

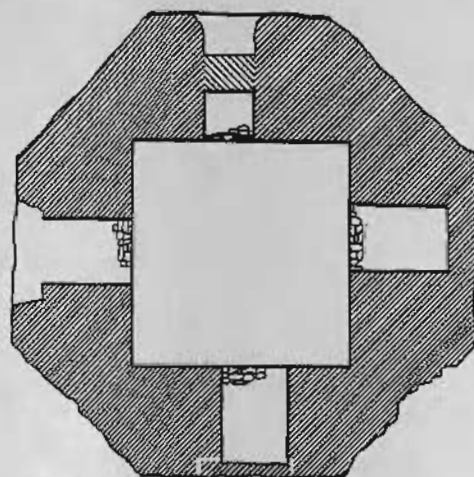
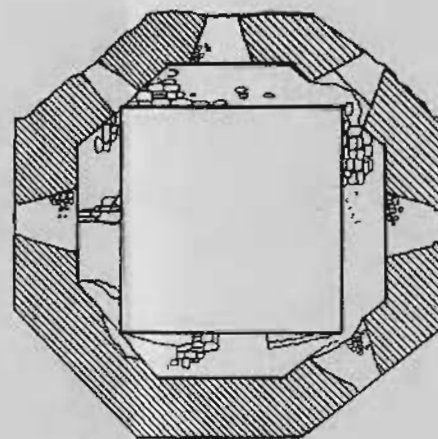


ROMAN PHAROS DOVER CASTLE

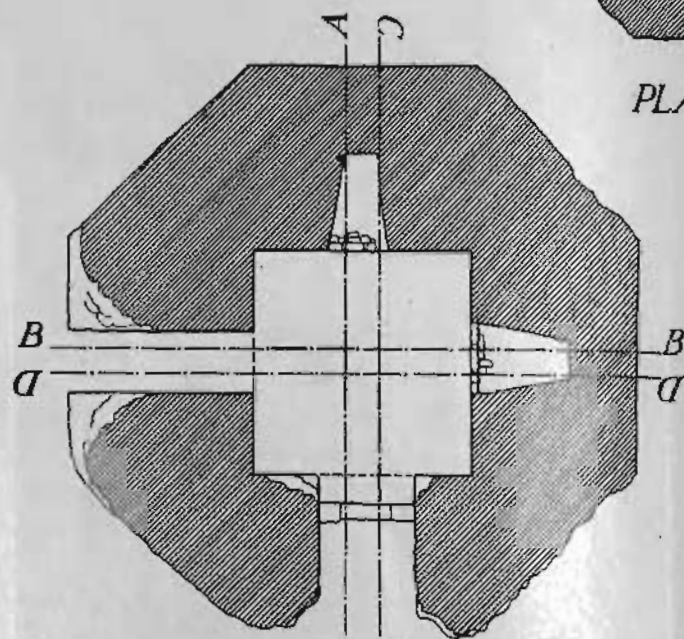
 ROMAN WORK
 MEDIAEVAL ADDITIONS



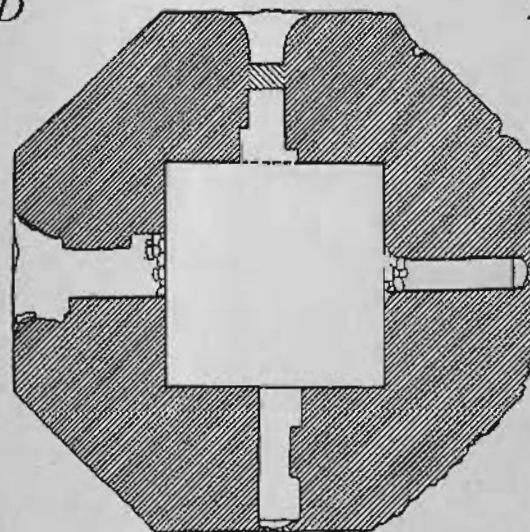
PLAN AT D



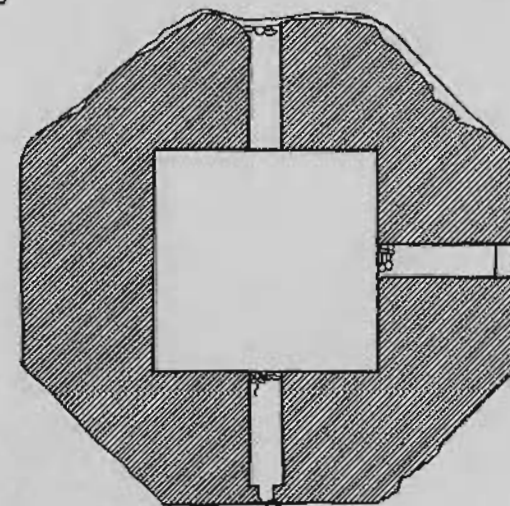
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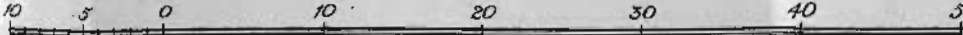
PLAN AT A



PLAN AT B



PLAN AT C

Scale  of Feet

THE ROMAN LIGHTHOUSES AT DOVER

By R. E. M. WHEELER

The Roman tower long identified as a pharos, high up on the east cliff or Castle hill of Dover, is one of the most obvious relics of Roman Britain. It is also one of the most remarkable Roman structures north of the Alps. A cynic might remark that these facts alone are sufficient to ensure its neglect. For neglected it certainly has been. Archaeologists have 'taken it for granted,' and, although much has been written of it in a casual sort of way, no adequate survey of it has ever been published. Recent enquiry, however, at the Office of Works has produced a series of excellent plans and sections made by the architects of that Office during repair-work in 1913-15, and slightly modified tracings from these drawings are here, by permission, reproduced (Pls. i and ii). The opportunity may be taken to review the evidence relating both to this tower and to its former neighbour on the Western Heights. My task has been facilitated by Mr. E. G. J. Amos, of Dover, who has provided all the photographic illustrations.

The tower on Castle hill was strangely ignored alike by Leland, Lambarde and Camden. The earliest reference to it is to be found in the *History of Dover Castle* which was compiled by Queen Elizabeth's chaplain, William Darell, but was not published until 1786. Darell observes: 'On the west side also of the above church [i.e. St. Mary's-in-Castro] is a quadrangular tower, built after the fashion of those of the Romans, and adorned with the arms of Lucius; which are now quite effaced by time and the weather.'¹ The tower was subsequently described more adequately by Stukeley, who regarded it as a Roman pharos,² and later again by Gough in his edition of Camden's *Britannia*.³ More recently, in 1872, an R.E. subaltern carried out a partial survey⁴ which, though of no great

¹ *Op. cit.*, p. 33.

² *Itinerarium Curiosum*, 2nd Ed., p. 129.

³ I, 245.

⁴ W. E. Peck, in *Archaeologia* xlv, 333. It is only fair to note that, when this survey was made, far less Roman work was visible than now (compare Pls. iv and v).

value, has not hitherto been superseded, unless by Miss Jessie Mothersole's excellent little summary in her book on *The Saxon Shore* (1924).

As now known to us from the Office of Works draw-

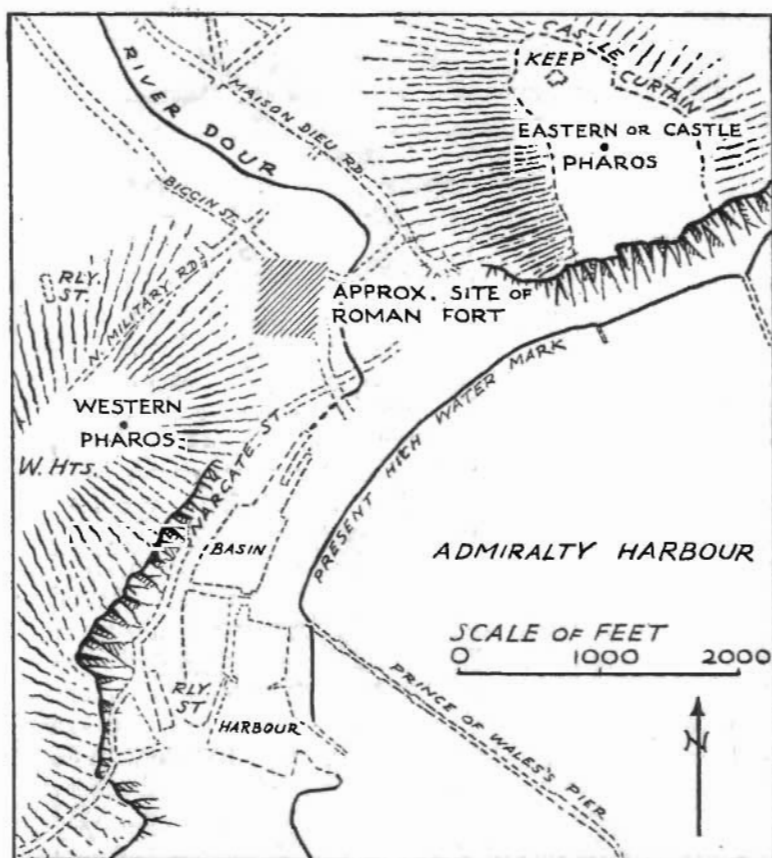


FIG. I.

