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PLANS OF DOVER HARBOUR IN THE SIXTEENTH CENTURY.

BY ALEC MACDONALD.

THERE are in existence at least sixteen contemporary plans or picture-maps, showing work carried out or contemplated on Dover Harbour during the sixteenth century. Ten of them are in the British Museum ; three others are, respectively, in the Bodleian Library, in the Public Record Office and among the papers of the Marquess of Salisbury at Hatfield House ; the remaining three, one owned by Mr. Prescott, of Dover, and two by the Dover Harbour Commissioners, are facsimiles of three of the B.M. plans. The literary evidence, though considerable, is insufficient to enable us to identify all of them, but the reproduction of some of them here is perhaps sufficient excuse for an attempt to do so. The difficulty is added to by the fact that, even in the rare instances in which they are dated or signed, there is seldom any indication whether they represent then existing works or only projects which may or may not have been carried out.

The earliest printed account of the making of the harbour is in Holinshed's *Chronicle* (1578), continued after his death in 1580 by John Hooker, and this is abbreviated in the *Histories of Kent* of Harris and Hasted. There are more recent and detailed accounts by Lyon (*History of Dover*, 1814), Statham (*History of the Town and Port of Dover*, 1899), and J. Bavington Jones (*Annals of Dover*, 1916). But by far the most complete account is in a paper by the late Mr. William Minet, F.S.A., in *Archæologia*, Vol. 72 (1921). Though I have ventured to differ from Mr. Minet in several details, I owe my chief debt to him, and my justification for here covering some of the same ground again must be the comparative inaccessibility of his paper. There are numerous

contemporary letters and memoranda dealing with the subject in the British Museum, especially among the Lansdowne MSS. I have transcribed many of these, but space precludes the printing of much.

Passing over, as irrelevant to these plans, the supposed Roman Harbour up the valley of the Dour, and the mediæval harbour on the north-east side of the bay, under the Castle Cliff, we may confine our attention to the harbour in its present position at the foot of the Western Heights; and this dates from the reign of Henry VII, when John Clerk, Master of the Maison Dieu, built a pier with two forts, which went by the name of the "Wyke", at the south-west side of the bay. The site is now built over and is occupied by the Harbour Station. The earlier historians say that this was in 1501, but Statham puts it back to 1495, in which year he says "Wardens of the Wyke" were appointed for the first time, and the accounts begin to be headed "The Town and Port of Dover". A well-known picture, formerly at Windsor Castle and now at Hampton Court, representing the embarkation of Henry VIII for the "Field of the Cloth of Gold" in 1520, clearly shows Clerk's two forts in the foreground.¹

According to Holinshed, Clerk's pier made a harbour "so pleasant as ever after that corner of the Bay hath been called, and is at this day, 'Little Paradise'". As a matter of fact, "little" was added to the name only after the outer harbour had appropriated the original name of Paradise, which still survives in Paradise Row. The name was doubtless borrowed from Calais, where the inner harbour was called "Paradis" several hundred years earlier.

The perennial problem of all the successive engineers down to the present day has been to protect the harbour against the inrush of shingle and sand, which is carried up by the flood tide running from the Atlantic with increasing

¹ A fine engraving from this painting, by James Basire the elder, was published by the Soc. Antiq. in 1781. In the same year John Topham, F.S.A. described it to the Antiquaries and misled them into supposing that these forts were Archcliff and the Black Bulwark, neither of which existed in 1520; and this error has been repeated.

speed as the Channel narrows, and is aggravated by the prevailing westerly and south-westerly winds; the ebbtide, on the contrary, naturally decreases in speed as it passes westwards down the widening Channel, so that the bulk of the shingle is left behind. In view of this generally admitted fact, it is strange to find Mr. Bavington Jones remarking in his *Annals of Dover* that it "has been overlooked that the entrance to the first 'Little Paradise' was not easterly but was cut through Archcliff Point direct into the sea". He bases this statement on some "special information", the source of which he does not give, obtained by Mr. James Hammond, harbour engineer in 1727, from "excavations made on the spot and from documents not now existing". Mr. Minet ignores this; I repeat it for what it is worth, but it seems an extraordinary idea, for an entrance near Archcliff would have defeated the whole purpose of the pier. If the entrance was ever there it is not surprising that it was soon closed again—and probably from natural causes.

In 1530 Clerk's pier was badly damaged by a gale, and one of his towers was carried away. Three years later the Mayor and Jurats wrote to Thomas Cromwell that "their harbour was utterly destroyed. Unless some remedy be provided the inhabitants as well as ship owners and others will be forced to forsake the town. Constrained by poverty they send this petition by John Thompson, beseeching Cromwell to move the King for remedy".

John Thompson was Rector of St. James's Church. He was himself the author of a plan for the rebuilding of the harbour, which the King accepted, and he was appointed chief surveyor with four "experienced mariners" under him, whose names, Holinshed tells us, were Edward May, Robert Justice, Richard Towerby (or Cowchie) and John Steward.¹ The essence of his scheme was an improvement of the existing Paradise, protecting the remains of Clerk's works by a vast pier running eastwards from near Archcliff.

¹ They were not, therefore, as Mr. Minet conjectured, Richard Cavendish and his colleagues, the authors of an unrealized project mentioned on p. 125.

This pier is lengthily described by Holinshed, who says it was 131 rods [2161·5 feet] in length, but "was not finished by 250 feet so far as the foundation thereof (called the Mole-head) was laid". It was in fact carried only as far as the point marked on several of these plans under the name of the Black Bulwark, which was near the site of the Lord Warden Hotel and the start of the Admiralty Pier. Henry VIII is said by Holinshed to have spent £50,000 (Lambarde says £63,000) on these works; their subsequent decay he attributes to the King's absence abroad, his sickness after his return, the minority of Edward VI and the later loss of Calais.

