# Kirkdale - The Inscriptions 

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#### Abstract

THE FRAGMENTART REMAINS of a lead plate have recently been found in excavations near St Gregory's Minster, Kirkdale, North Yorkshire. An inscription on it appears to refer to a reliquary, ossuary or coffin; the letter forms are Insular majuscule or half-uncial, dating to between the late-7th and mid-Ioth centuries. This find supplements existing evidence for the church and possible monastery before Orm Gamalson's reconstruction in the I I th century, referred to in the well-known sundial inscription. The opportunity is also taken to review the sundial, both its archaeological context and its content. We conclude by considering whether the earlier significance of the site was relevant to its treatment in the I I th century.


INTRODUCTION (L.W. and P.R.)
Kirkdale is well known for its Anglo-Saxon church, St Gregory's Minster, and especially for its sundial stone in the south porch. ${ }^{1}$ An inscription cut in the sundial stone records the rebuilding of the church by Orm Gamalson; the associated names of Earl Tostig and King Edward date this to c. $1055-65$. The building is thus one of the few Anglo-Saxon churches which is considered to be closely dated, an assumption that has however recently been questioned. ${ }^{2}$ The sundial inscription certainly refers to an earlier church, which was in a state of disrepair by the midit th century. Previous Christian use of the site is independently attested by sculpture of earlier centuries built into the present church, or found since. ${ }^{3}$ It has been suggested that this earlier activity was associated with a monastic community, ${ }^{4}$ one of several in Ryedale, including those nearby known from written sources at Lastingham and Stonegrave. ${ }^{5}$

Since 1994, research has been in progress to determine the character and extent of the postulated pre-1 I th-century church and monastery, and to undertake structural analysis of St Gregory's Minster. Introductory monographs describe this research, the sources of evidence available, and summarize the results to the end of 1997. ${ }^{6}$

The work has included a small excavation in the field N . of the present churchyard, part of the former glebeland, ${ }^{7}$ which now exhibits a well-preserved system of ridge and furrow. Here pre-Conquest contexts are sealed beneath deep cultivation soil; finds include the debris of metal working, a fragment of twisted

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'filigree' glass rod with yellow and white spiral trails that is most easily paralleled in the central Italian monastery of San Vincenzo in the 9th century, ${ }^{8}$ and the inscribed lead plate which is described below. Continuing work in this area includes topographical survey and geophysical examination. Small-scale excavation is also being undertaken on the church exterior. ${ }^{9}$

## THE INSCRIBED LEAD FRAGMENTS <br> DESCRIPTION (L.W. and P.R.)

THE ARCHAEOLOGICAL CONTEXT
On 8 July, 1996, six fragments of sheet lead (nos. $1-6$ ) were found in an excavation in the field N . of the church and adjacent to the present churchyard wall (Fig. I). They were found in Trench II, in context AA, a reddish-brown, very clayey soil. This comprises the subsoil beneath a complex of postholes, metalling and evidence of iron-smelting and smithing, and copper alloy working (slag, hearth or furnace bases and fragments of crucible). The glass rod was found nearby. There are only very few sherds of soft black pottery (and a few of Roman date) associated with this complex; the whole is sealed by the cultivation layers of the ridge and furrow, which have yielded hundreds of sherds of I 1th/ i2th-century date.

Although strictly speaking the lead fragments were stratified in this subsoil (the principal piece being $c$. I m below turf), they may have worked down from the level above. Context AA is ridden with worm-holes, larger (mouse-size) soft areas and occasional voids. The same applies to other finds from especially the top 0.1 m of AA: slag, a few small black or grey sherds, and stone. The slag in particular suggests infiltration from above. Alternatively, although some of the Kirkdale plate fragments show signs of melting (see below), the possibility remains that they have been displaced from a grave, either at a lower level or from elsewhere in or around the church.

## APPEARANCE

The six pieces of lead, assumed to derive from one object, are all thin (i mm or less) and oxidized to an off-white colour. The backs appear plain and slightly uneven, with no impressions of letters, and are corroded and powdery. The front surfaces are smooth, fairly hard, and apparently stable, with no loose corrosion products. In places (nos. I and 5 below), there is a pale brown-buff 'skin', clearly a patina due to oxidization. This is over the surface of some letters and on a blob of melt on no. 5 (see below). ${ }^{10}$

The front smooth surfaces exhibit incised characters, principally on no. i. Taking no. I together with no. 2, there are four zones separated by three horizontal lines; the twenty-four characters occupy the first three of these zones. The incisions must have been made with a very fine, hard instrument: a pointed graving tool, possibly a stylus, ${ }^{11}$ producing a U - or blunted V -shaped incision, c. 1.0 mm wide and up to 0.5 mm deep. A very fine hollow tube-like tool seems also to have been used for at least two of the dot terminals or serifs of a cross. It is possible in many


FIG. I
Plan showing location of lead inscription, and that of sundial, in relation to the church (St Gregory's Minster)
cases to determine the order in which the elements of a character were done, and in which direction the main strokes were scored. Most of the letters comprising the inscription were executed free-hand, but a rule may have been used for the dividing lines (see below).

Two pieces (nos. I and 3) have edges that are in places folded; and three (nos. 1,3 and 5 ) have small areas of melt ('blobs'), on both front and back. This suggests that either the fragments were partly melted by exposure to heat (see below), or that they were being used as scrap. The folding and melting may have occurred when any surface to which the inscription was attached was burnt; or they may support the hypothesis that the lead pieces were originally associated with the metal working noted above. ${ }^{12}$

The principal piece (no. 1), together with the conjoining piece no. 2, appears to form the greater part of the right-hand portion of the original plate (see below).

A technical study of such Anglo-Saxon lead inscriptions is badly needed, comparable with that worked out for stone sculpture and for the great vellum manuscripts. Meanwhile, the detailed description in which interpretation is minimized in Table 1 , column 1 , will serve as the basis for such technical discussion. ${ }^{13}$ Table I also includes comments, based on specialist epigraphic and linguistic knowledge, by E.O., S.B. and J.H.

Variations in readings and interpretation have been retained. It is hoped that this diversity will promote open discussion.

## the photographs and drawing (Pl. I and Fig. $2^{14}$ )

The schedule that follows is based on prolonged examination of the pieces in a variety of lighting conditions with an 8 x hand lens. The best observations were made when viewing the surface in very oblique strong sunlight. Any scholar subsequently examining the original would be advised to follow this extended procedure for a balanced assessment. Neither the photographs nor the drawing convey the detail adequately; they also make the letters appear bolder than they do to normal inspection. Photographs were taken by P.R. and Dr Philip Dixon on a variety of formats, in colour and monochrome. The drawings (Fig. 2) are necessarily subjective and selective, despite aiming to be accurate representations. That of the main pieces was done by making a same-size tracing on transparent film, enlarging this to twice-size, and then making a drawing at this scale, while observing the piece repeatedly. It needs to be on an even larger scale ${ }^{15}$ to show the full nuances of both the surface of the lead and of the characters: notably the thickness and angle of every stroke; also other marks, some or all of which may be deliberate.

With these reservations on the illustrations available, we may turn to schedules of the pieces of lead and of the inscription.

## SCHEDULE OF THE PIECES OF LEAD SHEET (Fig. 2 and Pl. I)

1. Max. $60 \times 46 \mathrm{~mm}\left(6_{4} \times 46\right.$ if flattened out), bent at c. $45^{\circ}$.

The lower RH. ${ }^{16}$ corner may be original; otherwise the edges are irregular, with some incisions which may indicate the location of any original affixing holes. The edges are in places slightly bent under, and partially damaged; there is a blob of melt in the central area of the upper part (two on the back). The upper LH. corner fits well with no. 2 below.

There are four zones of unequal width, horizontally defined by three scored dividing lines; the upper three zones bear the inscription.

The upper zone (c. ? $14 \mathrm{~mm}+$ wide), containing the first line of the inscription, has three letters, a crossshaped separator, and part of what may be a fourth letter.

The central zone (c. 16 mm wide), containing the second line of the inscription, has part of a letter, a crossshaped separator, four letters and the lower parts of two or three more.

The lower zone (c. 10 mm wide), containing the third line of the inscription, has part of a letter, a letter or separator, eight letters and possibly space for another. There are patches of a brownish patina on the RH. side. The lowest zone (c. 12 mm wide) is blank, with patina to R . It may be possible to 'unfold' the bent-over part, to reveal a further character. Analysis of soil on the back of this piece may provide information about the material to which the piece was attached.
2. Max. 12×19 mm. This piece fits well to the upper LH. corner of no. 1.

There is a single letter with a line beneath, separating the upper zone from the central zone. The upper edge may be original.
3. Max. $22 \times 19 \mathrm{~mm}$ with extra 8 mm folded under (so with this, $30 \times 19$ ).


Fragments of inscribed lead plate

FIG. 2
Drawing of lead inscription, all fragments

The upper edge is also melted. This possibly equates with the lower zone, as to its R . are upright strokes of what may be stops or letters. These are in a zone $c .10 \mathrm{~mm}+$ wide, defined at its base by a rather irregular scored dividing line. Below this is a blank zone (c. 1 I $\mathrm{mm}+$ wide), which may equate with the lowest zone in no. 1 .
4. Max. $12 \times 15 \mathrm{~mm}$; rather distorted, but an incised dividing line is visible above or below a zone $c$. $10 \mathrm{~mm}+$ wide, and above or below a zone $c .5 \mathrm{~mm}$ wide. There is a possible letter above or below the line (depending on the orientation of the fragment). There is some patina in patches on this surface.
5. Max. $20 \times 9 \mathrm{~mm}$ (plus two blobs of melt). One edge may be original (upper or lower), with a blob on either side (drawn here with a possible edge at the top). There is some patina on what is presumed to be the outer surface.
6. Max. if 6 mm ; amorphous eroded scrap.
schedule of letters and characters (L.W. and P.R.)
This is provided in the first column of Table $1 .{ }^{17}$ This table also contains more interpretative comments; these have been put together in order to facilitate comparisons.
TABLE I
SCHEDULE OF AND COMMENTS ON LETTERS AND CHARACTERS

| Zone | Piece and character number | Description (P.R. and L.W.) | Identification and comment (E.O.) | Identification and comment (S.B.) | Identification and comment (J.H.) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 Schedule of letters and characters on pieges 1 and 2 |  |  |  |  |  |
| Upper zone/line 1 of text | 2 | Fits well to top LH. corner of no. 1, so begins this schedule. Upper edge possibly the original upper edge. |  |  |  |
|  | $2.1$ | ? Two curving incisions. ${ }^{18}$ <br> Upper one extending further to R. with a <br> slight change of angle; it would have <br> extended over LH. part of 1.1 ; its terminal incomplete. <br> Lower incision ends to R. in a slight angular expanded terminal. ${ }^{19}$ Incised horizontal line below this accords with that separating upper from central zone in no. I. <br> Interpreted possibly as $t$, lower incision being the foot, and the upper, the cross-stroke, ending in a 'flourish'. | [.] Possibly t ${ }^{20}$ | t | Probably ( $t$ ), but the horizontal bar is unusually sinuous. |
|  | $1.1$ | e Small area in upper L. part missing, but reflected in surviving curved edge, where lead has split along edge of letter; another faint curving line on inside of this. Slight 'dragging' of ends, of upper and especially lower parts of body of letter, lead being slightly distorted. <br> Cross-stroke L. to R.: it extends beyond R. edge of upper and lower elements of letter, ending in an expanded terminal. | $E$ | c | c |
|  | 1.2 | r L. ascender ends in expanded terminal at bottom (incised top to bottom); 'tail' also ends in angular expanded terminal. Serif at head of ascender, to left of stem, and a faint extension of top of right side of scrif to top of body of letter. Faint incision (dubious) to L. of scrif. | R | r | Half-uncial r |
|  | ${ }^{1.3}$ | Cross-shaped separator or symbol, partially absorbed into melt 'blob'. L. arm clearly visible and ends in a well-defined 'dot' (cf. 1.6 below). | [ + ] | [ + ] Perhaps on a larger scale than the one on line 2 and partly melted? | Probably a cross, but why does it continue down to the guide-line and not end in a punched terminal? Perhaps the stylus ran away. |

Lower part of upright is visible extending Lower part of upright is visible extending
down into and is secondary to the incised horizontal line below.
Lower part of upper upright discernible in a sH 'ing light. eventually be revealed if 'blob' RH. arm may eventually be revealed if blob'
can be moved. Uncertain which element incised first.
Slightly undulating horizontal stroke. ?Part of another letter, ?mostly distorted by
(N.B. a merke to its left appears to be a groove
On L. margin, in lower third of zone, is the
RH. end of a stroke or 'flourish'.
Cross-shaped separator or symbol, with
circular dot incisions on end of each of the four arms. The R. and lower 'dots' are welldefined circles, as if the instrument was circles appear almost as if done with a fine tube-like tool, which has left the central part
The horizontal stroke is secondary to the
up 0 ody stroke and the b Gap between the body stroke and the
LH. sloping ascender. Well-defined hollow triangular serif to left of top of ascender. RH. element of serif is continuation of $L$.
ascender; in order of execution, the diagonal
element was added, impinging faintly into
element was added, impinging faintly into
ascender, and finally the upper element of
the serif, secondary to the rest.
Base of the letter is complex, with double
incisions, the lower of which intrudes on to and is secondary to the incised horizontal
line below; the upper flattened one may be a
replacement for this ?mistake.
$\pm$

| Central <br> zone/line <br> 2 of text | 1.5 |
| :--- | ---: |
|  |  |

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| Zone | Piece and character number | Description (P.R. and L.W.) | Identification and comment (E.O.) | Identification and comment (S.B.) | Identification and comment (7.H.) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ?Slip of tool from lower RH. corner inwards and upwards. RH. side of letter is joined to the next letter ( 1.8 ) by two positive diagonal incisions, almost like ligatures, probably secondary to 1.7 , but primary to 1.8 . Body of letter probably formed of three strokes - curved LH. ascender from top to bottom; straight base strokes from L. to R.; curved body from bottom to top (slightly more pressure applied at top to make a deeper incision). | B | b | b The 'diagonals' are most likely to be accidental. I agree that the flattening of the base is probably a correction, one of several pentimenti. <br> Serif drawn after principal stroke (with diagonal stroke preceding horizontal). |
|  | 1.8 | a Sub-circular body to L. with 'horns' extending to R . <br> Lower horn secondary to R. side of body of letter, impinging onto it, but formed of one continuous stroke (up and down); upper horn added last. <br> Faint diagonal stroke from middle of RH. side; and more definite incision extending diagonally down to right from lower LH. corner; the latter may be deliberate; the former appears to be a slip of the stylus. Lower 'horn' extends almost to next letter (1.9), ending in a double expanded terminal, the inner one apparently secondary to the outer one, probably a correction. <br> Upper 'horn' damaged at its end by a crack in the lead and surface erosion, so form of terminal uncertain. | A | a | a ('oc' or 'horned'). <br> Again I think both diagonals are slips. |
|  | 1.9 | n Tall and narrow; upper LH: serif damaged, precise form uncertain. <br> L. ascender shallow, with no expanded terminal. <br> Lower RH. descender ends in a bifurcation; the LH. element is more expanded than the RH.; the latter is secondary. ?A serif with no base line. <br> 1.9 and 1.10 rather cramped in space available. | $\mathcal{N}$ | n | Half-uncial n. The final RH. stroke of the R. foot is perhaps more likely to be a modification to the line of the letter rather than an incomplete serif, given its position. It is, however, a modification away from the more or less vertical stroke usual in this script. |
|  | 1.10 | c Well-finished, with well-defined expanded terminals, where tool strokes end. | C | c | A narrow c. The back is straight and leans backwards slightly. |

This letter could have been a t similar to that suggested for 2.1; C is also possible, but
the shape is rather different from that of 1.10; an alternative possibility is the curving variety of 1 used in Insular half-uncial, in turned back slightly to the L. and would turned back slightly to the L . and would
probably have ended in a wedge serif; e is ess likely since there is no trace of the
horizontal cross-bar; an uncial $m$ of the
form suggested by E.O. would be
the rest. What remains is not easy to explain as part of a $y$. The lines of the Wallingford inscription in capitals. ${ }^{23}$ The Sutton text is inscription in capitals. ${ }^{23}$ The Sutton text is
reproductions, the form is incompatible

 have a more promising variety of $y$, but it curves in the opposite direction and its
curve is much flatter. 25 A reversed $y$ with a very exaggerated curve is possible, but
difficult to explain, given that there is no difficult to explain, given that there is no
trace of (and no obvious space for) the
trace of and no obvious space for) the
second upper stroke at the top $L$.
To summarize: $\mathbf{t}, \mathrm{c}$, and $l$ are distinct
possibilities; y is possible but less likely.
It is hard to see how the stroke ends on the
R., or whether it is simply cut off.
c , half-uncial 1 , $o$ and s (more probably reversed) are possibilities, but microscopic examination of the termination might rule some of these out. Half-uncial $g$, which is If I.I2 and I.I3 were originally parts of the same letter $u$ is a possibility.
Perhaps, given the dot at the base, a cross. Possibly part of I.I2.
$[\mathrm{s}]$ or $[\mathrm{u}]$ as in
Dewsbury I.
[.] Too little remains
to suggest a reading.

Slight break in upper curve, possibly a pause, or an obstruction in the lead.

A rather wider letter, of which lower part only survives. L. side extends up to the eginning of a curve to the R . stroke that has been replaced by deeper

Lower element ends in an expanded double terminal, the lower bolder version of which is secondary to the upper.
There is no visible evidence of a cross-stroke (e.g. for an e), unless it were higher up, in the
eroded area.
? The narrow lower element of a further
rather faintly-incised letter on this line, the rather faintly-incised lett
remainder eroded away.

There is a very faint inward-turning 'tail to
the RH. element; if this is deliberate, it could narrow the options.

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e Like 1.18, more lightly incised than the
other characters.
f Serif constructed before rest of letter, no
top horizontal to serif.
d The dot is probably accidental.

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址
ค
9
$\stackrel{\circ}{-}$
$\stackrel{-}{-}$
$\stackrel{\text { ã }}{\sim}$

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## INTERPRETATION

comment a by Elisabeth Okasha

## Reading of the text (Table 1, column 2)

Since the plate has no certain original edge remaining (cf. p. 53 above), it is not clear whether the text originally contained three lines or more. Nor is it clear how much text is lost from each end of the three lines. However it is certain that we have the (incomplete) last line of text since the space below was left blank. It is also certain that the horizontal ruling lines were incised before the text. The letter D , incised over the lower line, is a clear indication of this.

The third line of text contains letters that are smaller in size than the other two. With the text incomplete, the reason for this is not clear. It could be that it is simply an error; alternatively, the last line of text may have been added as an afterthought (as seems to have been the case with the Flixborough lead plate). Another possibility is that the upper lines of text were considered of greater importance than the lower one: this may also have been the case with the Chichester lead cross.

