



LINDSEY ARCHAEOLOGICAL SERVICES

**Star Energy Welton Gas Storage Enhanced Oil Recovery Project**

**Holton-cum-Beckering - Welton Gathering Centre  
Gas Pipeline**

(Reepham, Fiskerton, Barlings, Newball, Bullington, Goltho, Rand and Wragby parishes)

NGR: TF 0480 7501 - TF 1340 7941

Site Code: SEGP03

LCNCC Museum Accn. No. 2003.234

**Archaeological Desk-Based Assessment**

**Report prepared for  
Lapwings Consultants Ltd  
(on behalf of Star Energy [East Midlands] Ltd)**

**by  
G. Tann**

**LAS Report No. 703  
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54903 - Medieval (FS)  
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## **Star Energy Welton Gas Storage Enhanced Oil Recovery Project**

### **Holton-cum-Beckering - Welton Gathering Centre Gas Pipeline** (Reepham, Fiskerton, Barlings, Newball, Bullington, Goltho, Rand and Wragby parishes)

#### **Archaeological Desk - Based Assessment**

NGR: TF 0470 7483 - TF 1340 7941

Site Code: SEGP03

LCNCC Museum Accn. No. 2003.234

#### **Summary**

*Assessment of the proposed route of a gas pipeline between Wragby and Reepham indicates that few known archaeological sites are affected, and particularly archaeologically sensitive locations (including the periphery of the medieval Bullington Priory site) have been avoided. The Wragby end of the route coincides with an Iron Age/Romano-British site which has not been investigated. A walkover survey along the route corridor identified infrequent scatters of Romano-British and medieval artefacts, and further investigation may show that these are associated with surviving features.*

*The route is thought to cross the area of a Middle Saxon land estate and early medieval park which have been studied by landscape historians. Groundworks for a pipeline could reveal unrecognised boundary features, or present reasons for boundary anomalies, which would add significant detail to the studies.*

*These factors indicate that there is potential for archaeological remains along the route, and a programme of mitigation measures will need to be arranged before any groundworks commence.*

#### **Introduction**

Lindsey Archaeological Services (LAS) was commissioned in September 2003 by Lapwings Consultants Ltd (on behalf of Star Energy [East Midlands] Ltd) to prepare an archaeological desk-based assessment of a proposed pipeline route (Fig. 1).

The purpose of the desk-based assessment is to identify the archaeological potential of the route by collating available existing information.

#### **Planning Background**

Lapwings Consultants Ltd are preparing an Environmental Statement for Star Energy's proposals for a 24" diameter underground pipeline, transporting gas to the Welton Gathering Centre north of Reepham, Lincs. As part of the Environmental Impact Assessment (EIA), LAS was commissioned to research and produce a desk-based assessment to form the Archaeological Submission.

Fields along and beside the proposed route were assigned letter codes (from Field A at the western end, to Field BB at the eastern limit) for recording and descriptive purposes, and this system is followed in this report.

### ***The Proposed Pipeline Route***

The intended pipeline is c. 11km long, and is intended to link an existing Transco trunk main (north of Wragby), to the Welton Gathering Centre north of Reepham, Lincs. The route crosses open farmland through Reepham, Fiskerton, Barlings, Newball, Bullington, Goltho, Rand and Wragby parishes.

### ***Methods and Sources***

A desk-based assessment and walk-over survey of the proposed route, within a 1km broad corridor context, was undertaken in order to identify and assess all apparent archaeological constraints. Research for the assessment was conducted by G. Tann between September 25th and November 6th 2003. An initial route was abandoned, and minor alterations were made to the proposed route. The following sources were consulted and available information researched:

- Lincolnshire County Council County Archaeology Office (Sites and Monuments Record, National Mapping Programme overlay of cropmarks, 1971 vertical air photographs, oblique air photographs, parish file, previous reports)
- Lincolnshire Archives Office (Manuscript maps, Ordnance Survey maps, other documentary and published sources)
- Lincoln Central Library Reference Department, Local Studies Collection (published sources, press cuttings, Ordnance Survey maps)

no ARs

### ***Topography and Geology***

The route encounters pelo-stagnogley soils of the Ragdale Association (712g) to the east of the Welton Gathering Centre, but is mostly within the Beccles 1 Association typical stagnogley soils (711r). Small parts of the route cross Fladbury 2 Association pelo-alluvial gley soils (813c) close to the Barlings Eau and minor watercourses (Soil Survey 1983). Alluvial soils were observed during the walkover survey, and in these locations prehistoric and Roman archaeological remains may be masked by later sediments.

### ***Archaeological/Historical Background and Route Walkover (Fig. 2)***

The proposed pipeline route was walked in two stages during October 2003. To the east of Barlings Eau, two archaeologists each walked a transect within approximately 20m of the proposed course, examining the field surface over a width of about 4m. West of the river, a single

transect was walked. In some fields, the ground surface was obscured, and here the inspection was restricted to a check for visible earthwork features. The observations and archaeological findspots from that walkover are described here from west to east for consistency with other reports for this project. Artefacts were assigned numbers by LAS for recording purposes; where several sherds were found within about 20m, a single number was used. The present route differs slightly from the walked route at some locations.

The results of the walkover are correlated here with relevant archaeological and historical information which may have implications for groundworks for a pipeline. Previously recorded sites and findspots are listed in the Lincolnshire Sites and Monuments Record. These have been allocated Primary Record Numbers (PRNs) and these are used in the text (prefixed SMR). A summary list of SMR entries in the vicinity is provided in Appendix 1.

### ***Reepham***

The proposed pipeline route passes from the Welton Gathering Centre, below the Lincoln – Market Rasen railway line (constructed before 1848), and across farmland at the eastern side of Reepham parish. The Beck, which passes the Welton Gathering Centre compound, flows about 100m north of the proposed course.

Part of a Niedermendig rotary quern **19**, of Roman, Saxon or medieval date, was recovered from the field surface in Field B during the walkover in October 2003. No other material was seen in the immediate vicinity. A farm track is marked 20m to the west (between Fields A and B), and a spread of brick rubble was evident in the ploughed field on the approach to the modern stream crossing. This spread of imported metalling was not thought to be the source of the quern fragment. It is conceivable that the rubble was taken from the demolition of a house and barns which formerly stood in Field D, 200m NW of the present Lodge Farm (formerly called Reepham Lodge). The premises are shown on an 1838 plan of Reepham, and on the 1851 Tithe Award, at which date they were owned by Robert Garratt (LAO TLE 43/2; LAO Tithe Award I/642). Ordnance Survey maps indicate that the site remained occupied (and called Lodge Farm) until after 1904 (OS 1948). The route passes immediately north of the barns site.

