The Fortifications of Hull between 1321 and 1864

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As one of the most important ports on the east coast of England, Hull had a major strategic role as a supply base for English armies, particularly in their campaigns against Scotland. Consequently, its defence was a major consideration for the English Crown. The medieval and later town defences of Hull were amongst the strongest in Yorkshire. From 1321-4 until 1776 the town was surrounded on three sides by a substantial Town Ditch and bank, later fronted by a circuit of brick walls incorporating numerous gates and towers; the fourth side, opening onto the River Hull and the town’s waterfronts, was protected by a boom chain slung across the entrance to the river. This paper summarises the historical and archaeological evidence not only for the defences on the west bank of the River Hull, surrounding the Old Town, but also the better-known Henrician and Stuart military defences on the east bank of the river.

INTRODUCTION

Its strategic importance as a deepwater port on the Humber – one of England’s major east coast river systems – was one of the principal reasons behind the foundation and development of Kingston upon Hull. Its predecessor, the borough of Wyke, had already emerged as a prosperous European trading port by 1290 (see Evans 1999), but it was Edward I’s imminent need to secure a strong naval base in the north of England, in preparation for his planned war against the Scots, which prompted him to purchase Wyke in 1293, and to replace it with the “King’s town” of Hull.

The new foundation lay at the confluence of two major rivers – the Humber Estuary, and the River Hull – and, from the very outset, these were to form the respective natural boundaries to the south and east of the town. The area around the mouth of the Hull was marshy land which was possibly liable to seasonal flooding, and before the drainage of the river was improved in the early or middle years of the thirteenth century, the River Hull may have joined the Humber via a number of dendritic creeks; the original main course of the Hull appears to have lain at about 1km to the west of its modern extent (Evans 2016, fig. 1), but, in the 1250s the river appears to have changed its course dramatically, to enter the Humber by a more direct route through Sayer’s Creek. The nineteenth-century antiquary, Charles Frost, suggested that this change of course was triggered by the major floods which were documented between 1253 and 1255, and which resulted in large-scale erosion of the Humber foreshore (see Evans 2016); it is also possible that this process may have been assisted by attempts to canalize parts of the river, as similar developments are attested in other parts of the Hull Valley during the thirteenth century. Whatever the causes, this change of course led to
the development of both the modern course of the River Hull, and subsequently the growth of the Old Town in approximately their current positions (see Evans 2016).

Settlement within the area now occupied by the Old Town began in c. 1260, and thus this relocation of Wyke was essentially a Henrician creation. Its incremental development over the next century can be reconstructed both from changes in its plan and in the details recorded in its enrolled deeds (Illus. 1). An initial small core alongside the River Hull expanded significantly to the west within its first two decades, to create an area for its market place (which is attested by 1279); this was soon followed by the construction of a chapel between 1285 and 1291. By the time of Edward I’s acquisition of Wyke in 1293, the settlement had grown slightly further to the north and west; the limits are recorded in a Royal survey commissioned just before his purchase, whilst the locations of the various tenements at this date feature in a Royal rental. Edward had a vision for a significantly larger town, which would extend both to the west, and notably to the north. Accordingly, it is in those outlying areas that elements of a more regular grid pattern of streets can now be seen, and it is around the periphery of this enlarged urban core that the future defences would subsequently develop. Some earlier writers have tended to assume that Hull’s historic town plan is largely an Edwardian creation, but it would be fairer to say that he purchased the existing port and burgeoning monastic borough (in all but name) of Wyke, and enlarged it with significant royal patronage to create his new town of Kingston-upon-Hull (cf. Beresford 1988, 86n. and 511-12). For these reasons, the town’s plan is not directly comparable to any of Edward’s planned new towns in either Wales (cf. Lilley 2005, fig. 12.3; 2010, figs 10.2 – 10.4; 2014, figs. 2.5 -2.7), or England (for example, New Winchelsea – Lilley 2005, fig. 12.2; 2010, fig. 10.5; 2014, fig. 2.3; Martin and Martin 2004, figs 4.2 and 5.2. Another example is New Salisbury – Beresford 1988, fig. 31); nor is there anything directly comparable to the Edwardian bastides in Gascony (cf. Prestwich 1988, 308-11 and fig. 4; Beresford 1988, figs 28-30 and pls 3-4; Schofield and Vince 2003, fig. 2.5). By the time of the Royal rental of 1347 Hull had developed into the form which would effectively characterise it for the next four centuries.

The town was set within the low-lying wetlands of the Lower Hull Valley, and, as the nearest higher ground lay some 5 kms to the north and west, there were no other natural defences which could be utilized, other than the character of the immediately surrounding boggy ground, which as late as 1677 was described as ‘a forsaken country’ (Woodward 1985, 37). The low-lying and badly drained nature of the wetland on which the town was to develop meant that it would always be prone to flooding; this was to prove a major strength in planning its defence against attack from the landward sides, and it was to prove a decisive factor in the town being able to withstand two major sieges during the English Civil War. Most of the roads through this badly drained landscape were prone to flooding for several months of the year, and in bad weather could be washed away entirely. The only road from the north was along a narrow raised causeway (Beverley High Road), which restricted the range of options open for constructing any siege works in the adjoining areas. Hence, during the 1643 siege, the Royalist siege forts were mainly strung out along this road, and along the coastal approach to Hull from the west; the only exceptions were three forts or batteries alongside the River Hull upstream from the town (see Illus. 35).
ILLUS. 1. A suggested model for the development of the later site of Wyke and its successor, the Old Town, over the period from c. 1260 to c. 1350. The earliest settlement in this area was close to the new cut of the River Hull, which had changed its course dramatically during the 1250s. During the period c. 1275–1285 the town began to expand westwards, with the construction of a new church and market. The first detailed record of individual tenements is in 1293, when Edward I acquired the town. By the time of the Town Rental of 1347 Hull had expanded greatly in size and was surrounded by newly built defences – still largely an earth and timber circuit at this date; but, those defences were already being gradually replaced in brick – though the latter work would not be completed until the early fifteenth century.
In such a wetland landscape, the easiest way of transporting people and goods was by water, and so, whilst Hull had control of the river systems, and could continue to be supplied by sea, the defenders would always have the upper hand. Yet, this was also potentially its most vulnerable side, as Daniel Defoe astutely observed in c. 1720:

“The greatest imperfection, as to the strength of Hull in case of war, is that lying open to the sea, it is liable to a bombardment, which is only to be prevented by being masters at sea.....”

(Woodward 1985, 56).

For this reason, the approach to the town from the River Humber has been a key consideration in terms of the defence of the town for the best part of the last seven centuries; it was usually the first part of the defences to be strengthened, and often incorporated the most sophisticated or strongly built elements of the whole defensive circuit.

PREVIOUS HISTORICAL AND ARCHAEOLOGICAL STUDIES OF THE DEFENCES (ILLUS 2-4 AND 7)

Hull’s royal origins and the national strategic role which it was to play throughout the period covered by this paper have helped to ensure that a great deal of documentation for its defences and fortifications survives within the national archives. A useful overview of the historical documentation was published in the Victoria County History volume for the City (Allison 1969b), but much more of the post-medieval evidence (particularly in relation to sixteenth- and seventeenth-century fortifications on the east bank of the River Hull) has since been made widely available thanks to the work of Colvin (1982) and, more recently, Audrey Howes (Howes and Foreman 1999). In addition, research into two of the major military engineers involved with the construction of parts of the town’s defences – John Rogers and Martin Beckman – have thrown extra light on their work (see Shelby 1967; Foreman and Goodhand 1996; Howes and Foreman 1999). Some earlier historical studies are now heavily out of date, but may still contain useful plans and elevations, or other detail (e.g. Hirst 1913).

Archaeological investigations of the fortifications began with the medieval town walls in the 1960s (Illus. 2). Small-scale research excavations took place in Humber Street in 1964, and at North Walls in May 1969, and in both cases exposed substantial parts of interval towers attached to the town walls (Illus 20–21; see Bartlett 1971.). This early work demonstrated that substantial parts of the town walls had simply been razed to a set height in the later eighteenth century, and that their footings could survive in very good condition, buried beneath the upcast from the excavation of large post-medieval docks; parts of the walls had been seen to have survived to heights of eighteen or more courses of brickwork. In 1973-4 further exposures of stretches of the town walls were observed in service trenches in both Humber Street and at the top end of High Street, whilst in 1976 a large part of the medieval Myton Gate was briefly exposed during the construction of the northern carriageway of what is now Castle Street (Illus. 19; Ayers and Evans 2001.).

Plans to pedestrianize extensive areas of the City Centre in the mid-1980s offered the opportunity to carry out more structured programmes of investigation on parts of the western and north-western sections of the defences. One of these took place in Humber Dock Street and Humber Place in August 1986, and involved the cutting of four linear trial trenches, in an
ILLUS. 2. The circuit of the late medieval and early post-medieval Town Walls, superimposed on the modern street plan. The locations of the main areas where excavations have taken place are also indicated. The Inset shows in black the extent of the excavated areas at the Beverley Gate. The extent of the seventeenth-century South End Fort is shown in red; this depicts the Fort as illustrated on the 1784 Robert Thew Map of Hull.
attempt to locate part of the Hessle Gate, and confirm the line of the town wall between that gate and a postern at the end of Blanket Row. Only one of these trenches uncovered a small section of wall; the others appeared to be within the town ditch. A far more successful project took place at the western end of Whitefriargate, in the hope of locating the town’s Beverley Gate. This began in 1986, and demonstrated within the first three weeks that substantial parts of both the Beverley Gate and adjoining sections of the town wall survived in such good condition that they would be of potential display quality (Illus. 16–17). This initial work led to further campaigns of excavation in 1987–9, which would be funded by English Heritage, as the designs for the pedestrian zone were modified so as to showcase the newly exposed remains (see Evans and Sitch 1990. Full report in Evans 2015). The remains of this gate were scheduled in 2016. Whilst fieldwork was in progress around the Beverley Gate, a series of watching-briefs was implemented on other sections of the town wall further to the north and north-east, in Alfred Gelder Street and Guildhall Road in April and May 1987. These were to confirm the line of the walls around the north-western part of the circuit, and to demonstrate that parts of the town wall could survive here in places to heights of up to sixteen courses of brickwork, set on chalk footings, and with an external batter to the lower courses.

Since 1990, development-led fieldwork has recorded small stretches of the town wall on the northern part of the medieval circuit (e.g. in Little High Street in 1998: Evans and Steedman 2001, 119–21. The wall was also exposed in two trenches at Hull College in 2008; unpublished work by Birmingham Archaeology Unit). Unsuccessful evaluation on the south side of Castle Street in 1994 failed to locate the wall at the northern end of Humber Dock Street; it seems likely that the evaluation trench was sited over part of the town ditch, rather than the expected wall (Evans and Steedman 2001, 118–19). In 2008 a programme of evaluations took place on the former Bonus Electrical site on the north side of Humber Street. One of these trenches uncovered a massive set of brick foundations with an external
batter towards their base; their alignment and position suggest that these may be the rear part of the medieval Humber Gate (George, in prep.). Lastly, recent work by Humber Field Archaeology has taken place along parts of Humber Dock Street and Humber Place in 2016, during preparatory works for the 2017 City of Culture festivities, and also for the construction of a new footbridge over the A63. Trial trenching at the northern end of Humber Dock Street revealed part of the town ditch (Jobling and Rowland 2016, figs 2-7 and pls 1-3), whilst much further south, near the junction with Humber Street, the rear part of the Hessle Gate was uncovered. All that remained of the Hessle Gate were the projecting brick buttresses of its north-eastern corner, the bases of which still stood some nine courses of brickwork high, capped with an angled course of brick coping; the rest of the former gate, to the west of these two buttresses, appears to have been completely destroyed by the construction of the Humber Dock in 1809. (I am grateful to Ken Steedman and Richard George of Humber Field Archaeology for kindly sharing information and thoughts about these remains.)

The post-medieval defences on the east bank of the River Hull (Illus. 4) have been found to survive in most places in very good condition. Their national importance, together with their condition, have led to large parts of their former extent being designated as a Scheduled Monument; approximately one-third of the entire defensive circuit on the east bank is now protected in this way, with the rest being managed by the City under Supplementary Planning Guidance.

Archaeological evaluations have taken place on two of the three blockhouses forming the mid-sixteenth-century defences on the east bank of the river, and have shown that substantial parts of these survive in good condition (e.g. Howes and Foreman 1999, figs 4 and 6; Evans and Steedman 1997, pls 15 and 17 and fig. 24; Evans and Steedman 2001, pls 25-32 and figs 39-41); lengths of the contemporary curtain wall, which linked these blockhouses, have also been examined and shown to survive in excellent condition (e.g. Dennison and Tibbles 1990, pl. 3; Evans and Steedman 1997, pl. 14 and figs 22-3).

The later seventeenth-century Citadel has been the subject of a long series of excavations and evaluations during the last thirty years. The sequence of its main construction phases, together with a summary of the first decade of investigations, were published in Foreman and Goodhand 1996, whilst much more was presented in detail in Howes and Foreman 1999. Since then, further evaluations have taken place on selected parts of its southern and western sides (respectively at a number of places within Victoria Dock School off Southbridge Road, and on several sites along Tower Street).

During the last twelve years, the opportunity has arisen to investigate the former South End Fort, which was constructed in the 1620s (and later known as the South Battery). This was shown to survive in very good condition by two preliminary evaluations (George 2005 and 2007). More recently, a substantial development to the west of the previous evaluations led to more extensive excavations nearby, and although much of the known site of the Battery has been kept clear of new buildings, various deep service trenches are known to have been cut across it; this construction work is believed to have been monitored as part of a larger programme of archaeological works undertaken by AOC Archaeology; an interim account on the early evaluations appeared in January 2015 (Clarke 2015), and shows some of the then surviving cobbled surfaces (e.g. op. cit., pls. 6 and 10-12) within the evaluation trenches, but as yet no detailed report is available on either that evaluation or the more extensive later work.
ILLUS. 4. The Tudor and Stuart fortifications on the East Bank of the River Hull. This plan shows both the Henrician fortifications (Hull Castle, the North and South Blockhouses and the linking Curtain Wall), and the late Stuart Citadel. The locations of archaeological investigations are also indicated.
Two popular booklets about the town defences were published as part of the Beverley Gate project (Hull City Council 1987; Evans and Sitch 1990). The first was only ever intended as an interim statement, and its interpretation of the remains was soon shown to be incorrect. The second contains some useful illustrations, but has long been out-of-print.

Turner’s survey of medieval town defences (1970) contains some useful information about the murage grants for Hull in her appendices; but, the first national survey of the archaeological evidence for medieval fortifications was presented in Kenyon 1990. This usefully summarizes for a national readership key points from Bartlett’s 1971 paper, and also highlights the early (1986) discoveries at the Beverley Gate (Kenyon 1990, 190, 192, 194, 197 and 209). A more recent overview of the medieval town defences is presented in Creighton and Higham 2005; although there are some minor inaccuracies (such as the attribution of a c. 1538-9 plan in the Cottonian Manuscripts, to Wenceslaus Hollar: p. 135), this major overview of town defences helps to place the remains at Hull within their national setting, and does present fairly some of the excavated results (loc. cit., 162-3 and fig. 92).

THE MEDIEVAL TOWN DEFENCES (ILLUS 5-7)

Unlike Edward I’s new towns in Wales and Gascony, Kingston upon Hull must have seemed far removed from the nearest war-zone in the early 1290s; as such, no provision was made at that stage for constructing any defensive circuit around the new foundation. However, within less than three decades, the situation was to change dramatically. The English campaigns in Scotland went badly under Edward II, and Robert the Bruce inflicted a humiliating defeat upon a much larger English army at the Battle of Bannockburn in 1314. Building on this momentum, marauding Scottish armies ranged deep into Yorkshire in 1318 and 1319, burning most of Knaresborough, pillaging large swathes of rural estates, and reaching as far south as Pontefract. Hull was fortunate to escape on these occasions, but the potential threat to the town, which was then serving as the principal supply port for the English armies in the north, was obvious.

Documentary sources for the defences

As a royal borough, Hull is blessed with a substantial body of surviving documentation, both at national and at local level. That relating to the town’s medieval defences falls into two main categories:

(a) Royal or State papers now preserved in The National Archives. This type of material typically includes grants of licences to crenellate (i.e. to fortify with battlements), and royal grants of permission to raise money to pay for fortifications (so-called murage grants – from the Latin word murum, meaning a wall; the actual money was raised locally by the Borough). Whilst such information can be very informative in indicating the possible onset of campaigns of construction work, one of the problems with using such grants and licences as historical sources is that they may simply indicate what was planned or envisaged, rather than necessarily what was enacted. Another problem is that they will have been drafted by court officials, who were often far removed from the actual work, and the wording of the documents may follow a standard pattern; hence, references to the building of “stone walls” at Hull should not be taken too
literally – there was no readily available building stone in the immediate vicinity of Hull, and it is far more likely that the use of brick would have been intended from the outset.