Thompson was not without his critics. In 1537 he writes of being hindered by the Controller, and in the same year one Wingfield writes to the paymaster at Dover:

The Master of the Masindwe [Thompson had been rewarded with the Mastership of the Maison Dieu for his services] aided by four mariners of the town began this labour without any experience, but ever as the blind man casts his staff; and so hath builded unto this day thinking he hath done well, and is clean deceived. The four mariners are honest men, but what building meaneth they know but as ignorant men doth.¹

It is almost certainly Thompson's work that is shown in the largest and best known of the British Museum plans.² This superb drawing was engraved in 1838 and published by Thomas Rigden, who describes it as "the earliest known view of Dover extant", which, if we exclude the "Cloth of Gold" painting, it probably is. It is not the original drawing, as they all imply, but Rigden's print, that is reproduced by Statham, by Mr. Minet and by Dr. Mortimer Wheeler.³ The original is, I believe, here reproduced for the first time (Plate I). The engraving is reasonably accurate, but it does scant justice to the beauty of the drawing; and it omits some of the inscriptions, thereby, as I think, leading

¹ P.R.O., L. and P., 28 Hen. viii, 92, 335.

² Cott. Aug. I, i, 22, 23. Plate I.

³ *Arch. Journal*, Vol. LXXXV (1929) p. 42.

Mr. Minet into an error. The picture is on several pieces of paper pasted together, the whole measuring 6 ft. 2 ins. by 2 ft. 6 ins., and is drawn in brown ink, the sea being tinted pink and most of the rest greenish-yellow. The ships, in particular, most of which fly the cross of St. George, and have a crew of from five to eight men, are drawn with exquisite care. There is no indication of authorship or date. The Catalogue tentatively attributes it to Vincent Volpe, Henry VIII's painter, and dates it 1520-30. An official in the Department of Prints and Drawings tells me that the style suggests a Flemish artist, such as the illuminator, Gerard Hornebolt, and he dated it, from the style alone, between 1520 and 1540. There can be no doubt that the later date is nearer the correct one. It is certainly the work of an accomplished artist, but the inscriptions, which are certainly contemporary or nearly so, show that it was done primarily for technical rather than decorative purposes.

This is not the place to enlarge on the topographical features of the town as a whole. But attention may be drawn to what is presumably the Templars' Church on the Western Heights (in the top left-hand corner)—though it is unlike what one would have expected from the round-naved plan (see *Arch. Cant.*, XI, p. 45)—and to the entrance to the still existing steps through the cliff to the Heights, just above the large ship in the entrance to the harbour. Seven spired or towered buildings I take to be (reading from left to right): Buckland Church (the spire just visible behind the hill)¹; the Maison Dieu; St. Mary's; St. Peter's; St. Martin le Grand; St. Martin the Less (behind it); and Old St. James (on the extreme right, under the Castle).

To return to the harbour: Paradise is clearly shown as two creeks running up towards the cliff. The inner creek is inscribed: "*And this parte of the harbor is both clensted and deped vij foote*", and the outer: "*this harbour is enlarged and deped*". Encircling the fleet of ships with furled sails

¹ Perhaps this is old St. Barnabas; it cannot be St. John the Baptist, destroyed in 1538, as Rigden says, because this church was east of the Maison Dieu.

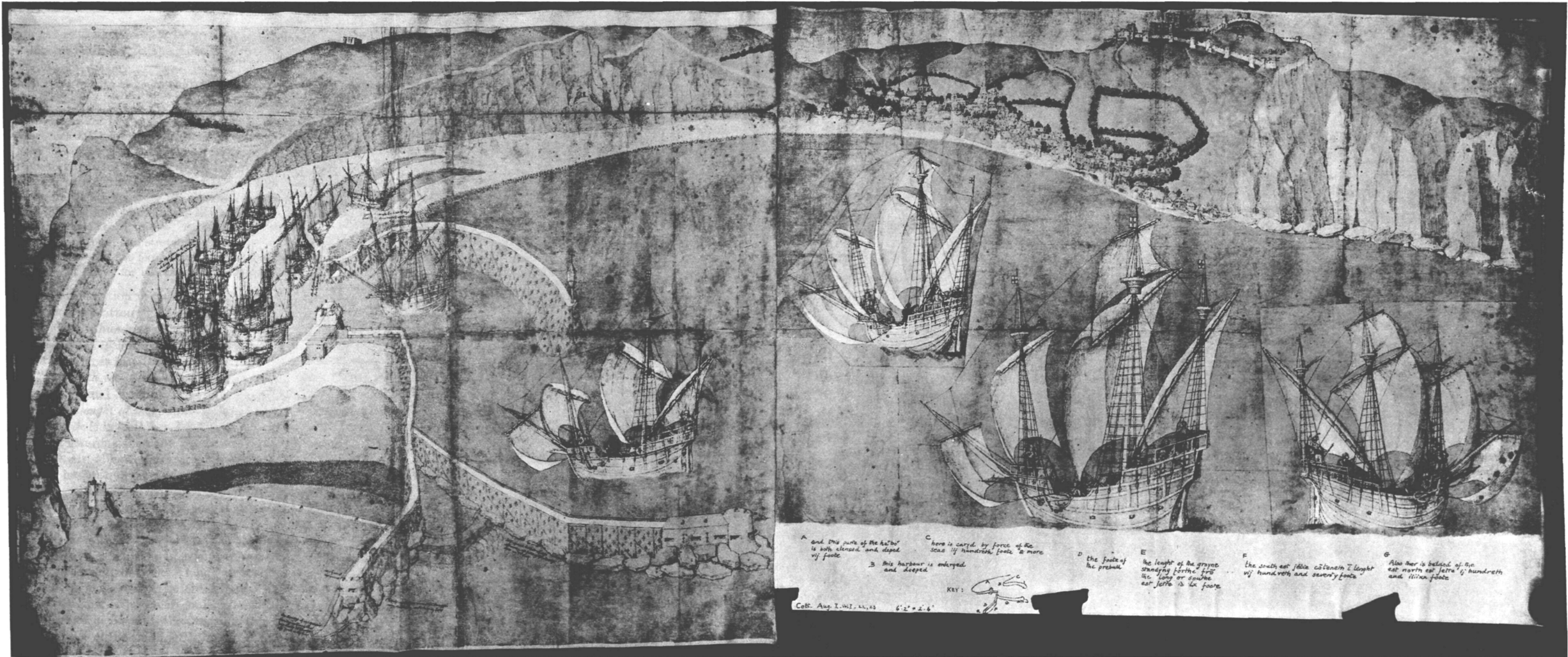


PLATE I.

