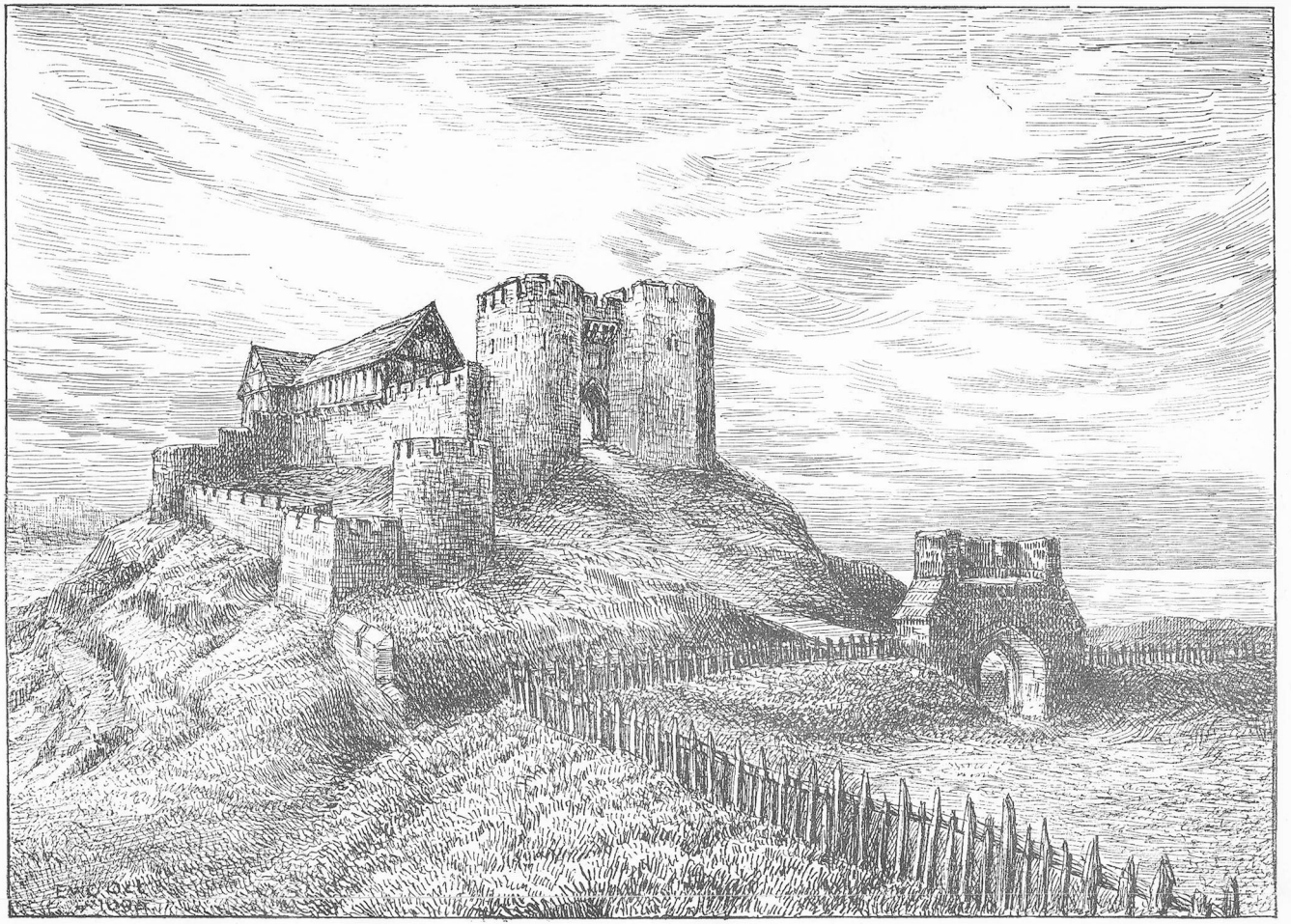


Diserth Castle, East Front

Diserth Castle

BY E. W. COX

THE VALE OF CLWYD, a fertile rich valley, closed by mountains on two converging sides and sea on the third, has been one of the chief prizes for the possession of which the various races of men who have held or tried to hold North Wales have contended. The great barrier of mountains between the Vale and the Dee is the first line of defence of those great natural strongholds which resisted for centuries the successive waves of invasion of Iberian, Celt, and Gael, on the pre-historic races; of Roman and Pict, and Saxon, Norman, and Englishmen. Here, on this borderland of hills have they each made their stand or forced their foes to submit; and on this land, still so much unchanged by the ploughshare, has each race engraved its mark, either in the rude aboriginal fenced hut-circles, the splendid roads and well garrisoned stations of Rome, or the series of vast entrenchments that crown the Clwydian hills, and guard every pass into the Vale.