SKETCH-MAP OF DOVER, SHOWING THE SITES OF THE CASTLE PHAROS, THE WESTERN PHAROS, AND (APPROXIMATELY) THE ROMAN FORT

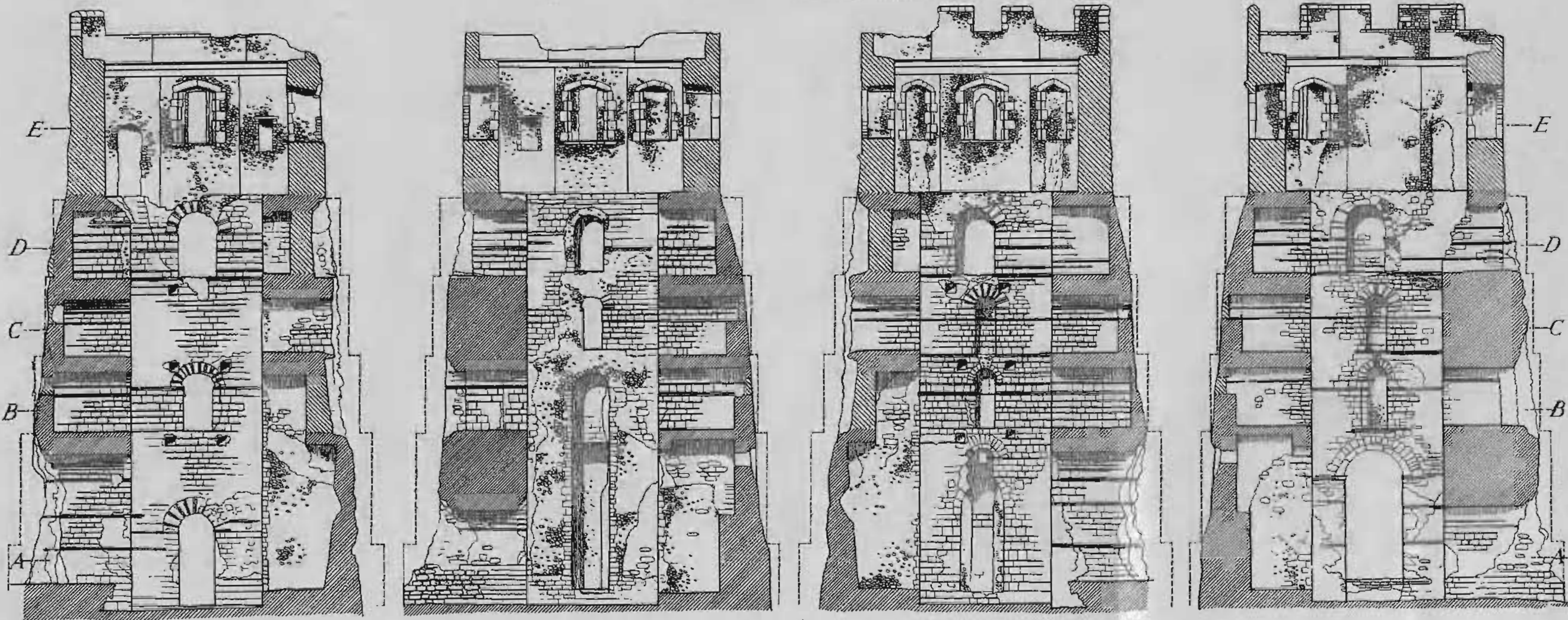
ings and from ground-observation,¹ the tower is 13 feet 10 inches square on plan internally, is octagonal externally with sides 15 feet long at the base, and survives to a total height of 62 feet. Of this height, the top 19 feet, repre-

¹ Several points of uncertainty in detail could probably be cleared up by further investigation from ladders or scaffolding, but

the results thus obtained would not modify in essentials the information now available.

ROMAN PHAROS DOVER CASTLE

ROMAN WORK MEDIAEVAL ADDITIONS



← EAST WEST → ← SOUTH NORTH → ← WEST EAST → ← NORTH SOUTH →

SECTION A. A.
LOOKING SOUTH

SECTION B. B.
LOOKING WEST.

SECTION C. C.
LOOKING NORTH

SECTION D. D.
LOOKING EAST

Scale 10 5 0 10 20 30 40 50 of Feet

senting the uppermost stage, are medieval. On the north face of this stage, in a recessed panel nearly 3 feet high, is a heater-shaped shield which evidently bore the arms of the Constable or other official responsible for its construction. Darell, as we have seen, assigned these arms to King Lucius. Gough, Stukeley and Hasted, although describing them as 'two bars and a canton,' allotted them to Sir Thomas Erpingham, Constable to Henry IV.¹ But the arms are no more those of Erpingham than of King Lucius, and Kentish antiquaries do not appear to have solved the problem of identification. To-day, the shield is much weathered. It can only be said with certainty to include two recessed bars divided and flanked by raised bars, and the charge may have been either *two bars* or, less probably, *barry*. The latter would conform with a Pembridge coat (*barry or and sable*), and the not very distinctive architecture of the stage is consistent with a date about 1369, when Sir Richard de Pembrugg or Pembridge was Constable of Dover. No emphasis, however, is laid upon this suggestion.

Beneath the medieval storey the Roman tower remains to a height of 43 feet, and is divided into four stages. Internally, the walls rise vertically; externally, the robbed and crumbling masonry was largely refaced in the middle ages, and, in the process, was battered back to the now-familiar outline (Pl. iv). This sloping outline has hitherto been regarded as an original feature of the structure; but Roman builders rarely used the batter, and the Dover tower is in reality no exception to the rule. In Roman times the outer face of the tower rose in vertical stages, with a projecting plinth of uncertain height and a set-back of about a foot at each stage. Most of the Roman facing-stones have long disappeared. But by the Roman entrance, on the southern side of the tower, the Office of Works has revealed a part of the original vertical face of the plinth (Pl. vii), and the vertical, weather-worn face of the upper part of the first stage can still be seen on the south-western side, between the third and fourth brick-courses. The extent of the successive set-backs is well indicated internally on the eastern side, where the depth of

¹ Gough's *Camden*, i, 245; Hasted, *History of Kent* (1799), iv, 58, note (t). The well-known arms of Erpingham were,

in fact, *vert an inescutcheon within an orle of eight martlets argent*.