DOVER HARBOUR c. 1540.
Cott. Aug. I, i. 22, 23. (6 ft. 2 ins. by 2 ft. 6 ins.)

in Paradise is Clerk's pier, with one tower remaining, and from this tower down to the bottom of the picture runs Thompson's great pier.

Here I venture to suggest that Mr. Minet was led astray. He writes :

The new seaward pier is also given . . . and ends in the fort which became known as the Black Bulwark. Against this is written " Also ther is belded of the est north est jette ii hundreth and iiiixx feet ". This " est north est jette " does not seem to have been a part of the original plan nor, though thus named by Thompson, is it shown in the picture, but it undoubtedly existed. Starting from opposite the Black Bulwark, thus leaving an outer entrance to Paradise, it formed a continuation of Thompson's main pier, and stretched across the bay towards the castle for a distance of 280 feet. How much farther it was meant to go we do not know, for it was never completed.

But an examination of the original shows that the part against which is written : " *Also there is belded [built] of the est norhest jette ii hundreth and iiiixx feet* " is itself the " est north est jette ". For against the apparently shorter branch of the pier is inscribed, in the original but not in the print : " *the south est jette coteneth i lenght vij hundreth and seventy foote* ", and it ends in a groin against which is written : " *the lenght of the groyn standyng forthe fro the long or southe est jette is lx foote* ". I feel sure that it is this point that was afterwards called the Black Bulwark. By relying on the print, Mr. Minet overlooked the first of these inscriptions, and he misquoted the second, reading " southe " for " forthe ". The word *long* should be noted, for, although foreshortening in the drawing (or perhaps economy of paper) makes this jetty look shorter, the measurements given (770 + 60) show that with its groin it measured 830 feet, as opposed to the 280 feet of the " est north est jette ". It will be observed that the " long " jetty does not start at Archcliff, as Holinshed says it did, but is a continuation of Clerk's pier. It is however connected with Archcliff by a cross wall, on which stands the Chapel of Our Lady of Pity. Against the base of the small jetty stretching down from the

cliff, with the beacon at its point, is written: "*Here is caryd by force of the seas iij hundreth foote and more.*"

There apparently intervenes here in point of date a drawing of Dover from the sea by Anthony van der Wyngaerde, in the Bodleian Library. Mr. Minet reproduces this and dates it between 1554 and 1558, since it was in the former year that Wyngaerde is supposed to have come to England, and in the latter that he dates the earliest of his dated sketches of Spanish towns now in the Victoria and Albert Museum. Mr. Minet says, "it is common knowledge that Dutch artists may be trusted for accuracy in what they represent"; but, without disputing the generalization, I see difficulties in trusting this drawing, which, unlike the British Museum plans, is the work of an independent artist, concerned less with the technicalities of the harbour than with the pictorial aspect of the town and bay as a whole. Some of its features are irreconcilable with the known facts about the harbour at any date. For instance, it does not show Clerk's round tower; its representation of Thompson's main pier with the two jetties is not in the least like that on the large drawing; and it shows a large building on the seaward side of Thompson's main pier, halfway between Arch-cliff and the Black Bulwark, of which there is no other evidence. This last building in fact puzzled Mr. Minet, who suggested that it was some building which, being exposed to the south-west gales, did not long survive.

A feature which Wyngaerde shows for the first time, but which reappears in later plans, is a short pier with a crane at the end of it. This was an extension seawards from Clerk's round tower, and formed a harbour known as "the Bight", just outside the mouth of Paradise. At this time it was apparently the only harbour, and is shown filled with ships. The clue to this is no doubt the phrase already quoted from the large drawing: "here is caryd by force of the seas iij hundreth foote and more", which, means, I take it, that sand and shingle to that extent was brought up by the currents and tide and left behind. At any rate it was this deposit that ultimately wrecked Thompson's

efforts. As Mr. Minet puts it, "every attempt made to improve matters has held in it the seeds of its own ruin". Hasted explains that the beach was carried up to such an extent that "no ships could ever get over it, excepting in that place where the river coming down from the town forced a passage into the sea, or where a channel was dug through it".

It was soon remarked that this beach could be utilized as a natural defence, and in 1580 Queen Elizabeth appointed Lord Cobham (Lord Warden of the Cinque Ports) head of a Commission to attend to the matter. Three engineers in succession worked on similar plans, the essence of which was the transformation of the natural sandbank into a break-water running south-south-west from the Watergate, on the site of the present Waterloo Crescent, and returning westwards to the cliff along the line of the present quay to the Prince of Wales Pier.

There is a good deal of interesting detail about the making of the harbour at this period among the Domestic State Papers, but as this has been dealt with already in *Arch. Cant.* by the late Canon Scott Robertson (X, cxiii *et seq.*) it need only be summarized here, and amplified by a few quotations from other sources. We learn that the cost was mainly defrayed by the Queen's licence to the Mayor to export free of duty an immense quantity of beer, barley and wheat. This was as early as 1570, and there were various other Acts of Parliament confirming and adding to the concessions. For instance, in 1581, the year of Digges' Report, described below, the Commissioners were empowered to exact from every ship of more than twenty tons passing Dover a tonnage due, the revenue from which source is said to have brought in as much as £1,000 a year.

We are also told that John True, the first engineer employed, was paid at the rate of ten shillings a day, reckoning seven days to the week, while his clerk of the works at Folkestone, where the stone was hewn, received 7s. a week, the hewers 6s. and the labourers 4s. a week each. True required two 40 ton boats to be made in London "with

engyns and ropes for the ladynge of stone at Folkestone, and the unladynge thereof at the woork at Dover", the cost of which was estimated at £200. It is no wonder that this reckless extravagance led to his dismissal.

