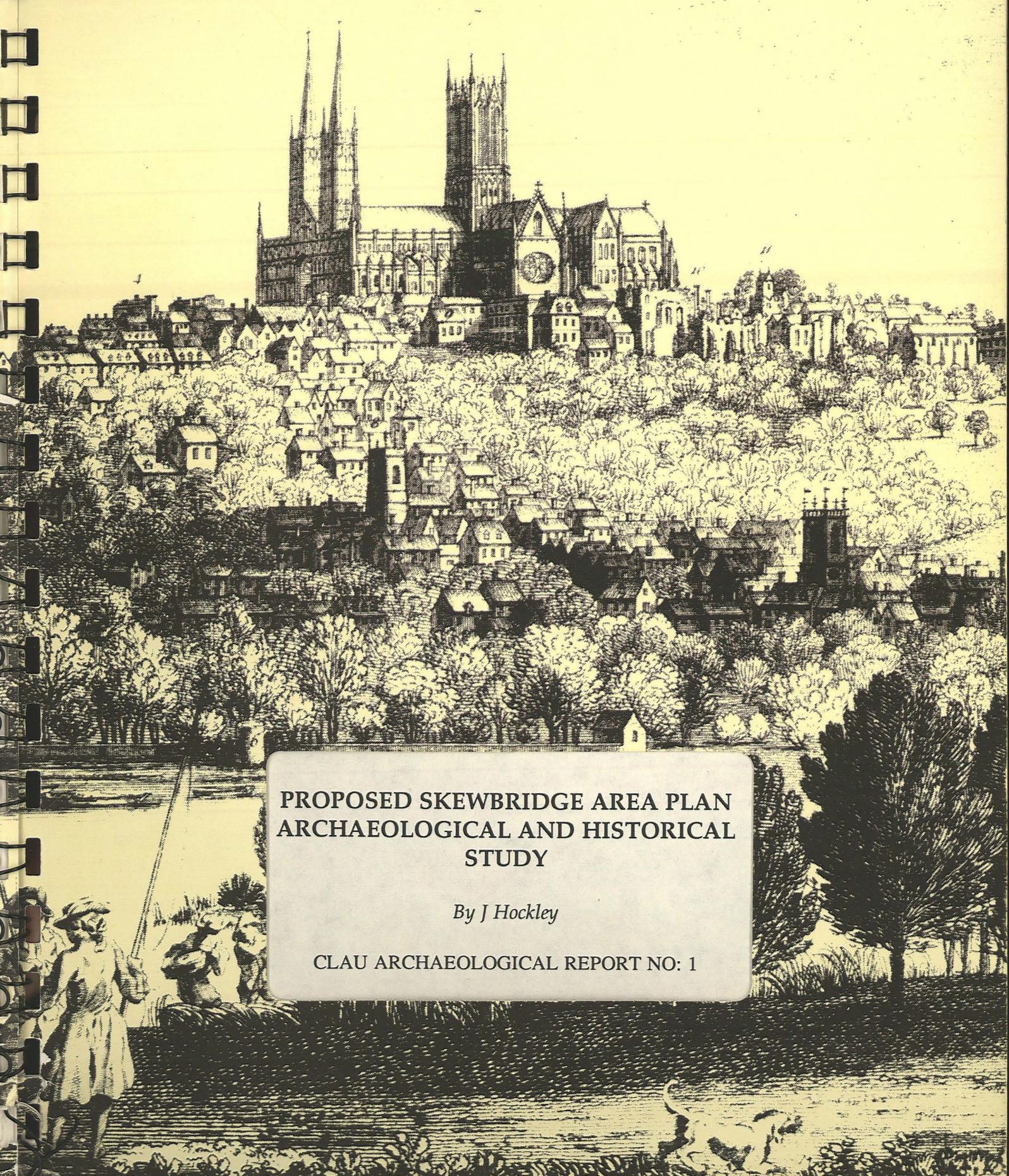


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**PROPOSED SKEWBRIDGE AREA PLAN
ARCHAEOLOGICAL AND HISTORICAL
STUDY**

By J Hockley

CLAU ARCHAEOLOGICAL REPORT NO: 1



**A Report to joint sponsors:
Lincoln City Council (in association with Crest Strategic
Projects Ltd.)
Lincolnshire County Council
Scarborough Farms Ltd.**

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Archaeological and historical study

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PROPOSED SKEWBRIDGE AREA PLAN

ARCHAEOLOGICAL AND HISTORICAL STUDY

Introduction

This document has been prepared by the City of Lincoln Archaeology Unit for joint sponsors, Lincoln City Council (in association with Crest Strategic Projects Ltd.), Lincolnshire County Council and landowners Scarborough Farms Limited. The Unit was commissioned to undertake a desk-top study of the archaeological implications of the proposed development of land to the south west of the city under the 'Plan For Skewbridge' and the construction of the Birchwood Link Road.

A key element in the City of Lincoln Local Plan, the Skewbridge area is expected to dominate development activity in Lincoln over the next ten years. The plan, which includes several innovative policies designed to secure a high quality of development, also provides for the investigation, recording and, where necessary, conservation of archaeological remains. The City Council, in its positive commitment to archaeology, is concerned that the known and potential archaeological heritage of the plan area is investigated in an organised and professional manner.

As an aid to the assessment and planning process the study document provides a synthesis of current archaeological and historical knowledge of the area concerned and proposes a strategy for field survey investigation of archaeological remains in accordance with the recommendations outlined in DoE Planning Policy Guidance 16 (PPG16), published in November 1990.

Designed to provide cost-effective, site specific information, the proposed field investigation strategy adopts an 'intensity zoned' approach to the plan area based on a staged programme of fieldwalking, contour and ditch-side survey, followed by geophysical survey of selected areas and, finally, localised trial trench excavation and recording.

The combined results from desk-top assessment and field evaluation would provide the necessary information upon which informed decisions could be made for the subsequent management of the archaeological resource within the proposed development design policies.

The information in this document is presented with the proviso that further data may yet emerge. The Unit, its members and employees cannot, therefore, be held responsible for any loss, delay or damage, material or otherwise, arising out of this report. The document has been prepared in accordance with the terms of the Unit's Articles of Association, the Code of Conduct of the Institute of Field Archaeologists and The Management of Archaeology Projects (English Heritage, 1991)

Sources of information consulted

Information has been obtained from the following primary sources :

Lincolnshire Sites & Monuments Records)	
Lincolnshire County Archives Office)	
Central Library, Lincoln (local history collection))	Lincolnshire Recreational Services
Usher Gallery, Lincoln)	
City of Lincoln Archaeology Unit - Archive)	
Lincoln City Council)	
Upper Witham Internal Drainage Board)	

Site location and topography

Land forming the Skewbridge Area Plan lies approximately 2.5km south west of the city centre; the National Grid reference at the approx centre of the 300 hectare plan area is SK 9515 7070. (see Fig.1)

The proposed development is bounded to the south west by the B1378 Skellingthorpe Road, to the south east by the Lincoln to Newark railway line, in the north east by the Lincoln to Gainsborough railway line and to the south west by arable land lying east of the A46 Lincoln Relief Road.

The site is traversed by two major surface water drainage channels, the Catchwater Drain in the south and the Boultham Main Drain to the north. A triangular area of land (previously allotment gardens), now used for dry waste tipping and the Boultham Ballast Holes are located immediately north of the Main Drain.

The Swanpool Basin and its surrounding area of woodland lies south of the Main Drain. East of the Swanpool the ground level has been raised by the Skewbridge household waste tip, which covers an area of approximately 25 hectares

A number of mains services cross the site in an east-west direction, including 33kv electricity cables on pylons, the Birchwood trunk sewer and the Newton-Lincoln water main. An extensive network of land drains is also known to be present. Small areas in the south of the site, fronting on to Skellingthorpe Rd. are occupied by existing housing, scrubland and playing fields.

With the exception of the foregoing, the greater proportion of the plan area is subdivided by ditched, hedged and fenced field boundaries and presently used for arable cultivation.

Primarily accessed by a series of tracks from Skellingthorpe Road, the land falls gently in a northerly direction from a level of c.10m OD in the south to c.4m OD between the Catchwater Drain and the Swanpool. Much of the northern half of the site, being only slightly higher than sea level, was subject to extensive flooding until it was drained by works begun in the 17th/18th centuries.

The visible topographic features, which possibly reflect ancient land use, include the grassed scrubland area in the vicinity of the now demolished Hartsholme Farm and the small area of elevated ground known as Haw Hill. The 4m OD contour may also be significant in defining the limits of any prehistoric and later occupation above flood levels.

Geology

The whole of the development area lies over a Flood Plain Terrace south\west of the Brayford Pool junction of the river Witham and Foss Dyke, the latter being formed from the pre-existing river Till during the period of Roman occupation. The geology consists primarily of alluvial drift; river terrace sands and alluvial clays and gravels beneath a cover of sandy topsoil. Solid geology of jurassic lower lias clay underlies the whole area. (See also section on 'Geotechnical Investigation')

SYNTHESIS OF ARCHAEOLOGICAL AND HISTORICAL KNOWLEDGE

Pre-Roman

The first historical reference to Lincoln is in the Geography of Ptolemy, written early in the 2nd Century AD, which mentions LINDUM as being one of two chief cities of a local tribe, the Coritani, now thought to be the 'Corieltauvi'. However, evidence for early settlement in Lincoln has remained somewhat elusive. Excavations to the east of Brayford Pool in 1972 produced pottery identified as being of late Iron Age or early Roman date; the case for any substantial prehistoric settlement remains unproven although traces of 1st Century B.C. activity have been identified. To the east of Lincoln, excavations and chance finds have indicated a rich Iron Age culture and several important objects, including the Witham Shield, were found in dredging operations along the river.

It is believed that much of the land immediately southwest of the city, being only slightly higher than sea level, would have consisted of flood plain and marsh and, with the possible exception of naturally occurring mounds, ('Holms' or islands) most of the area below the 4m contour would have remained uninhabitable. Such a mound, found to the east of the Brayford in 1972, produced the first structural evidence for pre-Roman settlement in the city.

The Roman Period

On historical evidence, the Roman army may have reached Lincoln by c. AD50 but dating of the earliest Roman structures excavated indicates a date of c. AD54 - AD65. By c. AD96, Lincoln had the status of 'colonia', utilizing the 'uphill' site of the Neronian fortress. In the late 1st or early 2nd century a grid of streets was laid out on the ground to the south of the fortress with both timber and masonry buildings erected.

