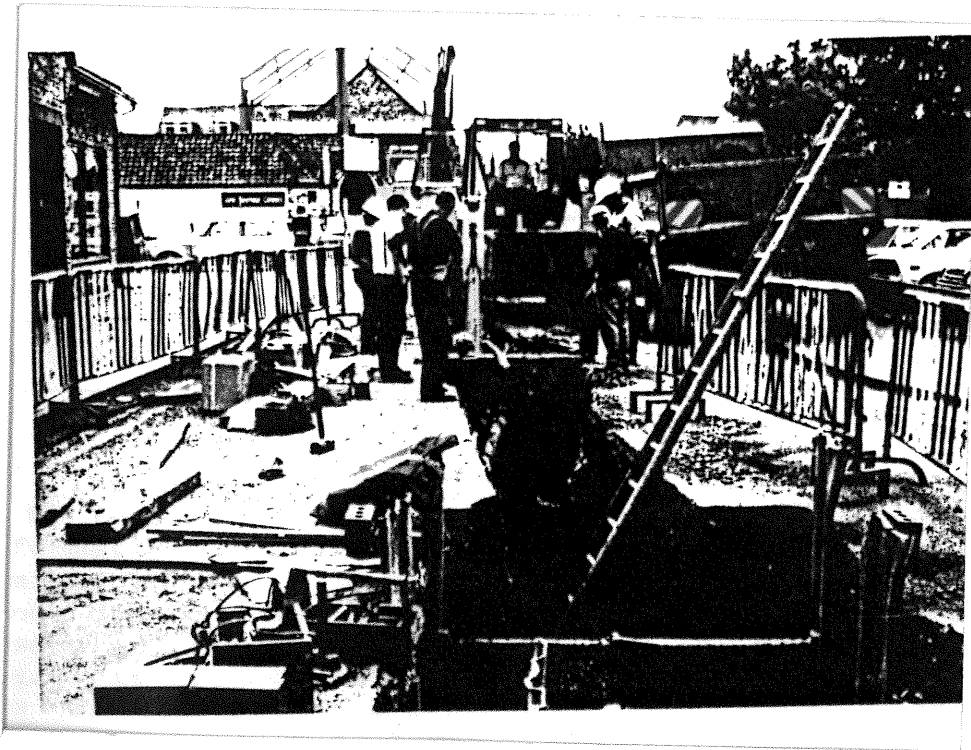


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AFU REPORT - NO.7

St Neots Priory 1989



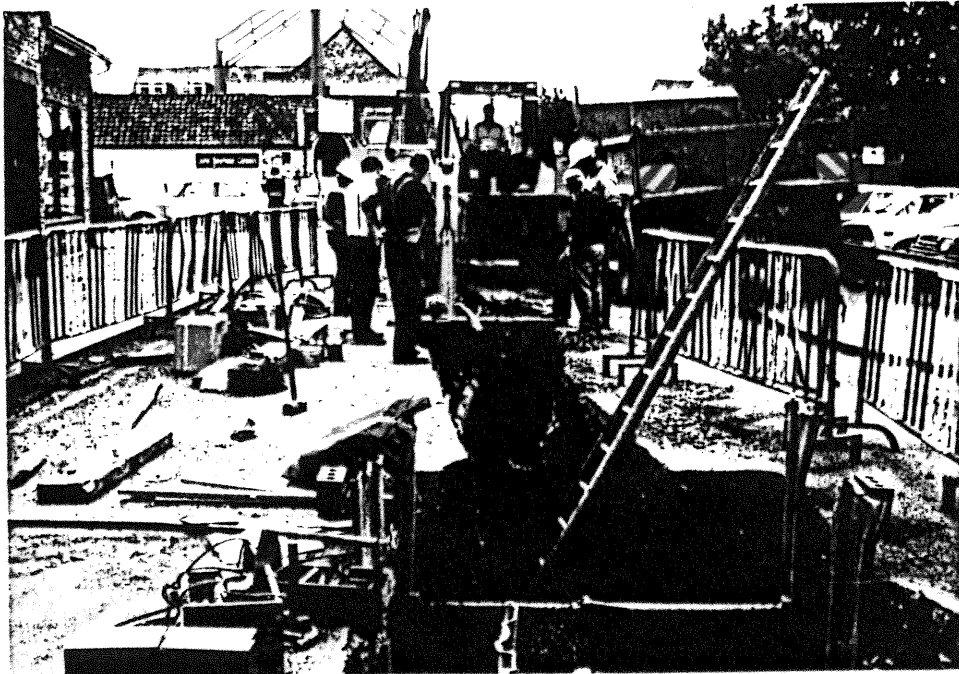
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St Neots Priory 1989

Wendy Horton and Gerald Wait



Cambridgeshire County Council 1990

ST. NEOTS PRIORY 1989

Wendy Horton and Gerald Wait

Abstract

A watching brief was carried out while a sewer line was replaced in Priory Lane St Neots. This revealed a number of human burials and disturbed bones, as well as remains of a building associated with the medieval Benedictine Priory of St Neots.

Setting

History

The history of the St Neots priory is well documented and needs only brief discussion here (Haigh 1988, Tebbutt 1956, 1966). The Benedictine Priory of St Neots was founded circa 972-975AD by Bishop Ethelwold, though it is curious that it is not mentioned in 1066. The Priory was refounded as a daughter cell of the Abbey of Bec by Robert Fitz Wimarc after 1066. The Priory church was completed by 1113, and for the next two centuries the Priory grew in importance if not in wealth. In 1409 the Priory achieved full independence from Bec. However, by the late fifteenth century the Priory was in financial trouble with many of its buildings in poor repair, although this was remedied and the house regained something of its stature before the Dissolution of the Monasteries in 1539.

Previous Work

The Priory was partially excavated between 1954 and 1960 by C F Tebbutt (1956; 1966), and much incidental historical information is available. Unfortunately the excavations were limited in scope and not recorded in detail, and the archive has since disappeared (though some of the finds are in St Ives museum). Much of the plan of the Priory (reproduced below, Fig.1) is conjectured and as Haigh noted (Haigh 1988, 76), there are anomalies that are not explained by the standard Benedictine lay-out. Because of these inconsistencies, interpretation is severely restricted.

During construction work in 1986-87 two burials in stone coffins were recovered from the corner of the car-park just east of the Priory buildings and north of the 1989 sewer trench. These burials are reported below.