MILITARY DEFENCES OF VARIOUS PERIODS.

Not the least of these traces is the wonderful series of castles that established the communications and held in check the native races during the English invasion; while their strength and the close proximity in which they stand testifies to the stubbornness of the defence,

and the importance attached by the invaders to the holding of this district, precisely as the earlier works tell their tale of those more obscure struggles, much of whose history is lost. It is desirable to consider very briefly the general character and position of some of these defences in connection with the races who erected them, because we want to note some of the distinctions between works strictly defensive and those of offence and invasion. It is quite true that many of such structures partake of both purposes, but the general scheme of a series of fortifications will be found to belong to one intention or the other; and we want to allot to our mediæval castles their place in the series, and then apply the indications specifically to our particular study of Diserth.

We will pass over the earliest works of all, because in *this* district the pre-historic remains of defences are few, at all events too few to systematise. There are some of the defended hut-circles in the remoter hills defended by rough stone walls that seem to have been founded in the most concealed places; probably later works have destroyed many. Roman traces are more clear, and are most significantly offensive works. Suetonius and Julius Agricola did not close the country by barring the passes; on the contrary, they opened bye-roads that penetrated in all directions. They set out their camps and stations well out in the clear and open ground, on good sites, no doubt; but like Deva and Caerwys and Varis, easily accessible from every side, so that their legionaries were at once in touch with the foe, and did not need to be hunted out in closed passes or remote and difficult mountains and swamps. Of a different character are the great earthworks which crown the summit of the eastern hills, such as Pen Cloddiau, Parc

Arthur, and Moel Fenlli. These are all of a purely defensive character. They lie in a remote and wild country, holding in possession no arable ground, opening no access to the lowlands, but sealing up the gates and passes that led to them. Although it is possible that some of these great and skilfully planned earthworks may be of pre-Roman date, and tradition connects Moel Fenlli with the Hallelujah victory gained by Germanus over the Picts and Scots early in the fifth century, the probability is that these defences had their origin about the eighth century, when the Strathclyde Britons (returning after the loss of their capital Aclwyd in 756) expelled the Saxons, and in the eighth century made this eastern range of the Clwydian mountains their main line of defence against the Saxon or English invader, which they held with more or less success till the invasion of Wales by Edward I. Contrast with these defensive works that series of strong castles commenced by the Norman invaders, and finally perfected in the 13th century by Edward I. These castles occupy, in all cases, a comparatively open site. They command and control the exits and entrances of passes, lines of road and fords. So far from being withdrawn into wild, thinly peopled districts, they are boldly set down in the midst of the most populous and fertile lands. The extreme ends of the roads leading to the passes being thus occupied, the older entrenchments among the mountains became untenable, being liable to be taken both in front and rear by the garrisons of the castles. In the later series of castles, it is apparent from the sites chosen, that their builders held command of the sea, so that the Welsh, whose natural strongholds were turned and dominated by the skill of these military engineers, no longer sufficed to keep their foes at a distance. The walled towns

contained the military stores necessary for the occupation, the want of which, through the inadequacy and difficulty of transport, had rendered the invasions under Henry II. unsuccessful. While these buildings were able to accommodate a large number of troops in time of war, thus forming bases for concentrating considerable armies, they are nevertheless planned with such economy of arrangement for their defence as to be easily held securely from danger of surprise by a very small garrison.

A mere naming of the mediæval castles in their sequence on the lines of communication they dominate, will illustrate the military scheme that dictated their sites. Beginning at the Upper Dee, Holt, Chirk, Caergwrle, and Ruthin hold the valleys of the Dee, Ceriog, Alyn, and the passes from the head of the Vale of Clwyd.

Hawarden, Ewloe, Mold, and Denbigh control the passes of the eastern range of the Clwydian hills; and the latter, planted in the centre of the Vale, was capable of containing a large army, and held in subjection the valley of the Elwy and the passes to Conway.