ROMAN PHAROS
IN
DOVER CASTLE

PARTIAL RECONSTRUCTION
IN SECTION & ELEVATION
FROM THE SOUTH

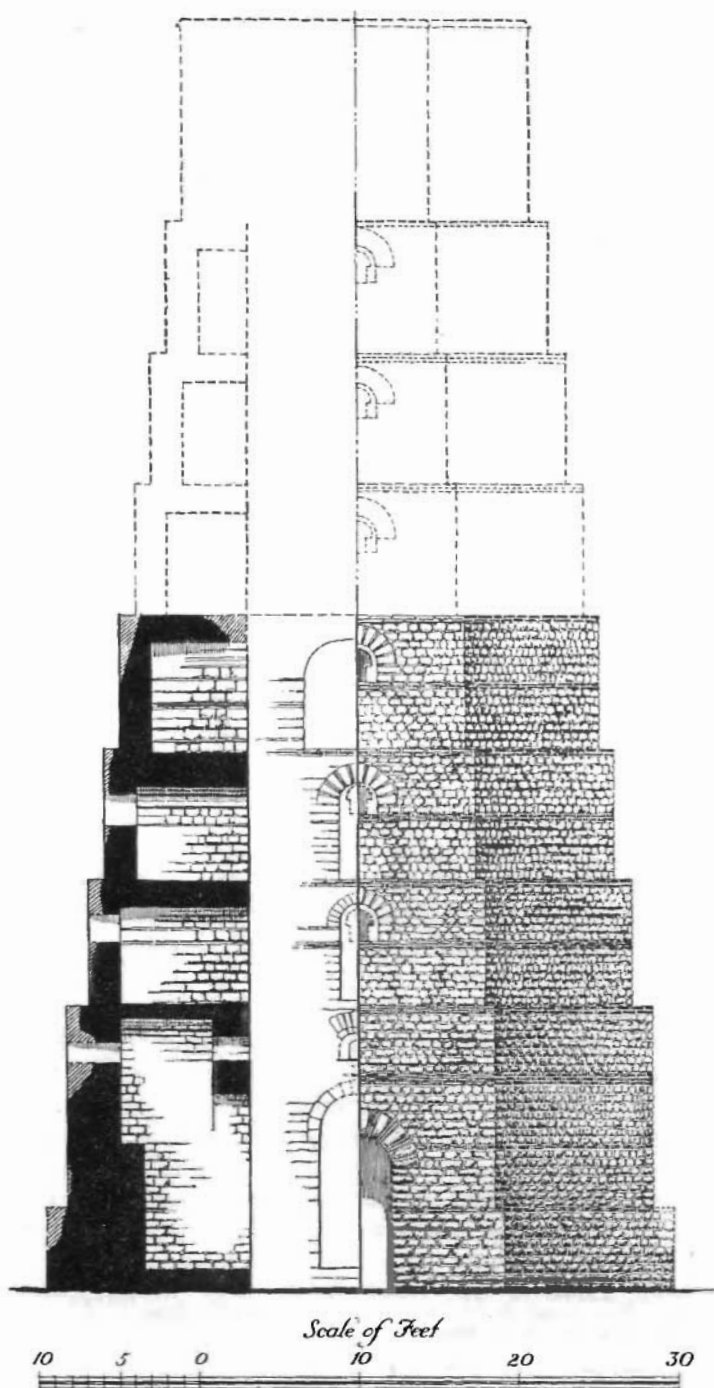


FIG 2.

the wall-recesses is reduced by a foot in each successive storey, clearly in conformity with a former series of equivalent external scarcements (Pl. ii, sections AA and cc). Only at the base of the building the plinth projects somewhat more—about 18 inches—beyond the face of the main wall of the first stage, and may have been stepped back to it with more than one scarcement.

The tower therefore had at one time a stepped or telescopic outline, which, if continued to a logical conclusion, implies an original height of about 80 feet. This height—about twice that of the surviving Roman fragment—would allow for eight normal stages and a parapet above the final floor or roof, with a wall of the reasonable thickness of 3 feet 9 inches for the top stage (see Fig. 2).

The core of the walls is of rubble with strong white mortar; the facing is of green sandstone and tufa, held by pink brick-dust mortar and levelled externally at regular intervals of seven courses with double (rarely single or triple) courses of brick. Nine of these brick-courses are still visible; the bricks are $1\frac{1}{2}$ inches thick,¹ and the mortar joints about the same. The arches of the Roman doorway and of most of the Roman windows and recesses are turned with blocks of tufa alternating with pairs of tiles, thus producing the polychrome effect of which the Roman builders (and their later imitators) were peculiarly fond (Fig. 3).

The internal arrangements are of interest and deserve a more detailed investigation than has yet been possible. Their main features, however, are clear enough. Each stage was floored with planking carried on two main beams of nearly one-foot scantling, held in square sockets in the north and south walls (see Pl. ii). Additional sockets in the north-east and south-east corners held angle-beams, which may have been connected with the staircase. The ground storey was of the exceptional height of $17\frac{3}{4}$ feet. It was entered through a doorway $9\frac{1}{2}$ feet high in the south side, which, at any rate at the base, was nearly 12 feet thick. In the opposite (northern) wall was an arched

¹ These bricks—or some of them—are about 2 feet square, are scored or combed (for keying into the mortar) on their broader surfaces, and have on each of these surfaces four small knobs or bosses, equi-

distant from the four corners. See J. Mothersole, *The Saxon Shore*, p. 129, Fig. 26. A good example is preserved in St. Mary's church.

recess, 11 feet high, with a small arched window above. The purpose of this recess is obscure; a fuller knowledge of the stair-arrangements might explain it. In the west wall, a tall recess has been cut, or at least heightened, in post-Roman times, and its quoins now run continuously

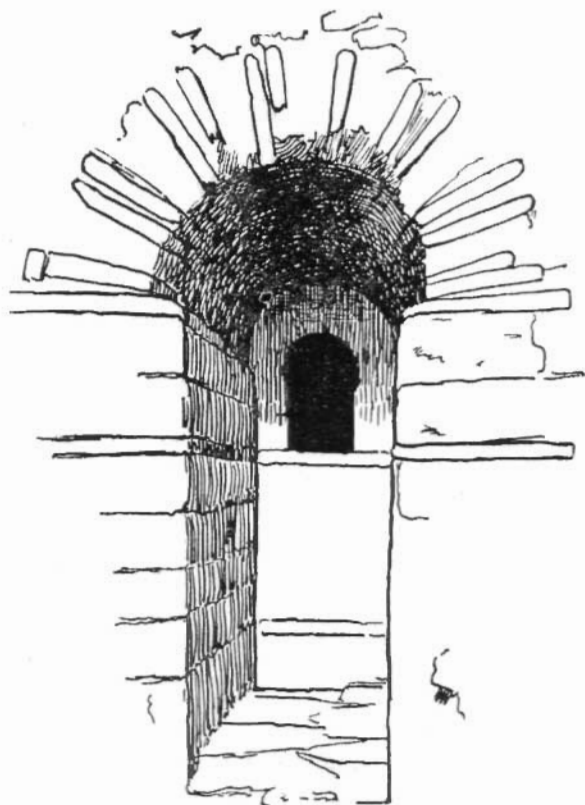


FIG. 3.

INTERIOR OF WINDOW-RECESS, WITH SMALL BLOCKED WINDOW,
IN THE 3RD STAGE ON THE EAST SIDE OF THE CASTLE PHAROS
(From a drawing by Miss Jessie Mothersole)

with those of a blocked window or recess in the second storey. On the east side, an early medieval doorway (Pl. iii, B) has been cut through the wall, possibly on the site of a former recess, to provide direct communication with the adjacent church, of which the pharos at one time



[*Ph. Amos & Amos*]

A. SOUTHERN OR ROMAN DOORWAY OF THE CASTLE
PHAROS, DOVER



[*Pb. Amos & Amos*

B. EASTERN OR POST-ROMAN DOORWAY OF THE
CASTLE PHAROS



[Pb. Amos & Amos

THE CASTLE PHAROS FROM THE SOUTH IN 1868, SHOWING ROMAN DOORWAY AND
WINDOWS BLOCKED WITH MEDIEVAL AND LATER MASONRY



[Pb. Amos & Amos

THE CASTLE PHAROS FROM THE SOUTH IN 1929, SHOWING MEDIEVAL AND LATER
BLOCKING REMOVED



[*Pb. Amos & Amos*

ROMAN WINDOW-RECESSES ON THE WESTERN SIDE OF THE CASTLE PHAROS

served as a bell-tower. This doorway and the corresponding doorway in the west end of the church were joined by a roofed passage, which is shown in engravings and photographs made prior to the reconstruction of 1860.

The second, third and fourth storeys were each from $7\frac{1}{2}$ to 8 feet in height. With the exception of the south wall of the third storey, they retain in each wall the remains of an original arched recess, from 6 to $6\frac{1}{2}$ feet high and from 8 to 6 feet in depth—the depth diminishing from storey to storey in consonance with the receding stages of the tower. The removal of much of the outer masonry of the tower has made it difficult or impossible to say how many of these recesses originally contained windows. It is possible, for example, that the relatively wide openings of the fourth storey were never more than blind recesses, intended merely to enlarge the capacity of the room. On the other hand, some at least were pierced to the outer air. The only recess which is still substantially complete is that in the east wall of the third storey (Fig. 3).¹ Here the outer end of the recess is almost filled by a masonry screen about 2 feet thick and of one build with the main structure. In the upper part of this screen is a small opening (now blocked), 2 feet high and 1 foot wide—a spy-hole at a convenient height for a watcher standing in the recess. Whether other windows were of more ample dimensions we cannot now tell; there were obvious advantages in restricting their size in this windswept tower. In the middle ages and again in the nineteenth century the tattered remains of them were largely built up (see Pl. iv), and so they remained until partially uncovered in modern times.