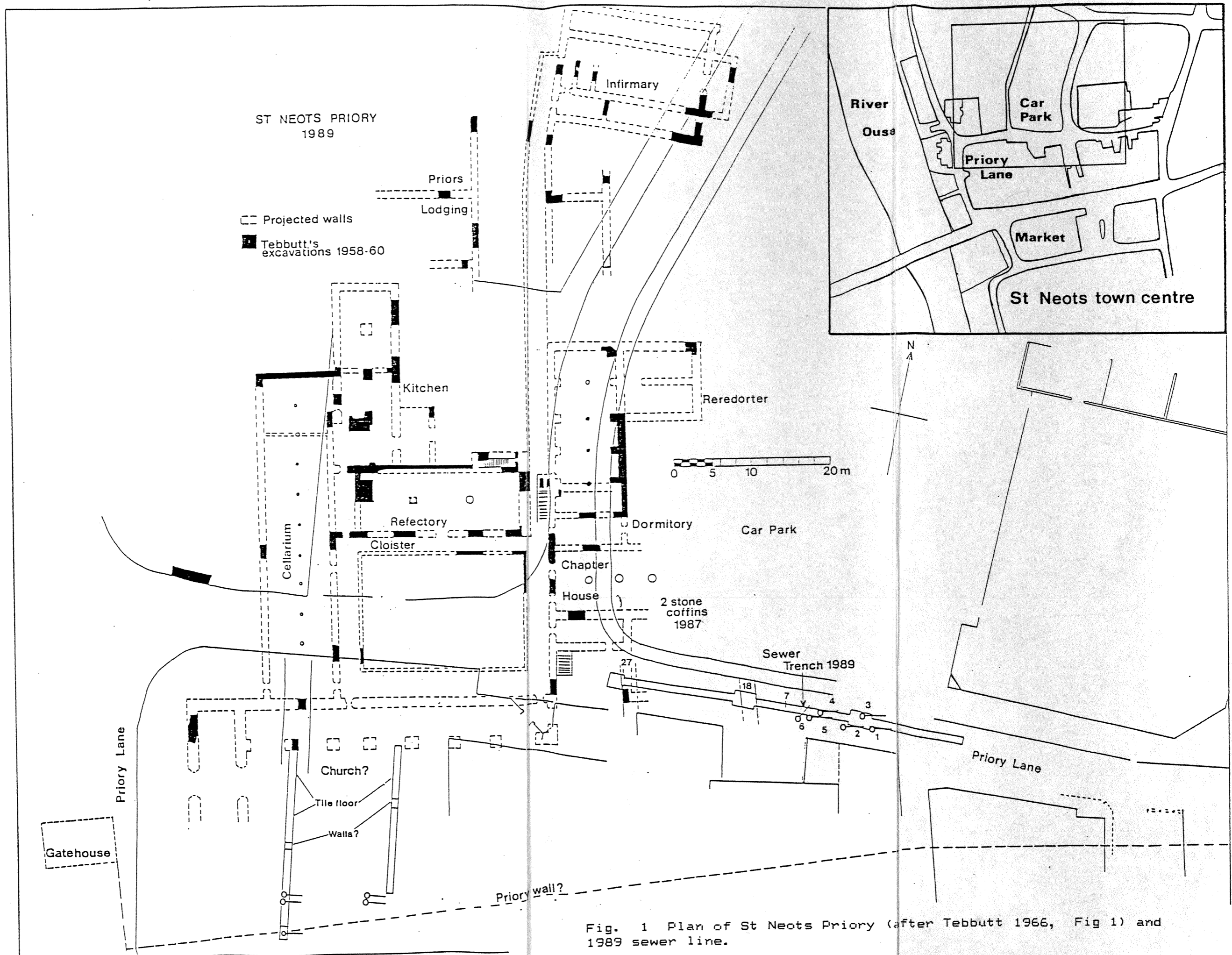


Fig. 1 Plan of St Neots Priory (after Tebbutt 1966, Fig 1) and 1989 sewer line.

Watching Brief

The replacement of a sewer line in Priory Lane in 1989 destroyed part of the Scheduled area of the Priory and human remains were encountered. As a result, the County Archaeologist was notified, Scheduled Monument Consent for the sewer arranged and a watching brief for the remainder of the work was arranged as a condition of Consent. The funding for the work and subsequent analysis of the human remains was provided by Huntingdonshire District Council.

Strategy of Fieldwork

The course of the sewer line is shown in Fig. 1. Human burials were to be expected as it crosses the area of the medieval cemetery recorded in Tebbutt (1956, 1966). Its western end was also expected to reveal remains of some of the buildings recorded by Tebbutt. This therefore presented the opportunity to confirm Tebbutt's results in general and it was hoped to shed some light on his more detailed interpretation of the church building and associated cloister.

The replacement sewer ran east-west and covered a distance of 100m but archaeologists were only notified of the western 46m, when the contractors encountered human bones. The sewer trench was about 1.05m wide and 1.7m deep. It was not quite straight, changing direction slightly in order to avoid other modern facilities (gas pipes, electric cables etc.) and included three pits for man-holes, each c. 1.8m wide and 2 or 3m long (see Fig. XXX).

Results

A deposit of post-medieval build-up [1] was found directly beneath the modern road throughout the trench. This varied in depth between 0.8 and 1.2m and consisted of dark brown silt with lenses of red and black, containing tile, modern brick, glass and post-medieval pottery. This was sharply differentiated from the layer below [2], a red brown silt with occasional pebbles. This contained no post-medieval material and the top may be the surviving medieval surface. Also, all the features mentioned below (burial pits and foundation trenches) were cut from (or only survive from) this level. This deposit lies on top of natural [3] - a mixture of fine sand and gravel with a striking red colour.

The types of features found divide the trench into two parts; burials were found in the eastern half and foundation trenches and a floor were found in the western half, with no overlap between the two.

Near the east end of the trench, on the south side, a few loose human bones were found near the base of unit [2], both east and west of a modern concrete block [4] 1.8m from the east end. The first burial was found immediately east of the first man-hole pit (and from 9.6 to 12.1m from the east end of the trench). This burial was suspected beforehand by the presence of seven large sandstone slabs each 30 by 50 by 14 cm deep, seen protruding from the south side of the trench, at the base of a pit [5] 2.6m wide. The stones appeared to have been purposely laid with a soft, white, crumbly mortar both between and above them. The skeleton (no. 1) was found neatly laid out orientated east-west directly below the stones. The body was supine in an extended position with the face upward and the right arm folded over the left arm. The stones above had caused some disturbance; both femurs had been snapped and the right leg slightly twisted. The hands and feet had been crushed by the weight of the stones and not all their bones were recovered.

Parts of two skeletons (nos. 2 and 3) were found along the edges of the 1st man-hole pit. Skeleton number 2 was found in the south section, 13.85m from the east end of the trench. The body was orientated ENE-WSW (at an angle of 30 or 40 degrees to the side of the trench) with only the lower legs protruding from the section. The rest of the body lay beyond the limit of the trench and was not recoverable. The body lay in a burial pit [7] with almost vertical sides cut from the top of layer [2], with a flat bottom and sharp corners. It is similar to cut [5] for skeleton no. 1, although only an oblique cross-section of the pit was visible.