Flint, Basingwerk, and Rhyddlan covered both the lowest practicable fords of the Dee, and kept open the communications with the sea. All these sites conform to the rule I have given for fortresses of invasion. They occupy easily accessible sites, and are centres of a network of roads and passes in the arable and pastoral lands, following in this the Roman precedents, and in many cases standing on or near Roman sites. Their structural arrangements tell the same tale, but time will not serve to particularise them now.

THE PURPOSES OF DISERTH CASTLE.

The Castle of Diserth is locally known by several names. Diserth means "The Steep House;" "Din

Colyn," "The Fort of the Sting," or, "The Wasp," as it is traditionally called; "Castell y Ffailon," meaning the Castle of the "Forgotten Lane." Also "Castell Gerri"—names full of significance, as most Welsh names are.

We may now turn to the examination of the office that Diserth was built to fulfil; and afterwards to the methods adopted by its builders to fit it for its use. It stands at the western end of the line of road from Flint and Mostyn (next to the coast), where it debouches on the Vale of Clwyd, and it closes access by this road to the Vale, and conversely it defends the estuary of the Dee from irruptions of the Welsh. It commands the low land towards the sea, towards the east. Although it could be made (and probably has been made) a castle of offence or invasion, its main characteristics are those of a defensive fortification. It is not a necessary link in the chain of works we have spoken of; in front, the marsh of Morfa Rhyddlan (the scene of the great battle between Saxon and Briton in A.D. 795) and the river cut it off from easy access to the best part of the Vale, and it is not even well placed to command Rydd y mor or Voryd—the ford of the sea shore. It closes the Newmarket road very effectually; and it does more, it helps to bar the passage of any army by the low land (between the hills and the sea) marching towards Flint or Chester along the coast or to invade the Vale of Clwyd. Such a march would not be a wise one for any army if a foe held the hilly country and castle on their one flank, having the sea on their other, as we now find it.

This consideration brings us to certain interesting geographical changes that have taken place since the building of Diserth.

Instead of the narrow strip that now lies between the end of the eastern range and the sea, there then lay

a wide flat land, now submerged in the sea. There are many traditions of the loss of these low lands; but beyond tradition, we have it in history, that the land at Gronant, near Prestatyn, having been swallowed up by the sea, the Bishop of St. Asaph was released from paying rent to the Crown under grant from Edward the Black Prince. In the reign of Henry VI., the remission of this rent, which was a large one, shows that the land must have been wide and valuable. That this was once an accessible route into the Vale is shewn by its being defended by the ancient castle of Prestatyn, a square earthwork (possibly late British) which was destroyed in 1167 by Owain Gwynedd, and was replaced by Diserth at a later date.

Having shown that Diserth is admirably chosen for *barring* two of the roads to or from England, but less calculated for attack or holding in subjection the Vale of Clwyd, we may conclude that it was essentially a castle of defence; and though it was built by the English, after the time of its destruction, it was not found necessary to restore it as one of that system of fortresses we have spoken of, as was the case when any of the others suffered a similar disaster. In this respect it holds an analogous place with Deganwy, which was abandoned, after the further bank of the river was secured by building Conway, which superseded its need as a fortress.

Diserth Castle is a building almost without a history. It was built by Henry III. in 1241, and destroyed after a siege of six weeks by the Welsh under Prince Llewellyn, in 1262, about twenty years after its erection. The period of its existence was too short for any great number of events to have happened while it remained a fortress, beyond the great and final catastrophe of its overthrow. What we have to learn from it has to be