His successor was a Fleming, Ferdinand Poins. Mr. Minet adduces reasons for attributing to him the Hatfield plan,¹ but I give below my reason for doubting this attribution. There is in the British Museum a memorandum endorsed "April 1583 F. Pointz opinion for the service of Dovor Haven",² but it is vague and nothing in it shows any variance with what Digges proposed. Like Digges, he intended to make a "bank for the pent" without timber and "there remayneth onlye question wheather the banks can be made of the stuffe that ys already in the harbor, or that of necessity there must be cley and earth brought from the shore". His conclusion is that there is sufficient natural material to make this unnecessary. However, he got no further than the construction of a groin on either side of the harbour mouth, near the Black Bulwark; these are shown on several of the later plans, and correspond with the present north and south piers of the Tidal Harbour.

In 1583 Poins gave way to Thomas Digges, mathematician member of Parliament and a scion of a distinguished Kentish family. It is this man who deserves to be remembered as the real maker of Dover Harbour. The following memorandum, endorsed 1584, is here printed almost in full, I believe for the first time :

BREEFE NOTES OF MY PROCEEDINGES IN DOUER HARBOR SINCE
THE BEEGINNING WITH THE PRESENT STATE THEREOF.

I was the firste that discovered that grosse error of one True too whome the makinge of the harbor of Douer was committed of whome there was so good an opinion conceived that hee had wasted vaynely about 2000 marks [£1,300] and was like to have wasted fivie tymes as much more: but by my meanes beeing called too examinatione yt was playnly founde that in that course which hee tooke hee shoulde haue consumed vaynly 10000li and performed nothinge towards the harbor, but rather

¹ Hatfield Papers, Maps, i. 58.

² Lansd. 37, f. 67.

haue spoyled yt for ever. But this inconuenyence by mee being discovered that mischeefe was prevented with the losse only of the moneye beefore spent.

After this Mr. Haukins, Mr. Borowes and Mr. Pet fitlye maintayned ther was no waye too make the pent for [holding ?] backwater but only with piled and planked wourkes : I affirmed the contrary that by precedent of the lowe cuntryes the pent might bee made with earth bayes of such substances as were to bee founde there without timber or planks . . . they . . . sayd it was impossible they shoulde houlde water ; but after opositione by those of the navie almost two yeares the waules were at last made as I wished of bay wourkes, and by prooffe do houlde water firmly and growe better and better and shall neede in efforte no reparations for ever : And therby at least 5000 marks sauved of that [which] otherwise shoulde vaynely haue bene wasted on planked wourkes.

THO. DIGGES.¹

If these remarks sound egotistical, it should be remembered that he might have added that, although offered the same salary that True had had, he had declined to accept any reward.² True's stone he directed to be brought to Dover, where no doubt he could find a use for it for quoins, etc. He refers to it in his "Report" as "that stone that hath byn mishewen by direction of one True".³ In 1583 Folkestone refused to supply any more stone, probably because of a proposal to build a mole for a harbour there, a proposal of which Digges was naturally contemptuous, declaring that it could not be done for less than £200,000, "wheras at Dover for £10,000 it may bee doone indeede serviceablye".

What I have alluded to as Digges' "Report" is a lengthy series of documents printed in *Archæologia*, XI (1794) from a MS. bequeathed to the Society of Antiquaries by John Thorpe and entitled : "A briefe discourse declarynge how honorable and profitable to youre most excellet maiestie,

¹ Lansd. 40, f. 79.

² S.P.D., Eliz. Vol. CLXXI, No. 13, i.

³ *Arch.* XI, p. 240.

and howe necessary and comodious for your realme, the making of Dover Haven shalbe, and what sorte, wth leaste charge in greateste perfection, the same maye be accomplyshed". Though the introductory part of this "discourse" was reprinted in 1701, at the beginning of a pamphlet by Sir Henry Sheers, and attributed to Sir Walter Raleigh, the documents attached to it show that it was the work of Thomas Digges, and was written in 1581. The title implies, and the introduction proves, that at this time Thompson's work had so decayed that the harbour was scarcely worthy of the name; and yet, he says, "noe Promontorye, towne or haven of Christendom ys so placed by nature and situacon, bothe to gratyfie freindes, and annoye Enemyes, as this your ma^{ties} towne of Dover." The introduction concludes with the assurance that, having learned from "the most skilfull maryners and inhabitants of Dover the true estate of all alterations that have happened there these forty years" (i.e. since 1541), and having carefully sounded the channels and "sett them down exactly in platte", he had "resolved upon one form of platte which . . . I finde and judge of most perfection", and which he thinks will prove both more feasible and cheaper, both to make and to maintain, than the "Flemyshe platte" (presumably Poins') which "in a former conference of comanyssioners" had been preferred.

He then sets out the "Commodities" of his plan as opposed to those of the Flemish. The most important of these are :

- i. It would be cheaper, because based on Henry VIII's foundations.
- ii. Its backwater is larger, and its sluice nearer the haven mouth, "besides a waulle to guyde the water w^{ch} in the Flemyshe ys omitted".
- iii. It makes use of "that goodlye greate baye before the towne and castle, w^{ch} in the Flemmyshe platte is quyte loste".
- iv. Land reclaimed near the pier can be built upon, and will bring in a substantial rent.

There follow "Articles explaining the English Platt" which make it clear that he intended to re-use Thompson's pier, and to make a "haven mouth" between the Black Bulwark and the Mole Head, and to build up a wall on the foundations laid by the tidal deposit of shingle, from the Mole Head to the Castle—he speaks of "the North-east wall of the backwater nexte the castle"—thus enclosing the "goodlye greate baye before the towne and castle". The mouth of the harbour was to be kept clear by the rush of fresh water from the river Dour, dammed up in the "backwater" and let forth from the main sluice¹:

This master-sluice, as in the platt may beste bee conceaued, is placed directly againste the haven mowth, not 20 rodd distante from the only place of perrill to bee clensted, the backwater farre greater than that of the Flemmyshe platt, his course first straightned betweene the jutties to geeue him force, and then, by a waull directlye guded, and ayded to worke his beste effecte. . . . A fludgate, or locke, there is also made in the bight adioyninge to the master-sluice, as in the platt is beste perceaued, the which shall serue not only to lett in and out all sutch vessells as may passe with marchandize even up to the towne, but allso to penne up the backwaters to sutch height, that shippes may safely ride a flote, fludde and ebbe within . . . The Ryver . . . ys turned from his old course, at the stone bridg by a double sluice, to let him runne ether towards the castle, or towards Paradize, as occasion shalbe offered. . . . to clense and scowre at all times, both partes of the olde haven, named Paradize; and also the chanell of the newer haven, even downe to the mowthe. . . . And soe; no doubt at all of a perpetuall good harboroughe for ever.