1971 vertical air photographs record NW-SE aligned ridge and furrow in Field C, east of the removed track. If the lost farm site had a medieval predecessor, it is likely to have been an isolated farmstead rather than part of a subsidiary settlement. The only other suggestion of an archaeological feature nearby is the abrupt field-boundary deflection, immediately north of the pipeline route between Fields C and D. Here the boundary may be enclosing the site of a structure, at the NE corner of the field called 'Far Walk'.

### ***Fiskerton***

The extreme northern edge of Fiskerton parish is crossed by the route, to the NW and NE of Barlings Farm. Numerous prehistoric and Roman sites and artefacts are known in Fiskerton close to the River Witham, but none are recorded in this part of Fiskerton Moor.

At the northern edge of Field I, an inspection manhole was interpreted as evidence for a sewer or other underground pipeline. It was unclear in which direction this was aligned.

### ***Barlings***

The pipeline route crosses the parish boundary between Fiskerton and Barlings to the east of Barlings Farm. The depth and width of the ditch here seem to have been increased recently, with a 1m high and 6m wide embankment along the eastern side (possibly constructed for flood defence purposes). Field M, at the western edge of Barlings parish, was under stubble, but the visible soil seemed to indicate alluvial material rather than the heavier clay to either side. It is at the base of sloping land, and the dry ditch along the boundary may carry considerable flows in wet weather. Air photographs record ridge and furrow in Field M (SMR 53010).

Further up the slope to the east, a large pond extends either side of the field boundary with Field N, about 50m north of the pipeline course. There was a brick-making industry in Barlings in the mid-nineteenth century, and this pit could represent a clay extraction source (Leach 1964). Roof tile fragments were seen in the centre of Field N, but these are not thought to denote a kiln site. Three Roman artefacts were found in Field N, (at **16** and **17**), close to three sherds from a single early/mid 10thC pot **18**, identified by Jane Young as manufactured close to 920 AD. To the east of the lane, two further sherds of Roman pottery **14** and **15** were found on the surface of Field O. The cluster of Roman findspots probably indicates a nearby occupation site.

The lane leads from Barlings village to the site of the ruins of Barlings Abbey. The abbey was founded in 1154, originally on a site (SMR 53010) between 5m and 10m OD to the north of Barlings Hall. The abbey moved to the later site on an island of higher ground in Fiskerton Fen known as Oxeney, linked by a causeway (Everson, Taylor and Dunn 1991, 69). The causeway is thought to have been constructed over land below 5m OD. Although the pipeline route crosses an approach to the causeway, it is at about 9m OD and is unlikely to encounter evidence of a constructed causeway.

A small hollow was seen in the western boundary bank of Field S, a narrow field beside the proposed crossing point at the confluence of the Barlings Eau and a tributary stream. The feature

was interpreted as evidence for small-scale quarrying, possibly for material to improve the flood bank which is positioned along this bank of the stream. The flood bank in its present form is recent, containing brick rubble, tarmac and concrete.

### ***Newball***

To the east of the Barlings Eau is another narrow pasture field, Field U. The surface is uneven; this may be the result of past small-scale quarrying, or traces of earlier stream channels now altered by flood banks along the existing river course (Pl. 1). The field ditch to the east of this field is broad and deep (although dry when seen), and may be a former stream channel (Pl. 2). It could potentially represent a mill leat, but it does not link with the Barlings upstream.

Air photographs from 1971 show cropmarks in Field V, probably of geological origin but possibly NW-SE aligned ridge and furrow. The soils immediately east of the river are sandy. Cropmarks in Field W (separated from Field V by a hedgerow of mature oak trees) are certainly of NW-SE aligned ridge and furrow. A plan of 1839 shows Gatecliff Wood extending north to the bend in the river, and this post-medieval woodland may have helped preserve the residual medieval features (Fig. 3; LAO Pad 2/61). Gatecliff Wood is not recorded as containing species indicative of ancient woodland (Hughes 1988).

Examination of the same map shows that the modern lane has been taken from a much broader swathe of land (including Field X to the east of the lane), perhaps an indication of a cattle drove route to Newball Common from the main road to the north. 'Gatecliff' contains place-name elements suggesting a road, which beside this location might lead to a river crossing (a farm track now leads to a bridge across the Barlings Eau south of the wood).

A rectangular earthwork enclosure (SMR 53054) in Newball Wood, 500m north of the pipeline route, has been tentatively identified as of pre-medieval date, and possibly Roman (Everson 1991). The ditch has been recorded as having a 1m high bank and a 1.4m deep ditch. The function of the earthwork site is not understood; earlier suggestions that this was a medieval defensive feature have been discounted, and the only clue seems to be its location on the edge of dry land east of the Barlings Eau (Everson, Taylor and Dunn 1991, 133-4).

To the south of Newball Wood, the pipeline route crosses between Fields Y and Z where no hedge survives. The alignments of hedge segments to the north and south appear to be slightly different, but the 1839 plan denotes a single boundary, with a boundary extending eastwards from it. A SW-NE aligned dark soil mark reflects this removed field ditch. A medieval pottery sherd **13** found in Field Z is assumed to have been introduced with farmyard manure.



### **Bullington**

The pipeline route crosses into Bullington parish immediately south of Newball Wood, and west of an uninhabited farmstead at The Grange. The boundary here follows a minor watercourse, flowing from springs NW of Bullington Wood. An eastern branch of this watercourse, a ditch with reeds, is mapped alongside the road as far north as Shortwood (although during the site visit much was dry), and the route runs to the east of the drain for about 850m. An air photograph records a feature interpreted as a former watercourse aligned NW-SE either side of the lane to the north of North End House (HSL UK 71 185 Run 09, 0926). This could represent a former water supply to the Bullington Priory site, east of North End House, and suggests that the natural courses of streams here have been altered.