Such is the Roman tower in Dover castle. We need not hesitate to accept the old identification of it as a pharos or lighthouse. Its commanding position, 380 feet above the sea, raised it well above the lower sea-fogs of the coast-line and made it visible, in fair weather, from the nearer points of Gaul. By night the flames of a beacon, by day a column of smoke, issuing from its summit—or even the structure itself—would have served well as a

¹ I owe thanks to Miss Jessie Mothersole and to her publishers, Messrs. John Lane, for permission to reproduce this drawing, made from a photograph taken from scaffolding about 1915.

focus-point for channel traffic. The identification does not however, depend merely on topographical considerations. The general type of the classical lighthouse is well known to us from ancient authors and from numerous representations on coins, lamps, mosaics, and sculpture,¹ and from a small bronze relief-model which Mr. R. G. Collingwood has sketched in the Turin museum (Fig. 4). The prevailing fashion was, of course, set by the famous tower which, from its construction about 280 B.C. until its final collapse

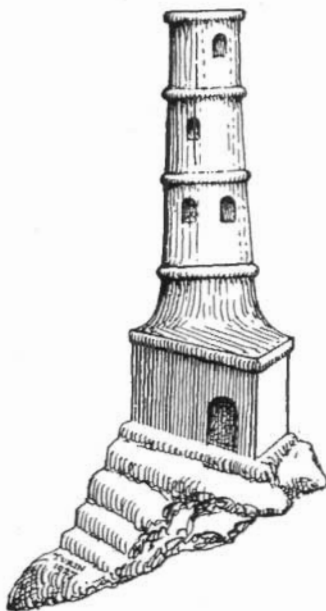


FIG. 4.

BRONZE RELIEF-MODEL OF A ROMAN LIGHTHOUSE,
NOW IN THE TURIN MUSEUM (ABOUT $\frac{1}{2}$)
(From a sketch by R. G. Collingwood)

during an earthquake in A.D. 1303, stood upon the island of Pharos off Alexandria. This great tower, the Pharos *par excellence*, rose to a height of 300 feet or more in three diminishing stages which, at least in later times, consisted of a high basal stage 100 feet square, an intermediate octagonal stage and a culminating cylindrical stage.²

¹ See Daremberg and Saglio, *Dictionnaire*, s.v. *Pharos*; and H. Thiersch, *Pharos: antike Islam und Occident* (Leipzig: Teubner, 1909).

² For a detailed account of the Pharos at Alexandria, see Thiersch as cited.



[Ph. Amos & Amos

ROMAN FACING ON THE EASTERN SIDE OF THE ORIGINAL ENTRANCE OF THE
CASTLE PHAROS

(Total height of facing in photograph, about $3\frac{1}{2}$ ft.)

The principle of diminishing stages was copied and sometimes exaggerated in certain of the lesser *phari*. An outstanding example is that which stood until about 1644 on the heights of Boulogne and is still represented there by an unintelligible fragment. It was long known as the *Tour d'Ordre* or, during the English occupation, as 'The Old Man of Bullen.' Its appearance during its latter years is well shown in a number of drawings dating from the fifteenth-seventeenth centuries, notably by Chatillon, topographer to Henry IV of France, and in the well-known Cowdray House picture of the English siege of Boulogne in 1544 (Fig. 5). It consisted of twelve or thirteen diminishing stages, octagonal in plan, with an alleged height of 200 feet and a basal width of 64 feet. In each stage it had one or more small arched openings or loops, possibly similar to those of the Dover tower. Apart from the discrepancy in size—it is clear that the Boulogne building was very much the larger—the two towers, on opposite shores of the straits, were essentially the counterparts of each other.

This brings us to the question of date. The Boulogne pharos is not dated, but we have perhaps a clue. Boulogne and its neighbourhood were the normal point of departure for a cross-channel expedition in Roman (as in Napoleonic) times, and it is more than probable that the Claudian army of conquest in A.D. 43 set sail thereabouts. It is equally natural to suppose that this region had been the scene of the celebrated antics of Caligula in A.D. 40, when, to commemorate his advance upon Britain and his victory over Ocean, he had erected 'a very high tower from which, as from a pharos, a beacon might shine forth to regulate the course of ships.'¹ Unfortunately, Suetonius is very vague as to the *locale* of the whole episode, and to assume, as has often been done, that the pharos of Caligula and the *Tour d'Ordre* are one and the same is to go beyond the evidence. Nevertheless, the identification, if a guess, is at least a likely one.

As to the Dover Castle pharos, we have even less basis for conjecture. The character of the structure itself tells us little. So far as can now be seen, it contains no material re-used from any previous building. In a region such as

¹ Suetonius, *Caligula*, xlv.

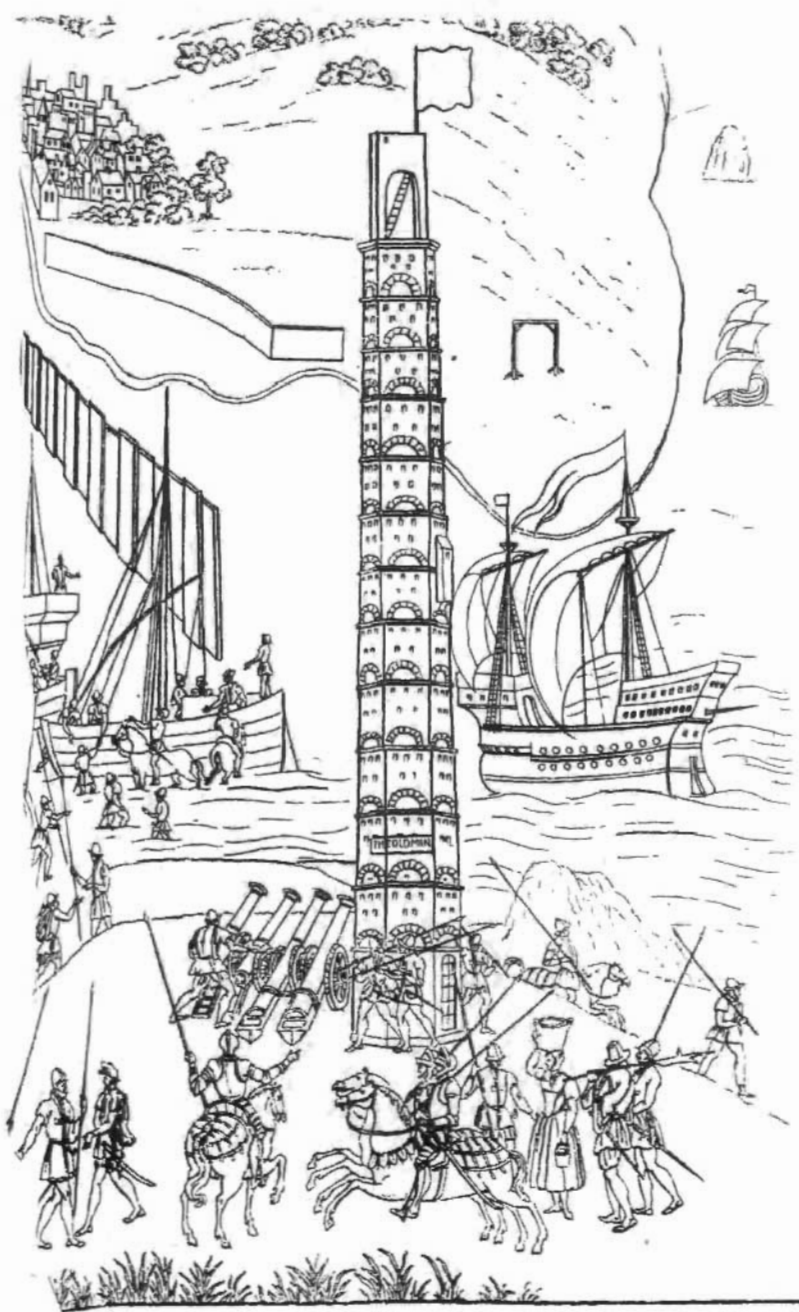


FIG. 5.

