JOHN MOORE HERITAGE SERVICES

ADDENDUM TO

ARCHAEOLOGICAL WATCHING BRIEF

AT

BEECH COURT CARE HOME, NEWLAND STREET, EYNSHAM, OXFORDSHIRE

NGR (SP 4350 0959)

On behalf of

Dr B. Cheung

DECEMBER 2016

REPORT FOR	Dr. B. Cheung Beech Court Care Home Newland Street Eynsham Oxfordshire OX29 4LB
PREPARED BY	Gavin Davis
ILLUSTRATION BY	Autumn Robson
EDITED BY	John Moore
AUTHORISED BY	John Moore
FIELDWORK	23rd August 2016
REPORT ISSUED	5th December 2016
ENQUIRES TO	John Moore Heritage Services Hill View Woodperry Road Beckley Oxfordshire OX3 9UZ Tel: 01865 358300 Email: info@jmheritageservices.co.uk
JMHS Project No:	3044
Site Code:	EYNR 14
Archive Location	The archive currently is maintained by John Moore Heritage Services and will be transferred to Oxfordshire County museum Service with the accession number OXCMS: 2014.115

CONTENTS

Summary
John Moore Heritage Services carried out a watching brief at Beech Court Care Home, Eynsham (NGR SP 4350 0959). This was following the accidental removal of the upper part of a human skeleton during the excavation of a soak-away. Two or three cut features were identified in the section of the trench but is was not possible to identify if all the features were grave cuts or from which cut the skeleton had been truncated. This work followed the main programme of work and archaeological watching briefs from 2014 to early 2016.

1. INTRODUCTION

1.1. Site Location (Fig. 1)

The site is located at Beech Court Care Home, Newland Street, Eynsham (NGR SP 4350 0959). The site lies to the north of Newland Street, and to the east of Hawthorn Road, at an approximate height of 67m OD. The underlying geology is Thames Second Terrace Gravel Deposits overlying Oxford Clay.

1.2. Planning background

West Oxfordshire District Council had granted planning permission to convert the stables and barn into additional dayrooms and support facilities for the existing care centre. This involved some demolition, extension and new build. Due to the potential of the site to contain archaeological remains a condition had been attached to the planning permission, which required the implementation of a programme of archaeological recording.. This was in line with PPG16 and West Oxfordshire Local Plan Policy BE13 (applicable at the time). Oxfordshire County Archaeological Services (OCAS) produced a Design Brief for such work

1.3 Archaeological background

Beech Court House itself is a Grade II Listed Building that dates originally to the seventeenth century. The site lies within the bounds of a new town or borough that was founded in 1215 by the Abbott of Eynsham.

A recent watching brief (JMHS 2016) recovered features of Romano-British date and Post-medieval date. Pottery dated to the Anglo-Saxon and medieval periods was also recovered from the site.

The archaeological potential of the surrounding area has been discussed in main watching brief report (JMHS 2016).

2 RESULTS

A soak-away was excavated in the rear garden on the north side of Beech Court House. The soak-away was 2.4m long ENE-WSW and its width was 1.9m at the ENE end and 1.8m at the WSW end. The depth of the soak-away was approximately 1.2m.