Next follows a detailed estimate of the cost of the whole work, including "your ma^{ts} Statua in the frunt [of the main sluice] for an honorable monument, that this haven was your ma^{ts} arte"; the total is £13,365 12s., £1760 being

¹ A similar cleansing by a rush of water was suggested in 1791 by John Smeaton in his Report on Ramsgate Harbour. The Inner Harbour there was to have sluice gates by which, when opened, the rush of water was to clear the Outer Harbour of silt.

added for the costs of the mole.¹ He then proceeds to advise as to the method of going to work, and recommends a compromise between payment by piece-work and by time.

Then come "Articles of the true estate of Dover Harbour . . . 21 December, anno 1581", which presumably dates the whole Report. The gist of the "articles" is that the building out of the pier (Thompson's work) had always been accompanied by the growth of the beach, which had "byn ether scowred awaye, or dryven farder in" as the pier had decayed.

After some notes of lesser interest, the whole series of documents concludes with a memorandum on "the other Plattes for Dover Haven, presented by Thomas Digges, wth the Harborough Mowth opened crosse the Peere S. est". This he considered a far less satisfactory plan, and entertained it only under protest, his estimate for its cost being £15,000.

It is disappointing, in view of the number of "platts" that have survived, that none of them can be identified with either of those referred to in this Report. We have however a plan dated 1581, and surmounted by the arms of Digges, *Gules, on a cross argent five eagles displayed sable*, motto: "In ardua virtus." This was presented to the British Museum² in 1841, and may be an early copy of the original. The only writing on it, apart from the date and the words "Paradise", "Ardcliff Tower" (the Chapel) and "The Crane", are some soundings, so it may be the platt of the soundings to which Digges refers in his introduction. The average depth of water in the harbour (it is obviously drawn at low tide) is 12 to 20 feet, with some 10 feet of ooze, while outside the harbour it varies from 1 to 3½

¹ Mr. Minett says (p. 198) that Lyon had regarded this Report as a statement of what was actually done, and that Lyon's Plate VI is a plan showing "in all seriousness" every detail of it. But Lyon's Plate VI is clearly based on the existing plan which Mr. Minet himself reproduces as Plate XLI; he was perhaps thinking of the frontispiece to a book called *A Proposed Plan for Improving Dover Harbour*, by Lieut. B. Worthington, R.N. (1838), which does represent everything, including the statue over the sluice.

² Add. MS. 11815 a. Plate II.

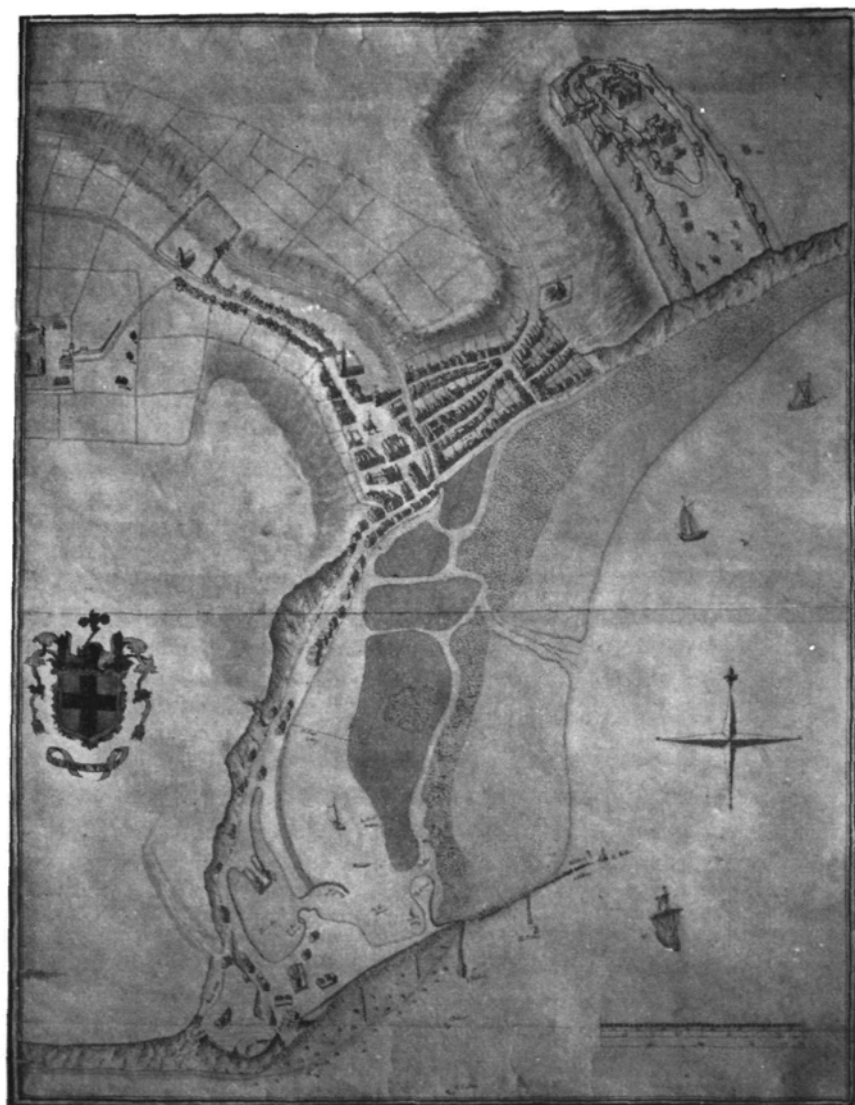


PLATE II.

DOVER HARBOUR, 1581.