I read the text as follows: ${ }^{20}$
-[.]ER[+.]-
-[.] + BANC[..]-
-[.]ISBREFDER-
A possible reading is:
$-[$ T]ER [+] [-] + BANC[Y-] [-]IS BREFDE R-

## Interpretation of the text

The language of an Anglo-Saxon inscribed text is likely to be Old English or Latin. Although inscribed texts in Old Norse, and those using more than one language, do occur, they are very rare. There would therefore have to be compelling evidence to support either suggestion. I think that the text is in Old English (see below).

The use of a cross in the middle of a text may have a number of functions (see below), but crosses are not found in the middle of words. This therefore helps to indicate beginnings and endings of words. The reading of the text proposed above contains five words, in whole or in part.

1. -(t)er. there are a variety of possible words and names, both in Old English and in Latin, that end -(t)er.
2. banc[ $y-]$ : the first part of the word seems likely to be Old English ban 'bone'; other less likely possibilities include Old English banc for benc 'bench' and Latin bancus, a rare kind of fish.

My tentative suggestion is that the word might have been ban-c [yst], a form of an unrecorded *ban-cest 'bone-chest', 'coffin'. Although this compound is not recorded, compounds beginning ban- and ending -cest (also spelt -cyst and -cist) are quite common. There are, for example, compounds meaning 'body, corpse': ban-faet, ban-hus, ban-sele (literally 'bone-vessel', 'bone-house', 'bone-hall' respectively). There are also compounds such as hraegl-cest, 'clothes chest, trunk', laece-cest 'medicine chest', and måm-cest 'treasure chest'. If ban-c [yst] were the reading, it could have been nominative, and hence in this form, or in an oblique case and hence with an inflexional ending now lost.
3. [- lis: the word is exists of course in Old English (meaning 'is') and in Latin (meaning 'that' or 'he'). However the word may not be complete; -is is a common Latin inflexion and
is found as the ending of a number of Old English words. I tentatively suggest Old English [b]is 'this'. In Old English, the word pis can stand alone, with the meaning 'this one' or 'this thing', or it can be used as an adjective. Either possibility could have been the case here.
4. brefde: the combination bref- is not found in Latin except as a spelling of words in brev-, for example brevis. The combination bref-, with its alternative spelling breu-, is also rare in Old English. However an Old English verb brefan 'to write' is recorded twice in one text, Byrhtferth's Manual, both times as the past participle gebreued 'written'. The past tense singular of this verb would be brefde or breude. I tentatively suggest that brefde here means '(s)he wrote'.
5. $r[-]$ : this could be the beginning of a word or name.

If my tentative suggestions are put together, the text could be interpreted as having contained the name(s) of one or more people buried, or deposited; in a ban-c [yst] 'bonechest' or 'coffin', with one name perhaps ending $-[t]$ er. This was followed by a final line giving the name of the person who wrote the text, or commissioned it to be written:- $[p]$ is brefde $r$-, R R -$]$ wrote this'. If the final line did contain a maker formula, this might explain why the letters in this line are smaller in size than the rest. Other inscriptions with more than one text sometimes have them in different sizes. Examples are 41 Great Edstone and 2 Alnmouth. ${ }^{21}$ In both cases the maker text is different in size from the rest; on Great Edstone it is larger, on Alnmouth smaller.

My tentative interpretation of the text is then:

$$
\begin{aligned}
& -[t] \text { er }[+][-]+\text { banc }[y \text { yst }-][-],[p] \text { is brefde } r-\text {, } \\
& - \text { coffin }[-] . \mathrm{R}[-] \text { wrote this }-. \text {. }
\end{aligned}
$$

## Script of the text

Typical epigraphical features of the scripts of Anglo-Saxon inscriptions are: the use of a mixture of scripts; inconsistency of letter form; letter forms which cannot be exactly paralleled elsewhere; inconsistent use of seriffing; spasmodic marking of word-division; the use of crosses, especially at the beginning of the text. Several of these features are to be observed on the Kirkdale plate.

The script employed is Insular majuscule with capital S. Other texts predominantly in Insular majuscule, but using the odd capital, including capital S, are 145 Yarm and 30 Dewsbury I. In the latter case the S is reversed, as it is in the Kirkdale text.

The letter forms used on the Kirkdale plate are in fact broadly consistent with each other. This can be seen in the case of the letters B, E and R, where there are two examples of each.

If the reading Y in ban $-c[y s t]$ is accepted, this is an example of a letter form that cannot be exactly paralleled elsewhere, although similar forms do occur (see above).

Seriffing is inconsistently used on the Kirkdale plate and, as is common, various sorts are employed: full, half, thickening and dot seriffing all occur.

On the interpretation of the text suggested above, some word-division is marked by the use of crosses, while some word-division is unmarked, for example that between -is and brefde.

Although crosses are particularly common at the beginning of texts in Anglo-Saxon inscriptions, they are not confined to this position. They can be used also to mark worddivision, for example on 145 Yarm, though some of the word-divisions in this text are left unmarked. This forms a good parallel to the Kirkdale plate text. Crosses are also found at the end of texts, as on 125 Whitby IV, and preceding the personal names in a text, for example 94 Newent. They seem to be used on 64 Kirkdale, the sundial inscription discussed later in this paper, to mark the continuation of the text on another part of the stone. Some of these functions might have been intended on the Kirkdale plate also.

In summary, the script of the text of the Kirkdale plate fits well into the pattern expected for an Anglo-Saxon inscription.

There is at present no direct archaeological evidence for dating the plate (cf. p. 52 above). The text is too fragmentary to provide linguistic dating evidence, but the script is more helpful. In a manuscript, the use of Insular majuscule would suggest a date before the early ioth-century emergence of square minuscule as the Insular hand. It may not be legitimate to argue directly from one medium to another, but nevertheless it is reasonable to suppose that the use of this script suggests a date before the middle of the roth century, a suggestion that is not inconsistent with the archaeological data. ${ }^{28}$

## comment if by S. A. J. Bradley (Table 1, column 3)

The following notes are based chiefly upon my examination and transcription of the fragment immediately after its unearthing. Letter-forms and analogies with the Dewsbury I stone shaft ${ }^{29}$ and with the Yarm stone shaft ${ }^{30}$ as well as with 9thcentury manuscripts pointed towards a late 8th- to 9th-century date, and that is the assumption behind what follows here. Most of the characters were legible from the start and it has been necessary to add to my initial reading only what emerged from study of the few incompletely preserved characters under special lighting and magnification: it is therefore all the more frustrating that a full reconstruction of the whole inscription still remains elusive. Though no single word has been identified with complete confidence, the text is probably in Old English, perhaps with a mixture of Latin. For various reasons, intrinsic and extrinsic, both early Scandinavian and Celtic languages have been so far excluded from further consideration. On these assumptions, I should like to raise some discussion of the three strings of characters comprising the three lines of the inscription.

## Line 1 , $-\operatorname{ter}[\dagger]$

If it is Latin, there is a considerable choice of words ending in -ter, including terms of kinship (biological or spiritual) (pater, frater, mater) and adverbs such as breviter 'briefly' (note discussion of brefde below) and ter 'three times, thrice' (as in ter sanctus 'thrice holy'). Old English words ending in -ter include mynster minster', dehter 'of the daughter', leahter ( $=$ leahtor) 'sin, offence', winter 'winter, year', after 'after, in memory of'. I am inclined at present to take the character following the $r$, I.3, as a cross, perhaps on a larger scale than the one in line 2 (1.6) and distorted by the melting of the upper right corner of the fragment. The string -ter might then be understood as terminating not only a word but a discrete, probably formulaic, text. There would be no problem in accepting a noun in the nominative case as the last word in a formulaic text.

## Line 2, banc[ys]

My initial reconstruction here, subsequently supported by E.O., was banc[est] 'bonechest, coffin', which, though not recorded elsewhere as a compound noun, comprises two familiar enough elements. Closer examination seems to exclude the possibility of an $e$ but allows, as E.O. suggests, the possibility of a (reversed) $y$ so that the form bancyst may be read, taking -cyst as a dialect alternative to -cest. An Old English word meaning 'coffin' (or 'relic-chest' or 'ossuary') is strongly self-recommending here: bancyst in one of these senses seems to me, at present, a rather persuasive reading and one worth a little examination.

The Old English word cest is a loan-word derived from Latin cista 'box'. It will stand on its own as a term for a coffin or theca within which holy remains are or have been kept.

For example, it is so used (with the West Saxon form cyste . . . para reliquia) in the gth-century West Saxon translation of Bede's Historia Ecclesiastica, referring to a casket of relics of St Cuthbert: 'he . . . סa cyste ontynde para reliquia, pat he heora sumne dal his biddendum freond sealde' [he opened the chest of the relics so that he might give a portion of them to his supplicant friend], where Bede's Latin has thecam reliquarum. ${ }^{31}$ It is also so used (with the West Saxon form cyst) in Elfric's late ioth-century Life of St Ethelthryth: 'and eac ða pe hrepodon pas reafes anigne dal pe heo mid bewunden was, wurdon sone hale; and manegum eac fremode seo cyst micclum pe heo erest on leg' [and also those who touched any part of the apparel with which she was wrapped were forthwith healed; and this coffin in which she first lay also greatly benefited many]. ${ }^{32}$ The compound with ban might be intended to give a poetic effect to the formula, or alternatively to suggest the more specific concept 'ossuary'. The form cyst, it is worth noting, is held by Campbell to be a West Saxon dialectal form - not, that is, a typical Northumbrian form - as the above quotations illustrate. ${ }^{33}$ This fact might invite speculation - thus far, upon very slight and ambiguous evidence - as to whether the object might therefore be an import from Wessex. Alternatively, of course, it might be taken to cast doubt upon the validity of the reconstruction of a $y$ here.

Perhaps, finally, the reading bancyst ought to be tagged with one further reservation. If there should prove to be any possibility that the rhetoric here could belong in an Old English poetic register - whether constituting part of a formal poem, ${ }^{34}$ or representing the kind of highly 'poetical' prose widely used in annals, homilies, paraphrases of the Lord's Prayer, the Creed, the Gloria and other liturgical and formulaic items - then the range of possible semantic nuance would have to be widened. Bancyst 'bone-chest' would have to be considered in the company of other more 'poetic' ban- compounds, all meaning 'body, corpse' rather than 'coffin'. They include bancofa ('bone-cove, bone-chamber, body'), banhus ('bone-house [housing the heart, soul, spirit], body, breast') and banfat ('bone-vat, body, corpse').

Among other words beginning with $c$ which might plausibly be compounded with ban in Old English are clus 'prison', yielding banclus 'bone-prison ['imprisoning', the soul], body', unrecorded but a viable analogue to banhus and banfat'; clysing 'enclosure', yielding a similar semi-metaphorical term, likewise not recorded; and clut 'clout, cloth, patch, piece of metal, plate' yielding banclut 'cloth used to wrap bones or a corpse', again not recorded elsewhere in Old English, but perfectly plausible. This last word interestingly suggests the possibility of a relic, perhaps one used for healing, as for example, was the reaf 'apparel, vestment' of St Æthelthryth mentioned in the quotation from Elfric above. Like the others, it also has the advantage, as J.H. suggests below, of reading an $l$ rather than a reversed $y$ as the character 1.1 I. Furthermore, the character-fragment in position 1.12 could well form part of the letter $u$. The word banclut must be a strong contender with bancyst as the reading in the Kirkdale fragment.

## Line 3, [?Ji]sbrefde

To the eye of the eager transcriber, brefde leaps out as a potential Old English word, a verb, which could be taken as the past tense of the verb [ge]brefan. The verb has to do with 'writing' (note Danish brev and French brève 'letter'). From the three preceding characters it is possible to elicit the word đis, 'this' which could function as object of the putative verb, producing the sense 'wrote this'. With the addition of a name, of which the last character in the line, $r$, might be taken as the beginning, as E.O. suggests, a 'scripsit' formula - ' R wrote this' - emerges which would be plausibly at home among Anglo-Saxon artefacts.

If the Anglo-Saxon verb brefde is indeed to be read from the characters in line 3, it may well be the earliest recorded occurrence of the word. It must also be acknowledged that it is a rare occurrence.

It is, of course, improper to discuss word-frequency in Old English as though deduction were underpinned by a statistical base anything like as extensive and reliable as exists for, say, Middle English. But, tricky though frequency-counts in surviving Old

English texts are as evidence of the likely actual currency of a particular English word before the mid-I ith century, some weight can be accorded to certain broad frequencypatterns. Some words are recorded, for example, once only, in glosses or Latin-English word-lists alone; some occur dozens of times across a wide range of texts. For its part, gebrefan occurs three times, in two texts.

Unrecorded in Bosworth-Toller, it is added by Toller in his Supplement ${ }^{35}$ where he gives two references, both from Byrhtferth's Manual (or Enchiridion). In both these cases the verb is in the form of the past participle gebréued. ${ }^{36}$ There is no further addition in Campbell. ${ }^{37}$ Clark-Hall and Merritt ${ }^{38}$ cites only one reference, namely to one of the two occurrences in Byrhtferth's Manual. ${ }^{39}$ The DOE Concordance ${ }^{40}$ cites the same two references to Byrhtferth's Manual and adds a third reference, to the poem The Seasons for Fasting. ${ }^{41}$ Thus principal dictionaries list only three occurrences in only two sources. All three, incidentally, use the prefix ge-which is characteristic of Old English past tense verbal forms - though the fact that the Kirkdale inscription does not use it (unless, improbably, the reversed $s$-shape immediately preceding it happens to be an otherwise unrecorded shorthand device for $g_{\ell-}$-) is not, alone and of itself, grounds for rejecting the reading.

Cognates of Old English gebrefan include Old Low German gibréuid, Old High German gebriefen, Icelandic bréfa, Middle High German brieven, and Middle English bréven. All go back to a Latin root (in some cases at least, via Old French bref) as represented in Latin brevis 'short' and its neuter breve used to signify 'a brief communication, note, dispatch'. This is the sense in which the noun bréf is used in Icelandic in the early-1 Ith century (contemporaneously, that is, with the only recorded Anglo-Saxon usage of the verb gebrefan, discussed below), as in a reference to bréf ok innsigli Engla konungs, a dispatch or writ, with seal, from Canute (1024).42 The prevailing semantic nuance of 'abbreviation' should be noted; implications of this for the interpretation of the Kirkdale inscription will be discussed further below.

As regards date, neither source sheds direct light on English of the period of the Kirkdale inscription. Byrhtferth most probably completed his Manual in 1012.43 The Cotton MS. in which Seasons uniquely occurred was written in Winchester in the mid-1oth century. ${ }^{44}$ The date of the composition of the poem itself, though, could long precede the date of the compilation of the manuscript, and could feasibly be as old as the Kirkdale inscription. ${ }^{45}$ But being as it is undated and probably undatable, the poem itself does not establish a conclusive date for this particular use of brefde: that is, it neither confirms nor opposes brefde as a word available in English of the date of the Kirkdale fragment.

The two texts, however, are well worth considering for the cultural nuances they may put upon gebréued, and, more widely, upon the lexis of the Kirkdale community responsible for brefde in the inscription. Byrhtferth's Manual and Seasons for Fasting have in common an emphatically latinate and ecclesiastical-monastic context.

Seasons is preserved only in a transcript (London B.L. Additional MS. 43703, ff. 257-260v) made by Laurence Nowell in ${ }_{1} 562$ from London B.L. Cotton Otho B.xi which itself was badly damaged in the Cotton fire of 1731. The poem is a peroration upon the obligations and virtues of fasting in the seasons of fasting appointed for the English Church by the ordinances of Gregory the Great. The ideology of the text repeatedly leads commentators back to Latin ecclesiastical sources such as the De institutione catholica attributed to Egbert, first archbishop of York, the Regularis Concordia, the account of the Ember Day fasts in the Leofric Missal and Ælfric's De ecclesiastica consuetudine. ${ }^{46}$ Like Byrhtferth's Manual, then, the poem Seasons handles Anglo-Saxon lore of time and of seasons, of formal consuetudinary, liturgical, theological and ultimately spiritual signification, in an appropriate terminology.

As used in Seasons, the verb (gebrefde) suggests the idea of that which is summarized by way of a set of ordinances: ' . . and we pa mearce sceolan / heoldan higefeste *** mid Anglum, / swa hie gebrefde us beorn on Rome, / Gregorius, gumena papa' [... and we must steadfastly keep those fixtures among the English according as the man from Rome, Gregory, the people's pope, summarized them for us]. ${ }^{47}$

The Manual ${ }^{48}$ is essentially a commentary on a computus intended as a handbook for priests and other religious, particularly those at Ramsey, the Benedictine house founded by Oswald, archbishop of York, to which Byrhtferth belonged. Byrhtferth represented the internationally-educated Benedictine Anglo-Saxon of his age: he had been taught at Ramsey by the distinguished Abbo of Fleury, had studied at Echternach and was evidently conversant with scientific writings of Macrobius, Rabanus Maurus of Fulda and Bede. The passages involved are:
Gif hwylcum cnihte lyste ma pinga 7 deopra gesetnyssa be him witan ponne we her habbað gebréued, ponne rede he pas eadigan weres getingnyssa, Bedan, pas aঠelan boceres, oððe Rabanes, pe wel gehende án asmeadun ymbe pisum crefte [If it pleases any man to know more matters and deeper accounts than we have here epitomized, then let him read the compositions of that blessed man Bede, the noble scholar, or of Rabanus - who alone, very nearly, have researched this science] ${ }^{49}$
and
Nu we pas ping habbað sceortlice gebreued after pare ealdan agesetnysse, hyt nys mycel pearf pat we hig smealice apinsion after pam dihte, pe pa fulfremede trahtneras purh pas Halgan Gastes gife hyt asmeadon. [Now that we have briefly epitomized these matters according to the Old Testament, it is very necessary that we should thoroughly ponder them according to that procedure which the expert commentators, through the grace of the Holy Spirit, have worked out.] ${ }^{50}$

The Manual is written in both English and Latin, and there is discernible in Byrhtferth's English lexis some taste for Latin-derived words, of which gebréued is one example. ${ }^{51}$ In some sense, it might be said, Byrhtferth is deliberately contributing to a special mode of English, one which aspires to replicate some of the characteristics of learned and ecclesiastical Latin (such as relative fixity of meaning in specialist terminology) in English. As Byrhtferth's most recent editors point out, 'The most striking aspect of the vocabulary of E[nchiridion] is its fondness for words that are more characteristic of glosses than of prose. ${ }^{152}$ They identify twenty-eight such examples where Byrhtferth is, as it were, looking up his vocabulary in English-glossed Latin word-lists. To these, they add seventythree examples of words used by Byrhtferth which do not occur in other surviving Old English texts, listing among them gebrefan (thus disregarding the case of gebrefde in Seasons).