The priory was founded between 1148 and 1154 on land called *Lindelai*, derived from Old English place-name elements denoting 'lime-tree wood' (Cameron 1998, 22-23). The site was granted to the Gilbertine Order by Simon, son of Walter de Kyme, from land which had formed part of an extensive park. It was originally endowed only with a portion of the parkland and a part of the accompanying wood, but received later land grants (Everson, Taylor and Dunn 1991, 78-9). The documentary records imply that the priory was an important house before dissolution in 1538, probably fifth in status within the hierarchy of only 34 Gilbertine institutions in England. Fragments of the stone walls of buildings were visible above-ground in the nineteenth century, including a small masonry lump which was photographed in June 1933, but earthwork features are all that now remain visible (LAO Ex 8/3/17; LAO Ex 8/7/13). Air photographs taken in 1936 indicate the site layout well, but photographs taken in 1937 and later record a process of levelling and ploughing (Hadcock 1937; CUCAP AHD 27). The site was designated a Scheduled Ancient Monument (SAM 85) in c.1937, and the designation has not been revised.

The Sites and Monuments Record lists an earthwork site within Cocklode Wood (SMR 50681). This feature has been variously interpreted, but the conclusions of a measured survey conducted in 1980 by the Royal Commission for Historical Monuments (England) are that it represents the remains of a lodge within the early medieval hunting park, or was a grange associated with the adjacent priory (Everson 1988, 95).

A settlement at Bullington is recorded in the *Domesday Survey* of 1086, but there has been considerable academic debate as to where that site was (Foster and Longley 1924; Bassett 1985; Beresford 1987; Everson 1988). Paul Everson, former Field Investigator in Lincolnshire for the Royal Commission on Historic Monuments, initially considered that the most probable village site was 'alongside or near the priory', and that the settlement site may have been abandoned when a

deer park was established before the mid-twelfth century (Everson 1991, based on earlier notes). On the evidence of various field surveys in 1980, Everson later came to the conclusion that Bullington's lost medieval settlement was actually 1.5km NE of the priory site, in the modern parish of Goltho (Everson 1988). This was the deserted medieval village site which was excavated in 1970-74 (SMR 51217), producing evidence of occupation until the fifteenth century (Beresford 1987). The administrative complications appear to derive from the Middle Saxon period, as indications from the 1086 *Domesday Survey* hint at an extensive estate which was subdivided at later dates. The Bullington focus of this estate seems to have been the most significant.

The mapped late-nineteenth century landscape around Bullington has been studied, and elements of an extensive field system aligned to Roman roads have been tentatively identified (Bassett 1985, 34-36). The same study has also suggested minor Roman roads, based on their conformity to the field pattern, including one passing the priory site. There is no confirmation of this theory.

The pipeline route passes outside the west and north limits of the Scheduled part of the priory site (Field AJ), on land that is now regularly ploughed (Field AI). A sale plan of 1875 marks the boundaries of fields at that date, and assigns their names (Fig. 4; LAO Pad III/446). The route crosses Plot 43 ('The Abbey Yard – rich old feeding ground; Old Abbey Piece and part of Crews and Garth Close), which extended to the road. To the north of this, not necessarily defined by a hedge or ditch, was Plot 42 ('The noted Hop Yard'). The element 'hop' is not known in this association before the fifteenth century, and this instance probably indicates use of the site after Dissolution of the priory in the sixteenth century; it need not relate to medieval use of this plot (Smith 1987, 260). To the north of this field was a row of trees at the southern edge of Plot 34 (Short Wood Close), which appear to have defined the abbey site. West of the road was Plot 30 (Kelm House Close), with no associated house illustrated. The name 'kelm' is not included in place-name element sources, but could refer to a building associated with the priory, or the hopyard.

During the walkover, fragments of medieval pottery and frequent spreads of limestone rubble, clay roof tile and stone and flint wall core rubble were seen to the north of the site. Air photographs indicate that features associated with this site extended as far west as the modern lane.

### ***Goltho***

The route crosses the Bullington/Goltho parish boundary to the south of a small pond; to the north of the pond in Field AM is a short length of low ridge which can be seen at ground level but not on the 1971 vertical air photographs. This feature seems most likely to be associated with the pond rather than the boundary, and is probably not more extensive. The present route crosses near to a possibly ploughed-out mound in Field AM, visible on air photographs (HSL UK 71 185 Run 09, 0925).

At the boundary between Goltho and Rand parishes, air photographs taken in 1992 show cropmarks in Field AN, which may be of geological features or hut circles of an Iron Age/Romano-British occupation site (Hartley 92/17/11).

North of this, the route crosses the NW corner of Goltho parish, immediately north of the mid-first/early third century AD Roman settlement, ninth century and later Saxon village with manorial centre, and deserted medieval settlement site (SMR 51217, 51227) excavated in the 1970s. The excavations recovered infrequent Iron Age pottery sherds and material from a substantial later Roman building, which may have been nearby (Beresford 1987). This route variation was notified after the walk-over. Although the known settlement features are avoided, the route probably crosses a precursor of the modern lane within the field NE of Field AO.

### ***Rand***

The County Sites and Monuments Record contains two entries relating to possible Roman roads passing through Rand parish. The course of possible road SMR 51242 is south of the A158 Lincoln-Wragby road west of Brown Cow Farm, crossing to the north side past some estate cottages at Rand Farm Park. The alignment continues to the NE, about 400m north of the pipeline route. A second suggested road alignment, SMR 50160, leaves the modern main road east of Rand Wood, and is recorded by the Ordnance Survey as an agger between Church Farm and Hall Farm, Rand. The course endorsed by Margary (ref 27) appears to follow the main road west of Bullington, with a fork towards Holton cum Beckering (ref 272), and no evidence of the major road until the NE of Wragby (Margary 1973, 238-9). All that can be said with certainty is that the pipeline route crosses a Roman road course in Rand or Wragby parish.

### ***Wragby***

Undated air photographs record ridge and furrow in the large field (Field AS) at the western edge of Wragby parish (CUCAP PE90). The field is partly under rough grass, but no traces are visible at ground level.

A small pond at the western corner of Field AV may mark either a natural water supply or a clay extraction pit. A single possibly worked flint 1, and two sherds of Romano-British or Iron Age pottery 2, were collected from the surface of the field during a walkover of the proposed pipeline route. Examination of vertical air photographs taken in 1971 has identified a sinuous feature, probably a former stream channel, 50m to the south in the northern corner of the adjacent field, Field AS. The photographs also record circular and curvilinear features SW of Malt Kiln Farm (300m SE of the pipeline route), which appear to be of archaeological origin and could represent a Late Iron Age or Romano-British enclosure and occupation site (HSL UK 71 185 Run 11, 1086). This location is 1.3km NE of the Goltho Romano-British farmstead site (SMR 51227).