Skeleton no. 3 was discovered in the northeastern corner of the 1st man-hole pit. It was the first found on the north side of the trench. The body was orientated in a NE-SW direction, and excavation of the lower legs would have involved tunnelling into the section which was not possible. The skeleton otherwise was exceptionally well-preserved and all bones were recovered. The teeth were all present including wisdom teeth, and they were also very well-preserved. There was however, a considerable amount of wear on one side of the mouth. The body was not as neatly laid out as skeleton no. 1 in cut [5]; the face pointed slightly southwards and the arms were not parallel, the right arm being quite straight and the left arm bent, with the lower arm and hand passing beneath the pelvis. The burial cut [9] was similar to

[5] and [7], with nearly vertical sides, sharp corners and a flat bottom. Again, only an oblique cross-section of the burial cut was visible.

Moving west from the first man-hole cover, a further skeleton, no. 4, was found orientated ENE-WSW with the right-hand side of the body protruding from the north side of the trench. The skull at the west end lay 3.8m from the west end of the man-hole pit and had been cut by the earth moving machine, so it was not all retrieved. The body appeared to be slightly disturbed, though most of the right side was recovered. Surprisingly, no burial cut could be seen.

About 20 cm west of skeleton no. 4, was a pit or ditch [11], about 1m wide and 0.35m deep with gently sloping sides, which broke gradually onto a curved base. Although cut from the top of layer [2], it has a very different shape compared to the burial cuts mentioned above. This pit would appear to be post-medieval. A few disarticulated human bones were found at the bottom of the pit, which had been broken in antiquity and may have been from a child or young person.

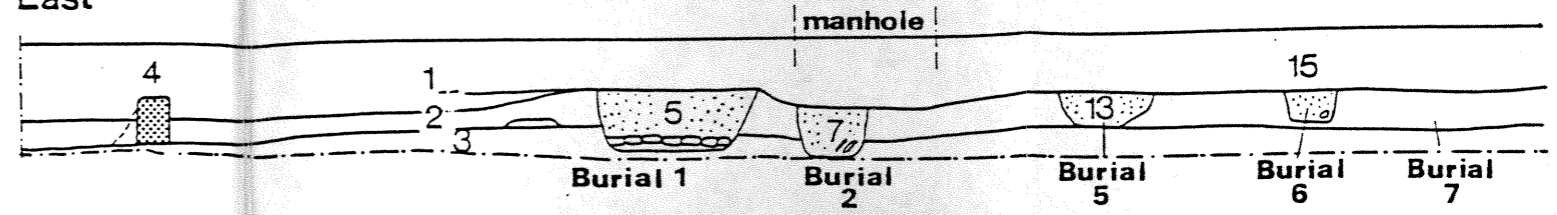
On the opposite side of the trench, 2.1 to 3.6m from the west side of the 1st man-hole cover, was another burial of particular interest, no. 5. This appeared to be an undisturbed grave but the burial pit [13] was shorter than usual and the body partially disarticulated as a result. The pit was 1.5m long at the top and 1.2 m long at the bottom. The sides were not quite vertical, but sloped with a gradual break onto a flat bottom. There was a thin layer of gravel along the bottom, directly beneath the skeleton. It was orientated E-W and only the left-hand side protruded from the section, so the right side was not recovered. The pit was not long enough for an extended skeleton, and may have been intended for a partially disarticulated skeleton. The skeleton was placed with the lower leg above the upper leg, and the pelvis positioned almost vertically. The ribs appeared badly crushed although the vertebrae are all articulated. The fingers or hands were above the head and not all of the skull was recovered. There was a thin layer of charcoal above the body.

A totally disarticulated burial (number 6) was found further west, approximately 5.75m west of the 1st man-hole cover. The pit [15], 80cm wide and 50cm deep, was found on both the north and south sides of the trench and was orientated NNE-SSW. The cranium was found on the south side, mixed up with other miscellaneous bones while other fragments were found on the north side. Some parts of the skeleton were probably removed from the middle of the trench by the construction machine. The pit itself

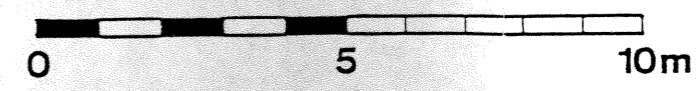
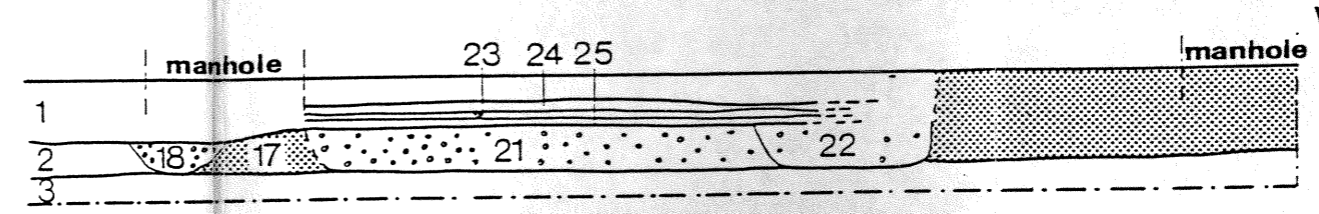
ST NEOTS PRIORY

South Face

East

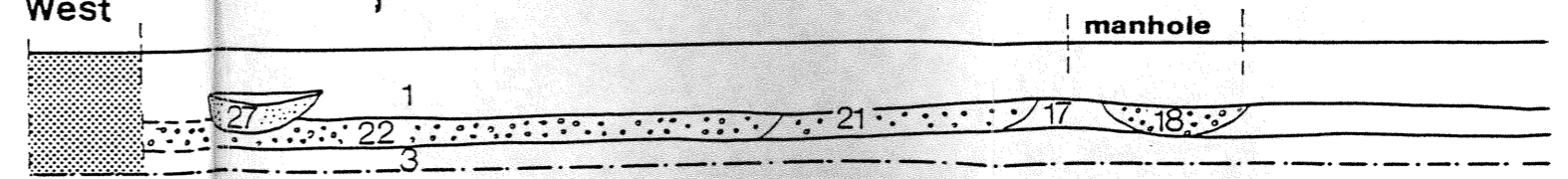


West



North Face

West



East

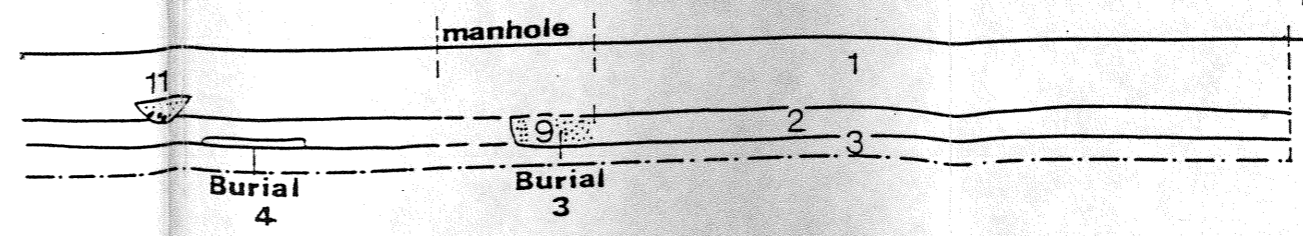


Fig. 2 Section drawings of 1989 watching brief.

has nearly vertical sides, which break sharply onto a flat bottom. Skeletal analysis indicates that the bones and fragments represent at least two individuals.

