3 represented the hand removal of flagstones by specialist contractors on the area of the south entrance steps, which were cleaned and recorded archaeologically. Trenches 4, 5 and 6 were machine dug by contractors through previous areas of lawn and planting beds. Trench 7 was dug by hand by contractors, and left open for inspection by the archaeologist. Stripping of existing hard standing paths formed Trenches 8, 9, and 10. The archaeologist did not observe the stripping of Trench 9, but an archaeological watching brief was undertaken during the stripping of Trenches 8 and 10.
- 2.8 A temporary benchmark with a value of 6.44m OD was established on the steps on the southern façade from an Ordnance Survey Bench Mark located on the southeastern corner of Kew Palace (6.18m OD). The measurement was transferred from an architect's survey supplied by Gardiner Theobald Construction Management. Measurements were also taken from the path level on the southern edge of Trench 4, established as c. 6.50m OD.
- 2.9 The fieldwork was conducted by Pre-Construct Archaeology Ltd (PCA), under the supervision of John Brown and the project management of Jon Butler.
- 2.10 The completed archive comprising written, drawn and photographic records and artefactual material will be deposited at the Historic Royal Palaces Archive at Hampton Court under the site code KEW 4.

⁴ Brown, 2005

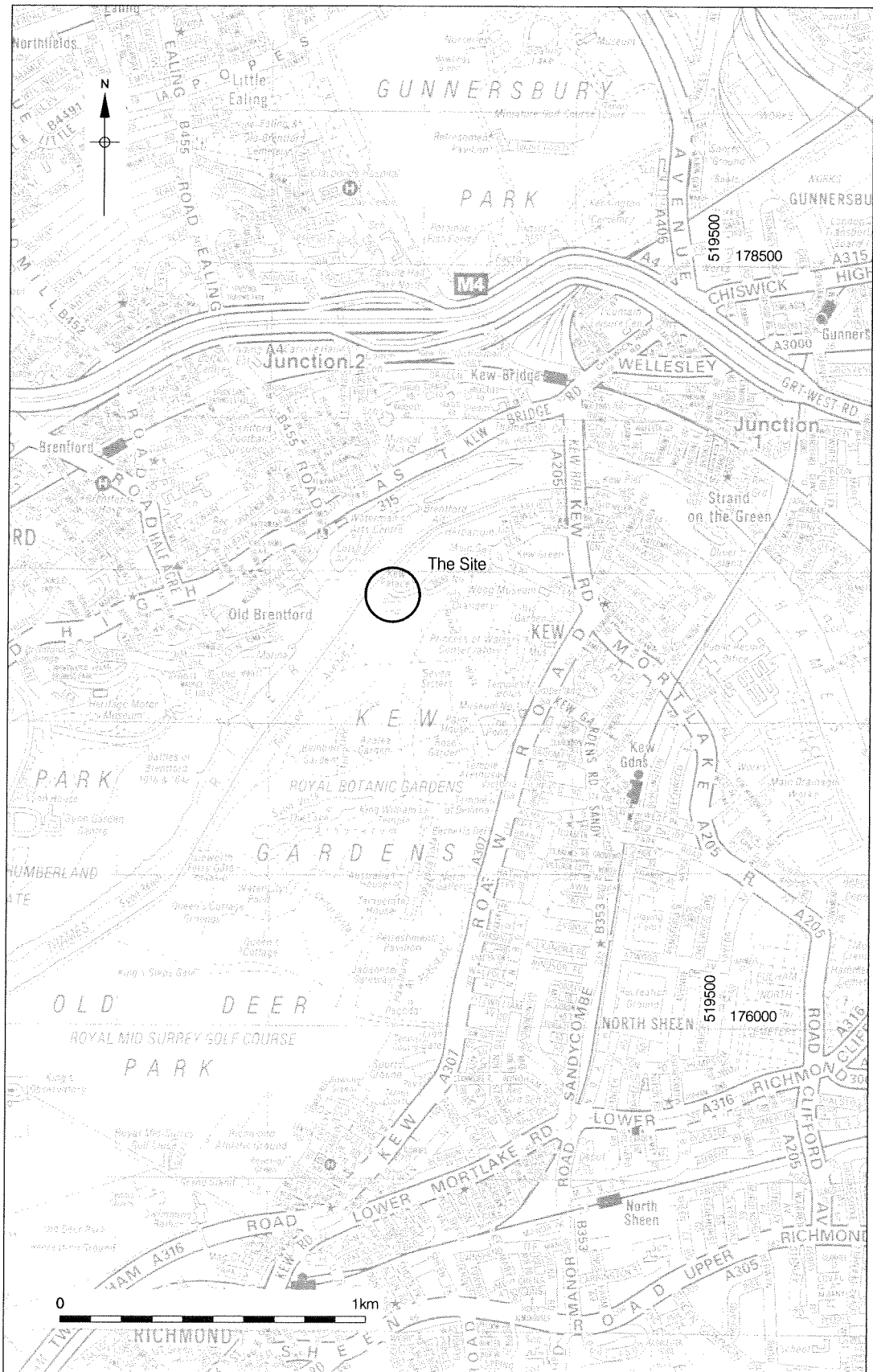
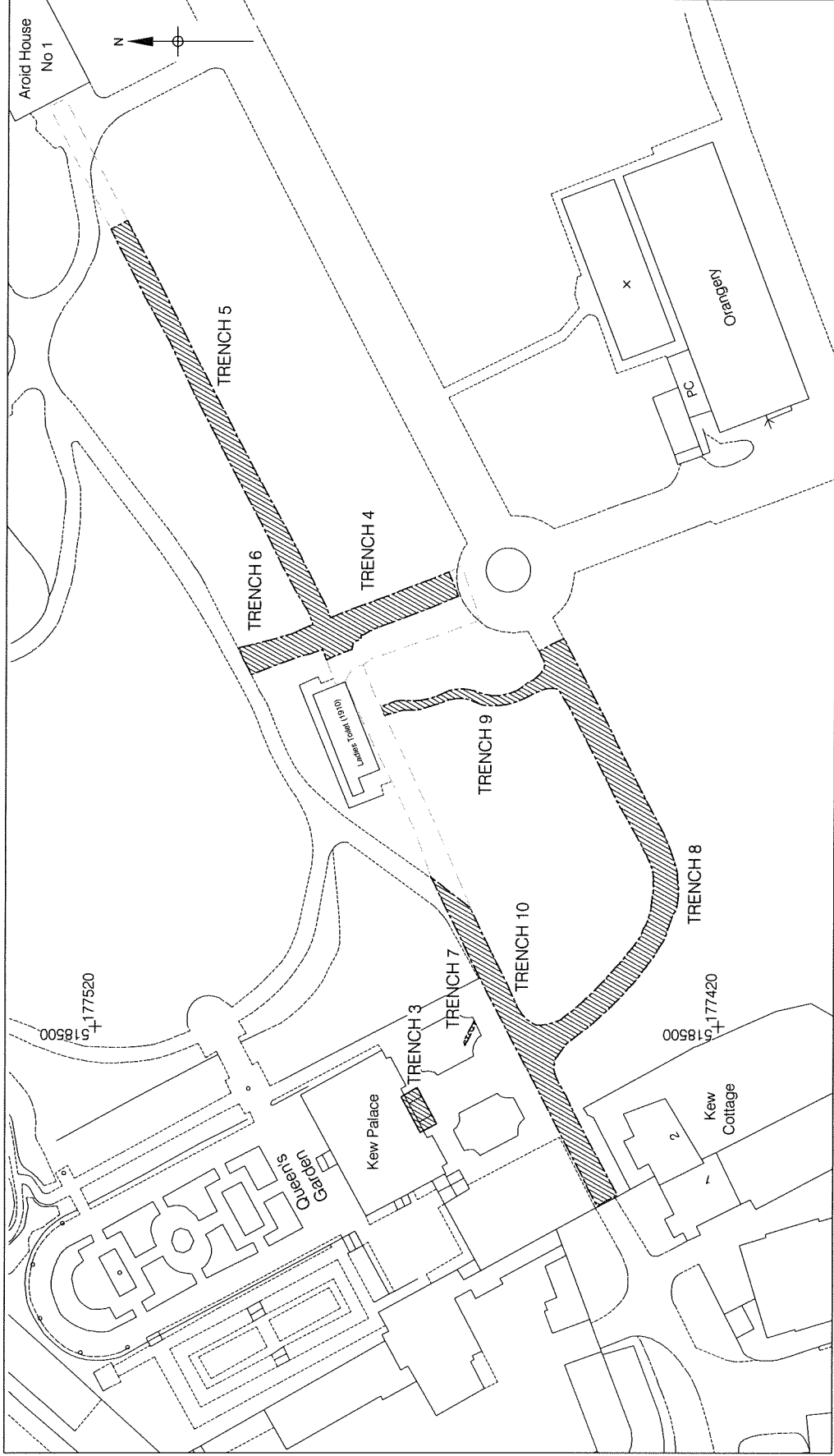


Figure 1
 Site Location
 1:20 000



© Crown copyright. All rights reserved. License number PMP36110309

Figure 2
Trench Location
1:1000

3 PLANNING BACKGROUND AND RESEARCH OBJECTIVES

3.1 The archaeological evaluation previously undertaken by Pre-Construct Archaeology Ltd. sought to address the following Research Questions, as identified in the method statement⁵:

- Is there any evidence of settlement or other activity prior to the late 15th century?
- Is there any evidence of the postulated two copyhold cottages?
- Is there any evidence of ancillary structures or features associated with the mid 16th century building as represented by the existing brick cellars?
- Is there any evidence of the ancillary kitchen buildings known to occupy the site in the 18th and 19th centuries?
- What is the date of the construction of said buildings?

3.2 The first phase of the watching brief was undertaken with the aim of further defining the archaeological record with regard to these research objectives.

3.3 This second phase of the watching brief sought to investigate the development of the south façade of the Kew Palace and its immediate environs. Additionally the watching brief sought to establish evidence of activity relating to the development of the grounds to the south and east of the palace (the 'Great Lawn'). This area was known historically to have been occupied by stables and a carriageway serving the White House, located to the south of Kew Palace.

⁵ Butler 2004

4 GEOLOGY AND TOPOGRAPHY

- 4.1 The geological history of the area is covered in depth in the Desk Top Assessment⁶. The following is a brief summary. The geology of the Kew area consists of lower Thames gravels probably laid down during the Saalian or Wolstonian stadial, dated to between 380,000 and 130,000 BP. Above this are alluvial deposits, coupled with Aeolian or wind-blown sandy brickearths.
- 4.2 Kew Palace lies close to the northern boundary of the Royal Botanic Gardens, some 80m to the south of the River Thames. The south side of Kew Palace is at a higher level than the west with steps leading down to the west courtyard within which the evaluation trench is located. To the south of Kew Palace the ground level is relatively constant across the area of the 'Great Lawn', with a slight rise to the east towards the area of the planned Welcome Centre (previously the Ladies Toilets). To the east of Kew Palace, north of the line of the intended path (Trenches 5 & 10), the ground slopes down again towards the River Thames.

⁶ Prosser 2003

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 5.1 The archaeological and historical background of the site was covered in depth in the desktop assessment⁷. It is repeated at length here.
- 5.2 The early environment of the Thames Valley is perhaps one of the best researched in the world, principally due to the preservation of extensive undisturbed deposits. This has established that on the retreat of the ice sheets some 13,000 years ago, the Thames formed a braided river system with tundra-type vegetation, which gradually yielded to colonisation by herbaceous plants and grasses on an open steppe. In this context, the first Palaeolithic hunters probably penetrated the area, though evidence for the period is problematic. Many finds, which exclusively comprise stone tools, are often found as redeposited finds, while the brickearth deposits over much of the area post-date the period, and have thus obscured almost all primary contexts. A single flake has been recovered to the east within the Royal Botanic Gardens, but remains the only point of reference for a wide area.
- 5.3 The Mesolithic period (c.10, 000-7000 BC) was probably one of greater activity. Pine and birch forests appeared, followed by mixed deciduous woodland as the climate became warmer. Mesolithic people hunted extensively along the Thames, but an itinerant lifestyle, coupled with a small population has left only the most ephemeral evidence. Occupation evidence is known from High Street, Brentford, with a flint-working site at Kew Bridge, but no evidence has been found within the immediate area of the site.
- 5.4 Along the Thames, the Neolithic period (7000-2500BC) is characterised by a decline in elm and other woodland species coupled with an expansion of cereal cultivation, suggesting that localised areas were cleared for permanent occupation and agriculture. The wide meander which the Royal Botanic Gardens occupies is practically devoid of sites, though occupation is attested in Brentford, while stone tools have been recovered at Kew Pond and from the river at Kew Bridge.
- 5.5 Cultivation and development seems to have continued or even expanded into the Bronze Age, with the extensive utilisation of the river environment for food, transport and even for religious or ritual purposes. The earliest surviving evidence of permanent landscape features in the area have been dated to this time, though are confined to the north of the river. Scattered pottery to the east suggests that some occupation took place, while a founders' hoard to the south and implements to the east indicate that there is still much to be found from the period.

⁷ *ibid.*

- 5.6 The Iron Age (c.700 BC-1st century AD) is poorly known throughout the London region, and corresponds to a regeneration of some woodland species in the pollen record. Environmental evidence is still under-represented but it has been suggested that frequent and extensive inundation by the Thames discouraged or even drove off any pre-existing occupation in the area. A few ditches and pits have been discovered during evaluations to the north of the river, but otherwise the record is practically blank.
- 5.7 Roman London is perhaps one of the best-known urban areas of the Roman Empire, but even at a slight distance from the city walls, the evidence falls away dramatically. The heavy clays probably discouraged agriculture and large settlement, though extensive woodland may also be inferred by the widespread presence of tile and pottery manufactories, which needed almost inexhaustible supplies of wood for charcoal. Immediately to the north of the river, the road from *Calleva* (Silchester) to London was laid out in the 1st century, and roadside settlement in one form or another would be expected, but is largely absent. Even casual finds of scattered pottery or coins are not widely distributed across the western part of Greater London, suggesting a general absence of activity.
- 5.8 When the region emerges into the historical record in the 7th century, a series of large rural estates can be discerned, peppered with royal or ecclesiastical centres of some importance. These large villas often formed the basis for later expansion into towns and cities. The lands around Kew formed part of the great royal estate of Kingston, though archaeological finds in the vicinity have illuminated the earliest Saxon development in the area. A collection of 6th or 7th century weapons has been recovered from the Thames at Brentford, which probably lay at the first fording site up-river from the City. Scramasaxes and swords, spears, a shield boss and other items form part of a highly important assemblage for the region, though the collection was discovered in the 19th century and its context is lost. At Strand-on-the-Green to the north of Kew Bridge, pottery has been found, while axes and spears have also been recovered from the Thames at the bridge site.
- 5.9 From its earliest records, Kew or Cayho (from the Old English: a spur of land) lay within the great royal patrimony of Kingston, which also included Maldon, Thames Ditton, Richmond and Petersham. Though it may have been an early estate, no village or nucleated settlement is recorded until after the 14th century, reinforcing its primary agricultural, and peripheral nature. Field names in the area suggest the existence of heath and woodland, though a survey of the manor of Sheen taken in 1314 (PRO SC11/638) records large messuages or properties owned by tenants

such as Richard of Cayho, Alice of Cayesho and John le Clerke of Cayesho, suggesting that a pattern of dispersed farmsteads or a small, discrete hamlet was in existence at this time. A short distance to the south, the royal palace of Sheen was to spring up in the 14th century, followed shortly by a Carthusian monastery, which in turn meant a substantial development of the landscape with deer parks and the squeezing of the agricultural land available for local farming tenants.