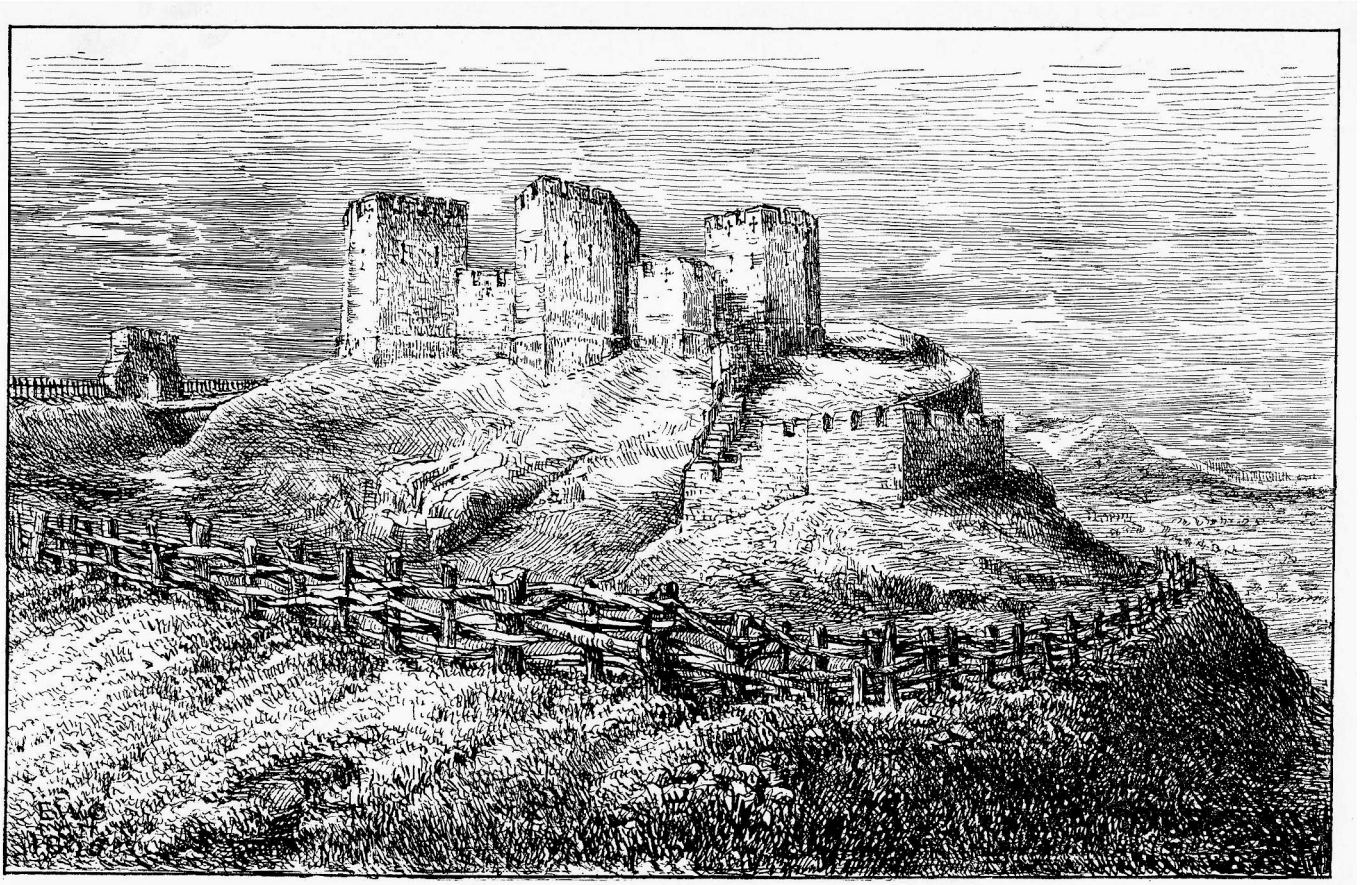
found in its remains, which, like those of the cities buried by Vesuvius, have lain deserted and unchanged since the destroyer cast down its walls and buried their lower portions in their own debris. There, lying just where they fell, are the newly-wrought ashlar details, only requiring to be lifted back into their places; there the excavations have uncovered the perfectly preserved lower walls fresh as from the builder's hand; and here is the plan of an unaltered fortress of one period as it was laid down.

SCHEME OF FORTIFICATION OF DISERTH.