It seems likely then that gebrefan was part of a monastic and learned lexis; perhaps even, at least as Byrhtferth uses it, a hallmark of a certain kind of literacy, associated with roth- and irth-century Benedictine learned centres. The chances are that it was no common word, and this likelihood warns us that we should be circumspect in building this particular word from the string of characters available in the (probably) gth-century Kirkdale fragment. On the other hand, if the case for accepting it there commands consensus, then it presents us with a potentially important option: it becomes possible to discuss the epigraphic vocabulary of the Kirkdale inscription in the context of those AngloSaxon 'standard' vocabularies which scholarship has begun to identify. ${ }^{53}$ The occurrence of the formal, latinate [ge]brefan in a setting as early as the gth century could have interesting implications about Northumbria's awareness of, and perhaps participation in, 'standard' modes of (monastic) English, just at that time of the decline of northern monastic Latinity lamented by King Alfred in the letter to his bishops prefacing his translation of the Cura Pastoralis of Gregory the Great.

For the time being, it is at least to be noted that the verb gebrefan preserves in each of its three cited manuscript contexts the original Latin semantic nuance of 'summary narration'. This is particularly clear in the case of the Manual, where Byrhtferth characterizes his book as a 'brief work' - 'tantum studeo pro posse mortalibus infundere in hoc breui opere' [so greatly eager I am to present as much as possible to people in this brief work] - and frequently refers to the process of abbreviation: 'Nu we habbað medomlice pas ping gehrepod, hyt pingð us gefadlic ping pat we numlicor pas gerenu atrahtnion' [Now that we have incompletely touched upon these things, it seems to us appropriate to treat these mysteries
more spaciously]. ${ }^{54}$ But all three of the manuscript usages discussed show the clear implication, that that which is gebréued relates to a fuller exposition or broader situation elsewhere. Tempting though it is to read the Kirkdale brefde simply as 'wrote', in the sense of the Latin epigraphical scripsit, the Manual and Seasons in fact use the verb otherwise.

The evidential material is admittedly slight and conditional, but perhaps we may conclude from it that the Kirkdale inscription was not a simple statement or a list, say of names, which the executor of the plate 'scripsit' - as, for example, in the Stratfield Mortimer stone slab ('Toki me scripsit ${ }^{55}$ ) - but a summary statement having recognized fuller exposition elsewhere, which the executor - or some authority cited by the executor - has 'epitomized' (in the manner of Byrhtferth), or summarily stated by way of an ordinance (in the manner of Gregory). We might also conclude that brefde potentially offers some formal endorsement of the literate-latinate, ecclesiastical or monastic cultural context which its archaeological context already suggests - even if the relatively low quality of the lettering and overall design of the inscription belongs to a piece of workmanship unskilled in the particular craft techniques of epigraphy.

Finally, for the sake of argument, some speculation in the spirit of Haigh ${ }^{56}$ and those 19th-century antiquarians who worked so hard to tie up material artefacts with the luminaries of historical record. Could the artefact be an identifying tag or label associated with a reliquary or ossuary of St Birinus? The speculation is founded upon the characterstring sbrefder in line 3, reading $s$ as an abbreviation for sancte, bre as an abbreviation for Birine; and fder as an abbreviation for feder, giving the sense 'O holy Birinus father'. The mixture of Latin forms with an Old English discourse in this manner is not unusual. But there are other problems! The postulated abbreviations appear arbitrary - though if the name had already appeared in full within the preceding text it would not be difficult to understand the abbreviations, particularly if they formed part of a familiar formula within which a name was expected. There appear to be no abbreviation marks (unless the two marks above the $r$ are ad hoc abbreviation signs rather than accidents in cutting ${ }^{57}$ ) though it is not unknown elsewhere for abbreviation marks to be omitted in inscriptions: for example, both heavy abbreviation and the absence of abbreviation signs (in a Latin formulaic text) appear to be illustrated in Okasha $10 .{ }^{58}$ It is not clear what the preceding word was, if the character before the $s$ is to be read as an $i$ and not (as I was inclined to think on first viewing) a partially lost sign of the cross functioning as a divider.

If however, the Old English word feder is allowed to appear in line 3 then it becomes tempting to guess that the string ter in line 1 is part of the Latin word pater, and therefore perhaps part of a Latin formulaic invocation matching the English formulaic invocation in line 3 and so including the formula sancte Birine pater (in the style of the hymn mentioned below). The bancyst of line 2 would thus become the 'bone-chest' of holy Birinus, that is, perhaps an ossuary containing a bone of the saint. One might, by way of illustration, envisage a label with formulaic Latin and English texts, in a size-reflected hierarchy, along the lines: + Salve sancte Birine pater $+/+$ bancyst des halgan Birines biscopes $+/+$ sancte Birine fader gebidd Ju for us + [Hail holy father Birinus. Bone-chest of the holy bishop Birinus. Holy father Birinus pray for us]. Something similar could be devised about the alternative reading banclut 'bone-cloth'. The rather low-grade quality of the workmanship and the use of lead might seem ill-fitting for what would have been a high-grade relic, but if it were some kind of identifying tag rather than part of the formal display of the relic, perhaps not so much need be expected of it.

My speculative formula for referring to Birinus is influenced by a Latin hymn in honour of Birinus and by a charter of the king Æthelwulf to Winchester (possibly spurious, however). The hymn, contained in a roth-/I Ith-century manuscript at Rouen (home of other notable Anglo-Saxon manuscripts), is entitled: ' 1 mnus in honore sancti patris nostri Binini episcopi, Occidentalium Saxonum apostoli . . .' [Hymn in honour of our father saint Birinus bishop, apostle to the West Saxons]. ${ }^{59}$ The charter reads 'Ic Aðulf kyningc on dysum gewrite geswutelie be Ciltacumbes freulse đone pe kynegyls kyningc pe arest kyninga cristen gewearp on west Sexan his fulluht feder Sancte Birine biscope geupe . . .' [I Ethelwulf king by this writing make clear concerning
the privilege of Chilcomb which Cynegils king granted, he who first of kings among the West Saxons became Christian in his baptism by father Saint Birinus bishop]. ${ }^{60}$

Birinus, bishop and saint (feast day 3 December), apostle to the West Saxons, was possibly born in Rome and, already consecrated bishop for the purpose, was sent by Pope Honorius in 634 as missionary to heathen regions of Britain. He established himself first among the Gewisse (West Saxons), brought their king Cynegils to conversion and baptism in 635, and received Dorchester as his episcopal seat. He died in 650 and was buried at Dorchester. Later his body was translated to Winchester where Bishop Æthelwulf ( $963-84$ ) enshrined his remains c. 980 during the rebuilding of the Old Minster. King Cnut commissioned a portable reliquary for his relics in $1035 . \mathrm{He}$ is also remembered in connection with Northumbria through the link with king Oswald, who was present when Birinus baptized Cynegils, and stood as sponsor to Cynegils, subsequently taking the daughter of Cynegils as wife. Oswald and Cynegils together presented Dorchester to Birinus as his episcopal seat, according to Bede. ${ }^{61}$ The Northumbrian connection is refreshed at the end of the ioth century by being commemorated in Elfric's Life of Oswald, where Birinus' conversion of Wessex is clearly perceived as having been accomplished under Northumbrian patronage and as constituting a prestigious part of the Christian history of the North. ${ }^{62}$ The cultivation of Birinus north of the Humber, then, would not be out of place, not least on account of this royal Northumbrian connection through Oswald. The presence of such a relic at Kirkdale would, of course, have implications regarding the Minster's status and patronage in and before the 9th century.

## comment ini by John Higgitt (Table I, column 4)

I have examined the fragments of the inscribed lead plate at the British Museum in March $1997^{63}$ and have a few comments to make in the light of the meticulous analysis written by Philip Rahtz and Lorna Watts and of the interpretations of the inscription by Elisabeth Okasha and Sid Bradley.

The Kirkdale plate may be compared with that found at Flixborough. ${ }^{64}$ Both use letter forms that approximate to those of the Insular half-uncial book-script also known as Insular majuscule) and imitate the characteristic wedge serifs of the scribe. Michelle Brown has drawn attention to the calligraphic quality of the script on the Flixborough plaque and she has characterized that script more exactly as 'hybrid (or high-grade) minuscule' (a very close relative to Insular half-uncial) on the basis of its similarities to script in a group of Mercian charters and books of the mid-8th to early-gth centuries. ${ }^{65}$ The Flixborough plaque is, however, much more skilful in execution. Its hand seems practised both in handling manuscript scripts and in manipulating the graving tool.

The Kirkdale lettering lacks the control of the work of a skilled scribe. It suggests instead an unskilled hand, such as the roth-century child or novice writing in the margins of some pages of the Durham Cathedral MS. A.I 1.17. Perhaps the Kirkdale writer had learnt what Julian Brown has called a 'basic teaching script' but did not have the aptitude, or perhaps the opportunity, to graduate to more formal scripts. ${ }^{66}$ The lettering also recalls the more or less half-uncial lettering of inscriptions on stone on the cross fragments from Dewsbury (Dewsbury I) and Yarm. ${ }^{77}$ The technique that has been analysed in this paper by Rahtz and Watts seems, however, to be more like that of a scribe than a letter-cutter, in that one can see strokes built up from continuous movements of the hand (unlike the series of separate strokes that guide a chisel). An intermediate technique between that of the scribe and the Kirkdale plate is that of a stylus on a wax-tablet. This must have been a very wide-spread form of writing, as is shown for example by finds of styli, and its character can still be judged on the well preserved 7th-century Springmount Bog tablets in the National Museum in Dublin. ${ }^{68}$ The Kirkdale plate should be considered in relation to the full spectrum of writing activity in order to assess the nature of the literacy of the writer of its
text, and in particular whether he (or less probably she) had been formally trained as a book-scribe or had acquired familiarity with writing in some other context. Such an assessment might also tell us something about Kirkdale as a centre of literacy. Some AngloSaxon, and indeed Insular, inscriptions of around the 8th century (for example the namestones at Lindisfarne, most of the inscriptions at Monkwearmouth and Jarrow, or York III in England, or Tarbat in Pictish Scotland, or the Ardagh Chalice ${ }^{69}$ ) seem to have been designed by people who were very familiar with formal book-scripts and had probably been trained in them in monastic settings. That may be true with the calligraphic Flixborough plaque, but it is apparently not the case with the Kirkdale plate or with the memorial inscription from Yarm - or, more debatably, that from Dewsbury. The use of the vernacular on each of these last three suggests a kind of literacy different from the formal variety seen at Monkwearmouth, Jarrow and other important centres of ecclesiastical learning of around the 8th century.

It is interesting to compare the Kirkdale plate with the Dewsbury I inscription. ${ }^{70}$ Both set their letters between, rather than on, incised guide-lines. On the plate, as on stone inscriptions such as that from Falstone, these lines are, however, much more pronounced. ${ }^{71}$ Both Kirkdale and Dewsbury use letter forms that approximate to those of Insular halfuncial, or the closely related Insular hybrid minuscule, and imitate the characteristic wedge serifs of the book script. The 'oc' (or horned) form of $a$ and the $b$ are shared diagnostic forms but there are several differences of detail; and the Dewsbury lettering is neater and rather more stylish that that from Kirkdale. Coincidentally, both use a reversed $s$, not an argument for a direct connection but an indication in both cases of a comparative lack of formal training in writing.

The lettering at Yarm lacks guide-lines and, like that from Kirkdale, is irregular in size and layout. ${ }^{72}$ Yarm also provides a parallel for the use of crosses within the text of an inscription. The crosses are clearly more than simple word-dividers and stand (as in the later 8th-century Irish Stowe Missal ${ }^{73}$ ) for the sign of the cross: perhaps the same is true of the Kirkdale plate.

It would be interesting to compare the results of the very rewarding analysis of the direction and order of strokes in letters (the 'ductus') on the lead plate with scribal practice, as far as it can be reconstructed. Brown was able to reconstruct the probable order of the strokes in letters with wedge serifs in the main text of the Lindisfarne Gospels of $c .700$ : 'First, a short, diagonal auxiliary stroke, which forms the part of the wedge which projects to the left; then the main stem of the letter, which cuts across the lower part of the auxiliary stroke; then a hairline drawn across the tops of the first two strokes'. ${ }^{74}$ The analysis of the construction of the wedge serifs on the Kirkdale lead appears to show a change in practice between lines 2 and 3. The serif of character 1.7 in line 2 was drawn after the principal stroke (with the diagonal stroke preceding the horizontal). The lines of the serifs in line 3 (characters I.I7, I.18, I. 20 and I.23) were constructed before the rest of the letter. ${ }^{75}$ The top horizontal preceded the left diagonal except in 1.20 , where there is no top horizontal. In neither case does the sequence of strokes correspond with the reconstructed practice of the scribe of the Lindisfarne Gospels (diagonal, main stroke, top horizontal). The Kirkdale writer seems therefore to have been imitating a feature of formal book-script rather than writing it naturally. Of course, it is possible that scribal practice varied.

Returning to the differences between lines 2 and 3 , there is some further evidence for a change in practice. The incisions of characters I.I8 and I.I9 are noticeably lighter than those of the others. They almost look like sketches that were never brought to completion by deeper incision. There is, however, no clear indication elsewhere on the plaque of such preliminary sketches. In other respects the forms and character of the letters over all three lines make it unlikely that there was a change of hand.

The strokes on the Kirkdale plate are fairly fluent but are less controlled than those of Flixborough, mainly a matter of training but perhaps also the result of using a blunter tool. The graver seems to have slipped on a number of occasions (for example on 1.7, i. 8 and $1.18^{76}$ ).

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All the letters that can be read derive from the kind of Insular half-uncial that can be seen at its most formal in manuscripts such as the Lindisfarne Gospels. ${ }^{77}$ Some of the letters are rather narrower than the broad letters of Lindisfarne, but not all, another sign of this writer's informality, or inexperience. (The sequence banc in line 2 starts with two broad letters and ends with two narrow ones.) In Insular half-uncial $d, n, r$ and $s$ can appear either in 'uncial' or 'half-uncial' forms. Kirkdale has 'uncial' $d$, 'half-uncial' $n$, 'half-uncial' $r$, and 'uncial' s (reversed), in surviving parts but could of course have used the alternatives elsewhere.

My comments on individual characters are contained in Table 1, column 4.

## Interpretation of the Inscription

I have one or two minor observations to make on E.O.'s interpretation of the text. Her reading of the last line as containing the verb brefde is very convincing. In the line above, the letters banc are clear and ban-c[yst] is an attractive suggestion, but, as I have argued, there are difficulties in reading the next letter as $y$, although I would not exclude it. A vowel would be most helpful in this context but cl followed by a vowel (in this case probably $o$ or $u$ ) is also worth considering. This might suggest other compounds such as the unrecorded ban-c [lut] (bone-cloth?) etc.

The smaller script and narrower space of line 3 may indicate that it was an afterthought, but, if so, it must have occurred almost immediately, because the script is very similar to that above. However, the order of execution of the strokes in letters with serifs appears to change between lines 2 and 3 . Furthermore, two of the characters in line 3 (1.18 and 1.19) are more lightly incised than the rest. These features support the idea of line 3 being an (early) afterthought. The suggestion of a writer's 'signature' is a very interesting one and raises the question of why the writer should have signed the text. The purpose may have been different from other sorts of maker formulae. ${ }^{78}$ Was the intention to authenticate the statement above? The use of scribal signatures in Insular manuscripts might throw light on this question.

It is debatable whether one should expect epigraphic features typical of inscriptions on stone on the Kirkdale plate. Inscriptions on lead have more in common in terms of technique with writing on vellum (or wax tablets) than they do with inscriptions on stone. Palaeographical analysis of the 'ductus' of the letters may help in determining the tradition of writing, scribal or otherwise, in which the writer of the Kirkdale plate was trained. Anglo-Saxon inscriptions on stone are in fact inconsistent in their letter forms when the whole corpus is considered, and so it may be better to think in terms of a number of distinct short-lived, or localized, traditions (or sub-traditions) of epigraphic script rather than a single Anglo-Saxon epigraphic tradition.

The script of the plate probably dates from the 8th or 9th centuries; but it could be later. In the north of England Insular half-uncial seems to have survived well into the roth century, at least in the traditionalist community of Chester-le-Street. Aldred and another scribe from Chester-le-Street ('scribe C') both used Insular half-uncial as well as minuscule script in their additions of around 970 to the Durham Ritual. In Brown's view, Aldred's half-uncial might have been a revival, but scribe C still represented the old tradition. ${ }^{79}$
S.B.'s suggestion that line 3 contains an abbreviated reference to a saint might fit the context but I do not know of any parallel for reversed $s$ being used as an abbreviation for sanctus etc. I would also expect an abbreviation bar. The lack of parallels for such drastic abbreviation and the absence of abbreviation marks also make it difficult to accept bre as Birine and fder as feder. Birine could not easily be reconstructed by a reader from bre, unless the reader already knew that that was what was meant. We do not, of course, know what kind of reader the writer had in mind.
comment iv by Michelle Brown
M. Brown of the Department of Manuscripts, The British Library, comments briefly on a photograph of the inscription:
The script lacks some of the more diagnostic features of Flixborough ${ }^{80}$ and its halfuncials could date to any time between $c .675^{-850}$. In its general layout, with its prominent written lines, it resembles Flixborough and is ultimately indebted, I believe, to Roman practice for bronze diplomas etc. The use of crosses as punctuators again resembles Flixborough (which I date to $c$. 8oo, or late 8th-early 9 th century), although this is a common epigraphic device which may, or may not, denote commemoration.

## DISCUSSION (L.W. and P.R.)

The six pieces are thus interpreted as part (perhaps half) of a plate, originally attached to some object or structure. Fourteen letters of an inscription can clearly be discerned, and parts of others, arranged in three zones; there are also spacers or separators, one of which is certainly a cross, with 'dots' at the end of each arm. The favoured reading at present, in either Old English or a mixture of Old English and Latin, using mainly the script known as Insular half-uncial or Insular majuscule, is:

$$
\begin{aligned}
& ? \text { ter? }+ \text { ? } \\
& \text { ?+banc??? } \\
& \text { ?? isbrefder (?) }
\end{aligned}
$$

The provenance is probably ecclesiastical. ${ }^{81}$
In assessing the possible identification of the partial or missing letters at the right-hand end of the three upper zones, and thus the interpretation of the preceding letters, it may be worth bearing in mind that the upper edge of no. 2, and the lower right-hand edge of no. I, may be the original edges (indicating an original width of the plate of $c .46 \mathrm{~mm}$ ); thus the right-hand edges of the lower three zones may also be near to those of the original. This would limit the length of any word or character-sequence on the right-hand side of the separator in the upper zone; the three partial characters in the upper middle zone may help to suggest a completion for $b$ anc $\quad n$; and affect the interpretation, in the lower middle zone, of $b$ refd er-. The most obvious comparandum is the complete plate from Flixborough, which names at least seven people, also in Insular majuscule or half-uncial letters. ${ }^{82}$ It is comparable also in that it has three dividing lines, but with four lines of script. Brown suggests it was done with a V-shaped chisel, in contrast with the clear 'scoring' of the Kirkdale fragments. The thickness of the Flixborough plate is i mm, similar to that at Kirkdale; this makes it unlikely that a chisel was used. The Flixborough plate is twice the length ( 117 mm ), and rather wider ( 59 mm ) than the surviving fragment(s) from Kirkdale.