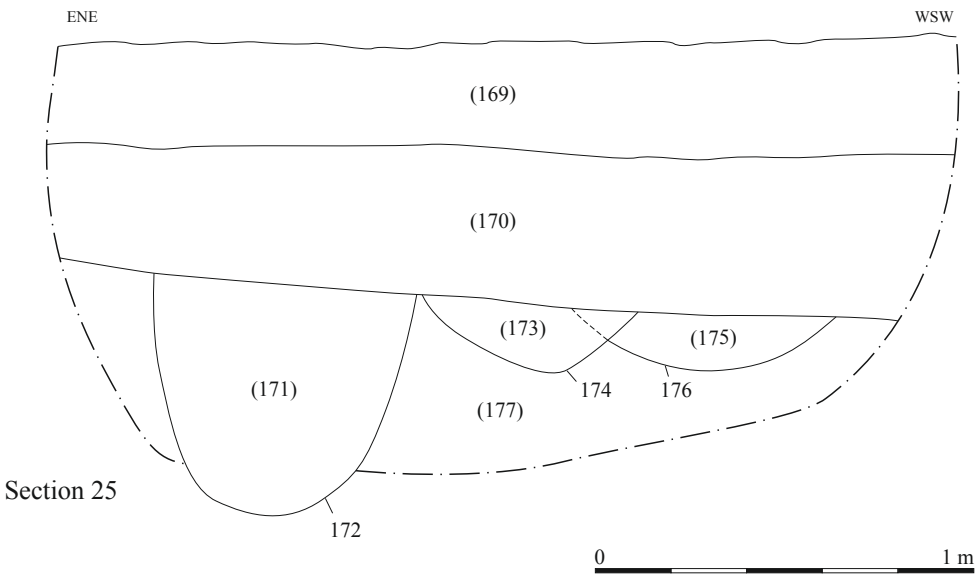

Figure 1: Site location

During the mechanical excavation of a soak-away the groundwork team had disturbed human remains. This had resulted in the removal of the entire portion of the skeleton from just below the top of the femur upwards. The presence of the archaeologist was requested following the excavation. On arrival at the site the archaeologist found the remains of the skeleton lying in the spoil at the side of the trench. The depth of the grave cuts had been entirely or mostly truncated by the excavations. Three cuts were identified in the south section of the soak-away but it was not possible to ascertain if all of these were grave cuts or from which cut the skeleton had been truncated.

The lowest layer identified in the soak-away was solid layer of coarse orange sand and gravel (177). This layer was identified as the natural geology and had been truncated by 0.5m depth. Three negative features were identified cutting this layer in the south section of the trench (Fig 1, section 25; Plate 1). There were no cut features identified in any of the other sections.

The deepest cut identified was 172 which was 0.6m deep and extended below the limit of excavation (Fig.1, section 25; Plate 1). It was 0.65m wide and the surviving length in plan extended into the trench by 0.3m. The majority of the feature had been truncated in plan but a further 0.12m remained in the base of the trench to be excavated by hand. The feature had steep, slightly concave sides and a rounded base and the end of the feature was rounded. The fill of the feature was a dark brown loamy coarse sand with fine gravel inclusions. Excavation of the surviving fill in plan did not reveal any further human bone. The fill had fallen away from the feature in section undermining the layers above it and it is possible that this had been caused by the removal of the skeleton. However, no truncated bone could be identified in the face of undermined section. It is possible that further collapse of the fill had covered the remaining lower half of the skeleton but due to the potential instability of the above layers it was not considered safe to chase too vigorously the possibility of further remains below the baulk.

Two further cuts were identified in this section WSW of cut 172. These two cuts were shallower and appeared to intercut, although the relationships were not clear and it could not be seen which cut which. The north-easterly of these two cuts was 174. It had been totally truncated in plan. In section it was 0.15m to 0.2m deep with slightly concave sides and a slightly rounded base. The feature was 0.5m wide and contained a dark brown fill of coarse loamy sand with frequent gravel inclusions (173). There was visible bone in section that had been sheared off flush with the edge of the section. It was not possible to ascertain if this bone was human or if it related to the lower parts of the partially recovered skeleton.

A further cut was identified to the WSW of 174. This cut, 176, was 0.6m wide and 0.14m deep. It was shallow with concave sides and a slightly rounded base. The fill was also a dark brown loamy sand (175). The fill was completely truncated in plan. In section it was not clear if (175) had been cut by 174 or if 176 cut (173). It is also possible that both cuts were the continuation of each other representing one cut with an uneven base. The fill, (175) contained evidence of bone in section.

Deposited above all these cut features was a 0.4m deep layer of sandy clay loam with frequent gravel (170). This layer was identified as the original topsoil layer and deposited above this was a 0.3m thick layer of mid to light grey sand with frequent

gravel (169). This overburden contained fragments of ceramic building material and was a disturbed deposit relating to recent development at the site.

Plate 1. Section 25. South section of soak-away. SE view.