Probably at the end of the 2nd Century, the colonia wall was extended almost down to the river front. Excavations have indicated that the south wall was probably close to the river/Brayford Pool. While the principal urban sprawl outside the walls appears to have been primarily confined to the southern suburb lining Ermine Street, together with extensive cemeteries to the north and east, there is increasing evidence of rural, semi-rural and industrial land use peripheral to the urban centre.

A number of pottery kilns have been found in the immediate environs of the city, including discoveries at the racecourse and Bracebridge and what is believed to be a major 3rd to 4th century industry in the Swanpool/Boultham area; possibly one of the largest such industries in late Roman Britain. (See; 'Swanpool Pottery Industry' Background and Archaeological Record)

Saxon/Anglo-Scandinavian Lincoln

Abandonment of the Roman City seems to have started in the 4th Century with town life reduced to small community between the 5th to 8th centuries. Following the Viking take-over of Lindsey in 874, Lincoln became a centre for a Viking army and, subsequently, a Viking town. Evidence for increasing urbanisation in the 10th and 11th centuries has emerged from all parts of the former Roman settlement.

Many Lincoln place names are of Scandinavian origin. Of particular interest are Holms, or islands in the land which flooded in winter (eg. 'Hartsholme') and, with reference to Haw Hill, the word 'Haw' which can be identified with the old English 'Haya'-hedge and related to the Scandinavian 'Hagi' pasture, although the later derivation of Haw meaning 'a yard or close' may be more significant.

The Medieval Period

The origins of many modern place names in the vicinity, recorded by the Domesday survey of AD1086, indicate a broad spread of Anglo-Saxon and Danish settlement. It also refers to Buletham (Boultham) as being part of Lincoln under the control of Robert of Stafford and Baldwin The Fleming being the principal landowner of Scheldingchope or Schellingop (Skellingthorpe), the area being in the wapentake of Graffoe (in Kesteven).

The main post-conquest change to be noted archaeologically is the introduction of stone building which started in the late 12th or early 13th Century.

The Lincolnshire ecclesiastical scene at the death of the Conqueror was almost completely Anglo-Saxon. The cathedral of the Bishop of Lincoln had not yet been transferred from Dorchester to Lincoln; the great burst of monastic foundation and donation was still to come, its holy places and churches were, for the most part, those which had existed for 300 years. Many of the parish churches, and most of the chapels, were still not founded.

The presence of mid 12th century occupation within the plan area, is evidenced by grants of land to the

chapel of St. Mary Magdelene at Hartsholme. However, the date of formation of the chapel is unknown. (See also; Haw Hill (Hartsholme) - Background).

Post-medieval

The 14th to 17th centuries saw a period of decay in the city with some abandonment of previously occupied areas. Silting of the Witham and Foss Dyke was probably one of the factors which had led to the city's decline from the middle ages. Extensive flooding of the land to the west and southwest of the city is also recorded. In 1681 Henry Stone of Skellingthorpe began a suit against the mayor and others for hindering the water passing to the Trent and thereby flooding several of his grounds at Skellingthorpe.

Enclosure acts were being introduced throughout the county but in many places agricultural methods were poor. An inspection by Arthur Young in 1771 reported that at Boultham by Lincoln he found inadequate rotation of crops, scarcely any idea of improving poor soils, no folding of sheep, and that fen meadows, probably the Boultham low grounds shown on a 1762 map of the Fossdyke (Fig.2), were undrained.

It is recorded that farmers commonly came to market in narrow cock-boats and that fishing and fowling were important occupations. There were duck decoys at various locations including Skellingthorpe, probably the Cuckow Pool area west of Haw Hill shown on the 1779 map of Lincoln, (Fig.3) which later maps show as the 'Decoy'. Records also show that the judges of Assize were commonly invited to spend a day fishing on Swanpool.

Construction of the Main Drain, carried out in the last quarter of the 18th century, had the effect of reducing the area of the Swanpool and bringing more land into agricultural use. This work was probably undertaken by the Lincoln Court of Sewers, the body responsible for drainage prior to the enactment of extensive drainage operations early in the 19th century.

It is not known if the mill shown on the 1762 map (Fig.2) to the west of the Swanpool, represents a point of flour production, or one of the many windpumps constructed in the area with the purpose of pumping excess water into the Main Drain. Many such pumps being replaced by steam driven pumps in the 19th century.

19th century and later

The 19th century saw further development of the wider area resultant from the raising of the south bank of the Foss Dyke, related drainage works and the mid-century introduction of a railway service.

Following a series of major floods during the last ten years of the 18th century, extensive drainage of the area was accomplished under the West Drainage provisions of the Lincoln and County drainage Act of 20th July 1804. This stated that fens, meadows and commons in Boultham and Skellingthorpe "are subject to be overflowed or otherwise annoyed with water for want of proper banks, drains and outfalls" and provided for "the draining and improving of said lands" and "for enclosing lands in the parish at Skellingthorpe". John Monson, Richard Ellison, the mayor and other owners and proprietors of land in Skellingthorpe and Boultham were appointed commissioners for the West Drainage. Anthony Bower was appointed surveyor tasked with providing the commissioners with a surveyed map and plan of the drainage area. (It has not been possible to locate such maps or plans at the time of drafting this report).

The Catchwater Drain which traverses the area between Skellingthorpe and the River Witham was formed under the 1804 act. These works had some immediate success. In 1806 a correspondent in Lincoln noted that "fat beef was growing on Swanpool where fishes lately swam", but all work was not complete until 1816.

The first edition of the one-inch Ordinance Survey map of Lincolnshire published in 1824 based on the survey carried out between 1818-1821 and updated in 1890 to show the railways (part reproduced as fig.4) provides a useful overview of the proposed development area. It is the earliest map located to date which makes specific reference to Haw Hill. The same map also records the existence of a road or track traversing the development area to the east of the Swanpool between the Lincoln-Gainsborough Railway in the north and what appears to be a gravel pit southeast of 'Hartsholme'. The records of railway construction indicate that gravel for embankments was obtained from local sources and it is probable that the gravel pit and track, formed during the mid to late 19th century period of railway construction, provided the first recorded evidence of the Roman pottery industry. (See also; Swanpool Pottery Industry - Archaeological Record)

The mid-19th century Rates books of the Lincoln Court of Sewers show that Richard Ellison was the principal landowner in the area and that land was also owned by Charles Kirk (later owned by William Sands), Heldenbys executors, the Governors of Christ's Hospital London, Richard Coupland, Lord Monson, The

ARCHAEOLOGICAL DISCOVERIES

Previous archaeological fieldwork within the plan area has been minimal.

Localised, low intensity fieldwalking, geophysical survey and research excavation in the area of the Roman pottery kilns was carried out on various occasions between 1945 and 1972, during which time seven kilns were investigated by limited excavation. Two further kilns were excavated in 1987 as a rescue response during the construction of the Newton - Lincoln water main.

In 1980, localised fieldwalking was carried out across the area of elevated ground known as Haw Hill, a suspected site of Medieval occupation.

During January and February, 1992, Archaeological observation and recording was carried out in conjunction with excavation of trial pits for geotechnical investigation of strata along the proposed route of the Birchwood Link Road.

There is no record of previous archaeological investigation at the site of the former Hartsholme Farm.

The following sections of the report summarise the historical background and results of previous archaeological investigation in the areas containing known and suspected remains.

'Swanpool' pottery industry - background

Pottery manufacture in Roman Britain was a major industry and its products were traded in quantity, sometimes (especially for the army) over great distances. The kiln sites of this industry provide evidence of the social, economic and technological history of Roman Britain. The development, or decline of a pottery, reflects the progress of Romanization, the immigration of craftsmen, the exploitation of local resources, the development of the local landscape and the fluctuations in the prosperity of a region. Studies of the products of kiln sites also advances our knowledge of trade and the chronology of Romano- British pottery.

The basic requirements for pottery production are the availability of suitable clay, tempering material, water and fuel. To make mass production worthwhile, the existence of potential local markets and easy communication for bulk transport are of equal

importance.

River valleys often provided most of these basic necessities. Valley alluvium frequently contains deposits of secondary clays and quantities of sand. The latter, often containing a proportion of silica, enabled it to withstand high temperatures and counteract shrinkage and splitting when added to clay.

River valleys were also naturally attractive to the rest of the community. They were often the most densely and continuously settled areas of iron-age and Roman-Britain and provided the necessary local market. As virtually all these requirements were fulfilled at the Swanpool site, the resulting development of the pottery, established what was probably the first large scale industry in Lincoln.

The late 3rd/4th century development of the rural Swanpool site, in close proximity to an urban centre is somewhat unique in Britain. It may well indicate contraction of trade from other sources, or, as a result of a general increase in prosperity, an entrepreneurial approach to a local/regional market with competitively priced products.

Apart from the building and operation of the kilns, pottery manufacture involved a number of other processes. Raw materials had to be acquired, stored and prepared and vessels had to be formed, decorated, dried and stored after firing. A large complex probably employed a kiln master, a master potter and a considerable number of other craftsmen and labourers, some of whom probably lived on, or in close proximity to, the site.

In addition to living quarters, structures would have been erected to provide cover for raw materials, potters wheels, decorative and other finishing processes, as well as finished products.

Pottery manufacture was often combined with other industrial processes with tile making and iron-working being the most common adjuncts. Concentrating such activities into an 'industrial estate' would have a number of advantages, including the joint exploitation of raw materials, labour and transport. While the existence of other manufacturing activity at Swanpool is uncertain, the high concentration of iron gritting in pottery recovered from the site indicates the use of iron-ore and the possibility that iron working was also carried out in the locality.

Analysis of mortar, used in construction during the Roman period, has demonstrated substantial use of sand and aggregate. It is believed that this material was sourced from the extensive beds of river sands and gravels to the south and west of the city, however, as no evidence of Roman gravel pits has yet come to light, further investigation within the plan area could

reveal such sources.

Of the many sites investigated across the county, few have been extensively excavated. For most, only the kiln itself, or a very small adjacent area has been studied, often in the course of rescue excavation ahead of, or in conjunction with development. While pottery and kiln studies are advanced by localised investigation, increasingly important information on the character and layout of all the various components making up an industrial complex will only be secured by area excavation.

'Swanpool' pottery industry - archaeological record

Isolated pottery kilns, or possible kiln sites, have been recorded in a number of locations in and around Lincoln, including a dispersed group in the Rookery Lane/Boultham area in proximity to the river Witham approximately 800-1000m east of the Swanpool kilns.