- 5.10 The proximity of Kew to Sheen and the Court meant that it became fashionable as a place of residence for the nobility, reinforced by the convenience of the river as the main route of transportation. Princess Katherine, daughter of King Edward IV (1461-1483) is the first notable person recorded as living at Kew, and many others followed.
- 5.11 It seems that houses were built as part of a speculative venture. One Thomas Byrkes divided a freehold into small plots for sale, and even sponsored the licensing of a chapel of ease for local, more convenient worship. Thereafter a number of prominent residences, all ringing the river devolved into the hands of noble families or individuals, including the Earls of Devon, Henry Norris, John Dudley and Charles Brandon, Duke of Sussex, with his wife, Mary, widow to King Louis XII of France.
- 5.12 The tenure and development of these properties is complex, and has not been completely deciphered (Cloake 2001), as many disappeared into obscurity within a relatively short space of time. Several survived however, and Kew itself continued to develop, even after the destruction of Richmond Palace and the monastery. Several families of note, including the Portman family built up consolidated estates from the various fragmented land-holdings, and the purchase of a lease by Queen Caroline in 1729 gave Kew a new social cachet which ensured success and development.
- 5.13 The subsequent development of the gardens under Frederick, Prince of Wales, his wife Augusta and their successors ensured the continuing prosperity of Kew in the 18th century, both as a place of recreation and an aristocratic residence. The Green developed, and became popular with French émigrés after the French Revolution, developing into an idyllic village environment, which was greatly favoured by George III and his consort Queen Charlotte. Kew itself, always an adjunct of Richmond and Kingston was finally made into a separate parish in 1769.
- 5.14 The abandonment of Kew as a royal residence after 1818 resulted in a certain level of decline, but senior members of the Royal Family, including the Duke of Cumberland continued to live at Kew Green, and the Gardens, which now occupied most of the old parish, were constantly maintained. They were opened to the public in 1899 by Queen Victoria. The last quarter of the 19th century also witnessed an unprecedented

expansion of suburban development at the fringes of the gardens, with the arrival of the railway, and the development of suburban life as London expanded to incorporate the formerly rural parish.

- 5.15 Kew Palace, or the Dutch House as it is also known originated as one of the many properties created by Thomas Byrkes at the end of the 15th century. Despite extensive research, it remains uncertain who owned several of the houses with any clarity. The site of the Dutch House may have been conveyed to Robert Dudley, Earl of Essex in 1558, though an alternative development is possible. John Cloake has suggested that the site of the Palace was originally two copyhold cottages, which were small tenements belonging, in 1500 to Robert Makyn and Robert Lydgold (*ibid*, 86). No archaeological evidence for any structure or occupation earlier than the mid-16th century has yet been found, however.
- 5.16 The existing cellar of the house, which may be broadly dated on its fabric to the latter half of the 16th century is of a calibre which might suggest that a relatively pretentious house once stood on the site. This cellar now occupies three quadrants of the existing footprint, but is entirely absent on the south-east. Geophysical prospecting has established that no earlier in-filled cellar ever existed on this part of the site. The western side is occupied by large vaulted chambers, with a small passage leading to a well on the north-east. This may suggest that the original house was orientated east to west, with a service wing to the rear, and that the area to the west was a garden or approach. The nature of the earlier house is unknown. It may have been partly of brick, with perhaps other areas of timber-framing, but no evidence has yet emerged to elucidate any detail.
- 5.17 In 1630, when the estate was transferred from the Portman family to Sir Robert Carr of Ancrum, a small portion was reserved and leased to Samuel Fortrey, junior. About ten years earlier, his uncle Peter Fortrey had been given a lease on the property, though redevelopment seems to have taken place by Samuel Fortrey senior and his wife Catherine. It is curious why Samuel himself did not take up the lease, but he may have been disqualified from holding property as a resident alien. The Fortreys were a prominent Protestant merchant family from the Low Countries, who fled to England in the later 16th century.
- 5.18 Samuel and Catherine constructed the house which exists today, as a double-pile house in brick of great virtuosity, which is a rare survival of its type, and unique for the London style which was once commonplace. Little is known about the setting and surrounding of the original gardens, though the diarist John Evelyn, who knew the

adjoining Dairy House (later known as the White House) noted the fineness of the nearby formal gardens there.

- 5.19 In 1728, Queen Caroline took a lease on the Dutch House, which had latterly been occupied by Sir Richard Levett, formerly Lord Mayor of London. The house initially accommodated her three daughters, but with the passing of time, only Princess Amelia remained at the house. During this period, a number of other buildings were also pressed into use, creating a royal compound which included the Queen's House and the White House, occupied by Frederick, Prince of Wales. This period of residence was seminal in the development of the surrounding lands as a botanical and ornamental garden, with new features laid out by Capability Brown and William Chambers.
- 5.20 From 1751, with the death of Prince Frederick, the Dutch House became the established residence for the Prince of Wales. At some time during the 18th century the house had been augmented with the addition of buildings to the west, comprising a kitchen range and other ancillary buildings, which probably meant that the original kitchens of the house were moved out to lessen noise and smell for the occupants. When this occurred is difficult to say, but the buildings were already in place by 1734 when John Rocque made the first accurate map of the area (Fig. 2). Conceivably the additions may have been made for the earlier princesses. The refurbishment of the house with a new staircase, panelling and doors, all from around 1730 make this the most likely date, though some of the additions may be earlier.
- 5.21 After a gap following the succession of Prince George as King in 1760, the house was once again used as a school-room and residence for a new generation of princes, including George, Prince of Wales, later King George IV. The house was bought outright by the King in 1780. At the end of the 18th century, as King George III began to suffer increasing bouts of porphyria, he was often sent for recuperation, or even incarceration at the nearby White House. The King initiated the construction of an enormous 'castellated palace' on an adjoining plot, and the White House was neglected, shifting the focus of royal residence to the Dutch House. The grand new palace was destined never to be completed, and the White House was demolished, leaving the Dutch House as the principal royal building on the site. It is now known that the adjoining kitchen block was at some stage converted for use as accommodation for the King himself, where he could be kept at a safe distance from his family during the darker moments of his illness.

- 5.22 After 1806, visits by the King ceased, and less frequent residence by the Queen and princesses is recorded in the accounts. In 1818, Queen Charlotte was taken ill *en route* from London to Windsor, and after a few months at Kew, died in the house.
- 5.23 For the rest of the 19th century, the house was maintained at a very basic level, and gradually plundered by the Sovereign for paintings and furniture, so that by the 1870s, little remained and the house was no longer considered fit as a royal residence. The ancillary buildings were allowed to fall into disrepair, so that in 1880, Queen Victoria ordered the demolition of the service wing to the west. By 1899, the Queen, in a pragmatic move, opened the gardens and palace to the public, setting an important precedent.
- 5.24 Over many years, the palace has continued to serve as an important public monument, though various restorations and presentation schemes. It closed to the public for major renovation and remedial work in 1996.
- 5.25 The White House stood some 50 yards to the south of the 'Dutch House' (present day Kew Palace). Its origins are fairly obscure but it may have been built by Sir Henry Capel in stone and timber in the second half of 17th century although it may have been on the site of an earlier house. However in 1678 the diarist, John Evelyn, described it as an old timber house suggesting that its origins were somewhat earlier. In 1721 the estate passed onto a great-niece Elizabeth Capel who was married to Samuel Molyneux. They either rebuilt or restored the house.
- 5.26 Frederick, Prince of Wales and Princess Augusta took over the house and commissioned William Kent to enlarge the house. The work was completed by 1735 and as the walls were plastered the building became known as the 'White House' to distinguish it from the red-brick Dutch House. The house is shown in Rocque's map of 1734 which shows the White House to the south of the Dutch House (present day Kew Palace) with stables to the northeast of it and smaller ancillary buildings on its eastern side between the stables and the house. Formal gardens were laid out to the south and the west. In 1751 Prince Frederick died but Princess Augusta continued to live in the house.
- 5.27 Sir William Chambers rebuilt the stables of the White House in 1758-9 and built a new porter's lodge and a little school house. After Augusta died in 1772 her son George III moved into the house and commissioned Chambers to expand the house which was now known as Kew Palace. In 1802 George III had the White House demolished to make way for a new palace to the northwest known as the Castellated Palace which was designed by James Wyatt but was never finished.

6 METHODOLOGY

- 6.1 Trench 3 represented the hand removal of flagstones by specialist contractors on the area of the south entrance steps, which were cleaned and recorded archaeologically. Efforts were made by the contractors to maintain and reuse the historic fabric where salvageable. Trenches 4, 5 and 6 were machine dug by contractors through previous areas of lawn and planting beds. Trench 7 was dug by hand by contractors, and left open for inspection by the archaeologist. Stripping of existing hard standing paths formed Trenches 8, 9, and 10. The archaeologist did not observe the stripping of Trench 9, which was not taken below the depth of the modern topsoil, apart from at the southern end, adjoining Trench 8. An archaeological watching brief was undertaken during the stripping of Trenches 8 and 10. In these trenches stripping was undertaken by a mechanical 360° excavator with a grading bucket, to a depth of c.0.45m.
- 6.2 A temporary benchmark with a value of 6.44m OD was established on the steps on the southern façade from an Ordnance Survey Bench Mark located on the southeast corner of Kew Palace (6.18m OD). The measurement was transferred from an architects survey supplied by Gardiner Theobald Construction Management. As a dumpy level was not available for Trenches 4, 5 and 6, a string was extended across the Trenches 4 & 5 using a line level and heights were measured down from this. The string was extended to the apex of the path by the flowerbed in the centre of the path to the south of Trench 4. The apex of the path immediately west of this point as surveyed by dumpy level from the T.B.M. was established as 6.53m OD. The OD of the string line was established as c.6.50m OD following a level taken on the masonry feature [401] by the contractors, using a dumpy level, from a known point of 6.32m OD. The OS benchmark on the southeast corner of Kew Palace was subsequently obscured by the provision of a ramp and associated raising of flagstones.
- 6.3 All investigation of archaeological levels was by hand, with cleaning, examination and recording in both plan and section. The masonry structures themselves were cleaned, recorded, photographed and the bricks were examined onsite to determine fabric types.
- 6.4 Recording on site was undertaken using the single context recording system as specified in the Museum of London Site Manual. Plans were drawn at a scale of 1:100 or 1:20, and representative sections at a scale of 1:10. Contexts were numbered sequentially and recorded on *pro-forma* context sheets.
- 6.5 The site was given the code: KEW 4, conforming to HRP's in-house site sequence.

- 6.6 On completion of the fieldwork the construction of a new pathway and reinstatement of topsoil for the reformation of the lawn will be undertaken by the contractors Gardiner & Theobald. The topsoil will be provided by Kew Gardens and is of local soil deposits established for the maintenance of the gardens.

7 THE ARCHAEOLOGICAL SEQUENCE

7.1 Phase 1 – Redeposited natural gravels

7.1.1 Trenches 4, 5 & 6

The earliest deposit encountered was a loose mid yellowish brown sandy gravel [411] identified in pockets across the base of the Trenches 4, and 5 at heights of between c.5.67m OD towards the south of the trench and c. 4.93m OD towards the north (fig. 5). This layer was thought to be equivalent to the silty gravelly deposits [825] observed in Trench 8. It was interpreted as an interface between the later agricultural soils and the undisturbed terrace gravels proper. The gradual slope from south to north and west to east across the area of the trench reflects the natural topography of the area, sloping down towards the River Thames to the north.

7.1.2 Trenches 8 & 9

In Trench 8 pockets of gravels were observed, some of which are thought to represent remnants of the modern made ground (hoggin) consolidated during the construction of the path. These varied in height between 5.75m OD and 5.59m OD, dropping in height as the line of Trench 8 swung towards the north along the line of the previous path. It is possible that these patches may represent the heights of the natural gravel. A silty gravel layer [825] was thought to represent redeposited natural gravel and was recorded, at a height of 5.66m OD, in the western corner of Trench 8 as it swung to the north (fig. 9). By comparison excavations undertaken in 2002, to the south of Trench 8, by Time Team interpreted the level of the natural gravel between 5.80m OD (Trench 1) and 5.18m OD (Trench 6)⁸. If these heights represent the top of the natural gravels then it would seem that the ground level dipped to the south of Trench 8 before rising again further southwards.

7.2 Phase 2 – Pre 18th century features

7.2.1 Trench 3 (figs. 3, 4, plate 1) Kew Palace

Removal of the stone pavoirs of the south entrance steps to Kew Palace allowed investigation of the evidence for their construction. The top of the steps was recorded at a height of 6.45m OD, and the base at 6.12m OD. The risers [207] and [210] were built from orange-red, sandy bricks with some silty inclusions (fabric 3046 near 3039). The bricks were unfrogged, with uneven sides and dimensions of ? x 98 x 63-65mm. They were generally poorly bonded with an off-white lime/sand mortar. The risers formed a foundation for 'treads' [205] and [208] constructed of unglazed Flemish floor tiles, with dimensions 290-300 x 290-300 x 38-40mm. The tiles and brick fabrics

⁸ Saxby 2005

indicate a construction date c.1600-c.1700, and may indicate the original form of the steps as a brick and tile construction. However one floor tile in [205] was laid upside down, with peg roof tile abutting the western plinth. This may indicate the floor tiles were not intended to be a finished surface, and may have originally been topped with stone.

7.2.2 Trench 6

An E-W aligned wall foundation [407] was observed at 5.63m OD (fig. 5, plate 2), the construction cut of which truncated a brown sandy silt layer with gravel patches [410]. One small fragment of a splash-glazed border ware (BORDG) dish was recovered from the backfill [409] of the construction cut, suggesting a deposition date between 1550-1700. The brick fabrics for the wall corresponded well with this date, being of local red sandy 'Tudor' type (MoL fabric 3046). Dimensions were 220-230 x 95-108 x 55-63mm, and the bricks were unfrogged, with sunken top margins and uneven bases. The lowest course only survived with bricks laid largely as headers on edge and some rubble fragments in the core of the wall. The wall was bonded with a coarse sandy whitish-yellow mortar, with very coarse white lime inclusions. All of these characteristics indicate a construction date between 1450-1700. It is possible that the wall represents a boundary wall defining a spur of Kew Green running up towards the Palace, as shown on Rocque's map of 1734⁹.

7.2.3 Trench 7

An E-W aligned wall & foundation [703] was revealed running roughly parallel to the south façade of Kew Palace (figs. 7, 8, plate 3). The total visible dimensions of [703] were 0.60m N-S, running across the trench E-W and a maximum depth of c.0.66m with a highest level of 5.87m OD. The bricks were laid in irregular header/English bond, and bonded with off-white, lime and sand mortar. The bricks were of local orange-firing sandy fabric 3046. They were unfrogged, with rounded arrises, and dimensions of 225 x 100-105 x 50-55mm. The fabric type suggests the date range of 1450-1700, with the fabric reminiscent of bricks observed in the foundations of Kew Palace¹⁰. The wall is possibly contemporary with [407], and may represent a continuation of the boundary wall.