We will now proceed to consider the means taken to fortify Diserth. The castle occupies a rocky promontory, jutting out between the mountains of Talar Coch and Moel Hiraeddog, on which are the trenches of a British Camp towards the west, and showing a precipitous crag to the west, and partly towards the south a steep incline to the north; while to the east a narrow neck joins it to the plateau in the rear. Two sides are nearly inaccessible, and the third steep. The main defences are therefore placed on the weakest sides—towards the east and north. The first of these is an entrenched (nearly square) outer-court with a deep but not very wide ditch; and beyond this (westwards), a deeper and wider ditch is carried for about two-thirds of a circle round the north and west sides till it ends at the precipitous face of the rock. This line of ditch is about *eighty* feet from the wall of the inner-court of the castle. There is a peculiarity about this entrenchment which at first sight might lead to the supposition that the great earthwork was earlier than the castle, as it follows the old British precedent of placing the vallum or bank outside the fosse. As a military work this is less strong than the plan of placing the ditch exterior to the vallum. Notwithstanding this feature, I think I can show conclusively that the castle

and entrenchments were planned together at one time. The purpose of placing the ditch within the vallum in British forts was, in most cases, dictated by the need for driving the cattle within the enclosure in times of peril, and the inner ditch acted as drainage for the area which otherwise would have become an untenable quagmire if banked in like a pond. The same consideration has most likely prevailed at Diserth; the deep and wide ditches were for the protection of cattle brought together in time of attack, and they were thus kept from inconveniencing the garrison. There are precedents for this in some of the castles of the north border (Norham for instance), and in the entrenched farm of Irby Grange (a mediæval manor of St. Werburgh's exposed to raids from Wales) the large vallum is also external to the ditch as in British examples. This provision for collecting the live stock is a collateral proof of the defensive character of Diserth. The entrenchments bear scarcely any vestiges of masonry, and were doubtless strengthened with a palisade of cleft oak as usual in such works.

We now come to the outer court of the castle. It was entrenched and no doubt stockaded, and would contain the penthouses and farm buildings and rick-yards, and when strongly occupied, rough quarters for troops or tents would be pitched in it. The buildings, judging from the scantiness of masonry remains, and the thin walls which were fitted for only a light superstructure, must have been of timber, or of wattle and daub, a material that resists fire much better than might be supposed. There is little remaining here to detain us. A bridge here (probably a drawbridge not attached to the main castle, unless it may have been to some outwork not now traceable) crossed the moat to the great gate of the castle.



Diserth Castle, North Side

At the far side of the ditch there must have been some barrier (probably of timber), otherwise the road from the outer-court to the well-tower on the left of the gate would have been exposed.

Before us we have the great gate of the inner castle, flanked on the proper right by a semi-cylindrical tower, and on the left by an irregularly sided polygonal tower, the arrangement of whose faces seems to indicate a preparation for a machicolation over the gateway which I have ventured to add in the restoration. These towers are now, like all the rest, broken down to less than half their original height, and lie buried in their own débris to some depth, and the gateway passage between them is partially choked with rubbish. Mr. Leonard Hughes, in his excavations, has disinterred the lower parts of the inner gateway, which was of two orders with an acutely pointed arch.

Before dealing with the main body of the castle, we will notice the character of the outworks. The north trench and outer-court we have already spoken of. In addition to this there is a large crescent-shaped court, whose wall, embracing the west side of the castle on the verge of the rock, terminates on the north-west in a square bastion or outwork commanding the road from the Vale. How this was closed on the north is not yet apparent. The south side has an external oblong court with a projecting angular bastion, at the east end of which is the well, which, as at Denbigh, appears to have had a tower of its own forming part of the external defences. These outworks surround and prevent access to the main court, the ground external to them being precipitous and difficult, and giving no foothold to an enemy. These outworks protect the weakest sides of the inner-court, which has a separate curtain-wall of its

own defended by towers, and the hall and domestic buildings, all of which are turned towards the part of the hill naturally the strongest.

The main defences of the inner-court are on the north side. Here the main walls are from five to eight feet thick, and inclusive of the north-east gate tower, are defended by three strong closed bastion towers, so skilfully planned and placed as to not only command the north ditch and external approaches (every part of which is covered by at least two of them), but their own walls and angles are effectually flanked each by the other, while they cover the interior of the court against missiles from almost any point of attack save one; and on this one point is concentrated the fire of five main defences of the castle and outworks, and the whole length of the north wall, while each main tower is capable of separate resistance if the others are taken; and any enemy approaching the north side closely is taken in front and both flanks. The disposition and trace of these features is identical in principle with the best modern military engineering. The range is calculated for a distance of 80 feet, at which the powerful and heavy crossbows and fixed engines on the towers (with which we know from the list of stores at Caernarvon in 1306 the Welsh castles were furnished) could pierce and destroy any armour. The fact that the great outer trench is just 80 feet beyond the inner defences seems to indicate that both formed one plan of the same period.