The earliest archaeological record of the Swanpool industry probably occurred in 1847 during ballast quarrying, for the Midland or Great Northern railway, when large quantities of Swanpool-type ware and "lumps of grey fired clay" were recovered. (Lincoln kiln No.12 - see Fig 5). This record is in part supported by the 19th century O.S. Map (Fig.4). which depicts a track and quarry feature located in the general area of the kiln complex.

Subsequent surface collection, observation and excavation has identified the location, or probable location, of at least a further fourteen kilns. (Lincoln kiln nos. 13 to 24 and 27 and 28), including a possible site on the lower east slope of Haw Hill (See Fig 5).

The somewhat unique character and arrangement of the so called 'Swanpool-type' kilns, probably emerged from earlier forms in the late 3rd - early 4th century. They appear to have been constructed in a large shallow scoop on a base of dumped clay, over which the chamber and flue was constructed. The chamber lay almost entirely above ground, explaining why few have survived above the pedestal top. (See Fig.6).

The Swanpool complex manufactured a wide variety of 'grey ware' cooking pots, dishes, bowls and jars, often with burnished line decoration. Specialist products, including mortaria (a specially strengthened mixing bowl), colour coated and painted wares were also produced.

The number of kilns and the wide variety of wares, clearly indicate that a pottery complex of some magnitude existed on the site between the late 3rd and late 4th centuries. Previous excavation of seven kilns has been localised in nature and generally of very short

duration. While slight evidence of gulleys and postholes has been recorded in proximity to kilns, the lack of any area excavation leaves the entire complex unexplained as regards its spatial extent and organisation and in particular, the form and function of ancilliary living/working quarters and any secondary industry which may have functioned at the site.

It is particularly important to note that all kilns recorded to date lay at a very shallow depth, immediately below the ploughsoil and that development of the area will probably result in the destruction of important archaeological evidence. (see also; Development Proposals - Impact on Buried Remains).

Metal detectorists are known to have been extremely active in this area during the early 1980's. Contact with local detector users indicates that considerable quantities of copper alloy coins were found, (mainly in poor condition), together with some Roman silver coins, most of which were described as Siliqua, of mid 4th century date. Occasional fibula brooches were also found and "other bits of bronze but very little lead". Note; as most metal detectorists are interested only in non ferrous coins and artefacts, detector signals which indicate the presence of ferrous (iron) objects are rarely excavated.

The Swanpool

Although not previously investigated archaeologically, it is thought that the Swanpool may have been formed by the extraction of clay for Roman pottery industry and probably later used, at least in part, as a medieval fish farm. The 18th century maps (Figs.2 & 3) indicate that the pool originally encompassed a large area, and was sustained by a natural watercourse, later the Prial Drain, which probably defined the west boundary of the site of occupation at Haw Hill, the north east boundary probably being formed by the pool itself.

Haw Hill (Hartsholme) - background

When the Domesday Survey was made, the Lincolnshire holdings of religious persons were relatively few; however, the next four centuries, and particularly the first of them, were to see a spectacular increase in the strength of episcopal government and land ownership. Between 1100 and 1300 many of the churches of the County were given either to the cathedral or to various monastic houses, particularly those of the Witham valley, including the Benedictine Abbey at Bardney which was founded in 1087 on the site of an early Saxon church and refounded in 1115-16 by Gilbert de Gant.

At the consecration of a new church or chapel it was

customary for the specific founder and other interested persons to make gifts of land for its maintenance and for the support of the priest and to provide a toft or house site close to the church or chapel as a dwelling for him.

The growth of the monastic movement saw an extension of this practice by which foundations, grants and gifts of land were made to religious houses.

The records do not show exactly how and when Bardney Abbey acquired the Chapel of St. Mary Magdalene at Hartsholme. It was probably a gift of Baldwin Wake during the reign of Henry II (1154-1189). He certainly granted to St. Oswald and St. Mary Magdalene of Hartsholme the place called Hartsholme with land and marsh which lay on the way between the fish pond (Swanpool?) and the bounds (Skellingthorpe Rd.?) of Boultham lea (Boultham Low Ground?), with pasture for 200 sheep and 40 beasts and as much moor as might be needed for the grantees for their own use for burning. Other grants of land in Bracebridge, Boultham and the neighbourhood were made to the chapel which was constituted a small cell of the Abbey.

Ranulf de Blunderville, Earl of Chester, who died in 1232, granted to the monks and chapel of Hartsholme, a silver mark out of the mill at Bracebridge and another from his mill at Waddington.

Reasons for such foundations were not always religious. Many such houses were put into undrained fen, marsh or river valley; thus, if they survived, they would serve as a focus for cultivation and improvement of the donor's land and his neighbouring properties.

Some of the smaller foundations, of which Hartsholme was possibly one, catered to travellers, lepers and the poor and aged. Most of such small houses, sometimes described as hospitals, were conducted by communities of a few clerks and occasionally a canon, observing a quasi-monastic rule. They existed for a variety of charitable purposes, and because much of their revenue came from the alms of the faithful, they imposed little burden upon the founder.

When the need for the small leper establishments slackened by the early 14th century, they were sometimes totally absorbed by local religious houses.

While the spatial arrangements of the 'Hartsholme' property are unknown, the Gedney hospital, perhaps typical of such places, consisted of forty-seven acres of land on which were a windmill, hall, chamber, kitchen and chapel. The whole surrounded by a moat and maintained a canon and five poor people.

The changes in land ownership resulting from the religious foundations of the 12th century led to new and more vigorous methods of agriculture, an

expansion of the flourishing monastic wool trade, and a considerable amount of clearance, drainage and enclosure was accomplished by monastic landlords.

It is possible that the occupation at Hartsholme and Haw Hill had ceased to function as a monastic cell or hospital long before the Dissolution in the 16th century, probably being used as a small manor house and operated as a farmed estate. Many such useful properties were given, for their lifetime, to retired or resigned abbots or leased out to the community or a lay owner.

The visitation of Bishop Alnwick (26.1.1437) records the view that the chantries of Hartsholme, Skendleby and Partney 'are not being serviced as they ought to be'. The same visitation also shows temporalities arising from rents and farms, including 2:12:4d from 'Hartsholme'. The cell of Skendleby, another possible parallel with Hartsholme, is recorded as being no more than a manor house for the accommodation of one or two monks who served the church.

Suppressed by the Dissolution, Bardney Abbey was surrendered on the 1st November 1538, the site and a number of manors belonging to the house being granted to Sir Rober Tyrwhitt. It is not known if he acquired the Hartsholme cell or manor, however, continuance of occupation is probably indicated by the ministers accounts for the Baliwick of Lincoln and Burton in 1539, which describe rents from a farm of divers land in 'Hartsholme' as 2:3:4d.

The previously mentioned maps (Figs.3 and 4) indicate the existence of structures in the vicinity of Haw Hill; the 1762 map depicts a mill west of the Swanpool, while the 1779 map shows two structures at the edge of the marsh ground southwest of the Swanpool in the area later identified as 'Hartsholme' and subsequently 'Hartsholme Farm'.

A number of references to Hartsholme are found in Title deeds to property in the area, including :

1700 - The will of Thomas Denman of Walcoate - gave and bequeathed all those manors of Boultham, HARTSHOLME and Alkburgh to Thomas Goulton of Bessingby (Yorkshire).

1803 - Assignment of land including the manors of Boultham and HARTSHOLME to Richard Ellison.

1811 - Elizabeth Horsefall bought 'all that manor and lordship of Boultham and also all that manor; or reputed manor or grange of HARTSHOLME and also fishings; fish garths, fish ponds, mansion house and several gardens and enclosures, 3a. 2r. 11p.'

The OS map of 1824 (Fig.4) depicts an area called HAW HILL at the north of a road or track leading from Skellingthorpe Road via a small area of enclosed

fields and a group of five or six structures identified as 'Hartsholme', probably the same structures shown on the map of 1779 (Fig.3).

Haw Hill is not shown on the early 20th century O.S.Map (part reproduced herein; see Fig.7), the group of structures previously shown as 'Hartsholme' now appear as Hartsholme Farm, and the principal field boundaries shown are substantially maintained to the present day.

The Haw Hill site has probably been under grass or arable cultivation for at least one hundred years, or longer, assuming the previous buildings fell into disuse or were demolished in the late 17th or early 18th century.

The above evidence, when combined with the existing archaeological record, is extremely significant, and probably indicates that the location of the now demolished Hartsholme Farm may well contain remains pre-dating occupation at the adjacent, and probably associated, Haw Hill site.

Haw Hill (Hartsholme) - archaeological record

The elevated area of ground known as Haw Hill is located more or less at the centre of the Skewbridge Area Plan at NGR SK 9510 7060 and lies approx 400m south-west of the Swanpool, 950m north-west of Oak Farm and 500m north of the site of the demolished Hartsholme Farm.

The elevated area of the site, which is presently in arable cultivation, is bounded by a hedge and drainage ditch to the west, a service track to the east and hedged/fenced field divisions in the north and south. The Birchwood trunk sewer traverses the south side of the area in an east-west direction. The 4m O.D. contour follows a roughly semi-circular alignment around the north and east extremities of the 'hill', the ground level immediately to the south of the site rising gently to c.4.50m O.D. The 'hill', a sub-oval knoll c.140m x 120m, rises approx 2.0m above the surrounding area, indicating that much of the site probably remained above pre-drainage flood levels.

The archaeological record for Haw Hill is sparse. Fieldwalking was carried out by A.J. White in February 1980. The record of this work showed the eastern and western slopes to be almost devoid of finds but the central area contained considerable amounts of pot, animal bone (some with marks of butchering), building material debris, charcoal and shellfish.

Most of the tile was of a standard medieval type with locating lugs, but there were a number of glazed tile fragments including part of a crested ridge tile, a

fragment of inscribed tile was subsequently found by the farmer and donated to the City and County Museum. It is a standard late medieval roof tile and has parts of three lines of writing on it in a hand of c.1500. There was much broken limestone together with some dressed blocks; in 1978 part of a straight-headed window of 16th century date was found on the site.

Pottery was principally late medieval and post-medieval in date, including 16th to 17th century Cistercian and Midlands purple wares and German stonewares.

It was noted that many pot sherds (and tiles) were large, suggesting that they had only recently been brought within plough depth; this and the range of wares indicated a medieval site continuing into the 17th century, but not much beyond, the earlier remains of which may possibly be relatively undisturbed.