The route passes through hedgerows either side of the Wragby – Holton Beckering road. These hedges were included in a survey of hedges conducted in 1979 by the Society for Lincolnshire History and Archaeology (White 1981, 19-23). The western hedge appeared to be more diverse, with an average of 3.6 specified species within each thirty yard length. Dogwood and hazel were recorded in the hedge, possibly indicative of former woodland. An estimated age of 400 years was ascribed to the western hedge; that to the east was less mixed and may be slightly younger (Healey 1981, 22-23).

The proposed pipeline will connect with the existing Transco main. During groundworks for the existing main in 1971, an apparently Iron Age ditch (SMR 40340) was seen in the trench face close to the track leading to Barn Farm. The location details are slightly confused, but the recorded grid reference is at the point where the Star Energy pipeline will join the other. No formal archaeological monitoring or fieldwork was arranged in 1971, and the extent of this archaeological site is not known. The 1.49m wide, and 0.9m deep ditch was at 90° to the pipe trench, and was of 'V'-shaped profile. Two sherds of pottery were recovered from its fill. The description suggests that part of an enclosure ditch was seen, and extensive archaeological features should be expected at this location.

### **Planning Policies**

The Star Energy gas pipeline application will be considered by Lincolnshire County Council, with West Lindsey District Council as a statutory consultee. The *Lincolnshire Structure Plan (Deposit Draft)* contains relevant county-wide policies (LCC 1998, 100-109). The *West Lindsey Local Plan* for the period to 2002 was placed on deposit in March 1994 (WLDC 1994). The *East Lindsey Local Plan* was produced in August 1995, and is in a revision process. Both remain in use. Extracts relevant to archaeological issues are appended (Appendix 3).

### ***Scheduled Ancient Monuments and Listed Buildings***

The pipeline route does not directly affect any Listed Buildings, although it passes within 500m of Goltho Chapel. It passes to the north of the site of Bullington Priory, Scheduled Ancient Monument 85. Dr Glyn Coppack, the English Heritage regional Inspector of Ancient Monuments, was consulted during preparation of this assessment, and indicated that a grant of Scheduled Monument Consent was extremely unlikely for any proposal requiring topsoil stripping within the defined monument area (letter to LAS, dated 13/10/2003). The importance and sensitivity of this site was reiterated by Dr Beryl Lott (Lincolnshire County Council Conservation Section), with particular reference to the unscheduled area around the Scheduled Monument. In response to these comments, Star Energy has made significant revisions to the route at this point. The current proposed route avoids the Scheduled area, and remains outside the identified periphery of the priory.

No other Scheduled Ancient Monuments, and no Historic Parks and Gardens, are affected by the route.

### ***Hedgerows***

Few hedgerows were identified during the walkover as of potential historical or archaeological interest. In Newball, the hedge between Fields V and W contains frequent specimens of mature oaks, and could mark an ancient boundary or the edge of former woodland. Field W is known to have been a post-medieval wood, but the hedge may be earlier.

The Newball/Bullington parish boundary hedgerow between Fields Z and AA is dense and multi-specied, as is the Wragby/Holton-cum-Beckering boundary hedge. To the north of the A158 Wragby Road, the boundary hedge between Goltho and Rand contains an apple tree, which may be an ancient marker tree or a relict tree from a former dwelling plot; the fruit is larger than a usual crab apple, but is not believed to be a cultivated eating or cooking variety.

The thick roadside hedges between Fields AW and AX were examined as part of the Wragby Hedgerow Survey in 1979, and were calculated to be of between 300 and 400 years old. It was suggested that the western hedge was the older, and that it may have been part of early woodland (Healey 1981).

### ***Archaeological Potential of the Proposed Route***

During the walkover survey for this assessment, a scatter of Roman pottery and tile was found in fields either side of the lane from Barlings to Barlings Abbey. The numbers of artefacts are small, but more systematic investigation across the working width of the proposed pipeline could be

expected to produce more. The finds suggest a Romano-British occupation site in the close vicinity, although not necessarily affected by the pipeline route. A Roman site here would be very significant as it is at the northern end of the identified causeway leading to Barlings Abbey

The proposed pipeline route cuts across an area which has been identified as a possible Middle Saxon estate, comprising the parishes of Bullington, Goltho, Rand and Wragby (Everson 1988). In the event that groundworks along this part of the route produce evidence of Roman, Saxon or medieval occupation sites, it will contribute to the developing understanding of this estate. Location of any Roman road remains (especially the unconfirmed course of the Lincoln – Burgh-le-Marsh road) would be especially significant.

The current route may affect the site of the Saxon settlement of Bullington, one possible location of which is in the close vicinity of the twelfth century priory. It has also been suggested that the initial development of Bullington priory lay to the north of the later complex, and evidence of this may be forthcoming. Physical features relating to the early medieval hunting park (which seems to have been the cause of the Bullington settlement disappearing after 1086) could be present; the lane past the priory site (alongside a former watercourse) may reflect the park boundary.

The anomalous strip of land at the edge of Rand parish (Field AN) has archaeological potential. The chronological relationship between use of this road between Wragby and Lincoln, and the creation of the Rand/Goltho parish boundary, is not known, and an archaeological feature at this location might contribute useful information. The present route no longer crosses this land.

In Wragby, the recovery of prehistoric and Roman artefacts from a field surface on the pipeline route north of Malt Kiln Farm adds a further site to the county's distribution map. The nearest identified cropmarks are south of the farm, but the complex may extend as far as the pipeline route. This site lies near the unlocated Roman road from Lincoln to Burgh-le-Marsh.

The 1971 Transco gas pipeline exposed part of an Iron Age enclosure ditch in the immediate vicinity of the proposed pipeline connection at Wragby. This area is therefore of high archaeological potential, although geophysical survey and excavation in this position will be affected by the adjacent live gas trunkmain.

#### **Potential Archaeological Impact of the Proposed Pipeline**

The approved pipeline route will be demarcated by fences enclosing a 26m wide 'working width' corridor. Topsoil will be stripped from most of this corridor and stored within the fencing. The 24" diameter pipe will be laid in a 1.7m minimum depth trench within the working width, allowing

minimum cover of 1.1m. The pipe trench will be 1m wide for most of its length, but wider at tie-in and crossing points.

The route will be open-cut across fields and tracks, with various trenchless technologies being used where there are practical or environmental constraints. Further works may be needed to provide contractors' vehicular access along the route, and this will include links to minor roads either side of the A158 Wragby Road crossing.