(b) Local records relating to the Borough Corporation, now preserved in the City archives. Such material would include the detailed expenditure on the construction and maintenance of the defences (for example in the Chamberlains’ Account Rolls, or in the Bench Books), and also detailed information relating to properties which incorporated parts of the defences (e.g. in the Enrolled Deeds). These types of records offer much more detail about the form of the defences, and, where they set out the expenditure on the construction or upkeep of the fortifications, are a much more reliable guide as to what was actually built at any one time. This category of material has been underused in some earlier historical works, which may help to explain why a number of misconceptions have been published in several of the standard histories of the town (e.g. claims that the walled circuit

ILLUS. 5. One of the earliest detailed views of the town was drawn up in c. 1538-9. This shows the town viewed from the River Humber, and walled on three sides. A battery of guns is set on a D-shaped spit of land in front of the Town Walls; a boom chain is shown stretched across the mouth of the River Hull. Small hand guns project from the round tower next to the Humber Gate. This is an antiquarian copy of an original plan held in the British Museum (Cottonian Mss Augustus I, Vol. I, Folio 83). (Copyright: Hull History Centre.)
dates from the early fourteenth century, and had been completed by the middle of that century; or that a great ditch would have been dug around the town at its foundation in 1293.

On 27 July 1321 Edward II granted a “licence for the burgesses and commonality of Kyngeston on Hull to strengthen their town with ditches and a wall of stone and lime, and to crenellate the wall” (Cal. Pat Rolls 1321-4, 7). As noted above, the reference to a stone wall should not be taken literally, given the shortage of any suitable building stone in the area; there is also no corroborating evidence – either from archaeological or documentary sources – that any wall was built at this date; rather, this licence demonstrates that the King had given permission for such works to take place, should the community so wish. It is not certain whether the initiative to erect defences came solely from the King; there is at least a suggestion that the citizens of Hull had already petitioned the Crown to enclose the town, as an undated document (The National
ILLUS. 7. The schematic development of the Hull Defences between the mid fourteenth century and the end of the seventeenth century.
Archives: Special Collections 8/14/693) refers to the safety that an enclosed perimeter would provide for the town’s merchants (Allison 1969a, 21, n. 18).

The cost of the new defences was supposed to be met by a grant of murage for five years; however, the Hull Chamberlains’ Account Roll for the period 1321-4 shows that the initial royal grant was so small that the town incurred a deficit of £113 14s 0d up to 1 January 1324 (Horrox 1983, 23 and 60; the total raised by this murage grant is said to have been £292; Turner 1970, 232). This local document also helps to correct the false impression given by the royal licence to crenellate.

Funds began to be raised in 1321, and actual work on constructing a defensive circuit had certainly begun by 1322. The new defences were ranged around the two landward-facing sides of the town and along the Humber foreshore, whilst the fourth side, facing onto the River Hull, was left open as this river frontage incorporated the town’s main waterfronts and port facilities. Access into the town by road was provided by four main gates: the North Gate, the Beverley Gate, the Myton Gate, and the Hessle Gate; a fifth and smaller gate (the Humber Gate) gave access to and from the River Humber, via a small jetty. By the end of the Middle Ages, the defences also incorporated four posterns: these were small tower gates or sally-ports, which stood at the ends of Lowgate, Posterngate, Monklegate (now Blanket Row) and Little Lane. Most of these probably existed by the mid fourteenth century, but it is unclear as to whether these were planned from the very beginning, or were added at an early stage in the evolution of the defences. Documentary and cartographic records show that by at least the mid sixteenth century, if not before, these opened onto small planked bridges across the town ditch; thus, they would have facilitated pedestrian access not only for the periodic cleaning of the ditch, but also to outlying crofts and meadows beyond. (In times of danger, the planks in these bridges could simply be removed.) The Little Lane postern remained standing until the mid 1960s (Illus. 11).

The initial circuit consisted of a clay bank (a great fossatum) topped by a timber palisade, and a ditch (le mote beside the great fossatum). Substantial remains of this bank and ditch were found at North Walls in 1969 (Bartlett 1971, 11), and at the Beverley Gate in 1988-9 (Evans and Sitch 1990, 9-10); the ditch seems to have averaged about 12 m in width and perhaps 6 m in depth (Evans 2015). In recent trial trenching at the northern end of Humber Dock Street, the base of the ditch was located by coring at a depth of -2.71 m OD, which equates to 7.71 m below the current pavement level (Jobling and Rowland 2016, 14); however, it should be stressed that the pavement level at this point has been raised in recent years by over a metre and a half to create an elevated terrace, so the original depth of the ditch is more likely to have been in the order of 6 m.

The Chamberlains’ Account Roll for 1321-4 records that £77 0s 15d was raised by a tallage in 1322 ‘for enclosing the town with a ditch’, whilst a further £63 11s 10d was levied in the October of the same year ‘for enclosing the town with a palisade’ (Horrox 1983, 53). The detailed accounts show that £58 4s 10d was spent on ‘digging 205 rods of the great fossatum for the first time’ (a rod/pole/perch was an old unit of measurement, corresponding to 5½ yards; hence, 205 rods = 1127.5 yds, or c. 1031 m.), and a further £8 17s 8½d was spent on ‘raising 176 rods and 4 feet of the aforesaid fossatum for the first time’ (c. 886 m). In addition, an outer earthwork - a second fossatum – was erected, at a cost of 16s 6d, “outside the great fossatum at the Northgate towards the
west, containing 32 rods” (176 yds, or c. 161 m long. Horrox 1983, 58). A further fossatum was erected “at the Humber bank”. Much later maps show a small earthwork redoubt on the Foreland, in front of the Humber Gate; whether this 1321-4 reference alludes to an earthwork in this position, or whether it lay somewhere else along the foreshore, is uncertain. There is also a reference to yet another fossatum between the plots of Richard de la Pole and Alexander Coke (at the northern end of the High Street), and there are mentions of the repair of other fossata (ibid., 58); this would suggest that the main circuit of bank and ditch around three sides of the town was supplemented by various short lengths of extra banks in those places where the defences were thought to be vulnerable.

It is interesting to note that the North Gate is the only gate specifically mentioned by name in any of the accounts for 1321-4, and is the only one to definitely merit the addition of an external forework or outer bank; this may suggest that at this date, the approach to the North Gate was considered the most important land route, and the one most likely to be taken by a potential attacking force; alternatively, it may indicate that this approach was thought to be where the town was most vulnerable.

Further entries in these Chamberlains’ Account Rolls show that £142. 6s. 8d. was spent on timber, boards and piles for the palisade, and on the wages of the carpenters, masons and labourers, between 1321 and 1324; this was in addition to £13 19s 2d spent on the iron nails and fittings used to erect the palisade. Lastly, the sum of £40 6s. 7½d. was spent on stone, bricks and lime for the construction of ‘the North Gate and elsewhere’; however, this is the only gate which is specifically mentioned. The total for the excavation of the ditch, erection of the bank, palisade and gate(s), and for all of the materials used in their construction came to £347 18s 5½d (this does not include the £32 5s 5½d incurred as expenses of the officials). Confirmation that the bulk of the defensive circuit erected at this time was in timber, rather than in brick or stone, can be seen in the fact that the cost of the timber and carpenters constituted around 40% of the expenditure, whereas the amount spent on all masonry materials used anywhere in the circuit amounted to barely 11.5% of the total. Whilst some brick and stone was clearly used at the North Gate, even here parts of the gate may have been in timber; the probability is that any other gates, erected at this time as part of the defensive circuit, would have been built substantially of timber – just as their contemporary counterparts in nearby Beverley were, up until the early fifteenth century. Where brick and stone were used at this date would probably have been in the foundations, and, possibly also as selective strengthening or details.

Some of the materials came from Beverley – for example, the Archbishop of York gave the town six oaks, worth £2 17s 0d, for use in the construction work (Horrox 1983, 59). Many of the bricks used were probably made, at the Corporation brickyard which at this date lay just outside the defences between the western end of Monk gate and the Humber (Brooks 1939; Horrox 1983, 171, n. 24); the Chamberlains’ Account Roll shows that the existing brickyard (or ‘tilery’) was enlarged with the purchase of an additional piece of land at this date (Horrox 1983, 59) – presumably to cope with the extra work.

The construction work on this initial circuit was clearly still in progress in 1325, as the King granted a further three years of murage for completion of the work (Cal. Pat. Rolls 1324-7, 197). Unfortunately, the surviving local records, which might have given
more detail as to what was actually achieved during this period, cover the period up to 1 January 1324, after which there is a long gap. Nevertheless, as there are no further records of murage grants between 1325 and 1341, we may assume that the bulk of the construction of the timber circuit was completed by 1330. Edward III visited the town in October 1332, and was said to have been 'highly pleased with the excellent fortification of the place' (Sheahan 1866, 58).

The timber gates (Illus 13-15)

Excavations on the site of the Beverley Gate have shown that the earliest gate structure was of timber, and dated to the second quarter of the fourteenth century. It was a freestanding structure which projected forward from the line of the clay bank with its timber palisade: in this respect, it was rather similar to the form of defences found at nearby Beverley, where freestanding timber gate structures controlled access in and out of the town (one of these which was rebuilt in brick in 1409 is still standing today: the North Bar at Beverley).

The gate was set on a frame of ground sills, made from squared oak beams, into which the uprights and diagonal braces were fixed with mortise-and-tenon joints. Unfortunately, there were insufficient rings in any of the timbers to give dendrochronological dates.

THE SECOND DEFENSIVE CIRCUIT: THE ERECTION OF THE TOWN WALLS

(Illus 5, 7, and 14-17)

At some stage before 1339, the decision was taken to begin replacing the timber palisade with a brick town wall. The base of the new wall was set on a low chalk rubble foundation, cut into the front of the former clay rampart. Excavation has shown that substantial stretches of the town wall can still survive to a height of twenty courses. Its full height would have been about 4.2 m to the sentry walk, with an additional parapet 1.8 m high. As with its timber predecessor, the brick circuit enclosed three sides of the town.

In its final late medieval form, it would have included five gates, and up to thirty interval towers and posterns; the brick circuit alone (excluding the gates) is estimated to have incorporated at least 4,700,000 bricks; if the gates were included in this calculation, then the total would be over five million bricks. Many earlier historians have assumed that a brick circuit was erected in the 1320s and substantially completed by the mid-1360s; and that later murage grants must relate to subsequent repairs. However, this is to ignore the practicalities of where to obtain such large quantities of bricks, and how to erect such a massive circuit, in such a short time. The documentary records of the two successive Corporation brickyards show that up to 1356, the output of the first tilery fluctuated between 54,000 and 92,000 bricks, and that even after the opening of a new tilery in 1356, in most years its output ranged between 90,000 and 105,000 bricks; in some years it produced none at all (Brooks 1939; Allison 1969a, 57). In other words, even if the entire annual output of the Corporation brickyard had gone into the construction of the town wall, at an average of 100,000 bricks per year (which is more than it often achieved), it would have taken at least forty-seven years to complete; in fact, the incidence of murage grants suggests that construction work continued until about 1406.

From the above, it can be seen that work on the defences was envisaged during most of the decades between 1321 and 1406 (a period of eighty-five years); although, in some years
| Date of grant or expenditure | Amount | Length of grant | Source |
|-----------------------------|--------|----------------|--------|
| 1321                        | £380 16s 7d | 5 year grant | Cal. Pat. Rolls 1321-4, 7 |
| 1321-4                      |        |                | Chamberlains’ Account Rolls 1321-4; Horrox 1983, 58-9 |
| 1325                        | 3 year grant |                | Cal. Pat. Rolls 1324-7, 197 |
| 1341                        | 5 year grant |                | Cal. Pat. Rolls 1340-3, 128 |
| 1348                        | 7 year grant |                | Cal. Pat. Rolls 1348-50, 87 |
| 1353-4                      | c. 67,000 bricks |                | Chamberlains’ Account Rolls 1353-4 |
| 1355                        | 16 year grant |                | Cal. Pat. Rolls 1354-8, 155 |
| 1361-2                      | £48 9s 6½d |                | Turner 1970, 103, citing Corporation Records M.4 |
| 1376                        | 5 year grant |                | Cal. Pat. Rolls 1374-7, 274 |
| 1377                        | 5 year grant |                | Cal. Pat. Rolls 1377-81, 18, 23, 58 |
| 1382                        | 5 year grant |                | Cal. Pat. Rolls 1381-5, 175 |
| 1391                        | 5 year grant |                | Cal. Pat. Rolls 1388-92, 362 |
| 1396                        | 5 year grant |                | Cal. Pat. Rolls 1396-9, 40 |
| 1399                        | 4 year grant |                | Cal. Pat. Rolls 1399-1401, 119 |
| 1404                        | 2 year grant |                | Cal. Pat. Rolls 1401-5, 471 |
| 1423-4                      | 10, 500 new bricks | Construction of a new postern | Gillett and MacMahon 1989, 38-9, citing Chamberlains’ Accounts, 2 Henry VI |
| 1436                        |                | Tilers worked on the roof of the tower at the Mamhole (Little Lane) for 56 days | Gillett and MacMahon 1989, 38, citing Chamberlains’ Accounts, 35 Henry VI |
| 1460                        |                | Extra temporary defences added at North Gate, Myton Gate and Hessle Gate | Gillett and MacMahon 1989, 66-7 |
| 1464-5                      | £2 25 |                | Chamberlains’ Account Rolls 1464-5; Horrox 1983, 100-1 |
| 1465                        |                | Permission to build a new postern for the Duke of Suffolk | Gillett and MacMahon 1989, 39, citing Chamberlains’ Accounts, 2 Henry VI, f.144b. |
| 1468                        |                | Chain repaired at Beverley Gate | Gillett and MacMahon 1989, 38, citing Chamberlains’ Accounts, 7 Edward IV |
| 1468-9                      | £40 grant by Edward IV | Money spent by mayor on upkeep of the walls | Gillett and MacMahon 1989, 69 |
| 1498-9                      | 80 stones of lead (i.e. 10 cwt, or 0.5082 metric tons) | Repair of the roofs of the interval towers | Gillett and MacMahon 1989, 38, citing Chamberlains’ Accounts, 14 Henry VII |
where *Chamberlains’ Account Rolls* happen to survive (e.g. 1354-5 and 1394-5), we can see that no money is recorded as having been spent on them, despite a current grant of murage being in place (Allison 1969b, 413). Although some writers have suggested that the later fourteenth-century murage grants might have been for repairs or enhancement, rather than for the initial construction of a walled circuit, it is very noticeable that there are no further records of grants after 1404; as many other towns continued to receive such grants during the middle and later fifteenth century (see Turner 1970, Appendices B and C), this would tend to suggest that the grants to Hull were primarily intended to cover the main phases of construction of the town walls. This interpretation would seem to be supported by the fact that numerous repairs to the walls and towers are documented as being carried out in the mid- and later fifteenth century, without any further grants of murage.

The earliest reference to a town wall occurs in 1339, when Robert de Lichfield was given permission to build a house on part of ‘the wall of the town towards the Humber’ (Allison 1969b, 412); as the approach from the sea was one of Hull’s most obvious weaknesses, this may indicate that the south side of the defences was the first part of the circuit to be rebuilt in brick. There were no murage grants during the 1330s, so this work might have been carried out between 1325 and Edward III’s visit in 1332. The impetus to improve the defences along the Humber may have come not only from fear of attack by the Scots, but also from 1324 onwards from the French; this latter threat may have contributed to ensuring that work progressed on the new construction.

Confirmation that the construction of a town wall was still in its early stages in the 1340s may be seen in the wording of the murage grants of 1341 and 1348, which state that the grants were to enable the inhabitants ‘to complete a wall begun by them for the safety of the town and the parts adjacent on the water of Humber’ (Allison 1969b, 412), whilst the 1355 grant was ‘to finish their wall begun on the water of Humber’ (ibid.). Surviving *Chamberlains’ Account Rolls* for 1353-4 record the purchase of sand, lime and about 67,000 ‘waltighel’ (i.e. bricks), along with the payments to masons and their labourers working on the walls; this is one of the most useful surviving indications of the rate of progress on the construction of the walled circuit. This would have taken up about two-thirds of the annual output of the Corporation brickyard, and may help to explain why in 1356 a new *tilery* was under construction further north, opposite the end of Posterngate (Allison 1969a, 57).

By the mid-1370s the French under Charles V were enjoying a revival of fortunes, and there were fears of a French invasion (particularly in 1377). The lengthy grant of murage made in 1355 had run until 1371, and, after a five year pause, murage grants resumed in 1376; in the following year, not only did the King order a thorough survey of the walls and dykes to be carried out, and any repairs undertaken, but he also issued a licence for the recruitment of any workmen needed within five leagues of Hull (Allison 1969b, 413). Successive murage grants through the 1380s and 1390s show that major campaigns of construction were being carried out during the reign of Richard II; the likelihood is that, however extensive the walled circuit may have been by the end of Edward III’s reign, the walls in their final form (as shown on the c. 1538-9 views of Hull), with their many interval turrets, were completed in the later fourteenth and early fifteenth centuries.