In January and February 1992, CLAU carried out a programme of archaeological observation and recording in conjunction with the excavation of Geotechnical trial pits along the proposed route of the Birchwood Link Road. (See also report on Archaeological Evaluation of Geotechnical Trial Pits-Birchwood Link, CLAU, February 1992).

The sequence of underlying deposits revealed by trial pits on or in the vicinity of the site would indicate that the 'hill' is probably of natural origin (one of the holms or islands which previously characterized other locations - the vicinity), but possibly adapted in order to render it habitable. It was such a knoll, found to the east of the Brayford Pool, which produced the first evidence for pre-Roman settlement in the city.

Fragments of pot, tile and glass were collected from the ground surface in the vicinity of a trial pit on the 'hill'. Preliminary analysis of this material has produced the following date information :

Tile - dated from Roman and 15th/early 16th century

Pot - dated from Roman and 13/14th and 17th centuries

Glass - the three fragments recovered are believed to date from the 17th century

While the presence of material of Roman date and the possibility of earlier occupation cannot be discounted, the displaced finds recovered point to a principal period of occupation between the 13/14th and 17th centuries.

Contact with local metal detectorists indicates that while the occasional roman coin has been unearthed, finds in the vicinity of Haw Hill have been predominantly medieval in date including at least one silver penny.

The shape of the mound and its immediate surroundings has probably been extensively modified by ploughing and now appears as a sub-oval knoll with a relatively flat top.

The contour survey carried out by JMP Consultants Ltd. (See Fig.8) demonstrates the probable alignment of the approach track from the south and slightly elevated spurs extending in a NE and NW direction. The spurs may be significant by leading in the direction of the, then much larger, Swanpool.

Recent observation has not revealed any prominent surface boundary features but it is possible that the site and its environs retain peripheral evidence in the form of ancillary structures, localised land use, moat or ditch and trackways. Some of the latter may now be incorporated into drainage ditches, field boundaries and modern tracks. It is also possible that peripheral remains may be more intact than those on the central mound, which may have been truncated by ploughing. In this respect, the relationship between occupation at Haw Hill and the probable earlier settlement in the vicinity of the now demolished 'Hartsholme Farm' merits detailed field investigation.

Aerial photographs

A series of aerial photographs of the plan area, produced by the Ordnance Survey in June 1988, have been studied. While few prominent crop or soil marks were revealed, a number of faint shapes, together with areas of possible suppressed or accelerated plant growth and traces of circular shading were noted. These features have been scale plotted on the area plan for comparison with recorded kiln sites and other suspected sites of occupation and to locate potential areas for geophysical investigation. (See Fig.9).

Although by no means conclusive, a preliminary analysis of the crop/soil marks plot indicates the possibility of further kiln sites together with associated gulleys or ditches in the area south of the Catchwater Drain. The possible location of building remains and elements of associated land use in the vicinity of Haw Hill are also noted, however, owing to grass cover and stands of trees, the aerial photographic evidence at the site of the former Hartsholme Farm was unfortunately negative.

Farmer and joint landowner Mr. John Scarborough has kindly provided a number of colour photographs, taken during recent pleasure flights over the plan area, one of which clearly shows plant stress cropmarks at Haw Hill. While the oblique angle of this photograph prevents an accurate location plot, the approximate arrangement of these cropmarks, shown on Fig. 9, is a further indication of ancient occupation at this site.

Geotechnical Investigation

An investigation of underlying strata was carried out along the proposed route of the Birchwood Link Road by geotechnical contractor Lincs Lab on behalf of Lincolnshire County Council (Highways and Planning Dept.) under the direction of JMP Consultants Ltd., Consulting Engineers to the County Council. A programme of archaeological observation and recording was undertaken by CLAU (on behalf of the County Council) in conjunction with the excavation of geotechnical trial pits. The detailed results of this investigation have been reported separately. (See previous reference)

A general investigation of strata over most of the plan area has been carried out by DHV Burrow Crocker Consulting Ltd., on behalf of Lincoln City Council/ Crest Strategic Projects Ltd. While archaeological observation was not undertaken with this investigation, the resultant bore-hole and trial pit logs, together with guidance strata profiles, have been studied by CLAU.

The results, compiled by DHV Burrow-Crocker contain two principal elements of archaeological significance. The first being a layer of alluvial clay generally found sandwiched between recent drift/terrace sands and the older river terrace sands and gravel. These clay deposits were primarily located within the central and northern parts of the plan area.

The substantial areas of orange/brown and grey/green alluvial clay deposits were recorded at depths of between 0.5m to 2.5m below the present ground surface and ranged in thickness between 0.5m and 0.9m, increasing locally to 2m.

It is probable that these easily accessible alluvial clay deposits and possible localised outcrops of lias clay, formed the primary source of raw material for the Roman pottery industry. (See also Analysis of Clay Samples).

The second element is revealed by the sectional profile of the various strata encountered and, while these sections were produced for guidance only, they indicate the possible presence of two buried former river channels. (Refer also to DHV Burrow-Crocker Consulting - Ground Investigation Report, March, 1992.)

Analysis of clay samples

Samples of alluvial clay were collected from three trial pits excavated during the course of the Birchwood Link geotechnical investigation. The clay was used by Lincoln potter, Mr. A. McDonald to form hand turned bowls and briquettes which were fired at a temperature

of c.900 C. The untempered clay, which was found to be easily worked, fired well with no evidence of splitting or cracking.

The briquettes are being processed by CLAU for thin section analysis and comparison with pottery from Swanpool kilns as part of a general study of Roman pottery. The results of this investigation should be available later this year.

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ARCHAEOLOGICAL POTENTIAL

The documentary evidence and results from previous localised archaeological investigation clearly indicate the potential for multi-period occupation and land use across a significant proportion of the proposed development area. This may be summarised as follows:

i) **PRE-ROMAN** - Easily defended areas of raised ground in or near the edge of marsh and water were frequently favoured sites of prehistoric settlement and while the area has not, as yet, produced evidence of such early occupation, its potential should not be overlooked during further investigation.

ii) **ROMAN** - The Roman pottery industry is identified in the City Council Consultation Draft as probably the most important archaeological site in the plan area in that it may have formed one of the major potteries of late Roman Britain and is one of the last known kiln complexes in an open field location.

It is possible, if assessed in terms of the Secretary of State's criteria for scheduling ancient monuments, that the pottery complex could rank as being of equivalent status.

The spatial extent of the pottery, including ancillary structures, remains uncertain and together with the possibility of other industrial activity and the early formation and use of the Swanpool, merits intensive investigation.

iii) **ANGLO-SCANDINAVIAN** - Saxon and Danish occupation and/or influence in the locality is represented by the adjacent villages or hamlets of Boultham, Skellingthorpe and possibly early settlement at Hartsholme.

iv) **MEDIEVAL** - A Chapel, and probably other buildings, some of which at least being associated with Bardney Abbey, were located at 'Hartsholme'. Part of this property possibly functioned at some time as a hospital and/or residence for the poor and aged with its later use probably taking the form of a small manor farm.

The medieval occupation at Haw Hill may well have been an adjunct to the Hartsholme property and probably fell into disuse during the 17th century. The building debris at Haw Hill indicates a building of some quality, however, the exact form and function of the structure, spatial extent of the site and its relationship to the 'Hartsholme' site is uncertain.

v) **POST MEDIEVAL AND LATER** - The structure shown on the 1779 map c. 500m south of Haw Hill, later described on the 1824 OS map as 'Hartsholme' and later called Hartsholme Farm (now

demolished) possibly identify the location of earlier occupation described under items (iii) and (iv) above.

Environmental study

The potential for organic sediments across the development area presents the first large scale opportunity to investigate the urban-rural relationship in proximity to the city.

While the geotechnical trial pits did not reveal evidence of prominent organic layers, it is possible that, in addition to natural deposits, organic material could be found in buried archaeological features such as moats, ditches, fish-ponds or early river channels.

Environmental studies are crucial to the understanding of past economic systems, and it is therefore important that any programme of further evaluation incorporates provision for environmental sampling and analysis.

Options for preservation

In addition to providing for the possible need to excavate archaeological remains ie, **PRESERVATION BY RECORD**, the development plan incorporates an open space policy, designed to meet recreational, visual amenity and nature conservation objectives. This policy could provide an opportunity for the encapsulation or display of historic features. Such an approach would fulfill the primary objective of PPG16, English Heritage and the City Council's general policy for archaeological remains; **THE PRESUMPTION IN FAVOUR OF PHYSICAL PRESERVATION**.

This objective can probably be most easily secured in relation to archaeological remains which may exist in the vicinity of the Swanpool, an area designated a recreational and nature conservation zone. However, as substantial development is planned for other areas containing known and suspected ancient sites, further investigation is necessary to determine the location and nature of remains which may be considered suitable for preservation within open space or landscaped areas.

Ground contamination

Elements of the tipped land, and its peripheral 100m potential leached contamination cordon, lie within areas having archaeological potential, particularly in the area of the Swanpool. Any proposals for archaeological fieldwork in such areas would need to consider and make provision for potential ground contamination, including the possibility of methane gas.

Development proposals - impact on buried remains

Groundwork for the proposed development and associated underground services, together with attendant use of heavy duty earth moving equipment, will almost certainly expose and probably destroy important archaeological remains.

Formation of the Birchwood Link Road and related drainage and services is likely to be the first major construction activity in the area. The proposed route of the road impacts upon areas having archaeological potential, particularly the site of medieval and later occupation at Haw Hill.

Initial proposals have been made to minimise impact at this location including re-alignment of the carriage-way, re-positioning of a roundabout and access road and the possibility of incorporating at least part of the Haw Hill site within an 'open space' element of the development design, however, the lack of detailed information regarding the type and extent of archaeological remains at this and other locations across the site impose a severe limitation on the impact assessment process.

It is vital that adequate archaeological information of the area be secured at the earliest possible time so that all parties may proceed from a position of knowledge in terms of assessing possible impact and developing suitable proposals for the preservation of any important remains encountered.

Archaeological assessment

Recommendations for further investigation of the archaeology of the area are based upon:

- a) The existing documentary and archive record for the area, including the results from previous archaeological investigations.
- b) The type of development outlined in City Council Consultation Draft.
- c) The probable extent of ground disturbance caused by the construction works and the shallow depth of known remains.
- d) The possibility of ground contamination in certain locations within the plan area which may necessitate modification of our proposals when the results of ground contamination investigation are known.
- e) The principal assessment criteria contained in PPG16, including the 'importance' of remains known or thought to exist, the policy of preservation 'in situ' and the alternative of preservation by record i.e. excavation.

f) The proposed policies contained within the Skewbridge Area Plan Consultation draft, February 1992 and, more particularly, the proposals contained in our response to same, dated April, 1992, submitted to Lincoln City Council, Department of Planning.

g) Our professional judgement on the merits of any possible remains, which should be seen as an aid to formulating strategy and not the only viable judgements that could be made.