The interior of the castle is still partly buried in its ruins, but enough has been excavated to disclose the probable uses of its buildings. The round tower on the proper right of the gate was most likely the prison; and on the left the guard room, over which most likely was the chapel. The bases of the gates and doors remain;

the jambs have been plainly chamfered, with two orders for the main gate.

The double tower, with a salient angle to the field, which is divided into two by the curtain-wall passing through it, seems to have formed the kitchen. The wide fireplace is only indicated by the smoked wall, the details are destroyed; but a beautifully moulded base of a circular chimney shaft that has been set on a square chimney breast was found near here. The outer portion of the tower may have been the Constable's apartments.

The west half-hexagon tower has the appearance of having been a stable; the wide window in whose sill are the sockets for a permanent grille, such as were used for such buildings. In the wall, on the left, is a curious square recess the purpose of which is not apparent. From this tower externally the foundation of a wall ran northwards into the moat, forming a traverse. At the point of junction with the tower is a triangular external chamber with two loop-holes. This defence was built after the tower, and doubtless forms part of certain repairs and strengthenings recorded to have been made to the castle.

Between the centre tower and the south wall is a pile of formless ruins. On this site should lie the pantries and butteries crossing the court. I have conjecturally restored these. At the south-west angle the foundation of the hall, 48 feet in extreme length, and 25 feet in breadth; it is furthest withdrawn from the lines of attack, and is covered effectively by the three towers. The door is at the eastern end of the north side, where it would pass behind the screens; the dais at the west end. As there is no trace of a fireplace, we may conclude that there was a central hearth.

I am of opinion from the peculiar form of the walls at the west side of this court in front of the hall, that a

kind of cloister or verandah of wood was carried round three sides of it as a shelter from arrows shot over the walls at a high elevation, and that portion on the left was an open shed for the protection of the lord's horses; the curtain-wall protected the fourth side without any pent roof; also that another apartment or two, of two stories, existed behind the hall for the withdrawing room and chamber. The hall has very thin walls, and was, with the chambers, most likely built of oak in the upper portion. This is not at all unusual for the internal offices of a castle. There is reason to believe that the first hall of Conway (which was built in 1286) was of timber. The fabric rolls tell us that not only are expenses allowed for carpentry, but the timber was removed to Carnarvon, when, a few years later, it was superseded by the present great hall in masonry. An opinion exists (from the appearance of the masonry at Carnarvon), that the hall there never was finished in stone; doubtless it was only prepared for the timber building from Conway. The character of the lower walls of the hall at Diserth are fitted only as the base for timber superstructure. There are some valuable details of the windows and battlements among the fragments, the former showing how the glass was fixed in moveable wooden frames. We know that when castles were not occupied by their owners, the glass was carefully removed and stowed away. The loophole from the battlement is cruciform, with circular oeillets and triangular foot. A beautiful moulding, either from the kitchen fireplace or some fragment of the chapel, was also found. When the excavations opened the various chambers they were found to be whitewashed on the stone; very little plastering was used in the interiors. Thus we have an exactly dated instance of the use of whitewash.

The fact that the domestic buildings are withdrawn towards the south or Welsh side of the Vale, and that the strongest points of resistance are turned towards the road to Flint and Holywell, to prevent a foe marching round the flank of the Vale by these or the low ground, are (in addition to its abandonment as a base of operations by the English) strong presumptive evidence of the defensive purpose being the main object of this strong fortress. In the character of its military engineering, but not in its office and use, its analogies are strong with Denbigh; so much so as to suggest a common designer. The angular and polygonal bastions, the separate well-tower, and the system of outworks, have much in common with the larger castle. The grouping of the towers towards the line of attack also recalls the arrangements of the older portion of Chester Castle, also built by Henry III.

PRINCIPLES OF CONSTRUCTION USED BY BUILDERS OF DISERTH.