3 HUMAN BONE *By Linzi Harvey MSc*

3.1 Nature of sample

A small quantity of human bone was recovered during the unmonitored insertion of a service trench at Beech Court, Newland Street in Eynsham, Oxfordshire. This skeletal material has been subjected to osteological analysis in order to provide an inventory of the material and assess its condition. The aim of this report is to ascertain demographic and health information about the assemblage, including the age, sex, stature and pathological or traumatic condition of any individuals recovered.

Although no contextual information is available for the assemblage, a mid-Roman date (2nd – 3rd centuries AD) has been suggested for it based on findings from the excavation (John Moore *pers comm.* 2016, Rose-Jones & Leech 2016).

3.2 Methods

Skeletal remains had been washed and were examined macroscopically, using light magnification (x10) where necessary. Information was recorded onto *pro forma* skeletal inventory and recording forms, following IFA and English Heritage

guidelines (Brickley & McKinley 2004, Mays & Brickley *et al.* 2004 respectively). Photographs were taken for illustrative purposes, using a Panasonic DMC-TZ8 digital camera. Copies of these photographs will be submitted with the paper archive. Analysis took place during October 2016.

3.3 Preservation and completeness

An assessment was made of the state of preservation of the skeletal remains considering the appearance of the cortical bone and condition of the joint surfaces: from 'good' (1) to 'poor' (3).

(1) 'Good' Bone surface is in good condition with no erosion, fine surface detail such as coarse woven bone deposition, if present, would clearly be visible to the naked eye.
(2) 'Moderate' Bone surface is in moderate condition, with some post-mortem erosion on long bone shafts, but the margins of the articular surfaces and some prominences eroded.
(3) 'Poor' Bone surface is in poor condition with extensive post-mortem erosion, resulting in pitted cortical surfaces and long bones with articular surfaces absent or severely eroded.

A skeletal inventory, estimation of completeness and description of each context was undertaken. Disarticulated material or bone that appeared charnel in nature was also noted in order to calculate the minimum number of individuals (MNI) present in the assemblage. The MNI was calculated using the number of left femora in the assemblage.

3.4 Age at death

Age at death estimation was based on a number of commonly used aging techniques. The adult sample was aged using epiphyseal fusion data (Schwartz 1995), cranial suture closure (Meindl & Lovejoy 1985), age-related changes of the pubic symphysis and the auricular surfaces of the ilium (Brooks & Suchey 1990 and Lovejoy *et al.* 1985) and dental attrition (Miles 1962) where appropriate. The age of the sub-adult and neonatal sample was determined using epiphyseal fusion data (Scheuer & Black 2000), dental development (Moorrees *et al.* 1963ab) and length of long bones (Scheuer *et al.* 1980) where appropriate.

For descriptive purposes, the skeletons were assessed and then assigned to the following broad age categories:

Description	Age range
Neonate	36 weeks – 1 month
Infant	< 1 month – 2 years
Child	2 – 12 years
Adolescent	13 – 18 years
Young adult	18-25 years
Middle adult	26-35 years

A	
Middle adult B	36-44 years
Older adult	>45 years

Table 1: Age categories

3.5 Sex estimation

Estimation of biological sex was only considered appropriate for the adult sample and was based on macroscopic observation of key skeletal landmarks in the cranium/mandible and pelvis (after Schwartz 1995). Where present, a number of predetermined sexually diagnostic features were marked on a five point scale as follows: 1 = male, 2 = possible male, 3 = intermediate, 4 = probable female and 5 = female. These scores were tallied and the modal average taken as the likely sex of each individual.

3.6 Metric and non-metric data

Measurements of complete long bones were recorded in order to aid biological sex estimation and determine stature for individuals over 18 years of age. This was calculated using formulae created by Trotter (1970) and carries a standard deviation of 3cm. Given the small quantity of material, a formal survey of non-metric traits of the skull, post-crania and dentition which are often taken to explore familial relationships and ancestry, was not undertaken.