7.2.4 Trench 8 (figs. 9 & 10)

A heavily abraded masonry feature [809] was observed in the centre of the trench at 5.76m OD, surrounded by what appeared to be a metallised surface [812]. The feature was L-shaped in plan running N-S and returning to the west at the southern end (plate 4). It was constructed of unfaced Kentish rag stone and chalk, and Tudor type

⁹ Saxby 2005, 11

¹⁰ Brown 2005

bricks in a local sandy fabric (Museum of London fabric 3033). The brick dimensions were 230-240 x 105-118 x ?mm, unfrogged with rounded arrises, characteristics indicating a date range of 1450 to 1700. The metallated surface [812] was truncated by modern intrusions to the north but appeared to form a semi-circular shape south of the E-W return. From the metallated layer small fragments of green and olive glazed Border ware (MoL fabric EBORD), a small fragment of Cologne or Frechen stoneware (KOLFREC), and a body sherd of Post-medieval green-glazed Redware (PMRG) (B Sudds pers. comm.). A date range of 1550 to 1700 is suggested by the pot, and of 1450-1700 by the brick fabric. The brick dimensions are typically larger than those observed elsewhere, indicating an earlier date, perhaps late 15th or 16th century. This feature, therefore, may represent the earliest in situ masonry remains encountered during the watching brief.

7.2.5 In the eastern end of Trench 8 a N-S aligned wall [804] was observed at 5.74m OD, extending from the southern section of the trench for a length of approximately 1.44m although it may have been truncated at the northern end. The wall was approximately 0.30m wide and constructed of local red-firing sandy brick (MoL fabric 3033). The bricks were unfrogged, with rounded arrises and dimensions of c.220 x 100 x 60mm, indicating a similar period of construction as the features observed in Trenches 6 and 7.

7.2.6 At the western end of the trench, as it returned to the north, another N-S aligned wall [811] was recorded at 5.76m OD (plate 8). The wall ran for the length of the trench and was approximately 0.5m wide. It was constructed with stretchers on both faces and a row of headers in the core, suggesting a form of English bond employed on a wide wall. The bricks (fabric 3033) were unfrogged with rounded arrises, and dimensions of 222-230 x 104-114 x 55-58mm. The wall was considered likely to be contemporary with [804].

7.3 Phase 3 – 18th to early 19th Century

7.3.1 Trench 3 Kew Palace

A yellow-grey lime/sand mortar [204] overlay the Flemish floor tile 'steps' [205], forming a bedding layer for stone steps. Above this a line of purple-yellow unfrogged bricks (fabric 3032) with dimensions of ? x 98-100 x 65-68mm formed a riser for the (removed) stone pavoirs. The brick fabric and dimensions indicate an 18th to early 19th century date, and being markedly different from the bricks used in the lower steps, suggests that the height of the steps was raised at this period. The house was

refurbished in 1730¹¹ so this could be a possible date for alteration to the steps. It is possible that some of the surviving stone pavoirs and coping date from this period. Two types of stone, Portland stone and Purbeck limestone appear to have been used. Purbeck stone was observed by the author to be used in the pavoirs for the Kew Palace Kitchens, built in c.1736. Portland stone became popular in London following its use by Sir Christopher Wren in the late 17th century for the rebuilding of the City of London churches.

7.3.2 Trenches 4, 5 & 6

Overlying the silty gravels [411] in Trench 5 at the far eastern end was a compacted layer of sandy silty gravel [503], at an estimated height of 5.55m OD. Small fragments of post-medieval roof tile, bone and a clay tobacco pipe stem were observed in the layer, indicating the gravel was not natural, however they may have been intrusive. No diagnostic artefacts were recovered to provide better dating than 'post-medieval'. It is possible that this layer, which was observed extending approximately 3.6m to the west, may represent a compacted or metalled surface. This was overlain by a layer of sandy silt with frequent pebbles [406], which was also observed in Trenches 4 and 6. This layer was recorded between heights of c.6.10m and 5.52m OD. Overlaying this layer in Trench 4 was another similar sandy silty gravel-rich layer [405], with its highest level at 5.95m OD. This layer was truncated to the south by modern services, and continued beyond this as [404].

- 7.3.3 A N-S aligned masonry feature [401] was recorded in the southern part of the trench at c.5.98m OD, truncating [404]. It extended N-S for approximately 1.92m, and was 0.33m wide, surviving 0.27m (three courses) deep. Initially it was assumed that the wall was truncated, but the brickwork did appear to be relatively well finished at both ends. The bottom course of wall [401] was edge laid, with the upper courses consisting of irregular laid bricks in fabric 3032 (near 3046). The backfill [403] of the construction cut contained a sherd of a biscuit-ware dish (TGWBISC) and a fragment of pan tile (fabric 2279), suggesting a deposition date of 1630-1800. The bricks were unfrogged, with sharp arrises and dimensions of c.220 x 100 x 65mm, suggesting that this wall may be slightly later in date and may belong to the early 19th century. The function of the wall is not clear, however it may represent the base of a freestanding arch or other garden feature. Interestingly the O.S. maps of 1863 and 1894-6 show a hard-standing feature that appears to be running across the path in the area of Trenches 4 and 6 (fig. 12). Both maps indicate that this feature was used to provide a benchmark, of 22' 4", for the surveys. Its position and size indicate that it is a freestanding arch or gateway. This feature does appear to be slightly to the north of [401], and may be related to masonry feature [412], below.

¹¹ Prosser 2003, 8

7.3.4 Trench 8 (figs. 9 & 10)

A soft, greyish-brown, gravel-rich sandy silt [802] with a highest level of 5.78m OD was recorded at the western end of Trench 8, and appeared to overlay wall [804]. This deposit was recorded across the area of the trench N-S, and appears to have been a horticultural soil prior to the 18th century development of the site. This layer is thought to be equivalent to [404]/[405]. Fragments of pottery and clay tobacco pipe recovered from this layer indicate the layer was no earlier than 1680-1710, and prior to c.1800. It continued to the west, where it was obscured/truncated by later features and continued as [818] in the central area of Trench 8, at a height of 5.74m OD. It was further obscured by more recent deposits to the west, but is likely to equate with a grey-brown silty layer [823], recorded at 5.75m OD, where the trench turned to the north.

7.3.5 A number of brick structures were recorded cut into this layer. These features were found to continue into the section to the south (fig. 10). A T-shaped foundation wall [803], recorded at 5.85m OD, extended N-S from the section for 1.40m, and was 0.74m wide. The E-W return was c.4.24m in length, 0.72m wide to the west and 0.60m wide to the east of the N-S wall (plate 6). It is likely that this foundation served a substantial brick wall, the width of which is indicated by mortar scarring on [803] to be c.0.60m. The core coursing was obscured by mortar, but the faces were laid as headers on bed. The bricks were in fabrics 3032 & 3034, unfrogged with sharp arrises, and dimensions of c.220 x 110 x 60mm, suggesting that this wall may belong to the 18th or early 19th century. Its position suggests that it formed part of the eastern range of the Royal Mews as indicated on the 1734 map by Rocque¹², and the 19th century OS maps (fig.12).

7.3.6 Disappearing into the section immediately south of the E-W return of [803] were rectangular masonry structures [805] and [806]. Both of these features were constructed of similar bricks with unfrogged sharp arrises and dimensions 220 x 100 x 70mm (fabric 3034) and reused bricks, with dimensions 230 x 100-110 x 60mm (fabric 3046). The form of [805] was not discernible, but [806] may represent a cesspit. The features were recorded at 5.88m and 5.76m OD respectively, and are likely to be associated with [803]. A thin line of lime mortar/plaster [814] running N-S from the western return of [803] may indicate the presence of a timber wall, recorded at 5.80m OD.

7.3.7 West of [803] a N-S aligned wall [807] was observed at 5.87m OD. The wall was partially truncated by modern intrusions in the centre of the trench, but extended

¹² Saxby 2005, 11

across its width and into the north and south sections. It was c.0.40m wide, except at the south central area of the trench where a possible buttress or truncated return extended out from the east face. The wall was constructed of bricks with unfrogged sharp arrises and dimensions 220 x 110 x 70mm (fabric 3032) and reused bricks, with rounded arrises (fabric 3046), and is likely to be contemporary with [803].

- 7.3.8 West of [807] a moderately compact sandy silty layer of made ground [819] appeared to overlie the horticultural layer [802] = [818]. It extended north from the southern section for 1.68m and ran E-W for 8.0m. The northern edge of the layer was fairly well defined, respecting the southern edge of a cobbled brick surface [808]. Further west it was obscured by remnants of modern made ground. The cobbled surface was constructed of 'Dutch pavoirs' (fabric 3036) measuring 150-170 x 56-60 x 35-40mm. The cobbles survived at a height of 5.79m OD, and probably indicate the ground level of the 18th century stable yard depicted on the historical maps. The east side of the surface was truncated and may have continued up to the N-S wall [807]. However the southern and western edges appeared to be well defined, and probably indicate the real limits of this surface. The cobbles appeared to continue into the section to the north. Modern electrical services truncated the central part of the surface, running SE-NW. It is unclear whether the stable yard would have been entirely cobbled in this manner, but the 1853 OS map appears to indicate a number of well-defined paths within the stable yard area, and it may be that the cobbles represent such a path.
- 7.3.9 Further west, a late 19th to early 20th century stoneware drain and manhole was removed to reveal a rectangular masonry feature, with a central E-W division. It was seen to butt up against wall [811], and was interpreted as a cesspit [810] (plate 8). It measured 1.96m N-S and extended E-W across the centre of the trench for approximately 1.68m, surviving to a maximum height of 5.79m OD. The bricks were laid on bed, consisting of stretcher laid bricks in fabric 3032, measuring 214-222 x 104-108 x 64mm. The presence of pearlware pottery and clay tobacco pipe in the southern fill [813] suggests that this feature went out of use between 1780 and 1860. It is likely that the late 19th stoneware drain represented alterations to the sewage arrangements replacing the outmoded cesspits. It is known that stable buildings were situated on or near this area of the site prior to their demolition c.1905, and the cesspit may form part of this complex, perhaps an outside privy. The cesspit was cut into a mortar-rich made ground layer [822] overlying [810].
- 7.3.10 In the northern area of Trench 8 modern made ground or truncations caused by services remained visible at the excavated level. However, a masonry feature [816] was observed running into the east section surviving to a height of 5.76m OD (plate 9). The masonry was truncated to the west by modern services, but appeared to be

orientated E-W, measuring 1.33m N-S and 1.3m E-W. It survived 2 brick courses in depth (0.11m), and was bonded with white lime/sand mortar. The bricks were of local orange-firing sandy fabric with occasional voids (3046 near 3032). They were unfrogged, with rounded arrises, sunken top margins and dimensions of 228-230 x 105-108 x 54-60mm. The fabric type suggests the date range of 17th to 18th century. Disappearing into the west section on the same alignment was another fragment of masonry [817], which was constructed of similar brick fabrics and probably represents a continuation of the same feature surviving west of the modern service truncations.

7.3.11 Trench 9

Just visible in the southwest corner of the trench close to the junction with Trench 8 a N-S aligned masonry feature [901] was observed at a height of 6.02m OD (fig. 9, plate 5). The form was not discernible, but the feature was interpreted as a N-S wall. The wall measured 2.23m N-S and 0.22m E-W disappearing into the west section. It survived to a depth of 0.28m (4 courses), consisting of unfrogged brick in fabrics 3032 and 3046. The bricks were bonded with a light grey lime/sand mortar containing occasional charcoal flecks. The construction cut [903] truncated the soil layer [802] and it is likely that the wall is contemporary with masonry features [803], [805] and [806], to the south. The base of the cut was observed at c.5.74m OD.

7.4 Phase 4 – 19th Century

7.4.1 Trench 3 Kew Palace

A mid to dark brown sandy silt and gravel containing occasional ceramic building material and mortar fragments was recorded overlying the earlier 18th century brick [206]. It was identified as bedding layer of probable 19th century date on the basis of the brick fragments and may be associated with the redesign of the house following demolition of the service wing in the later 19th century.

7.4.2 Trench 5

In the southern section of the trench compacted yellowish-brown gravel layer c.0.11m thick was observed, at a height of c.5.27m OD (fig. 6). This layer is thought to represent the remains of the original E-W orientated path leading from the Nash Conservatory to Kew Palace, as indicated on the OS maps (fig. 12). The gravel layer was well defined at the east end of the trench for a distance of c.7m, becoming less well defined further west as modern services truncated the 19th century ground level at various points.

7.4.3 Trench 4

Further westwards, in the western section of Trench 4 opposite the west end of trench 5, a surviving masonry feature measured c.2.10m N-S and c.1m E-W with a highest level of c.6.03m OD (plate 10). It was constructed of frogged bricks in fabrics 3032, 3034 and yellow London stock brick 3035, bonded with a cement mortar, suggesting a late 19th or 20th century date. It may represent a manhole associated with the Ladies toilets to the northwest, built in 1905. Alternatively it could represent the base of a freestanding arch seen on 19th century Ordnance Survey maps (see 7.3.3).

7.4.4 Trench 8

In the southwest corner of the trench a 19th century domed brick soakaway [827] (fabric 3034 nr. 3035, 3032, 3033) The exposed elements of the soakaway had a diameter of approximately 0.97m; it was excavated to a depth of approximately 0.47m, and had a highest level of 4.38m OD.

7.5 Phase 5 – Late 19th/20th Century

7.5.1 Trench 3 Kew Palace

The use of a Portland cement based bedding layer [203] repairs to the steps had been undertaken in the late 19th to 20th century, and may be contemporary with repair works following the demolition of the service wing. On the main top step a layer [201] of cementitious gravelly mortar represented the latest phase of repairs, where stone pavoirs had been replaced by concrete pavoirs, possibly in the 1960's when other repairs were undertaken at the west façade.

7.5.2 Trenches 4, 5, 6, 8 & 9

Overlying the earlier deposits in all the trenches was a dark blackish brown humic sandy silt layer that forms the current topsoil for the lawns to the south and east of Kew Palace

7.5.3. Trench 10

The only surviving archaeological deposit observed in Trench 10 was a heavily truncated road surface constructed of granite setts bonded with sand and cement [1001] (fig. 11). The cobbles extended westwards beyond the limit of excavation where they were overlain by modern tarmac road surfaces. The remainder of the trench was largely truncated by modern services and no other features of note were observed.