The last collection of human bones was found redeposited in a relatively modern trench made for installing a sewer, 7.8m from the west end of the first man-hole cover, more or less in the centre of the trench. The fill was a sticky dark grey to black silt, with many modern brick and tile fragments. The miscellaneous collection of bones were found 1.2m from the top surface. They had been broken in antiquity and appeared to come from one individual who was exceptionally large.

From this point, the features in the trench changed in nature. There were no more burials, but instead, cuts and fills which probably comprise foundation trenches and a floor.

The first trench [18] was seen on both the north and south sides of the second man-hole cover pit, (28m from the east end of the trench). It was cut from the top of layer [2] with sloping sides, 30 or 40 degrees from horizontal, and a rounded bottom with no sharp breaks. The feature is about 55cm deep throughout and is not quite perpendicular to the trench, with an orientation NNW-SSE. The oblique cross-sections on each side of the trench are not the same width; the south cross-section is 1.6m wide and the north cross-section 2.3m wide, the reason for which is unclear. The fill was dark brown clayey silt with frequent flint cobbles up to 15 cm in diameter. It is likely that this feature is a foundation trench.

About 1m west of feature [18] is the beginning of another cut [20] (see Figs. 1, 2), which is very similar in shape to [18], and the fill [21] is about the same depth, 50-60cm. This continues westwards for 4.5m where another cut, or possibly a slip line is seen sloping down sharply from east to west. The material to the west [22] consists of flint nodules like those in trench [18], in a cream coloured mortar-type material. This continues for another two or three metres before disappearing due to modern disturbance. These fills would appear to be purposely deposited and the possible slip line suggests that material was poured in from the east. They may be make-up levels for a building or room, bound to the east by the wall which would have stood on foundation fill [19].

Immediately above fills [21] and [22] on the south side a band of layers could be seen. It became evident that one of these layers [23] was a floor, consisting of small red tiles, c. 10cm x 10cm and 1.5cm thick, with traces of a brown monochrome glaze. These were laid out side by side, each separated by a thin line of grey

silty mortar a few millimeters thick, which was also found immediately below the tiles. The floor disappears about 7.5m west of the second man-hole pit.

Above the floor and below post-medieval layer [1] is a deposit [24] made up of a mixture of grey silt, mortar and red sand, with few inclusions. The top surface of it is uneven and the thickness variable. It is likely to be a destruction level. Immediately below the floor there is a thin layer [24], 3cm thick, of grey silt and red sand with a crumbly texture. This is either a make-up level for a floor or an earlier floor. Below this and above deposit [21] is grey-brown silt [25] containing small pebbles up to 4 cm across. This looks like a floor make-up level. The top of [21] on the north side starts 30 or 40 cm below that on the south, above which is post-medieval debris [1], so it is likely that the floor [23] was removed in post-medieval times on the north.

The westernmost 8.5 metres of trench showed very little stratigraphy because it approximately followed a Victorian sewer line. There was, however, one cut [27] seen on the north side, 1.5m east of the 3rd and final man-hole cover pit. This may have been cut from a high level, c. 70cm below ground surface (within post-medieval deposit [1]) and was about 2m wide and 70 cm deep. The west side was steep but the east side sloped more gently, with a fairly sharp break onto a rounded bottom with the lowest point at the centre. The fill of this feature consisted of grey-brown silt with moderate pebbles and flecks of mortar with slip lines on both sides, from the top to the bottom. This may be either a post-medieval robber trench of a medieval wall or a post-medieval pit.

Finds, apart from human skeletal remains and the tiles on the floor (which may be of the later fifteenth century), were very rare, probably due to the method of excavation employed by the construction. One piece of St. Neots shell-tempered ware was found in association with one of the burials [3] which points to an early medieval date. Burials 5 and 6 contained roof or floor tile of fabrics found by Tebbutt (1966, 49-50). A sample tile from floor [23] was taken, along with several other tiles with brown glaze. One piece of lead strip (possible window "cram" and a handle of a jug or platter of late fifteenth century fabric complete the finds recovered during the 1989 watching brief.

In conclusion, the trench is divisible into two halves with evidence for part of a grave-yard to the east and a building to the west. There were seven burials in total, with two complete skeletons recovered. They were buried in the graveyard immediately next to a building, which, according to C.F.

immediately next to a building, which, according to C.F. Tebbutt's plan, could be part of the church. If his plan is correct, the trench was immediately east of the north transept, the west half of which would run through adjoining room such as a chapel or vestry. Tebbutt also notes from his excavations, that floor tiles were only found in the church and refectory and that floors elsewhere were of poor quality and consisted of compacted clay or mortar which was frequently renewed. If his plan is correct, the tiled floor is likely to be within the church. Cobbles were frequently used for foundations, and cobbles in silt or mortar were found both beneath the floors and in a foundation trench of the eastern wall of this building.

Discussion

The 1989 Watching Brief - Structural Remains

As mentioned above, the attributions of building remains to elements of the Benedictine Priory by C F Tebbutt (1966, Fig 1) must be regarded as uncertain. It was anticipated that this watching brief would elucidate where some of the Priory buildings stood, and what the buildings were to the south of the Cloister (Tebbutt's "Church"). This hope was not fulfilled. The floors [23] and [25] and wall trench [18] should all belong to the Priory but must represent a new building, while trench [27], though cut (or surviving) from a high level may also belong to the Priory as it's location precisely matches that of the east wall of the north transept of the "church". Wall foundation trench [18] could represent the east wall of the choir of the church. Tebbutt may have suspected a building in this position as he indicates walls extending in this direction (1966, fig 1) but no evidence for his reasoning survives. In spite of recording both wall foundations and floors, it does not appear possible to definitively reinterpret Tebbutt's plan of the priory, and consequently his building attributions are reproduced here (Fig 1).

However, comparison of Tebbutt's plan of St Neots with the plan of the Benedictine monastery of St Mary, Sherborne, Dorset (Saul, 1983, 179, fig 5), reveals that the two are extraordinarily similar, suggesting that Tebbutt's plan is not so anomalous as has been suggested. There is insufficient evidence to either prove or refute Tebbutt's interpretations.