3.7 Palaeopathology

The nature and location of pathological changes and trauma were described and a diagnosis made if appropriate. Basic pathological information was obtained from Aufderheide & Rodriguez-Martin (1998) and Roberts & Cox (2003), with additional references as required.

The recording of dental pathology, where dental remains were present, covered six pathological changes; ante-mortem tooth loss, calculus deposits, carious lesions, dental enamel hypoplasia, periapical voids (including abscesses, cysts and granulomas) and periodontal changes (Hillson 1996). Each observation was recorded by tooth or tooth position as appropriate.

Prevalence rates were not calculated for this assemblage due to its small size.

3.8 RESULTS

3.9 Completeness and preservation

The skeletal remains were incomplete, representing around 35% of a single individual. Many elements including a skull, mandible, radius, ulna and pelvis exhibited a number of recent breaks, some of which refitted. Some elements exhibited post-depositional crushing damage. The preservation of the bones themselves was good despite the fragmentation, and all elements exhibited excellent surface detail with no weathering or erosion. The remains have been summarised in Appendix 1.

3.10 Animal bone

Two small fragments of animal bone were noted alongside the human remains. Animal bone is a common find on archaeological sites, and is likely to represent the remnants of food preparation or rubbish disposal on or near site.

3.11 Minimum number of individuals (MNI)

On the basis on the number of left femora present, a minimum of one individual is represented by the remains (MNI=1). There were no repeated elements. On the basis of size, shape, robusticity and colour, and refitting fragments, it is probable all remains belong to a single individual. For ease of discussion throughout this report, this individual has been designated as SK1.

The MNI should be thought of as a conservative estimate of the number of individuals present at the site however, as the true number could be higher if further ground breaking works were to take place on or near site.

3.12 Burial position and laying out

The remains were recovered as unstratified finds, so no information regarding burial position is available. However, the remains have been truncated in roughly the same place on both sides, at the level of the femur heads. This may suggest the SK1 had been buried in an extended position and subsequently partially disturbed during trenching. It is possible that the lower half of the skeleton continues under a section on site.

3.13 Age at death estimation

On the basis of age-related changes to the pubic symphysis, auricular surface and cranial sutures the age of SK1 could be estimated to between 50 to 65 years old at death. This would place SK1 firmly into the Older Adult age category.

3.14 Sex estimation

The biological sex of SK1 could be estimated using a number of diagnostic features of skull and pelvis. Nine out of nine sexually diagnostic features of the pelvis were classified as male or probable male. All seven sexually diagnostic features present in the fragmentary skull all were classified as male. The general robusticity of the remains in addition to these diagnostic features supports the biological sex estimation for SK1 as male.

3.15 Stature

Stature is genetically determined, although full height is only attained with sufficient nutrition and good health (Roberts & Manchester 1995: 26). Stature could be estimated for SK1 as around 165.5cm (5’5”). Although stature estimation from the upper long bones is generally considered to be less accurate than from the lower long bones, this estimation is based on measurements of the humerus and radius as no complete leg bones were present.

Skeleton	Sex	Stature	Long bones used for stature estimation
SK1	M	165.5cm (5'5")	Right and left humerus (estimated), left radius.

Table 2: Stature estimation

3.16 Metric and non-metric data

As many post-cranial measurements as possible were collected. Due to the incomplete nature of the sample, only five measurements could be taken, all of which are given in Table 3.

Element	Measurement type	Side	Measurement (mm)
Humerus	Max length	Left	312*
Radius	Max length	Left	229
Humerus	Head diameter	Right	50
Femur	Head diameter	Left	50
Femur	Head diameter	Right	51

Table 3: Metric data

* Estimated using parts of right humerus

Remains were considered too fragmentary to take a full non-metric trait survey. However, it was noted that SK1 had a septal aperture present in the left distal humerus which was not mirrored on the opposite side and a supraorbital foramen and an accessory foramen present over the right orbit (the left frontal bone was not present).