Along most of the route, the potential damage to archaeological remains is greatest from the topsoil stripping and subsequent disturbance of the stripped surface within the 26m wide corridor. This can be expected to reveal further artefacts and archaeological features. Once exposed, these will be vulnerable to weathering and contractors' vehicular movements, as well as further damage when the pipe trench is excavated.

The most significant impact on known archaeological remains is believed to be close to the site of Bullington Priory. English Heritage commented that a previously proposed route appeared to clip the Scheduled Ancient Monument area in two places, and indicated that Scheduled Monument Consent might not be granted. The Lincolnshire County Council Conservation Section noted that the proposed route affected archaeological remains in the unscheduled area of the Priory site, and indicated that the route might be unacceptable. As a result of these initial objections, the present proposed route has been moved further north and west to reduce these concerns.

The construction of temporary access arrangements across hedgerows may lead to localised damage to field boundary banks and ditches. This will be most significant where the route crosses parish boundaries, as these may coincide with prehistoric, Roman or Saxon features.

#### ***Mitigation Options***

The proposed route has been revised by Star Energy to reflect archaeological issues, and no further re-alignment of the route is considered necessary by LAS on the basis of known information. English Heritage and Lincolnshire County Council Conservation Section both considered that the route should not be immediately adjacent to the site of Bullington Priory. The revised course takes the route about 250m south of Shortwood Farm, and west of North End House. In this position, only features at the extreme NW periphery of the priory site are expected to be affected.

Here, and elsewhere where there are grounds to anticipate that archaeological remains will be affected by the route, a staged programme of archaeological investigation and recording should

be agreed in advance of confirmation of the pipeline route. The walkover survey has shown that large quantities of worked flints are not visible on the cultivated surface, and that a dense pottery scatter was only present close to Bullington Priory. A more systematic fieldwalking survey is unlikely to contribute significant additional information.

Geophysical survey may be appropriate for specific parts of the route (eg. at Barlings, near Bullington Priory, immediately south of the A158 road crossing, north of Kiln House Farm, and near the Wragby terminal), where finds from the walkover survey or earlier reports suggest that archaeological features may be present. Targeted evaluation trenching may also be necessary for these locations.

Any archaeological features discovered in advance of the topsoil stripping will need assessment to determine if unacceptable damage will be caused by the pipeline route. Where the route cannot be moved, and approval is obtained, open-area archaeological excavation of the affected site may be needed, providing 'preservation by record' of archaeological features prior to contractors' groundworks commencing.

In recognition of the likelihood of further archaeological sites being revealed by the contractors' groundworks, archaeological monitoring of topsoil stripping and trench excavation is recommended. In sensitive locations, specified sections of the working width corridor should be topsoil stripped using 360° machines with ditching buckets or blades, as bulldozing produces a disturbed surface unsuited to recognition or rapid recording of archaeological remains.

These mitigation measures should be agreed in advance with Lincolnshire County Council, and activated sufficiently in advance of groundworks to reduce risk of delays to the pipeline installation programme.

### **Conclusion**

Much of the proposed pipeline route is not known to affect archaeological sites, although any scheme of this length is likely to reveal previously unknown remains. There are known archaeological sites beside the route (at Bullington Priory and at the eastern terminal) which can be expected to extend on the route. English Heritage and Lincolnshire County Council, commenting on the basis of provisional information, have asked that the route be changed where it passes beside the site of Bullington Priory. At other locations, finds scatters or topographical features may indicate as yet unidentified archaeological sites, and attention needs to be given to these places.



### Acknowledgements

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Pottery from the walkover survey was examined by Jane Young, and the quern was examined by Dr Alan Vince (Alan Vince Consultancy). Formal identification and reports on these finds will be combined with any further fieldwork for this project. The figures were prepared by Karen Dennis and Geoff Tann. The report was collated and produced by Naomi Field.

Geoff Tann  
Lindsey Archaeological Services  
November 7th 2003

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**Archive Summary**

- Correspondence
- Star Energy plans of proposed route, and revisions
- Annotated plans from walkover
- Archaeological finds: flint, pottery, tile, stone
- Colour photographs: LAS film nos. : 03/124/11-21, 31-34.

**APPENDIX 1**

**Summary List of Archaeological Sites and Artefacts**

(Source: Lincolnshire Sites and Monuments Record)

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PRN No.	NGR (all TF)	Parish	Description	Status
40340	1340 7941	Wragby	?Iron Age enclosure ditch on gas pipeline route, 1971	
40341	141 787	Wragby	scatter of four Neolithic and Bronze Age flints on gas pipeline route, 1971	
40341	149 784	Wragby	one flint scraper, three trimmed flakes	
40341	148 782	Wragby	two flint scrapers, one trimmed flake	
43901	1279 7797	Wragby	medieval ridge and furrow	
50160	1125 7906 - 1100 7903	Rand	?Roman road	
50280	1056 7643	Bullington	medieval moated site, Great West Wood	
50395	0660 7500	Barlings	Site of medieval deerpark	
50666	0670 7490	Barlings	Barlings Park, contains ancient woodland	
50670	0880 7620	Newball	Newball Wood, contains ancient woodland	SSSI
50671	089 774	Newball	Far North End Wood	
50672	0930 7490	Newball	Hardy Gang Wood, contains ancient woodland	SSSI
50681	1040 7670	Bullington	Cocklode Wood, contains ancient woodland	SSSI
50682	1070 7620	Goltho, Bullington	Great West, Spring and Little West Woods	SSSI
50669	087 749	Newball	Gatecliff Wood, Newball	
51217	1145 7760	Goltho	Site of deserted medieval village	
51227	113 777	Goltho	Roman pottery	
51242	0800 7715 - 1140 7870	Newball, Rand, Bullington	?line of Roman road	
51718	0710 7530	Barlings	Palaeolithic handaxe, found c. 1957	
52879	0300 7270	Fiskerton, Reepham	RAF Fiskerton and associated buildings	
52893	0650 7380	Fiskerton	Neolithic polished stone axe	
53008	0833 7408	Barlings	?post-medieval earthwork drainage system	
53010	0798 7429	Barlings	Earthworks; ?original site of Barlings Abbey	
53011	0760 7480	Barlings	Settlement remains of village of Barlings	
53014	0779 7461	Barlings	undated cropmark and earthwork enclosure	
53018	0800 7410	Barlings	Barlings Hall	LBII
53032	0711 7530	Barlings	Neolithic flint axe, found c. 1972	
53037	0789 7523	Barlings	cropmark of Bronze Age barrows	
53038	0794 7512	Barlings	cropmark of medieval field boundary	
53040	0785 7560	Barlings	cropmark Iron Age settlement site	
53052	089 772	Newball	medieval ploughing boundary	
53054	0830 7576	Newball	medieval earthworks	
53055	083 756	Newball	searchlight battery	
53056	0814 7601	Newball	ridge and furrow	
53058	0900 7365	Barlings	Anglo-Saxon spearhead, from stream by abbey site	
53817	0962 7524	Bullington	?ploughed mound, undated	
53818	0949 7561	Bullington	?medieval windmill mound	
53819	0960 7684	Bullington	cropmark of medieval boundary ditch	
53822	0985 7670	Bullington	Unscheduled parts of Bullington Priory; Bronze Age palstave	
54188	1012 7672	Bullington	site of medieval Bullington Priory; fishponds, moat	SAM 85
53000	0756 7487	Barlings	St Edward's church	LBII
	0750 7490	Barlings	Grange Farmhouse	LBII