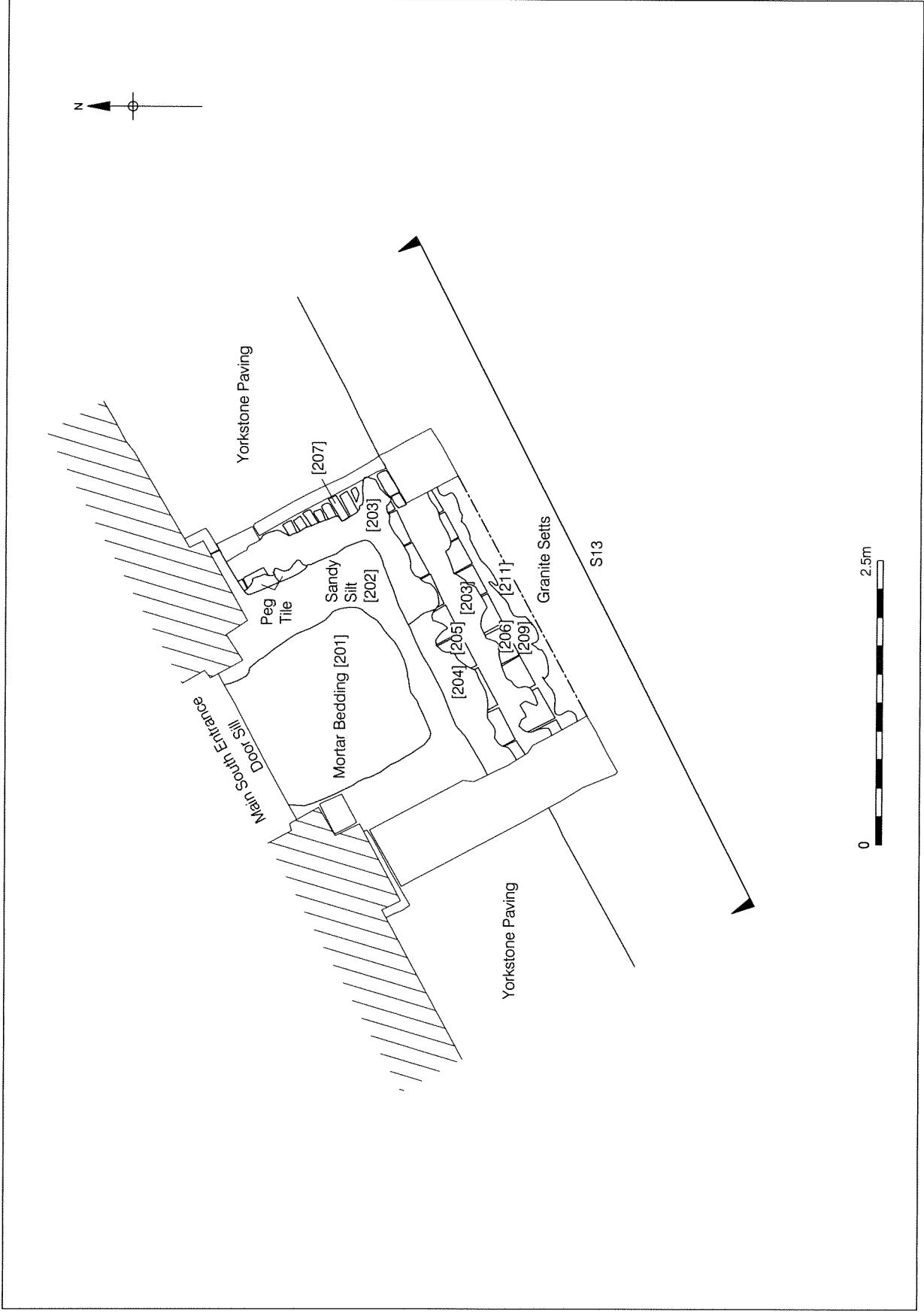


Figure 3
Plan of Trench 3
1:50

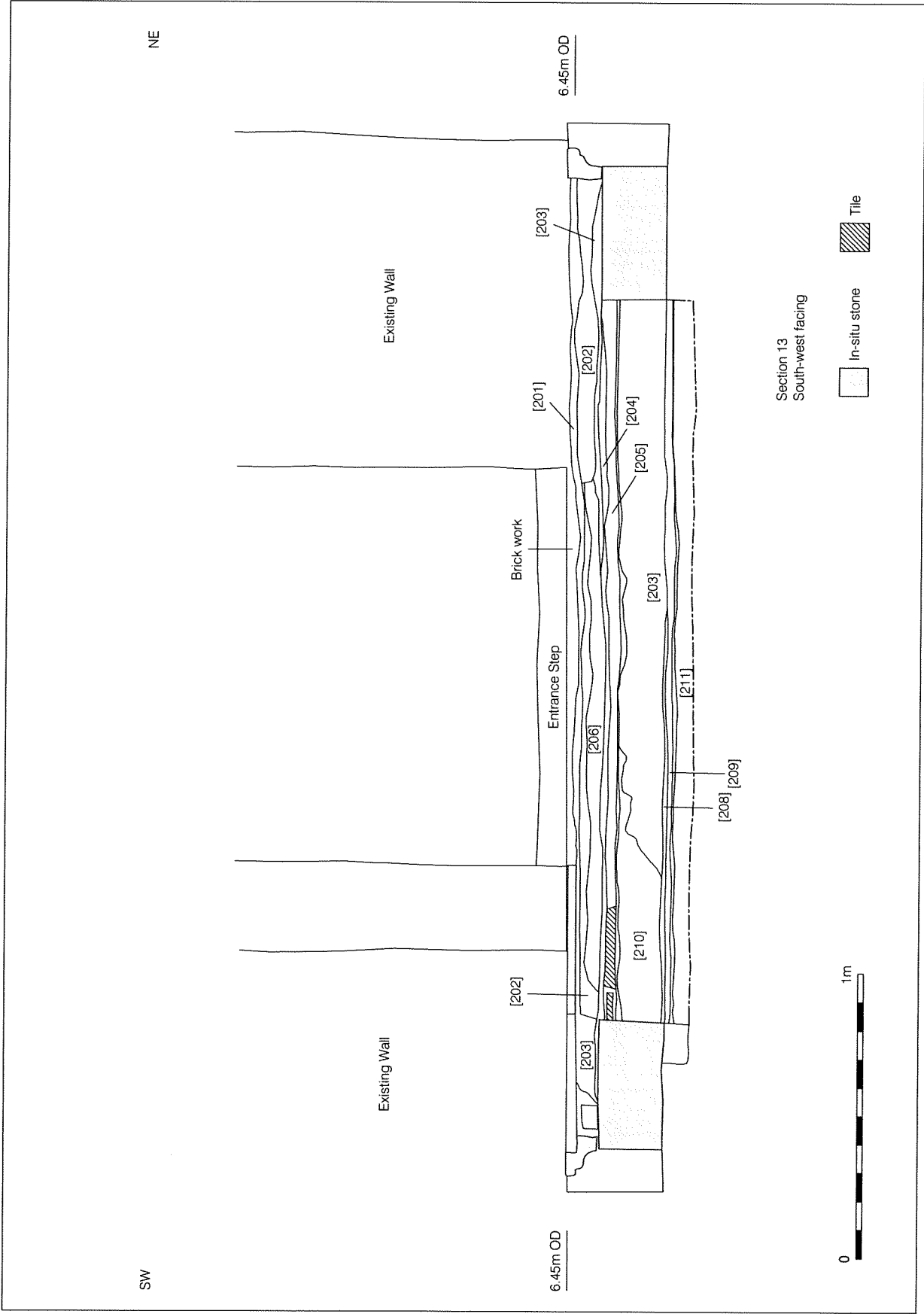


Figure 4
Section 13, Trench 3
1:20

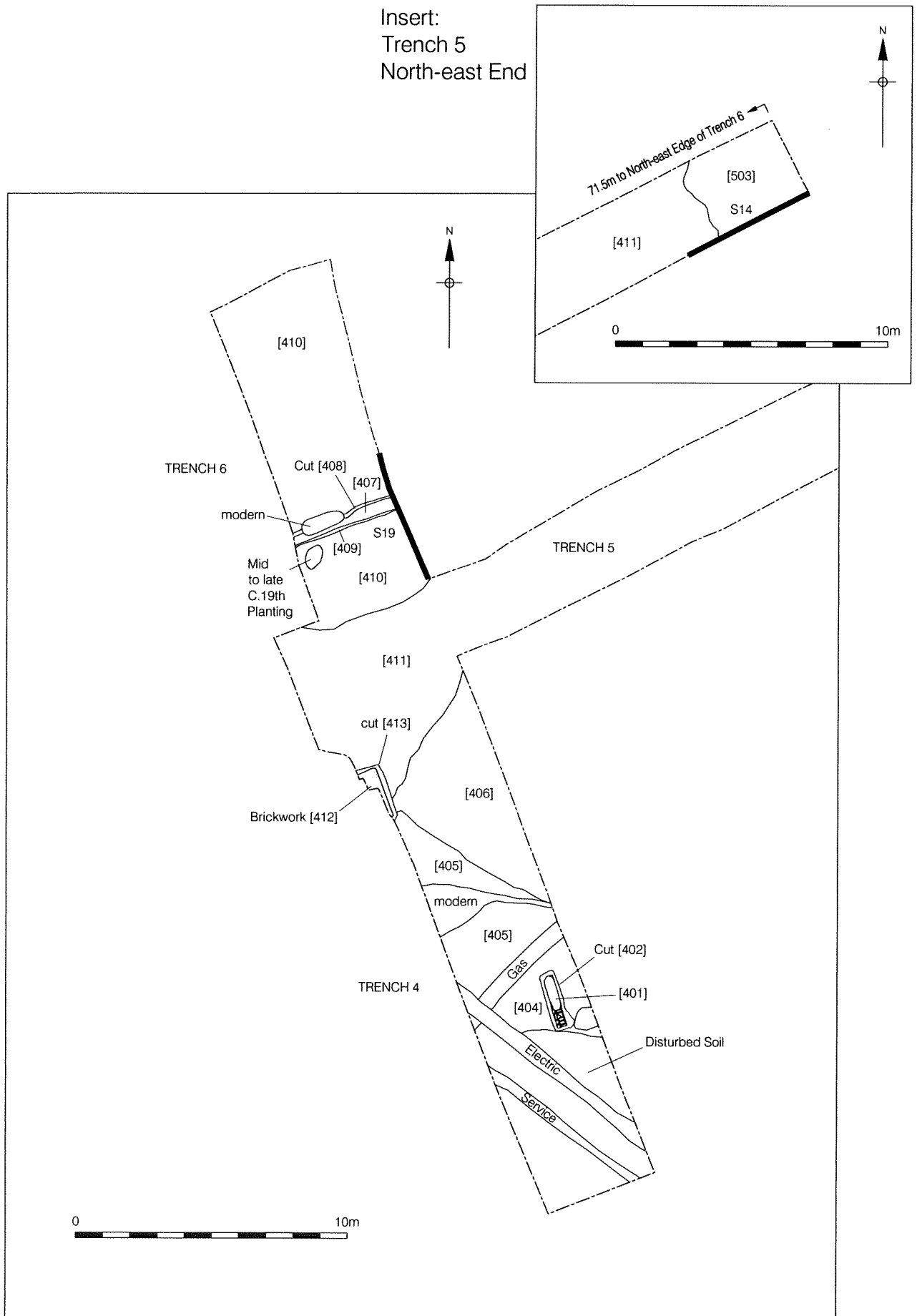


Figure 5
Plan of Trenches 4, 5 and 6
1:200

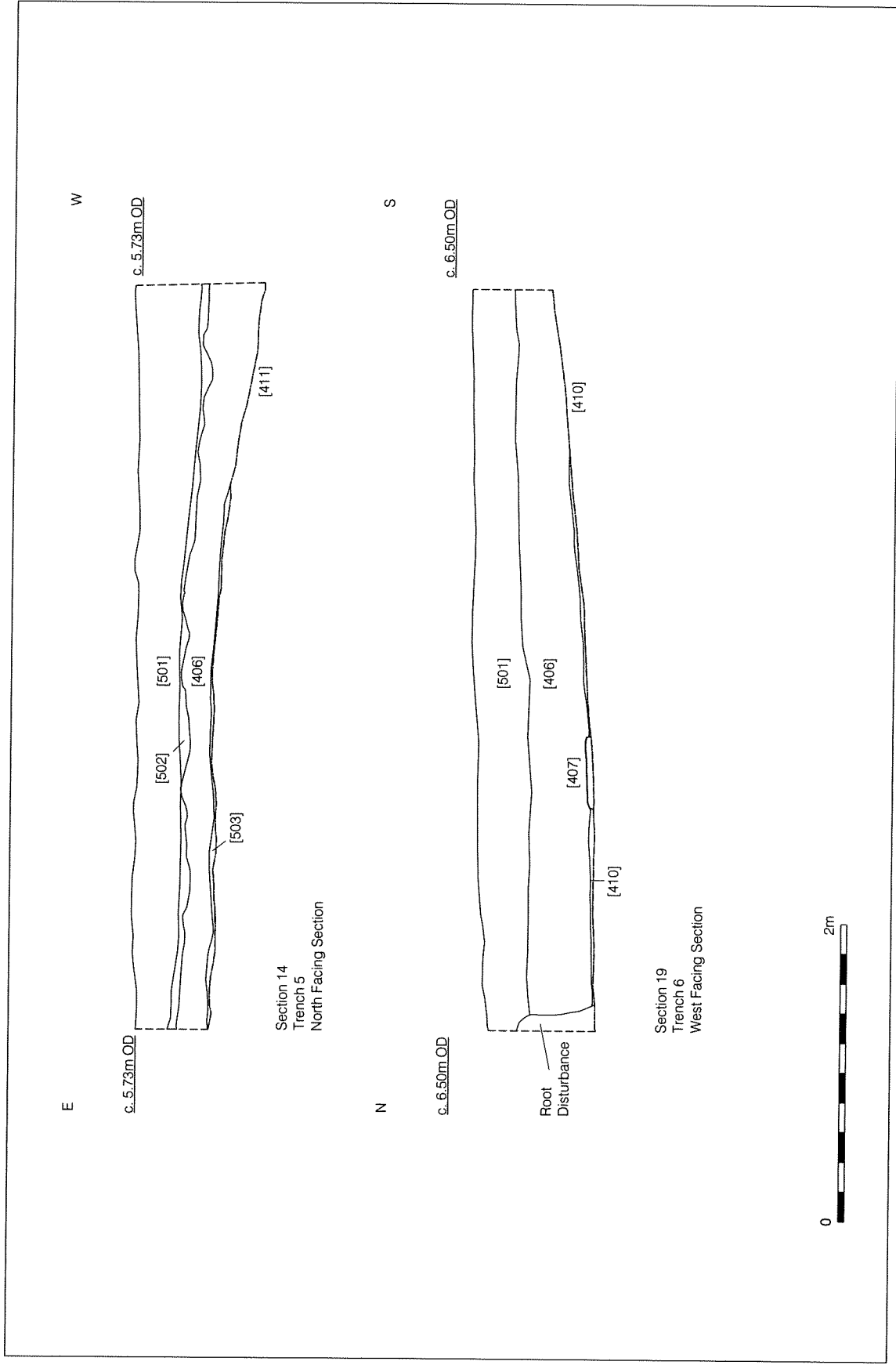


Figure 6
Sections 14, Trench 5 and Section 19, Trench 6
