St. Caimin’s, Inis Cealtra
Reconstruction of the Doorway

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A programme of excavation and survey was carried out on the early monastic site
of Inis Cealtra (Holy Island) in Lough Derg in ten seasons of work, beginning in
1970 and concluding in 1980. A detailed report on this has now been completed
for the Department of Arts, Culture and the Gaeltacht, and a summary will be
published in this Journal. As part of the Inis Cealtra investigation, a study was
undertaken of the design and construction of the doorways of St. Caimin’s Church
on the island. The doorway was dismantled in the course of this study and was
subsequently rebuilt by the Office of Public Works, following the findings
reported here.

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For the past hundred years our impression of the character of twelfth-century Irish church
doorways has been, at best, misleading. Most of the Romanesque doorways now standing in
different Irish locations have, at one time or another, been in a state of ruin, often complete
collapse. Subsequently they were wholly reconstructed, without detailed record. Inis Cealtra,
Castledermot, Clonkeen, Clonmacnoise (the Nuns’ Church), Dysert O’Dea, Freshford,
Glendalough (St. Saviour’s and the Priest’s House), Inchagoill, Killeshin, Mona Incha, Ullard;
all were rebuilt, often from the ground up. For the understanding of the original designs, it is
necessary to know how this work was done. Apart from Dysert O’Dea, the Nun’s Church and
Freshford, almost all the doorways in question were rebuilt under the auspices of the
Commissioners of Public Works fairly soon after they assumed responsibility for National
Monuments - in the last decades of the nineteenth century or early in the twentieth century.

The reconstructions themselves generally followed a tidying of fallen masonry - we must
understand that when first taken into State Care (in consequence of the Church
Disestablishment Act of 1869)1 many of our medieval ecclesiastical buildings were in a sad
state. Working by eye and with the help of good masons, with the material provided by the
remaining carved stones (often limited and inadequate), the Board of Works assembled the
doorways into some sort of understandable whole. A similar approach had been most
successful in the 1865 work on the Nuns’ Church at Clonmacnoise, but the Rev. Graves, who
did the reconstruction there, showed that he possessed an eye and an understanding of the
material that were not perhaps shared by everyone.

What is satisfying about these rebuilding jobs is that the stones have at least been secured,
and, unless they were too heavily hammered into a nineteenth-century framework, the
twelth-century material has been preserved. But, bearing in mind how the reconstructions
were done, it is apparent that many of the resemblances, between rebuilt doorways in regions
distant from one another, might be due more to nineteenth-century taste than to twelfth-
century style. In a sense, a neo-Romanesque was created.

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87
The Romanesque doorway of the church of St. Caimin's, Inis Cealtra, was among the first to be re-erected by the old Board of Works. The doorway was totally rebuilt in 1879 and 1880, and its subsequent shape is recorded in published reports. As so assembled, it had several visible irregularities. Most notably, an arch-ring composed of voussoirs with human heads - a distinctive feature of Irish Romanesque - had been eliminated, only three of the surviving heads being used. These were set as key-stones one above the other, placing a Victorian stamp on the final appearance.

In 1974, using geometric methods to determine accurately the original form of the semicircular arch and the relationships of the Romanesque orders and of the individual stones comprising the arch, we arrived at a quite different reconstruction. The methods employed are described below.

The same methods might easily - perhaps with surprising results - be applied in the future to other Irish arches. Moreover, they can be effective even when the remains are fragmentary. In applying them to measure the stones of the doorway of St. Caimin's we learned much about twelfth-century masons' techniques which were perhaps peculiar to Ireland.

In the twelfth century the Inis Cealtra doorway was inserted into the fabric of a late-tenth-century single-celled building with antae. A chancel was also added. The doorway was in a collapsed and dismantled condition by the time of the Ordnance Survey of Co. Galway in 1838. Following a discussion of portions of the chancel, of the chancel arch (which seemingly was intact), and of the dimensions of the nave and chancel, the Survey letter states that the west door was

built with ornamentally chiselled stones, six feet of which in height remain still visible on the north side, which part alone can be regarded as in any degree of preservation.²