CONCLUSIONS AND RECOMMENDATIONS

The historical and archaeological record demonstrates that the proposed development area offers significant archaeological potential. However, as the spacial extent, nature and survival conditions of remains is largely unproven, a detailed field evaluation of the plan area is the next and, most important part of the assessment process. Such evaluation would provide site specific information, from which an archaeological impact statement and appropriate resource management strategy could be developed.

The magnitude, complexity and potential time scale of the project requires a substantial, well organised and ordered archaeological commitment to ensure that the archaeological resource is properly managed. It is equally important that the archaeological process is fully integrated with all aspects of the development and that all concerned parties are presented with the maximum quantity and quality of information at the earliest possible time. It is clearly desirable that all parties proceed from a position of knowledge, an objective that will only be achieved by a fully integrated response to all aspects of assessing and managing the archaeological resource.

The long-term programme of development will probably involve a considerable number of individual developers and statutory undertakers. This aspect alone indicates the need for a clearly defined structural plan for dealing with the archaeological resource to ensure a common and consistent approach to all parties over the projected development period. The importance of a carefully designed programme of field evaluation cannot, therefore, be overstated.

Field evaluation

This aspect of assessment involves detailed examination of the archaeological resource through gridded fieldwalking, topographical survey, geophysical survey, machine or hand excavated trial trenches and ditch side surveys.

To allow sufficient time for the processing of evidence and preparation of the resultant report, a field evaluation must be carried out well in advance of earliest construction groundwork.

As suitable ground conditions are a pre-requisite to effective field survey, the timing of such work becomes critical. The earliest opportunity to carry out a field survey now appears to be late 1992 through early 1993. With the construction of the Birchwood Link

Road scheduled to commence in April 1993, it would be advantageous to ensure that a detailed assessment, with response recommendations based on a field survey, be complete by the end of 1992.

Having regard to the total area of the proposed development and the information revealed by this study, we recommend that an evaluation would be best carried out as a staged process with various levels of survey intensity related to the type and probable extent of remains thought to be contained within the plan area. This would provide the most cost effective method of securing the maximum information in the shortest possible time.

An outline design for staged field evaluation would consist of :

Stage I

- a) Low, medium and high intensity gridded field walking of the plan area to retrieve and plot surface displaced artefacts and record any other visible ground surface features.
- b) Topographical survey of Haw Hill and the site of Hartsholme Farm and their respective environs, together with a general survey to establish primary datums and survey grid for subsequent stages of evaluation.
- c) Ditch side survey in selected locations to record local stratigraphic sequences and evidence of archaeologically significant deposits or remains.

The results from Stage I would be correlated with the existing record, aerial photographic and other data, to produce a design for Stage II geophysical survey.

Stage II

Using the information secured from Stage I to target probable location of remains, a geophysical survey would be carried out to locate suspected buried features.

NOTE : The use of geophysical techniques would be subject to a preliminary investigation of site conditions and its suitability for survey with particular reference to limiting factors such as geology, ground conditions, modern disturbances and most important of all, the type of archaeological features expected.

Stage III

Using the combined results from all earlier stages of evaluation, localised trial trench excavation would be carried out to;

- a) Identify the depth, nature and survival conditions of any archaeological remains in the area of proposed development.

- b) Assess the importance of any remains encountered.
- c) Assess the survival and quality of preservation of organic deposits which could contain evidence of early environmental conditions.
- d) Assess the probable impact of development on surviving remains and recommend modification to development design which would enhance the insitu preservation of remains.
- e) Assess the potential and possible need for further archaeological excavation or recording prior to, or during, the construction phase; recommend the appropriate course of action and provide designs and cost estimates for such work.

Archaeological impact and resource management

The resultant Archaeological Impact Statement would indicate the quality and sensitivity of the archaeology and probable impact the proposed development would have on surviving remains. The assessment of impact is highly site specific and demands a responsible and accurate approach.

Of the various criteria to be considered, the 'importance' of remains within a local and national context and potential loss or damage by volume of archaeological deposit, are probably the most significant. Professional judgement will play a major part in establishing degree of impact and developing a suitable Resource Management Strategy.

The preliminary information thus secured, would provide the basis upon which informed decisions could be made and appropriate zoned response proposals developed in relation to planning control policies and the overall design and progressive development of the area.

The City of Lincoln Archaeology Unit would be pleased to undertake the assessment programme and, in this regard, we recommend further discussion to agree an appropriate archaeological specification, programme of work and cost based on proposed areas for field evaluation (See Fig.10).

In conclusion, we believe a thorough archaeological investigation of the area concerned is of vital importance in extending our understanding of the use and development of the landscape in close proximity to this major historic urban centre.

J.Hockley

8th June 1992

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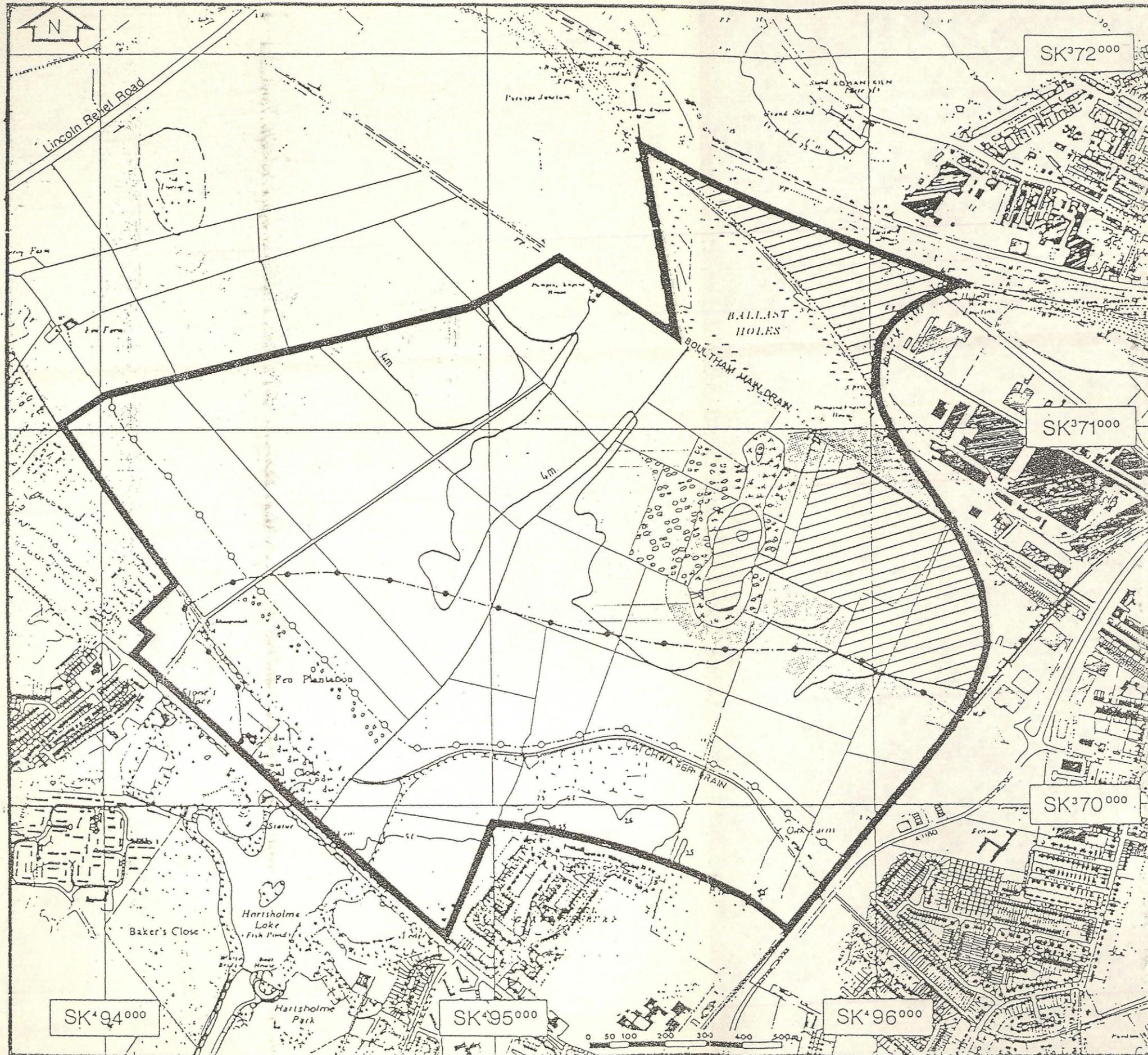
A detailed study of this nature is a collaborative undertaking and I would therefore acknowledge,with grateful appreciation,the significant co-operation and support of the following;

Dr.Kathleen Major,for valuable information and guidance.

Mr.D.Van Den Bos of the Upper Witham Internal Drainage Board,for providing access to early records of drainage works in Lincoln.

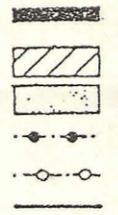
Mr.J.Scarborough,for making available colour photographs of parts of the plan area.

All my professional colleagues,and last,but by no means least my research assistant Marjory Whaler for her dilligent scrutinty of countless maps and other documents.