There has been through this paper a suggestion of the prevalence of careful design and fitness of purpose, both in the sites chosen for the Welsh castles and their admirable plans of military architecture. Description of a general character can do very little towards showing the extreme perfection of design, and marvellous ability, intelligence, and practical knowledge brought into these works. So far from plans being dictated by the chance conformation of the ground, they were dominated by strict geometrical conditions down to the minutest details. There has of late been much debate whether architecture is an art or a profession or trade. It is more than an art; it is a science, but almost a lost one. There is much building but little architecture in our times; only, of late years, a few men, such as E. Penrose, Clarke, Phené Spiers,

and Norman Lockyer, have begun to discover that design was evolved from a set of fixed geometrical mathematical principles; while modern architects work not from these, but as mere copyists of this and that style. While I acknowledge my indebtedness to the theories of some of the men I have named, so far as I am aware, no one beside myself has endeavoured to apply the theories systematically to mediæval buildings. It will be new to most architects that any such system existed at all, though vague traditions of masonic secrets have always been current. Into these theories it is impossible to enter at any length—that would require an elaborate paper to itself; but inasmuch as I have applied these principles, so far as I am able to read them, to Diserth, they disclose that the system I refer to is not to be classed as a mere theory to which it is sought to adapt ancient work. So far as the little that is known of it goes, it is a partial rediscovery of method of which as yet we know the application too imperfectly to dictate any general laws; yet we do know that distinct codes have been used from the remotest antiquity, because the clearest insight we have into them comes to us from Egypt, Persia, Assyria, and Greece. In the East some remnants of ancient usage have given a clue to these ancient systems. In Persia no plans such as we understand them are made, but a site is marked out in squares, each the area of one brick, and upon that, taking so many spaces in the direction required, the plan of the walls is fixed. It is said that the patterns of Persian carpets are committed to memory in the form of poems learned by heart. This would seem incredible, but that such a tracing board of innumerable evenly set spaces makes it practicable for any series of recurring known letters, or words, to be fixed on such a pattern board in the same sequence that

they hold in a poem. So we have one element of plan. The next is to find how it is laid down with relation to the definite forms derived from it (not always corresponding with its square spaces), then to show how such a frame of perfectly even spaces can evolve a series of quite new and varying measures, which are, nevertheless, in perfect harmony with these primary spaces; and lastly, how the first base lines are laid down. This evolution of measures is effected by a system of diagonals. It is clear enough that any series of squares if crossed throughout by their diagonals evolve by these a new set of spaces, set at an angle of 45 degrees to the first set, differing in their areas, but harmonising with the first. Thus, if the measure of a side of these first is 20 feet, the squares set off by the diagonals are 28 feet. Now if, instead of taking diagonals of one square, we take that of an oblong composed of two, three, or five, we get other angles, and a new set of harmonising measures; and all lines so drawn on the primary board of parallelograms bear the same relative proportions and measures throughout. If we place on this tracing board a pentacle, one of whose angles is a right angle, running with the lines of the original squares, and the others determined by the diagonals in the manner above-mentioned, we obtain the proportioned geometrical figure used in the planning of the castle. That this is the system here adopted is plainly apparent, because the pentacle points laid out thus mark out and measure exactly every defensive point of the castle.

So far was this certain that when I laid it down I found one point standing free beyond the known limits of the castle; and had written that here the scheme of fortification was in need of a defence that must have existed, and which I suggested might have been a

wooden stockade. The next post brought me a fresh plan, with traces of a wall of the South Court, supplying the missing feature.

ORIENTATION AND DERIVATION OF SYSTEMS.

We have thus a scaleboard with a system of harmonising measures and angles; it remains to show how this was placed on the ground to work from. And here comes in a second and most interesting problem, that of orientation, a system as early as the most remote date of all architecture, and which appears from recent investigations to have more or less influenced every style and period that can be truly called architecture. This is based on astronomical knowledge, and originated in the worship of the heavenly bodies. In Egypt, Assyria, Greece, Arabia, Persia, and the lately found ruins in Mashonaland alike, the orientations were not alone fixed by the sun but the stars also; so that astronomers are able to calculate the age of temples by the deviation of the star of the deity to which the temple was dedicated, from its original orientation, owing to the precession of the equinoxes.