John O'Donovan, interpolating, comments that the door was exactly like that of Teampall na Naomh (the Saint's Church), on Inchagoill in Lough Corrib (see photograph, Illus. 1).³ Whether O'Donovan had actually seen the Inis Cealtra doorway in a more complete form, or whether he made the observation after examining the fallen stones as they lay in rubble about the church structure, is not known. The doorway at Inchagoill is, in its present form, a reconstruction: at the time of the Ordnance Survey only the inner order of the arch was complete, supported on the south side by a jamb of boldly-rounded angle-and-fillet supporting a capital with angle masks.⁴

The voussoirs of the inner order at Inchagoill are cut with a concentric band moulding, with an arris roll. Two voussoirs that were in situ in the second order have a flat (square-section) hood, over thinly cut and attenuated ribbon-chevron ornament. One block alone remained in the outer order: the north springing block (or first voussoir), of rather amorphous form. The only similarities, therefore, that O'Donovan could be citing between the Saints' Church and St. Caimin's are the angle-rolled jamb, and the similarity in type (although not in style) of the fallen orders at St. Caimin's (viz., concentric band moulding, ribbon-chevron and - fallen at Inchagoill also - heads with a bold square-in-section hood).

Petrie was the next to document St. Caimin's.⁵ Producing a rather romantic engraving (Illus. 2), in which the whole upper part of the west gable disappears to allow a view through

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³Edwin, third Earl of Dunraven, Notes on Irish Architecture, London (1875), vol. 2 (M. Stokes, ed.), p.60 pl. XCIX.
Illus. 1. Inchagoill, Saints' Church doorway (Dunraven).

Illus. 2. St. Caimin's, Inis Cealtra (Petric).
to the chancel arch, he displays the west door with the jambs of the north side standing. There are plain square-in-section impost blocks and the first, or springing, voussoirs of the inner two orders in situ. In the second order, Petrie illustrates the multiple arris-chevron (which was, in the 1879-80 Board of Works reconstruction, to be formed into the outer, or third ring). In the inner order is shown a curious L-shaped block. This most likely is a mistake in the engraving, where the L form is created by retaining the line of the hood while misreading the chevron, the upper joint of which has been eliminated. The engraver has here erroneously depicted what was originally, at the springing, the start of a ribbon-chevron with a hood.

In 1866, R.R. Brash reports of St. Caimin's:

Where the doorway stood is now an unsightly breach; at my first visit in 1852 there were about two and one half feet of one jamb standing, and about one foot of the other; these have now gone, having been torn away by the ignorant peasantry to put as head stones to graves. The shafts have carved capitals, consisting of an abacus with a head under it; these capitals and several of the jamb stones are to be found in the adjoining cemetery.6

In the meantime a guidebook of 1853 illustrates, by a distant view, St. Caimin's and the Round Tower (see Illus. 3)7. This shows a ragged gap where the doorway had been. Brash's account documents the employment of the ornamental stones as grave-markers in burial grounds that are in use to the present day. It also suggests, in support of Petrie, that above the small angle heads of the jambs there were impost blocks (the "abacus" as he calls them). He provides a plan of the north jambs of the doorway, showing three orders with roll-and-bead angle mouldings, with a shallow flat architrave on the exterior and a shallow flat recessed architrave on the interior. The interior is also shown with a full angle roll - which appears not to conform to the other evidence (see Illus. 4). Brash's article also illustrates the chancel arch, showing it intact, clean of ivy, and with only plain voussoirs, lacking the now obvious keystone-head in the outer order.

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7Illustrated Hand-Book for Ireland, London (1853 – Great Exhibition Year), "Printed for the Railway Companies", p. 153. Professor Etienne Rynne kindly drew our attention to this publication.
A romantic painting of Holy Island by Colles Watkins, dating from about 1870,\textsuperscript{8} hangs in the Ulster Museum gallery. It shows St. Caimin’s from the east and it is possible to see, through the chancel arch, that there was a gap where the doorway had been. However, other features of this work show that the painter was not aiming at an exact reproduction of the scene, and this is of little value as evidence (Illus. 5). Lord Dunraven concludes the

\textbf{Illus. 4. Plan of St. Caimin’s Church and door jamb (Brash)}

\textbf{Illus. 5. View of Inis Cealtra (Colles Watkins)}.