Numerous repairs are documented as being carried out during the fifteenth century. Many of these relate to the various towers and posterns, and are detailed separately below, but some relate to the town walls. In addition to bricks, there are occasional
references to the purchase of stone from Ellerker (near North Cave); this would have been oolitic limestone (Cave Oolite), and would have been used for footings or for dressing the facings of entrances (Gillett and MacMahon 1989, 38, citing Bench Books BB3A, f.69). The Chamberlains’ Account Roll for 1464-5 shows that running repairs were needed during the Wars of the Roses, by which time some parts of the walled circuit would have been at least 125 years old. In that year £2 2s had to be spent repairing ‘the town walls against the Humber’ (i.e. the seaward-facing south wall), and cleaning out some of the ditch. Most of the work seems to have consisted of extensive re-pointing of brickwork, and repair of holes. The itemized expenditure includes eleven cartloads of lime and sand, an additional four quarters of lime (i.e. a hundredweight, or c. 50.8 kg), “two empty casks to be used as weges” (presumably wedges), two cartloads of Thaks (possibly thatch), and “a pump lying in le Dempyng”; the rest of the money was spent on the wages of the mason and his labourers, and for two dykers (i.e. men to clean out the town ditch; Horrox 1983, 100-1). No new bricks were required on this occasion; hence, this was simply routine maintenance work, rather than any strengthening of the walls. Damage to the walls was not simply caused by poor maintenance: in 1488 Robert Brygge was caught stealing stones from part of the wall (Gillett and MacMahon 1989, 39) – presumably these were loose footings.

The threat of an imminent attack during the Wars of the Roses prompted a series of emergency measures to be implemented in the autumn of 1460. An additional ditch was excavated inside the walls at Northgates, whilst every man in the town was required to assist in the excavation of additional earthworks outside the North Gate, Myton Gate and the Hessle Gate (Gillett and MacMahon 1989, 66-7). Guns were placed on every staith (Allison 1969a, 24). The circuit of walls did not completely close the small gap between the North Gate and the River Hull, so large barrels filled with stone were ordered to be placed at Bishop Lane, to block access into the town (Gillett and MacMahon 1989, 67). In November an iron chain was stretched across the entrance to the River Hull (Allison 1969a, 24; see below).

Whilst a number of archaeological investigations have exposed or recorded various sections of the medieval town wall, the opportunities to examine the accompanying town ditch have been far fewer. A substantial part of the ditch in front of the Beverley Gate was excavated in 1988-9 (Evans 2015), and a small transect at the northern end of Humber Dock Street was investigated in 2016. At the latter site, a substantial deposit of primary silts up to 3.52m thick accumulated within the base of the ditch; two radiocarbon samples (SUERC-68412 and -68413) suggest that this material was probably being laid down during the fifteenth and early sixteenth centuries (Jobling and Rowland 2016, 32), whilst pollen contained within these silts confirms that the adjacent area beyond the town defences (the town records show that this section was bordered by Butcroft) was used for agriculture, with evidence for both pasture and arable cultivation. Driven into the base of these ditch silts were two substantial oak posts (ibid., pl. 2 and figs 3 and 6). These appear to follow the same alignment as the ditch, and to be set somewhere within its middle section; they may have supported a small foot-bridge.

The earliest known depiction of the town defences appears on the fourteenth-century Gough Map, but this is schematic. Far more informative are two views of the town defences dating to c. 1538-9 (de Boer 1973, pls 10-11. One of these is reproduced here as Illus. 5); these
were probably commissioned as part of a survey of the defences undertaken for Henry VIII by the engineer John Rogers, following the capitulation of the town to the Pilgrimage of Grace in 1536-7 (Neave 1996a). These clearly show the form of the walls, and their various towers and turrets; whilst flights of steps can be seen at the rear of the north and west walls, giving access to the wall-walks. Arrow-slits and gun-loops can be seen in the walls and in individual towers. Such embrasures are also mentioned in the town records as 'holes'; hence, rents for four holes in the town wall, and the decay of a fifth hole, are mentioned in the 1464-5 Chamberlains’ Account Rolls (Horrox 1983, 108 and 112), and a 1527-8 Town Rental records that four 'holes in the wall' by the Foreland were in decay (i.e. were unoccupied, and were earning no rent; ibid. 123). Nowhere is any further elaboration offered as to the exact meaning of what constituted a hole, but the context of these rentals suggests that these were rooms within the towers, with embrasures set into the wall faces – and that these rooms were rented out by the Borough Corporation, either for storage or as accommodation.

Also visible on these two c. 1538-9 views of Hull is a D-shaped timber-revetted structure to the south-east of the Humber Gate (see Illus. 5), in the position later to be occupied by the South End Fort (and its successor, the South Battery). Four cannon are depicted mounted on flat beds with low earthworks between them; immediately to the west, set into the town wall, is a round tower which contains artillery embrasures. Both are useful reminders of the importance that artillery had assumed in siege warfare by this date.

A number of excavation trenches have been cut across various parts of the town wall during the last fifty years, and these show that its dimensions and form vary in different sections of the circuit; this is consistent with what can be deduced from the historical evidence – namely, that it was built in a number of campaigns spread out over a lengthy period, and that different gangs of workmen would have been employed on its construction. By far the best understood section of the town wall is that adjoining the Beverley Gate. It is set on a shallow foundation of chalk rubble, cut into the front of the rampart. The bottom 1.2 m of the brick wall rises in a gentle slope, or ‘batter’, with each fresh course of brickwork set slightly back from that beneath. Above this height, the wall rises vertically.

All of the bricks used in this construction were handmade, and for this reason their sizes vary slightly, but the typical range in the section adjoining the Beverley Gate is from 270 x 135 x 50 mm to 275 x 140 x 55 mm. They have been bonded with a lime-based mortar, and have been laid in what is known as ‘English Bond’: rows of bricks laid with their end to the wall face (‘headers’), which alternate with rows lying with their sides to the face of the wall (‘stretchers’). Occasionally, small half-bricks have been used to block up scaffolding holes in the wall.

The gates and posterns (Illus. 8-12)
The four main gates opening to landward were the North Gate (at the end of High Street. Illus. 8), the Beverley Gate (at the end of Aldgate or Whitefriargate. Illus. 9), Myton Gate (at the end of Lisle Street, or Mytongate), and Hessle Gate (at the end of Humber Street. Illus. 10). At the southern end of the town lay the Humber Gate (Illus. 5), which gave access to the Foreland and the River Humber. In addition to these, there were also a number of smaller gates or posterns. The most northerly of these was Low Gate (at the end of Marketgate, or the modern Lowgate). On the west side of the town, there were posterns at the end of Posterngate, and also of Blackfriargate (the modern Blanket Row). On the south side of the
illus. 8. The North Gate in the mid to late eighteenth century. This was demolished in 1774–6, to make way for the construction of the Queen’s Dock. (Copyright: Hull City Museums and Art Gallery.)

illus. 9. The Beverley Gate in c. 1770. From an engraving by Benjamin Gale. (Copyright: Hull City Museums and Art Gallery.)
town, a small arched gateway stood at the end of Little Lane until the mid-1960s (Aldridge 1989, 63; Tuxworth 1991, 10. See Illus. 11). In addition, the various Borough Records contain references to new posterns being added during the course of the fifteenth century. Hence, in 1423-4, 10,500 new bricks were needed to construct a postern (Gillett and MacMahon 1989, 38-9), and in 1465 the Duke of Suffolk asked for a new postern to be built to give him a direct personal access to the Charterhouse; the Borough decided to allow him this request, provided he supplied the materials (ibid., 39. Strictly speaking, this represented the re-opening of the blocked Lowgate postern, rather than the creation of an entirely new one; Allison 1969a, 26; 1969b, 414).

As noted above, the material used for constructing the earliest forms of all these gates is likely to have been timber. This was certainly the case at the Beverley Gate (Illus. 13); however, subsequently, its timber base was encased in a chalk rubble raft, which was faced with a low limestone wall for the bottom four courses (Illus. 14-16). Towards the end of the fourteenth century, the entire gate was rebuilt in brick.

As with the earlier timber structure on this site, the new gate took the form of a simple rectangular tower, enclosing a tunnel passageway. That this was a complete rebuilding is shown by the fact that the sawn-off stumps of the earlier timber uprights were sealed beneath the newly laid brickwork. This new gate was two storeys high, and
was topped by a steeple. The front of the central passageway was flanked on either side by projecting angle buttresses. This passageway was c. 7.6 m long, and with an internal width of at least 3.8 m. This is very similar in size and general layout to the surviving North Bar at Beverley (which was built in 1409-10 at a cost of £96 0s 11½d. See Illus. 18); it is likely that the internal passageway would have been similarly vaulted. Incorporated within the construction levels of the new passageway at the Beverley Gate was a complete Humberware jug.

As with most of the gates, the Beverley Gate projected forwards from the town wall – giving the impression of a barbican projecting into the area of the moat, or town ditch. The ditches were crossed by drawbridges. In 1468, a hundredweight of iron was used to replace one of the bridge chains at the Beverley Gate (Gillett and MacMahon 1989, 38). The roofs of the various gates and larger towers were variously covered with tile or lead, and could require substantial maintenance. Hence, the repair of the roof of a
ILLUS 13. Plan of the excavated Phase Ia timber structures at the Beverley Gate. (Early to mid-fourteenth century)
ILLUS. 14. Plan of the excavated Phase Ib and Phase II structural remains at the Beverley Gate, and the eastern edge of the adjacent Town Ditch. (Later fourteenth to later sixteenth centuries)
illus. 15. The Beverley Gate. Timber ground sills and diagonal braces of the early fourteenth-century timber gate encased in the stone footings of a later fourteenth-century rebuilding in brick. (Photo: Humberside Archaeological Unit.)

illus. 16. The Beverley Gate. Part of the later fourteenth-century limestone wall footings of the north side of the Beverley Gate; the superstructure of the Gate was built of brick. (Photo: Humberside Archaeological Unit.)

illus. 17. Part of the medieval Town Wall extending northwards from the Beverley Gate; one of the projecting buttresses of a seventeenth-century guard-chamber at the Gate can just be glimpsed in the distance. The lower courses of the Town Wall were battered outwards, and were set on a chalk footing. (Photo: Humberside Archaeological Unit.)

illus. 18. The North Bar in Beverley, built in 1409. This was of similar plan and dimensions to Hull’s Beverley Gate, and gives a good idea of the former height and appearance of the latter. (Photo: Humberside Archaeological Unit.)
large tower over the Mamhole (at Little Lane) took tilers fifty-six days in 1437 (ibid.), whilst 10 cwt of lead was needed in 1498–9 to repair the roofs of the various interval towers (ibid.).

Part of the town’s Myton Gate was briefly exposed in July 1976 (Illus. 19), and was seen to comprise an arched passageway, approximately 4 m wide internally, which was flanked on either side by brick walls, both of which had forward-projecting buttresses; the medieval town wall was butted onto the rear of the gate. The remains of a counterweight pit for a drawbridge lay immediately in front of the passage; but, the bricks used to construct this were thought to be of seventeenth-century date, suggesting that this was a post-medieval feature (Ayers and Evans 2001, 45–6, and fig. 1 and pl. 1).

In 2008 the rear part of the Humber Gate appeared to have been exposed; its basal courses were battered and faced in places with ashlar. In 2016 the rear of the Hessle Gate was revealed, and appeared to be broadly similar in construction.

The turrets and towers (Illus 5-7, 20-21 and 32)

By the end of the Middle Ages a large number of interval towers and turrets formed an integral part of the walled circuit. Their precise number is unclear, but by the eighteenth century there would seem to have been between twenty-five and thirty-one individual towers and/or posterns; not all of these may have been medieval in origin, as the 1964 Humber Street excavations suggested that at least one of these was added in the sixteenth century. The antiquary, John Leland, lists twenty-five in c. 1540 – but he does qualify his description with the phrase “as I remember” (Woodward 1985, 10). The c. 1538-9 map shows thirty, whilst the c. 1638 Hollar plan appears to show either

**ILLUS. 19.** A machine uncovering the remains of the Myton Gate in July 1976 during the construction of the A63 Castle Street dual carriageway; viewed from the west. The footings of a counterweight pit, in front of the Gate, can be seen beginning to emerge. (Photo: Humberside Archaeological Unit.)
twenty-seven or twenty-eight. A 1776 Map, sent by the Office of Ordnance to the Dock Company, shows thirty-one towers and/or posterns, viz.:

- Seven towers between the Humber Gate and the Hessle Gate
- Four towers between the Hessle Gate and the Myton Gate
- Five towers between the Myton Gate and the Beverley Gate
- Fifteen towers between Beverley Gate and the North Gate

(The above does not include the freestanding Chain Tower (or Anchor Tower) for the boom chain across the River Hull.)

The sixteenth- and seventeenth-century depictions of the defences show that some of these towers were rectangular (Illus. 20–21), others were round or D-shaped – all of which suggests that these were not contemporary in conception, and had probably been added at different times (quite possibly as secondary features); the proportions suggested by these early maps would imply that these towers would have been about 9 m high, compared with an overall height for the town walls of about 6 m (including the parapet and horizontal battlements).

Whilst many of these may have been constructed by 1406, when the last murage grant expired, the Chamberlains’ Account Rolls show that at least two more were added during the course of the fifteenth century. Some had their own names (e.g. Harry Ogle’s Tower), and several appear to have been rented out as storage space in times of peace (e.g. Horrox 1983, 106. 112, 123, and 178 n. 97). The c. 1538–9 depictions of the town suggest that at least one of these towers had had gun-ports added to enable the use of artillery weapons.

One of the interval towers along North Walls was excavated in 1969, whilst another was partially uncovered during excavations at Humber Street in 1964 (Bartlett 1971; see photograph in Evans and Sitch 1990, 13). Both were rectilinear in plan (Illus. 20–21). In Humber Street, most of the south wall and the southern end of its west wall were exposed; the former was at least 16 ft (c. 4.87 m) long, 3 ft (c. 0.91 m) thick, and survived to a height of twenty-two courses (Bartlett 1971, 3–5). At North Walls, the interval
tower measured 23 ft 7 inches by 15 ft in plan (c. 7.19 m x 4.57 m). Its walls were of brick, laid on top of a number of courses of large chalk blocks; its rear wall still stood to a height of thirty-six courses, whilst its front wall stood twenty-five courses high, with the bottom 5 ft (c. 1.52 m) or so battered or raked outwards, to give greater stability and strength (Bartlett 1971, 6–8). Material deposited within the interiors of both towers was clearly post-medieval in date – reflecting their continued use into at least the seventeenth century. Bartlett thought that the North Walls tower was medieval in origin, but that the Humber Street structure represented a sixteenth-century addition to the circuit.

The entrance to the River Hull would have been a substantial weak point in the circuit, as this gave access to the unprotected haven and the vulnerable wharves. On its western side stood a tall tower known variously as the Toll Tower, Brogger’s Tower, Broghouse, or Foreland Tower. This is first mentioned in 1369, when it was described as ‘le Towre apud the Foreland’ (Horrox 1983, 172, n. 36). It stood at the Horsetaith, and was occupied by the Brogger (or water bailiff), whose job it was to collect tolls on all water-borne goods entering the port. Just to the north, and joined to it by a short length of wall, was a second smaller tower called The Ankerhouse. In order to prevent any attacking force from entering these waters in times of war, a boom chain could be slung across the river mouth; the western end of this chain was anchored to this tower – hence, its name. The Anchor House or Chain House remained standing until 1839, when it was finally demolished; a view of this building was published by Greenwood (1835, 153). The
town appears to have purchased land on the opposite bank of the river in about 1380, on which to erect a tower to secure the other end of the boom chain (Allison 1969b, 413 and n. 20); this had been built by c. 1538-9, as one of the Cottonian maps shows a small, rounded or D-shaped tower projecting into the River Hull, a little further upstream than the Anchor House on the opposite bank (ibid., 414, n. 29).

**MID-SIXTEENTH-CENTURY CHANGES AND THE CONSTRUCTION OF THE HENRICIAN DEFENCES TO THE EAST OF THE TOWN (ILLUS 6–7 AND 22–26)**

Henry VIII embarked upon a series of expensive and lengthy campaigns against the French quite early in his reign. These did not go well, and his subsequent rift with Rome meant that England became increasingly isolated; by the 1530s there was a real fear of possible naval attacks by the alliance between France, Spain and the Holy Roman Empire (Crossley 1990, 107). Consequently, Henry decided to strengthen the defences around key strategic ports; this was part of a larger programme of building coastal defences, which began on the south and east coasts of England between 1538 and 1540, and resulted in the construction of such major structures as Deal, Walmer, Camber, Pendennis and St Mawes Castles. Having dealt with the most pressing threats to those parts of the coast nearest to France, Henry turned his attention northwards to Hull, which had played such a prominent part in *The Pilgrimage of Grace* in 1536–7; both Hull and York had given into the rebels, and admitted them into their towns without putting up much of a fight (Neave 1996a). Though Henry had subsequently pardoned both towns, he clearly expected his northern strongholds to be prepared to offer much stiffer resistance to any potential attacking forces.

ILLUS. 22. Ground plans of Hull Castle and the North Blockhouse, erected on the east bank of the River Hull between 1541 and 1543 (the Henrician defences).
In preparation for the strengthening of the existing defences and the construction of additional defensive works, a detailed survey appears to have been commissioned of the town and its immediate surroundings. This resulted in the production of the first two detailed plans of Hull in c. 1538–9 (now part of the Cottonian Manuscripts: see de Boer 1973, pls 10-11). One of these is reproduced here as Illus. 5. In 1541 Henry personally visited Hull twice and inspected the defences. In October of that year he ordered various improvements to be made to the existing circuit of defences, but also addressed the question of the undefended east side of the town and its approach from the river. The surveyor for the new works was to be John Rogers, who had been the King’s master mason at Calais, and who had been responsible for such advanced military works as the castle at Guines in the Pas de Calais (Shelby 1967; 1969). To complete the strengthening of the town’s defences, Henry also ordered a new gun battery to be established further downstream on the Humber at Paull.