3.17 Pathology and trauma

The right humeral head exhibited osteophytic bone deposition across the anterior and posterior joint surface, in a plaque-like formation (Plate 2), as well as a raised joint margin and increased porosity. These changes are consistent with Degenerative Joint Disease, generally considered to be age-related in nature. A small cortical pit defect and increased porosity was noted in the superior part of the greater tubercle, at the insertion site of infraspinatus, one of the rotator cuff muscles which laterally rotates the arm at the shoulder. This, along with the generally prominent muscle attachments of the proximal humerus may suggest SK1 took part in a strenuous activity or occupation that involved rotation of the upper arm. Indeed, many muscle attachment sites in the shoulder, arm and forearm of SK1 were very prominent, including those in the left scapula, the lateral epicondyle of the right humerus and the deltoid tuberosity of the left radius.

In the lower body too were signs of activity related stress. The right femoral head had a notable exostosis (projecting bony spur) in the medial posterior aspect of the greater trochanter, at the insertion point of obturator externus, a muscle which aids lateral rotation of the thigh at the hip joint. Surviving fragments of the pelvis were also extremely robust with many prominent muscle attachments throughout.

Plate 2: Right humeral head, posterior aspect, with plaque like bone deposits (white arrow). Scale bar 2cm.

The remaining vertebrae of SK1 were clearly pathologically altered. Three cervical vertebrae - two of which were contiguous - were recovered. All showed osteophytic bone growth around the vertebral body margin, particularly on the right side, as well as increased porosity in those areas. The most superior (C3) of these has a small patch of eburnation (bone polishing from bone on bone contact after degeneration of cartilage) on the lower right vertebral body margin. The body of C5 had a similar patch of eburnation in the upper right vertebral body margin. The thoracic vertebrae, none of which were contiguous, also showed additional bone deposition around their bodies and bone growth and porosity in some articulations. One of the lower thoracic (possibly T10 or T11) had Schmorl's nodes in the upper and lower vertebral bodies. Schmorl's nodes are protrusions of the intervertebral discs into the surface of the vertebral body, and were also present in the lumbar vertebrae. The presence of osteophytes, eburnation and porosity is usually considered diagnostic of osteoarthritis (Roberts & Manchester 1995).

The lumbar vertebrae were extensively altered by osteophytic shape changes to the anterior vertebral bodies. However, most notable in this region is the wedge-shaped body of the fifth lumbar vertebra along with its missing spinous process and inferior articular facets (Plate 3). A fibrous connection with part of the spinous process is suggested by the appearance of the right superior articular facet, although it is not present on the left, in which an anomalous articulation has formed between the left

superior articular facet of L5 and the left superior articulation of the first sacral vertebral.