\textsuperscript{8}The late Thomas Delaney, then of the Ulster Museum, in a letter of 14 December 1971 kindly supplied the following information:

“The painting by Colles Watkins of Holy Island is undated. However, as he signs it as an R.H.A., and only attained that high status in 1864, the Art Department corporately suggests that the painting be dated to c.1870. He died in 1891.”
The West door is nearly destroyed, about three feet of one jamb alone remaining; it is two feet, ten inches wide at the base. It was of two orders; they were formed into engaged pilasters, at the top of which was a sculptured head carved on the face of the round, with no necking and a plain impost moulding. An incised chevron moulding ran around the face of the arch, while on one of the bases, there is a sort of spiral or rope moulding, such as may be seen on the base of the door of Temple Finghin at Clonmacnoise.\(^9\)

Dunraven, after stating that the door was nearly destroyed when he saw it, credits his illustration as being a woodcut based on the Petrie engraving of 1838. When treating of the ornament and form of the arch, he must have been basing his discussion solely on the evidence of the engraving, which led him astray. However, Dunraven included a most useful photograph of St. Caimin's in a sorry state, with antae largely destroyed and, in the west gable, an enormous breach where the door no longer stood (Illus. 6). The photograph shows that on the north side of the door, two blocks in each of the outer two jambs, and three in the inner, were still in place - but not the same blocks as were placed in those positions in the 1879–80 reconstruction. The outline of the breach shown in the Dunraven photographs corresponds to the masonry change around the doorway, clearly visible in photographs, and

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\(^9\)Dunraven, op. cit., p. 55 ff.
still retained after the most recent reconstruction. Some of the blocks of wall masonry adjacent to the lower jamb stones that were still in situ do not correspond to the blocks at present in those positions; which suggests that in the 1879–1880 reconstruction the arch was completely dismantled and reset, from the ground up.

The Report of the Commissioners of Public Works for the year 1878–1879, briefly states: Works on Holy Island are now in progress.¹⁰

A fuller account is given the following year, when work was brought to a close. In this report it is stated that:

The chancel arch was in such a state that it had to be partly rebuilt, all stones disturbed being carefully replaced in their positions. The western doorway had fallen, and the chancel walls had nearly disappeared. The interior was a mass of rubbish, which on being removed, and carefully examined, gave nearly all the arch stones of the western entrance. These have been put in their places.¹¹

Finally, R.A.S. Macalister, who visited the island three times before publishing his account of it in 1916,¹² faithfully drew the doorway as it had been reconstructed but pointedly calls attention to four extraneous heads, three of which were cemented into an early stepped window in the south wall of St. Caimin’s and another incorporated in the upper course of the south wall of St. Mary’s Church. Françoise Henry also mentions the group of heads, suggesting that they formed an additional ring to the doorway.¹³

Besides the human heads, the other voussoir ornaments were: a ribbon-chevron (i.e., a continuous concertina-like band), an arris-chevron (i.e. a chevron formed by deep notching of the arris of the arch), an ornament of continuous bands of concentric mouldings, and a hood or drip moulding.

Apart from the three Romanesque heads set as keystones (which on examination proved without doubt to be voussoirs of an arch of doorway dimensions) there were several other easily observed anomalies in the 1879–80 reconstruction. First, the jambs uncomfortably lacked the battery, characteristic of proto-Romanesque and Romanesque doorways that have escaped total rebuilding (viz. Clonfert and the inner order of Teampall na Naomh, Inchagoill), and that is suggested in the non-square form of a jamb-stone, found in the modern graveyard of Inis Cealtra, which had not been refitted into the 1880 orders. Next, in the absence of the impost blocks, already noted, the arch rings, in the 1880 reconstruction, sat heavily on the small, recessed, angle head-capitals. In the arch rings, the ornament of the voussoirs, in the outer arris-chevron order and in the second order of concentric band moulding, did not connect or flow consistently, voussoir to voussoir. In fact, in the second order, the flow actually appeared to break angularly, suggesting an original larger circumference for the order. Finally, the springing-stone on the north side of the second order appeared to be reversed from its intended positioning, and a block was employed on the

¹⁰The 47th Annual Report of the Commissioners of Public Works in Ireland for the Year 1878–1879, p. 73, Appendix E.
¹¹The 47th Annual Report of the Commissioners of Public Works in Ireland for the Year 1879–1880, p. 73, Appendix D.
south side of the second order that in fact was the springing-stone of the south side of the inner (ribbon-chevron) order.