A new bulwark was added at ‘the Watergate’ (probably the Humber Gate, rather than the Little Lane postern), and ordnance (i.e. artillery – possibly demi-cannon, serpentines or falconets) was to be placed here. The chain tower on the east bank of the Hull was to be ‘enlarged to bear the chain and to beat the haven’. The North Gate and the corner tower at the north-west angle of the town were to be enlarged and strengthened. A barbican was to be added at the Beverley Gate, and the town ditch was to be scoured. The old clay ramparts were to be ‘made up with soil’, and all the posterns were to be strengthened. Lastly, all the sluices were to be renovated, so that if necessary the order could be given to ‘drown about the town’ (Allison 1969b, 414).

The new defences to be built on the east side of the River Hull were to consist of three new blockhouses to be connected by an 830 m long and 3 m thick curtain wall, topped with battlements (Illus. 7. These structures are also shown clearly on the c. 1638 Hollar Plan of Hull: see Illus. 6). The central blockhouse, known as Hull Castle (Illus. 22), commanded the port and waterfronts, whilst the North and South Blockhouses

ILLUS. 23. Part of the mid sixteenth-century Curtain Wall, near Hull Castle. (Photo: Humberside Archaeological Unit.)
respectively protected the bridge across the River Hull, and the entrance to the Haven (their ground-plans are also shown on Illus. 22).

In common with many of Henry’s other fortifications, the new north and south blockhouses were intended to present a low silhouette to attacking artillery, had curved flanks and parapets to deflect cannon-balls, and were designed to allow batteries of artillery to be placed at varying heights. However, what is markedly different from the rounded style of earlier Henrician defences (e.g. Deal, Camber and Walmer Castles) is the pointed segmental bastions of the central blockhouse, Hull Castle (which echoes some of John Rogers’ ideas from Guines Castle): this marks a development towards the more sophisticated Italianate angle bastions, which would characterize later Henrician fortifications such as Sandown, Isle of Wight, or Yarmouth (Crossley 1990, 109).

The new works were undertaken in 1541-3 and were to cost £23,144; over 500 workmen, twenty masons and sixty bricklayers are recorded as having been employed on this project in February 1542 alone (Allison 1969b, 414). The new
Blockhouses and the adjoining curtain walls were built mainly of brick, and still survive in reasonably good condition (see Illus 23-26), to a height of up to 2.5 m, buried beneath nineteenth-century and later overburden; a brick kiln was erected near the Castle, to manufacture at least some of the bricks needed for the new fortifications (ibid.). A thin facing of dressed stone was added to the walls facing towards the river, although this has often been removed by later robbing; the stone had been reused from the collapsed tower of St Mary’s church in Hull, and also from the recently suppressed Cistercian monastery of Meaux Abbey (where twenty masons were busily dismantling the stonework).

The two end blockhouses were effectively gun platforms, comprising central square blocks surrounding a courtyard, to the exterior of which were added three semi-circular bastions, to produce a trefoil plan. They were two-storied structures, topped with crenellations; the upper platforms also mounted guns. The central blockhouse (Hull Castle) had a larger, more rectangular three-storey inner keep, to the east and west of which were added bastions of segmental plan; its outer walls were up to 6 m thick (see Illus. 26), whilst those of the inner keep were about 2.6 m thick. Platforms above the inner courtyard also carried guns.

Excavation at the South Blockhouse revealed that the external walls had a gentle batter, and were built of brick laid in English Bond – surviving to a height of at least 1 m, and a width of at least 4.2 m (Illus. 24). Two sizes of brick were used in their construction - 200-220 x 100-105 x 50 mm, and 245-260 x 130-150 x 50 mm – and they were bonded with a hard, pale, creamy lime mortar (Foreman 1997, 9). A series of gun-ports, with splayed embrasures faced with either brickwork or limestone ashlar quoins, were built into the thicknesses of these walls, whilst other internal features included a recess for a possible lamp-locker. A rectangular gun-chamber, 2.40 x 2.14 m in extent, was built into the thickness of a bastion wall.
Internal floor deposits also survived. Sealed beneath later seventeenth-century deposits was the barrel and breech-chamber of a redundant sixteenth-century gun: this was a port-piece (Illus. 25: Evans and Steedman 2001, pls 28–32 and figs 40–1) – one of three such weapons to have been recorded at the South Blockhouse in December 1547 (Kenyon 1982, 305-6).

| Type of gun   | Calibre in inches | Wt. of piece in pounds | Diameter of shot in inches | Weight of shot in pounds | Weight of powder in pounds |
|--------------|-------------------|------------------------|---------------------------|--------------------------|---------------------------|
| Basilisk     | 8¼                | 9000                   | 8¼                        | 60                       | 60                        |
| Cannon       | 8                 | 7000                   | 7¼                        | 60                       | 44                        |
| Port-piece   | A breech-loading gun, firing stone or “murthering” shot, with a 5 inch calibre. Early examples are of iron with two chambers. The average weight of the iron barrels was 6½ cwt, whilst the chambers averaged 300 lbs. |
| Demi-culverin| 4½                | 3000                   | 4                         | 9                        | 9                         |
| Falcon       | 2¼                | 800                    | 2¼                        | 2½                       | 2½                        |
| Falconet     | 2                 | 500                    | 1½                        | 2                        | 2                         |
| Base*        | 1¼                | 201                    | 1                         | ½                        | ½                         |
| Sling        | In the seventeenth century this was “a swivel gun with a separate chamber, usually of wrought iron, firing some form of small shot”. Earlier examples could be either breech- or muzzle-loading. |
| Portingale (or Portuguese) base | This was a small brass weapon akin to a sling, and was also a swivel breech-loader. |
| Fowler       | “A type of breech-loading gun, used for firing small shot or stones”. |

* These particular statistics are taken from a 1628 work called The Gunner by Robert Norton, but by this date a base may have been more of a mortar-piece, and were heavier than their predecessors. The barrels of mid sixteenth-century iron examples typically weighed 168 lbs, whilst their chambers averaged 8 lbs. No details survive of the weights etc. of double bases.

Numerous small excavations have taken place around Hull Castle since 1970 (e.g. Cook 1971; Eddy 1976; Tomlinson 1988; Foreman 1996; Fraser 2002). The earlier work concentrated on locating parts of the south and east outer walls, inner keep, and eastern bastion; whilst some of the outer walls were found to have been partially robbed, the south wall survived in better condition than many of the other walls, and the internal floor surfaces were found to be well-preserved. In June 1996 a large portion of the south wall of the Castle was examined (Illus. 26), exposing two hand-gun ports, a paved glacis, and an entrance, set at the mid-point of the wall, leading to a gallery running behind (see Evans and Steedman 1997, pl. 17 and figs 23–4; Foreman 1996). The outer wall was found to be 2.2 m thick, and comprised a core of mortared brick and stone rubble, faced on either side with coursed brickwork; the external face of the
The outer wall was laid in English Bond; but Flemish Bond was used on parts of the inner face. The size of the bricks used in the south wall was 210 x 110 x 50 mm (Foreman 1996, 27), but, earlier excavations on other parts of the Castle reported the use of bricks of 210 x 100 x 50 mm, and the eastern bastion was faced with bricks measuring 220 x 100 x 55 mm (Fraser 2002, 13 and 20). Limestone facing was used on the splayed embrasure of one of the hand-gun ports. A gently sloping glacis, paved with half-bricks or fired clay tiles, lay between the outer wall and an external moat. Inside the Castle, compacted mortar floor surfaces may originally have served as the bedding for paved floors, similar to those used for the external glacis; however, if this were indeed the case, the internal paving had subsequently been removed.

The Henrician curtain wall survives best immediately to the north and south of Hull Castle, along Tower Street (for example, see Illus. 23); further north, parts of it have been removed or truncated by the construction of nineteenth-century docks and mills, whilst in the area to the south, some sections were slighted to enable the construction of the later seventeenth-century Citadel (see below). Excavated sections of the wall have shown that it was variously between 3.1 m and 3.2 m wide, and constructed with a mixture of bricks and half-bricks, laid in English Bond; it has been found to survive up to a height of twelve courses of brickwork (c. 1.75 m), and in at least one place the lower courses of its east face have been composed of limestone ashlar blocks (Dennison and Tibbles 1990, pl. 3). These dimensions accord reasonably well with seventeenth-century surveys of the defences which describe this wall as being c. 3.96 m high from foundation to parapet, and measuring c. 3.5 m thick at the top and c. 4.26 m at the base (the measurements have been transcribed into their metric equivalents; Foreman and Goodhand 1996, 177). In the section immediately to the north of Hull Castle, the full bricks measured 265-270 x 125-130 x 50-60 mm; however, to the south, a section examined in 1996 was constructed with identical bricks to those used in the south wall of the Castle – 210 x 110 x 50 mm in size; whilst those in St Peter Street had two sizes present – 235 x 110 x 45, and 240 x 120 x 50 mm – again laid in English Bond (Dennison and Tibbles 1990, 10). This variation in size suggests that the Henrician defences were built in sections, and that different batches of bricks were employed on the various sections – perhaps with different teams of bricklayers; the range of sizes and the use of numerous half-bricks in the wall cores may also point to the reuse of brick, robbed from earlier structures (in the same way as the documented reuse of stone masonry in these defences). Where fully exposed, the lower parts of the Curtain Wall have been shown to have had two offsets on its western side, with coursed masonry at its base (Dennison and Tibbles 1990). In places, a ditch ran parallel to it, about 4 m to its west (Evans and Steedman 1997, pl. 14 and fig. 22; Foreman and Goodhand 1996, 176-7 and fig. 16).

Cartographic evidence for any moats associated with the Henrician defences is conflicting. Town plans by Speed (1610) and Hollar (c. 1638: see Illus. 6) depict a moat to the east of the curtain wall and the blockhouses, and this is also clearly shown in blue on a coloured plan of the town (Illus. 42), drawn probably in January 1639 and signed by the Master of the King’s Armouries (The National Archives, Calendar of State Papers Domestic, Charles I, 1638-9, p. 411). Archaeological evidence for this was observed at Hull Castle in November 1970 (Cook 1971, 5), although subsequent attempts to
confirm its presence elsewhere to the east of these defences have met with more equivocal results (e.g. at Clarence Mill: Tibbles 2008, fig. 2 and pl. 8). Some other plans, e.g. Joseph Osborne’s 1660 Plan of Hull (reproduced in Evans and Sitch 1990, 21) appear to show a substantial moat to the west of the Curtain Wall and blockhouses – i.e. between these defences and the River Hull.

We are fortunate in having a comprehensive inventory of the ordnance and weapons that were present in Henry VIII’s fortifications in England and France during the winter of 1547–8 (see Kenyon 1982); whilst not completely exhaustive (ibid., 167), it does provide a useful guide to the weapons and equipment then in use in the great majority of the forts – though it does not include any weapons kept within the circuits of town walls throughout England. From this we can see that twenty-eight different types of guns were in use throughout the kingdom. Almost all of the fortifications boasted numerous small-calibre pieces, such as slings, bases and fowlers, but the forts at Hull (Table 2) were also equipped with heavier guns, such as a basilisk, cannons, demi-culverins, port-pieces, falcons and falconets (ibid., 167–8 and 205–6). In addition, the Castle and the two Blockhouses contained numerous bows, arrows, and bills, as well as the stores of gunpowder and the various shots to arm all of these artillery-pieces.

**LATER SIXTEENTH- AND EARLY TO MID-SEVENTEENTH-CENTURY ADDITIONS**

Edward VI had granted the fortifications to the town in 1552, but the cost of maintaining them had become so great that by 1576 the Corporation had to petition the Privy Council for relief; major repairs were needed at the South Blockhouse (Howes and Foreman 1999, 17). A survey carried out in that year found that whilst the blockhouse outer walls were in good repair, the gun platforms were badly decayed, the timberwork was collapsing, and the moat ditch had become infilled; a new jetty was also needed at the South Blockhouse to protect the latter from damage by tidal erosion (Allison 1969b, 415). Between 1576 and 1583, £624 was spent on repairs; a later lawsuit includes the claim that the town had spent £2893 in maintenance between 1552 and 1587 (this figure was then revised upwards as the claim dragged on for another fifty years. Ibid.). One of the responses from the Crown was to give sixty trees from the Duchy of Lancaster’s woods to Hull in 1581, to help with these repairs.

*Temporary works in the 1580s*

Fears of a Spanish invasion in the mid-1580s led to some hasty strengthening of the Hull defences. The moat on the east bank of the Hull was scoured out, and a mud wall was ordered to be erected between the North Gate and the River Hull in 1585. In February 1588 the planks of the small bridges leading to the posterns in the town walls were ordered to be removed. A plan of c. 1588 by W. Browne shows that a number of additional earthworks were proposed around the Henrician defences; but, as none of these is shown on any later plans of the town, it is quite likely that these were never built (Howes and Foreman 1999, 18).
illus. 27. The South End Fort, built in 1627: overall view of the southern walls of the site, looking east. (Photo: Humber Field Archaeology.)

illus. 28. Inner wall of the South End Fort, with a cobbled courtyard to its left; view looking eastwards towards a gun embrasure. (Photo: Humber Field Archaeology.)

illus. 29. Detail of outer wall and gun embrasure of the South End Fort; view looking west. (Photo: Humber Field Archaeology.)

illus. 30. The central part of the South End Fort, showing walls and cobbled floor surfaces; view looking east. (Photo: Humber Field Archaeology.)
Excavations at the Beverley Gate uncovered three of the principal timber uprights for the eastern end of a bridge across the town ditch. Dendrochronological assay indicates that these oak timbers were from trees felled after AD 1580. Whilst it is possible that the new bridge was constructed with timbers from the Crown gift of 1581 (mentioned above), it is more likely that those particular timbers would have been used mainly for the urgent repairs needed at the South Blockhouse. Perhaps a more plausible scenario is that the new bridge at the Beverley Gate would have been constructed in the mid- or later 1580s. This was probably a drawbridge, rather than a fixed bridge; a rectilinear brick-lined structure located close by may represent a pit for the counterweights of such a drawbridge, and this would also fit with documentary references to drawbridges at the Beverley Gate, which occasionally occur in the Borough Records until the later seventeenth century.

The South End Fort (later, the South Battery) (Illus 27-30)

Following the accession of Charles I in 1625, diplomatic relations with Spain deteriorated so rapidly that there was a very real fear of a Spanish invasion in the later 1620s: the Privy Council gave orders in 1626 that Hull should be fortified against the Spanish, and it was reported in 1627 that ‘several fortifications and bulwarks’ had been built. One of these new fortifications was the South End Fort (a new fort on the Foreland at the southern tip of the Old Town), whilst a battery of guns also seems to have been added near the south blockhouse on the east side of the River Hull. Further improvements were made to the defences in 1629, whilst in the following year the gap between the North Gate and the River Hull was ordered to be closed with the construction of an earth wall, topped by a fence, and faced with brick.

Excavations at the South End Fort (later known as the South Battery) have shown that the remains of the 1627 D-shaped fort survive in excellent condition underneath the concrete surround for a nineteenth-century dock (George 2005; 2007. See Illus 27–30). The brick-faced ramparts survive up to a height of about 1.1 m, and are some 4.5 – 5 m thick; at least two phases of walling were present. In 1634 this fort is recorded as mounting eleven guns of various calibres. A number of gun-emplacements were identified in the excavations (e.g. Illus. 29); internal buildings and cobbled courtyards were also found to be well-preserved (Illus 28 and 30). The whole structure was protected from tidal erosion by a massive brick river wall, which was 1.9 m thick, and survived to a height of at least 3 m (George 2007, 100, and pls 1-2).

This Fort (later the South Battery) was contained within a brick-faced earth rampart, with several angles and shallow re-entrants. The ramparts were between 4.5 and 5 m wide, and had soil-filled cores, revetted at front and back by brick walls set on chalk-rubble foundations. These ramparts were sub-divided into segments by angled returns of the inner wall, alternating with a series of vaulted brick gun embrasures; the latter were cut into the ramparts, and opened back into an internal cobbled courtyard (George 2005, 119). The floors of the gun embrasures were also cobbled (ibid., 120). So far, four of the original seven gun embrasures have been located, and have strengthened brick-linings – one having an external brick wall 1.25 m thick, which is twice the width of the brick outer skin of the rampart.
ILLUS. 31. Plan of the excavated Phase III and Phase IV structural remains at the Beverley Gate. (Seventeenth and eighteenth centuries)
ILLUS. 32. The battered courses of brickwork in the external western face of the seventeenth-century northern Guard Chamber at the Beverley Gate, with its flanking corner buttress, viewed from the west. Part of the adjoining medieval Town Wall can be seen to the left of this buttress, on the far left of the photograph. An early twentieth-century sewer trench has removed much of the south-western corner of the Guard Chamber. (Photo: Humberside Archaeological Unit.)