An important feature of the plate is the narrowness of the lower zone, by comparison with those above and below. If all three horizontal lines were scribed before all the inscriptions, ${ }^{83}$ it would be clear that the differential spacing and letter size were intended from the start, with implications for the importance, function,

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or symbolism of the lower zone. Alternatively, it could be that the lower zone was made narrow because a certain number of characters or words had to be accommodated in a single lower line; to make this possible, the zone had to be narrower than the others, so that a reduced size of characters could be used (cf. E.O. above).
J.H.'s study of the lettering itself indicates how the Kirkdale plate can be related to other Anglo-Saxon writing in various media and to the possibility of localized epigraphic practices. ${ }^{84}$ E.O. suggests that the text may refer to a person/ people contained in a bone-chest, ending with the name of either the writer or commissioner of the text, perhaps, J.H. comments, to add authenticity. Such a maker formula might explain why the third line was narrower. S.B.'s more radical interpretation is that an 'epigraphic vocabulary' may be identified, with the inscription merely summarizing something explicated more fully elsewhere. He goes on to suggest the sort of formulaic text to a known person that may be envisaged.

The two alternative functions suggested by Brown for the Flixborough plate that it may have been attached to a reliquary, naming the people whose relics or bones were thus enshrined, or that it could have been a plaque commemorating eminent people of the past - may provisionally be suggested for the Kirkdale plate. We may also note the lead memorial plaques at Wells and Canterbury; ${ }^{85}$ and, in the Glastonbury story (from a later date), the discovery of the lead plaque in the tomb of King Arthur. ${ }^{86}$

The lead inscription belongs to a little-known class of objects, inscribed lead plaques, ${ }^{87}$ whose physical characteristics and appearance, as well as the content of their inscriptions, provide evidence for their function. Today there are difficulties in reading the Kirkdale inscription: it needs to be looked at either in strong sunlight or with a spotlight. This may suggest that it did not need to be readily legible; either its content was already well-known, it was not often referred to or not many people at Kirkdale were literate. Any of these possibilities would have been appropriate in the context of the 'bone' and possibly the 'bone container' to which the text may refer.

The 'bone' could be derived from charnel or relics, housed in a container ${ }^{88}$ or bag. ${ }^{89}$ If the word 'ban' could be envisaged as meaning 'corpse' or the remains of one, the container may have been a coffin, which E.O. suggests as one alternative; a 'chest' could also have been appropriate in this connection, as at York Minster. ${ }^{90}$

Such collections of bones would not necessarily need, near the time of death of the person or people represented, to be named, as they would have been familiar. ${ }^{91}$ Perhaps it was only at a more distant time that such naming was required to preserve the identity of a perhaps seldom-handled memento from the past. ${ }^{92}$ Thus a naming at some point in the 8th-roth centuries could have been of a relic already considerably older. If the inscription thus provided a label, its obvious users would seem to be religious curators, as a means of transmission from one generation to another rather than using it on a daily basis.

One important problem about the lead plate is how it arrived in the context in which it was found. Its proximity to a concentrated area of metal-working debris
may suggest that it had been gathered, when it was no longer useful, as scrap. An original source, however, inside or near the church would seem likely, from a portable object or fixture such as a reliquary or shrine, or from a grave or coffin. ${ }^{93}$

The point of major interest in the context of St Gregory's Minster is that the lead plate was almost certainly connected with the dead, either with actual burial, with commemoration, or with relics, at a date before the middle of the ioth century and before Anglo-Scandinavian settlement in the area. It reinforces other evidence for the importance of Kirkdale in the context of burial, notably that of the two great decorated slabs of the 8th and 9th centuries, now under the north arcade. Both may be parts of box shrines. Their richness of design, which has been compared with the Lindisfarne Gospels, with implied access to exemplars and the concomitant cultural associations, suggests patronage at Kirkdale in relation to burial of the highest level in the 8th-9th centuries. ${ }^{94}$ The lead inscription may provide a glimpse of another aspect of regard for the dead, perhaps extending to a cult of relics, that is rarely visible, either historically or archaeologically. ${ }^{95}$

Meanwhile, the technique, style and form of the writing provide a visible link with the world that manufactured the major books and jewellery of the period. The resonances of the content of the inscription, its probable use of the vernacular and the power of writing itself ${ }^{96}$ will, we hope, be further explored. The wider topic of the use of lead as a mortuary material also remains to be developed.

While the outer limits of dating are from $c .675$ to $c .950$, the analogues cited, such as Dewsbury I, Yarm and the Lindisfarne Gospels (albeit in other media), are in the earlier part of this period; they may favour a date not dissimilar from the earlier of the decorated slabs referred to above (late 8th-early 9th century), which is otherwise the earliest evidence for a church at Kirkdale.

Finally, we would suggest that the plate belongs to both a literate and a Christian milieu, and provides strong support for the existence of a pre-Viking period monastic complex.

The foregoing detail and discussion, with the illustrations, will, it is hoped, serve to initiate comment from a wide range of specialists: from history, archaeology, art-history, palaeography (especially that of manuscripts), technology, epigraphy, language, literature, and theology: a body of people who vastly outnumber those interested in the less exotic aspects of archaeology, and to whom a new inscription of this period is an important addition to the extant corpus.

## THE SUNDIAL

## STRUCTURAL CONTEXT (L.W. and P.R.)

The sundial and its inscriptions occupy the visible face of a rectangular block of a stone, embedded in the S. wall of the nave of St Gregory's Minster, above the south doorway (Fig. I, Pl. II); its thickness is unknown. It is now wholly within the S. porch. The slab is not quite horizontal - it is about $2^{\circ}$ aberrant. ${ }^{97}$ The stone is divided into three panels; ${ }^{98}$ the central one contains the sundial and part of the inscription, while the flanking panels contain further text (Pl. III, A). The face of the slab is not quite flat; the two side panels and part of the central panel are slightly


FIG. 3
Brooke's published drawing of church porch and sundial (1779)
recessed. The defining mouldings within which the three panels lie extend almost to the edges of the slab, except on the right-hand (E.) side where the slab protrudes several centimetres beyond the frame. This side is irregular and apparently damaged, as are the other edges to a lesser extent.

It has generally been assumed that the S. wall of the nave is in origin that of Orm Gamalson's rebuild, together with the greater part of the W . wall of the nave. ${ }^{99}$ Also often regarded as part of this work are the jambs, bases, capitals and imposts of the present chancel opening. ${ }^{100}$

The geology of the sundial stone has been defined briefly by DrJ. R. Senior; ${ }^{101}$ a new examination has also been made by Dr Geoffrey Gaunt, ${ }^{102}$ who has provided the following fuller description, augmenting that of Senior. 'Sandstone, pale brown, fine-grained with sub-angular to sub-rounded grains, well-sorted, fairly well compacted (but slightly friable), with parallel grain-size layers. One of the Middle Jurassic "non-marine" sequences. The nearest outcrops of this are of the Scalby formation, c. 4.5 km N. of St Gregory's Minster, in the Hodge Beck valley; but the adjacent moors would provide better quarrying sites.'

The sundial was first noted by Dade in c. $1770,{ }^{103}$ and published by Brooke in ${ }^{1} 779,{ }^{104}$ together with a drawing of the church (Fig. 3). The latter shows the sundial stone partly within a porch smaller than the present one, as it was in 1776 . By


1817, this porch had been enlarged to its present form, with the sundial wholly enclosed (cf. Fig. 6, 1821). ${ }^{105}$

The published Brooke drawing (Fig. 4) has two outlines of the outer edges of the sundial stone. One rectangle is outlined by a double line boldly drawn, which presumably represents the edges as they exist today. Another similarly-sized rectangle is more faintly drawn, with its edges slightly W . of, and higher than, the main outline. No indication of this can be seen today, but it could suggest - if taken at face value - that there had been alterations to this part of the S. wall before ${ }^{1776}$. As only one such frame is now visible, it could also imply alteration to this part of the fabric since 1776 . Either or both alterations could possibly relate to a relocation of the inscribed slab. ${ }^{106}$

There is however another Brooke illustration, apparently a preliminary drawing, ${ }^{107}$ which has only one outline (Fig. 5), in approximately the same position as the faint rectangle in the published version. It is thus possible that this location had originally been adopted on the finished drawing, but had been erased when Brooke realized it was incorrect; and that the engraver had faithfully incorporated the erased outline as the faint rectangle!

Whatever the explanation for the two versions of the Brooke drawing, we cannot be certain that the sundial stone is in the position in which it was displayed in the 1 ith century. ${ }^{108}$ That the stone is not in situ might also be deduced from its


Brooke's original drawing of church porch and sundial
damaged edges; ${ }^{109}$ and (indirectly) from the description of the remedial works of 1827, undertaken at the same time as the construction of the western tower. These were said to include the 'rebuilding' of 'the whole of the south wall', which was apparently unstable. ${ }^{110}$ Major changes to the S . wall at that time can be seen by comparing Brooke's drawing (admittedly somewhat schematic) with one of $1830 .{ }^{111}$ A buttress near the porch in the Brooke drawing (Fig. 3), still in that position in drawings of 1821 (Fig. 6) and 1824 , ${ }^{112}$ had been moved to the SE. corner of the nave by $1830 .{ }^{113}$ That it was necessary in either position is witness to instability in the S. wall. ${ }^{114}$ Neither Tudor ${ }^{115}$ nor the present writers could discern any junction in the S. wall of the nave between the rebuild of 1827 and what appear to be the intact SW. quoins of the nave. ${ }^{116}$

Close examination, however, of the junction of the E. wall of the porch with the S . wall of the nave, on its outer (E.) face suggests that whatever part of the S . wall was rebuilt in 1827, this may not have included the two sides of the porch. A vertical row of stones links the E. side of the porch with the nave wall; some (as seen from the exterior angle) are common to both structures, the nave wall apparently being keyed into the surviving porch (Fig. 7). This is probably true of the W. side also, where the arrangement, as seen within the porch, is less clear. ${ }^{117}$ It would seem, therefore, that the porch was left standing in 1827, presumably propped up. The implication is that much of the S. wall (?from the porch eastwards) was indeed rebuilt, from the N.; but that the porch, the S. doorway and the sundial may not have been altered in 1827 . This would not preclude alteration at some other time.


There have also been suggestions that the sundial stone itself has been taken out of the wall and its back observed, within recent times. ${ }^{118}$ Although this is unlikely, on balance we consider that the sundial is not in its original I t th-century location, although the evidence does not allow this to be a certainty. We would nevertheless believe that it was in a closely similar location, above a S. doorway.

It may be noted that the S . doorway in its present form is not thought to be part of the it th-century work, but is considered to be of a later date, c. 1200, ${ }^{119}$ broadly contemporary with the addition of the N . aisle at this time. While the inner framework of the doorway, possibly the arch (of chamfered voussoirs), and the W. exterior jamb (of regular-sized stones), are probably post-Conquest, the eastern exterior jamb is composed of larger blocks more like the SW. quoins of the nave, and could be part of the i th-century S. entrance. ${ }^{120}$ The central gnomon-hole of the sundial is not quite central to the keystone of the arch of this doorway (it is to the right of the centre of the doorway).

With this summary of the structural context, we may now proceed to E.O.'s description of the organization of the exposed surface of the stone and the incised inscription thereon. This may be compared with those by Page published in $1995^{121}$ and by J.H. in Lang 1991, ${ }^{122}$ which differ in detail.

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FIG. 7
Drawing of junction of porch east wall exterior and south nave of St Gregory's Minster (drawn from photograph)

## THE INSCRIPTIONS ON THE SUNDIAL (Pls. II, III) (E.O.)

transliteration ${ }^{123}$
There are two texts, the main text and the dial text. Most of the main text is incised within two rectangular compartments, each of which contains five lines of lettering; one compartment is to the left of the dial and the other to the right. The main text ends beneath the dial with one long line and one short one. The dial text begins above the actual dial and continues in the semi-circular margin beneath it. With one exception, the D of TIDE, all the letters are clearly legible but the worddivision dots are not all certain due to the weathering of the stone.

The main text reads:

$$
\begin{aligned}
& \text { +ORM:GAMAL: } \\
& \text { SVNA:BOHTE:SC̄S } \\
& \text { GREGORIVS:MIN } \\
& \text { STER:DONNEHI } \\
& \text { T:WESÆL:TOBRO }
\end{aligned}
$$

> CAN:7TOFALAN:7H/E
> HITLETMACAN:NEWAN:FROM
> GRVNDEXPE:7/SCSGREGORI
> VS:INEADWARD:DAGVM:CNG
> 7NTOSTI:DAGVM:EORL+
> + 7HAWARĐ:MEWROHTE:7BRAND
> PRS

The dial text reads:

$$
\begin{aligned}
& + \text { PISISDÆGES:SOLMERCA + } \\
& E \text { TILCVMTI }[D] E[+]
\end{aligned}
$$

Divided into words, the main text reads:

+ ORM : GAMAL : SVNA : BOHTE : SC̄S GREGORIVS : MINSTER : ĐONNE HIT : WES ÆL : TOBROCAN : 7 TOFALAN : 7 HE HIT LET MACAN : NEWAN : FROM GRVNDE XPE : 7 SCS GREGORIVS : IN EADWARD : DAGVM : CN̄G 7 N TOSTI : DAGVM : EORL ++7 HAWARĐ : ME WROHTE : 7 BRAND PR̄S
This can be translated as: 'Orm, son of Gamal, bought St Gregory's church when it was completely ruined and collapsed, and he had it constructed recently from the ground to Christ and St Gregory, in the days of King Edward and in the days of Earl Tosti. And Hawarð made me and Brand the priest'.

Divided into words, the dial text reads:

+ BIS IS DÆGES : SOLMERCA + ÆT ILCVM TIDE [ + ]
This can be translated: 'This is the day's sun-marker at each hour'.
Further discussion of the translation of the texts appears below, p. 92.

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COMPOSITION AND CUTTING
As is usual in Anglo-Saxon inscriptions, the texts are written in capital letters and spaces are not used to mark word-division. The Kirkdale texts do, however, use single medial dots as word-division symbols although this is not done consistently. Due to weathering of the stone, not every word-division dot, or absence of it, is now certain, especially in the dial text. It is clear, however, that word-division dots were more frequently used at the beginning of the main text than towards the end of it.

The main text and the dial text both begin with a plain cross, a regular feature of Anglo-Saxon inscribed texts. The dial text contains two further plain crosses, one in the middle of the text and one at the end. The one in the middle is at the end of the first line and may have been intended to provide symmetry of design with the initial cross; the cross at the end may simply be indicating the end of the text. The main text contains two crosses of a more elaborate nature, one following EORL, at the end of the final line of text in the right-hand compartment, the other preceding 7 HAWARĐ. As first suggested by Rowe, this more elaborate form of cross may be intended as a signe de renvoie or reference mark. ${ }^{124}$

The spacing of both texts is badly arranged. The dial text begins with the first 'letter', the initial cross, set in the space inside both left-hand margins of the dial. The last letter of the line, however, is set within the inner right-hand margin (see Pl. III, A). The text therefore looks asymmetrical. It may have been in an attempt to improve the symmetry of the design that the carver cut a plain cross within the outer right-hand margin: the first line was now set even less centrally than before, but at least it began and ended with a cross. The remainder of the dial text is cut on one portion only of the lower part of the inner left-hand margin.

The lettering of the main text is spaced even less well. The stone-cutter had cut only one third of the letters when (s)he had used up half the available space. The cutter, or possibly a literate overseer, seems to have realized this problem at the $N$ of TOFALAN. The cutter then began to use various stratagems to try to fit in the rest of the text: less space was left between letters; some letters, for example $\mathrm{A}, \mathrm{H}$ and M , were cut less broadly than before; ligatures, for example $\mathrm{H} / \mathrm{E}$, were employed; more abbreviations were probably used, for example CNG; fewer worddivision dots were cut; letters were omitted, either accidentally or because the meaning seemed obvious from the context, for example the cutting of N for IN in the phrase in Tosti. Despite all this, however, the cutter reached the end of the righthand compartment with still a substantial amount of text to inscribe, that beginning 7 HAWAR $Đ$. With care this could have been fitted into one line beneath the dial; however (s)he reverted, at least until after cutting the letter $Đ$, to spacing the letters widely and cutting them quite broadly. In spite of some subsequent squashing, the last three letters could not be fitted in and had to be cut above the line.

Some tentative conclusions can be drawn about the way in which the stonecutter worked. Firstly, it is clear that, before any letters were cut, the stone must have been laid out in three compartments, with the margins cut and at least the outline of the dial, if not the details of the 'hour' marks also. The horizontal guiding
lines for the letters must also have been cut, with the possible exception of the line below the dial and above the last part of the main text; this may not have been cut until the need for it became apparent.

Secondly, it seems unlikely that the texts were laid out on the stone before the stone-cutter started cutting. It may well be that this was sometimes the practice, using chalk or light scratching. Had it been done here, however, the errors of spacing discussed above would presumably have been rectified at this stage.

Thirdly, such long and complex texts are unlikely to have been cut from memory and no doubt the cutter was copying a written exemplar. The poor spacing of the letters in the main text indicates that the written exemplar could not have been set out in lines as the text was to appear on the stone. Indeed, it could not even have been set out in two parts, one for each end compartment, as it would then have been divided more nearly into two equal portions. Similarly, the written exemplar for the dial text could only have noted in general that the dial text should be cut in the dial compartment; it could not have contained the text set out as it was to appear on the stone. The written exemplar could have been in capitals, as on the stone, or in a cursive script. Whether the writer of the exemplar was also the composer of the text is not clear.

Fourthly, either the stone-cutter was literate or the work was over-seen by someone literate. If the stone-cutter was literate, (s)he might have produced the written exemplar and/or have converted a written text in cursive script into capitals during the cutting process. It is perhaps more likely, however, that the stone-cutter was semi-literate or illiterate. This is suggested by the odd shape of an occasional letter, for example the first A of TOFALAN where the top cross-bar seems to be discontinuous. In this case, a literate overseer must have produced the written exemplar already in capitals and with word-division dots supplied. The literate person involved, whether cutter or overseer, might have suggested the use of horizontal guiding lines, corresponding to the ruled lines on a piece of vellum. This person might well have noticed the problems of space and certainly must have suggested some of the stratagems for dealing with them, for example the abbreviation of some words and the omission of some letters. Could the carver, whether literate or illiterate, have been Hawarð and the literate overseer Brand the priest?

## LANGUAGE

It seems likely that the texts inscribed on the stone would have been composed by a local person. The language of the texts is Old English with a small Latin element. This would be appropriate if the composer of the texts was Brand the priest. The Old English used contains late features, suiting its date in the IIth century, and some non-West-Saxon features, to be expected in the dialect area of Yorkshire.