Key

- Plan Boundary
- Tipped Areas
- 100m Cordon
- Birchwood Trunk Sewer
- Water Mains
- 4m Contour



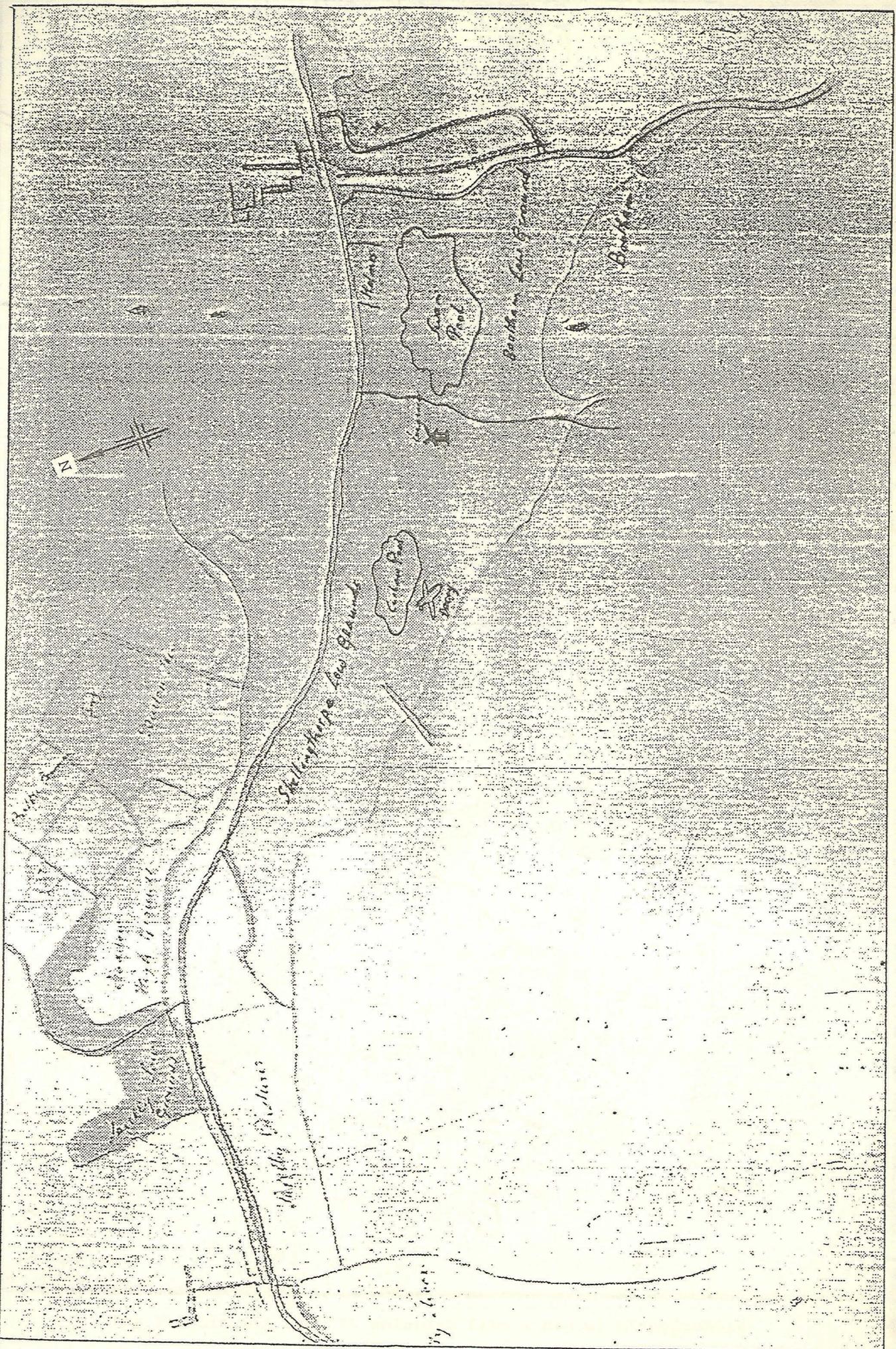


Fig.2 - The Fossdyke, 1762 enlarged from a map by John Grundy

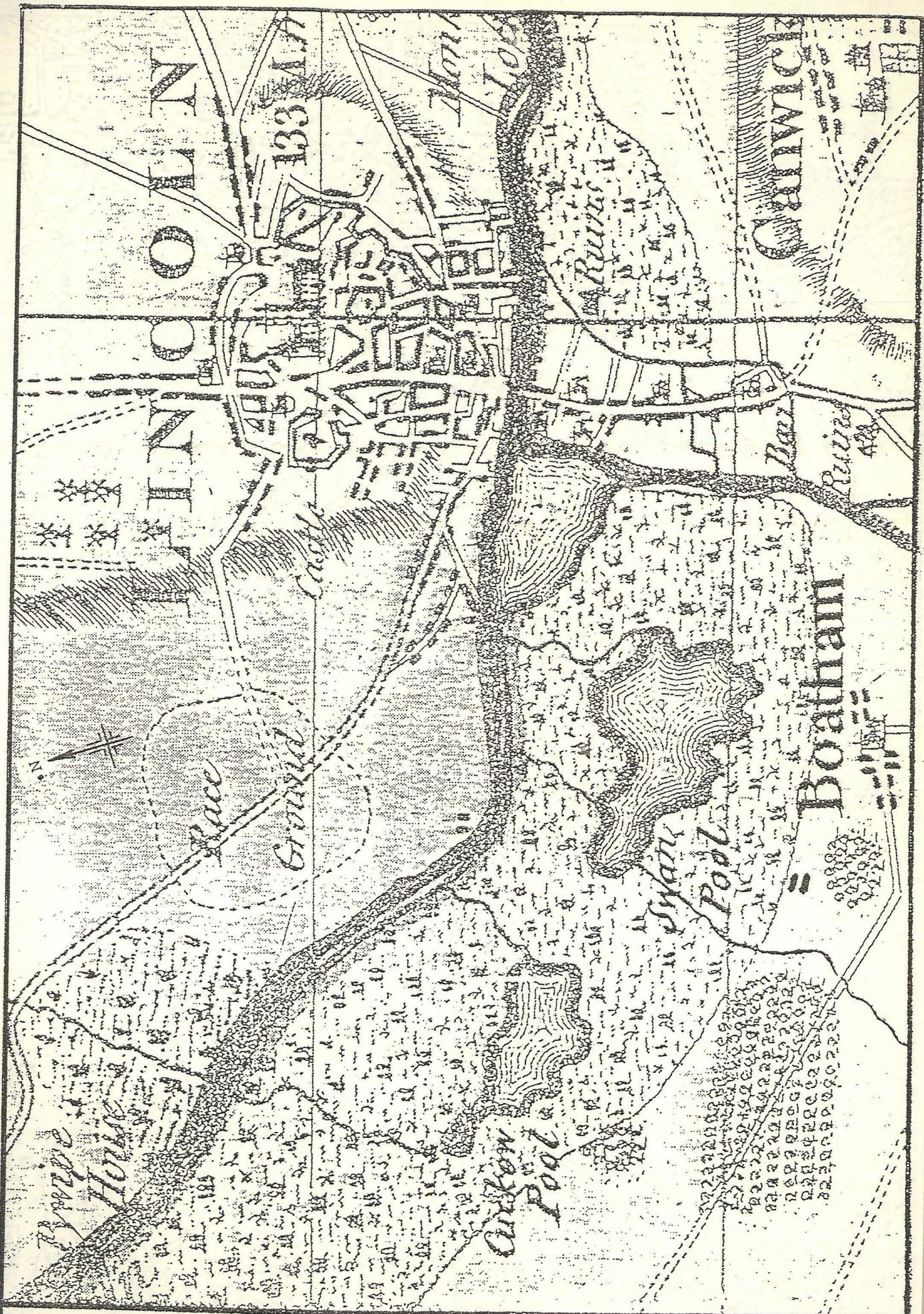


Fig.3 - Lincoln in 1779 enlarged from a map of Lincolnshire

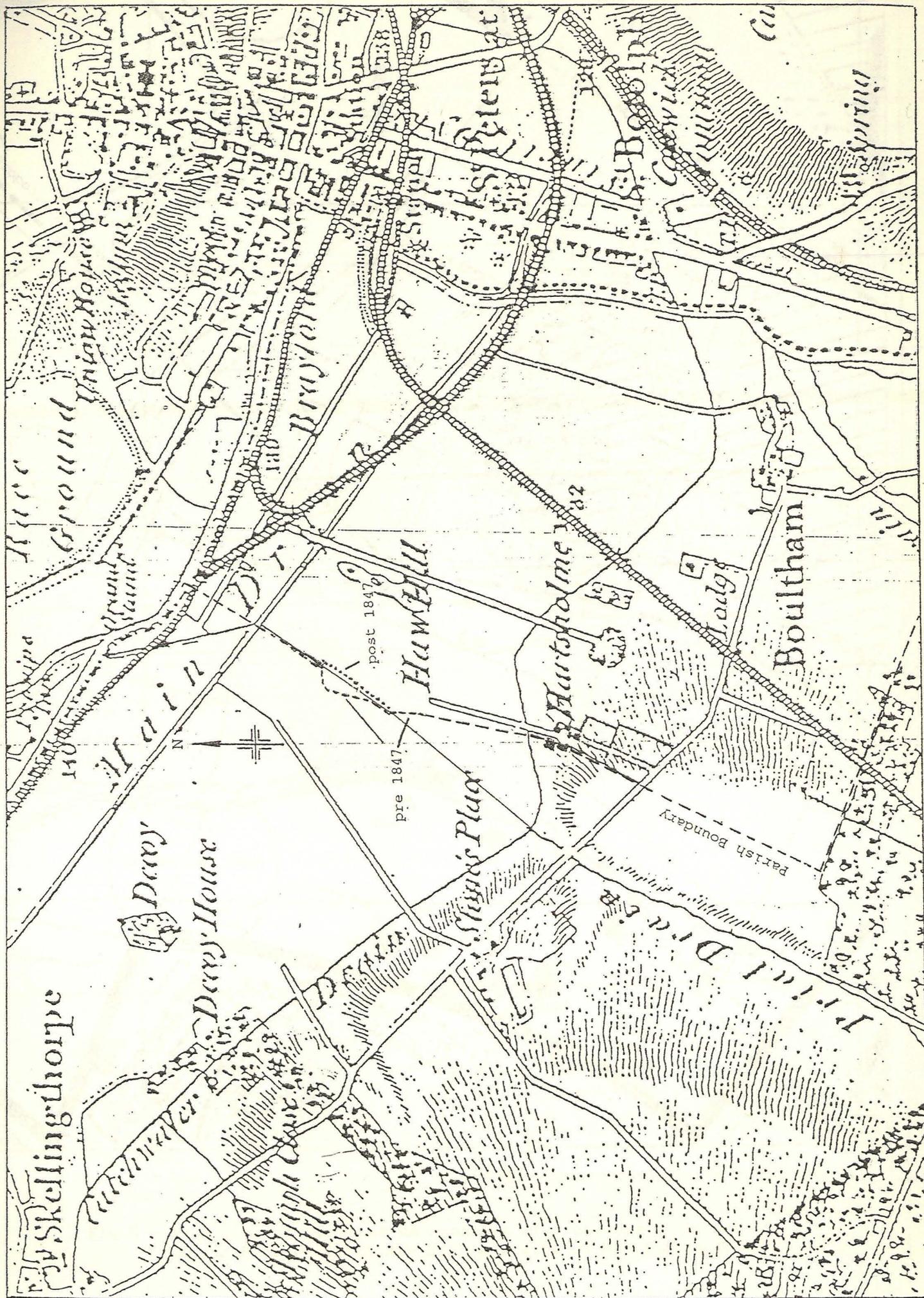


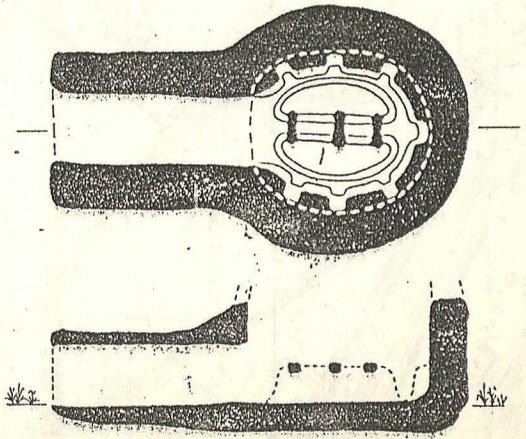
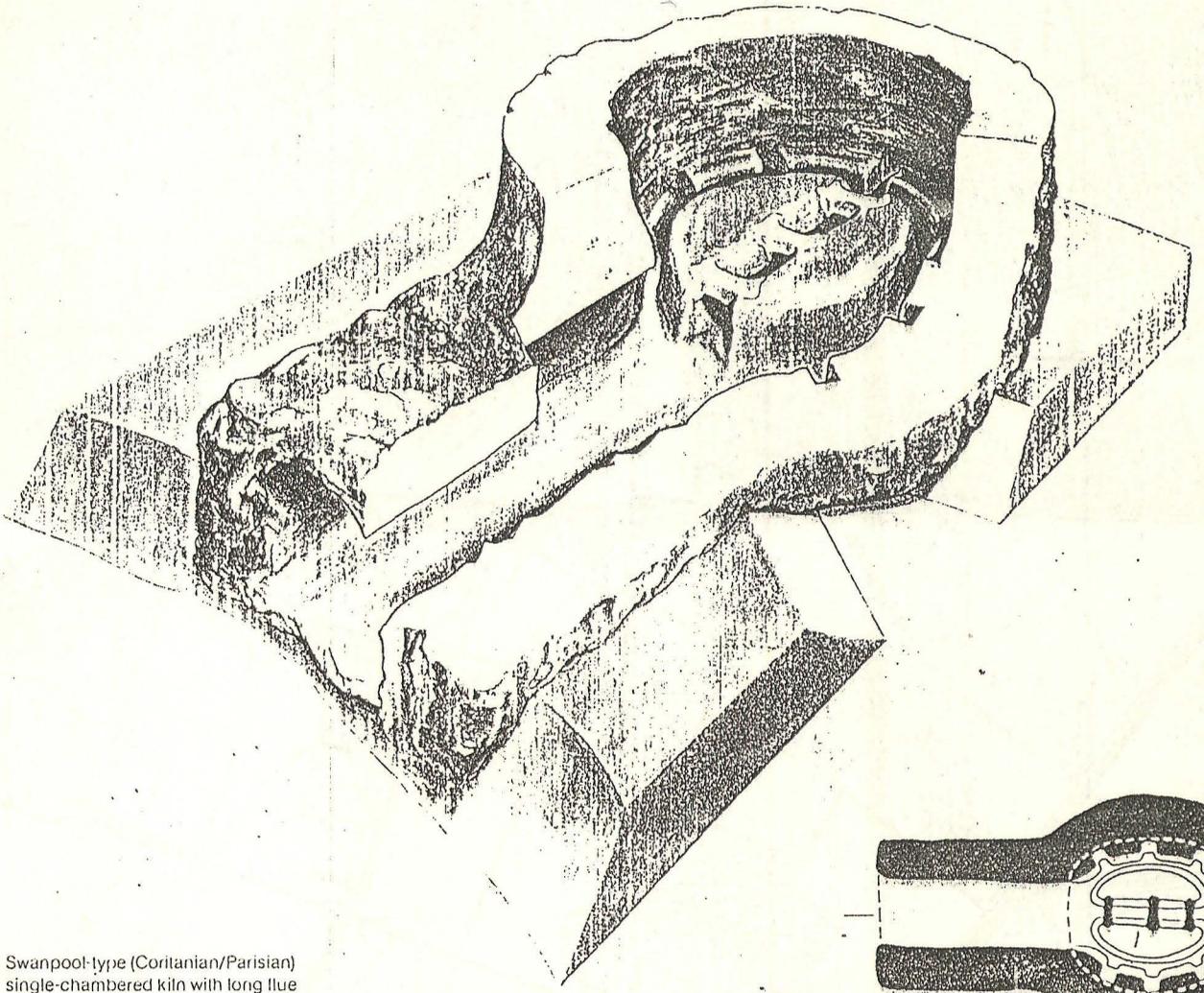
Fig.4 - Part 1824 Ordnance Survey map of Lincolnshire



Fig.5 - Part plan of proposed development area showing location of Roman Pottery kilns, Haw Hill and site of Hartsholme Farm.

City of Lincoln Archaeology Unit

June 1992



Swanpool-type (Corintian/Parisian) single-chambered kiln with long flue and integral twin pedestals and ledge, 'sculpted' from a mass of clay set in a shallow depression (plan and elevation based on Whitwell unpubl. records and Webster 1960)

Approximate scale of the perspective illustration 1:24

Scale of plan 1:48

Fig. 6 - Typical arrangement of 'Swanpool' type pottery kiln.