1:40

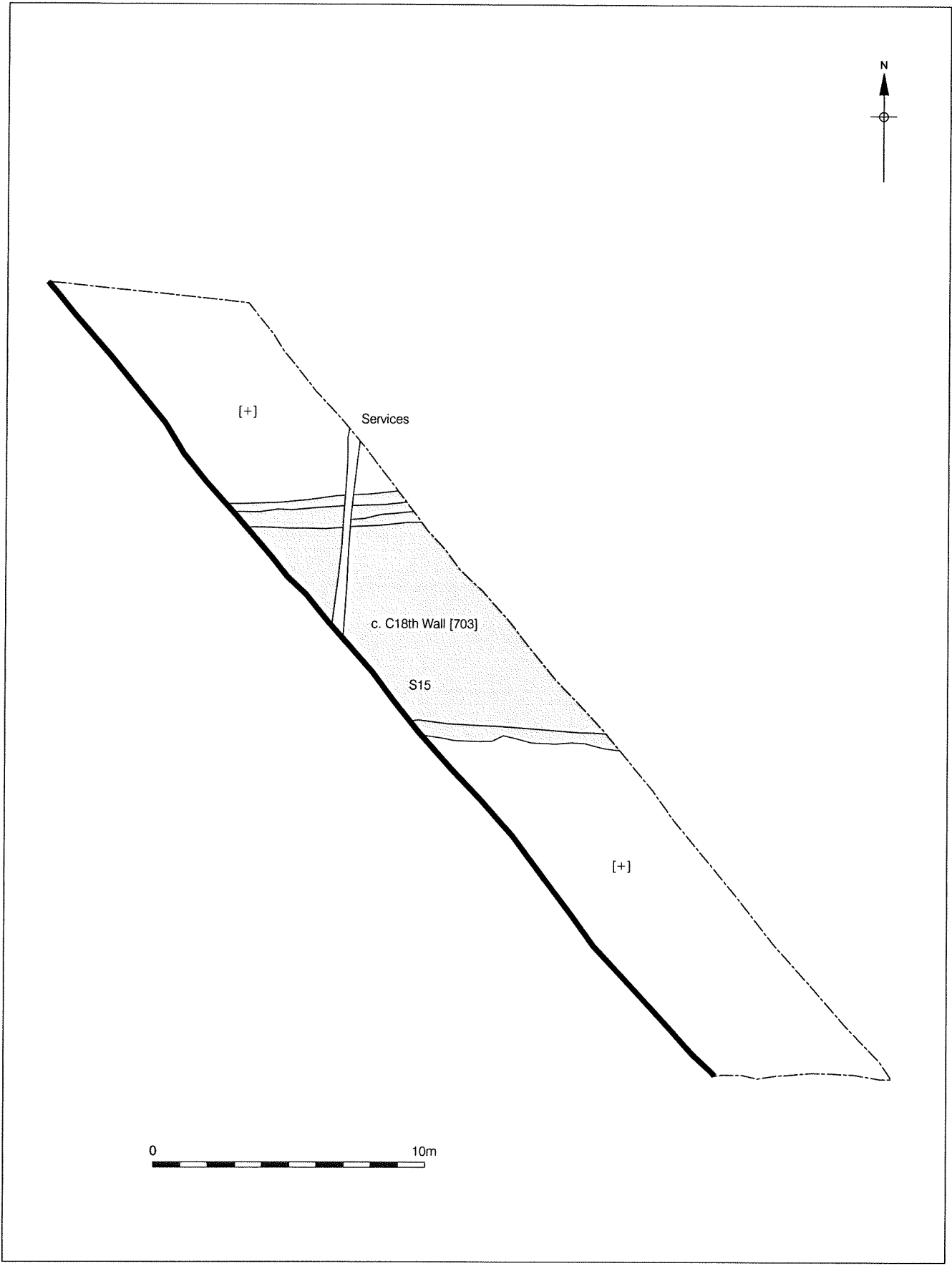


Figure 7
Plan of Trench 7
1:20

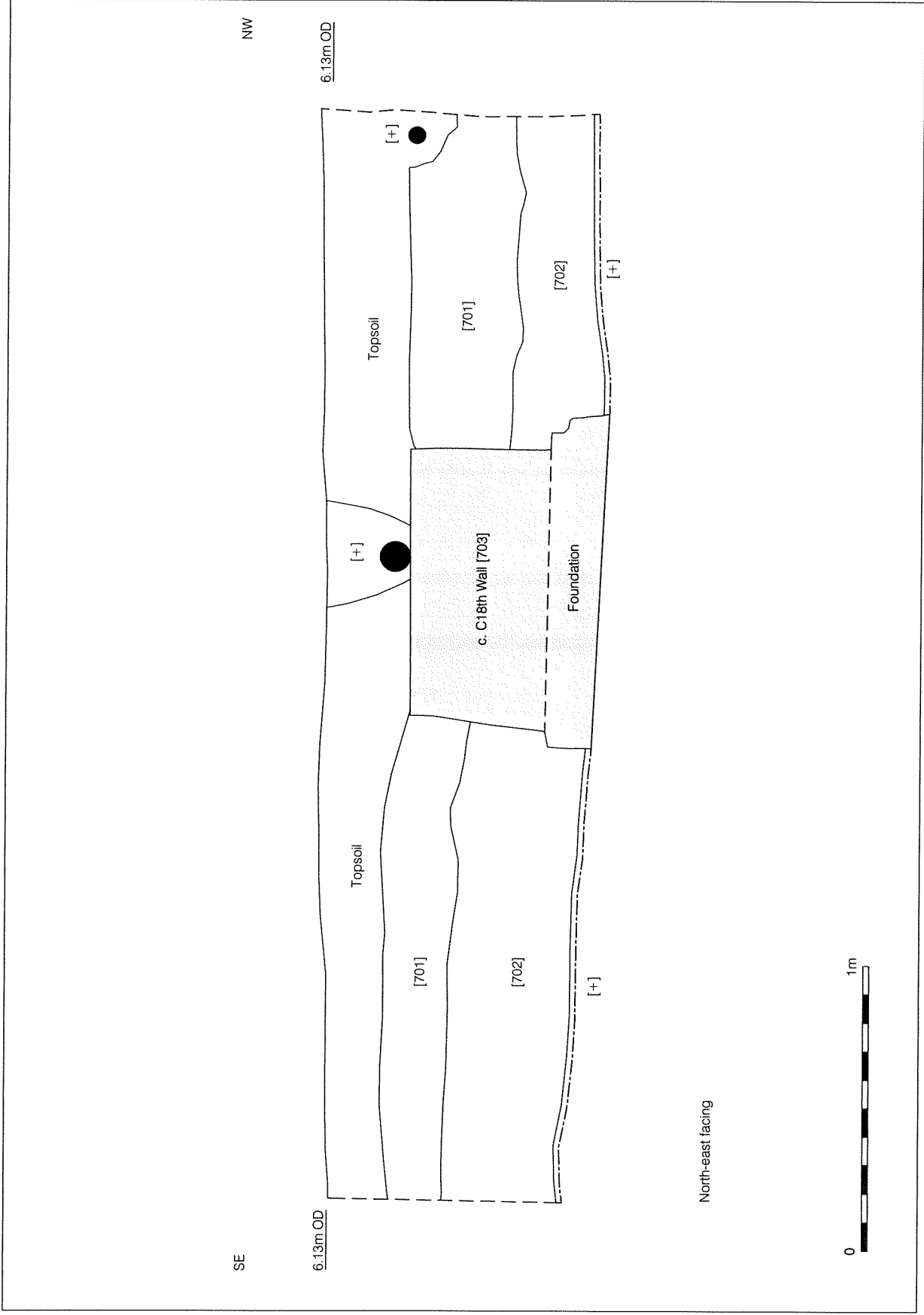


Figure 8
 Section 15, Trench 7
 1:20



Figure 9
 Plan of Trenches 8 and 9
 1:200

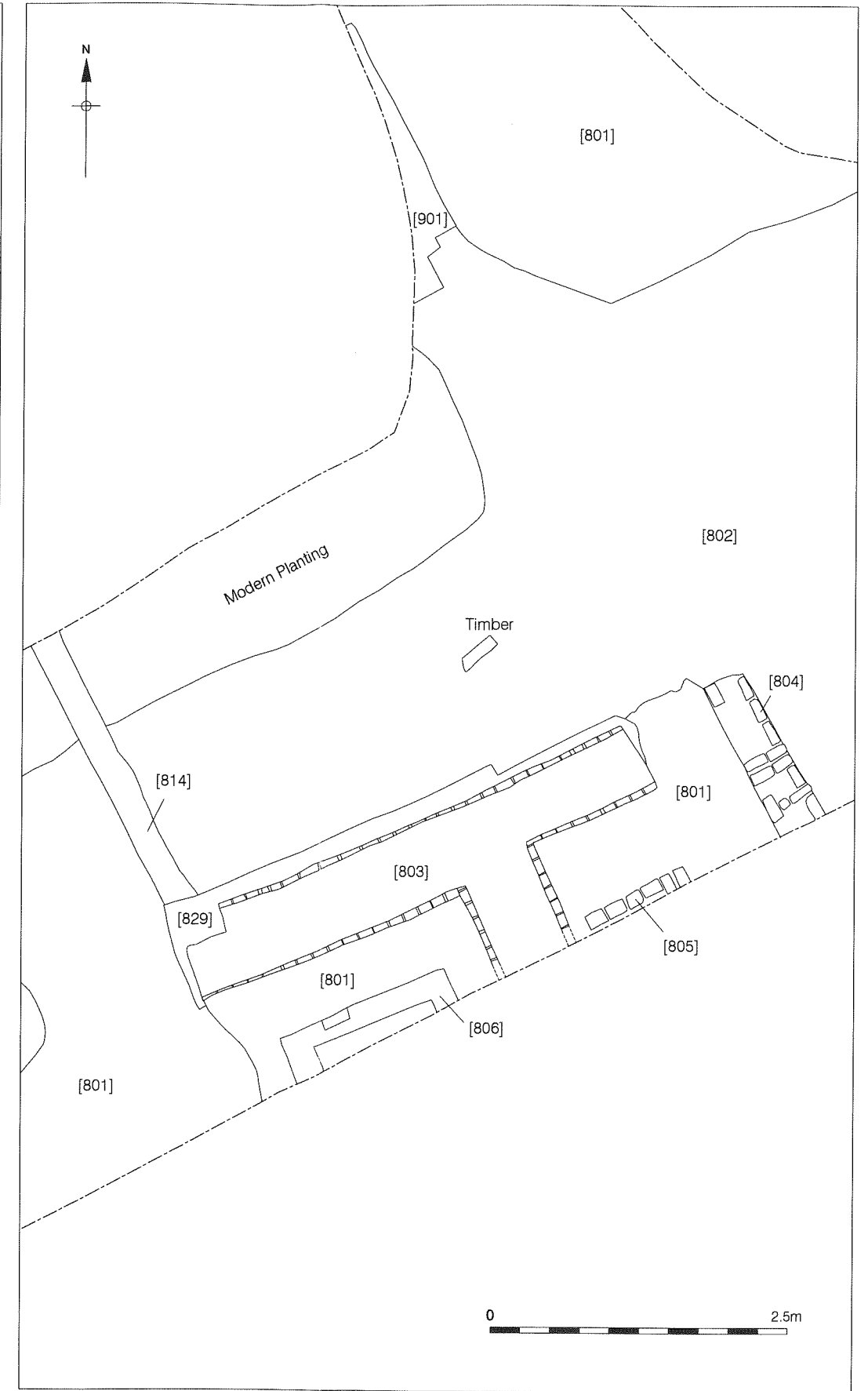
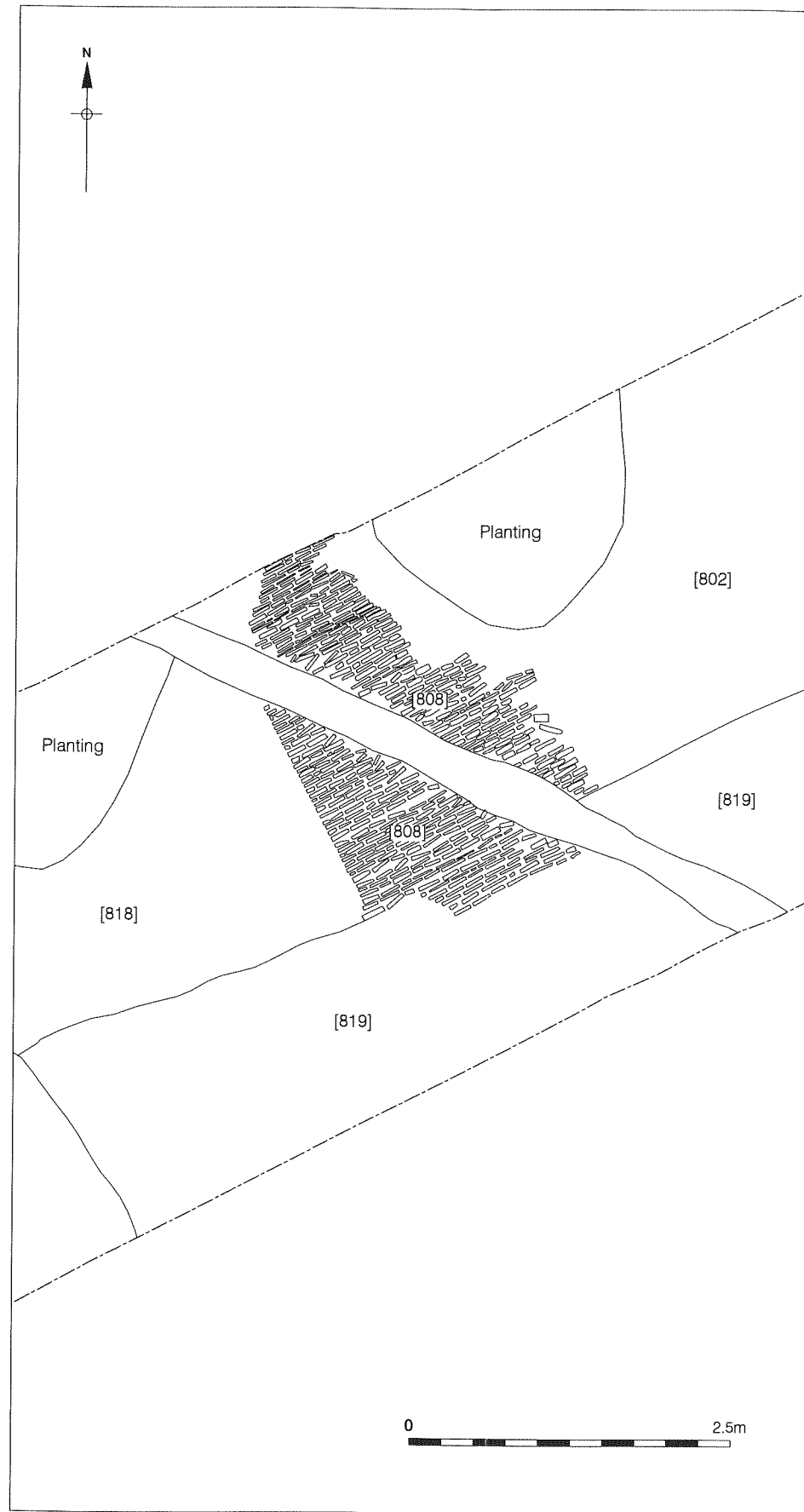
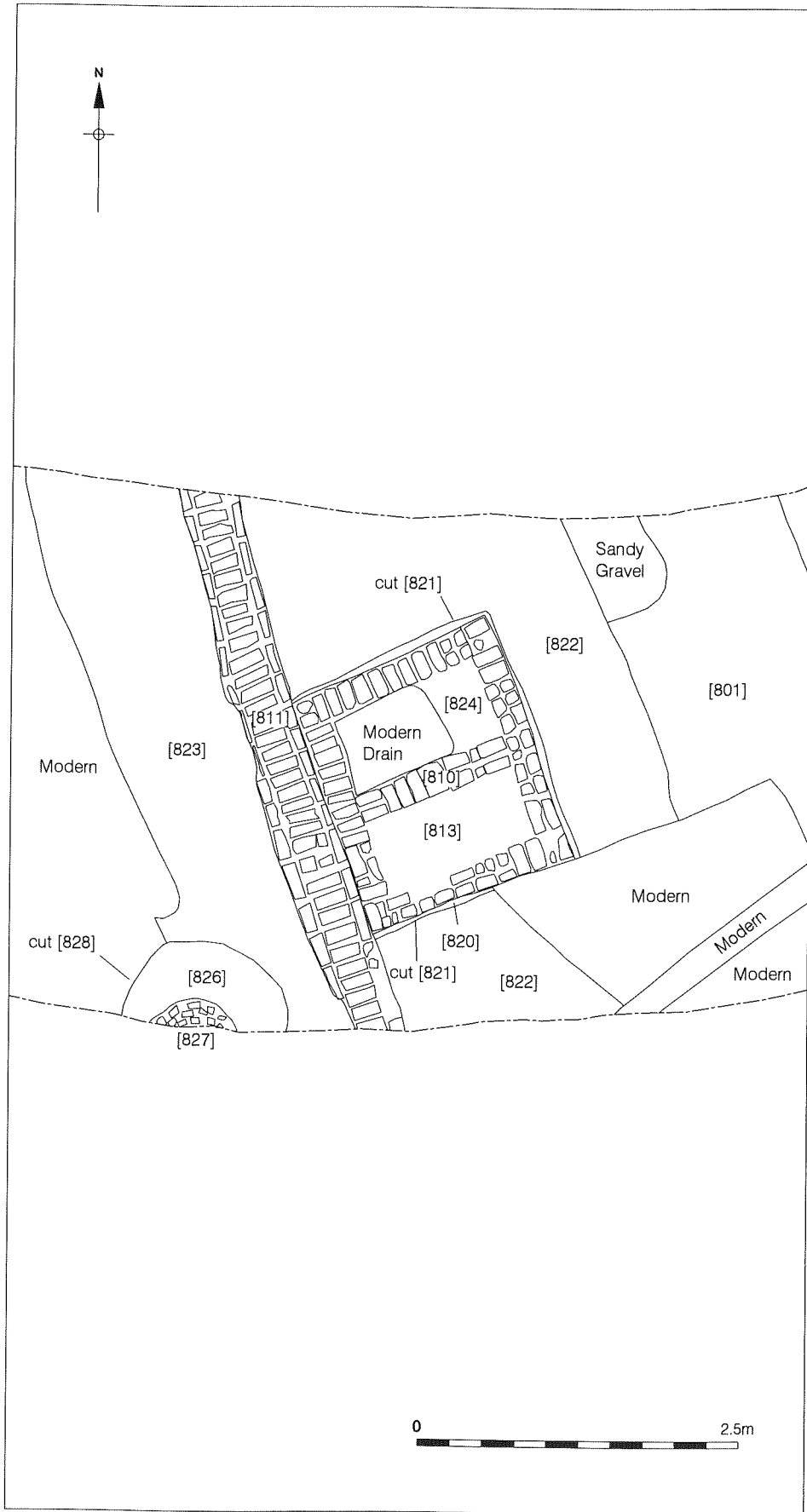