ILLUS. 33. Captain Phillips’ Map of Hull 1725. This shows the layout of the Civil War outer circuit of ditch, and the polygonal bastions erected in front of each Gate. This is one of the fullest records of their extent, before work began on dismantling the fortifications in the late eighteenth century. (Copyright: Hull History Centre.)
The bricks used in the outer wall and the internal walls of the South End Fort consistently measured 240–245 x 115–120 x 50–55 mm (George 2005, 93), which is similar to some of those observed at the Beverley Gate, where the guard-chambers are thought to have been added at around this date; in contrast, the bricks used in the linings of the gun embrasures measure 233 x 110 x 55 mm, and are thought to have been reused sixteenth-century bricks.

Further extents of its internal surfaces were exposed in evaluations and excavations in 2015, but the results of this work have not yet been published.

Changes made in the years leading up to the Civil War (Illus 31–34)

In January 1638 the town’s defences were examined by the Master of the King’s Armouries, and various instructions for their improvement were given to the Mayor, as part of the preparations being made for the planned campaigns against Scotland as part of the Bishops’ Wars. Consequently, the town ditch was cleaned out, and new drawbridges to three of the main gates were added (Allison 1969b, 415; Howes and Foreman 1999, 25). The King also lent the town six demi-culverins.

In 1639 the decision was taken to add an outer ditch around the town, beginning at the Hessle Gate and working round to the North Gate; new drawbridges were built
over this ditch in front of the Beverley Gate and North Gate. Inside the new outer circuit, in the space between the two ditches, half-moon batteries were erected in front of each of the main gates, and were linked by breastworks to form a continuous outer perimeter. Although this was planned for 1639, excavation of the new circuit of ditch did not actually begin until 1640, and was still underway in the September of that year (Howes and Foreman 1999, 25-6).

In c. 1638, but before the new outer circuit of defences had been constructed in 1640, Wenceslaus Hollar produced a plan of the town. By this date, refurbishment is evident at some of the gates – e.g. new guard-houses had been added to the rear of the Beverley Gate: these were almost certainly intended to cope with the additional demands imposed by the installation of artillery (a survey of 1660 shows that a demi-culverin and three sakers were kept at this gate: see Table 3). Excavations at the Beverley Gate have shown that these new guard-houses had brick-vaulted ground floors, with a stairway (next to the passage) which gave access to the upper floors (Illus 31-32). Tall side chimneys depicted on the c. 1638 plan (Illus. 6) attest the presence of fireplaces on the upper floors.

Hull was to play a major role in the early stages of the English Civil Wars, as it housed one of the largest arsenals (outside of the Tower of London) in the kingdom (see Ryder 1989). Indeed, the refusal of the town to allow the King entry into Hull in April 1642, followed by the first abortive siege of the town in July 1642 (see below), were the events which led inevitably to the onset of open warfare.

None of the outer circuit of defences or the half-moon batteries has ever been located by excavation, but their form and positions (see Illus. 33) are clearly depicted on a number of eighteenth-century plans of Hull (e.g. the 1725 Phillips Map, Woolner’s Map of 1715, Johnson’s 1776 plan for the Dock Company, Thew’s Map of 1784, Hargrave’s Map of 1791, etc.); a cross-section through the outer ramparts is shown on a view of 1742 (Illus. 34), and a profile of the half-moon battery outside of the Hessle Gate is visible in an eighteenth-century view (Hadley 1788, facing p. 684. See Illus. 10). Hadley notes that the bastion beyond the Lowgate postern was levelled as part of the construction of The Dock in 1774-6 (ibid., 701), whilst ‘near Hessle Gate, the remains of that half-moon is easily distinguishable, as also some of the works, with the embrasures, etc.’ (ibid., 684).

The relationships between Charles I and Parliament had been deteriorating steadily throughout the 1630s, and by early 1642 had reached an all-time low: England was on the brink of Civil War. Preparations were being made by Charles I and Parliament for the inevitable conflict. Both sides realized the strategic importance of Hull as a port, as well as being the location of a massive arsenal of weapons and ammunition in the castle.
In January 1642 Parliament nominated Sir John Hotham as the new governor of Hull (see English 1992). His instructions were “not to deliver up the town, nor its magazine, without the King’s authority signified unto him by the Lords and Commons in Parliament”. This last part was crucial, as it emphasized that without the consent of Parliament no-one could have access to these strategic assets.

On 23 April the King and 300 men rode to Hull, with the intention of taking the town, but Hotham shut the gates against the King: Charles arrived at the Beverley Gate, only to find the gates barred, and that he was to be refused entry into the town. After a stand-off, Charles and his men withdrew (see Reckitt 1952 for more detail).

The first siege, July 1642
In July 1642 the King unsuccessfully laid siege to Hull with an army of 3000 infantry and 1000 cavalrymen for a period of three weeks (Broxap 1905). Sir John Hotham was defending the town with a force of 1000. Taking advantage of a high spring tide, he gave orders that the sluices on the Rivers Hull and Humber should be opened, and the

Illustr. 35. The location of the Royalist siege forts, and the two defenders forts, which played a part in the Civil War siege of Hull in 1643.
banks of the Humber were to be breached, in order to flood the low-lying land around the town. In addition, in order to give clear lines of fire to the defenders, and remove any potential cover or vantage points for the attacking Royalists, he blew up the remains of the Carthusian Priory to the north of the town, and completely cleared away what was left of the settlement of Myton to the west.

The attacking Royalist troops in retaliation burnt down three outlying windmills, and cut the freshwater dike which brought water from Anlaby to Hull; the latter act was not as effective as the attackers might have hoped, as there were many wells within the town.

The Parliamentary forces had control of the navy, and so were able to send two ships to Hull to re-provision the garrison with corn and wine. Nevertheless, a Royalist ship sent from Holland did manage to get as far up the Humber as Keyingham, where it ran aground; its sailors unloaded eight guns which they towed across land, and set up a battery to the east of Hull. In addition, the Royalists built temporary forts at Paull and Hessle (respectively to the east and west of Hull), and also on the south bank of the Humber, in order to be able to fire at passing shipping.

During the three-week siege, the defenders launched various sallies from the town. At the end of the month a sally by 500 men routed the Royalist infantry, and caused their cavalry to retreat towards Beverley; shortly afterwards on 27 July, another sally resulted in the destruction of the Royalist magazine at Anlaby (to the west of the town). These reverses prompted Charles to abandon the siege, and withdraw. This was the first incident of open hostility between the King and Parliament and marks the real beginning of the Civil War; three weeks later Charles raised his standard at Nottingham (marking the official outbreak of the war).

The only certain evidence which we have for this siege is documentary. Neither the Royalist siege works, nor any evidence for the destruction of outlying structures by the defenders has yet been found.

The second siege, September 1643 (Illus. 35)

By the end of 1642 both Hull and much of the East Riding were controlled by Parliament (see Neave 1996b); York was the only major strategic asset to be held by the Royalists at that stage of the war. By the early summer of 1643 Royalist fortunes in this area had significantly improved, and they now effectively controlled most of the East Riding, apart from Wressle Castle, Beverley, Cottingham and the major stronghold of Hull; Royalist cavalry mounted skirmishes at the gates of Beverley at the end of June, and the town finally fell on 28 August, when faced with an army of 16,000 men under the command of the Earl of Newcastle.

The Parliamentarians under Sir Thomas Fairfax retreated to Hull. After sacking Beverley, and capturing Cottingham, the Royalists followed and laid siege to Hull on 2 September (see Broxap 1905). They built a series of siege forts (Illus. 35) to the north and west of the town at Newland, Stoneferry, Sculcoates, Wilmington, Hessle Cliffs, Dairycoates, Gallow Shore, and at three sites along the causeway to Beverley (now Beverley Road); from these positions, eighteen guns of various sizes, including two giant weapons (brass demi-cannon), named Gog and Magog - one positioned near Sculcoates (north of the town), and the other near Hessle (to the west) - pounded the town for much of the next five and a half weeks. But, Hull was well defended and
could also be re-supplied from the sea, as Parliamentary ships controlled the Humber. Fairfax had brought six guns with his forces, and these were supplemented by the town’s ordnance. In 1634 there were eleven guns stationed at the South End Fort, whilst a further six demi-culverin had been supplied by the Crown to the town in 1639. In addition, there were also guns sited at Hull Castle and the two Blockhouses, plus whatever was still held at the magazine. In early 1642 the magazine at Hull had held 120 field pieces, but forty-nine of these cannon were subsequently transferred to London in May 1642 (Howes and Foreman 1999, 27); so, the precise strength of the defenders’ artillery is uncertain. (It reputedly included “a large brass cannon called Sweet Lips, which fired 32 lb shot”; this weapon was subsequently transferred to Newark in the later stages of the Civil War. It seems likely that this was an ordinary Demi-cannon, as Robert Ward’s 1639 Animadversions of Warre lists these as firing a 32 lb shot: Blackmore 1976, 395.)

The Royalists once again cut off the main supply of freshwater to the town (a dike running from Springhead to the Beverley Gate), but this had little immediate effect as there were so many freshwater wells in the Old Town. On 14 September, the Parliamentarians opened the sluices outside the town to flood the surrounding lands (just as they had done in the first siege of Hull in 1642). An attempt to capture the Royalist headquarters at Anlaby was beaten off, but later in the month the Parliamentarians did manage to blow up the Royalist magazine at Cottingham. Hull sustained considerable damage from the bombardment, and on 16 September the North Blockhouse was partly destroyed when a careless gunner entered the powder store with a lighted fuse.

In early October 1643 the Royalists suffered a major setback when their forts at Paull and Barton on Humber were destroyed. Then, on 11 October the Hull garrison sallied forth and captured all the Royalist positions between Derringham (to the north) and the Humber. As this also coincided with news of the Royalist defeat at the battle of Winceby (Lincs.), the Earl of Newcastle abandoned the siege of Hull, and retreated to York – but not before once again pillaging Beverley on the way.

In addition to the main town defences described earlier in this paper, there were two outlying defenders’ forts – one to the west of the Hessle Gate, and one alongside the River Hull, to the north of the North Gate. The besieging Royalist forces are known to have built ten siege forts – three to the west, and seven to the north of the town – in addition to their main headquarters at Anlaby, and a gun battery at Hessle Cliffs.

In archaeological terms the main evidence for this siege so far consists of find-spots of cannon-balls and musket-balls both within the Old Town and around the positions where documented siege forts and defenders’ forts are thought to have been. An attempt to locate a defenders’ fort at The Mount (to the west of the Hessle Gate) did reveal a substantial deposit of pottery and clay pipes of this period, but failed to identify any surviving structures which might have been part of this fort. Of the various Royalist positions, nothing structural has yet been found.
A considerable amount of damage had been incurred during the two Civil War sieges: a survey of 1646 estimated that the cost of the repairs would be £6605 (Allison 1969b, 416; Howes and Foreman 1999, 41-2). In April of that year trees were supplied for the repair of the Blockhouses and the rest of the defences. The work on the Castle and the Blockhouses on the east bank of the Hull included repairing the gun platforms, walls, brickwork, bridges and a jetty — costing £2580 (39.06% of the entire costs). The other 60.94% was spent on repairs to the northern and western parts of the town walls and gates; of these, by far the worst affected section adjoined the North Gate — presumably damaged by the bombardment from the Royalist siege forts to the north and north-west. Here, fifty-two retaining buttresses of brick, stone and timber were added behind the North Gate, at a cost of £2600 (39.36% of the total). On the western side of the town, the stonework at the Hessle Gate had been damaged by the weight of the horn-work built against its exterior; whilst a 50 yd. (c. 46 m) section of the town wall to the north of the Myton Gate had collapsed outwards, probably as a result of the defensive artillery placed here, the weight of the soil piled behind it, and the heavy rain. Additional earthen revetments were added behind the walls between the Hessle Gate and Beverley Gate in 1645 and 1646, and similar work took place between Beverley Gate and North Gate in 1647. In addition, forty new gun platforms were to be built against the town walls, at a cost of £300. Lastly, some of the damage had been inflicted by the garrison itself; hence, 600 yds. (c. 548 m) of structural timberwork had been pilfered from behind the jetty, the lime kilns, and the horn-work in front of the Hessle Gate, by the soldiers for lighting fires — and this would all need replacing.

Excavations at the Beverley Gate in 1988-9 did reveal evidence for additional strengthening works at the front of the gate, and for new bridge timbers being sunk into the eastern side of the moat; however, dendrochronological evidence suggests that these probably relate to repair works carried out after the end of the Civil War (see Evans 2015. Illus. 31), and it seems likely that these are amongst the repairs suggested above.

Whilst the costs may have been quickly established, the implementation of these recommendations was much slower. Parliament approved the expenditure of £2000 in June 1649, and a further £600 in 1652; this seems to have been spent exclusively on the repair of the South Blockhouse, and (in 1653) in making a boom to protect the mouth of the Hull. The latter was in response to the first Anglo-Dutch War (1652-4). In June 1655 further repairs were authorized at the Ropery, the Blockhouses, and ‘breaches of the line’; again, as no Civil War damage had been reported previously at the Ropery (along the southern parts of the town wall), this suggests that priority was now being given to strengthening Hull’s seaward defences, rather than the damaged landward-facing sections of the fortifications (which a 1657 survey shows still required £5051 10s. 0d. of repairs). In 1658-9 the river bank was strengthened with new piling and various repairs were carried out at the Blockhouses. Other monies, previously voted for the repair of the fortifications, were diverted into paying for the repair or replacement of defective weapons; hence, in 1657 some of this money was used to pay for 157 firearms and one hundred pikes to be sent from the Tower of London, and for the repair of...
decayed gun carriages. In the following year forty large guns (cannon, demi-cannon and culverins) were ordered, along with new gun carriages.

An inventory of the town’s artillery survives from 15 June 1660. Of the seventy-one guns listed, thirty-nine (almost 55%) were concentrated on the east bank of the River Hull: twenty-one at the South Blockhouse, ten at the North Blockhouse, and eight at the Castle. A further nineteen (26.7%) were located at the South End Fort, guarding the west side of the mouth of the Hull. The remaining thirteen (18.3%) were based either at the various town gates, or at guardhouses and the Magazine: the Beverley Gate boasted three sakers and a demi-culverin, the Hesse Gate three sakers, Myton Gate had two sakers, the Main Guardhouse (in the Market Place) had two sakers, and the Magazine two demi-culverin (see Table 3). This was a major change from the practice during the Civil War, when the guns had been mounted on the medieval ramparts.

In 1658 the town had petitioned Parliament for additional relief to fund the repairs, but the response to this plea was both slow and piecemeal. In 1660 a review of the

| Type of gun       | Calibre in inches | Weight of piece in pounds | Diameter of shot in inches | Weight of shot in pounds | Weight of powder in pounds |
|-------------------|-------------------|---------------------------|----------------------------|--------------------------|-----------------------------|
| Basilisk          | 8¼               | 9000                      | 8¼                        | 60                       | 60                          |
| Cannon Royal, or cannon of 8 | 8               | 8000                      | 7½                        | 58                       | 32½                         |
| Ordinary Culverins | 5½              | 4500                      | 5                         | 17 5/16                  | 11 6/16                     |
| Twelve-pounders   |                  |                           | 4 5/8                     | 12                       |                             |
| Ordinary Demi-culverins | 4½             | 2700                      | 4½                        | 10 11/16                 | 7½                          |
| Culverin Drakes   | 5½               | 2000                      |                           |                          |                             |
| Demi-culverin Drakes | 4½             | 1500                      |                           |                          |                             |
| Ordinary Sakers   | 3¼               | 1500                      | 3½                        | 6                        | 4                           |

Table 3. The comparative sizes of the various types of guns recorded as being in use at Hull in June 1660 (as suggested by the Compleat Gunner, published in 1672, reproduced in Blackmore 1976, 397. For a selection of earlier seventeenth-century tables, see Hogg 1970, 270-73). Altogether, the South End Fort, the Castle, the two Blockhouses, the Main Guard House, and the forts at the Hesse Gate, Myton Gate and Beverley Gate, held seventy-one guns; these comprised one large basilisk, one cannon of eight, seven culverins, two demi-culverin drakes, two culverin drakes, two twelve-pounders, and twenty-four sakers (Howes and Foreman 1999, 53). It is probable that some of these weapons were of different ages, and that some of these (e.g. the basilisk) may have been quite old by 1660; the table below shows the figures only for the ordinary weapons in use in the mid seventeenth century, so this should be seen only as a comparative guide.
town’s eastern defences had found that the South Blockhouse was in good repair, but both the Castle and the North Blockhouse were ‘somewhat decayed’ (Howes and Foreman 1999, 53). The Government directed in February 1661 that timbers should be supplied from Sherwood Forest for the repair of the fortifications, and ordered in August 1662 that £500 was to be released towards the costs; £300 was transferred to the Governor in June 1663. On 27 June 1663 the King granted approval to the Governor to sell some of the old lead and wood from the ruinous North Blockhouse to pay for the repair of part of the building (Sheahan 1866, 338). (Sheahan quotes verbatim from a document which is no longer extant; Howes and Foreman cite a similar warrant dated 27 July 1663 (loc. cit., 53).) Unfortunately, 150,000 new bricks and seventy pieces of new timber purchased for the work in 1664 were said to have been misappropriated, and the Governor’s deputy, Colonel Gylby, is alleged to have pocketed much of the proceeds of the sale (Sheahan 1866, 339-40). Looting of the former North Blockhouse continued in 1671-2. Evidence given to an enquiry in 1681 claimed that some of the money was used to repair the three batteries at the North Blockhouse, and its immediate environs, whilst the former Governor claimed that when he inspected the defences in 1666, he “found the place in a good condition of defence” (ibid., 340-1).