THE ROMAN PHAROS AT BOULOGNE

(From the contemporary picture of the British siege of Boulogne, 1544. For the whole picture, see W. H. St. John Hope, *Cowdray and Easebourne Priory*, Pl. XV.)

the Kentish coast, where good building-stone is hard to come by, late Roman structures built in the vicinity of an earlier Roman settlement commonly contained second-hand masonry or brick-work; witness the walls of the Saxon-Shore fortresses at Richborough or Lymne. At Dover, occupied from the first century onwards, it may be supposed on analogy that by the latter part of the Roman period disused building-materials were available for re-use in fresh constructional works. The apparent absence of such materials from the castle pharos of course proves nothing in itself, but is at least consistent with a fairly early date.

Of slightly greater weight is the general consideration that the necessity for a pharos on the Dover cliffs—a natural counterpart, as has been remarked, of the tower of Caligula at or near Boulogne—would become evident quite early in the Roman occupation of Britain. The regular cross-channel traffic which is recorded by Tacitus, for example, to have filled London with traders within the first two decades of the occupation, must have required some such elementary aid to navigation up-channel. Then there was the Channel Fleet. There is no certain evidence that the Castle pharos contains tiles impressed with the stamp CL.BR (*Classis Britannica*), such as bear abundant witness to the official relationship of the Channel Fleet with the site of Dover town.¹ But the Fleet was in existence from the days of Claudius until the end of the third century or later,² and its coast-wise needs may be added to those of the mercantile marine. On grounds of general utility, therefore, a lighthouse on one or other of the Dover cliffs might be expected as early as the first century. This, on the other hand, does not prove that the pharos now in question is of that period. Due consideration must be given to a possible rival claimant three-quarters of a mile to the westward, on the opposite side of the valley of the Dour (Fig. 1).

¹ Two or three stray tiles bearing this stamp have indeed been found near the pharos; but the vague statement of a writer in the Dover Handbook of the British Association (1899), p. 25, that CL.BR tiles have been found actually in the structure is unsubstantiated, and the tiles may have been brought to the spot with Roman materials intended for the construction of the adjacent Saxon church.

² At the one end of the period, we have from Boulogne an inscription of a trierarch dating from the time of Claudius or Nero (*Corpus Inscriptionum Latinarum*, xiii, 3542); at the other end, we have the reference to the Fleet in A.D. 287 in the *Panegyric* of Eumenius, xii—the last occasion upon which the Fleet is mentioned, at any rate under its old name.

To the earlier antiquaries, the Castle pharos was a thing of small account. Indeed, as we have remarked, neither Leland nor Lambarde nor Camden condescend to mention it. On the other hand, they all refer to a Roman tower or pharos which then stood upon the brows of the Western Heights. Leland in his notes on Dover remarks: 'On the toppe of the hye clive between the towne and the peere remayneth yet, abowt a flyte shot up ynto the land from the very brymme of the se clyffe, a ruine of a towr, the which hath bene as a pharos or a mark to shyppes on the se: and therby was a place of Templarys.'¹ Similarly Lambarde observes in the second edition of his *Perambulation of Kent*: 'There stendeth yet, upon the high cliffe, betweene the Towne and the Peere (as it were) not farre from that place which was the house of Templers, some remaine of a Tower, now called Bredenstone, which had bene, both a Pharos for comfort of Saylor, and also a προφυλακή (or watch house), for the defence of the inhabitants.'² Now the Templar church stood on the Western Heights, where its foundations may still be seen. It is evident, therefore, that Leland and Lambarde were both referring, not to the existing Roman pharos on the east cliff, but to another Roman building on the opposite side of the haven. Camden likewise refers to this western 'pharos.' After discussing Dover castle he proceeds: 'On the other cliff . . . there are remains of a very ancient structure. For some unknown reason, it has been called *Caesar's Altar*; but John Twyne of Canterbury, a learned old man who in his youth saw it to a large extent intact, has assured me that it was a Pharos for a beacon to assist nocturnal navigation.'³

What was this western pharos? Haverfield, commenting in a printed but unpublished note upon the strange omission of Camden to mention the pharos on the Castle hill, remarks that 'the suspicion arises that he had heard of the eastern one and transferred it to the west hill in error.' This gloss will not do. Lambarde, at least, knew his Kent, and the earliest description, that of Leland, is sufficiently circumstantial to carry conviction. Fortunately,

¹ Ed. L. Toulmin Smith, iv, 50.

² *Op. cit.* 1596, p. 158; 1701, p. 163.

The passage is absent from the 1st Edition of 1576.

³ *Britannia* (1607), 243.

all doubt can be removed by convincing pictorial evidence. A drawing of Dover harbour, dating from about 1543 and now in the British Museum (Cotton MSS. Aug. I. i, 22, 23), has long been known through a reproduction published in Dover about the middle of the last century; it has more recently been reproduced by Mr. William Minet in *Archaeologia*¹ and is once more illustrated here (Pl. viii). This view, which combines some of the virtues both of plan and of elevation, shows, on the Western Heights beneath the word 'Dover,' a tower and a low elongated structure. The latter is presumably the foundation of the Templar church, whilst the former may with some probability be identified with the pharos of Leland, Lambarde and Camden. But a better and more convincing representation of the pharos was recently brought to my notice by Mr. J. H. Mowll, of Dover. In Mrs. Martyn Mowll's comprehensive collection of paintings and drawings relating to Dover, is a large oil-colour view from the sea, painted, as the character of the shipping indicates, within a few years of 1690 (Pls. ix and x).² This picture, which seems hitherto to have escaped notice, makes all clear. A little to the left of the centre, on the bare slope of the Western Heights, the massive remains of the tower still dominate the landscape. The pharos on the eastern cliff is lost amidst the walls and towers of the medieval castle, and it is not difficult to see how it came to pass that the lonely western tower excluded the other from the note-books or memories of the early antiquaries. Indeed, the only reference to the Castle pharos, prior to the time of Stukeley and Montfaucon, is that included by Darell as quoted above (p. 29). But then Darell was dealing explicitly with the Castle and could not well entirely overlook this feature of it.

Lambarde has already introduced us to an alternative name for the western pharos; he calls it the Bredenstone. Camden has recorded the more sophisticated name of *Ara Caesaris* or 'Caesar's Altar,' a name which 'smacks of the renaissance antiquary and does not seem to have established itself in popular parlance. Bernard de Montfaucon,

¹ lxxii, 1921-2, Pl. xxxvi.

² The picture measures 4 feet 3 ins. by 2 feet 6 ins. I am greatly indebted both

to Mrs. Mowll and to her son for supplying the photograph and for permission to reproduce it.

writing before 1741, adds another name to the list. He describes the western tower as a 'grand monceau de mazures, de pierres et de chaux, qu'on voit auprès de Douvre, que les gens du pays appellent . . . *la goutte du Diable*,' and notes that some persons regarded it as a Roman pharos.¹ In the same century, the name 'Devil's Drop' appears also in English accounts of the relic. When in 1786 the *History of Dover Castle* written long before by William Darell was given to the world, it was illustrated from drawings made in the year 1760. One of these illustrations, here reproduced (Pl. xi, A), shows the 'Bredenstone or Devil's Drop,' and the editorial description written, be it remembered, in 1786 reads: 'a small fragment of a building said to have been a watch-tower, now vulgarly called Bredenstone, and the Devil's Drop, from the hardness of the mortar. To this place every new Lord Warden of the Cinque Ports comes in procession, and here takes his oath of office. This fragment stands on a hill opposite to the castle, the town of Dover lying in the valley between them.'² Gough, in 1789, adds nothing; he merely remarks that the tower was 'now reduced to a very small ruin called the Bredenstone, on which the lord Warden is sworn as formerly at Shipway.'³ (Incidentally, it may be observed that the transference of the Court of Shepway from Shipway or Shepway near Hythe to the Bredenstone seems to have taken place about the middle of the seventeenth century.)⁴

It is evident that during the first half of the eighteenth century the western pharos had fallen into a bad way. The drawing of 1760 shows merely a formless chunk of masonry with a large, fallen fragment alongside it. The tower had by now lost almost completely its former dominating character, and it is not therefore surprising that Stukeley, reversing the habit of his predecessors, now gave precedence to the neglected pharos on Castle hill.