Figure 10
Detailed Plans from Trench 8
1:50

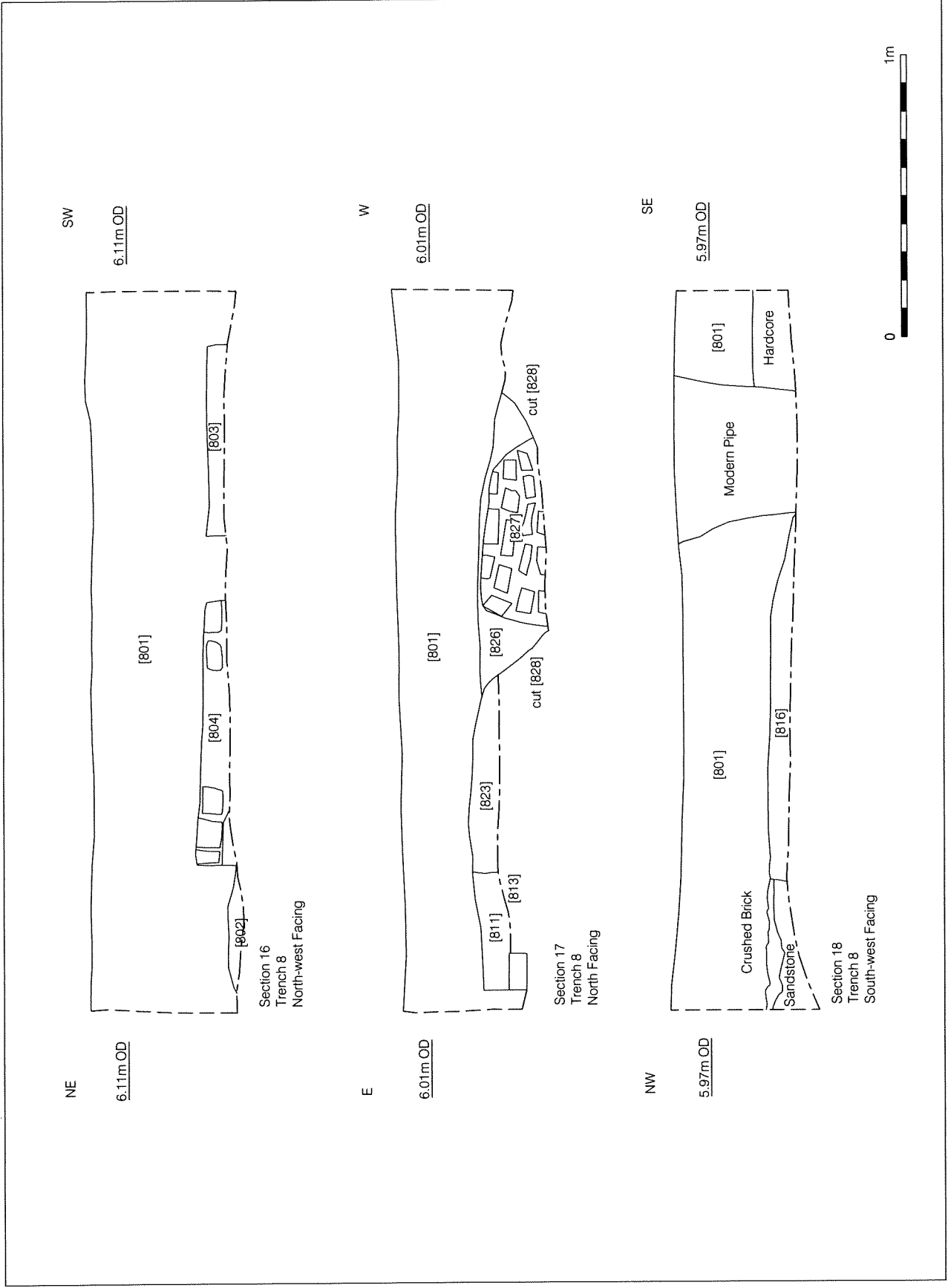


Figure 11
 Sections 16, Section 17 and Section 18, Trench 8
 1:20

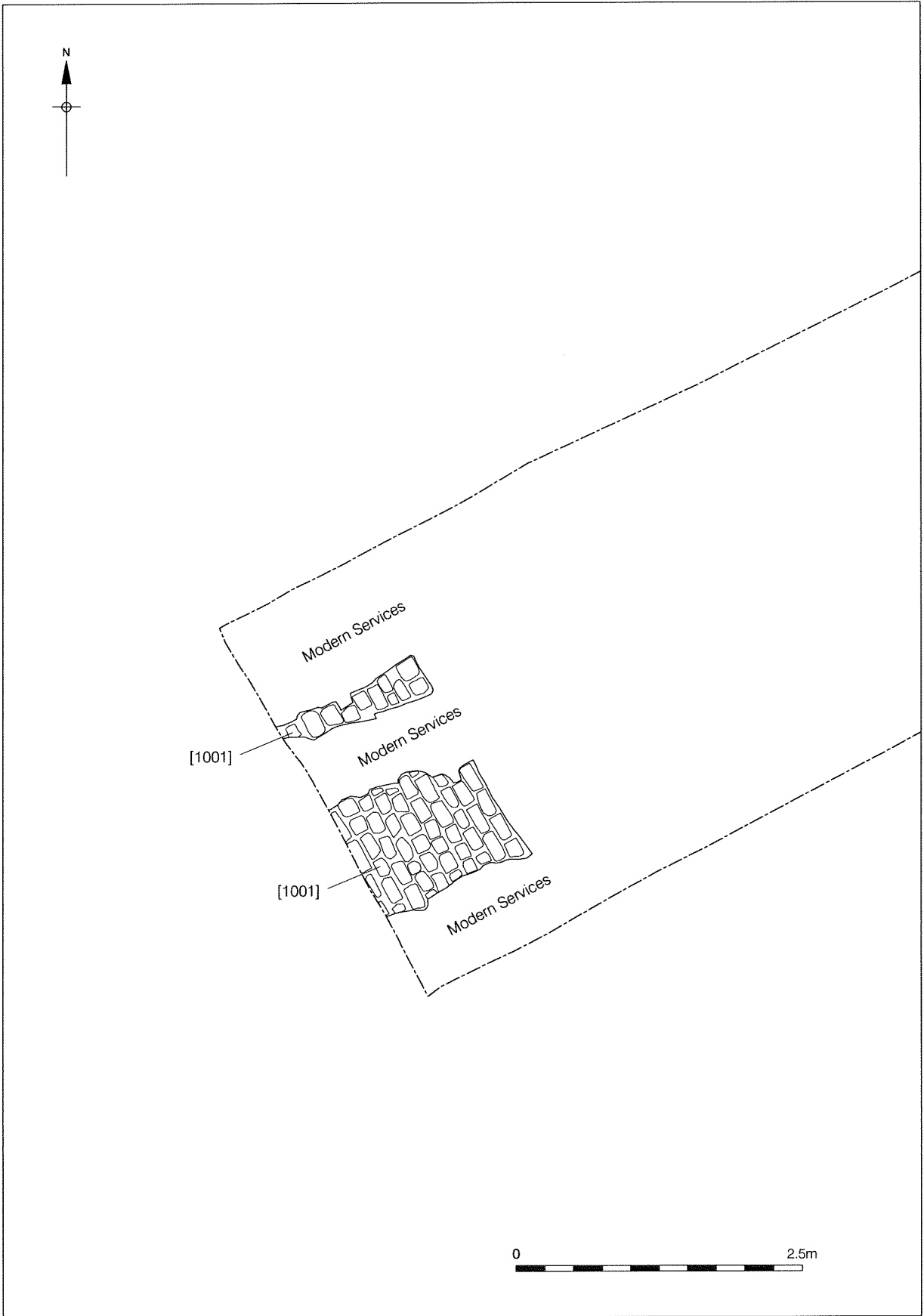


Figure 12
Plan of Trench 10
(South-west End of the Trench)
1:50

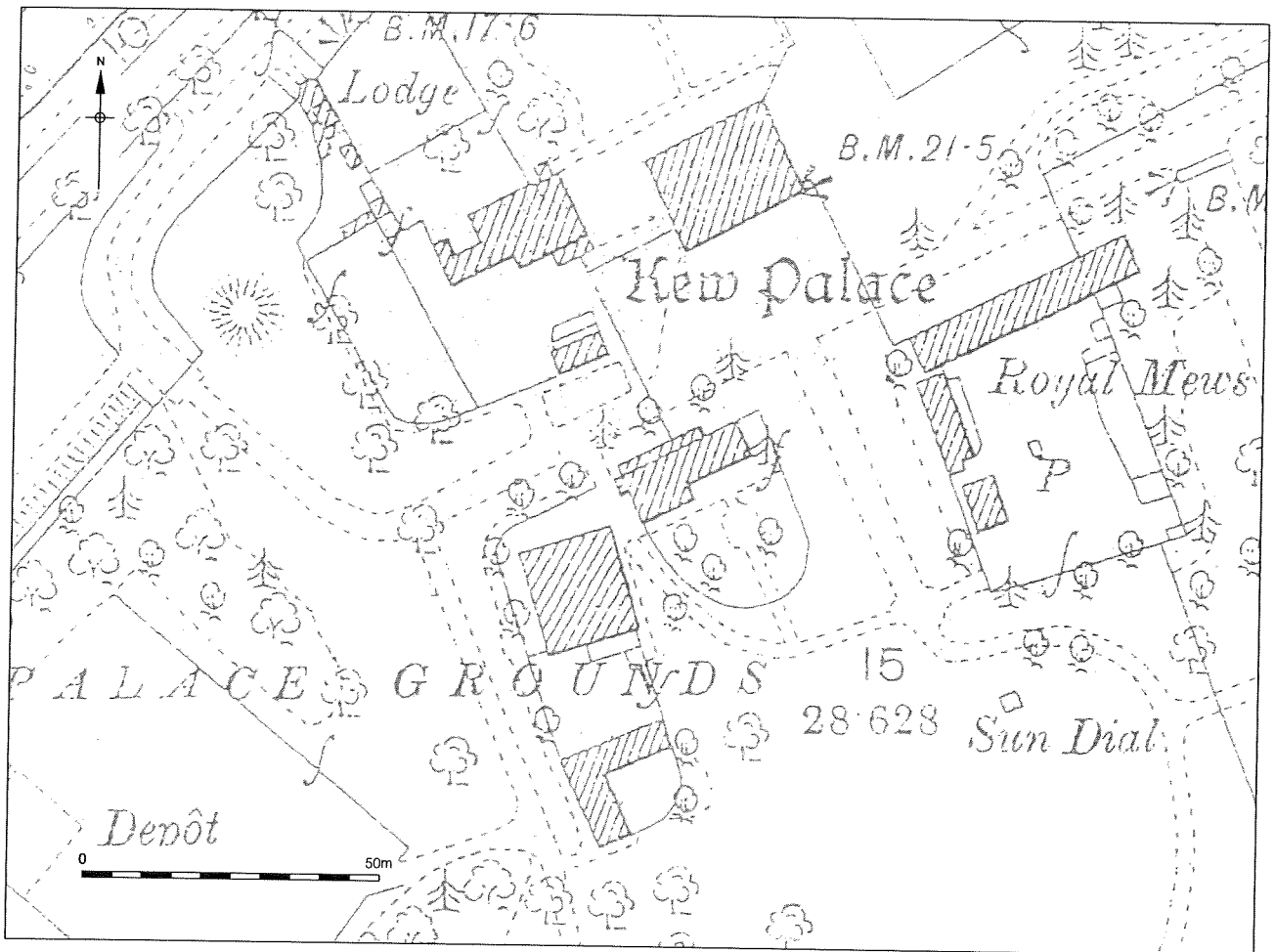
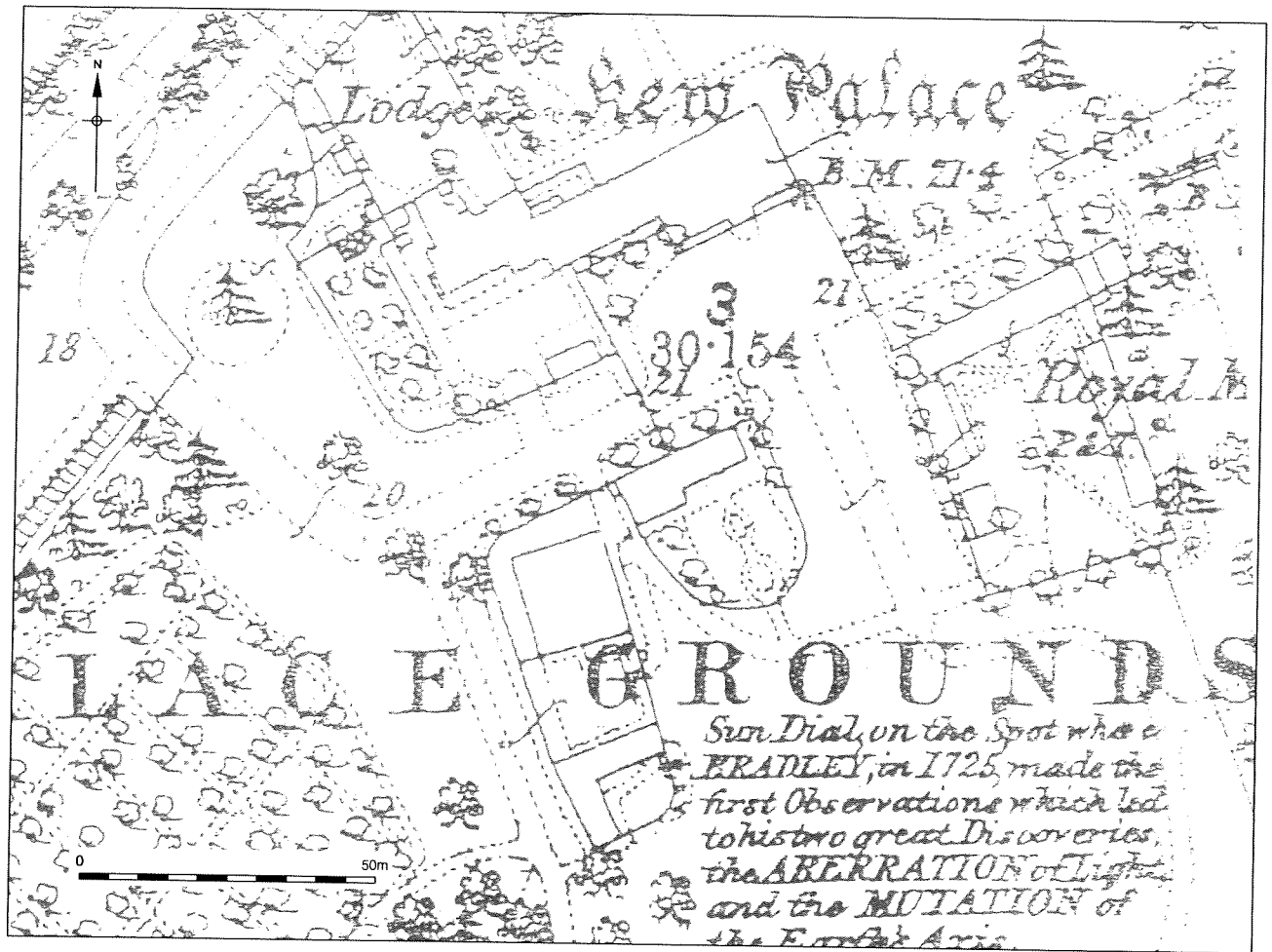


Figure 13
 Ordnance Survey, 1st Edition 1863 (top) and
 Ordnance Survey, 2nd Edition 1894-6 (bottom)
 1:1250

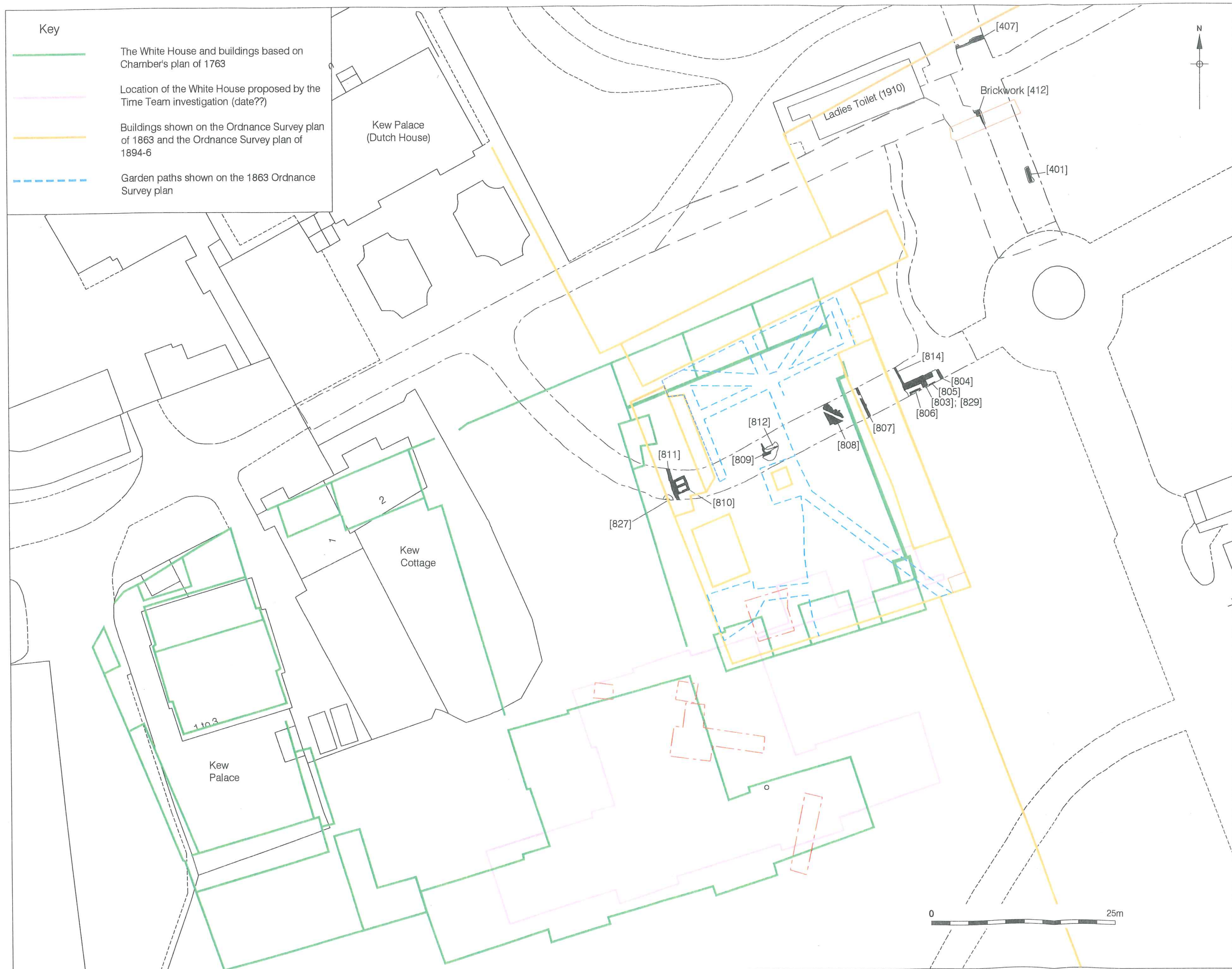


Figure 14
 Comparison of Masonry Features with Findings from the Time Team
 Investigation and Historic Maps
 1:500

PLATES

Plate 1: Floor tiles underlying stone pavoirs at the south entrance of Kew Palace



Plate 2: 16th - 17th century ?boundary wall [407]



Plate 3: 16th – 17th century ?boundary wall [703]



Plate 4: Possible Tudor hearth [809]



Plate 5: 18th century masonry [901]



Plate 6: 18th century masonry [803], [805], [806]



Plate 7: 18th century cobbled yard or path [808]

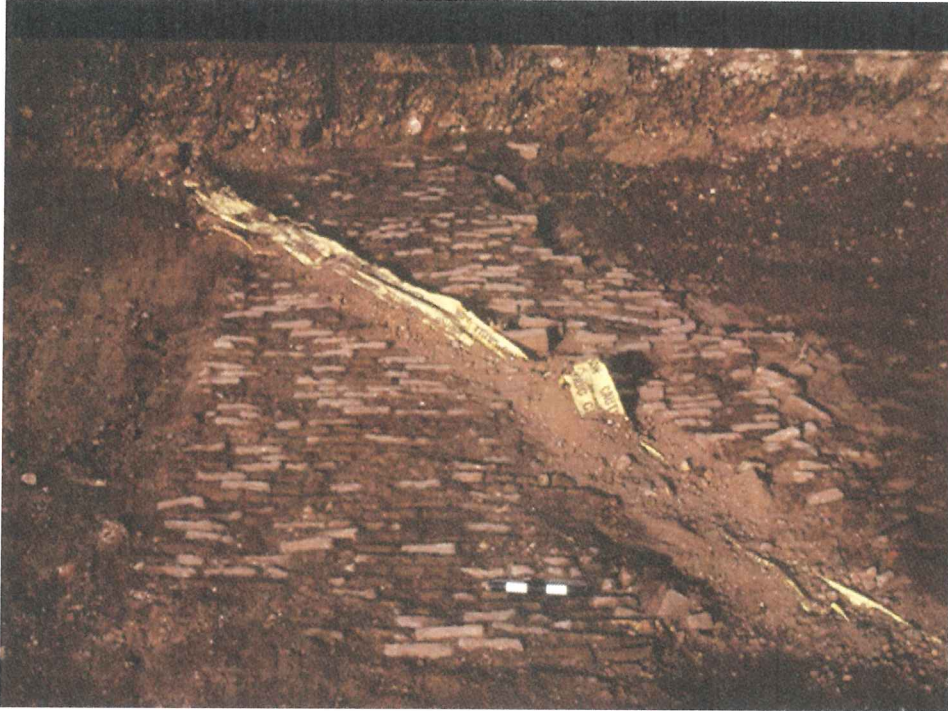


Plate 8: 17th century N-S wall [811] and 18th century cesspit [810]



Plate 9: Masonry feature [816] in Trench 8



Plate 10: Masonry feature [412] in Trench 4



8 CONCLUSIONS

- 8.1 The archaeological watching brief revealed evidence of re-deposited natural river terrace gravels, to the south and the east of Kew Palace. These represented the earliest observed levels in the archaeological sequence.
- 8.2 The earliest evidence for development of the area was seen to be from the early post-medieval period. A possible hearth observed in Trench 8 indicated survival of late Tudor features within the area of investigation.
- 8.3 A number of 16th or 17th century boundary walls, which may be shown on Rocque's map of 1734, were observed in Trenches 6, 7 and 8. The N-S aligned walls in Trench 8 are likely to represent the boundary walls that demarcated the 18th century stable yard, and suggests that the yard areas were based on boundaries defined prior to the redevelopment of the White House in the 1730's.