Trading rivalries with the United Provinces of the Netherlands, and the restrictions of the Navigation Acts continued to cause friction between the two countries, and relationships deteriorated during the early to mid-1660s, leading to a second Anglo-Dutch war in 1665-7. In August 1665 the Duke of York (the future James II) visited Hull to view the fortifications. The Town Corporation advanced £200 to the Governor for “repair, etc., of the fortifications during the emergency of the Dutch invasion” in c. 1666, and minuted 15 October 1667 (Stanewell 1951, 249, L.765; 352, M.320). The defences were inspected by Lord Fauconberg (Thomas Belasyse, Lord Lieutenant of the North Riding of Yorkshire) in 1667. The Corporation had earlier ordered that all the drawbridges leading into the town should be repaired in 1662 (Allison 1969b, 416, and n. 87); but it is uncertain as to how many of these bridges were actually repaired, as a subsequent Council document of 28 May 1667 records only that the Governor undertook “to repay the cost of the repair of the drawbridge at the Beverley Gates, advanced by the Mayor and Aldermen” (Stanewell 1951, 352, M.324), and a subsequent inspection of March 1670 “viewed the drawbridge and gates which are much in decay, and estimate that the repairs will cost £85” (Howes and Foreman 1999, 53).

In June 1667 the size of the garrison had been initially increased to 500 men, but then depleted as detachments were moved to London (Howes and Foreman 1999, 50). It was to remain in this depleted state until May 1671 when, in preparation for the third and final Anglo-Dutch war (1672-4), it was increased to 560 soldiers (ibid., 51). A visitor to the town in 1673 during this heightened state of emergency (Richard Blome) described it as “a place of exceeding great strength, being able to bid defiance both to a Navy, and a Land-Army, and that by reason of its strong Blockhouses, Castle, Walls, Forts, Trenches, and the Inhabitants and Souldiers within it, being at present a considerable Garrison of his Majesties...” (Woodward 1985, 28-9). Thomas Baskerville, writing in 1677, also gave a favourable account:
“As to Hull, the great garrison of the North of Portsmouth in the South, ‘tis seated on a level on the banks of the Humber, no hills being near it. Being now got to it, and ready to enter, we saw a draw-bridge and a broad and deep moat full of water surrounding this part of the town; leaving this behind us, we came to another deep moat of water with a drawbridge over it where is a strong gate-house, gates, and portcullis, and a strong wall on the inner bank surrounding this moat. Then allowing room for defence where men may stand and use their arms we came at length to another strong gate which let us into the town, with a wall surrounding their houses, both walls and gate-houses being well stored with guns to annoy the enemy whenever he shall come to attack it.” (ibid., 38).

Yet, despite these favourable impressions from occasional visitors, the condition of the defences was actually one of ongoing neglect, as only the most urgent repairs had been implemented since the end of the Civil War. In August 1674 estimates were prepared for repairs at the South Blockhouse, the Castle and the Storerooms (Howes and Foreman 1999, 53 and n. 41); but, as the war was now ended, it is doubtful whether these were enacted. Similarly, little money seems to have been spent on the repair and maintenance of the main town defences before the mid-1670s, as the Corporation and the Crown were in dispute as to who should be responsible for the costs (ibid., 53). A happy exception to this trend is represented by the repair of all the ‘out-bridges’ over the Civil War ditch in 1676 (Allison 1969b, 416 and n.86), whilst in 1679 a new Guardhouse was built in the Market Place (Howes and Foreman 1999, 54).

THE LATER SEVENTEENTH-CENTURY CITADEL  
(ILLUS 4, 7, AND 36–41, AND TABLE 4)

The appearance of the Dutch fleet in the River Medway in 1667 and the success of their privateers and men-of-war off the Holderness coast in the war of 1672–4 led to fresh concern about the state of England’s coastal defences. In c. 1681 Bernard de Gomme, Charles II’s Chief Military Engineer, drew up initial designs for a new 30 acre (12.15 ha.) fortification on the east bank of the river, to be known as the Citadel (Saunders 2004, fig. 8.4, upper); his design is undated, but may have followed a survey of the Hull defences which was carried out in May 1681 by his deputy, Martin Beckman. The latter went on to significantly improve upon de Gomme’s original design (ibid., 229–31 and fig. 8.4 lower; Foreman and Goodhand 1996, figs. 3–4), and then to oversee its construction in the following years. The new fortress incorporated part of the earlier Henrician defences (particularly Hull Castle and the South Blockhouse), and served the dual function of protecting the approaches from the river, and of overlooking the town. (It is significant that some of the new gun ports pointed directly at the Old Town, with lines of fire commanding the principal gates on its far side: Charles II evidently intended to avoid the humiliation that his father had suffered on being refused entry to the town.) By 1688 the earthworks of the Citadel were substantially complete, but the accession of William of Orange to the throne of England effectively removed any further threat of an invasion by the Dutch, and the work was largely abandoned from 1690 onwards. The overall cost of the construction work up to this point is said to have been upwards of £100,000 (Tickell 1798, 558) –
which was considerably beyond Beckman’s original estimate of £74,425 (Sheahan 1866, 344; Allison 1969a, 416).

The Citadel was designed as a triangular fortress, with substantial cut-bastions at each of its corners (Illus. 7. See also Saunders 2004, fig. 8.4). Its south side was ranged parallel to the River Humber; its western side faced onto the River Hull and opened onto the waterfronts and eastern flank of the town on the opposite bank; its eastern side faced towards Holderness. This major fortress took the best part of ten years to build, to the point of being largely complete, but unfinished (the sequence is neatly summarized in Foreman and Goodhand 1996, fig. 4. Detailed documentary evidence for both the construction and the subsequent occupation and modification of the Citadel may be found in Howes and Foreman 1999, Chapters 6-12). For comparanda, see Saunders 1989 and 2004.

Between 1681 and 1683 work concentrated on strengthening the Henrician defences. In the next two years (1684-5) the eastern arm of the fortress was constructed, so as to provide a defence against any landward attack from Holderness. Between 1686 and 1688 the focus turned towards the construction of the seaward side facing onto the Humber; which was technically the most difficult to construct because of the soft ground conditions. The south flank was largely completed in 1689-90 under the reign of William and Mary. The upper parts of the brick revetment were never finished – the top 1.5 m was never laid; even as late as 1705, no gun embrasures had been built to face onto the Humber. Although the Citadel was put in order for the two Jacobite
rebellions (1715 and 1745), it was increasingly used as a stores depot rather than a fortification. It was eventually demolished in 1863-4.

Extensive excavations on this site have taken place during the last thirty years (see Illus. 4, beginning in 1987 (e.g. see Foreman and Goodhand 1996; Atkinson 1998; Foreman 1998; Howes and Foreman 1999; Abramson 2001; George 2003; George 2004; Tibbles 2006; Tibbles 2007; Fraser 2008; Fraser 2009; Jobling 2015). These have confirmed the positions of its perimeter walls and some of its sally ports (e.g. Illus 39–40), and have revealed a wealth of detail about the nature of its construction. Most of
the internal buildings were completely destroyed by the nineteenth-century demolition; however, the site of its magazine and some of the guard rooms adjoining the perimeter walls have been identified (e.g. Illus 38–9), and one area survived in sufficiently good condition to merit consolidation and display. In addition to the internal features, part of its western base-flank battery (a low-lying, linear artillery platform located in front of the main earth rampart on its western side, and protected by a low bank) was located and examined (Tibbles 2007). Base-flank batteries had formed part of the original design of the Citadel from the outset, with that on its eastern side being inspected personally by Beckman in 1681, to satisfy himself about its placement (Howes and Foreman 1999, 84); the western base-flank battery had been constructed by 1688, and access to this gun-battery was provided by the sally-ports through the western ramparts (ibid., 88). On the western side of the Citadel, the original 1683 timber sluice leading into the River Hull (Howes and Foreman 1999, 74) had been destroyed by the construction of a somewhat larger, late eighteenth- or early nineteenth-century, brick and stone sluice in much the same position (Fraser 2009).

The construction methods used for different parts of the new fortress varied considerably. In part, this reflects the fact that construction work was carried out in a series of discrete campaigns; in part, it is a result of the western flank incorporating much older existing elements, whilst the eastern and southern flanks were entirely new constructions. Lastly, variations in the underlying ground conditions of this poorly-drained area adjoining the Hull and the Humber may have influenced the design of foundations in specific areas. The west side of the enceinte incorporated and surrounded the existing Hull Castle and South Blockhouse, which became strong-points inside the new fortress; the former curtain wall which linked them became the outer revetment for a massive clay rampart facing onto the River Hull. Additional defence was provided by a platform in front of the South Blockhouse, and new base-flank batteries on the flanks of the cut-bastions; a covered walkway with musket embrasures would allow infantry to defend the side facing the town. The rampart here was faced on the rear with turf, and was 60 ft thick (c. 18.3 m), and between 10 ft and 15 ft high (c. 3.4 – 5 m); at the top was a parapet, in which were set twenty-seven embrasures or gun-ports,

| Table 4. A List of the tools purchased for use during the works in 1683 (source: Howes and Foreman 1999, 87–8) |
|---------------------------------------------------|---------------------------------------------------|
| 44 spades                                         | 4 iron crowbars                                    |
| 9 shovels                                         | 12 pickaxes without shafts                        |
| 317 wheel-barrows                                | 8 bevels                                          |
| 37 double rams                                    | 5 levels                                          |
| 4 single rams                                     | 3 sledges [sledge-hammers]                        |
| 17 paring and turning spades for sod-work         | 6 wedges                                          |
| 23 stages of scaffolding, containing 3,380 boards |                                                  |

Tools repaired for the 1685 season (Howes and Foreman 1999, 88)

|-------------------------------------------------|-------------------------------------------------|
| 256 wheel-barrows                               | 6 double-rammers                               |
| 34 pickaxes, hafted with ash                    | 2 single rammers                               |


|-------------------------------------------------|-------------------------------------------------|
| 3 stages of scaffolding, containing 3,380 boards |                                                  |

Fortifications of Hull

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forming one continuous battery. The corner bastions were faced with brick. The old Henrician moat was infilled, and a new external ditch, up to 15.25 m wide and c. 4 m deep, was dug in front of the new rampart.

The eastern side contained the main entrance. Here, the new rampart was 120 ft (c. 36.5 m) thick, but the same height as its western counterpart (c. 3.4 – 5 m); it also incorporated casemated passages. Various external earthworks were originally planned, but the only part which was completed was a ravelin, protecting the approach to the entrance (or Main Gate). The latter consisted of a passage, flanked on either side by barrel-vaulted guardhouses. The ground on this side of the Citadel was very soft and water-logged. Hence, before any revetment wall could be constructed here, wooden piles had to be sunk at intervals, to support its weight. The new wall in front of the rampart was set in a construction trench, and built largely of brick, but faced with ashlar at its eastern terminal. A large moat was excavated outside of these defences.

The southern side facing the Humber needed a protective sea wall, to prevent erosion by the tides of the Estuary. Before this could be built, a temporary coffer dam had to be constructed, and the ground needed to be extensively piled with massive wooden piles, c. 5.8 m long. A lattice of ground timbers was laid, and then the new wall was built in three successive stages, working from east to west. A 200 ft (60.9 m) long jetty on the eastern side acted as a breakwater, to protect the wall from tidal erosion. Some idea of the scale of the work can be gained from the fact that a contract for the manufacture of two million bricks for this project was approved in August 1687; these were presumably intended not only for the core of the new wall, but also for the finishing off of the upper part of the wall and the parapet. Excavation has shown that the new sea wall had a smooth sloping face dressed entirely with ashlar masonry, and capped with a stone roll moulding (Illus. 37). The stone-faced wall stood to a height of c. 4.6 m; above this, a vertical brick facing was added in a single campaign in 1690. The brick walling here was originally intended to rise above the stonework for another 3.7 m; but, by the time that construction was abandoned in 1690, it had reached a maximum height of only 1.8 m.

The sea wall formed the front face of a clay rampart which was c. 18.3 m thick, and which rose to a height of c. 6.4 m. Set at intervals on top of this rampart were embrasures or gun-ports; these survive as trapezoidal counter-forts (Illus. 36).

Excavations have revealed not only the main ramparts and cut-bastions, with their associated gun positions and sally-ports, but also the bases of some of the internal buildings of the Citadel (e.g. the Regimental Magazine, the Sally-port Magazines, and the South Guardhouse). Other features identified include the Water Bastion, the Main Gate, the Cistern, and some of the casemated features.

As the Citadel remained in use for some 180 years, excavation has also identified evidence for substantial modifications and refurbishment – not all of which can be matched to the surviving documentation (e.g. the stables and surfaces found in Atkinson 1998). In places, more than one phase of clay rampart has been identified, with clearly defined turf-lines separating the successive ramparts (e.g. George 2003; Abramson 2001, fig. 4); in others, a timber revetment, consisting of horizontal boards set on edge behind a line of retaining posts, has been found at the front face of the base of a rampart, at the edge of the moat (e.g.
George 2003, pls 5 and 6 and fig. 5). Internal surfaces and cinder paths have sometimes been found behind the ramparts – although some of these may be early Victorian in date.

In some places, bricks from the earlier Henrician defences were simply reused in the building of the new Citadel; in others, new bricks were employed, and, as only to be expected in such a large undertaking spread over a number of years, there is variation in the size of the new bricks – probably reflecting the fact that they were made in batches by a number of different brickyards. At the former South Blockhouse, bricks measuring 220-228 x 102-110 x 62-68 mm were used in the construction of the late seventeenth-century defences, and were laid in English Bond (Foreman 1997, 11); whereas, at one of the Sally-ports, the bricks measured 230-235 x 105-110 x 50-60 mm (Foreman and Goodhand 1996, 179). (The full range of brick sizes recorded at the Citadel is summarized in Foreman 1997, 47, but this also includes examples used in nineteenth-century modifications to the fortress.)

Late seventeenth-century work on other parts of the defences
In June 1681 Beckman had made a survey of all of the existing defences at Hull, including those surrounding the town on the west bank of the Hull. His findings regarding the town defences were that

“The fortification in this place is come most to a total ruin, the moats about the town most grown up; the ramparts without parapets like a dyke on a sea side, the stone wall about the town all decayed, cracked, and ready to fall down, which it has in one part, but repaired by the town. It has not one inch of parapet nor a gun about the walls that can do service.” (Howes and Foreman 1999, 58).

He recommended that five sections of the town wall, totalling some 235 yds in length (c. 214.9 m), should be rebuilt. How much of this work was ever implemented is uncertain, but an observation by the nineteenth-century historian, Joseph Sheahan, suggests that at least part of the walls were rebuilt to a similar standard to that carried out at the Citadel:

“In 1827 the workmen employed in excavating the Junction (now Prince’s) Dock, laid bare the foundations of the town wall from the site of Beverley Gate to that of Myton Gate; and of two of the square towers that flanked it. From beneath one of the towers, the piles were drawn perfectly sound” (Sheahan 1866, 353n).

An early account of Prince’s Dock, clearly citing a contemporary source, adds a little more detail about the piles:

“Prince’s Dock was opened on the 1st June 1829, little more than 2½ years after the start of the work. During the construction of the Prince’s Dock, part of the old fortifications or town walls on the east side was cut through and taken down and from their antiquity they were not unworthy of notice. The walls are said to have been originally built of stone in the time of Edward II but repaired and strengthened with bricks in Richard II’s reign, when the art of brickmaking was revived in this country. The bricks were about 11” long, 5¾” wide and 2½” thick. The foundations were 8 or 10 feet under high water and in some parts were on small piles, the rest being on natural ground. The piles were 5 or 6 feet long and 6 to 7 inches in diameter, some of oak, some of fir and the hearts of both kinds were quite sound and blackish in colour but the sap was much decayed.”
The use of piles beneath the medieval walling has not been observed in any of the other parts of the defensive circuit, but, this was a feature of Beckman’s work elsewhere on the east bank of the Hull. Beckman also made recommendations for additional works to be carried out at the South End Fort, on the Civil War batteries and breastworks outside the main gates, and also on the various drawbridges and guard-houses (Allison 1969b, 417).

Excavations at the Beverley Gate in 1988-9 did reveal evidence for additional strengthening works at the front of the gate, and for new bridge timbers being sunk into the eastern side of the moat; however, dendrochronological evidence suggests that these were more likely to relate to repair works carried out after the end of the Civil War, than they are to any work following Beckman’s survey (Evans 2015).