In the summer of 1974 drawings of the doorway were completed (Illus. 7), and tracings were made of them. Each stone of the doorway was then numbered, beginning with the inner order and numbering each order from the north base round to the south base (Illus. 8). Not every voussoir was a single block running through the depth of the archway to the interior; the interior elevation of the doorway was therefore numbered for these, and for the masonry abutment. The four additional heads and the jamb stone were numbered consecutively. These numbers were retained through the reconstruction. Centering was then fitted, the arch was taken down, and the stones removed to a work hut, where they were sorted and arranged according to ornament. The remaining traces of ornament on the weathered Stone 38, which had been positioned in the 1879–1880 reconstruction as a springing-stone of the concentric-roll-moulding order, were measured at this time, and the stone was then properly placed as the south springing-stone of the ribbon-chevron order.

Illus. 7. Elevation, sections and plan of St. Caithin’s doorway as rebuilt 1879–80.
Many of the joint-beds, where the voussoirs in each ring fitted together, had been heavily packed with mortar. This was removed, and the blocks were then examined for masons’ marks. The twelfth-century mason’s diagonal axing could readily be seen on the joint-beds and soffits (or intrados) of some of the stones, as could also be seen the crude and heavy erasure of this workmanship by the nineteenth-century mason - particularly on the blocks of concentric roll moulding, which had been severely trimmed and reduced in radial length as well as in circumferential intrados breadth. It was clear that the ribbon chevron should be positioned as the inner order, since voussoirs 6 and 7 have an arris-roll on the interior face and measure 38 cm in soffit depth - the exact through-depth of the inner-order jambstones 5 and 15.

Applying a technique that had been devised to work on the reconstruction of the late Romanesque doorway of Kirk Ella Church in Yorkshire, and assuming that the Inis Cealtra doorway was relatively semi-circular-headed, each stone of each order was measured to give an approximate radius for the arch-ring to which it belonged. In turn each voussoir, after the centre had been marked at extrados and intrados by triangulation, was set, extrados downwards (i.e., upside down) and face forwards, hanging in a loop of mason’s line. The line was wound around a 1/4-inch-diameter rod (representing the thickness of a

mortar joint between the voussoirs), passed along the lateral joint-bed, under the extrados at the centre mark, and brought up the other lateral joint-bed to cross itself over the rod. The centre of the block was then plumbed from the overhead rod, and the rod and line were then raised and lowered, maintaining the plumb, so that the mason’s line was snug along the lateral joint-beds and dead straight all the way from the extrados of the block to the rod. The line was measured, giving a radius: the distance from the centre point (the rod) to the intrados of the voussoir. This varied somewhat, due to irregularities; but the range of radii was noted, within which the lines could be maintained conforming correctly to the joint beds (Illus. 9).

![Diagram of plumbing method](image)