It is worth noting here that the area of the "Kitchen" appeared to have deep stratigraphy in Tebbutt's excavations and was deliberately left largely untouched by him. This area is likely to still survive and may yet again provide an opportunity to clarify the phasing and design of the Priory.

The recovery of at least seven burials further to the east of the Priory buildings is hardly surprising given the large numbers of burials seen in the vicinity by Tebbutt and others. Furthermore, the presence of women and children confirms that this area was probably used as a parish cemetery. Some burials, in particular the more prestigious ones to the north would have been placed inside buildings, and the individuals may be benefactors of the Priory and so honoured with burial within the precincts.

The Human Remains

The human remains recovered in 1989 consist of three complete males, one female, and fragmentary remains of three other males, another female and a child. Burials 1,2,3,4, 6a and 7 are males; burials 5 and 6b are female. The group as a whole contains an unusually high number of skeletal anomalies. Burial 1 had extremely rare dental anomalies, burial 3 has a cranial anomaly that may be of clinical significance, burial 5 shows both degenerative pathologies of age and childbirth, while the extremely robust male burial 7 demonstrates both osteoarthritis and dramatic (but well healed) fractures of both tibias.

Only one burial contained any direct dating evidence, a sherd of St Neots ware which should date the burial to the tenth/eleventh century or later. As the church went out of use at the Dissolution in 1539, all burials may be presumed to date to before this period.

Burial	Sex	Age	Height	Anomalies
1	male	18yrs	5'4''/162 cm	Dental anomalies
2	male	?	5'10''/178cm	-
3	male	40+yrs	5'6''/167cm	Possible cranial anomaly
4	male	20yrs	5'9''/176cm	-
5	female	?55+yrs	?	Degenerative pathologies Childbirth trauma
6	(2 individuals)			
a)	female	?	?	-
b)	male	25yrs	?	-
7	male	35-39yrs	6'/182cm	Osteoarthritis Tibial fractures

Misc. fragments include a child of about 12 yrs.

Rescue work in 1986-87

During 1986 two burials were recovered during construction work associated with the new shopping precinct and car-park. No detailed records were kept, but several general points may be made. The burials were in stone coffins that may be dated by decoration on the lids to the thirteenth century. One burial was a female in her thirties with no signs of either trauma or of having been involved in heavy labour during life. The second was male. Both were interpreted as benefactor/resses of the Priory as they were thought to have been buried in the Cloister. It now appears more likely that they were in a building to the east of the transept/chapter house (as located in Fig 1), but the interpretation nonetheless remains the same. One of the burials has been reconstructed in Fig 3 below.

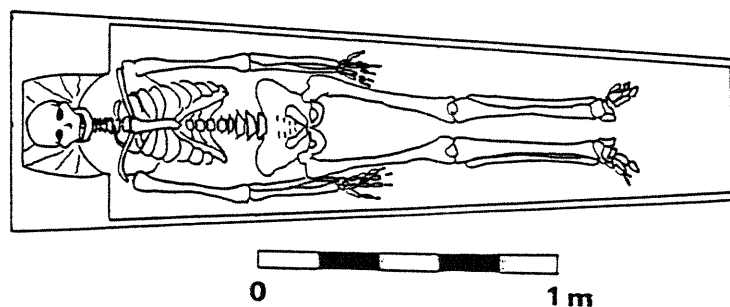


Fig 3. One of the coffined burials excavated during construction work in 1986-7.

SKELETAL MATERIAL FROM ST. NEOTS PRIORY 1989

by CORINNE DUHIG

The material from this site is heterogeneous, the complete skeletons representing three males of varied age, size and build, and one female, with fragments of at least three other males, one other female and a child also present. It must be borne in mind that patrons were allowed the favour of being buried in the Priory burial ground (J. Oeppen, pers. comm), so we should not expect entirely male interments; when part of this area was disturbed two years ago, one of the two skeletons found was female. Equally, the child is not necessarily an early entrant to the monastic community.

In terms of pathology and non-metric variation this is a outstandingly rich and interesting assemblage. It includes common problems such as dental disease and the degenerative changes of age, signs of infection and trauma in different areas of the skeleton, several non-pathological conditions and a rare anomaly of dental development.

In all the remains except one skeleton, the bone is well preserved with little erosion of the cortex, but with a loss of collagen which renders it somewhat brittle. Skeleton No. 3 is less brittle, with some elasticity indicative of a high collagen content; it may be a later burial, but the difference in preservation could result from different soil/drainage conditions in one area of the site.

Except where stated, age estimations are based on Ubelaker (dental development and eruption), Brothwell (tooth wear) and Suchey/Brooks (pubic symphysis changes); height estimation is from the regression formulae of Trotter and Gleser.

Skeleton No 1

This is an almost complete skeleton, lacking only a few bones of the extremities, of a small young man of about 18 years. The skull appears male, with strong brow ridges and flaring gonial angles; the pelvis has rather open sciatic notches but the sub-pubic angle would have been acute, and the auricular area shows the male conformation. This is, however, a gracile individual, whose height, estimated from eight long bone measurements, would have been approximately 162.6 cm (5' 4"). Age can be determined closely as the lower left third molar was just coming into occlusion while the uppers were, apparently, unerupted. The condition of the pubic symphysis confirms the age estimate of a young adult.

This individual has particularly interesting dental features. Upper and lower incisors are crowded out of alignment, which is usually the result of a small jaw size; and the right third molar is impacted, possibly again the result of tooth crowding; it is not impossible that the impacted tooth caused death through systemic pyogenic infection; certainly, the lack of wear on the other third molar shows that death closely followed its eruption. Both of these teeth have the uncommon +6 cusp pattern. The upper lateral incisors are shovelled; shovel-shaped incisors are characteristic of mongoloid populations, but are found regularly, as a low percentage, in europeans. The most remarkable dental feature is the fusion of the lower right central and lateral incisors, an extremely rare anomaly, coming about at an early stage of foetal development as a failure of differentiation of the tooth germs, and whilst development generally continues without malformation, this example is particularly well-formed; indeed, the fusion is not noticeable on immediate inspection.

Skeleton No 2

Only a pair of lower legs are preserved, the left being represented only by the complete tibia and a broken fibula, while the right is almost complete, with only a few phalanges missing. Measurements of the long bones give a height estimate of 178.9 cm; the degree of robusticity suggests a male individual. Another left tibia, with a dramatic fracture, was included with these remains, but has been ascertained as belonging to skeleton No. 7.