We all know that churches were orientated by the shadow of a staff, thrown westwards by the rising sun, on the Saint's day to whom it was dedicated. It is almost certain that other buildings also were orientated; a compass indicating this is shown on an ancient plan of Chester Castle in the British Museum. Certainly Diserth was so treated. From this line of orientation, by the method I have previously indicated, the desired angles are taken for the board of parallelograms. Upon this line a centre is taken, and the line of orientation with its centre becomes the main measuring line. From this centre the lines and points of defence are radiated, and

A—Guard-room, Chapel over
B—Gate passage
C—Gate Tower Dungeon
D—Guard-room to Dungeon
E—Well Tower
F—Kitchen
G—Constable's Tower
H—Pantry
I—Great Hall

J—Stable Tower
K—Solar and Chamber
L—Shed, open in front
MM—Wooden Cloister
N—Inner Courtyard
O—Buttery
P—Small outwork (added)
Q—Traces of traverse wall
R—Square redout on outer defences

S—Garden with curtain wall
T—Traces of Traverse wall
U—Southern outworks
V—Site of Drawbridge from Outer Court
W—Trace of wall crossing ditch
X—Outer Court earthworks
Y—Site of great Stables and Outbuildings
ZZZ—Moat and Vallum

thence are given a long series of measures of 50 feet, and the orientation line is divided into parts of 50 feet, each marking a point on the castle plan. A second measure is 66 feet, a combination of the fifty measure and one side of a 16 feet square, which measures out nearly all the extreme points of the main building from the centre. Thus, as in most of the other buildings I have measured, out of a scale-board of even measures, is evolved five as a dominant number for measuring distances, and three as that for construction of the buildings.

If this system be found to respond in every detail to the very careful plan drawn to scale by Mr. Leonard Hughes, to mark every feature and measure them out, not only with accuracy, but into a perfectly definite series of dimensions, I trust it is not too much to assume that here is the system on which the builder based his plans. If also it is found that the same principles applied to other quite different mediæval buildings give precisely similar results, may we not assume that such was a practically accepted system, and that a step towards its elucidation has been gained.

One more minor detail it is well to notice—the mason-marks; and I mention this last because a theory exists that the forms of mason-marks were evolved from the scale-boards I have described; also I have reason to think that the marks and the system were further connected. By the delivery of a piece of metal or parchment marked out with one square, and the angles to be used, the mason was thereby enabled to understand and work upon all the lines intended to be used without plans, and by word of direction, much as the Persian could repeat, by a form of words, the pattern of his carpets. It is certain that mediæval plans are among the rarest of documents, and while the buildings are

true to scale, ancient plans are not all made to scale. The marks are otherwise valuable as dated marks; they have their counterparts in both earlier and later work in Cheshire and elsewhere, proving the descent and continuity of such marks—a theme that need not be dwelt on here.

Thus we have touched very superficially on the general scheme of military engineering from Chester to the Vale of Clwyd; on the skilful means by which this strong castle was guarded; and finally, on the wonderful power of design by which a complete geometrical and mathematical knowledge enabled the ancient masons to rear its walls and plan its defences with the perfection shown in its construction.

There are many other antiquities in the parish and vicinity of Diserth which merit notice. Siamber Wen is a few hundred yards from the Castle, and is said to have been a Nunnery; it is cruciform and is a very curiously arranged monastic building. The ancient cross carved with knolwork, and ancient grave slabs in the churchyard, as well as the old stained glass in the Church, are interesting. Not far off is the vast Roman Cairn of Gop, near which was found a Celtic burying place; and the mines of Talar Goch have shown traces of Roman mining industry.

The excavations at Diserth Castle have shown a large quantity of charred timber—apparently the Castle was burned before the walls were demolished. Through part of the north wall the gallery of a mine has been run, but whether this was part of the siege works or made for the destruction of the wall is uncertain. The larger proportion of the dèbris appears to have been taken down by manual labour, as at Dyganwy, and has not been thrown down in large masses by mining. The

metal gratings have been wrenched out of the windows. The floors of the towers are unpaved, and are made of beaten clay, well laid and hard.

The window and door casings of this Castle, and the quoins, are of a fine white freestone, which appears to be either from Cefn, near Ruabon, or from the Storeton Quarries; probably the latter, as Wales during the building of the Castle was in a disturbed state. If from Storeton, it probably was brought by sea, in the same way as we know from the Fabric Rolls stone was brought to Conway. The fact that the mason marks are identical with many in Bebington, though of a later period, might indicate the employment of Wirral masons, several of whom are named in the succeeding reign as master masons and contractors employed at Conway and Caernarvon Castles.