- 8.4 If the N-S aligned walls [804], [807] and [811] do relate to the 18th century stable yard laid out their position relative to the features recorded during the Time Team investigation supports the premise that the Chambers' plan of 1763 inaccurately plots the position of the White House. The walls relate very well to the Victorian Ordnance Survey maps being c.1m to the east. However, it is unknown how well they relate in a N-S plane as no E-W walls were revealed. If masonry [809] relates to the feature on the Ordnance Survey map to the south there might be a slight inaccuracy to the north as compared to these maps.
- 8.5 The original form of the steps of the Kew Palace is called into question; with evidence to suggest that floor tiles may have been used for the treads, rather than stone. It is also possible that the original steps were not as high, with an extra step added in the 18th to 19th century, possibly around the time the stone finish was applied.

9 BIBLIOGRAPHY

- Bradley, T., 2004, An archaeological evaluation at Kew Palace, Royal Botanic Gardens, Kew, London Borough of Richmond upon Thames, Pre-Construct Archaeology Ltd. unpublished report.
- Brown, J., 2005, An archaeological watching brief at Kew Palace, Royal Botanic Gardens, Kew, London Borough of Richmond upon Thames, Pre-Construct Archaeology Ltd. unpublished report.
- Butler, J., 2004; A method statement for an archaeological evaluation at Kew Palace, Royal Botanic Gardens, Kew, London Borough of Richmond upon Thames, Pre-Construct Archaeology Ltd. unpublished report.
- Prosser, L., 2003, Kew Palace: An Archaeological Desk-Based Assessment, Historic Royal Palaces unpublished report.
- Saxby, D., 2005; Royal Botanic Gardens Kew, London, London Borough of Richmond-upon-Thames: An archaeological investigation report for Channel 4's Time Team, Museum of London Archaeological Service unpublished report.

10 ACKNOWLEDGEMENTS

- 10.1 Pre-Construct Archaeology Ltd. would like to thank all those involved in the project. Particularly we wish to thank Lee Prosser and Jo Thwaite from the Historic Royal Palaces for commissioning the project. Thanks also to Mike Smith of Gardiner & Theobald Construction Management for onsite assistance and a sympathetic approach to the ground works.

- 10.2 The author would also like to thank Alexis Haslam and Shane Maher (PCA) for assisting on the Watching Brief, Berni Sudds for looking at the pottery. Thanks also to Josephine Brown and Adrian Nash for preparing the site plans and illustrations. Gratitude is also expressed to the staff of the Royal Botanic Gardens for their cooperation.