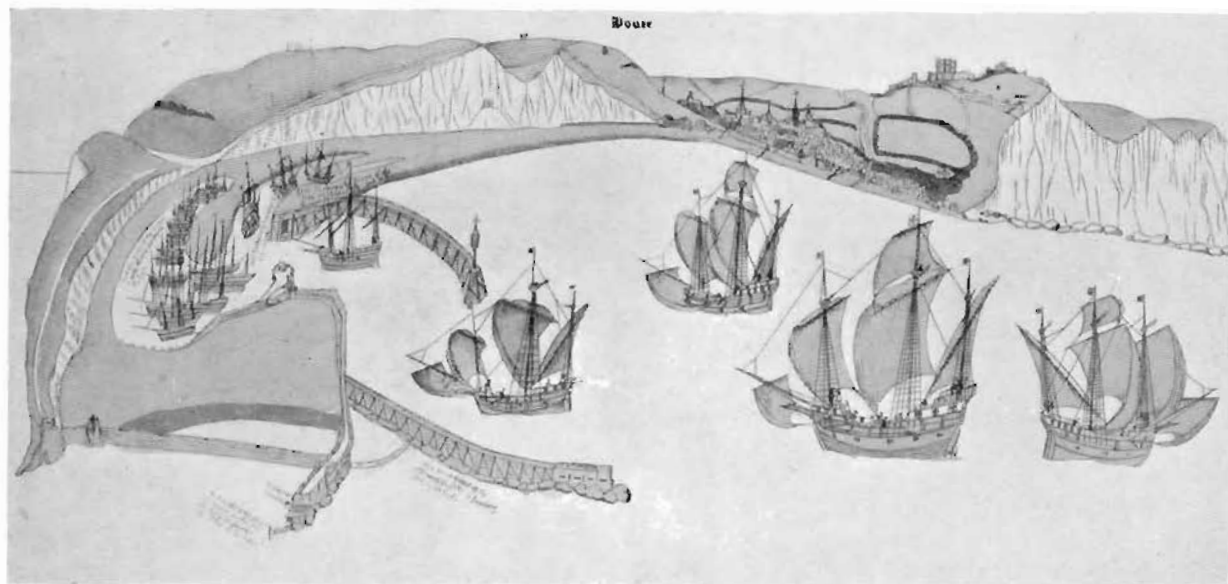
The next phase in the history of the Bredenstone or Devil's Drop—to use the names in which the ruined western pharos had now merged its identity—was one of

¹ *L'Antiquité expliquée et représentée en figures*, supp. tom. iv (1757), 137.

² Darell does not himself describe the ruin, although more than one writer has accredited him with doing so.

³ Gough's *Camden*, i, 245.

⁴ E. Knocker, *An Account of the Grand Court of Shepway*, 1862, p. 45.



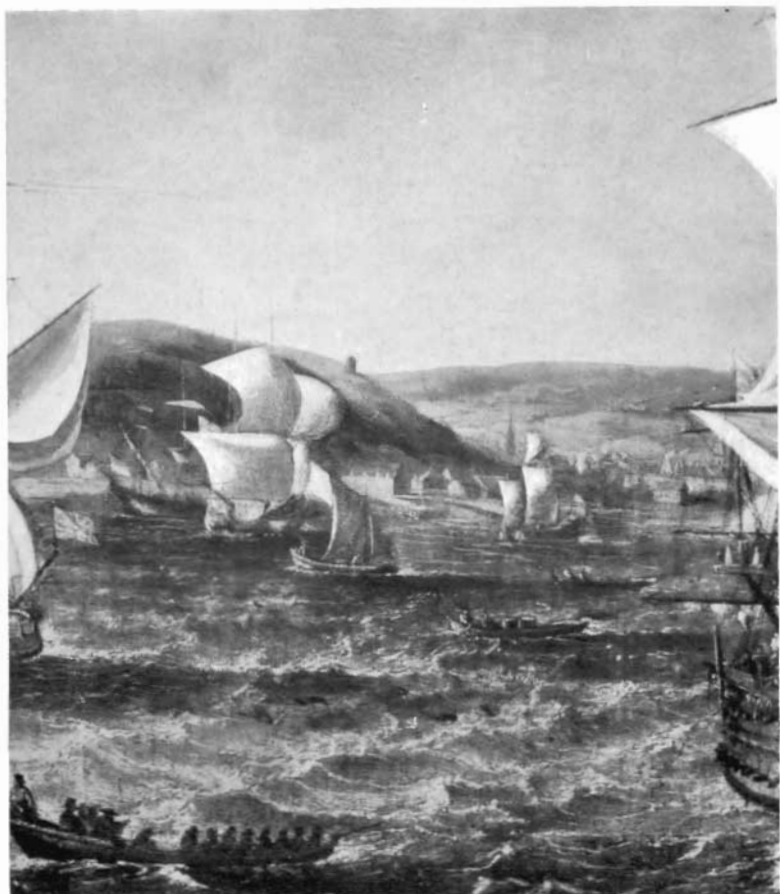
DIAGRAMMATIC VIEW OF DOVER IN 1543, APPARENTLY SHOWING THE WESTERN PHAROS NEARLY UNDER THE
'D' OF 'DOVER'

From Cotton MSS. Aug. I. i, 22, 23.



DOVER FROM THE SEA, ABOUT 1690, SHOWING THE PHAROS ON THE WESTERN HEIGHTS, LEFT-CENTRE OF PICTURE

From a contemporary oil-painting, 4 ft. 3 ins. × 2 ft. 6 ins., in the Moull Collection

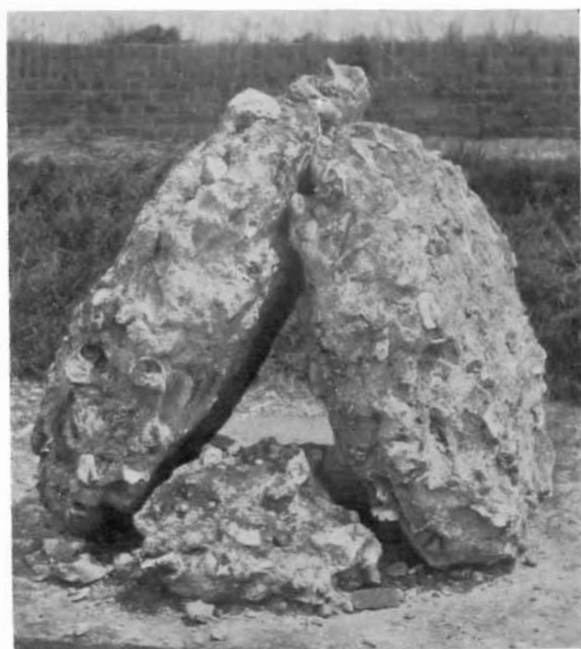


DETAIL OF PLATE IX, SHOWING THE WESTERN PHAROS ABOUT 1690



Bredenstone, or the Devils Drop.

- A. THE RUINED WESTERN PHAROS (BREDENSTONE OR DEVIL'S DROP). IN 1760
 From Darell's *History of Dover Castle*, 1786



[Ph. Amos & Amos]

- B. THE IMITATION BREDENSTONE, MADE OF BROKEN MASONRY FROM
 THE WESTERN PHAROS AND SET UP ON THE DROP REDOUBT IN 1861

total obliteration. In 1805-6 the threat of invasion led to a hasty and intensive fortification of the Western Heights. In the stress of the moment, a fragment of ancient masonry, whether as pharos or as Bredenstone, was of no account. The time-worn relic was completely buried beneath the debris thrown up by the engineers, and was lost to sight for over half a century.

In 1861 it was once more brought to light during alterations in the overlying redoubt. The discovery is recorded by Colonel Knocker :

'In the course of the excavations necessary for building new barracks the workmen came upon a platform of solid masonry, about fifteen inches in thickness, placed about eleven feet from the upper surface of the ground ; the soil above the platform being evidently made ground. The masonry is composed, according to the Roman habit, of a very hard reddish concrete and flint, and Kentish rag-stone, with tiles placed in it longitudinally. There seemed to be one layer of tiles—the tiles, however, varying in their formation. One piece I found had a smooth surface on both sides ; another next to it, in the same course, was smooth on one side, the reverse being fluted and cut into sections, giving a diamond shape of little more than half an inch diameter. Several pieces of tile were extracted which varied in thickness and in the pattern of the grooving . . .

'The building operations unfortunately only involved the uncovering of about a dozen feet in depth of the platform . . . The investigation of it, therefore, was necessarily imperfect. But, from the best observation that could be made, the platform appeared to be of hexagon shape, corresponding with the pharos in the Castle as originally constructed (*sic*), and the width of the front side of the hexagon to be about twelve or fourteen feet.