THE DEFENCES C. 1700 TO 1864

The Citadel, although never completed as a fortress, continued in use variously as a barracks, supply base and prison until its demolition in 1863-4; its internal buildings were largely demolished, and its perimeter walls were demolished to a set height. Part of the site became a railway marshalling yard for the adjacent Timber Dock, whilst other riverside sections became shipbuilding and ship-repair yards. A few new streets were laid out across its interior. Most of the site was covered by up to 1 m of later overburden, leaving the remains of both the Henrician walls and the Citadel ramparts largely protected, and forgotten, until the later 1980s. A housing estate and a school have since been erected inside the area enclosed by the ramparts, but the latter have been kept clear of development. The remains of Hull Castle and the South Blockhouse are protected as a Scheduled Monument, and have similarly been kept free of any development.

The North Blockhouse was largely demolished in 1803, and building materials recovered from it were sold for £820 at public auction (Allison 1969b, 417). The Curtain Wall to its south had a more variable fate. Sections of it adjoining St Peter Street have been found to survive in good condition (e.g. Dennison and Tibbles 1990); other parts were clearly removed to permit the construction of the nineteenth-century Timber Dock. Yet others appear to have been reduced almost to its foundation stonework (e.g. at Clarence Mill; Tibbles 2008, pls 6 and 7, and fig. 2), in order to allow later structures to be built over its top.

Routine repairs were regularly carried out on the defences and drawbridges during the eighteenth century, as they became more dilapidated. The celebrated local historian, George Hadley, records that in 1735, “the tower over Beverley Gates, being ruinous, and likely to fall, were ordered to be taken down, and an arch made over the Gates, if necessary, and the Town’s Husband was to take care thereof” (Hadley 1788, 307). In 1761 the Hessle Gate was also unblocked; but, in truth, the town defences had outlived their usefulness. This was increasingly apparent to visitors to the town; earlier visitors had often been relatively complimentary, but from the 1720s onwards, in those cases where the defences are mentioned, the comments are critical. An anonymous visitor to Hull in August 1724 noted that “The Fortifications are old and decay’d & little store of Arms, 18 new Cannon, some Mortar peices &c.” (Crowther 1992, 12). Another anonymous account in 1733 noted that “The Citadel is its best defence, having a double Tier of Guns, a wide Ditch before it, and what is more terrible, a Company of Invalids within. This was once
accounted the strongest Fortress in England; but now the Walls are tumbling down, and
the Ditches a common Lay-stall. . .” (ibid., 14). In 1752 John Wesley wrote “I was quite
surprised at the miserable condition of the fortifications, far more ruinous and decayed than
those at Newcastle, even before the rebellion. It is well there is no enemy near” (ibid., 16).
There was also clearly a major problem with encroachments upon the town walls, now
that their defensive role had largely been abandoned. The draft notes for a speech by H.
Etherington (a future mayor) in 1764 complain:

“a great part of the said (Town) walls are and have been from time to time lett out by some of the
Officers of the Garrison to different Persons upon Building Leases and several Dwelling Houses (and
Shops and places for keeping Pigs and other Noxious uses) have been erected thereon, scarce a year
passes but the number of Houses &c. are increased by new Building Leases, some have very lately
been granted and Built upon the said Walls which being much higher than the Town prevents the
Circulation of fresh Air and is highly detrimental to the health of the Inhabitants of the said Town
which is very Close built and the Streets narrow and very Populous, and if the practice of building
upon the Town Walls in their present state is not timely prevented it may prove fatal in time of any
Contagious Sickness but if the said walls were level’d and Motes fil’d up their Situation wd. be lower
than ye Town and Consequently the Buildings that might be erected thereon wd. be no impediment
to the Circulation of Fresh Air nor risque the health of the Inhabitants on that Acct. . . . not only the
Walls but some parts of the Ditches are let out for Workshops, keeping Pigs &c. . . . the Walls are
become quite indefenceable and have been so time out of mind insomuch that in a time of Danger
— viz. — the Rebellion of 1745 — upon a view of those who were appointed the Repairation of
the Walls was judged impractical & we apprehend they are judged so at present by their being let out
to build upon as private property” (MS in the Museum Archives, cited in Bartlett 1971, 8).

Moreover, the medieval town walls and gates were a major constraint to the develop-
ment of the town, and the gates were too narrow for the volume of wheeled traffic
which needed to pass through them. Accordingly, they were largely removed to permit
the construction of a series of new docks around the north and west sides of the Old
Town. The earliest of these was the Queen’s Dock (opened in 1776), followed by the
Humber Dock (1809), and finally the Junction Dock (later renamed Princes Dock;
opened in 1829). Demolition of the walls and adjoining gates began in 1776, and
continued in progressive stages into the 1820s; however, in most cases, the walls were
simply razed to a set height, and were then buried beneath the upcast of the excavation
of the new docks — often leaving substantial sections of walling safely sealed from
damage by later developments.

The first section of the town wall to be taken down was that between North Gate
and Beverley Gate; the latter was demolished in 1776, and the wall to its north,
alongside the new Queen’s Dock had been taken down by 1778 when the new
Dock opened — this is clearly shown on Tew’s Map of 1784. The next section of
the defences between Beverley Gate and the Myton Gate was removed between 1784
and 1791. The remainder of the west wall to the Hessle Gate was cleared away by 1800,
whilst the medieval southern defences were mostly removed between 1800 and 1809, in
preparation for the opening of the Humber Dock. This left only the South Battery
standing on the west bank of the Hull (see below), and the Citadel on the east bank —
as both were still in use as military installations.

The progressive dismantling of sections of the town wall and gates is charted in a
series of historic maps, ranging from an anonymous map of c. 1775, through Tew
(1784), Hargrave (1791), Anderson (1814), and Craggs (1817), to an anonymous map of 1829 which still shows ‘the precise position of the old fortifications in their relation to the docks’ (Sheppard 1911, 110. Several of these maps are readily available in facsimile, in Humberside County Council Leisure Department 1995). A contemporary eye-witness (Strother) writing in 1784-5 commented:

“Beverley Gates are now taken down and a fine free passage left. Myton Gates are still remaining, built of brick within the earthen ramparts, from whence on either side extends a wall built of the same, the greater part of which is in ruins, as is the square tower wherein the gates are fixed, and which flanked the walls. The walls are about 3 feet 6 inches thick. Hazael Gates are the entirest buildings yet remaining, consisting of two towers, east and west. The east tower is a square of 6 yards each way, and had 2 gates in it, and a room over them, but are now taken away. Thirty yards westward stands the west tower, of the same length and breadth, and eight yards high, within the walls, and the arch yet remaining, which forms the chamber floor. The whole is of brick, about two feet in thickness, and joined to the east tower by a wall one foot thick.” (Crowther 1992, 26).

The old South End Fort already needed major repairs in the late seventeenth century, but its renovation did not begin until 1709. By 1699 it had been renamed the South Battery, and it was extended in 1728. In 1843 its usefulness as a gun battery was severely compromised when a new graving dock was allowed to be built immediately adjacent to it; yet, it remained standing until 1855, when its site was sold for redevelopment. Its buried ramparts and cobbled courtyards survived in good condition until recently; part of it has since been built upon (in 2015).

Both the South Battery and The Citadel had become largely redundant by this date. Improvements in naval gunnery and armaments by the 1850s meant that Hull was now potentially vulnerable to attack from any attacking ships long before they came within range of these fortifications’ guns. If the town and port were to be adequately defended, then it would be necessary to extend their defences much further down the Humber Estuary, so that attacking vessels could be checked, and hopefully destroyed, long before they came in range of the town. Accordingly, in 1864 a major new fort was built at Paull, about six miles to the east of Hull. The following century would see the defences moved ever eastwards, with gun batteries at Sunk Island, and then the construction of the fort at Spurn Point (at the mouth of the Estuary), and the adjacent battery at Kilnsea. Finally, in 1918, two forts were built actually in the mouth of the Humber Estuary at Bull Sands and Hale Forts (for details of all of these, see Dorman 1990). The subsequent military history of this area lies outside of the scope of the current paper, but is covered both by Dorman 1990 and by Foster 2004; the former’s gazetteer is more reliable for this area, but Foster’s book does contain some useful general chapters.

DISCUSSION

It is not certain how many towns in Britain actually had any defences at all; Turner, in her seminal survey of town defences, originally listed over 130 examples (Turner 1970), but more recent studies have suggested that as many as 211 late Saxon and medieval
boroughs may have had some sort of defences (Bond 1987, 192; Palliser 1995; Palliser et al. 2000, 174; Creighton and Higham 2005, 218). However, this covers the whole period from AD 600–1500, and includes not only those towns with significant defensive circuits, but also those which boasted imposing freestanding gates – to control the ingress and egress of traffic, the collection of tolls, and to symbolise civic pride – but little else. Certainly, within York and the East Riding, only four boroughs had any defences at all – Hull, York, Beverley and Hedon – and of these, by far the most elaborate were at Hull and York. In the rest of Yorkshire, only Pontefract and Scarborough had any elaborate town defences.

THE FIRST DEFENSIVE CIRCUIT

The complexity of a town’s defences often reflected both its own strategic needs and the amount of funding which was available at the time of their construction; this could also be influenced by when the defences had first been developed, as some towns had their origins in the pre-Conquest era. Hence, there can be such a considerable variation in the size and complexity of surviving examples of even earthen and timber circuits (see examples cited in Creighton and Higham 2005, 80–1 and 158; and Kenyon 1990, 186, 191 and 198). Some town ditches can be as little as 2 m deep and 4 m wide (as at Northampton: Kenyon 1990, 198), but the more substantial examples range between c. 3.5 m and 6 m in depth, and between 10 m and 22 m in width. The corresponding ramparts show similar disparities in size. The least substantial banks can be as little as 1.5 m in height (as at Hartlepool: ibid., 191), whereas more substantial ramparts tend to have been 3 m or more in height (as at Taunton, Somerset: Creighton and Higham 2005, 158). This variation probably reflects the respective roles of these “defensive” circuits. The less substantial defences will have served to clearly demarcate the boundaries of a town, to show where its authority held sway, and where it could legally levy tolls on goods entering and leaving it. In contrast, where more substantial defences were constructed, it seems likely that they were intended from the outset to serve a military function, and offer some real defensive capability in time of conflict. These handful of examples suggest that the original early fourteenth-century defensive circuit at Hull – with its rampart surviving up to 2.8 m high, and possibly originally as high as 3.05 m (Bartlett 1971, 20), and a ditch of up to 18.5 m in width and perhaps as deep as 6 m – was comparable with some of the larger and more substantial circuits of town defences elsewhere in Britain, and was clearly on a larger scale than those of some of its wealthier contemporaries, such as Beverley, Coventry or Northampton.

The gates set within this initial timber defensive circuit were also built largely of timber, as confirmed by excavations at the Phase Ia Beverley Gate; however, the Chamberlain’s Account Rolls from 1321–4 do show that a small amount of stone did feature in the construction of the North Gate – perhaps in its foundations. Elements of these early timber gates appear to have survived through to the end of the Middle Ages, encased within their later brick re-buildings; at the Beverley Gate, the remains of several timber uprights were preserved in this way. Whilst only the North Gate is specifically mentioned in the account rolls for 1321–4, the likelihood is that all of the main gates would have been built into the defensive circuit, either from its outset, or from a very
early stage. In particular, the route to and from Beverley was of such paramount importance, that a gate would have been an early priority; the archaeological evidence suggests that there was a timber gate here by at least the mid fourteenth century, if not by the end of the first quarter. By the end of the Middle Ages, the Beverley Gate had emerged as the most important entrance to the town, and it was to hold that pre-eminence in later centuries.

This is the only gateway to be examined in any detail. The length of its central passageway was 6.7 m; but its width is less certain, as the southern side of the gate was not firmly established. If the timber gate was of similar width to its brick successor, and if the evidence of early cartographic and topographical depictions of the Beverley Gate is at all reliable, then the width of the central passageway might have been in the order of about 3.6 m to 3.8 m – which would have been wide enough to have merited being closed with double-leaved doors (possibly at either end); this would have been a similar arrangement to that of the surviving early fifteenth-century North Bar at Beverley (Bilson 1896, 38 and 40). The likelihood is that this was a rectangular gate tower, probably of just two storeys – the room above the passage providing not only accommodation for a gate-keeper, but also providing a more commanding view of the approach to this entrance to the town.

Many medieval towns are known to have had timber gates – particularly in the period from the eleventh to the later thirteenth centuries; but, in the archaeological record, these are now represented mainly by fragments, as the bulk of the gate structures would have been rebuilt in more durable materials, such as stone or brick – just as happened at Hull’s Beverley Gate. In the neighbouring town of Beverley, the earliest reference to a timber gate or ‘bar’ is in the late twelfth or early thirteenth century (Kent 1989, 178); and wooden ‘bars’ were erected in 1405 and 1433–4, and were still being erected as late as 1460–1 and being rebuilt or repaired in 1445–6 (ibid., 179). Timber structures had the advantage of being much cheaper, and easier to erect than their stone or brick counterparts; but, their disadvantages were that they required a higher level of maintenance, were a greater fire risk, and were less durable. Lastly, the advent of artillery quickly rendered these timber structures obsolete.

**THE MEDIEVAL TOWN WALLS**

The details given in the Chamberlains’ Account Rolls show clearly that the initial defensive circuit consisted of a large ditch enclosing a clay rampart, topped by a timber palisade; this was built between 1321 and 1324, and had presumably been completed by the time of a royal visit in October 1332, when Edward III was said to be ‘highly pleased with the excellent fortification of the place’ (Sheahan 1866, 58). At some stage thereafter, and certainly by 1339, work began on replacing these timber defences in more permanent materials. Given the dearth of locally available freestone in the area immediately around Hull, the local permanent building material of choice for walling has been brick since the later thirteenth century; stone imported from other parts of the region was occasionally used for major religious buildings in the area, or for detailing such as jambs, quoins and buttresses, but the great majority of public buildings, churches, and buildings of status in the area in the later Middle Ages were built of brick. The Borough had its own brickyard, for which detailed records survive from 1303 to the early 1430s (Brooks 1939); hence, brick was an
obvious choice when it came to replacing the timber circuit in more durable materials. A century later, nearby Beverley opted to use the same material for the construction of its North Bar in 1409 (Bilson 1896; Leach 1896). In Norwich, the Cow Tower, for which building accounts survive from the 1390s, had its stone core faced with brick, and many of its internal details finished in brickwork (Ayers et al. 1988). These are perhaps the best-known examples of the use of brick within town defences in Britain, but there are also surviving lengths of internal brick arcading to the walls at London, Norwich, Yarmouth and King’s Lynn (Creighton and Higham 2005, 135-6). Brick rubble was also used within the wall cores at Norwich, and even at the construction of the keep at Norwich Castle, whilst brick was used extensively in repairs to London’s city wall (ibid.). On the continent, similar considerations about the availability of suitable building materials led to the widespread use of brick in town defences in many of the Hanseatic towns with which Hull traded. Thirty-three of the sixty or more Hanseatic towns covered in Gläser’s substantial 2010 survey had brick defensive circuits, towers, gates, or brick facings – and these included such major trading partners as Lübeck, Bremen, Bruges, Antwerp, Stralsund, Rostock, Danzig, Elbing, Stettin, Lund, Malmö, Stockholm, Ribe and Copenhagen; one could add many others, not included in that survey, such as Amsterdam (Gawronski 2012, 23-4. For a fuller list, see the gazetteer in Westholm 1996). As Hull was a major international port, it is hardly surprising that its architecture shows European influences.

The date of the building or rebuilding of the defences at Hull in brick has long been a subject for debate. When the Victoria County History volume for the City (Allison 1969a) was being written, the section on the defences was based entirely upon the historical sources then available, and a series of inferences based upon their then interpretation; Allison had to consider, inter alia, whether the defences had ever been of stone, rather than of brick, and of whether the ‘pro pila’ mentioned in the 1321-4 Chamberlains’ Account Rolls might have referred to the piling for a brick wall (see Allison 1969b); there was even a suggestion that a brick circuit around the town might have been completed by the 1350s — which in turn would imply that the later murage grants of the reign of Richard II would have represented repairs, rather than the continuing replacement of a timber circuit with brick walling. Whilst much of Allison’s account has stood the test of time, some of his interpretations and assumptions have not since been supported by subsequent archaeological investigation. Sadly some of these misconceptions have been reiterated by later writers; hence, one national overview repeats the contention that ‘notable English town walls of the fourteenth century include that in brick at Hull begun in the 1320s’ (Schofield and Stell 2000, 373) — whereas the archaeological evidence provides no support for any sections of the town wall being built of brick at this early date.

The evidence of the murage grants (see Table 1, above) suggests that the gradual replacement of the earlier bank and palisade with a brick curtain wall may have taken over sixty-five years; the first definite mention of a town wall is in a deed of 1339, and so construction had clearly begun before that date. That the fact that there are so many individual grants spaced over the course of the mid and later fourteenth and early fifteenth centuries would tend to suggest that the defensive circuit was rebuilt in brick in successive campaigns of work, and that there may well have been substantial periods of inactivity between these building campaigns; that, in turn, would suggest that these various sections of walling were built by different gangs, and that a certain amount of
variation might be expected in both the finish of the wall, and the sizes of bricks which were employed over such a long period.