Late Old English features are:
(a) loss and confusion of unstressed vowels: SVNA occurs for suna, MACAN for macian, and the past participles TOBROCAN and TOFALAN both have -AN for $-e n$;
(b) confusion of grammatical gender: ILCVM is a masculine or neuter form but tid is usually a feminine noun; see below, p. 86;
(c) instances of late spelling: MINSTER occurs for mynster, WROHTE with metathesis for worhte, and TOFALAN with a single not a double $l$;
(d) loss of inflexional endings: CNG and EORL occur for cyninges and eorles. These endings may have been omitted as a space-saving device, as suggested above, but this could have been because they were in fact possible Old English forms at this date. ${ }^{125}$ It is perhaps surprising that the dative endings in -um are retained, DAGVM (twice) and ILCVM.

Non-West-Saxon features are:
(a) the retraction of $a$ to $a$, as compared with West-Saxon fracture of $a$ to $e a$ : TOFALAN, West-Saxon tofeallen;
(b) the spelling $e$ for $a$ : WES, West-Saxon wes;
(c) the preponderance of personal names of Scandinavian origin (most of which have been anglicized in spelling). Old Norse Ormr appears as ORM; Gamal or Gamall as GAMAL; Tosti or Tostig as TOSTI; Havarðr (Old Danish Hawarth) as HAWARĐ; Brandr as BRAND.

The Latin element in the texts consists of names and titles. There are two examples of SCS GREGORIVS (one with SC̄S), where SCS is the abbreviation for sanctus 'saint'. Both examples retain their Latin nominative form rather than being given inflexions appropriate to their places in the Old English sentence; the first should properly be genitive, the second dative. The usual medieval Latin abbreviation for Christus is $x p s$, formed from the Greek letters for 'ch' and ' $r$ ' with Latin inflexional endings. The form used here, XPE, is unusual in having an Old English dative inflexion $-e$, representing Old English criste, rather than a Latin dative inflexion -0 , representing Latin Christo. $\mathrm{P} \overline{\mathrm{R} S}$ is a recorded medieval abbreviation for Latin presbyter, 'priest' (see p. 86).

## INTERPRETATION

The translation of the texts given above seems to me the most likely interpretation of the texts. Some words and phrases, however, require discussion.

## Main text

MINSTER: the Old English word mynster can mean both 'church' and 'monastery' and in Kirkdale the former seems more appropriate. The only other Anglo-Saxon inscribed text to use the word is 146 York I and there it seems likely also to mean 'church'. ${ }^{126}$ In both cases the exact meaning of the word mynster has to be viewed in the light of the considerable recent discussion about the definition of the word mynster and the place of the 'minster' in the organization of the Anglo-Saxon church. ${ }^{127}$
ĐONNE: the Old English word ðonne is often used, as here, with the preterite indicative. It can refer to frequentative acts in the past, or to a continuous state in the past, or simply to action in the past. In the last of these, ðonne is more or less equivalent to Old English pa
'when; then'. These two words finally fell together in usage and Mitchell gives examples from various dates. ${ }^{128}$ However Mitchell considers that in the Kirkdale text, đonne is used to refer to a continuous state in the past. ${ }^{129}$ If this were so, it would presumably imply that when Orm bought the church it had been completely ruined and collapsed for a long time and still was so. It is possible that the composer of the text was implying this. It seems just as possible, however, that the composer of the text was referring to a single act in the past, that đonne is here being used as equivalent to $p a$ 'when'.
TOBROCAN 7 TOFALAN: search through the Microfiche Concordance to Old English ${ }^{130}$ has revealed no other example of this phrase, although tobrecan is recorded with feallan. Tofeallan is a rare word with only ten occurrences in the Concordance, including the Kirkdale example. Of the remaining nine, one refers to an abstract structure (the walls of this world's unbelief), two refer to concrete objects that cannot be made from stone (the leaf of a tree and the limbs of a person) and six refer to structures which can be of stone but need not necessarily be so, for example houses, churches, idols, walls. Tobrecan is of more frequent occurrence and usually refers to concrete objects, although on occasion abstract things like rules or agreements can be tobrocen. It is used of objects made of stone, for example castles, towns and walls, but it is frequently used of objects that cannot be of stone: examples are people, parts of the body, iron fetters, bread, trees, ropes and glass vessels. It therefore seems clear that the use of the phrase TOBROCAN 7 TOFALAN to describe the earlier church bought by Orm does not necessarily imply that this building was of stone and, indeed, tells us nothing of the material from which it was constructed.
MACAN: the meaning here is clearly 'to construct'. Old English macian usually means 'to do' but from late Old English the meaning 'to construct' is also recorded; from the 12th century this meaning becomes common. Elfric, writing in the it th century, generally used macian meaning 'to do' but occasional instances of 'to construct' can be found. An example occurs in his homily Dominica Quinto Post Pascha: . . . pat he mihte macian his mynster on pam rymette, '. . . so that he could construct his church/monastery in that space'. ${ }^{131}$
NEWAN: this word could be the Old English verb niwian 'to renew', or the Old English adjective niwe 'new', or the Old English adverb niwan 'recently'. In each case $e$ is a perfectly acceptable spelling of the stem vowel. If NEWAN is a verb, the spelling with loss of $i$ in the inflexion is exactly paralleled in MACAN for macian. However the lack of the co-ordinating conjunction 'and' suggests that NEWAN is unlikely to be a verb in this text.

If NEWAN is an adjective, it is irregular in two ways. Firstly, it is the weak form of the adjective in a position where, with no demonstrative or possessive expressed, the strong form is required. Secondly, it is a masculine/feminine form yet it is agreeing with the neuter noun MINSTER, whose gender is confirmed by the use of the neuter pronoun HIT. These two irregularities can be paralleled elsewhere and, indeed, confusion of gender may also be an explanation in the phrase ILCVM TIDE (see below). A simpler solution is, however, to take NEWAN as an adverb.

If NEWAN is an adverb it is correct in form, which it is not if it is an adjective or verb. If it is an adverb, NEWAN almost certainly means 'recently' and is most unlikely to mean 'anew'. There are over 6o occurrences of the adverb niwan listed in the Microfiche Concordance to Old English. ${ }^{132}$ In four cases niwan probably means 'newly', in one it means either 'newly' or 'anew', ${ }^{133}$ and in all the rest the only possible meaning is 'recently'. This fact has not, however, inhibited the publication of large numbers of translations of the Kirkdale text with the meaning 'anew'.

In my view, the balance of probability is that NEWAN is here used as an adverb and therefore means 'recently'. This suggests that Orm's rebuilding of the church had only just taken place when the text was composed.
FROM GRVNDE: this phrase, 'from (the) ground', seems to suggest that the fabric of the present church was built from a flat site, not on earlier foundations. The phrase may, however, have been intended less literally, indicating a complete rebuilding without
implication about the foundations. The phrase certainly does not preclude the use of earlier building material in Orm's church. ${ }^{134}$
ME: the formula ' X made me', with the object personified, is fairly common in AngloSaxon inscriptions from the 9th century onwards. ${ }^{135}$
PR̄S: the abbreviation pis for presbyter 'priest' occurs also on an inscribed stone from York, 148 York III. ${ }^{136}$ Two other inscribed stones make use of the word presbyter in an abbreviated form, one from Monkwearmouth and one from Ripon. ${ }^{137}$ In both cases the word is abbreviated as $p \ddot{r} b$ and refers to one person. In manuscript texts, presbyter (both singular and plural) is frequently abbreviated, in a variety of ways. As an abbreviation for the singular presbyter, for example, prs occurs eight times in the lease of land by Werfrith, Bishop of Worcester, to Wulfsige (A.D. 904). ${ }^{138}$ On the other hand, Lindsay gives only one example of prs and there it is used for the plural presbyteri. ${ }^{139}$ Although P $\bar{R} S$ as a plural form here is certainly a possibility, the context suggests that it is equally likely to be singular and refer to one priest. ${ }^{140}$

## Dial text

SOLMERCA: this word is not recorded elsewhere in Old English but the context makes clear that its meaning is 'sun-dial' or 'sun-marker'. It is not unknown for an Old English word to be recorded once only in surviving texts and it is not necessary to assume that it was coined for use on this occasion. The word can be related to the Old English words sol 'sun' and mearc 'a mark, sign', mearcian 'to mark, mark out'; a rather rare word mearca meaning 'space marked out' is recorded in Gregory's Dialogues: belocen binnan pam mearce pas hringes, 'enclosed within the space marked out by the ring'. ${ }^{141}$ Alternatively, SOLMERCA may be related to the Old Norse word sol 'sun' (a more common word than Old English sol) and Old Norse merki 'sign, mark'. ${ }^{142}$ Old Norse influence on the text would not be out of place in view of the Scandinavian personal names that occur in it.
ILCVM TIDE: from the context it is clear that ILCVM means 'each' (Old English elc) not 'same' (Old English ilca). Confusion between these two words is common in Middle English and is recorded as early as the 12th-century Peterborough Chronicle, for example, under the year 852: he scolde gife ilca gear in to pe minstre sixtiga footra wudu, 'each year he must give to the church/monastery sixty waggon loads of wood ${ }^{1}{ }^{1 \neq 3}$ The charter which this Chronicle entry summarizes makes it quite certain that Old English alc 'each' is the word intended, despite the spelling ilca. ${ }^{144}$ The Kirkdale example is the earliest known to me of ilca meaning 'each'.

The form ILCVM is also irregular. Old English tid is a feminine noun here used in the dative singular. The adjective agreeing with it should therefore have the strong feminine dative singular ending -re, not the masculine/neuter -um. The ending on ILCVM may be an error due to the late confusion of inflexional endings or to the late confusion of grammatical gender. Alternatively it may be a correct form since Old English tid does occasionally appear as masculine/neuter, for example Durham Ritual Jam tide. ${ }^{145}$

The Old English word tid is the usual word for 'hour' but it can also be used of canonical hours. It is not clear here whether the dial text is referring to 'hour' in the sense 'hour of day' or 'hour of mass'. However since nine tid-marks are shown on the dial (see below, The sundial and its function), it may well be that TIDE refers to hours of the day.

## PERSONAL NAMES IN THE TEXTS

Several people mentioned in the texts can be identified. EADWARD is King Edward the Confessor who reigned from 1042 to 1066. TOSTI is Earl Tosti, the brother of Harold Godwineson; Tosti was Earl of Northumbria from 1055 until his expulsion in 1065 . The rebuilding of the church by Orm is thus securely dated to
the decade 1055 to 1065 . ORM may perhaps be the Orm who held T.R.E. some of the Yorkshire manors afterwards held by Hugh, son of Baldric; these manors included Chirchebi, which might be Kirby Moorside or, possibly, Kirkdale. ${ }^{146}$ However, as Fellows Jensen pointed out, the names Orm and Gamal occur fairly frequently in Yorkshire, and ORM cannot be identified with certainty. ${ }^{147}$ What is clear is that Orm must have been a wealthy man of high social standing in the community. If the inscribed stone was set up during his lifetime, Orm could have 'read', or pointed out, his own name on the stone; this would not have required great skill in literacy since ORM is cut in well-spaced letters immediately following the cross that begins the main text. ${ }^{148}$ As suggested above, it is possible that Hawarð was the stone-cutter and that Brand the priest oversaw the cutting of the text. The identity of the composer of the text is unknown unless he was Brand.

## conclusion

The interpretation of the texts given here indicates that the church was rebuilt by Orm within the decade 1056 to ro66. The wording of the texts suggests that it was a complete rebuilding, but does not permit us to draw conclusions about the material of the original church, nor whether any parts of it were utilized by Orm in his rebuilding. If NEWAN means 'recently', this would imply that the texts were cut soon after the completion of the church. If NEWAN means 'new', the texts could have been cut at some later date. The linguistic forms used, however, suggest that the texts are likely to have been composed before the end of the i ith century: although the texts are short, their language seems clearly earlier than, for example, that of the first continuation of the Peterborough Chronicle, dated c. 113 I. The main text, then, can be seen as a commemoration of Orm's building of the church; what remains unclear is whether it was inscribed as a tribute to him while living or as a memorial to him after his death.

## THE SUNDIAL AND ITS FUNCTIONS

The Kirkdale sundial was taken by Green, in his study of Anglo-Saxon sundials, to be typical of the class. ${ }^{149}$ One characteristic feature of Anglo-Saxon sundials is that the dial is carved on a separate piece of stone, not scratched on a wall as later dials often were. Another is that it is semi-circular with the perimeter marked with a double line. Another is that the octaval system of time-division is used with one of the early 'hours' differentiated from the rest. The marked 'hour' on the Kirkdale dial has a small cross at the end; five of the other 'hour'-marks have a small line towards the end and the remaining three are left plain.

All Anglo-Saxon stone sundials seem to have been vertical rather then horizontal, therefore requiring a horizontal gnomon. Being vertical, their usefulness must have been severely restricted. Even on a south-facing wall, a vertical sundial can only have been of any use during sunny days in summer. If the angle of the gnomon were altered regularly, for example every month, the accuracy of the dial would have been improved. There is no evidence that this was done. It seems more
likely that dials like these were intended only to indicate approximate times, perhaps the hour of daily mass. The marked 'hours' on the Kirkdale dial may have indicated this in different months throughout the summer. The impression remains, however, that Anglo-Saxon sundials are to be seen more as decorative than as functional monuments. ${ }^{150}$

## CONCLUSION (L.W. and P.R.)

The sundial inscription has much to tell us about Kirkdale, and a series of points are worth making in conclusion.

There was an earlier church said to be in a state of collapse before Orm's reconstruction. Although the state of dilapidation may have been exaggerated and certainly cannot be taken as implying a period when the site was abandoned, recent archaeological work at the W. end of the present building would endorse a rebuilding 'from the ground', using previous foundations. ${ }^{151}$

The inscription provides the earliest reference to the dedication of the church to St Gregory (and Christ). This may refer to the pope associated with the Christianization of the Anglo-Saxons by Bede and may also associate Kirkdale with the Roman tradition. It also places Kirkdale within a small group of churches probably of early foundation. ${ }^{152}$

The church is called a 'minster'. Although by the inth century this was not used specifically for monasteries and earlier had a wide range of connotations, ${ }^{153}$ it may nonetheless reflect the existence of a monastery here, as well as what it was considered appropriate to describe it as when the inscription was composed.

The inscription also gives the name of the purchaser who restored the building: Orm Gamalson, who is also probably known from other sources (below).

The inscription tells us that the church had been 'purchased' by Orm: why was it available to be bought, and from whom?

The inscription provides a date for the church restoration of, at face value, ${ }^{1055-65}$. Richard Morris has proposed ${ }^{154}$ that the interest shown in Kirkdale in the inth century, as testified in part by the sundial inscription, may have been directly related to its earlier history; and that the connections of Kirkdale in the I Ith century may have been more far-reaching than its geographical location would now suggest. ${ }^{155}$ He refers to Kirkdale's high status and possible importance in relation to burial in the pre-Viking period. ${ }^{156}$ Such a status and function are arguably also reflected by the presence of the inscribed lead plate. ${ }^{157}$

Nothing is known of Kirkdale's relationship, if any, to the major local documented churches of the Anglo-Saxon period, notably to York, Whitby, Lastingham and Hackness. A tentative link between Kirkdale and Lastingham can be suggested in terms of land holding in the II th century, ${ }^{158}$ a topic that should be explored for earlier centuries. Morris has also asked whether the interest in ancient holy places, ${ }^{159}$ which certainly included Lastingham, ${ }^{160}$ began before the Norman Conquest and may have been part of the reason why Orm Gamalson thought Kirkdale worth purchasing. The priest(s) referred to in the sundial inscription may reflect a small community. ${ }^{161}$

Orm Gamalson continues Kirkdale's proposed link with the aristocracy, now definitely secular. ${ }^{162}$ The sundial itself has been viewed as a status symbol. ${ }^{163}$ It may have been Orm's presumed aristocratic connections which provided some of the links in the chain that led to the architectural sophistication of details of the 1 I th-century church. ${ }^{164}$ E.O.'s discussion of the nuances of newan (p. 85) contribute to the on-going discussion of just when in the later part of the century these influences were at work, in Orm's time or later. ${ }^{165}$

The two inscriptions discussed in this paper are linked by their physical location, by their obvious belief in the written message, their use of vernacular and by their reflection of the high status of Kirkdale. The refinement of what this actually implied over the whole of the pre-Conquest period is the subject of continuing research.

## POSTSCRIPT (L.W. and P.R.) (added in press)

Since this paper was written, a manuscript has been made available to us by Mr. Tony Clark of Kirkbymoorside. It is a further version of a History of Kirkdale by Thomas Parker, a Ryedale antiquarian and poet. Other versions of this work exist, but none is as complete as this, written in 1879 .

Parker was born in 1812 and died in 1902. He observed the major restoration in 1827 when he was a boy. In describing this, he made an important observation, which we quote verbatim:
'The stone [i.e. the sundial stone] which I saw taken out when the wall was rebuilt in the year 1827 seemed once to have been a stone coffin having only the back part broken out and parts of the ends; the stone is seven feet five inches in length and one foot ten inches deep ...'

Several points are made explicit by this passage. Firstly, that the sundial stone is not in situ in its present location. Secondly, that the sundial stone is not a specially-made slab, cut for the purpose of making the inscription and other features, but the side of a sarcophagus; an identification appropriate to its dimensions. Parker's measurements are not quite correct. It is seven feet eight and a half inches long $(2.35 \mathrm{~m})$ and one foot eight and a quarter inches deep ( 0.5 I m ) (not 0.53 m , as in Lang's Corpus).

The stone is quite flat; if the sarcophagus side had been slightly convex originally, it had been dressed flat before the inscription was cut. It seems more likely that the sarcophagus was in fact straight-sided.

With hindsight, it might be observed that the long, narrow shape of the stone was perhaps in fact rather unsuitable for the intended use; a slab with a ratio of length to depth of $3: 2$ would have been easier for the designer; in other words, Orm Gamalson was utilizing a stone that was readily available (perhaps found in his building operation). This may have avoided finding a new slab to be cut and dressed de novo, or it may have been consciously preserving part of an existing sarcophagus in memory of its former inhabitant.

A final point may be made: that the decision to use this narrow stone will have determined the design of the inscription; or the stone was selected with this very design, of three adjoining panels, in mind!

## APPENDIX (E.O.) EARLY ACCOUNTS OF THE INSCRIBED STONE

It is known that, between 1770 and 1817 , at least three separate visits were paid to Kirkdale by people interested in the inscribed stone. On each of these occasions a drawing of the stone was made. In addition, a fourth visit and drawing were made before 1817, but whether before or after 1770 is not clear. A further possible visit may have been made before 1787 . There were therefore at least four (possibly five) independent drawings of the stone dating from the period up to 1817, of which four survive in one form or another.