**Illus. 9. Illustration of plumbing method.**

When this method was used, although the stones within each ornamental order produced a short range of congruous radii, no exactitude could be attained in determining each order’s intrados circumference - although with averaging it could be seen that the relative placing of the orders would position the ribbon chevron in the inner order; the arris chevron in the second order; the human heads in the third (Table 1). More intriguing, however, was the discovery that when the lines of the joint beds properly converged, the block would no longer plumb centrally from the point of convergence, but plumed towards either the right or the left of the intrados in varying degrees. When the blocks were examined for radial axis, it was obvious that the joint beds seldom complemented each other; but that one side would incline towards the soffit at a greater angle than the other. With this information, each order was sorted into blocks that plumbed to the left and blocks that plumbed to the right of the soffit. When they were ranged according to how far left or right of centre the plumb fell, it could be shown that those blocks which plumbed left belonged to the left, or north, side of each ring; those that plumbed to the right belonged to the south side.
<table>
<thead>
<tr>
<th>Order</th>
<th>No.</th>
<th>Radius</th>
<th>Radial Plumb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ribbon</td>
<td>6</td>
<td>44cm</td>
<td>left; left or north springing block</td>
</tr>
<tr>
<td>Chevron</td>
<td>7</td>
<td>41</td>
<td>right</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>44</td>
<td>left</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>46</td>
<td>left</td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>46</td>
<td>right; right or south springing block</td>
</tr>
<tr>
<td>Arris</td>
<td>49</td>
<td>60</td>
<td>right</td>
</tr>
<tr>
<td>Chevron</td>
<td>50</td>
<td>58</td>
<td>far left</td>
</tr>
<tr>
<td></td>
<td>51</td>
<td>60</td>
<td>right</td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>58</td>
<td>left</td>
</tr>
<tr>
<td></td>
<td>53</td>
<td>61</td>
<td>right</td>
</tr>
<tr>
<td></td>
<td>61</td>
<td>partial block</td>
<td>partial block</td>
</tr>
<tr>
<td></td>
<td>62</td>
<td>58</td>
<td>left</td>
</tr>
<tr>
<td></td>
<td>63</td>
<td>42</td>
<td>centre</td>
</tr>
<tr>
<td></td>
<td>64</td>
<td>57</td>
<td>far right; a large block; south spring</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>58</td>
<td>right</td>
</tr>
<tr>
<td>Concentric</td>
<td>26</td>
<td>72/65</td>
<td>far left</td>
</tr>
<tr>
<td>Band</td>
<td>27</td>
<td>73</td>
<td>right</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>77</td>
<td>right</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>81</td>
<td>irregular and badly battered</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>91</td>
<td>left</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>67/70</td>
<td>left</td>
</tr>
<tr>
<td>Heads</td>
<td>106</td>
<td>81</td>
<td>right</td>
</tr>
<tr>
<td></td>
<td>103</td>
<td>81</td>
<td>left</td>
</tr>
<tr>
<td></td>
<td>57</td>
<td>81/55 rear</td>
<td>left</td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>71</td>
<td>left</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>73</td>
<td>left</td>
</tr>
<tr>
<td></td>
<td>104</td>
<td>83</td>
<td>left</td>
</tr>
<tr>
<td></td>
<td>105</td>
<td>73</td>
<td>far right</td>
</tr>
</tbody>
</table>

Table 1.

<table>
<thead>
<tr>
<th>Stone no.</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>105</td>
<td>(Broken)</td>
</tr>
<tr>
<td>103</td>
<td>20cm.</td>
</tr>
<tr>
<td>106</td>
<td>21cm.</td>
</tr>
<tr>
<td>10</td>
<td>20cm.</td>
</tr>
<tr>
<td>32</td>
<td>22cm.</td>
</tr>
<tr>
<td>57</td>
<td>22cm.</td>
</tr>
<tr>
<td>104</td>
<td>22cm.</td>
</tr>
<tr>
<td></td>
<td>(Broken)</td>
</tr>
</tbody>
</table>

Table 2. Heads: Joint bed height.
In a true round arch, a line joining the centre point of the intrados with the centre point of the extrados is a radial line. This was not so in the Inis Cealtra doorway. The voussoirs were somewhat skewed, tending slightly away from a radial bedding towards a horizontal bedding. The mason who built the doorway had continued to use a method of construction based on the technique of corbelling which had been characteristic of Irish building in the preceding centuries. Most probably he lacked working knowledge of Roman arch technique.

In view of this finding, another radial measurement technique was undertaken in order to attain a higher degree of exactitude in the proposed positioning of the orders. Each block was measured for its circumferential width at extrados and intrados, and the radial length of each existing joint bed was noted (Table 2). Radial length was obtained by measuring the height of the actual joint surface, no the height (radial length) of the block; for, although many of the voussoirs were regularly circumferentially finished along the intrados, the extrados often protruded - particularly at the rear of the block - above the joint beds.