Skeleton No 3

This is another male, as shown by the form of skull and pelvis and by the general robusticity of the skeleton. The body is complete except for the lower legs, which were present but could not be excavated. Height was determined from eight long bone measurements as

167.4 cm (5' 6"). Various methods of age determination were used: tooth wear was uneven, the slight wear on one side suggesting an age of 17—25, heavier wear on the other side implying an older individual, 25—35 years; methods of ageing of the pubic symphysis gave differing results (Suchey/Brooks, McKern & Stewart, Todd) with a range of between 28 and 44 years, and the changes in the auricular area (Lovejoy *et al.*) were those associated with a person in his 40's; all sutures were closed. Overall, this is the skeleton of a mature to older adult.

There is little sign of disease in this individual, the teeth, especially, being in extremely good condition for the period, with no caries, abscessing, calculus or indications of periodontal disease. A Schmorl's node is present on the eighth thoracic vertebra, but isolated examples such as this are not uncommon and their diagnostic relevance is debatable. Within the skull, it is worth noting the very deep channels for the bregmatic vein, terminating in Pacchionian depressions, on the right side, which could indicate a venous anomaly of possible clinical significance.

In general, the bone of this skeleton was 'fresher' than that of the others, and a later period burial should be considered.

Skeleton No 4

Six complete long bones and an innominate are preserved from this individual, but only fragments of the skull vault and other portions of the body. Enough survives, however, to facilitate ageing, sexing and height estimation. These are the remains of a young man, approximately 20 years old, as shown by the fusing epiphyses of the arm bones and iliac crest and the condition of the pubic symphysis. Height was 176.5 cm (5' 9 1/2"), and there are no signs of disease.

Skeleton No 5

This partial skeleton is that of an older adult woman, represented by only two complete long bones, all the vertebrae (many being broken), and many other bone fragments. Most of the vault of the skull could be reconstructed, and portions of the face are present. The skull shows a combination of features which renders sexing problematical: the frontal is rounded, with very slight brow ridge, the mastoid processes are of medium size, whilst the occipital is rugged. However, enough is preserved of the pelvis to establish this as a female, the pubic symphysis showing wide sub-pubic angle with concavity and ventral arc. This is clearly an older person, in which the degenerative signs of age can be seen in the porosity of vertebrae and femoral articulations (compare the preservation of the other skeletons), the osteophyte development on most of the thoracic vertebrae, and the breakdown of the pubic symphysis and auricular area of the pelvis; in addition, all skull sutures are closed and almost completely obscured. The condition of the pubic symphysis suggests an age of approximately 47 years (G&McK) and that of the auricular area an age of over 60 years.

Apart from the degenerative changes mentioned above, this woman has an unusual bony 'spur' on the dorsal aspect of the pubic symphysis on the left side, extending across to the right side, where there is some new bone formation. This dense new bone, showing no evidence of infection, must have developed after tearing of the fibrocartilage of the joint, and is probably a reaction to the trauma of childbirth.

There is a small button osteoma, a benign tumour of bone, on the right frontal over the orbit. The only two teeth preserved, a central and lateral incisor, show hypoplastic lines in the enamel, indicative of some stress during the developmental period: problems of nutrition or febrile illness in childhood have been suggested as causes of hypoplasia.

Skeleton No 6

This 'skeleton' is, in fact, the remains of at least two individuals, consisting of fragments of a robust skull, including portions of vault, facial area and jaws, a complete frontal/anterior parietal area of a more gracile skull, and a small amount of postcranial material. The robust skull shows many male features, and tooth wear places it around the age of 25 years. The other, with its sharp orbital rims and rounded frontal profile, is probably female; that it represents a juvenile male is ruled out by the adult features of development of the frontal sinus and endocranial closure of the sagittal suture. It is not possible to associate the

postcranial bones with either skull, although the almost-complete clavicle is possibly within the female size range. The only vertebra, a thoracic, may show Schmorl's nodes, as seen also on skeleton No. 3, exaggerated by post-mortem erosion.

Skeleton No 7

The remains marked 'near No 7' were found to belong to this skeleton, almost complete but without a skull, which is that of an unusually large man, whose height was estimated from the complete right femur as 182 cm, or approximately 6' (compare skeletons 1 and 3). All bones are extremely robust and heavily marked by muscle insertions; in addition to this robusticity sex estimation can be made from many features of the sacrum and pelvis. Part of the pubic symphysis has been preserved, enabling an age estimation to be made of 35—39 years (Todd).

A single left tibia included with skeleton No 2, and having a fracture of the lower 1/3 of the shaft, was found to match the fractured left fibula of this individual. Both fractures have caused overlap of the shafts, resulting in considerable shortening of the bone — 7 cm in the tibia — but healing has been good and fracture callus has been almost wholly resorbed, so the injury was not sustained close to the time of death.

There are signs of osteoarthritis throughout the body, in osteophytic lipping of thoracic and lumbar vertebrae, parts of the pelvis and the articular areas of arm and leg bones, while osteophyte development, erosion and eburnation have affected the lateral articulation of the right clavicle, showing that the joint cartilage was destroyed. Some of this osteoarthritis, in the leg, pelvis and perhaps the spine, may be a result of the changing stresses of walking following the leg fracture. However, arthritic changes of this kind develop to some extent in most older adults, particularly when heavy physical work is undertaken, so their wide distribution is probably a factor of the general age degeneration.

There is a possible infective origin for the bone loss near the sternal articulation of the clavicle, but no more specific diagnosis can be made. Double condylar facets, an interesting variation of no clinical significance, are present on the atlas.

Other bones

The small groups of bones labelled as 'disturbed' or 'machine trench' are listed in the inventory, but it is worth noting that there is at least one immature individual present, represented by several long bones and portions of the pelvis: the unfused condition of the pelvis shows that it belonged to a child of not more than 12 years, a maximum age confirmed by the size of the long bones. Portions of a skull with open sutures may be related, but this cannot be confirmed.

The distal end of an unassociated adult tibia has a large outgrowth at the fibular notch, suggesting, by its condition, a long-standing problem in the articulation of these two bones rather than a single trauma. As described in skeleton No. 7, osteophytic lipping is also present in one isolated and two adjacent thoracic vertebrae, one of which is the most extreme case in this assemblage.

Infection is probably the cause of new bone development found on the tuberosity of a radius, but a more remarkable example is that of a fragment of tibial shaft, thickened and covered in a mass of extra-cortical new bone. This is not a localized condition, and must be the result of a systemic infection: osteomyelitis, infection of the marrow cavity, is not indicated, and while specific diseases such as syphilis and leprosy can produce periosteal reactions identical to this, so can other, less dramatic, non-specific infections. Unfortunately, no other bone shows changes which could relate it to this tibial fragment.