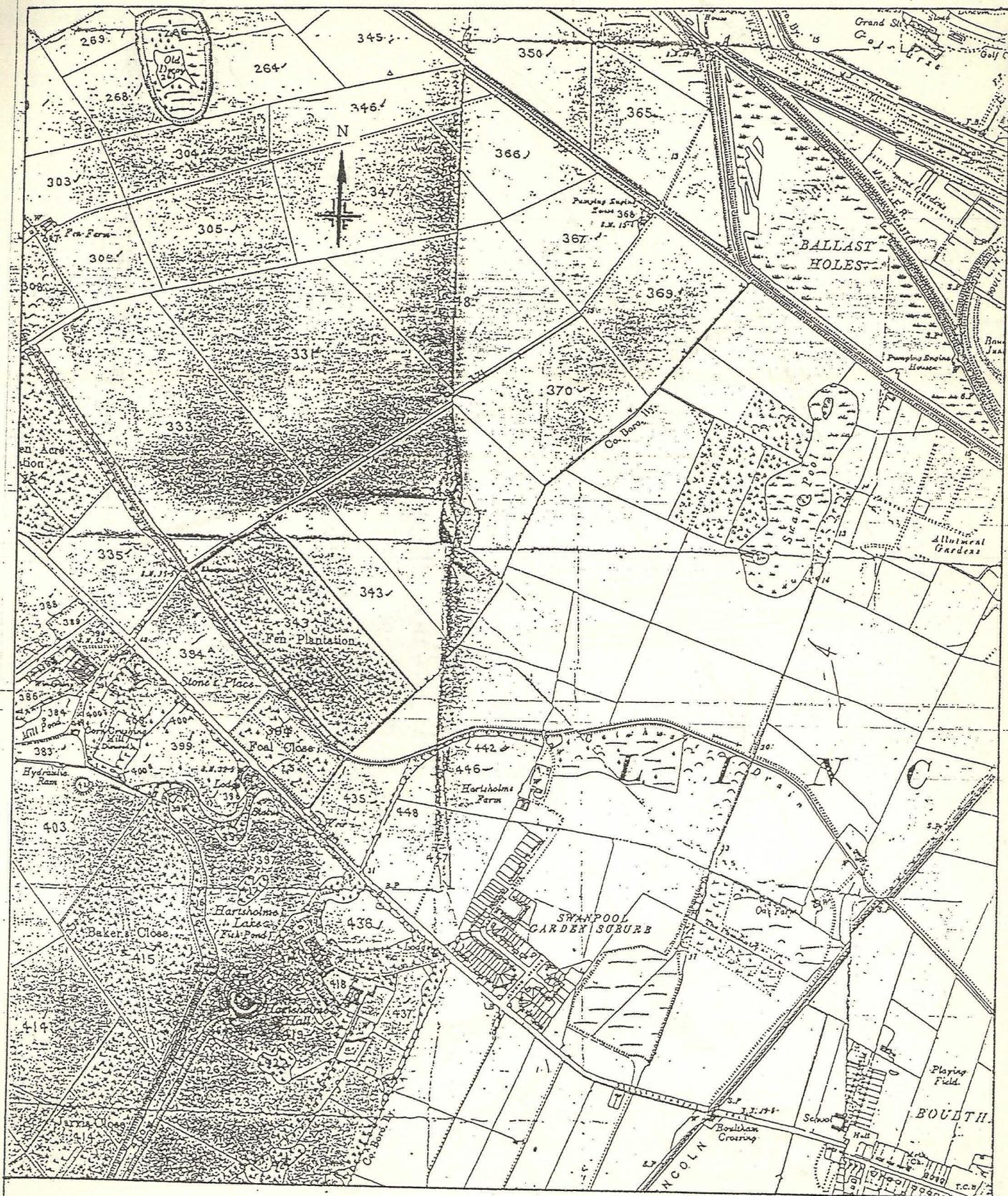
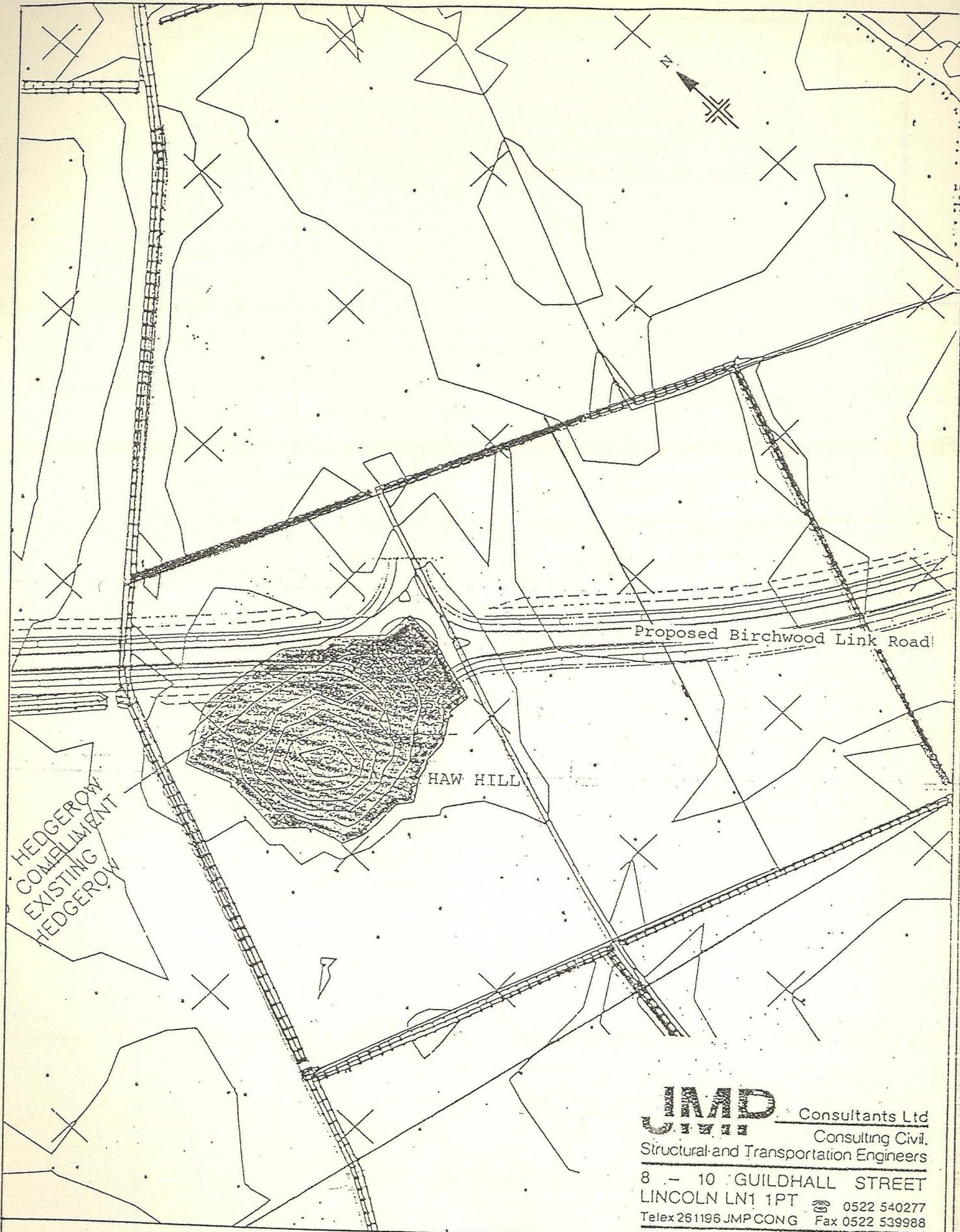
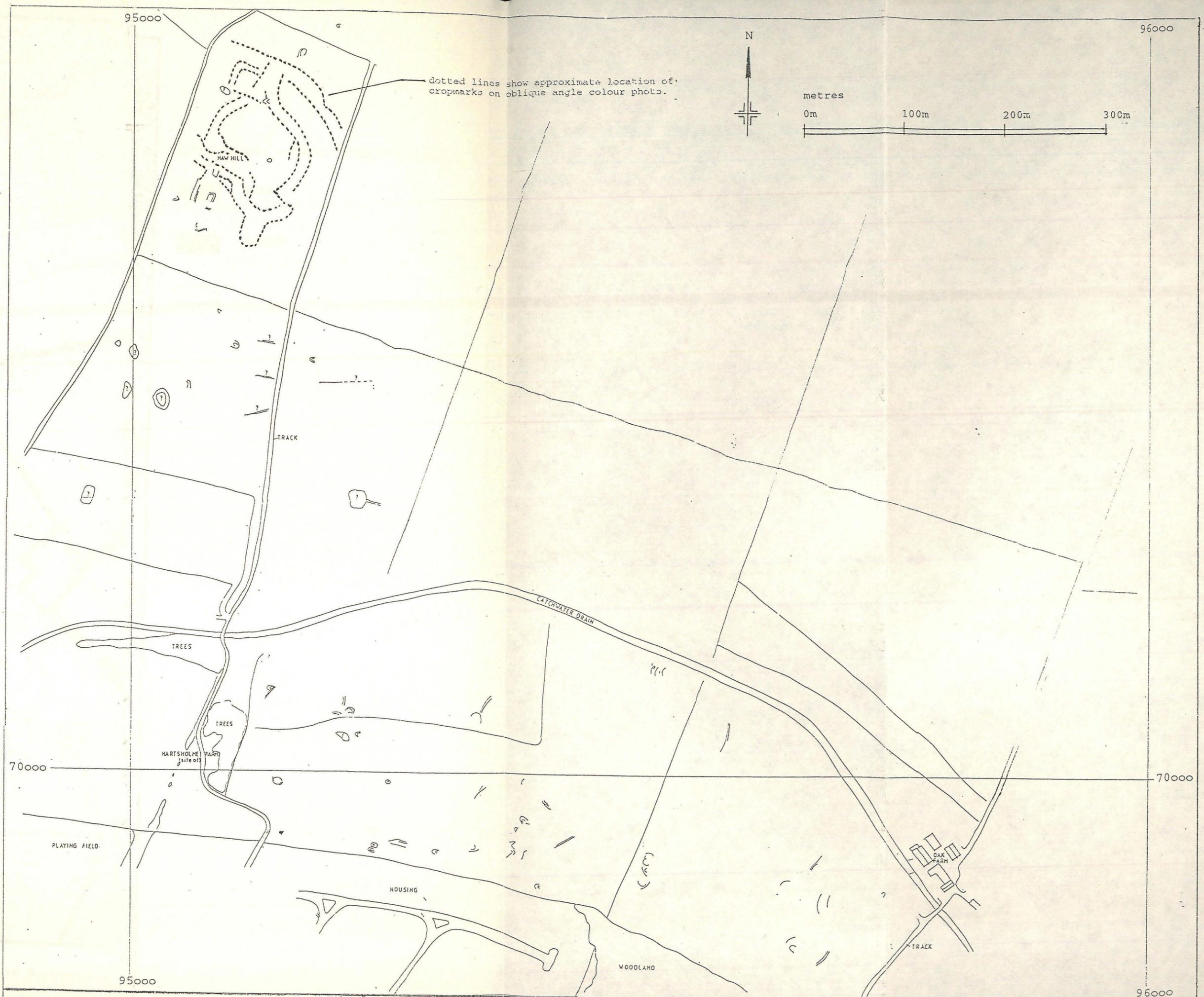


Fig.7 - Part early 20th century map showing Hartsholme Farm



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 Consulting Civil,
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Fig.8 - Haw Hill and environs - Contour Survey by JMP Consultants Ltd.



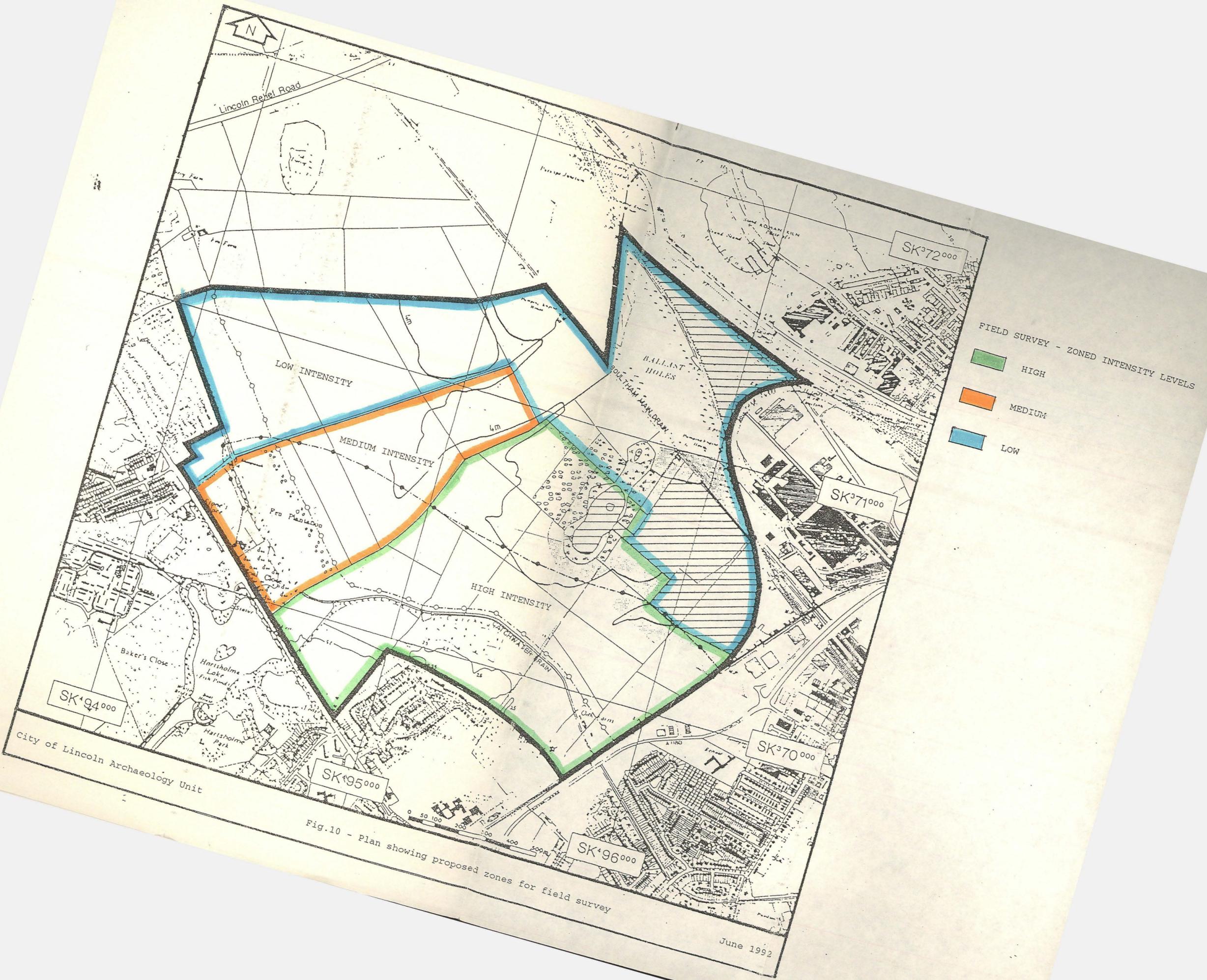


Fig.10 - Plan showing proposed zones for field survey

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