Such a view is also consistent with the archaeological evidence. There is a considerable amount of variation present between the dimensions of different sections of the town wall along parts of the western and northern sections of the defensive circuit (Table 5); but, this has often been complicated by both the level of truncation which those sections had experienced, and the limitations on what could be exposed during individual pieces of fieldwork. Nevertheless, in three of the nine relevant pieces of fieldwork, the external face of the lower courses has been shown to have a stepped external batter; a similar stepped external batter has also been observed on both the Beverley Gate, and on the excavated interval tower on North Walls. Hence, it would be reasonable to assume that many (if not all) sections of the town wall bore an external stepped batter.

Where the base of the wall has been exposed, this has been found to sit on a chalk foundation. Three main brick sizes have been recorded in different sections of the wall. These are:

- 255 mm x 135 mm x 45 mm
- 280 mm x 140 mm x 50 mm
- 275 mm x 135 mm x 45 mm

These would all appear to have been in use during the medieval period, and presumably reflect little more than the variety of ceramic building materials which were in use at that time, and which were being supplied by different production sites over a period of perhaps three-quarters of a century or more. In addition, other brick sizes were used in later additions and repairs to the town defences during the post-medieval period.

Bartlett attempted to calculate the original height and form of the defences, and the quantities of bricks which might have been employed in their construction (Bartlett 1971,
19-21). With the information available to him at the time when he was writing, he produced the following rough calculations:

\[
\begin{array}{l}
\text{No. of bricks in a single interval tower} & 40,350. \text{ Hence,} \\
\text{No. of bricks in all thirty towers (including posterns)} & 1,210,000 \\
\text{No. of bricks in the three main gates} & 240,000 \\
\text{No. of bricks in 4yds of excavated curtain wall} & 9,675. \text{ Hence,} \\
\text{No. of bricks in the whole curtain wall (1,355 yds)} & 3,250,000 \\
\end{array}
\]

Suggested total of bricks used in the medieval defences of Hull 4,700,000

There are some obvious problems with these calculations, not least of which is that he has included estimates for only three main gates, whereas there were five; at the time when he was drawing up these calculations, no archaeological investigations had taken place at any of the main gates, and so his estimates for the number of bricks used in their construction were pure guesswork. (Later excavations were to show that their brick foundations were both more substantial than those of the interval turrets, and were set much deeper than the adjacent stretches of the town wall.) In addition, Bartlett had assumed that the dimensions of the town wall would have been uniform throughout, whereas we now know that there was significant variation between different parts of the circuit. Lastly, the two interval towers which he investigated were both rectilinear, whereas cartographic evidence suggests that there was considerable variety in the plans and shapes of individual towers. Hence, his calculations should not be taken too literally. Nevertheless, they do serve as a useful indicator of the enormous scale of these works, and of the kinds of order of materials which would have been needed to complete this brick circuit: the realisation that upwards of five million bricks would have been needed for this circuit, coupled with the surviving medieval documentary records for the output of the Corporation brickyard in individual years, make it clear that it would have taken many decades for this circuit to have been built, and show that previous assumptions in some historical works that the whole circuit could have been completed in the 1320s were ill-founded. (The annual output of the Corporation brickyard rarely reached 90,000 before 1356, and after that ranged from about 90,000 to 105,000 bricks in most years; hence, even if its entire output were used in the construction of the defences – which is unlikely – a project of this scale would have taken many decades to complete.)

The Beverley Gate is so far the only one of the town gates to have been extensively investigated. The main dating evidence for its rebuilding in brick (the onset of Phase Ib) is provided by Humberware (including a complete jug) incorporated within the dumps for the floor levels within the passageway. These floor levels are unlikely to be any earlier than the second half of the fourteenth century, but could equally be of early fifteenth-century date. The most likely documented murage grants (see Table 1) cover the period from 1352-4 to 1404, which would span the reigns of Edward III, Richard II, and Henry IV. We have precious little detail about the order in which different parts of the defences were rebuilt in brick, and so we do not know whether this work was done sequentially from south to north, or whether the rebuilding of individual gates was given any precedence over adjoining stretches of the town wall; as the earliest
recorded section of wall lay at the southern end of the town, facing the Humber, if the work was done sequentially from south to north, then one might argue that reconstruction in brick might have been expected to have reached this part of the circuit by the 1370s or 1380s – which would conceivably place it in either the later parts of the reign of Edward III (1327-77), or that of his successor, Richard II (1377-99). Certainly, there were a number of five year grants between 1376 and 1396, followed by a four year grant in 1399 – all of which argue for a substantial and sustained programme of building work taking place during this period, with several grants following on sequentially; though not conclusive in itself, this period from 1376 to 1399 does look the most likely candidate to fit the bill.

Parts of the Beverley Gate probably continued to be modified during the remainder of the Middle Ages and the earlier years of the Tudor period – and, by then, some of the earlier timbers may have become redundant. Archaeological support for continued modifications to this part of the defences in the later fifteenth or early sixteenth centuries may be seen in the presence of pottery fragments of these dates in clay dumps set against the face of the adjoining sections of the town wall.

By the end of the fifteenth century, the walled circuit was complete on three sides, but was left largely open to the River Hull, where its quays and waterfronts (the life-force of the port) were sited; the only protection for the riverside was provided by a boom chain which could be strung across the mouth of the river. The economic importance of Hull was clearly recognised by contemporaries, as is shown in a late medieval petition to the King for a grant of privilege: ‘It is a port and the key of the north part (of England)’ (Allison 1969a, 21, n. 12).

The earliest detailed depictions of the town are provided by two maps which survive within the Cottonian Manuscripts of the British Library; George de Boer has argued convincingly for these to date to c. 1538–9 (de Boer 1973). These show the Beverley Gate as a two-storeyed structure, surmounted by a small, round embattled tower, topped with a pointed steeple; the tower is lit by a number of rectangular windows. A large central Tudor archway is flanked on either side by symmetrical projecting stepped buttresses. At first-floor level, a single small rectangular window opening is set centrally over the gateway; the latter is protected by a portcullis, and would appear to open onto a drawbridge – as small square openings for the bridge chains are visible in the upper brickwork of the ground floor.

Later topographical prints and historic maps depict the other main gates to the town, and show that (by their final stages) there was considerable variety in form, size and ground plans; this, together with the substantial variation in the form of the interval towers, argue for work on the construction of the defences having taken place over a lengthy period of time, with much of the work being carried out by different gangs of workmen. Interestingly, all of the gates depicted on the c. 1538–9 maps of Hull and in later topographical prints appear to have been single-towered structures.

Nationally, although many of the better-known and more impressive surviving medieval gates tend to be twin-towered structures (for examples, see Kenyon 1990, 191–4, and numerous plates in Creighton and Higham 2005), there are also a number of other single-towered structures known from other parts of the country. One of the more famous examples is St. Benedict’s Gate, Norwich, which was erected in the late
thirteenth or early fourteenth centuries (Hurst and Golson 1955); others include Southampton West Gate, Coventry Cook St Gate, and Launceston South Gate (Creighton and Higham 2005, pls 50 and 115-16).

**The Tudor Defences**

The walled circuit must have looked quite formidable in its heyday, and formed sufficient of a deterrent to keep the town safe from any attacks during the Wars of the Roses. Yet, ironically, despite the visual appearance of strong defences, Hull was to capitulate to *The Pilgrimage of Grace* in 1537, without even offering any resistance. This was undoubtedly a key consideration behind Henry VIII’s decision in 1538-9 to strengthen the existing town defences, and to begin the construction of new military defences on the east bank of the River Hull in 1541-3; the engineer for these works was John Rogers, and it is likely that he was responsible for initiating the surveys which have given us are two earliest maps of Hull (see de Boer 1973, pls 10-11. One of these views is the frequently reproduced “c. 1538” plan of Hull in the Cottonian manuscripts).

Rogers undertook a comprehensive review of the defences. Not only did he recommend strengthening key points within the existing circuit, but he addressed the fundamental weakness of the town’s exposed eastern flank, and the approach to this from the Humber Estuary. His solution was to build three new gun platforms, linked by a massive new curtain wall, on the east bank of the River Hull. These would provide far more effective control of the entrance to that river, protection for the town’s waterfronts and harbour, and also, for the first time, a suitable defence against any land-based attack from the east. The cumulative effect of these Tudor works was to make Hull one of the strongest fortifications and arsenals in the North of England. They also represent the only large-scale coastal defence works in the North during the later part of Henry’s reign; the extension of any comparable work to the coast further north, and along the border with Scotland, did not begin until the reign of Edward VI, and continued under Elizabeth (for example, at Berwick-on-Tweed: Crossley 1990, 110-113).

How many of his recommendations for improvements to the existing town defences were ever carried out is unclear. As Henry visited the town in 1541, and was clearly taking a personal interest, it is likely that some action would have been taken to implement at least some of these. Manuscript drawings of the defences facing onto the Humber suggest that Rogers was planning additional works at the Humber Gate (Shelby 1967, pl. 8); hence, at least the seaward-facing defences are likely to have been considered for strengthening. How much, if any, of the works proposed at the North and Beverley Gates, and at the angle tower, was ever progressed, is less certain.

**The 17th-Century Military Works**

This century would see fundamental changes which would transform the defences at Hull, and bring them into line with some of the major European towns of this era. The construction of the South End Fort at the mouth of the River Hull in 1627 – on the west bank of the river, opposite to the South Blockhouse – made the town far better protected from any potential naval attack. It was one of only a tiny handful of coastal fortifications dating to the earlier part of Charles I’s reign: the only other significant fort
to be built on the East Coast during this period was the Landguard Fort at the mouth of
the Orwell Estuary (Suffolk), which was directly contemporary with this Hull fort,
being constructed between 1626 and 1628 (Saunders 1989, 69). Probably coeval with
the building of both these forts was the addition of the two guard-houses to the rear of
Hull’s Beverley Gate. These were probably intended to accommodate the additional
men, stores and ammunition, which came with its adaptation for the use of artillery.
Whilst the gun crews and their equipment would have been stationed at the gate, the
likelihood (from subsequent records of damage sustained during the Civil War) is that
the guns themselves would have been mounted on the flanking sections of the ramparts
immediately behind the town wall; the c. 1638 Wenceslaus Hollar map of Hull shows
low embrasures cut at intervals along the tops of the town wall (Illus. 6). That map was
clearly surveyed before additional outer defensive works were constructed around the
town in 1639-40. Hence, as this map shows the Beverley Gate with its new guard-
chambers, these clearly pre-date Hollar’s survey.

In 1639-40, as tensions rose in the period leading up to the start of the Civil War, a
major programme of improvements to the defences was initiated by the Crown. The
widespread use of artillery in contemporary warfare had exposed the weaknesses of
medieval town defences, and many contemporary European towns had addressed this
problem by adding additional circuits of outer ditches and low counter-scarped outer
banks, and protecting the approaches to their gates with angled bastions and hornworks
– all intended to keep artillery and the besieging forces further away from the actual
walls, whilst the angled outer earthworks would also serve to deflect shot away from
scoring direct hits on the walls. Such complex outer defences had already made their
appearance around some historic towns in the Low Countries by the time of the
Religious Wars of the later sixteenth century (for example at Alkmaar), but with the
outbreak of the Thirty Years War in 1618 they were to become widely adopted across
much of Western Europe, and it was not long before such fashions were copied in
Britain. Hence, as Hull held England’s second largest arsenal (outside of the Tower of
London), it is hardly surprising that the Crown decided to bring its defences up to the
same standard.

In January 1638 the Master of the King’s Armouries, Captain William Legge,
examined the town’s defences and began to make recommendations for their improve-
ment. By January 1639 he had already started to plan the construction of additional
defences: some, but not all of these are shown faintly in outline on a plan of Hull
bearing his signature on the back (Illus. 42). In September 1639 work began on the
construction of a series of angular half-moon bastions in front of the major gates, linked
by breastworks which extended for the full length of the western and northern sides of
the town; beyond this set of earthworks was excavated in the following year a new
outer ditch, spanned by drawbridges, with a low counterscarp bank even further
beyond. Whilst none of these outer defences has yet been archaeologically investigated,
and nothing now remains above ground, their plan and layout are known from their
depiction on various eighteenth-century maps of the town (for example, the 1725
Phillips Map; Illus. 33).

The effectiveness of these improvements is shown by the fact that Hull was able to
withstand two sieges during the Civil Wars, and, despite the defences having taken a
ILLUS. 42. A view of Hull and its defences from the north, looking towards the Humber Estuary, and dating to January 1639; it is endorsed on the reverse by Secretary of State (Sir Francis) Windebank, and was sent by Capt. Legge (Master of the King’s Armouries). The Henrician defences on the east bank of the River Hull are shown clearly, with a water-filled moat to the east of the curtain wall; a short length of walling also extends westwards from the North Blockhouse to the river bank. Alongside the Humber can clearly be seen the relatively new South End Fort. The positions of planned bastions are shown faintly in outline outside the Myton Gate, the Beverley Gate and the Lowgate postern; construction of these would not begin for many months, and there are no indications here of the outer circuit of ditch which would be added in 1640. Three long jetties projecting into the estuary (near the Hessle Gate and the South Blockhouse) would allow the town and garrison to be supplied by sea in times of war. (From the Calendar of State Papers Domestic, Charles I, 1638-39, p. 411; reproduced with permission from The National Archives.)

considerable battering (as shown by the post-Civil War surveys of the condition of the fortifications), they still held out — in contrast to the fate of some other besieged towns and castles (e.g. Pontefract, or nearby Sandal Castle, in West Yorks.).
Lastly, the construction of the massive Hull Citadel between 1681 and 1690, with its extensive firing platforms (Foreman and Goodhand 1996; Howes and Foreman 1999), — had it been fully completed and armed — would have transformed Hull into one of the strongest and most heavily-armed arsenals in the North of England, with a prodigious concentration of firepower in a relatively small, heavily fortified area. The accession of William III to the English throne effectively removed any imminent threat of invasion from the Low Countries, and caused work on its remaining construction stages to be abandoned. Although the Citadel was never completed to the high standards envisaged by its creators, Bernard de Gomme and particularly Martin Beckman, its outward appearance was still sufficiently impressive to persuade a number of late seventeenth- and early eighteenth-century visitors to Hull that this was the pre-eminent fortress in the North.

The defences from c. 1700 to 1800

This period saw the gradual deterioration and neglect of Hull’s defences throughout the circuit, as their military role became increasingly irrelevant; rather, they were seen as an encumbrance and a nuisance to a rapidly burgeoning port and thriving trading centre.

After 1690 the Citadel was variously used as a barracks, supply base and prison. The South End Fort, renamed the South Battery, was refurbished in 1709 and extended in 1728; but the rest of the town defences increasingly fell into decay. By 1735 the tower at the Beverley Gate had become so ruinous that the upper parts of its guard-chambers had to be taken down. This can be clearly seen in Benjamin Gale’s drawing of the early 1770s (Illus. 9).

The need for a new dock, to ease the congestion on the town’s waterfronts, led to the decision to start taking down the town walls. This started in 1774 at the northern end of the town, and had effectively been completed along all of its northern and western sides by 1800. Its progress can be plotted in a succession of maps from 1776 onwards. On Robert Thew’s Map of 1784, all of the sections of the outer ditch and its bastions from the Beverley Gate to the Hessle Gate are still shown as being intact; but the comparable section and bastions to the north and north-east had already disappeared. Whereas, by the time of Cragg’s Map of 1817, all trace of the outer ditch and its bastions had vanished. This would seem to be corroborated by Lumsdon and Davis’s map of 1800, which — although it does not show the outer ditch per se – leaves the line of it clear of development, and labels this as ‘Old Government Works’ (Brigham 2009, fig. 12).

The defences from 1800 onwards

The nineteenth century saw Hull concentrate on developing its commercial port, and no longer spend any resources on its defence. Whereas coastal towns in other parts of England added Martello Towers during the Revolutionary and Napoleonic Wars, no such developments took place here. Similarly, at the time that new Palmerstonian fortifications were being constructed around several major harbours in the South of England, Hull’s Citadel was dismantled: the decision had already been taken to replace it with a new fort at Paull, further down the Estuary. Henceforth, any threats of naval attacks would be tackled long before they reached Hull.
ACKNOWLEDGEMENTS

This paper represents a synthesis of over 50 years of excavation and fieldwork on various parts of the Town Defences and the East Bank fortifications. The fieldwork on the former is presented at length in Evans 2015. A full list of acknowledgements to those who contributed to or facilitated that fieldwork may be found in that work. This paper has benefited from some very useful comments made by the referees, and also from discussions with many colleagues over the years, including friends at the Lübecker Kolloquium zur Stadtarchäologie im Hafenraum; some of the ideas expressed here were first aired at meetings of that body. The Hull History Centre and Hull Museums and Galleries kindly allowed various images to be reproduced here. Illus. 42 is reproduced with the kind permission of The National Archives. Most of the drawings are by Mike Frankland; Illus. 2 is by Mike Frankland and Jim Fraser, whilst Illus. 4 is by David Atkinson. The photographs were taken either by the former Humberside Archaeological Unit, or by staff of Hull Museums. I am very grateful to Professor Barbara English for bringing the 1639 plan of Hull by Captain William Legge to my attention. This paper has been published with the aid of a generous grant from Historic England, whose various predecessors had funded much of that work.

FUNDING

The author would like to acknowledge that funding for the publication of this paper was provided by Historic England.

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