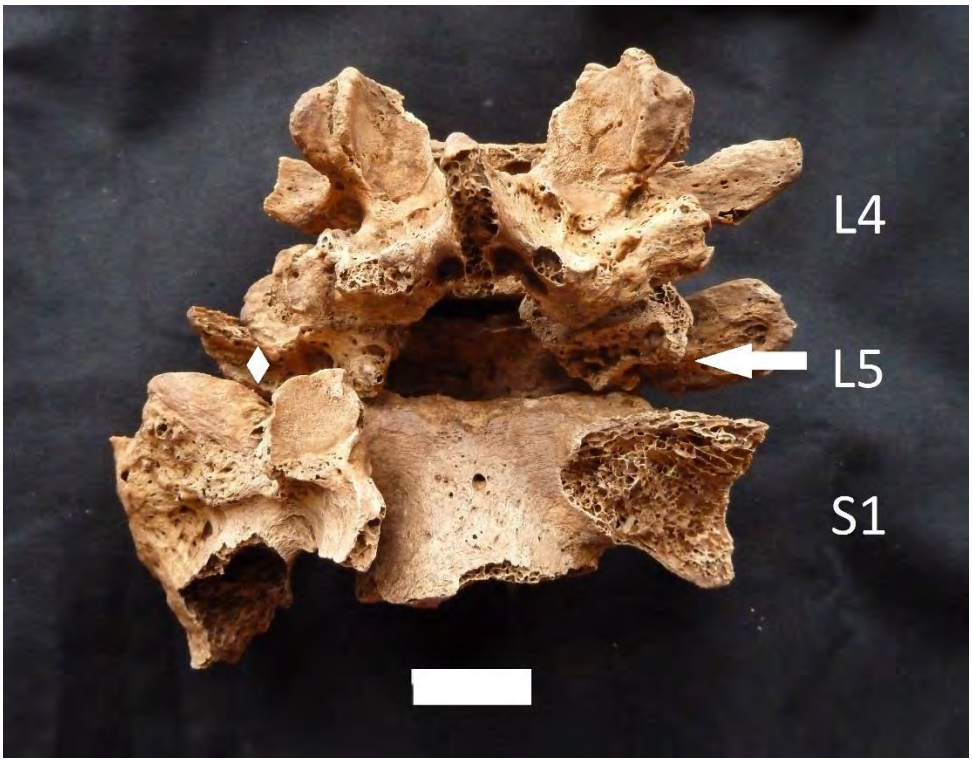

Plate 3: Spondylolysis in fifth lumbar vertebra (white arrow, L5) and anomalous articulation between superior articulations for L5 and S1 (right of white diamond). Scale bar 3cm.

This sort of separation in a vertebral arch between the body and the spinous process is termed spondylolysis. This is usually attributed to habitual physical stress and chronic trauma which instigates small fractures in this region which fail to heal (Lovell 1997). It most commonly occurs in the fifth lumbar vertebrae, as it the case here, and is seen in males more frequently than females (Merbs 1996). In clinical settings these types of fracture are most often observed in athletes and manual labourers who take part in activities which 'involve frequent and large stress reversals between lumbar hyperextension and lumbar flexion' (Lovell 1997: 158), such as bending and lifting.

A rib end fragment exhibited shape changes consistent with a healed fracture (Plate 4). This appeared to be from one of the middle ribs, near the border with the sternal costal cartilage. Rib fractures are most often a result of a blow or fall against a hard object, and are the most common kind of thoracic injury seen clinically, with up to 70% of hospital admissions for blunt chest trauma involving rib fractures (Lovell 1997: 159). The location of the fracture indicates the direction of the impact or blow probably came from the side. This fracture was fully healed at the time of death.

Plate 4: Healed rib fracture (white arrow). Anterior aspect. Scale bar 2cm.

Only part of the mandible was recovered, along with a single tooth (Plate 5). Fresh breaks appear to be the reason for the post-mortem loss of the rest of the dentition as there was little surface bone intact across the alveolar region. It was possible to discern fourteen dental positions and a single tooth (the lower right second premolar). There was no evidence of disease in this tooth, although small patches of dentine have been exposed which indicate some natural 'wear and tear' of the tooth. The lower right first molar has been lost ante-mortem and has fully healed. Some bone resorption is visible in the area of the lower left first molar so whilst it is possible this tooth was lost before death, recent damage makes this difficult to confirm. A dental inventory is given in Appendix 2.

Plate 5: Mandible and remaining tooth for SK1. Note the fresh breaks and damage to tooth sockets. Scale bar 5cm.

3.18 Discussion

The human bone assemblage from Eynsham represents around 35% of a single individual. The condition of the remains was generally good, with excellent surface detail visible. Sexually diagnostic features of the skull and pelvis suggest that SK1 was biologically male, and age related skeletal changes indicate he was between 50 and 65 years old at the time of death. He would have attained a stature of around 165.5cm (5'5") and his skeleton was generally very robust in appearance, with prominent muscle attachments.

A number of pathological changes were noted, which included a significant amount of spinal joint disease, amounting to osteoarthritis of the spine. Spondylosis of the fifth lumbar vertebra had taken place, and the topography of L5 and its neighbour vertebrae were heavily altered in response. An additional traumatic lesion was identified in a fully healed rib shaft fracture. Degenerative changes to the right humeral head (likely age and activity related) were also noted, in addition to numerous prominent muscle attachments across the body. Given the small quantity of remains, it is difficult to draw wider conclusions about SK1, although it seems reasonable to summarise him as an older male who had experienced a great deal of strenuous physical activity during his life.