SKELETAL RECORD SHEET

Specimen No(s) : No 1
Site : St Neots Priory watching brief 1989
Source : Dr Gerald Wait, County Archaeologists Office
Report : 16.10.89
Publication :

Skeletal elements present

cranium : complete except for left malar and inner face, plus
small fragments of vault
mandible : complete
clavicles : both
scapulae : L complete, R blade broken
sternbrae : body
vertebrae : all including 1 coccygeal (body missing T12, L1)
ribs : 35 fragments
innominates : L lacking part pubis, R complete
sacrum : complete
upper limb
 humerus : both, R 298 mm
 radius : both, L 223 mm, R 223 mm
 ulna : both, R 247 mm
 c/mc/phals : L trm, mt x 5, p1 x 5; R mt x 5, p1 x 4, p2 x 1
lower limb
 femur : both, L 415 mm, R 418 mm
 patella : neither
 tibia : both, L 338 mm, R 335 mm
 fibula : both
 t/mt/phals : L calc, tal, nav, cub, 1 cun, 2 cun, all mt
 R calc, tal, nav, cub, 1 cun, 3 cun, all mt

Dentition

~~8~~7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 ~~8~~
8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8

Overcrowding of incisors, upper 2's shovelled, lower R 1/2 geminate 8's +6 pattern, L just reaching occlusion, R impacted; no wear facets on upper 7's for 8's

Sex

Skull : M, esp brow ridges and gonial angles
Pelvis : M but rather open sciatic notch
Other : gracile build

Age

Growth/epiphyses : adult
Teeth : c. 18
lower 8's just reaching occlusion, uppers absent



Pubic symphysis : young adult, billowing still visible
Other : coronal and sagittal sutures patent

Height : 162.6 cm (fem, tib, R hum, rad, R ul)

Pathologies : teeth as above
NB rarity of geminate teeth (?0.03%) cf. Khnum Nakht

Other comments

SKELETAL RECORD SHEET

Specimen No(s) : No 2
Site : St Neots Priory watching brief 1989
Source : Dr Gerald Wait, County Archaeologists Office
Report : 16.10.89
Publication :

Skeletal elements present

cranium :
mandible :
clavicles :
scapulae :
sternbrae :
vertebrae :
ribs :
innominates :
sacrum :
upper limb
 humerus :
) radius :
 ulna :
 c/mc/phals :
lower limb
 femur :
 patella :
 tibia : L complete; R complete 409 mm
 fibula : L shaft and dist; R complete 390 mm
 t/mt/phals : R calc, tal, nav, cub, 1 cun, 2 cun, 3 cun, all mt, pph
 1—5,
 dph 1

Dentition

8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8

Sex

Skull :

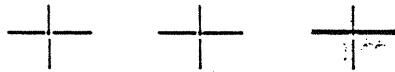
Pelvis :

Other :

Age

Growth/
epiphyses : adult

Teeth :



Pubic
symphysis :

Other :

Height : 178.9 cm (R tib, R fib)

Pathologies :

Other comments

Another tibia of approximately equal size, with well-healed fracture, added to #7

SKELETAL RECORD SHEET

Specimen No(s) : No 3
Site : St Neots Priory watching brief 1989
Source : Dr Gerald Wait, County Archaeologists Office
Report : 16.10.89
Publication :

Skeletal elements present

cranium : complete
mandible : complete, with hyoid and one calcified stylohyoid ligament
clavicles : both
scapulae : both, blades broken
sternabrae : manubrium and body, unfused
vertebrae : all
ribs : 49 fragments
innominates : both
sacrum : complete
upper limb
 humerus : both, L 322 mm, R 324 mm
 radius : both, L 225 mm, R 227 mm
 ulna : both, L 245 mm, R 248 mm
 c/mc/phals : L trm, trd, ham, mc x5, p1 x 5, p2 x 2, p3 x 1
 R scaph, lun, tri, trm, cap, ham, p1 x 5, p2 x 4, p3 x 1
lower limb
 femur : both, L 457 mm, R 450 mm
 patella : both
 tibia : absent (could not be excavated)
 fibula : "
 t/mt/phals : "

Dentition

8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8

complete
some calculus

Sex

Skull : M

Pelvis : M

Other :

Age : mature to older adult (c. 35-40)

Growth/
epiphyses : adult

Teeth : Brothwell 17-25 or 25-35 (wear differs both sides)



Pubic
symphysis : Suchey V, Todd VIII 40-44, McK&S 23-39

Other : auricular area 40-44. NB no arthritic changes

Height : T&G 167.4 (fem, hum, ul, rad)

Pathologies : Schmorls node T8
skull has very deep channels for bregmatic vein,
terminating in deep Pacchonian depressions

Other comments : bone is 'fresher' than all other specimens, possibly
later?

SKELETAL RECORD SHEET

Specimen No(s) : No 4
Site : St Neots Priory watching brief 1989
Source : Dr Gerald Wait, County Archaeologists Office
Report : 16.10.89
Publication :

Skeletal elements present

cranium : portions of vault (x 29)
mandible : absent
clavicles : L shaft & distal (x 2)
scapulae : L (x 3): prox coracoid; acromion; inferior angle
sternabrae : absent
vertebrae : L fragment
ribs : 24 fragments
innominates : L
sacrum : absent
upper limb
 humerus : L complete 344 mm, prox just fused
 radius : L complete 265 mm, dist just fused
 ulna : L complete 278 mm, dist just fused
 c/mc/phals : R mc x1
lower limb
 femur : L complete 487 mm
 patella : L
 tibia : L complete 389 mm; R fragments (x 4) incl. dist artic
 fibula : L complete 377 mm; R fragments (x 2)
 t/mt/phals : L calc, tal, nav, cub, 1 cun, 2 cun, 3 cun, mt x 5
 R calc; dp x 1

Dentition

8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8

Sex

Skull : N/A

Pelvis : M (all Phenice's)

Other : N/A

Age

c. 20:

Growth/
epiphyses : hum 19-20, ul 18-19, rad 18-19

Teeth : N/A



Pubic
symphysis : 20-21 (Todd II)

Other : iliac crest 19-23

Height

176.5 cm (L hum, rad, ul, fem, tib, fib)

Pathologies

: none

Other comments

:

SKELETAL RECORD SHEET

Specimen No(s) : No 5
Site : St Neots Priory watching brief 1989
Source : Dr Gerald Wait, County Archaeologists Office
Report : 16.10.89
Publication :

Skeletal elements present

cranium : most of vault, portions of face
mandible : absent
clavicles : fragments of both (3)
scapulae : fragments of both (5)
sternbrae : absent
vertebrae : all (some incomplete)
ribs : 34 fragments
innominates : both ischia, both symphyseal areas of pubis,
R auricular area
sacrum : upper part
upper limb
 humerus : L proximal and shaft
 radius : absent
 ulna : R proximal half
 c/mc/phals : absent
lower limb
 femur : L absent, R complete
 patella : absent
 tibia : L proximal and shaft, R complete
 fibula : L shaft, R shaft
 t/mt/phals : absent

Dentition

(A) (B)