B.M. Add. MS. 11,815a. (2 ft. 4 in. by 1 ft. 10½ in.)

fathoms.¹ This plan contains no harbour works that were not in existence some years before 1581, and I think it is simply a plan of the harbour—or absence of harbour—at that date. I imagine that Digges' intention, as described in his Report, was to reconstruct Thompson's pier as it was originally designed, as far as the Molehead, the foundations of which are marked just above the ship in the foreground, and another wall from that point to the Castle, along the line of the sandbank shown. This bold scheme was certainly never executed. What was done, however, is indicated on this plan by a fine line starting from just north-east of the river mouth, running south-west about halfway towards the Black Bulwark, and returning at a slightly obtuse angle to join the cliff under the Western Heights. In fact, as Lambarde wrote in 1576 :

Pent and Sluyce hath been made, which both open the mouth and scowre the bottome of the Haven, delivering it from that Beach (or bowlderstone) that before choaked it, and is now (as is said of a Scorpion) converted to the medicine of that maladie which it had brought upon the place, in such sort, as where before was not four foot of water, a ship of some hundreds may now safely goe in and out.²

This Great Pent is the present Wellington Basin, and its greater and lesser wall are the foundations respectively of Waterloo Crescent and Union Street. It is shown on all the subsequent plans, of which (up to 1600) there are four, only one of which is dated, and that is of 1595.

Of these, we may consider first a garish pen and ink and wash drawing in the British Museum³ with no writing on it, but endorsed : "Dover new worke to be done and already done." Its value is lessened by its failure to bear any date and its omission to distinguish between these two

¹ Add. MS. 11815 b, which Mr. Minet mystifyingly says is "copied from Symans", is to my mind another version of 11815 a, from which it differs only in being done at high tide, in lacking the writing, and in bearing the Royal Arms instead of those of Digges.

² *Perambulation of Kent*, (1656 ed., p. 152). The first sentence is quoted by the N. E. D. as the earliest known use of the word "pent" in this sense.

³ Cott. Aug. I, i. 45.

categories, but I think it probable that the "new worke to be done" was the sluices in the Pent wall. A minor joy in this clumsy drawing is the attempt, surely one of the earliest, to represent a sunset behind the hills.

Next in date seems to be the plan in the P.R.O.¹ with the caption: "This Plat of Dover harbrowgh Is 20 Rodes to one ynch—P. Symans".² A fairly accurate engraving from this is reproduced in Hasted's Folio edition, and Mr. Minet reproduces the original. I cannot agree with Mr. Minet that British Museum Add. MS. 11815 b was copied from it. To begin with, Symans represents the town only in "map form" without drawing any of the buildings; moreover the Pent wall is represented as having definite form, and the sluice on its cross wall is shown, whereas the Add. MS. plan only indicates its coming position by a thin line. To my mind, Symans' is of slightly later date, about 1583, when this Pent wall was begun. One interesting innovation is here shown for the first time. "Paradise" has apparently silted up, but the name has been borrowed for the outer basin, which is called "Great Parrads".

We may next consider a plan of which there are two copies, one in the British Museum³ and the other in the possession of the Dover Harbour Commissioners. The old Paradise has become "Little Pent" and is connected by the "Little Sluce" near the Crane, with the Bight, which is now called "Paradise" and is connected by the "Great Sluce" with the "Great Pent", now so called for the first time and for an obvious reason. "Poyns his first groyn" and "second groyn" are also marked, the latter having a "chalk jetty" near it. An extra tab at the bottom, pasted on so as to fold over, shows an additional "North

¹ S.P.D. Eliz. 120, 24.

² It is perhaps worth while to suggest that this may be the Philip Symonson (or possibly the father of the Philip Symonson) who drew one of the earliest known maps of Kent in 1579. This map is described by the late Hon. Henry Hannen in *Arch. Cant.* XXX, and in Vol. XXXI Mr. Hannen added some biographical details extracted from the Rochester Bridge Wardens' accounts. In these accounts the name is spelt in a variety of ways one of which is "Phillip Symons". He died in 1598.

³ Cott. Aug. I, i. 7. Plate III.