'The platform was placed upon a pavement of flint formation of about the same thickness, which extended about six feet beyond it.

'There is good ground for assuming that it was upon this platform that the "Ara Caesaris" of Darell (*sic*) stood. But this latter has not been exhumed.¹

'The military authorities most obligingly consented to adopt a course which should preserve a memorial of this interesting relic . . . It was necessary to remove the uncovered portion of it which projected from the bank ; and, accordingly, the part which has been cut off has been preserved in two pieces, and is intended to be placed on the *terre-plein* immediately over the spot ; and the wall of the barracks has been so constructed as to make the edge of the unremoved part of the platform a course in the wall, projecting a few inches from its face.'²

¹ This statement is liable to give rise to confusion. The phrase 'Ara Caesaris,' originally Camden's, not Darell's, applied to the tower as it then stood—an erect mass of masonry. Col. Knocker assumes that this upstanding mass still remains on the

buried portion of his 'platform.' It may, of course, have been destroyed in 1806 ; only further excavation can tell.

² E. Knocker, *An Account of the Grand Court of Shepway*, 1862, pp. 47 ff.

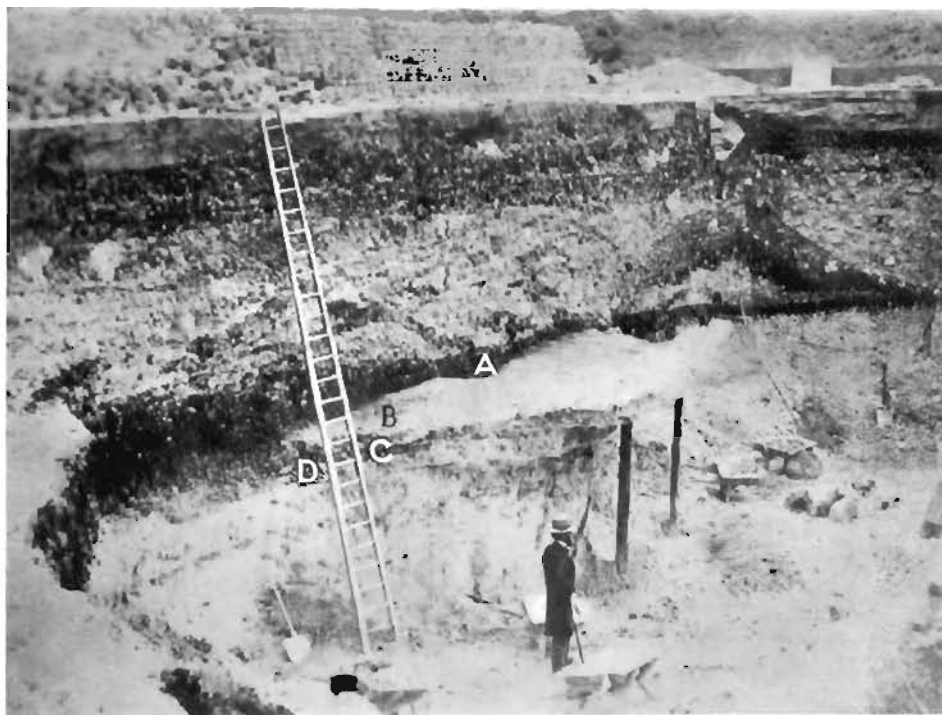
In the same year (1861) a 'photograph of the base or groundwork' of the newly discovered pharos or Bredenstone was exhibited at a meeting of the Royal Archaeological Institute.¹ This photograph was presumably one of which, through the instrumentality of Mr. E. G. J. Amos and Mr. E. O. Hambrook, of Dover, I have been able to secure a copy (Pl. xii). It shows beneath about 12 feet of mixed chalk and humus a rough projecting layer of cemented rubble, containing two or possibly three brick courses and marked "B." About the centre of this concrete is a depression, marked "A," which is said to have contained charred wood and ashes. According to an annotated sketch, signed by Clement Tait (the engineer in charge of the work) and now preserved in the Dover Town Hall, the total width of the masonry as exposed was 30 feet, its depth was $9\frac{1}{2}$ feet, and the hollow containing 'charcoal from wood and bone' was 1 foot deep. It may be that at some moment during the opening-up of the foundation its true outline was apparent; but the photograph suggests that without fresh verification, the statement that it was hexagonal should be received with all reserve.

To-day, the fortification is known as Fort George or the Drop Redoubt—in the latter name perpetuating the Devil's Drop beneath it. The Drop itself, imbedded in the stonework in 1861, shows merely as a long streak of Roman flint-rubble concrete surmounted by a tile-course. A label above it proclaims 'Site of ancient Roman pharos' (Pl. xiii, A). Overhead, on the surface of the redoubt, three chunks of the concrete, hewn off the foundation in 1861, have been set up in rough imitation of the fallen masonry which represented the stump of the pharos in the eighteenth century and, as the Bredenstone, was hallowed by association with the Wardens of the Cinque Ports (Pl. xi, B; compare Pl. xi, A).² And so the matter stands in 1929. It is to be hoped that something more may yet be done to establish beyond doubt the shape and significance of this battered but historic fragment. The Drop Redoubt is now once more obsolete. A little exploration in its cavernous depths may be expected to solve the problem. Indeed, it is to be hoped that the stubborn Roman

¹ *Archaeological Journal*, XIX, 86.

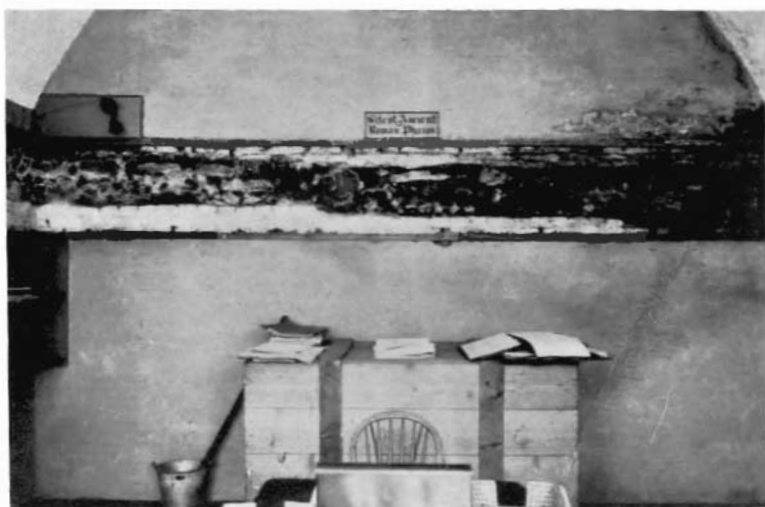
Palmerston was installed as Lord Warden

² At this new 'Bredenstone,' Lord on August 28th, 1861.



PHOTOGRAPH TAKEN IN 1861 DURING THE REDISCOVERY AND PARTIAL DEMOLITION OF THE FOUNDATIONS OF THE WESTERN PHAROS

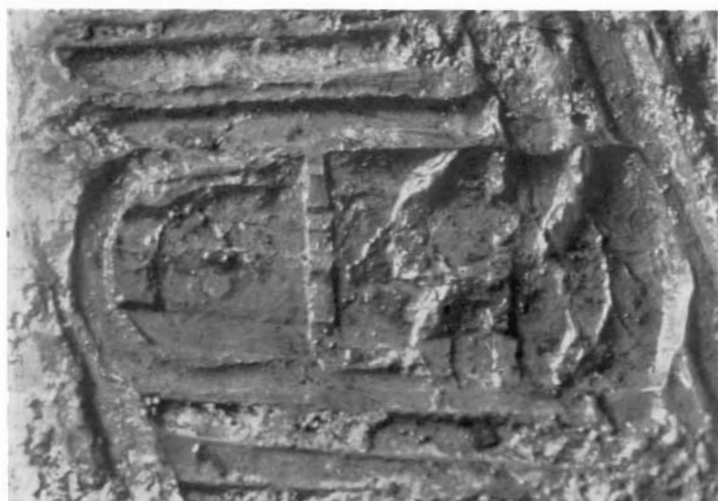
'A, cavity one foot deep in which was found charcoal from wood and bone; B, stratum of flints, mortar and stone, a solid concrete; C, facing course of two beds of grooved and plain Roman tiles; D, flints and mortar, concrete bed. Dimensions visible, 30 feet by 9 feet 6 inches.'