Using a level floor as the horizontal springing-line of the arch, groups of voussoirs of each order, maintaining the left or right side of the ring assortment, were then measured in combinations of two or three blocks. The point at which the lines of the terminal joint-beds of the assorted combinations converged on the horizontal was marked as a centre and the distance from this point to any point along the intrados of the combined voussoirs was measured. The voussoirs, varying greatly within an order in circumferential intrados and extrados widths, formed particular combinations congruent within the order in circumferential curves and radial length. As combinations of voussoirs produced a consistent radial measurement, a diameter was determined for each order. Each ring span was then assembled. A nail was driven into the floor at the centre point obtained from the convergence of the line of the combined joint-beds on the horizontal. A line was attached to the nail and extended to the intrados of each block within the ring. When the voussoirs were set in particular combinations where their joint-beds radiated from a centre point, the arch of the soffits of each order fell well into the curve of the projected intrados circumference, and the separate orders - ribbon chevron, arris chevron, and human heads, in that progression - fitted well, one into the other. There was, however, little convergence of the lines of the joint beds of one order to another. The arch was not regularly radially constructed.

The concentric roll-moulded voussoirs that had formed the middle order in the 1879–80 reconstruction had, to this point, failed to correspond to either of the radial measurement techniques. This was understandable, since, as mentioned above, each stone within this order had been trimmed for the reconstruction - reduced in radial breadth by cutting the intrados, and reduced also in intrados circumference; sometimes in extrados circumference as well. Any combination of blocks of this order, when assembled along a horizontal springing-line, would produce an obvious lack of continuity, the line of ornament breaking angularly at each voussoir joint.

At first, an attempt was made to ease the flow of the carved bands of ornament by wedging open the joint-bed at the intrados of each joint; but because of the condition of the blocks this arrangement was neither stable nor reliable. Therefore a precise drawing of the face of each voussoir was made on the scale of 1:10 and transferred to tracing paper. On another paper, and to the same scale, a series of concentric semicircles was drawn above a horizontal line. The voussoir tracings were then placed above the series of semicircles and moved into
position where the concentric band mouldings correspond correctly to a set of semicircular circumferences. The order was then measured and found to have an intrados circumference with a radius of 1.05 metres; which directly corresponded to the extrados circumference of the third order of the arch. The arch, therefore, was of four orders. Above the order of heads there had been a drip course, independent of jamb support, patterned in three concentric bands with a hood moulding.

Because of the success of this method, measured drawings of all the stones of the other orders were then completed and matched with a series of concentric half-circles to check the findings of the radial measurement methods described above. Not only did the findings of these methods prove correct, but many of the small tabulated discrepancies, caused by the irregularity of the stones and by the difficulties of manouevring them into position, were corrected.

Although the existing voussoirs of the ring of human heads had regularly responded to the radial measuring methods, producing an intrados radius of 85 cm, these stones proved to be the most individualized of the voussoirs. Each mask, with its distinctive personal features, was twisted in varying degrees, not axially positioned on the voussoir, but inclining towards either the right or the left of the block.

Head 10 retained all of its original surfaces, but the other blocks, particularly 103 and 106, which had been incorporated into the walls of either St. Caimin’s or St. Mary’s, were badly battered and coated with stone glue. Stone 104 was broken in two through its horizontal plane, and stones 105, 106 and 10 had considerable damage on their hood and extrados surfaces. All of the heads narrow along the frontal edge of the joint-bed, the blocks widening slightly towards the rear. The heads furthermore project more from the upper part of the voussoir face, and appear to be looking down on what passes below.

The hood voussoirs are irregular in their circumferential width. But after sorting the blocks to their positions on either the left or the right side of the arch-ring, it could be observed that the stones on the right had hoods that were slightly broader on the right, or lower side, and vice versa. Block 104, which was considered to be the springing-stone of the right, or south side of the ring (since its right face joint-bed is practically perpendicular to the tangent of the extrados circumference, while the left face joint-bed inclines greatly towards the intrados), exhibits a peculiarly fluid touch in that its hood curves in on itself towards its terminus on the springing line.

Finally a sand pit was made to facilitate a trial assembly of the arch. A four-metre square, approximately 50 cm deep, was dug. Fresh sand was then transported to the island and used to fill the pit, providing an adequate medium within which to support and build up the arch rings. It was recognised that, where original stones were missing, it would be necessary to cut new voussoirs so that the full rings could be constructed.