8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8

Sex

Skull : ? (rounded frontal, little brow ridge, rugose occipital area,
medium sized mastoid processes)

Pelvis : F (ventral arc, subpubic angle and concavity)

Other : gracile long bones

Age

Growth/epiphyses : adult

Teeth : N/A



Pubic symphysis : c. 47 (G&Mck)

Other : 60+ (auricular area rarified and porous)

Height

Pathologies

: L pubic symphysis, dense bone spur overlapping the R, which has some o/phyte formation, no sign of infection: torn fibrocartilage, probably childbirth

vertebrae and femoral articulations (head and condyles), porosity, auricular area, degeneration : age changes

thoracic vertebrae, o/phyte formation: osteoarthritis

R frontal: button osteoma

Other comments

: G Wait says, contracted burial, ? earlier

SKELETAL RECORD SHEET

Specimen No(s) : St Neots 6
Site : St Neots Priory watching brief 1989
Source : Dr Gerald Wait, County Archaeologists Office
Report : 16.10.89
Publication :

Skeletal elements present

cranium : a) 4 fragments: R frontal and upper orbit/temporal; R maxilla and lower orbit; L temporal; L maxilla with 6-8
b) whole frontal with upper orbits, part parietals
mandible : a) L half, R condyle
clavicles : R lacking sternal end
scapulae : R glenoid fossa (trace of rim)
sternabrae :
vertebrae : 1T (?Schmorl's nodes with p/m erosion)
ribs : 5 fragments
innominates :
sacrum :
upper limb
 humerus :
 radius :
 ulna :
 c/mc/phals :
lower limb
 femur :
 patella :
 tibia :
 fibula :
 t/mt/phals :

Dentition

~~8-7-6-5 4 3 2 1 1 2 3 4 5 6 7 8~~
~~8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8~~

slight cervical calculus; alveolar resorption slight throughout and medium on 67 where lipping

Sex

Skull : a) M (orbit, brow, up temp line, mastoids)
b) F (orbit, brow, up temp line absent, frontal; NB not juv M see age below

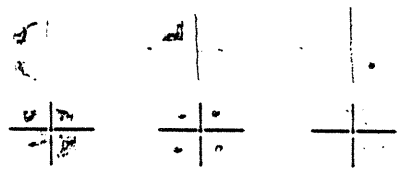
Pelvis :

Other :

Age :

Growth/ : b) adult: endo closure of sag suture, dev. of frontal sinus epiphyses

Teeth : a) c. 25



Pubic symphysis :

Other : p/c bones adult

Height :

Pathologies : 'rim' on glenoid fossa

Other comments:

3 animal bones

SKELETAL RECORD SHEET

Specimen No(s) : No 7 (including bones marked 'near No 7')
Site : St Neots Priory watching brief 1989
Source : Dr Gerald Wait, County Archaeologists Office
Report : 16.10.89
Publication :

Skeletal elements present

cranium : absent
mandible : absent
clavicles : L complete 169 mm; R complete 164 mm
scapulae : L broken (x 2); R broken
sternabrae : body
vertebrae : atlas; T8, 9, 10, 12; L1—5; Co1
ribs : 25 fragments
innominates : R (x 3): blade, acetabulum/ischial tuberosity; auricular area
sacrum : complete
upper limb
 humerus : L almost complete; R shaft and dist
 radius : R prox & dist (x 2)
 ulna : L prox; R complete 281 mm
 c/mc/phals : absent
lower limb
 femur : L prox & shaft (x 2); R complete (x 3) 507 mm, condyles 95 m
 patella : absent
 tibia : L complete (from #2); R almost complete
 fibula : L shaft; R shaft
 t/mt/phals : L mt2; R mt2

Dentition

8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1 | 1 2 3 4 5 6 7 8

Sex

Skull : N/A
Pelvis : M (sciatic notch, subpubic angle)
Other : M (sacrum highly curved, body >x2.ala; femoral condyles)

Age

: older adult

Growth/epiphyses : adult

Teeth : N/A



Pubic symphysis : Suchey 23—59/28—78, Todd VII 35—39

Other : o/arthritis changes in many bones (NB changes in verts may be due to postural change from fracture, but not arm)

Height : 182 cm (fem)

Pathologies : L tib & fib fractures of lower 1/3 of shafts, well healed, loss of c. 7 cm; some lipping on tibial head, resorption anterior edge of distal artic (? results of new stresses)

O/phyte lipping on radial notch of both ulnae, R lipped at distal artic with radius; R radius lipped on head at artic with ulna, ?erosion of tuberosity

O/phyte lipping on R femur medial condyle

O/phyte lipping on all verts except atlas

Schmorl's nodes on T8—10

Double condylar facets on atlas

L clav bone erosion behind sternal end; R clav lateral end eroded, eburnated and slightly lipped

Other comments

6 animal bone frags, one cow tooth and one horse tooth

SKELETAL MATERIAL FROM ST. NEOTS PRIORY 1989
 INVENTORY OF 'DISTURBED' OR 'MACHINE TRENCH' BONE

Layer 1

femur: R (x 7)
 fibula: shaft fragment
 metatarsals: L 2nd
 foot phalanges: 1st proximal

Layer 2 group A

skull: vault + 5 fragments (?M: nuchal area and mastoids,
 older adult: all sutures obliterated)
 vertebrae: upper thoracic, with lipping and Schmorl's nodes
 humerus: L proximal
 tibia: R, with outgrowth posterior to fibular notch, slight lipping on condyles

Layer 2 group B

femur: L distal (x 2)
 tibia: R shaft
 metatarsals: R 5th

IMMATURE:

ribs: 1 fragment
 innominate: L, 3 fragments of acetabular area, all unfused
 humerus: L proximal, distal, head epiphysis
 ulna: L
 radius: L
 femur: L proximal, head and trochanter epiphyses
 tibia: L distal
 fibula: shaft

Layer 3

skull: vault (x 3), with open sutures
 one worn canine
 vertebrae: 2 thoracics, with degenerative changes of articular surfaces,
 lipping (one extensive), Schmorl's nodes
 ribs: 7 fragments
 scapula: R fragment (x 2)
 humerus: R distal
 ulna: R distal
 radius: L proximal, with infective new bone on tuberosity, lipping on head
 femur: R shaft
 R proximal
 tibia: L proximal} not
 R proximal} pair
 L proximal shaft, large, thick cortex, with ECNB over whole surface, no
 cloacae
 fibula: shaft fragment
 unidentified: 4 shaft fragments

Layer 17

humerus: R proximal
 femur: R proximal

Notes

- 1 The finds and archive are kept in the County Archaeology Office. The Human remains were studied in the Duckworth lab, of the Dept. of Biological Anthropology, Cambridge.
- 2 The human remains will be reinterred after study.

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Todd

Trotter and Glesser

Ubelaker