The first certain visit to Kirkdale was made by the Rev. William Dade, rector of Barmston in the East Riding of Yorkshire, probably in 1770. Dade sent his drawing to the antiquary Samuel Pegge and Pegge communicated it to the Society of Antiquaries in January ${ }_{1771}$, in the form of a letter addressed to the Bishop of Carlisle. This letter and Dade's drawing are now lost but the letter is paraphrased in the unpublished Minute Book of the Society of Antiquaries. ${ }^{166}$

The second certain visit was made by the antiquary John Charles Brooke in September 1776. Brooke also communicated his drawing and account of the inscription to the Society of Antiquaries; this took the form of a letter to the antiquary Richard Gough which was read to the Society in January 1777. The letter and the drawing of the inscribed stone, accompanied by a drawing of the church, were published in Archaeologia in 1779 (see Figs 3, 4). ${ }^{167}$ Brooke had personally visited Kirkdale and was using his own drawing, while Pegge had not visited Kirkdale and was relying on Dade's drawing. Nevertheless, Brooke's account contains some wording which is identical to Pegge's. This was perhaps because Brooke had read Pegge's earlier communication; he acknowledges Gough's help in informing him of it. ${ }^{168}$

A drawing closely similar to that by Brooke, but signed 'F. Cary', was subsequently printed by Gough in $1789 .{ }^{169}$ This drawing was also printed by Pegge in 1787 , without the ascription to Cary but referring to 'p. 86'; despite the difference in date, this is presumably a reference to that page in Gough's work. ${ }^{178}$ It may be that Cary went to Kirkdale and drew the stone again, in which case his would be a third independent drawing. However, in view of the close similarity between the drawings, it may be that Cary was simply working from Brooke's drawing in preparing the illustration for Gough's work.

The third certain visit made to Kirkdale was by George Young in or before 1817 . Young published his drawing and account of the stone in his History of Whitby. ${ }^{171}$ Young's drawing is the first accurate one and his account contains the first correct interpretation of the texts.

The fourth certain visit and drawing were made at some unknown date by some unknown person. The drawing (Fig. 8) is neither dated nor signed and is accompanied only by a caption identifying it as from 'Kirkdale Church in the County of York and Deanry [sic] of Ridal'. ${ }^{172}$ The manuscript containing this drawing, B.L. MS. Stowe 1024, contains various drawings collected together by John Anstis (1669-1745), but the caption to the Kirkdale drawing does not appear to be in Anstis' handwriting. In 1768, most of Anstis' manuscripts were acquired by Thomas Astle (1735-1803). Astle added further drawings to Stowe 1024, some of his own and some made by other people, including Edward Lhwyd and his assistants. Comparison of the handwriting of the Kirkdale caption with the handwriting of B.L. MS. Stowe 1027, most of which was written by Astle, suggests that the Kirkdale caption was probably not written by Astle.

If the Kirkdale drawing was in Anstis' original collection, whoever wrote the caption, then it is the earliest known drawing of the inscribed stone. ${ }^{173} \mathrm{If}$, however, it was added by


> LMN－7TQFMLAN－7リ HITLETMALANNEDANFR』M GRVNDE•XDE VSIINEADDARD－DAGVM－［N̄ 7NTNTVDAGVM•EORL 士

FIG． 8
Drawing of sundial inscription from B．L．MS．Stowe 1024
Astle then it may or may not be earlier than the drawings made by Dade and Brooke but is likely to be earlier than Young＇s drawing published in 1817 ．What is quite certain is that it is not Dade＇s lost drawing：Pegge＇s 177 I reading of the text differs substantially from any reading derivable from the Stowe drawing．It is possible that the Stowe drawing was made by someone who became interested in the inscribed stone after hearing one of the two communications made in the 1770s to the Society of Antiquaries．

The next certain visit to Kirkdale after $\mathrm{I}^{18} 17$ was made by someone who drew the inscribed stone and either signed or initialled it illegibly．This drawing was reproduced by Parker and by Rickman in various editions of their works from 1846 onwards．${ }^{174}$ After this， a substantial number of independent drawings，and subsequently photographs，were published．Important information is contained in two early guide books to the church，one by Charles Tudor（1876）and the other by the Rev．Frederick Powell（1907）．${ }^{175}$

The accounts accompanying three of the early drawings，and the caption under the fourth，all state that the inscribed stone was then（as now）above the south doorway of the church．Indeed，Brooke＇s drawing of the church confirms that in 1776 the inscribed stone was in the same location as it is today．Three of the four early accounts mention a porch but the caption to the Stowe drawing does not．It describes the stone as＇over the South Door on the outside of Kirkdale Church＇．${ }^{176}$ The word＇outside＇presumably refers to the fact that the stone is set into the outer，not the inner，face of the wall；it does not seem to me to imply the absence of a porch．${ }^{177}$ Pegge＇s account of the stone in ${ }^{1} 771$ described it as ＇secured by a Porch（of later Erection we may presume）from the Injuries of Time and Weather＇．${ }^{178}$ In 1776 Brooke noted that the porch＇entirely covers＇the stone，＇except at two angles＇，a description confirmed by his drawing of the church which shows the top two right angles of the stone outside the porch．${ }^{179}$ Brooke added that＇the tiles of the porch ［were ordered］to be removed，the better to enable us to read it＇．${ }^{180}$ It is not clear how many tiles were removed，nor whether or not they were immediately replaced．This porch was eventually removed and a larger one，covering the whole stone，put in its place．In ${ }_{18} \mathrm{I}_{7}$ Young recorded that，＇Since the discovery of the inscription，the porch has been renewed and raised，so as to shelter it from injury＇．${ }^{181}$ This porch，which remains today，is shown in a water－colour dated 182 I.${ }^{182}$

Brooke stated that in his view the inscription had been preserved partly by the porch and partly by the stone having been previously＇plaistered over with lime，or some other cement＇．${ }^{183}$ This he deduced from the remains of the＇cement＇left in the incisions and in the hole for the gnomon．It is not clear when the bulk of this＇cement＇was removed，but presumably before Dade made his drawing c．1770．In 1817，Young said that the stone＇has been recently painted＇，although not very accurately．${ }^{184}$ The letters contain paint today，as they have done since my first examination of the stone in August 1964．Although Higgitt considered that the paint＇seems to have followed the carving with some care＇，${ }^{185}$ in my view Young＇s complaint at the lack of accuracy remains justified today．

The evidence of these early accounts and drawings demonstrates several things． Firstly，the church and the inscribed stone were known to be of historical interest since the 1770s；visits were made on at least four separate occasions between c． 1770 and 1817 ． Secondly，the stone has been in the S．wall since c．1770．Thirdly，the stone had been

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covered with some kind of plaster but this had been largely removed by 1776 and probably by $c .1770$. Fourthly, the porch, which in 1776 had covered most but not all of the inscribed stone had, by 1817 , been replaced by the present larger one.

## THE TEXTS: EARLY READINGS

Pegge's account of the inscribed stone in 1771 gave a translation but no text. Moreover, he did not 'attempt to decypher' the 'Middle Division, wch. has somewhat in it resembling a Dial', that is, the dial text. ${ }^{186} \mathrm{He}$ translated the main text as: 'Orm Gamalsun, or Fitz-Gamal, beat down St. Gregory's Minster, or Church. When it was totally demolished \& thrown down, Chethithle \& others rebuilt it from the Ground, in honour of Christ \& St. Gregory, in King Edward's Reign, \& in the time of Earl Tosti', and that part of the main text beneath the dial as: 'And Hawarth wrought me \& Brand the Priest'. ${ }^{187}$ P

In 1779 Brooke improved on this interpretation in that he correctly rendered BOHTE as 'bought' not 'beat down'. However, he read CHEHITLE. AND . MAN, translating 'Chehitle and others', which suggests that he was following Pegge's translation here. ${ }^{188}$ According to Young, Brooke subsequently improved on his reading, correcting CHEHITLE AND MAN to HE HIT LET MACAN, but translating it as 'he agreed with Macan (to rebuild it)'. ${ }^{189}$ I have been unable to find this reading in any published source and Young gave no reference.

Brooke quoted a suggested interpretation of the dial text (which Pegge had failed to decipher) made by the Rev. Manning. Manning surmised that 'in its original state' this text read: 'PIS IS DeGES SÆL MERCA TO SVNNA TILLVM WINTERES', which he translated as 'This is a Draught exhibiting the time of Day, While the Sun is passing to and from the Winter-solstice'. ${ }^{190}$ This ingenious interpretation took into account the fact that a vertical sundial, even on a south-facing wall, would serve a useful purpose for only half the year. Pegge's ${ }_{1} 787$ interpretation adopted this reading. ${ }^{191}$.

The undated drawing in the Stowe manuscript includes neither a reading nor a translation of the texts. It seems possible that the part of the main text to the right of the dial, perhaps from TOFALAN, along with the part of the main text beneath the dial, might have been interpretable from the drawing. It is not clear how much of that part of the main text to the left of the dial, or the dial text, could have been understood from the drawing.

The first fully correct reading and interpretation of the texts were published by Young in 1817.

[^0]${ }^{8}$ The metallurgical remains are currently being studied by Dr G. McDonnell at the University of Bradford, and the glass fragment by DrJ. Price of the University of Durham.
${ }^{9}$ The research is conducted under the aegis of the Department of Archaeology, University of York, and the Helmsley Archaeological Society. Here we would reiterate our grateful acknowledgement of financial and other assistance from the Society for Medieval Archaeology, the North Yorkshire County Council, the Helmsley Archaeological Society, the University of York, an anonymous benefactor, the Yorkshire Museum, the owner of the field north of the church (Major J. Shaw), the tenant farmer (Edward Wood) and the incumbent, the Rev. John Warden, who, with his staff, have made us very welcome. We also thank the numerous volunteers who helped with the excavation, and the specialists whose work will be detailed in subsequent publications; see references in note 6 .
${ }^{10}$ If it were not for the evidence of the 'melt', the 'skin' might conceivably have been seen as an anthropogenic coat - a protective varnish or something similar; or even an applied substance to emulate a more precious metal (i.e. a silvery or gilt colour, now altered). It is hoped that future scientific work can establish how the patina was produced (cf. note 13).
${ }^{11}$ Cf. those from the nearby site of Whitby, L. Webster and J. Backhouse (eds), The Making of England. AngloSaxon Art and Culture AD 600-goo (British Museum Press, 1991), 142-43, nos. ro7c, d, e, especially d.
${ }^{12}$ There is however no other evidence that lead was being worked.
${ }^{13}$ The British Museum is currently (1998) initiating a technical study of the fragments.
${ }^{14}$ The profile from L. to R. shown in Fig. 2 is as it was when found. 'Drooping' of the lead has considerably flattened the angle in the months that have lapsed between the original drawing and the writing of this paper; but is now probably nearer to its original profile.
${ }^{15}$ With microscope-attached camera; or even a scanning electron microscope.
${ }_{17}$ Abbreviations: L. and LH. - left and left-hand; R. and RH - right and right-hand; max. - maximum.
${ }^{17}$ These are as discerned in July 1996 and revised March 1997. This column should be read in conjunction with fig. 2 and pl. I.
${ }_{18}$ 'Incision' means a mark or linear element made with a stylus-like tool. 'Stroke' is more appropriate to a written inscription, but is used in the schedule to imply a continuous move of the graving tool; 'scribed' would possibly carry misleading implications about the maker's avocation.
${ }^{19}$ Expanded terminals may be due to 'dragging' or slight distortion of the lead as the letter was completed.
${ }^{20}$ The inscription mainly uses lower-case letters; this is reflected in the identifications given below, except for E.O.'s transliteration according to the following formal system A indicates a clearly legible letter $\mathrm{A} ; A$ indicates a letter A, damaged but legible; [A] indicates a damaged letter, probably to be read as A; [.] indicates one lost letter; - indicates a complete loss of text.
${ }^{21}$ E. Okasha, Hand-list of Anglo-Saxon Non-runic Inscriptions (Cambridge, 1971), pls. 12, 87, 106a-c; E. Okasha, 'A Second Supplement to Hand-List of Anglo-Saxon Non-Runic Inscriptions', Anglo-Saxon England, 21 (1992), pl. VII; D. Tweddle et al., South-East England. Corpus of Anglo-Saxon Stone Sculpture, Iv (Oxford, 1995), 222.
${ }^{22}$ The Anglo-Saxon inscriptions mentioned are all discussed in Okasha 1971, op. cit. in note 21; E. Okasha, 'A Supplement to Hand-List of Anglo-Saxon Non-runic Inscriptions', Anglo-Saxon England, 11 (1983), 83-118; Okasha 1992, op. cit in note 21, 37-85. The exception is the Chichester lead cross, published with a discussion of comparative material: 'The Lead Cross of Bishop Godfrey of Chichester', Sussex Archaeol. Coll., 134 (1996), 63-9. E.O.'s comments on the lead plate are based on having examined the fragments themselves.
${ }^{23}$ Okasha 1971, op. cit. in note 21, pl. 117.
${ }^{24}$ Okasha 1971, op. cit. in note 21, pl. 114; D. W. Wilson, Anglo-Saxon Omamental Metalwork 700-1100 in the British Museum (London, 1964), fig. 34 .
${ }^{25}$ Okasha 1971, op. cit. in note 21, pls. 68a, 76. (Lancaster II is again in capitals and Lindisfarne II is in Insular decorative capitals similar to those of the display script of the Lindisfarne Gospels).).
${ }^{26}$ The form in the Epinal Glossary is much more pointed: E. A. Lowe, Codices Latini Antiquiores, rv (Oxford, 1953), no. 760 .
${ }_{29}$ Okasha 197 1, op. cit. in note 21, pl. 30.
${ }^{28}$ Report in prep., cf. note 6 above.
${ }^{29}$ Okasha 1971, op. cit. in note 21, no. 30, pp. 30-31 (British Museum no. 1882).
${ }^{30}$ Okasha 1971 , op. cit. in note 21, no. 145, p. 130 (Durham Cathedral Library no. 50).
${ }^{31}$ Book iv, ch. 33 in Old English translation: T. Miller, The Old English Version of Bede's Ecclesiastical History of the English People (Early English Text Society, 95, 96, 1 10, 111 , London, 1890-98 (reprinted 1951-63), 382. And, in Latin, Book iv, Ch. 32, B. Colgrave and R. A. B. Mynors (eds), Bede's Ecclesiastical History of the English Church and People (Oxford, 1969 ), $44^{8}$.
${ }_{32}$ W. W. Skeat, Elfric's Lives of the Saints (Early English Text Society, 76, 82, 94, 111 , London, 1881-1900 reprinted in two volumes, 1966 ), 432-40.
${ }^{33}$ A. Campbell, Old English Grammar (Oxford, 1959), $201, ~ I 498$.
${ }^{34}$ Poetic text is inscribed on, for example, the Ruthwell Cross, the Franks Casket and the Brussels Cross; and versified inscriptions occur on, for example, various stones bearing memorial formulas (Okasha 1971, op. cit. in note 21,8 ).
${ }^{35}$ J. Bosworth and T. N. Toller, An Anglo-Saxon Dictionary, Edited and Enlarged by T. Northcote Toller (Oxford, ${ }^{1898} 8$ ). Supplement by T. Northcote Toller (London, 1921).
${ }^{36}$ In the most recent edition, P. S. Baker and M. Lapidge, Byrhtferth's Enchiridion (Early English Text Society S.S. 15, Oxford, 1995), references are to Enchiridion Part ii, section I, line 148 and Enchiridion Part iii, section I, line 25 .