Half way along one side of the pit a stake was sunk, and a nail inserted, to mark the centering point of the arch. A measuring tape and a length of mason’s line were attached to the nail. Using the determined radius for each ring, the inner-order chevron was first set in place. Voussoirs 6 and 7, which have a soffit depth equal to be full depth of the doorway (exterior to interior) were wedged into their positions along the intrados circumference marked in the sand. The sand was then piled up in a ring around the marked circumference to lift the remaining voussoirs of the order, until the faces of all the voussoirs were level with stones 6 and 7, even if these voussoirs did not run through the full depth of the archway. So each order was placed, the level of each easily ascertained since the soffits of some of the
Illus. 10. Sandpit reconstruction of doorway arch.
blocks in each order were still complete enough to have retained the line of rebate where they overlapped the adjacent order (Illus. 10).

After all the orders had been placed, it was then possible to tighten the whole of the reconstruction, each order being more secure when the radius was shortened by one or two centimetres. The assembled intrados readings were as follows:

<table>
<thead>
<tr>
<th>Block Type</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ribbon chevron</td>
<td>39 cm.</td>
</tr>
<tr>
<td>Arris-chevron</td>
<td>58 cm.</td>
</tr>
<tr>
<td>Heads</td>
<td>85 cm.</td>
</tr>
<tr>
<td>Hood</td>
<td>1.06 cm.</td>
</tr>
</tbody>
</table>

These readings further show the extent of the original batter of the door-jambs. Dunraven had measured the jambs at 2 feet, 10 inches apart (approximately 86 cm.). The jambs were originally battered inward to accommodate an arch span of 78 cm. on the inner order. The combined batter of the jambs therefore amounted to a narrowing of 8 cm. from sill to impost level.

Finally, the time had come to assay the arch form as assembled in the sand-pit with the west wall of St. Caimin’s and with the size and form of the original, pre-reconstruction, breach as documented by Dunraven. In the work of 1879–80, the base of the doorway had been set on a relatively thick sill foundation, that not only was considerably raised above the twelfth-century ground level, but that sat considerably above the twentieth-century level as well. Lowering this level, tightening the jambs to restore the slight batter they originally had, and adding the documented plain, square-in-section, impost blocks, left a breach with adequate space within which the finished circumference of the four-order arch neatly fits. As previously set, the three-order reconstruction arch had been slightly recessed within the fabric of the tenth-century wall; but with the addition of the fourth order, the hood extends beyond the face of the wall. This has precedent in Irish Romanesque work: one has only to look at Clonkeen, Co. Limerick, which has a recognised relevance in decorative motifs to St. Caimin’s, but which admittedly has been greatly rebuilt. The chancel arch of the Nuns’ Church at Clonmacnoise (which too has been rebuilt, but with an harmonious sense of correctness), however, has an outer hood moulding course extending beyond the face of the chancel wall. But the most obvious example to cite (and one that has not been rebuilt) is the south door of Cormac’s Chapel at Cashel, which not only has a protuberant hood course but one that seems in every sense a hood, since the ring sits above and beyond the context of the doorway, having label-stop terminals but lacking ancillary jambs: the restored St. Caimin’s hood is similar. The reconstruction drawing, Illus. 11, shows the original form of the doorway as arrived at by the investigation described above.

A label-stop uncovered during the 1971 excavation season in the interior of St. Brigid’s Church and bearing no relationship to the Romanesque doorway there, has been placed in position now in the outer order of St. Caimin’s. It seems highly unlikely that any further stones belonging to the doorway will be found, since the areas that might well have produced additional voussoirs (the enclosed areas of St. Brigid’s Church and St. Michael’s, the area inside and immediately in front of St. Caimin’s, and the areas adjacent to the Saints’ Graveyard) have been extensively excavated. The missing stones may have been removed from the island by pilgrims or by those who collect such for their gardens, or else they may have found a second use a grave-markers in modern burial grounds, now lying buried or overgrown and not to be disturbed. They have been replaced by newly wrought stones in the reconstruction recently completed by the Office of Public Works (Frontispiece), which may be compared with the reconstruction of 1879–80, illustrated in Illus. 12.

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Illus. 11. Elevation to show original design of doorway
Acknowledgements

The full and generous co-operation of the Office of Public Works in this undertaking is gladly acknowledged, and in particular we wish to thank David N. Johnson for his advice and help. We are also grateful to Róisín Barton for her help in preparing this paper and to Professor Etienne Rynne for his editorial patience and advice.