**APPENDIX 2**

## APPENDIX 2

### Artefacts recovered from the Walkover Survey, October 2003

Walkover Survey No.	Field Ref.	NGR (all TF)	Period	Description
1	AV	1223 7885	?Bronze Age	?flint scraper
2	AV	1213 7880	Iron Age/Roman	2 pot sherds
3	AS	1162 7849	medieval or earlier	tile fragment
4	AP	1090 7806	medieval	2 pot sherds
5	AN	1089 7794	medieval	pot sherd
6	AN	1082 7773	?Roman	floor tile fragment ( <i>tegula</i> )
7	AK	1036 7732	medieval	pot sherd
8	AI	1016 7687	medieval	2 pot sherds
9	AI	1006 7682	medieval	pot sherd
10	AI	0998 7681	medieval	6 pot sherds
11	AI	0993 7685	medieval	5 pot sherds
12	AI	0988 7662	medieval/post-medieval	3 pot sherds
13	Z	0919 7578	?post-medieval	floor tile fragment
14	O	0775 7460	?Roman	tile fragment
15	O	0782 7452	Roman	pot sherd
16	N	0763 7457	Roman	2 pot sherds
17	N	0754 7455	Roman tile; early/mid - mid 10thC pot	tile fragment, 3 pot sherds
18	N	0753 7455	Roman	floor tile fragment ( <i>tegula</i> )
19	B	0788 7490 0433 7400	Roman - Medieval	Fragment of upper stone of Niedermendig hand rotary quern

**APPENDIX 3**



## APPENDIX 3

### Planning Policies

#### ***Lincolnshire County Council***

Relevant policy initiatives followed by Lincolnshire County Council are detailed in its *Lincolnshire Structure Plan, Deposit Draft 'Shaping the County's Future'* (LCC 1998).

#### ***Policy 63: Archaeological Heritage***

*Development adversely affecting an archaeological site of national importance (whether scheduled or not) or its setting, will not normally be permitted*

*Development affecting an archaeological site of regional or local importance will be considered having regard to its intrinsic importance and the need for the proposed development*

*Where development is permitted, satisfactory arrangements for the preservation in situ of archaeology within the development, or (where appropriate), the excavation and recording of the archaeological remains will be required*

#### ***West Lindsey District Council***

Relevant policy initiatives followed by West Lindsey District Council are detailed in its *Draft Local Plan (Deposit Local Plan March 1994, Adopted 1998)*:

#### **Ancient Monuments and Sites of Archaeological Importance:**

##### ***Policy SA9***

*The Local Planning Authority will seek to protect the District's archaeological heritage, including all known sites of archaeological importance.*

*Planning permission will not normally be granted for development which would adversely affect the archaeological remains on, or under, a site or affect the character or setting of a site. This is particularly so in the case of archaeological remains of national or great local importance.*

*Where development is proposed on a site where there is considered to be an archaeological interest and the information about the archaeology is insufficient to determine an application the applicant may be required to provide further information needed to determine the application; in the absence of this the local planning authority will consider the need to refuse permission for the proposals.*

*If planning permission is granted for a development which if carried out would adversely affect the archaeology of the site it will be subject to conditions, agreements or planning obligations as appropriate to:*

- i) Ensure preservation of the archaeology in situ and/or*

ii) Ensure an adequate record of the site is made. Depending on the importance of the site, this may take the form of

a) excavation, adequate opportunity being provided by the developer for an archaeological body approved by the District Council to carry out such works

b) watching brief

c) field survey

Such excavation or recording shall normally be carried out before development commences. The publication of results of any excavation or survey will be required as part of any agreement or set of conditions.

Where the character setting or physical structure of an archaeological site is being or would be adversely affected by permitted development, the local authority will give consideration to the need for making an order under Article 4 of the Town and Country Planning General Development Order 1988.

#### **East Lindsey District Council**

Relevant policy initiatives followed by West Lindsey District Council are detailed in its *Local Plan* (East Lindsey Local Plan, pt. 1: District-wide Policies, August 1995):

#### *Policy C6 – Archaeology*

*The council will not permit development which would harm a defined scheduled ancient monument site or other site of archaeological importance, or its setting.*

*Where such development is permitted or, in the course of new development, archaeological remains become apparent, then the developer will be required to suspend activities in order that the County Archaeologist shall be given the opportunity to excavate and record the site before development begins and to inspect and monitor the progress of the development on the site.*

*Also, where such development is permitted, its form, scale, proportions, siting, materials, boundary treatment and associated landscaping shall take account of, and complement, the setting or archaeological significance of the ancient monument.*

The Local Plan is in the process of revision (*East Lindsey Local Plan- Alteration 1998: Proposed changes as agreed by Planning and Development Committee, 23/7/1998*). Among proposed wording changes are paragraphs

- requiring any planning application for development affecting a site of archaeological interest to be accompanied by a site evaluation to determine the site's archaeological significance

- stating that development will not be permitted which would harm a scheduled ancient monument or its setting, any other nationally important archaeological site or monument, or any locally important archaeological site deemed worthy of preservation *in situ*.
- requiring permitted development on archaeological sites, where preservation *in situ* is not warranted, to minimize or avoid disturbance, and to ensure preservation of the site by record.

The wording changes are not yet in their final form.