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${ }^{37}$ A. Campbell, Enlarged Addenda and Corrigenda to the Supplement (to Bosworth and Toller, op. cit. in note 35) (London, 1972).
${ }^{38}$ J. R. Clark-Hall and H. D. Merritt, A Concise Anglo-Saxon Dictionary (4th ed., Cambridge, 1962).
${ }^{39}$ Toller 1921's (op. cit. in note 35) references to Bryhtferth's text as printed in Anglia viii correspond to Crawford 1929, 72, line 20 and 136, line 4. S. J. Crawford, Byrhtferth's Manual (A.D. IO1I) vol. I, Text, Translation, Sources and Appendices (Early English Text Society, 177, London, 1929 ).
${ }^{40}$ Microfiche Concordance to Old English, Dictionary of Old English Project, Toronto, 1980; A. DiP. Healey and R. Venezky, Microfiche Concordance to Old English: The List of Texts and Index of Editions (Toronto, 1980).
${ }^{41}$ E. v. K. Dobbie, (ed.), The Anglo-Saxon Minor Poems, The Anglo-Saxon Poetic Records, vi (New York, 1942), 99 , line 45
${ }^{42}$ See R. Cleasby and G. Vigfusson, An Icelandic-English Dictionary (Oxford, 1874 , reprinted 1957), s. v. BREF; the first recorded usage noted there, in the 13th-century Ólajfs saga helga by Snorri Sturluson, relates to a dispatch in the negotiations between Norway and Sweden in 1018. Compounds incorporating bréf include bréf-bók 'register-book' and bréf-brot', 'breach of ordinances'.
${ }^{45}$ Baker and Lapidge, op. cit. in note 36 above, xxviii.
${ }^{44}$ The manuscript is described in N. R. Ker, A Catalogue of Manuscripts Containing Anglo-Saxon (Oxford, 1957), $230-34$; see especially 230 and 232 , item 10 .
${ }^{45}$ For example, part of the Old English poem Genesis is generally agreed to date from the 9 th century, although Oxford Bodleian Junius 11, in which the unique text of it is preserved, is dated palaeographically to $c$. 1000; and still earlier dates of composition have been upheld for various other poems uniquely preserved, like Seasons, in relatively late manuscripts.
${ }^{46}$ See for example Dobbie, op. cit. in note 41 , xcii-xciv.
${ }^{47}$ Dobbie, op. cit. in note 4I, 99, lines 43-46. E.O. comments that she, in contrast, considers that the meaning here is simply 'wrote'.
${ }^{48}$ Oxford Bodleian Ashmole 328 (described in Ker, op. cit. in note 44, 349-50).
${ }^{49}$ Crawford, op. cit. in note 39, 72, line 20.
${ }^{50}$ Crawford, op. cit. in note 39,136 , line 4 . Baker and Lapidge 1995, op. cit. in note 36 also gloss gebreuan as 'write briefly'.
${ }^{51}$ Byrhtferth's 'monastic' idiom also contained some French adoptions, which were perhaps learnt directly from Abbo of Fleury and his entourage during their residence at Ramsey; for a discussion of this cultural phenomenon, see R. Derolez, 'Language Problems in Anglo-Saxon England: barbara loquella and barbarismus', in $\mathrm{M}_{52}$ Korhammer (ed.), Words, Texts and Manuscripts (Woodbridge, 1992), 285 -92.
${ }^{52}$ Baker and Lapidge, op. cit. in note 36, cx.
${ }^{53}$ The observance of 'standard' vocabularies at Winchester and Canterbury has been plausibly identified. See, for example, H. Gneuss, Hymnar und Hymnen im englischen Mittelalter: Studien zur Überlieferung, Glossierung und Übersetzung lateinischer Hymnen in England etc. (Buchreihe der Anglia xii; Tubingen, 1968); H. Gneuss, 'The Origin of Standard Old English and Æthelwold's School at Winchester', Anglo-Saxon England, 1 (1972), 63-83; H. Gneuss, 'Anglicae linguae interpretatio: Language Contact, Lexical Borrowing and Glossing in Anglo-Saxon England', Proc. British Acad., 82 (1992), 107-48; W. Hofstetter, Winchester und der spätaltenglische Sprachgebrauch, etc. (Munich, 1987); W. Hofstetter, 'Winchester and the Standardization of Old English Vocabulary', Anglo-Saxon England, 17 (1988), 139-61.
${ }^{3}$ Crawford, op. cit. in note 39, 142, lines 18-20.
${ }^{55}$ Okasha 1971, op. cit. in note 21, no. 111, pp. 114-15.
${ }^{56}$ Concerning whom Elisabeth Okasha observes: 'A text recorded on the sole evidence of Haigh is of doubtful validity' (Okasha 1971, op. cit. in note 21, 113, re no. 108). For Haigh's speculations about Kirkdale itself, see L. Watts, The Rev. D. H. Haigh and the runes at Kirkdale', The Ryedale Historian, 19 (1998-99) 21-24.
${ }^{57}$ L.W. and P.R.'s extended study of the plate leads them to consider that the marks are indeed deliberate see Table 1, 1.18.
${ }^{58}$ Okasha 1971, op. cit. in note 21.
${ }^{59}$ Rouen MS.V 107, fol. $8 \mathrm{I}-82$, according to A. Baudrillart, A. de Meyer and É. Van Cauwenbergh (eds), Dictionnaire d'Histoire et de Géographie Ecclésiastiques (Paris, 1935), vol. 8, cols. 1530-31. See also T. D. Hardy, Catalogue of Materials Relating to the History of Great Britain, vol. I (Rolls Series, 26, London, 1862-71; reprinted New York, 1964), items 625-36, for many texts - Latin lives, an English verse life, hymns, a homily, and a Missa in translationem S. Birim, attesting to the post-Conquest continuation of the cult of Birinus fuelled in part by competition between Dorchester and Winchester.
${ }^{60}$ P. H. Sawyer, Anglo-Saxon Charters. An Annotated List and Bibliography (London, 1968), 151, no. 325: 'Confirmation of the beneficial hidation of Chilcomb, Hants' - 12 th-century manuscript, authenticity questioned (although cited in D.O.E. Conc., op. cit in note 40). W. de G. Birch, Cartularium Saxonicum (3 vols., London, $1885^{-99}$; reprinted New York and London, 1964), no. 493.
${ }_{62}$ Colgrave and Mynors (eds.), op. cit. in note 31, Bk. iii, ch. 7.
62 The homily is no. 24 in Elfric's Lives of Saints (Skeat, op. cit. in note 32), and survives in three manuscripts; it is closely based on Bede's Ecclesiastical History.
${ }^{63}$ My thanks to Dr Leslie Webster for arranging for me to inspect the fragments.
${ }^{64}$ Webster and Backhouse (eds.), op. cit. in note 11, 95; Okasha 1992, op. cit., in note 21, 46-47.
${ }^{65}$ Webster and Backhouse (eds.), op. cit. in note 11, 95; M. P. Brown, A Guide to Western Historical Scripts from Antiquity to 1600 (London, 1991), 48-57.
${ }^{66}$ C. D. Verey, The Durham Gospels (Early English Manuscripts in Facsimile, $x x$ ) (Copenhagen, 1980), $51-52$ for T. J. Brown's discussion of these additions and the evidence for basic teaching script.
${ }^{6}$ Okasha 1971, op. cit. in note 21, no. 30, pp. 65-66; no. 145, p. 130.
${ }^{68}$ Webster and Backhouse (eds.), op. cit. in note 11, 80-81, 86-87, 90, 100-01, 140, 142-43; E. A. Lowe, Codices Latini Antiquiores, Supplement (Oxford, 197 1), 5, no. 1684.
${ }^{69}$ The Earl of Dunraven, 'On An Ancient Chalice and Brooches Lately Found at Ardagh, In the County of Limerick', Trans. Royal Irish Acad., 24 (1874), 433-54; Okasha 1971, op. cit. in note 21, pls. 61-63, 75-78, 80, $83,92,148$; J. Higgitt, 'The Dedication Inscription at Jarrow and its Context', Antiq. J., 59 (1979), 343-74; J. Higgitt, 'The Pictish Latin Inscription at Tarbat Ross-shire', Proc. Soc. Antiq. Scotland, 112 (1982), 300-21; J. Higgitt, 'The Stone-Cutter and the Scriptorium', in W. Koch (ed.), Epigraphik 1 g88: Fachtagung für mittelalterliche und neuzeitliche Epigraphik Graz. 10.-14. Mai 1988 (Vienna, 1990), 149-62 (=Osterreichische Akademie der Wissenschaften, Philosophische-Historische Klasse, Denkschriften, 213. Band).
${ }_{70}$ Okasha 1971, op. cit. in note 21, pl. 30.
${ }_{71}$ Okasha 1971, op. cit. in note 21, pl. 39.
${ }^{72}$ Okasha 1971, op, cit. in note 21, pl. 145.
${ }_{74}{ }^{73}$ G. F. Warner, The Stowe Missal, 11 (Henry Bradshaw Soc., 1915 ; I and in reprinted in one vol., 1989), 16, 32.
${ }^{74}$ T. J. Brown in T. D. Kendrick et al., Evangelia Quattuor Codex Lindisfamensis, II (Olten and Lausanne, 1960), 68-69.
${ }^{75}$ My examination of the plate seemed to bear out these observations, but was unfortunately too brief to be conclusive.
${ }^{76} \mathrm{Cf}$. note 57 re r.18.
${ }_{78}^{77}$ Brown, op. cit. in note $65,50-51$.
${ }^{78}$ E. Okasha, 'The Commissioners, Makers and Owners of Anglo-Saxon Inscriptions', Anglo-Saxon Studies in Archaeol. and Hist., 7 (1994), 71-77.
${ }^{79}$ T. J. Brown, The Durham Ritual. Early English Manuscripts in Facsimile, xv1 (Copenhagen, 1969), 15-17, 28, 29-31, 37-42.
81 Webster and Backhouse (eds.), op. cit. in note 11, 94-95; Okasha 1992, op. cit. in note 21, 46-47.
${ }^{81}$ A cross-shaped ( + ) separator as such cannot be used to propose this - it was also used in secular contexts, even if apparently invoking divine blessing or favour.
${ }^{82}$ M. Brown in Webster and Backhouse (eds.), op. cit. in note 11, 95, no. 69(a); and Okasha 1992, op. cit in note 21, 46-47.
${ }^{83}$ Strictly speaking, all that can be established is that each individual horizontal line was incised before the inscription above it.
${ }^{84}$ For writing on objects at Whitby, including a major collection of funerary monuments, see J. Higgitt, 'Monasteries and Inscriptions in Early Northumbria, The Evidence of Whitby', in C. Bourke (ed.), From the Isles of the North. Early Art in Ireland and Britain (Belfast, 1995), 229-35; and E. Okasha, 'Literacy in Anglo-Saxon England: the Evidence from Inscriptions', Anglo-Saxon Studies in Archaeol. and Hist., 8 (1995), 69-74.
${ }_{85}$ W. Rodwell, 'Lead Plaques from the Tombs of the Saxon Bishops of Wells' Exhibits at Ballots, Antiq. J., 59.2 (1979), 407-10; Okasha 1971, op. cit. in note 21, Canterbury III, no. 2, p. 60 . J.H. has also noted a number of lead plaques from northern France and Flanders of $c$. the 11 th-12th centuries (pers. comm.). Okasha 1983 , op. cit. in note 22, Wells I, no. 180, p. 101.
${ }_{86}^{86}$ E.g. Gerald of Wales, The Journey Through Wales/The Description of Wales (1980), 282.
${ }^{87}$ Hence the need for the detailed description above.
${ }^{88}$ Perhaps of wood or metal. Cf. the inscription on 'an old silver shrine' (presumably above-ground), which was the only information William of Malmesbury in the 12 th century could find relating to the 8th-century Aldhelm (William of Malmesbury, De Gestia Pontificium Angliorum (N.E.S.A. Hamilton (ed.), Rolls Series, 52, $1964), 330$.
89 William of Malmesbury reports that the bones of 'Beda', a priest of York were found with those of King Ceolwulf 'in linen sacks' ('in singulis saccis lineis') in the tomb of St Cuthbert; presumably they must have been marked in some way (William of Malmesbury, op. cit. in note 88, 275 and 474).
${ }_{90}$ B. Kjolby-Biddle, 'Iron-bound Coffins and Coffin Fittings from the Pre-Norman Cemetery', in M. O. H. Carver (ed.), Excavations at York Minster Volume I (London, 1995), 489-521.
${ }_{91} \mathrm{St}$ Cuthbert's coffin, dating from near, but not at the same time of his death, may not have been named cf. G. Bonner, D. Rollason and C. Stancliffe (eds), St. Cuthbert, His Cult and His Community to AD 1200 (Woodbridge, 1989).
${ }_{92}$ Note the story of the later labelling of Dunstan's relics in J. Scott (ed.), The Early History of Glastonbury Abbey. An Edition, Translation and Study of William of Malmesbury's De Antiquitate Glastonie Ecclesie (Woodbridge, 1981), 77.
${ }^{93}$ Note John Blair's suggestion (pers. comm.) 'that the Flixborough piece came from a box of bones interred from a monastic cemetery, which got built over as the monastery expanded'. Also cf. Bede, op. cit. in note 31 above, 221: 'Owing to the restricted space on which the convent [Barking] was built she decided that bones of Christ's servants buried there, both men and women, should be exhumed and transferred to a single tomb within the church of the blessed Mother of God'. Also cf. P. Sims-Williams, Religion and Literature in Western England (Cambridge, 1990), 341-42, quoting Cuthbert's description of a multiple tomb (for six people), with an accompanying inscription, possibly at Hereford.
${ }^{94}$ Lang, op. cit. in note 3 , nos. 7 and 8, pp. 161-63, where he dates no. 7 (which has a cross flanked by plantscroll in the main panel) to the late 8th to early 9 th century and no. 8 (with tassel decoration around three edges) to the early 9 th century. The character of the decoration may presuppose a literate context. A. Thacker (pers.
comm. to J. Blair) would associate the skeuomorph of a textile pall on stone no. 8 with special sanctity or veneration, perhaps even with a shrine; see also R. Bailey, 'What means these stones?' Some aspects of preNorman sculpture in Cheshire and Lancashire. The Toller Memorial Lecture; reprinted from the Bulletin of the John Rylands University Library of Manchester 78, no. I (1996), 37-38. Both slabs were removed from the W. wall of the nave in $\mathrm{I} 907-\mathrm{ob}$; this was done by a skilled mason, J . Weatherill, who was certain, on technical grounds, that they had been built into the wall when it was constructed (MS. in the possession of The Helmsley Archaeological Society).
${ }_{95}$ This is an aspect of popular religion that extended elsewhere also to pilgrimage. For a modern overview, D. Rollason, Saints and Relics in Anglo-Saxon England (Oxford, 1989).
${ }_{96}$ The very existence of writing may have had a significance without understanding being necessary. The inscription may indeed have been a 'multivalent image', conveying more than one meaning; see M. Brown in L. Webster and M. Brown (eds), The Transformation of the Roman World aD 400-goo (London, 1997), 241. Also see R. McKitterick (ed.), The Uses of Literacy in Early Medieval Europe (Cambridge, 1990).
${ }^{97}$ This was calculated using a level on the black incised lines on the raised mouldings defining the left and right hand flanking panels, where the horizontal lincs dip down to the right $2^{\circ}$ below the horizontal; the vertical lines are also not quite vertical, but incline top to right.
${ }^{98}$ For the physical details of the sundial, see the very full description in Lang, op. cit. in note 3, no. ro, pp. 163-66; also G. Baldwin Brown, The Arts in Early England. The Life of Saxon England in Relation to the Arts (2nd ed., London, 1926), 356 , fn. I. Its physical appearance is relevant to both whether the slab is in situ and also to linguistic considerations, R. Page, Runes and Runic Inscriptions (Woodbridge, 1995), 329.
${ }^{99}$ Taylor and Taylor, op. cit. in note i, Fig. 158.
${ }^{100}$ The chancel was rebuilt in 188 r ; its arch is medieval (Taylor and Taylor, op. cit. in note 1,358 and 360 ).
${ }^{101}$ In Lang, op. cit. in note 3, I64.
${ }^{102}$ Formerly of the Geological Survey; pers. comm., 3.9.96. These observations would seem to replace Professor J. E. Hemingway's identification as Caen stone (cf. The Ryedale Historian, 10 (1980), 19, note ii), but this should not be lost sight of: none of these three identifications is based on fresh fractures. In what is increasingly being realized to have been the sophisticated circumstances of Kirkdale in the I ith century, such a use at this date would be less surprising than it used to be thought.
${ }^{103}$ How William Dade, an East Riding clergyman, came to discover the inscriptions is unknown. Did he notice a block of stone outlined in the 'lime or some other cement' that had covered it? (cf. Brooke, in note 104 below, 189). Or was the plaster flaking enough to reveal something beneath? There is no known record of building work on the church at this time. If Dade was merely a curious or observant clergyman, he was not apparently following an existing local vogue for finding dials. In Yorkshire, that at Aldborough was first noted in 1782 by the same Brooke who reported on Kirkdale, in the volume of Archaeologia following his Kirkdale paper (Okasha 1971, op. cit. in note 21,47 and note 104 below); that at Great Edstone was not written about until i817 (Okasha 197r, op. cit. in note 21, no. 41. p. 73), and that at Old Byland even later, in 1846, by the Rev. D. H. Haigh (G. Frank, Ryedale and North Yorkshire Antiquities (York, 1888), 1 4).
104 J. C. Brooke, 'Saxon Inscription on the Church of Kirkdale in Ryedale', Archaeologia, 5 (1779), 188-205. John Charles Brooke ( 1748 -94) wrote widely on antiquarian subjects and was a fellow of the Society of Antiquaries of London. His Yorkshire connections included his birth and a family collection on the topography of the county, to which he added an extensive manuscript compilation (L. Stephen and S. Lee (eds.), Dictionary of National Brography (Oxford, 1949-50), 1338 -39).
${ }^{105}$ Young reports that the porch had been altered by 18 I 7 , 'renewed and raised, so as to shelter it [the inscription] from injury' and that the stone 'has been recently painted', G. Young, A History of Whitby (Whitby, ${ }_{181} 7$ ), 747 , fn. The other early drawings are not helpful about the outer frame(s), concentrating as they do on the inscription (cf. Appendix I), viz: R. Gough (ed.), W. Camden, Britannia 3 (London, 1806), pl. xviii, fig. 2 (between pp. 318-19). The B.L. MS. Stowe 1024 discussed by E. O. in Appendix, pp. 90-2. We are grateful to E.O. and to M. Brown of The British Library for obtaining a copy of this for us. Young, ibid., p. 743 .
${ }_{106}$ The fainter frame could also possibly relate to an earlier doorway, slightly ( $c .40-50 \mathrm{~mm}$ ) to the W . of the present one, with possibly a higher apex (?up to 100 mm from the location of the fainter frame in relation to the bolder one on the published Brooke drawing). Also see below.
${ }_{107}$ In the library of the Society of Antiquaries of London, signed 'I. C. Brooke, delin.' I 5 th Sept. ${ }^{\text {r }}$ 1776.'
${ }^{108}$ The opinions of past observers differ on this. The alternatives, either that it was or was not in situ, were both held before the major restoration of 1827 and both seem to be based on observation of the fabric. The earliest consideration of this point appears to be by the Rev. George Young, writing from Whitby, with personal knowledge of the area. He wrote, 'It is remarkable that while the church has thus been repaired and altered on all sides again and again, this stone and the Saxon door beneath it have remained undisturbed.' (Young, op. cit. in note i05, 742). In contrast, the architectural historian Thomas Rickman considered that 'the stone has been removed from its original situation, and built into the wall to preserve it', T. Rickman, An Attempt to Discriminate the Styles of Architecture in England from the Conquest to the Reformation (3rd ed., London, 1825), 351. Later, he also drew out what would be the implications if it was not in 'its original place': that 'it is now no evidence of itself, as to what part of the church is Saxon', T. Rickman, 'Further Observations on the Ecclesiastical Architecture of France and England', Archaeologia, 26(1836), 32.
${ }^{109}$ Even if 'purpose-cut' for the inscription (Baldwin Brown, op. cit. in note 98,356 , fn. 1 ), the battered, damaged eastern end of the slab in particular would not seem to reflect a finished, prepared, face, still in situ, but a stone that has been taken out, damaged and subsequently replaced.
${ }^{110}$ Kirkdale Vicarage Archive, Correspondence 1763-1827, documents 39-41.
${ }^{111}$ Watts et al., op. cit. in note 6, Fig. 8.
${ }_{112}$ Watts et al., op. cit. in note 6, Fig. 6, 7.
${ }^{113}$ Watts et al., op. cit. in note 6, Fig. 8. The buttress must have been moved during the 1827 restoration. What happened to the two windows in the S. nave wall in 1827 has not been established. Whether the three-light window was rebuilt, using the same or identical members, is uncertain; if it was rebuilt, it is also uncertain whether its position shifted slightly, or if it was only the location of the buttress that changed - the perspective of the drawings of 1821,1824 and 1830 does not allow this to be resolved (cf. Watts et al., op. cit. in note 6, Figs. 6-8); but the Brooke position of this window, adjacent to the E. end of the nave (Fig. 4) is presumably unreliable.

The date of the two-light window above the porch is uncertain. It is not shown in Brooke's drawing of 1779. There may be a feature in this position by 1821 , perhaps a blocked opening (?associated with the 1817 rebuild of the porch, note 105 above); but it is not shown on the 1824 drawing. It is certainly in existence by 1830 (cf. above references).
${ }^{114}$ Since the 1827 restoration, the buttress has supported the nave-chancel junction. One reason for instability may have been the proximity of graves to the walls. A report of 1880 on the chancel walls referred to graves being made both 'close to their foundations, and even under them . ..' (Letter from J. S. Crowther to W. B. Gamlen, Secretary, University Chest Office, Oxford; Oxford University Archives, Bodleian Library UC/FF/ $143 / 2 / 2$ ).

When the buttress was moved, sculpture was found: 'When the Church was altered in 1827 several remains of crosses were built into the wall behind, if not actually into the buttress itself' (Tudor, op. cit. in note 4, 13); (this does not make it clear if it was behind the buttress in its old or new position). The crosses referred to may have been those in Lang, op. cit. in note 3, nos. I and 2, pp. 158-59, where the earliest known references to these are given as 1857 and 1888 . Tudor, pl. 2 seems to be the earliest drawing to show them built into the fabric of the S . wall of the nave. If these are the crosses to which Tudor was referring, this would be further evidence of the extent of the 1827 work.