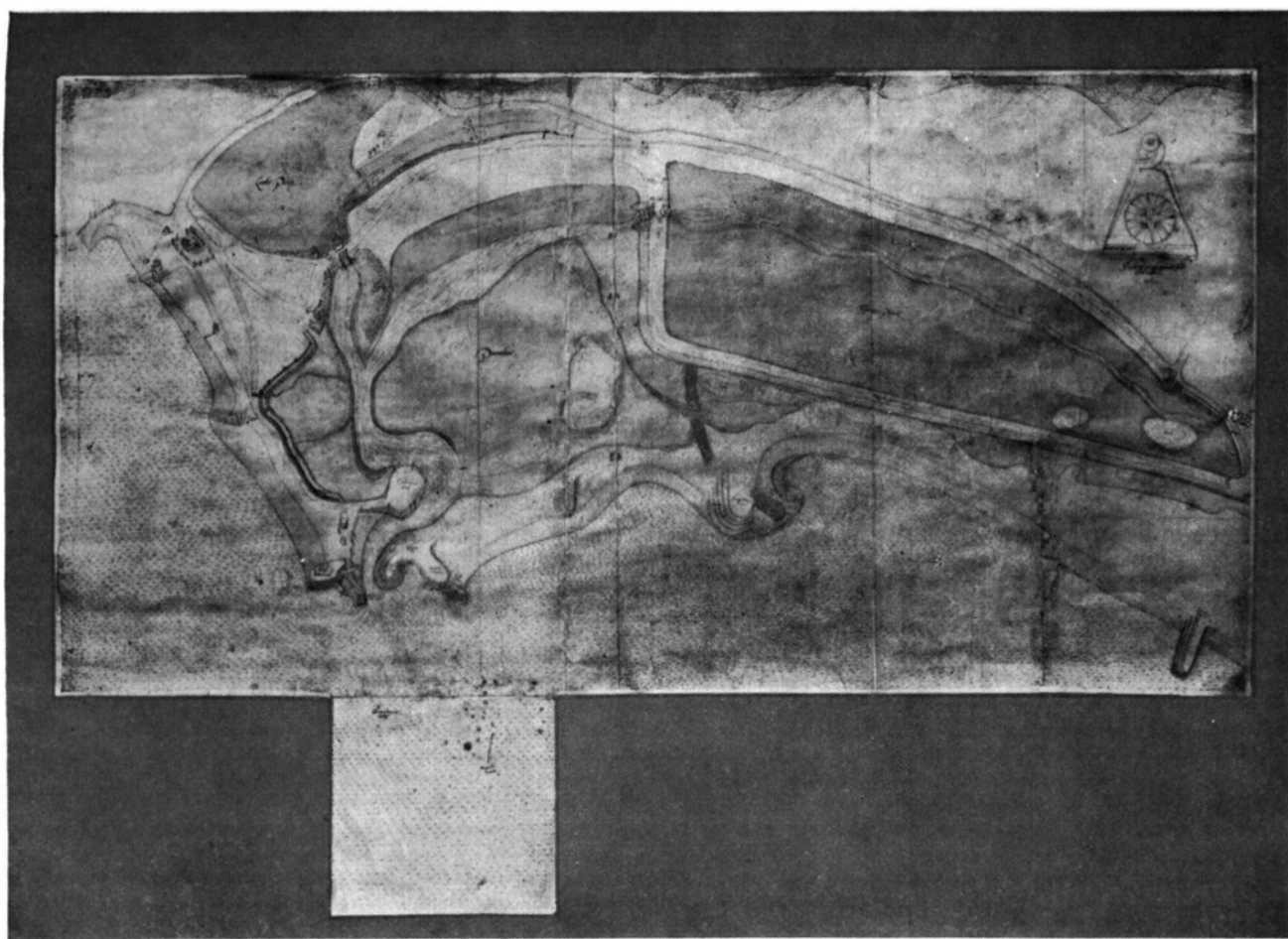


PLATE III.

DOVER HARBOUR, c. 1590.

Cott. Aug. I, Vol. I, 7. (2 ft. 8½ in. by 1 ft. 5 in. with extra piece 6½ by 6 in.)

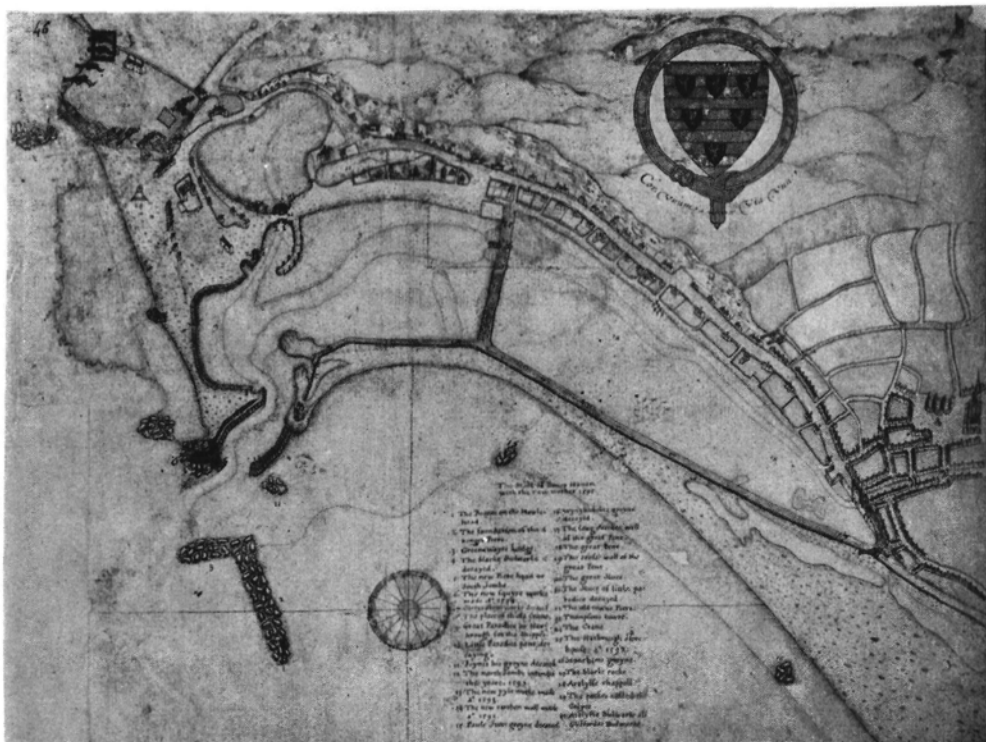


PLATE IV. THE STATE OF DOUER HAUEN WITH THE NEW WORKES, 1595.

Cott. Aug. I, Vol. I, 46. (16 $\frac{3}{4}$ in. by 14 in.)

Jettie" on "Poyns his second groyn" at the harbour mouth. Just seawards of the return of "the Pent Wall" are "Ivies first groyne", "Ivies second groyne" and "crosse groyne"; these are not otherwise known, except that "Paul Ives groyne decaied" appears as a submerged mass of rock well out to sea in the 1595 map, about to be described. Mr. Minet conjectures that they were part of an effort to encourage the formation of the tidal harbour.

By far the most convincing and detailed of all the plans is that in the British Museum¹ entitled "The State of Dover Hauen with the new workes 1595," which Mr. Minet says was found by Mr. Prescott, of Dover. There is no indication of its authorship. It is headed by the arms of Cecil (*Barry arg. and azure, five shields each sable a lion rampant argent tongued gules*) surrounded by the Garter, with the motto "Cor unum via una". It was therefore, as the British Museum Catalogue suggests, probably made for the use of Lord Burghley, who was Lord High Treasurer, and to whom much correspondence on the subject was addressed by Digges and others. But on what authority the Catalogue adds "drawn by John Hill (?)" I do not know. It seems most likely, as Mr. Minet says, that it was drawn by, or for, Digges, and it certainly represents his work. The entire harbour is shown in precise detail. Everything is numbered, and a key, here printed, makes everything so clear that little space need be occupied with a description.