## THE FIGURES

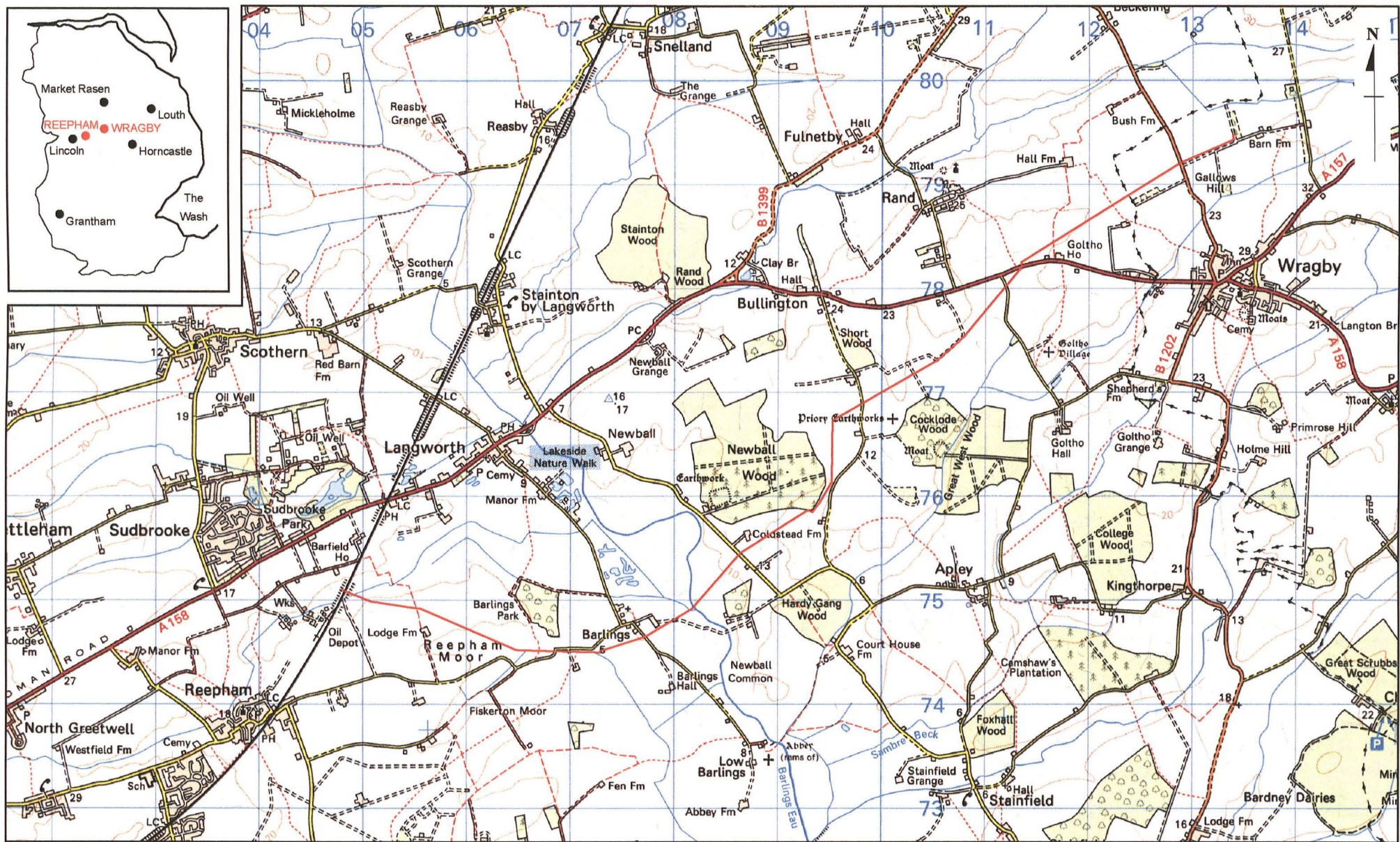


Fig. 1 Location of the proposed Holton-cum-Beckering to Welton Gathering Centre gas pipeline (based on the 1:50,000 Ordnance Survey map Landranger map sheet 121 (1994). © Crown Copyright, reproduced with the permission of the Controller of HMSO. LAS Licence No. AL 10002165).