Another clue to this may be a weathered block of stone within the church, just E. of the S. doorway, displaying worn interlace decoration (not noted in Lang, op. cit. in note 4). It is adjacent to the interior face of the S. wall, at floor level and is substantially canted down to the S., as might have been the case if it had been part of the foundation of the S. wall before it was rebuilt. Publication of this stone is in preparation, with other recently-found sculptural fragments.
${ }_{115}$ Charles L. R. Tudor, son of the then incumbent of Kirkdale and a London architect, himself published (from London) his A Brief Account of Kirkdale Church ... in 1876, op. cit. in note 4. He incorporated first-hand observations and opinions from 'Mr Haigh' (see note 118 ); and from T. Parker of Wombleton, to whom he was 'indebted for a good deal of information with respect to the condition of the Church before it was altered in ${ }^{1827}$ ' (ibid., 3). Tudor was a careful and thoughtful observer and an able draftsman; all subsequent students of Kirkdale are heavily indebted to him.
${ }_{116}$ The 1827 rebuild is not visible as such.
${ }^{117}$ Tudor also noted other evidence that the porch was of at least two periods, as he observed a difference in build horizontally, either side of the stone sets within the porch, Tudor, op. cit. in note $4,{ }^{14}$
${ }^{118}$ These seem to derive from remarks by the Rev. D. H. Haigh, who has left a mixed legacy at Kirkdale; this includes his conflation of Kirkdale and the Lastingham of Bede (L. Watts, op. cit. in note 56). Tudor, op. cit. in note 4,10 , quotes Haigh: 'The inscription stone, with dial, is a coffin-lid reversed, the sculptured part being hidden in the wall.' Haigh's own publication of three years later however suggests this was based on supposition rather than a factual observation: 'I suspect . . . that the large slab on which this inscription and the dial are cut, will be found to be a coffin-lid with carving on the now hidden side, and perhaps an inscription', D. H. Haigh, 'Yorkshire Dials', Yorks. Archaeol. J., 5 ( 1879 ), ${ }^{1}$ 50. Similar remarks in T. Bulmer, History, Topography and Directory of North Yorkshire (Preston, 1890), 977, and F. W. Powell, A Short Account of St. Gregory's Minster, Kirkdale (Leeds, 1909), 12, appear to be derived from Haigh.

It is of course possible that the sundial slab has not only been out, but has been used more than once. Various scenarios can be suggested:
i) that it is a reused Roman stone; if, for instance, it was the lid of a stone sarcophagus.
ii) that it had an earlier, pre-1 1 th-century, Anglo-Saxon use, perhaps as part of a large cross-shaft; or as the cover of a sarcophagus or box-shrine, on a much more massive scale than Lang, op. cit. in note $3,161-63$, Kirkdale, nos. 7 and 8;
iii) that it was used as a medieval grave-cover. The late Jim Lang (pers. comm., late 1995) suggested that if the sundial inscription had been laid face downwards over a medieval grave, little damage need have resulted from such a use. We would favour any other use to have preceded that as a sundial; otherwise it would have had to have been found, recognised and reinserted into the church.

All this has to be reconsidered in the light of the postscript added in press (p. 89).
${ }_{120}$ Taylor and Taylor, op. cit. in note 1, 359.
120 ?In situ or rebuilt, cf. note 106 above.
${ }^{121}$ Page, op. cit. in note 98, especially 329-30.
${ }^{122}$ In Lang, op. cit. in note 3, $163-66$.
${ }^{123}$ The texts are transliterated in lines as on the stone according to the following system: A indicates a clearly legible letter $\mathrm{A} ; A$ indicates a letter A , damaged but legible; $[A]$ indicates a damaged letter, probably to be read as A; A/B indicates a ligature of the letters A and B; ; indicates a word-division symbol, in these texts consisting of one medial dot; $\overline{\mathrm{A}}$ (a letter with a line above it) indicates a mark of abbreviation.
${ }^{124}$ G. Rowe, 'On the Churches of Lastingham and Kirkdale, in Yorkshire . . .', Assoc. Archit. Soc. Rpts., 12, no. 2 (1874), 208.
${ }^{125}$ See R. I. Page, 'Dating Old English Inscriptions: The Limits of Inference' in S. Adamson et al. (eds), Papers from the $5^{\text {th }}$ International Conference on English Historical Linguistics, Current Issues in Linguistic Theory, 65 (1990), 361-62.
${ }^{126}$ Okasha 1971, op. cit. in note 21, no. 146, p. 131.
${ }^{127}$ See for example J. Blair (ed.), Minsters and Parish Churches: The Local Church in Transition, 950-1200 (Oxford, 1988); E. Cambridge and D. Rollason, 'Debate: The Pastoral Organization of the Anglo-Saxon Church: A Review of the "Minster Hypothesis"", Early Medieval Europe 4.1 (1995), 87-104; J. Blair, Debate: Ecclesiastical Organization and Pastoral Care in Anglo-Saxon England', Early Medieval Europe, 4.2 (1995), 193-212.
${ }^{128}$ B. Mitchell, Old English Syntax (Oxford, 1985), section 2572.
${ }^{129}$ Mitchell; op. cit. in note 128, section 2568.
${ }^{130}$ D.O.E. Conc., op. cit. in note 40.
${ }^{131}$ J. G. Pope (ed.), Homilies of Elfric: A Supplementary Collection I, Early English Text Society, 259 (London, New York, Toronto, 1967 ), no. 8, pp. 353-71. The quotation is on p. 362 , line ${ }_{115} 5$ (my translation).
${ }^{132}$ D.O.E. Conc., op. cit. in note 40.
${ }^{133}$ Metres of Boethius 15, line 2: . . Neron cynincg niwan gescerpte, ' . . . King Nero clothed him(self) niwan' (my translation). G. P. Krapp (ed.), Panis Psalter and the Meters of Boethius, A.S.P.R. 5 (London, New York, 1932), 173. This line, including the word niwan, is largely derived from Junius' transcript of the manuscript; see pp. xliv-xlv. ${ }^{134}$ Cf. Conclusion, p. 88.
${ }^{135}$ These and similar texts are listed and discussed in Okasha 1971, op. cit. in note 78, pp. 71-77.
${ }^{136}$ Okasha 1971, op. cit. in note 21, no. 148, p. 132.
${ }^{137}$ Okasha 1971, op. cit. in note 21, no. 92, p. 101 (Monkwearmouth II) and no. 102, p. 107 (Ripon).
${ }^{138}$ British Museum Additional Charter 1979 I: A. J. Robertson (ed.), Anglo-Saxon Charters (Cambridge, 1939), no. XVIII, pp. 34-35 and 294.
${ }^{139}$ W. M. Lindsay, Notae Latinae . . (Cambridge, 1915), 436-37.
${ }^{140}$ Conclusion, p. 88.
${ }^{141}$ H. Hecht (ed.), Bischof Warferths von Worcester Übersetzung der Dialoge Gregors des Grossen . . . (Leipzig, 1900), 197, lines $3-4$ (my translation). The reading is from MS. CCCC 322 ; MS. Cotton Otho C. I has mearcan.
142 The Old Norse compound solmerki is recorded in the 12th century, but with the meaning 'sign of the zodiac'; see Cleasby and Vigfusson, op. cit. in note 42.
${ }_{144}^{143}$ C. Plummer (ed.), Two of the Saxon Chronicles Parallel . . . 1 (Oxford, 1892 ), 65 (my translation).
144 This charter is preserved in a 12th-century cartulary of the Abbey of Peterborough; see Robertson, op. cit. in note 138, no. viI, pp. 12-13, 271-74. For further discussion see E. Okasha, 'The English Language in the Eleventh Century: the Evidence from Inscriptions' in C. Hicks (ed.), England in the Eleventh Century, Harlaxton Medieval Studies 2 (Stamford, 1992), 335 -
${ }^{145}$ U. Lindelöf (ed.), Rituale Ecclesiae Dunelmensis . . (Surtees Soc., 140, Durham, London, 1927), 162, line 17.
${ }^{146}$ M. L. Faull and M. Stinson (eds), Domesday Book: (Yorkshire) (Chichester, 1986), fol. 327 c and note concerning entry ${ }_{23} \mathrm{~N}_{19}$.
${ }^{147}$ G. Fellows Jensen, 'Of Danes - and Thanes - and Domesday Book' in I. Wood and N. Lund (eds.), People and Places in Northern Europe 500-1600 (Woodbridge, 1991), 111.
${ }^{148}$ See further, E. Okasha, 'Literacy in Anglo-Saxon England: the Evidence from Inscriptions', Anglo-Saxon Studies in Archaeol. and Hist., 8(1995), 69-74, especially 71.
${ }^{149}$ A. R. Green, 'Anglo-Saxon Sundials', Antiq. J., 8(1928), 489-516.
${ }^{150}$ The 1997 Kirkdale Lecture by S.B. was on the subject of the sundial. He discussed the sundial in the context of the late Anglo-Saxon computus and developed the theme of its symbolic and liturgical meaning. See S. A. J. Bradley, in prep, to be published by Kirkdale Church.
${ }^{151}$ Perhaps it is archaeological evidence that will resolve linguistic ambiguities! Report on this excavation in prep., see Rahtz and Watts, op. cit. in note 6.
${ }_{152}$ J. Blair, 'Palaces or Minsters? Northampton and Cheddar Reconsidered', Anglo-Saxon England, 25 (1996), 97-121. There Blair considers (p. 105) that 'Dedications to Gregory the Great can be expected to originate at the end of the seventh or in the first half of the eighth, when the cult was at its height in England'; he also notes that this dedication is unlikely to be 1 Ith-century in origin. Dedications to Gregory are also known at both York (the stone church that Edwin started and Oswald completed contained a chapel dedicated to St Gregory, where Edwin's head was placed) and Whitby; what Congrave called The Earliest Life of Gregory the Great was composed at Whitby.
${ }^{153}$ Cf. E.O. above, p. 84.
${ }^{154}$ R. Morris, 'A Note on St. Gregory's Minster, Kirkdale, North Yorkshire', Bull. C.B.A Churches Comm., (1990), 4-6.
${ }^{155}$ Kirkdale was in fact close to the main road along the N. side of the Vale of Pickering until the 19th century, when the modern road was built on land formerly subject to flooding (cf. Watts et al. 1996-97, op. cit. in note 6). It may have been 'public' in another sense. If it and Lastingham were connected, as a monastery in two places, could Kirkdale have been the accessible, 'business' part, while the remote Lastingham was the contemplative element?
${ }_{156}$ Cf. above, p. 75.
157 The glass referred to on pp. 51-2 also suggests high status.
${ }^{158}$ While bearing in mind E.O's note of caution above, it has been suggested that before the Norman Conquest land at Lastingham was held by the family of the Orm Gamalson of the sundial inscription (e.g. Tudor, op. cit.
in note 4, 7). This is based on the assumption that the 'Gamall' who held land at both Lastingham and Kirby Misperton, a dependency of Kirbymoorside, which was held by Orm, T. R. E., belonged to Orm Gamalson's family (cf. Faull and Stinson eds., op. cit. in note 146, re. entries $8 \mathrm{~N}_{2}-3$ and ${ }_{23} \mathrm{~N}_{21}$ ).
${ }^{159}$ Morris 1990, op. cit. in note 154,5 .
${ }^{160}$ See J. Burton, 'The Monastic Revival in Yorkshire: Whitby and St. Mary's, York,' in D. Rollason, M. Harvey and M. Prestwich (eds.), Anglo-Norman Durrham (Woodbridge, 1994), 44 -
${ }^{161}$ Morris, op. cit. in note 154, 5-6. As E.O. notes above, p. 86, there is some uncertainty whether one or two priests are referred to. Baldwin Brown, op. cit. in note 98, 355, for example, believed that both Hawarth and Brand were priests. P. H. Blair, Anglo-Saxon England (Cambridge, 1956), 192 expresses doubt about the translation of PRS.
${ }^{162}$ See C. J. Morris, 'Marriage and Murder in Eleventh-Century Northumbria: A Study of 'De Obsessione Dunelmi', Borthwick Papers, 82 (r992), 5 .
${ }_{164}^{163}$ Lang, op. cit. in note 3, 47.
${ }^{164}$ Morris, op. cit. in note 65, 196; R. Morris and E. Cambridge, 'Beverley Minster Before the Thirteenth Century', in C. Wilson (ed.), Medieval Art and Architecture in the East Riding of Yorkshire IX (The Brit. Archaeol. Assoc. Conf. Trans. for the year $1983(1989)$, 19) (but also see E. Cambridge, 'Early Romanesque Architecture in North-East England: A Style and Its Patrons', in D. Rollason et al., op. cit. in note 160, 144 fn . 8). Morris, op. cit. in note 154,4 , where he also refers to other holdings of Orm in Domesday Book, viz. Hovingham and Skipwith, where the churches were widely altered in the mid i Ith century. There is no evidence at Kirkdale for a mid/late irth-century tower.
${ }^{165}$ Morris, op. cit. in note 161 , 196. Doubts about the exact dating of the architectural details to be associated with the sundial inscription stem from asking whether its dating reference is notional, i.e. that the work on the fabric could have been carried out a little before or after its inclusion within the building. (E.O. sets a linguistic limit on this, above, p.87). The precise date is important for architectural historians because of the use of this reference point for features elsewhere. John Blair (pers. comm.) asks whether, if the sundial stone is not as initially set, is it possible that the whole of the standing church is late II th century (i.e. that there were two 1 Ith-century building campaigns). What is not in doubt is that a major restoration of the building was undertaken sometime in the mid-I Ith century.
${ }^{166}$ Minute Book vol. xir, pp. 78-81, being an extract from the Minutes of 24 January 1771.
167 Brooke, op. cit. in note 104.
${ }^{168}$ Brooke, op. cit. in note 104, 188.
${ }_{169}$ Gough, op. cit. in note 105, 330.
${ }^{170}$ S. Pegge, A Sylloge of the Remaining Authentic Inscriptions relative to the Erection of our English Churches . . . Bibliotheca Topographica Britannica 6, no. 41 (London, 1787), 20-21.
${ }_{172}$ Young, op. cit. in note 105, 741-47.
${ }^{172}$ British Library MS. Stowe 1024, fol. 199 (old numbering fol. 773), op. cit. in note 104.
${ }^{173}$ This is assumed, without argument, by Lang, op. cit. in note 3, 164.
${ }^{174}$ J. H. Parker, A Companion to the Fourth Edition of a Glossary of Terms used in . . . Gothic Architecture (Oxford, 1846), 28-29. T. Rickman (ed.), J. H. Parker, An Attempt to Discriminate the Styles of Architecture in England from the Conquest to the Reformation, 6th ed. (Oxford, London, 1862), 65 : the Kirkdale stone is mentioned in the second (1819) and subsequent editions, but the sixth edition is the first to contain an illustration of it.
${ }^{173}$ Tudor, op. cit. in note 4; F. W. Powell, A Short Account of S. Gregory's Minster, Kirkdale (Leeds, 1907).
${ }_{177}$ MS. Stowe 1024, op. cit in note 172.
${ }_{177}$ However see Page, op. cit. in note 125, 365 and 375 -
${ }_{178}$ Minute Book, op. cit. in note 166, 78.
${ }^{179}$ Brooke, op. cit. in note 104,189 and figure. Brooke's drawing is reproduced in Taylor and Taylor, op. cit. in note 1 , plate 504 (our figs. 3 and 4).
${ }^{180}$ Brooke, op. cit. in note 104, $188-89$.
${ }^{181}$ Young, op. cit. in note 105, 747.
${ }^{182}$ This water-colour was reproduced, redrawn, by Tudor, op. cit. in note 4, plate 3; by Powell, op. cit in note 175; and by Taylor and Taylor, op. cit. in note 1, plate 505, who reproduced Tudor's copy (our fig. 6).
${ }^{183}$ Brooke, op. cit. in note 104, 189.
${ }^{184}$ Young, op. cit. in note 105, 747.
185 J . Higgitt in Lang, op. cit. in note 3, 165.
${ }^{186}$ Minute Book, op. cit. in note 166, 78 .
${ }^{187}$ Minute Book, op. cit. in note 166 .
${ }^{188}$ Brooke, op. cit. in note 104, 190.
${ }_{199}$ Young, op. cit. in note 105, 745 .
${ }^{190}$ Brooke, op. cit. in note 104, 191.
${ }^{191}$ Pegge, op. cit. in note 170, 20.


[^0]:    NOTES
    ${ }^{1}$ H. M. and J. Taylor, Anglo-Saxon Architecture, I and II (Cambridge, 1965), 237-61, figs. 158-60, and photographs 504-6.
    ${ }^{2}$ The evidence of the sundial regarding dating is taken at face value by e.g. Taylor and Taylor, op. cit. in note 1, 359 ; and by L. Butler, 'Documentary Evidence and the Church Fabric', in P. Addyman and R. Morris (eds.), The Archaeological Study of Churches (C.B.A. Res. Rep. 13, 1976), 18. R. Morris however had doubts R. Morris, 'Churches in York and its Hinterland: Building Patterns and Stone Sources in the 1 th and 12th Centuries', in J. Blair (ed.), Minster and Parish Churches: The Local Church in Transition 950-1200 (Oxford Univ. Comm. for Archaeol. Monos., 17,1988 ), 196.
    ${ }^{3}$ J. T. Lang, York and Eastern Yorkshire. Corpus of Anglo-Saxon Stone Sculpture, III (Oxford, 1991), 'Kirkdale', ${ }^{1} 5{ }^{-1}-66$ and pls. $542^{-7}-73$.
    ${ }^{4}$ For an early discussion, see C. L. R. Tudor, A Brief Account of Kirkdale Church with Plans, Elevations, Sections, Details and Perspective Views (London, 1876), 4-7; (he realized that only 'thorough excavations' could locate any monastery physically, ibid., 7).J. Blair, Anglo-Saxon Minster Catalogue (in prep.); cf. R. Fletcher, St. Gregory's Minster, Kirkdale (York, 1990), 4 and 7; also R. Morris, Churches in the Landscape (London, 1989), 112.
    ${ }^{5}$ Taylor and Taylor, op. cit. in note 1, 372-73 and $57^{8}$.
    ${ }^{6}$ L. Watts, J. Grenville and P. Rahtz, Archaeology at Kirkdale, supplement to The Ryedale Historian 8 (Helmsley, 1996-97); P. Rahtz and L. Watts, Kirkdale Archaeology, supplement to The Ryedale Historian 19 (Helmsley, 1998-99).
    ${ }^{7}$ It was identified as glebe for example when it was sold; this was finalized in 1967 - Northallerton Record Office, MIC 1978 P/KRD ${ }_{3} /$ г .