The fragmentation of the remains, with several clean fresh breaks which refitted and some post-depositional crushing damage, suggests the individual had likely been disturbed by machine. Many upper body elements were recovered, including some hand bones. Both femurs were truncated in the same place, at the level of the femur heads, which may imply that the lower part of the skeleton continues under a section somewhere on site. It is probable that further ground breaking works could find the rest of this individual and even additional human remains.

It has been posited that the remains date to the Roman period, in keeping with the bulk of archaeological finds from site, which date to the 2nd - 3rd centuries AD. Whilst it is possible this individual dates to this period, the remains themselves cannot confirm this. Both inhumation and cremation were practised with a great deal of regional variation in Roman Britain, although cremation is usually considered more typical of the earlier period (Taylor 2001).

3.19 Recommendations

No further osteological work is recommended for the human skeletal material from Beech Court, Eynsham, The remains should be deposited along with the paper archive at a local museum as per the Written Scheme of Investigation.

4 DISCUSSION

Though there were several cut features identified in section that may have been grave cuts, the human bone report identified only one individual, SK1. This skeleton been truncated just below the heads of the femurs. It is evident that the skeleton recovered from the excavation of the soak-away came from one of the cuts identified in section but unfortunately the less than ideal nature of the recovery made identification of the

exact grave cut impossible. Cut 172 seemed a likely contender as it appeared that the removal of something from this cut had undermined the later deposits above its fill. However, no truncated bone could be identified in the face of the undermined section, though it is possible that further collapse of the fill had covered the remaining lower half of the skeleton.

The fills of the two shallower cuts in section, 174 and 176 did show evidence of bone in the section with obvious signs of truncation. However, without further excavation it was not possible to say that the skeleton came from either of these features or indeed whether the bone in section was human or animal. Both these features were shallow and may have been truncated before the development of the buried topsoil (170). The relationship of these two cuts to each other was difficult to determine and it is suggested that they may be one continuous cut with an uneven base.

No contextual information was available for the assemblage but a mid-Roman date (2^{nd} – 3^{rd} centuries AD) has been suggested for it based on findings from the previous excavations (John Moore *pers comm.* 2016, JMHS 2016). This broad date may also be tentatively proposed by the orientation of the burial.

No direct evidence for orientation could be ascertained due to the nature of the excavation. The bone report, however, noted that remains have been truncated in roughly the same place on both sides, at the level of the femur heads. It is suggested by this that SK 1 had been buried in an extended position and if we assume that the break of both femurs was perpendicular to the southerly section then this would suggest an orientation with the head towards the NNW and this might suggest a burial predating later Christian practices of east-west orientation.

In conclusion whilst it is not certain which cut SK1 came from it is certain that it had been truncated from one of them. The other one or two remaining cuts may also be grave cuts but with limited evidence in the form of recovered bone.

The evidence for orientation would indicate that the burial must have been orientated with the head in a northerly direction, which would identify the burial practice as one that is not part of the later Christian rite.

8 BIBLIOGRAPHY

Aufderheide, AC & Rodriguez-Martin, C. 1998. Human Paleopathology. Cambridge, Cambridge University Press.

Brickley, M & McKinley, JL (eds.) 2004. *Guidelines to the Standards for Recording Human Remains*. BABAO/IFA 8-12.

Brooks, S & Suchey, JM. 1990. Skeletal age determination based on the Os Pubis: a comparison of the Acsádie Nemeskéri and Suchey Brooks methods. Hum Evolution 5: 227-238.

Hillson, S. 1996. *Dental Anthropology.* Cambridge University Press, Cambridge.

John Moore Heritage Services 2016. *Archaeological watching brief at Beech Court Care Home, Newland Street, Eynsham*. Unpublished. John Moore Heritage Services, EYNR 14.

Lovell, NC. 1997. Trauma analysis in paleopathology. Yearbook of Physical Anthropology 104, S25: 139-170.

Lovejoy, CO, Meindl, RS, Prysbeck, TR & Mensforth, RP. 1985. Chronological metamorphosis of the auricular surface of the ilium: a new method for the determination of adult skeletal age al death. American Journal of Physical Anthropology, 68: 15-28.