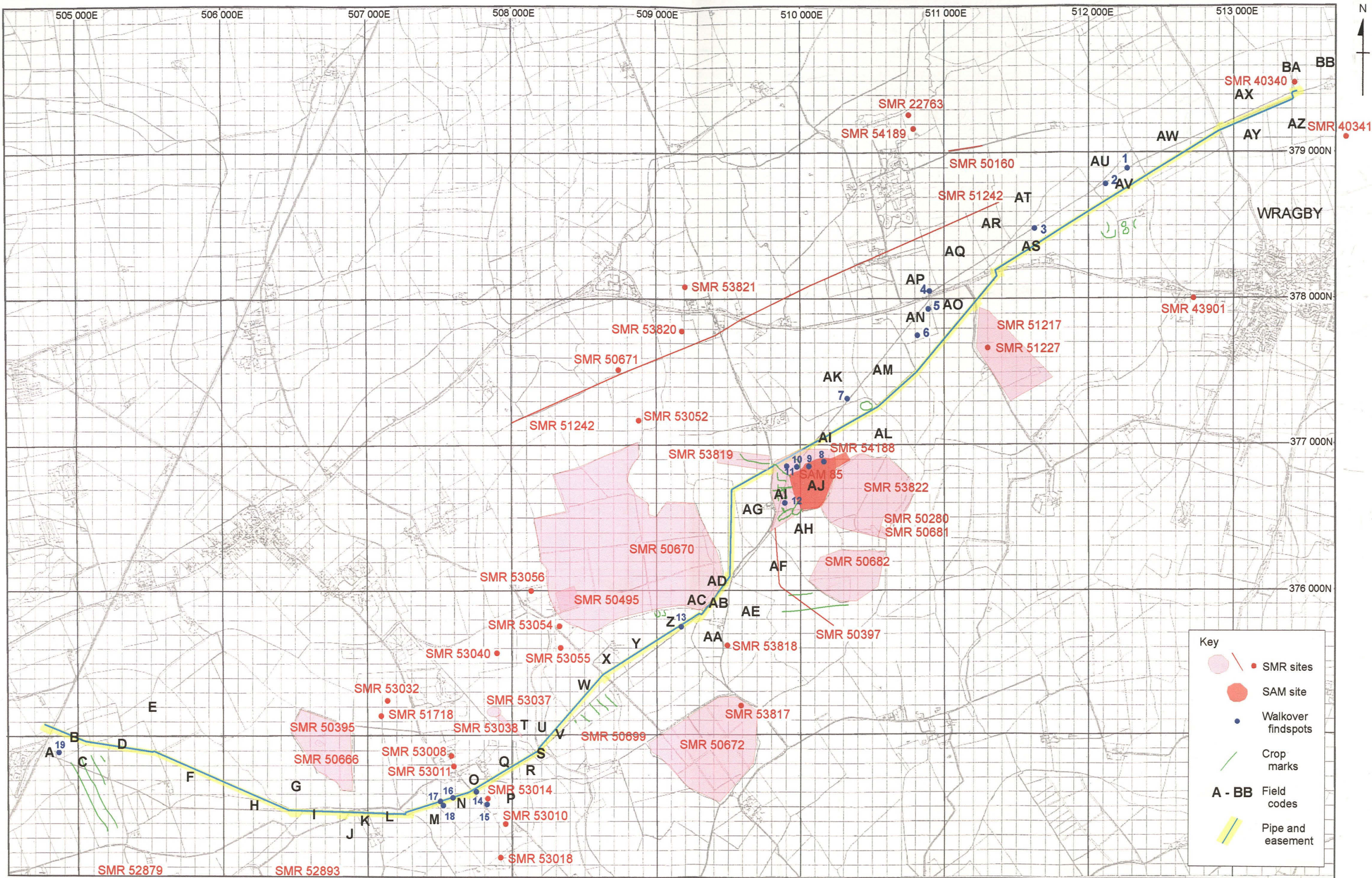


Fig. 2 Proposed route of the Holton-cum-Beckerling to Welton Gathering Centre gas pipeline showing known archaeological constraints.  
 Based on digital mapping provided by the client, with the Proposed Route shown on Star Energy dwg. UP/SM/SE/100.01C. © Crown Copyright, reproduced with the permission of the Controller of HMSO. LAS Licence No. AL 100002165.



Fig. 3 Traced extract from the 1839 Plan of the Parish of Stainton with Newbold. (1839 LAO PAD 2/61; Lincolnshire Archives).

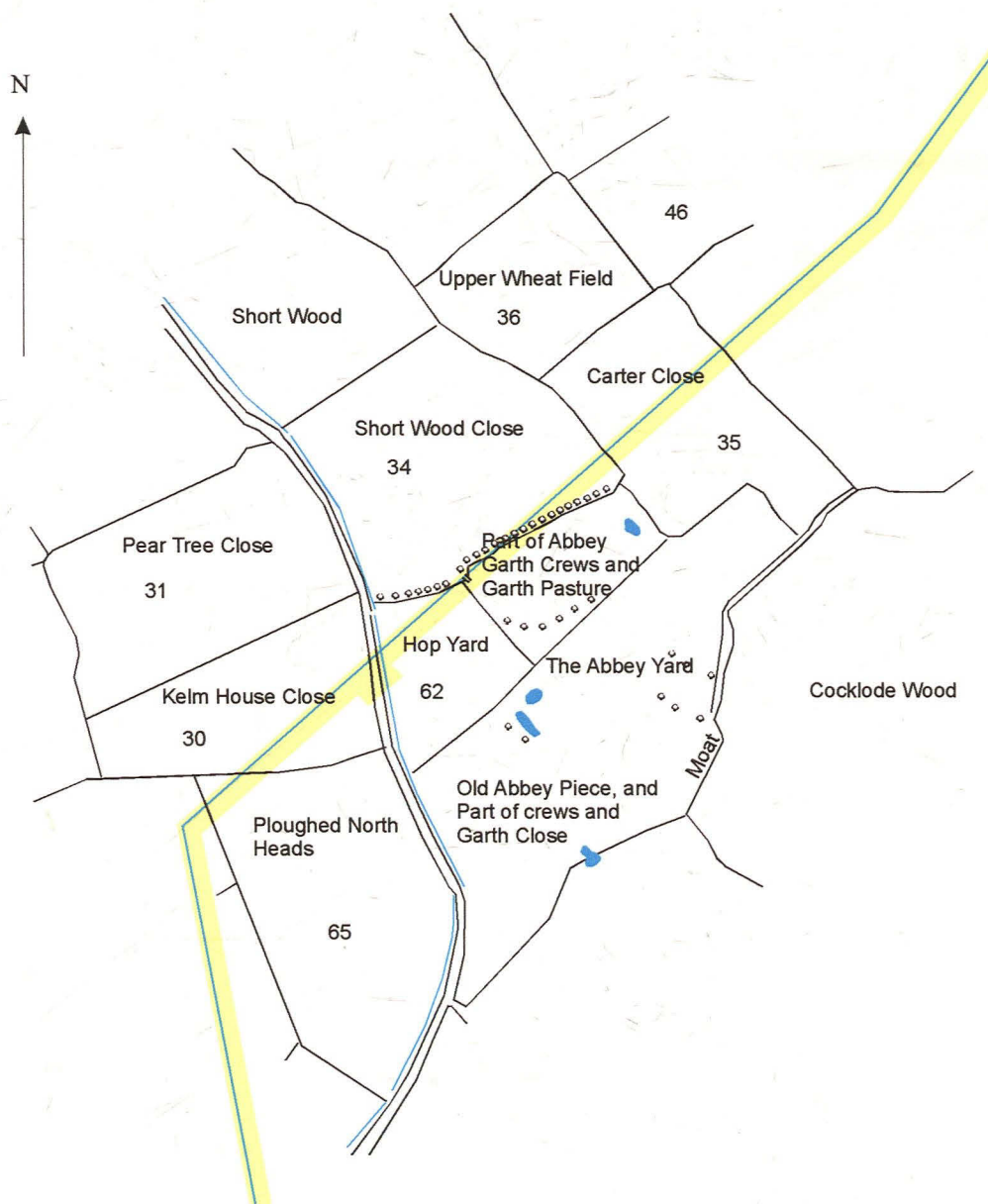


Fig. 4 Traced extract of 1875 Plan of the Bullington Estate, for sale by Mr John Walter (LAO PAD III/446. Lincolnshire Archives).



**THE PLATES**



Pl. 1 Undulations in the surface of Field U, possibly the result of former stream channels or small-scale quarrying (looking north).



Pl. 2 Ditch between Fields U and V, which may mark a former watercourse (looking south).