THE STATE OF DOVER HAUEN WITH THE
NEW WORKES 1595

- | | |
|---|---|
| 1. The Beacon on the Mowlehead | 7. Careys stone worke decaied |
| 2. The Foundations of the Kinges
Piere | 8. The place of th' old Crane |
| 3. Greenewayes Ledge | 9. Great Paradice or Harbrough
for the Shippes |
| 4. The black Bulwarke decayed | 10. Little Paradice pent, decay-
ing |
| 5. The new Piere head or south
jambe | 11. Poynes his groyne decaied |
| 6. The new squyre worke made
A. 1594 | 12. The north Jambe intended
this year 1595 |

¹ Cott. Aug. I, i. 46. Plate IV.

- | | |
|--|---|
| 13. The new Pyle worke made A.
1593 | 22. The old towne Piere |
| 14. The new earthen wall made A.
1592 | 23. Thompson's towre (¹) |
| 15. Paul Ivese groyne decayed | 24. The Crane |
| 16. Wynybanckes groyne decayed | 25. The Harbrough store house a°
1592 |
| 17. The long earthen wall of the
Great Pent | 26. Stonehams groyne |
| 18. The great Pent | 27. The blacke rocke |
| 19. The crosse wall of the great Pent | 28. Arclyffe chappell |
| 20. The great Sluce | 29. The rocks called the Collyer |
| 21. The Sluce of Little Paradice
decayed | 30. Arclyffe Bulwarke als Gulford's
Bulwarke |

It is reasonable to suppose that the "Flemish plat", on which Digges considered his to be so great an improvement, was that proposed by Poins. If this be accepted, I do not see how it is possible to attribute to Poins, as Mr. Minet does, the plan in the Marquess of Salisbury's papers at Hatfield.² Its only indication of date is the inscription, "This plan was drawn and colored by Thos. Miles for William, Lord Cobham," and this suggests a date shortly after 1580 when Lord Cobham's commission (see page 115) was set up. It certainly cannot be the "Flemish plat", because it so clearly shows the "wall to guide the water" which Digges says was omitted in the Flemish scheme. Whatever it may have been, this plan was never executed.

In 1606 the Harbour was handed over by the Corporation to the Crown, and was vested by a Royal Charter to "eleven discreet men" called the Guardian, or Warden, and Assistants of the Harbour of Dover. This change opens a new chapter in the history of the harbour, with which it is no part of this Paper to deal. The whole story may be read in Mr. Bavington Jones's *Annals of Dover*, supplemented by Mr. Minet's Paper.

So far as the present Paper is concerned, it remains only to consider the four remaining British Museum plans, all of which are entirely irreconcilable with the harbour at any stage, and are obviously designs proposed but never carried out. One of these is reproduced by Mr. Minet, from a

¹ This must be an error; the tower is clearly Clark's.

² Hatfield Papers, Maps, i. 58.

facsimile in the possession of the Commissioners of Dover Harbour. It is a crude drawing¹ in water colour on vellum, and represents two large walls, one starting near the mouth of the River Dour and the other near the Black Bulwark—like Thompson's piers—but curving round towards one another; each is finished off with a turret, and the turrets are joined together by a chain boom. Down the side is written: "In compas $\overset{m}{v}ij \overset{c}{v}ij \text{ xl}$ [7740] foote In lengthe mmmc [3100] foote In bredthe $m \overset{c}{v}ij \overset{xx}{iii}j \text{ xi}$ [1791] foote," and the plan is endorsed "Dover Havyn". It is not dated, but is signed "Richard Caundysshe, John Bartlett, John aborowgh, Anthony Aucher". Cavendish is mentioned as Controller of the King's Work at Dover in 1542 and in 1545, and Aucher is named as paymaster in 1538, which approximately dates it.

It is not difficult to understand that so bold a scheme was in advance of its time. But it pales into insignificance before the schemes recorded in the three other plans.

One of these² is merely labelled "A grounde platt for Douor", with no indication of date. It seems to involve the complete destruction of all existing work; it is not easy, in the absence of any landmarks except the town and castle in the background, and possibly the Archcliff Chapel in the foreground, to be sure where everything was, but apparently there was to be an entrance with a boom near Archcliff and a wider one opposite the castle; these two entrances were to be joined together by a vast wall with groins and towers, while three large promontories, also with towers, were to extend into the harbour from the cliffs, dividing it into extensive basins.³ The only writing on it is a few indications of the nature of the ground: reading from south-west to north-east, "sandy grounde—softe grounde—Duff⁴ of good grounde—Duff softe grounde".

¹ Cott. Aug. I, i. 26.

² Cott. Aug. I, ii. 10.

³ On the back of this plan are a few rough scribbles, including a walled town with two churches—certainly not Dover.

⁴ Duff: "a dark-coloured clay (Kentish)," (Halliwell).

More elaborate and impressive still is a plan "mad and set fourth by the handes of John Luckas",¹ a name which does not otherwise occur in connection with the Harbour. This contemplates two vast embattled walls, one round the coast from the town to the Black Bulwark, or thereabouts, and the other straight across from there to the foot of the Castle cliff, the "mouth of the Havon" being fixed with a boom "betweene the two jettes" at the south-west end. The harbour was to be divided in half by a great stone bridge fitted with "slewces three hundreth feete brode", the upper end being shown full of rowing boats, and the lower of sailing ships. John Luckas had realized that one of the chief difficulties was the inadequate supply of water brought down by the river, and he proposed not only to dam it up with his sluices, but to supplement it with (apparently) rain water, carried down from about what is now the Connaught Park and (appropriately enough) the Corporation Water Works by a "trench in the meddowes to laye water in to serve the Goulff".

The climax of extravagance is reached in "A Plott for making the Hauen of Dover",² a drawing on vellum and dated by the British Museum Catalogue, on what evidence I do not know, "about the year 1531-1532". This proposes what I can only call a resurrection of the Roman Harbour. The mouth of the Dour is shown widened and apparently dredged, and a ship is riding with full sail somewhere about the Maison Dieu. Higher up, two locks hold up a vast sheet of water which appears to extend nearly to Buckland. The tower at the foot of the Castle flies the Tudor flag. Lyon, writing about 1813, and apparently referring to this plan, says: "as this was the most absurd of the three, it was lately proposed for the consideration of the Warden; but it is hoped that death hath laid such a visionary scheme asleep."

¹ Cott. Aug. I, ii. 9.

² Cott. Aug. I, i. 19.