[Pb. Amos & Amos

A. STRIP OF THE WESTERN PHAROS VISIBLE IN A CASEMATE OF THE
DROP REDOUBT

(From a photograph taken about 1891)



[Pb. Amos & Amos

B. TILE STAMPED **CLBЯ** (I.E. *Classis Britannica*) FROM THE FOUNDATIONS
OF THE WESTERN PHAROS

foundation may yet be allowed to survive the more transient works which have all but destroyed it—works which, incidentally, have their own interest, too, and deserve a careful record before removal.

Two further points remain to be noticed about this western tower. In the first place, it was built wholly or in part of re-used materials. The mixed character of the tiles and bricks used in its construction was, as we have seen, noted in 1861; and 'a large piece of Roman tile . . . of the kind found in hypocausts,' extracted 'from one of the horizontal courses of tiles which occurred in a counter-part, on the Western Heights, Dover, of the well-known Pharos' was presented in 1863 to the Society of Antiquaries of Newcastle-on-Tyne.¹ Another flue-tile, taken from the structure in 1861, is now in the possession of Mr. E. O. Hambrook in Dover. Furthermore, a flat block of rag-stone found 'embedded on its face in the mortar' was thought by Canon Puckle to be a fragment of re-used carving.² In construction, therefore, the western pharos may be contrasted with the eastern which seems to lack second-hand material. On the other hand, it conforms in every respect with the normal methods of the builders of the Saxon Shore defences at Richborough, Lymne and elsewhere; and may with reasonable safety be ascribed to the latter part of the Roman occupation.

In the second place, whilst there is no definite evidence that the Castle pharos contained tiles with the CL(*assis* BR(*itannica*)) stamp, it is certain that such tiles were included in its western neighbour. One of them (Pl. xiii, B) is now in the possession of Mr. Hambrook; another is said to have been sent to Cambridge, but I have been unable to trace it.³ The tiles may indicate that the western tower was an official work of the Channel Fleet. But too much stress should not be laid upon this possibility, for tiles bearing this stamp occur abundantly in Dover and may therefore have been introduced into the tower with other second-hand material.

There our present knowledge of the structure on the

¹ *Archæologia Aeliana*, New Series, vi, 183.

² J. Puckle, *The Church and Fortress of Dover Castle* (1864), p. 8, with illustration. The fragment is now in the Dover Museum.

I have not seen it, but Mr. Amos is inclined to doubt whether the marks upon it are really artificial.

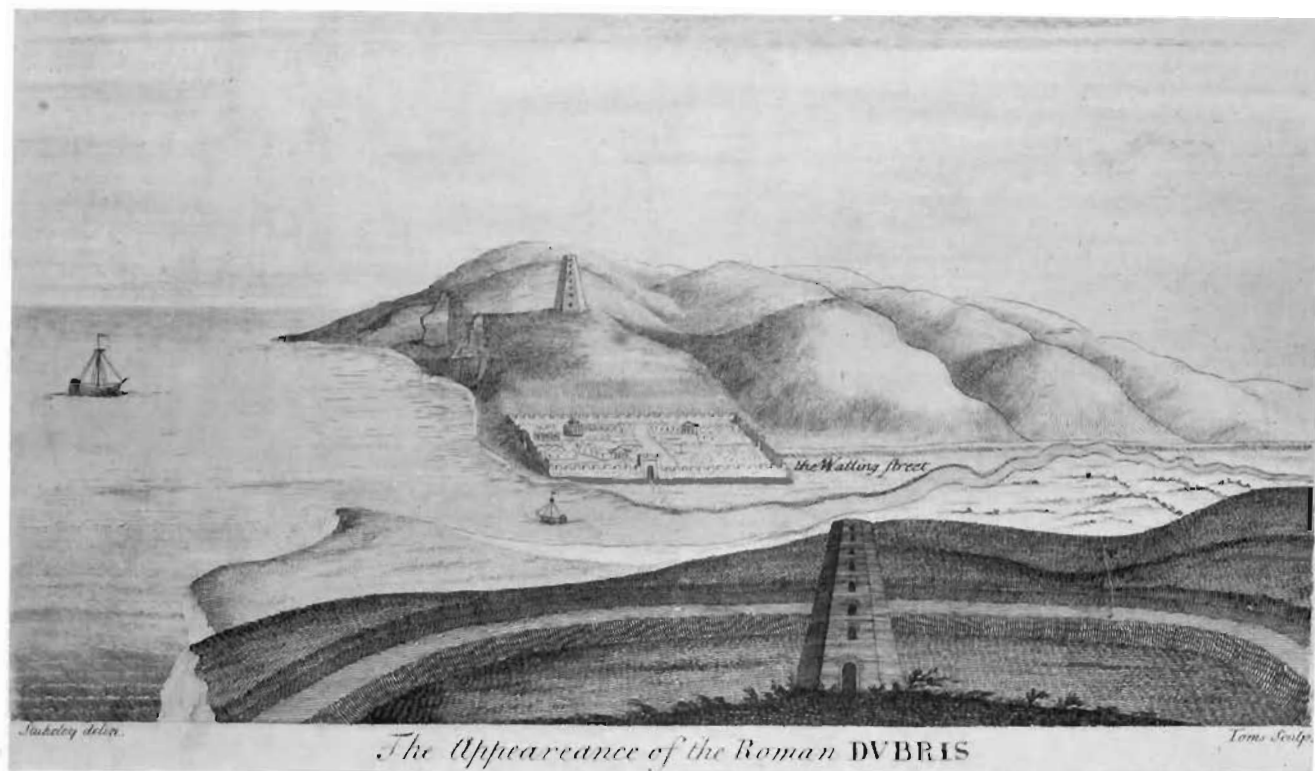
³ Vaillant, *Classis Britannica* (Arras, 1888), p. 353.

Western Heights ends. We know of this structure that it stood up as a tower, that it was possibly polygonal on plan and that the earlier antiquaries were unanimous in identifying it as a lighthouse. They were probably right. The only possible alternative is that it was a monumental tower-like tomb of a type common enough in the Roman world. A notable example of such a tomb has long been known on Mersea Island in Essex,¹ and at Dover a Roman cemetery certainly lay along the foot of the heights upon which the western tower stood.² The hollow containing ashes and possibly bones, found in the centre of the foundation in 1861, might be regarded as consistent with a funerary use. The bones, however, are not known to have been human, and the ashes may equally well have been the charred remains of a central timber upright of the kind found in the late Roman watch-towers of the Yorkshire coast. On general grounds, it seems more likely that the structure was erected as a sea-mark and a watch-tower in those latter days when the Roman equivalent of the Dover Patrol was busy about the Kentish coasts. The name 'pharos' may provisionally, therefore, stand. The twin towers, on the heights flanking the Dover fortress, would serve not merely to 'bracket' the harbour but would form a usefully distinctive feature amongst the coast-wise signals. Stukeley in his imaginary view of Dubra may more nearly have hit the mark than he sometimes did, and his fantasy (Pl. xiv) may fitly close our survey.

¹ This tomb has more than once been identified as a lighthouse, but Mr. A. W. Clapham, *Arch. Journ.* LXXIX, 93, has amply demonstrated its true character. Even less is to be said for the attempt to identify as a Roman lighthouse the tower on Garreg hill, overlooking the Dee near Holywell (*Arch. Journ.* LX, 254). Haverfield remarks of this tower: 'So far as I can judge, it is neither Roman nor a lighthouse.' Of greater interest is the early Saxon name for Whitby—Streoneshalch—which Bede translates as 'sinus fari.' A lighthouse at Whitby in the seventh century could scarcely have been other than Roman in origin. On the other hand, Professor F. M. Stenton writes: 'It is not very safe to argue from Bede's "sinus fari" that there was an ancient

lighthouse at Whitby. For one thing, there is another Yorkshire place of the same name far inland (Stremsall, in the N. Riding); for another, Streon is a known personal-name element meaning "strain" or "descent" and "fari" may be the genitive of a late Latin equivalent of this word.' See also *The Place-names of the North Riding of Yorkshire* (English Place-name Society, v, p. 126). Lastly, the tall structure implied by the great concrete foundation (30 feet deep) at Richborough must have served, at least incidentally, as a sea-mark in the second and third centuries A.D., but whether it was fully fitted out as a pharos is of course unknown.

² Lyon, *Hist. of Dover*, i, 2.



STUKELY'S RECONSTRUCTION OF ROMAN DOVER