APPENDIX 1
CONTEXT INDEX watching brief phase

CONTEXT	PLAN	SECTION	PHOTO	PHASE	TYPE	DESCRIPTION	LEVEL (m OD)
101	SW multi	11	YES	2	Masonry	Tudor foundation	4.58
102	SW multi	11	NO	5	Masonry	Modern stair well	4.91
103	SW multi	11	YES	5	Fill	Make-up for modern stair well	4.59
104	SW multi	11	NO	5	Fill	Bedding layer for modern stair well	4.60
105	SW multi		NO	2	Fill	Backfill of construction cut [106]	4.20
106	SW multi		NO	2	Cut	Construction cut for [101]	4.20
107	PL multi	1	NO	5	Fill	Fill of cut [108]	4.90
108	PL multi	1	NO	5	Cut	Cut for bedding plants	4.90
109	PL multi		NO	4	Layer	Sandy silty made ground	4.44
110	PL multi	1	NO	5	Fill	Backfill of cut [113]	4.91
111	PL multi	1	YES	2	Masonry	Tudor foundation = [101]	4.51
112	PL multi	1	YES	4	Masonry	19 th C soakaway	4.38
113	PL multi	1	NO	5	Cut	Construction cut for 19 th /20 th C stair well	4.91
114	PL multi	11	NO	4	Layer	Demolition layer	4.21
115	PL multi	1	NO	4	Fill	Backfill for cut [116]	4.36
116	PL multi		NO	4	Cut	Construction cut for [112]	4.36
117	PL multi		NO	2	Fill	Backfill of cut [118] = [105]	4.21
118	PL multi		NO	2	Cut	Construction cut for [111] = [106]	4.21
119	PL multi	1	NO	4	Fill	Sandy gravel silt fill of [120]	4.21
120	PL multi	1	NO	4	Cut	Pit cut for demolition debris?	4.21
121	PL multi		NO	1	Layer	Natural gravel = [22]	4.19
122	PL multi	1	NO	4	Fill	Silty fill of soakaway [112]	4.28
123	LS multi		YES	4	Layer	Mortar & tile spread – demolition layer?	4.52
124	LS multi		NO	4	Masonry	E-W brick & tile drain, ?reused wall = [7]	4.56
125	LS multi		NO	4	Fill	Backfill of construction cut [124] = [29]	4.60
126	LS multi	1	NO	4	Cut	Construction cut for wall [124] = [30]	4.60
127	SW2	1	NO	5	Masonry	Late 19 th /20 th C Drain pipe	3.87
128	SW2	1	NO	5	Cut	Construction cut for drain pipe [127]	4.44
129	SW2		NO	5	Fill	Backfill of cut [128]	3.94
201	TR 3	13	YES	5	Layer	Mortar bedding for concrete & re-laid pavoirs	6.41
202	TR 3	13	YES	4	Layer	Brown sandy silty bedding layer	6.39
203	TR 3	13	YES	5	Layer	Cement/rubble bedding layer (type 1)	6.31
204	TR 3	13	YES	3	Layer	Mortar bedding overlaying floor tiles	6.30
205	TR 3	13	YES	2	Masonry	Floor tile 'tread'	6.28
206	TR 3	13	YES	3	Masonry	Brick riser for stone pavoirs	6.37
207	TR 3	13	YES	2	Masonry	Brick riser for stone coping	6.31
208	TR 3	13	YES	2	Masonry	Floor tile 'tread'	6.12
209	TR 3	13	YES	4	Layer	Sand bedding layer	6.12
210	TR 3	13	YES	2	Masonry	Brick riser for floor tiles [205]	6.26
211	TR 3	13	YES	2	Layer	Garden soil	6.12
401	TR 4		YES	3	Masonry	?truncated wall 18 th century	5.98
402	TR 4		YES	3	Cut	Construction cut for [401]	5.98
403	TR 4		YES	3	Fill	Backfill for [402]	5.98
404	TR 4		YES	3	Layer	Greyish brown sandy silt	5.90
405	TR 4		YES	3	Layer	Dark yellow-brown gravel	5.95
406	TR 4, 5, 6	14, 19	YES	3	Layer	Dark grey-brown agricultural soil	6.10
407	TR 6	19	YES	2	Layer	Pre- 1700 E-W wall	5.63
408	TR 6		YES	2	Layer	Construction cut for [407]	5.63
409	TR 6		YES	2	Layer	Backfill for cut [408]	5.63
410	TR 6	19	YES	2	Layer	Greyish brown agricultural soil	5.98

411	TR 4, 5	14	YES	1	Layer	Redeposited yellow-brown silty gravel	5.67
412	TR 4		YES	4	Layer	Masonry feature, possible drain?	6.03
413	TR 4		YES	4	Cut	Construction cut for [412]	6.02
414	TR 4		YES	4	Fill	Backfill of cut [413]	6.02
501	TR 4, 5, 6	14	YES	5	Layer	19 th – 20 th century topsoil	6.36
502	TR 5	14	YES	4	Layer	Metalled 19 th century path	c. 5.55
503	TR 5	14	YES	3	Layer	? Gravel spread/made ground	c. 5.27
701	TR 7	15	YES	5	Layer	Rubble demolition/made ground	5.93
702	TR 7	15	YES	3	Layer	Sandy silt layer/made ground	5.63
703	TR 7	15	YES	2	Masonry	?17 th century E-W wall	5.87
801	TR 8, 9	16, 17, 18	YES	5	Layer	Dark grey black topsoil	6.24
802	TR 8	16	YES	3	Layer	Dark grey brown horticultural subsoil	5.78
803	TR 8	16	YES	3	Masonry	N-S & E-W main wall	5.85
804	TR 8	16	YES	3	Masonry	N-S wall	5.74
805	TR 8		YES	3	Masonry	E-W aligned masonry block	5.88
806	TR 8		YES	2	Masonry	Possible cesspit	5.76
807	TR 8		YES	3	Masonry	NS aligned wall	5.76
808	TR 8		YES	3	Masonry	Brick cobbled path/yard	5.79
809	TR 8		YES	2	Masonry	Late med/Early post-medieval hearth?	5.76
810	TR 8		YES	3	Masonry	18 th century cesspit	5.79
811	TR 8	17	YES	2	Masonry	N-S ?17 th century wall	5.76
812	TR 8		YES	2	Layer	Metalled layer	5.71
813	TR 8		YES	4	Fill	Backfill of cesspit [810]	5.63
814	TR 8		YES	3	Layer	N-S line of mortar	5.80
815	TR 8		YES	2	Layer	Mortar spread, possible gone out wall	5.76
816	TR 8	18	YES	3	Masonry	E-W ?wall fragment	5.76
817	TR 8		YES	3	Masonry	Possible continuation of [816]	5.69
818	TR 8		YES	3	Layer	Made ground/possible surface	5.74
819	TR 8		YES	3	Layer	Made ground/possible surface	5.76
820	TR 8		YES	3	Fill	Backfill of construction cut [821]	5.68
821	TR 8		YES	3	Cut	Construction cut for cesspit [810]	5.68
822	TR 8		YES	3	Layer	Made ground/mortar spread	5.70
823	TR 8	17	YES	3	Layer	Dark grey brown horticultural subsoil	5.75
824	TR 8		YES	4	Fill	Backfill of cesspit [810]	5.65
825	TR 8		YES	1	Layer	Silty gravel layer, redeposited natural?	5.66
826	TR 8	17	YES	4	Fill	Backfill for soakaway [827]	5.73
827	TR 8	17	YES	4	Masonry	Victorian soakaway	5.78
828	TR 8	17	YES	4	Layer	Construction cut for soakaway [827]	5.78
829	TR 8		NO	3	Fill	Backfill of construction cut [830]	5.83
830	TR 8		NO	3	Cut	Construction cut for wall [803]	5.83
901	TR 9		YES	3	Masonry	N-S aligned ?18 th wall	6.02
902	TR 9		NO	3	Fill	Backfill of cut [903]	6.02
903	TR 9		NO	3	Cut	Construction cut for wall [901]	6.02
1001	TR 10		YES	5	Masonry	Late Victorian cobbled surface	5.97

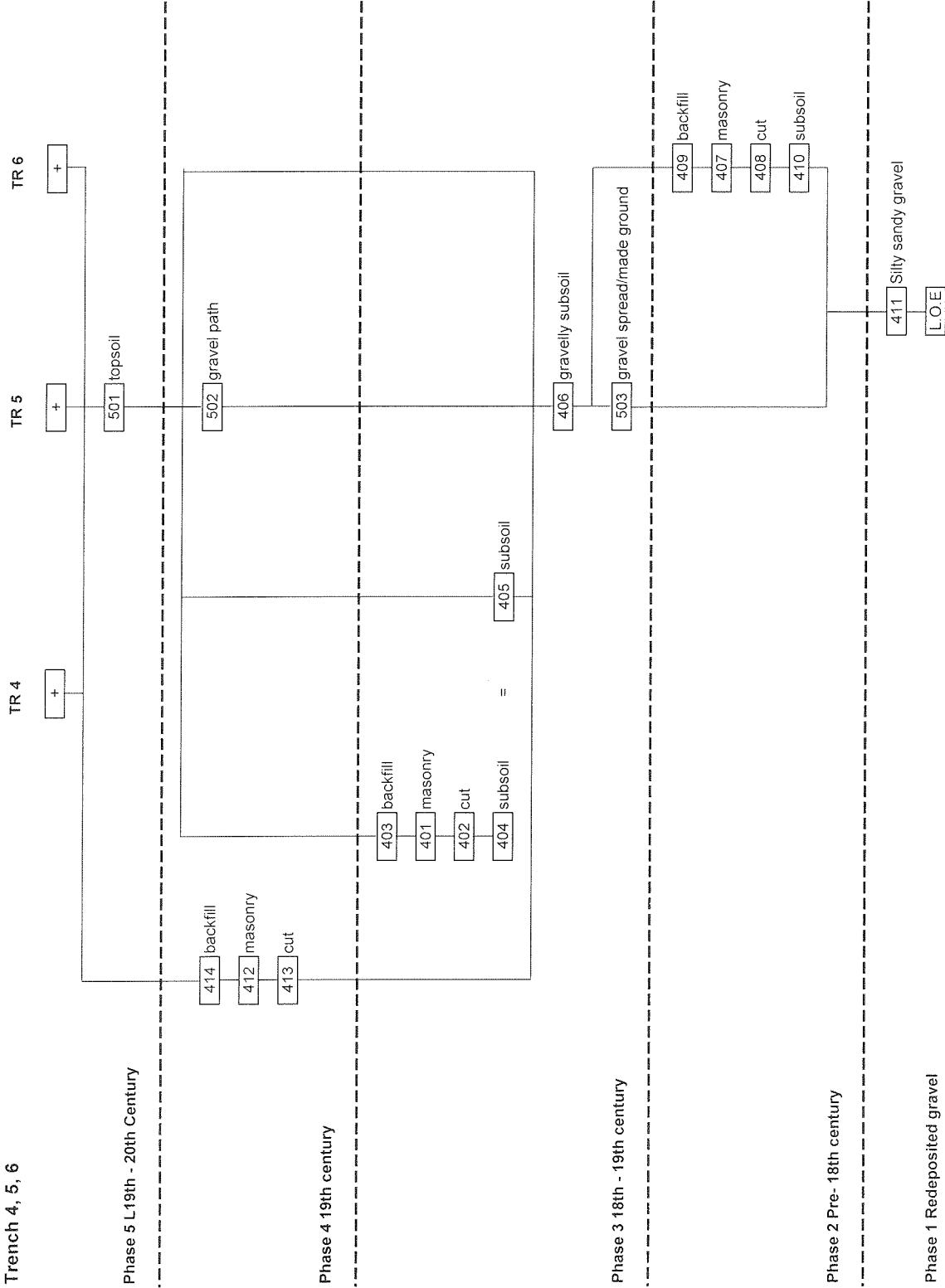
APPENDIX 2 Site Matrix KEW4 watching brief 2005/6

Trench 3 Kew Palace South Steps



APPENDIX 2 Site Matrix KEW4 watching brief

Trench 4, 5, 6



APPENDIX 3 KEW 4: CONCORDANCE OF POTTERY

Context	Fabric	No.	Form	Date range
403	TGW BISC	1	Dish	1570 – 1800
409	BORDG	1	Dish	1550 – 1700
702	RAER	4	Jug	1480 – 1610
801	CREA	1	Plate	1740 – 1880
	ENGS	1	Uncertain. Machine pressed.	c.1850 – 1930
	PMR	2	Flowerpots	1800 – 1900
	PMR	1	-	1580 – 1900
	RBORB	1	-	1580 – 1800
802	BORDG	1	-	1550 – 1700
	BORDY	1	Saucer candlestick?	1550 – 1700
	FREC	1	Bottle/ jug	1550 – 1700
	PMR	2	Flowerpot?	1580 – 1900
	PMR	1	Thickened rim. Large vessel.	1580 – 1900
	PMFR	1	Lid-seated rim. Pipkin/ cauldron?	1580 – 1700
	TGW C	1	Porringer	1630 – 1800
	TGW	2	1x painted blue lines. Hollow forms.	1570 – 1800
	TGW	1	Ointment pot base.	1680 – 1800
	TGW	1	Unusual pierced rim. Lid? Blue painted border design. ?18 th century.	1700 – 1800
812	EBORD	2	-	1480 – 1550
	BORDY	1	-	1550 – 1700
	FRECW	1	-	1550 – 1700
	PMSRG	1	-	1480 – 1650
813	PEAR	2	Cylindrical preserve jar	1770 – 1860
	REFW	2	Spouted vessel. Simple rim, rounded profile. ?Medical bowl.	1800 – 1900
	REFW	1	Rim sherd.	1800 – 1900

APPENDIX 4 OASIS DATA COLLECTION FORM

OASIS ID: preconst1-13459

Project details

Project name	Kew Palace
Short description of the project	An archaeological watching brief was undertaken at The Great Lawn, Kew Palace, on work on the porch of the palace and in advance of the realignment of pathways serving Kew Palace to a 19th century alignment. Early post-medieval features were encountered on site, particularly a potential Tudor hearth and 16th-17th century wall foundations. 18th century wall foundations and a cobbled path discovered in Trench 8 are likely to represent the remains of the stable yard associated with the White House, constructed in 1732. The majority of the features encountered were from the post-medieval period, mostly relating to the development of the area from the 18th century and subsequent demolition of the royal complex in the 19th and 20th centuries.
Project dates	Start: 05-09-2005 End: 02-02-2006
Previous/future work	Yes / Not known
Any associated project reference codes	KEW4 - Sitecode
Type of project	Recording project
Site status	World Heritage Site
Site status (other)	Scheduled Ancient Monument
Current Land use	Other 5 - Garden
Monument type	WALLS Post Medieval
Monument type	SURFACES Post Medieval
Significant Finds	CBM Post Medieval
Significant Finds	POT Post Medieval
Investigation type	'Watching Brief'

Prompt Scheduled Monument Consent

Project location

Country England

Site location GREATER LONDON RICHMOND UPON THAMES RICHMOND AND KEW Kew Palace, Royal Botanic Gardens, Kew

Study area 9000.00 Square metres

National grid reference TQ 1847 7747 Point

Height OD Min: 4.93m Max: 5.75m

Project creators

Name of Organisation Historic Royal Palaces

Project brief originator Historic Royal Palaces

Project design originator Lee Prosser

Project director/manager Jon Butler

Project supervisor John Brown

Sponsor or funding body Historic Royal Palaces

Project archives

Physical Archive recipient Hampton Court

Digital Archive recipient Hampton Court

**Project
bibliography 1**

Publication type	Grey literature (unpublished document/manuscript)
Title	An Archaeological Watching at "the Great Lawn", Kew Palace, Royal Botanic Gardens, Kew, London Borough of Richmond upon Thames
Author(s)/Editor(s)	Brown, J
Date	2006
Issuer or publisher	Pre-Construct Archaeology Ltd
Place of issue or publication	London
Description	A4 Archive ring bound report
Entered by	jon butler (jbutler@pre-construct.com)
Entered on	10 March 2006