Mays, S & Brickley, M *et al*. 2004. *Human Bones from Archaeological Sites: Guidelines for Producing Assessment Documents and Analytical Reports.* English Heritage.

Meindl, RS & Lovejoy, CO. 1985. Ectocranial suture closure: a revised method for the determination of skeletal age at death based on the lateral anterior sutures. *American Journal of Physical Anthropology* 68: 57-66.

Merbs, CF. 1996. Spondylolysis and Spondylolisthesis: A Cost of Being an Erect biped or clever adaptation? Yearbook of Physical Anthropology 39: 201-228.

Miles, AEW. 1962. Assessment of the Ages of a Population of Anglo-Saxons from Their Dentitions. *Proceedings of the Royal Society of Medicine* 55: 881-886.

Moorrees, CFA, Fanning, EA & Hunt, EE. 1963a. Age Variation of formation and resorption of three deciduous teeth in children. *American Journal of Physical Anthropology* 21: 205-213.

Moorrees, CFA, Fanning, EA & Hunt, EE. 1963b. Age variation of formation stages for ten permanent teeth. *Journal of Dental Research* 42: 1490-1502.

Roberts, CA & Cox, M. 2003. *Health and Disease in Britain: From Prehistory to the Present Day.* Stroud, Sutton Publishing.

Roberts, CA & Manchester, K. 1995. *The Archaeology of Disease*. New York, Alan Sutton Publishing Limited, 2nd ed.

Scheuer, L & Black, S. 2000. *Developmental Juvenile Osteology.* Academic Press, London.

Scheuer, JL, Musgrave, H, & Evans, SP. 1980. The estimation of late foetal and perinatal age from limb bone length by linear and logarithmic regression. Annals of Human Biology, 7,3: 257-65.

Schwartz, JH. 1995. *Skeleton Keys: an Introduction to Human Skeletal Morphology, Development and Analysis.* Oxford, Oxford University Press.

Taylor, A. 2001. Burial Practice in Early England. Stround, UK, Tempus.

Trotter, M. 1970. Estimation of stature from intact long limb bones. *Personal Identification in Mass Disasters.* ed. Steward, TD. Smithsonian Institution, Washington, D.C. pp 71-83.

Appendix 1 – Summary Table

Skeleton no.	*Pres.*	*Completeness*	*Age*	*Sex*	*Stature*	*Pathology and trauma*	*Notes*	*MNI*
SK1	1	35% complete. Partial skull including frontal, left/right parietals and occipital and partial mandible with one tooth (PM2) present. Three cervical, three thoracic and 3 lumbar vertebrae, partial S1. 4 right rib ends, 7 left and several rib shaft fragments. Most left pelvis, anterior part right pelvis. Left/right humerus, distal right ulna/radius, complete left radius. Right MT5, left MT2 and MT3. Left/right femur heads. High degree of recent fragmentation with several refitting fragments.	50 – 65 years at death	Male	165.5cm (5'5")	Plaque-like osteophyte deposits on right humeral joint surface and margin, and porosity. Small cortical defect in area of insertion of infraspinatus on the greater trochanter of the humerus. Exostosis right femur in location of obturator externus insertion. Cervical vertebrae with osteophytic bone in lateral parts of body margin and porosity, ?C3 and ?C5 with small patches of eburnation right body margin. Thoracic vertebrae with osteophytic bone growth and porosity. T10 or T11 with Schmorl's nodes upper and lower body surfaces. Lumbar vertebrae with osteophytic changes anterior bodies and widespread porosity. L5 with wedge shaped vert. body and spondylolysis. Fibrous connection on right superior articular facet, pseudo articulation between left superior articular facets of L5 and S1 due to absence of L5's spinous process. Well healed fracture in rib end fragment, anterior part, around 2cm from margin with costal cartilage. Only 14 tooth positions present. One tooth lost ante-mortem (lower right M1).	Generally robust individual with prominent muscle attachments. Two fragments of animal bone recovered with remains.	1
							TOTAL MNI	**1**