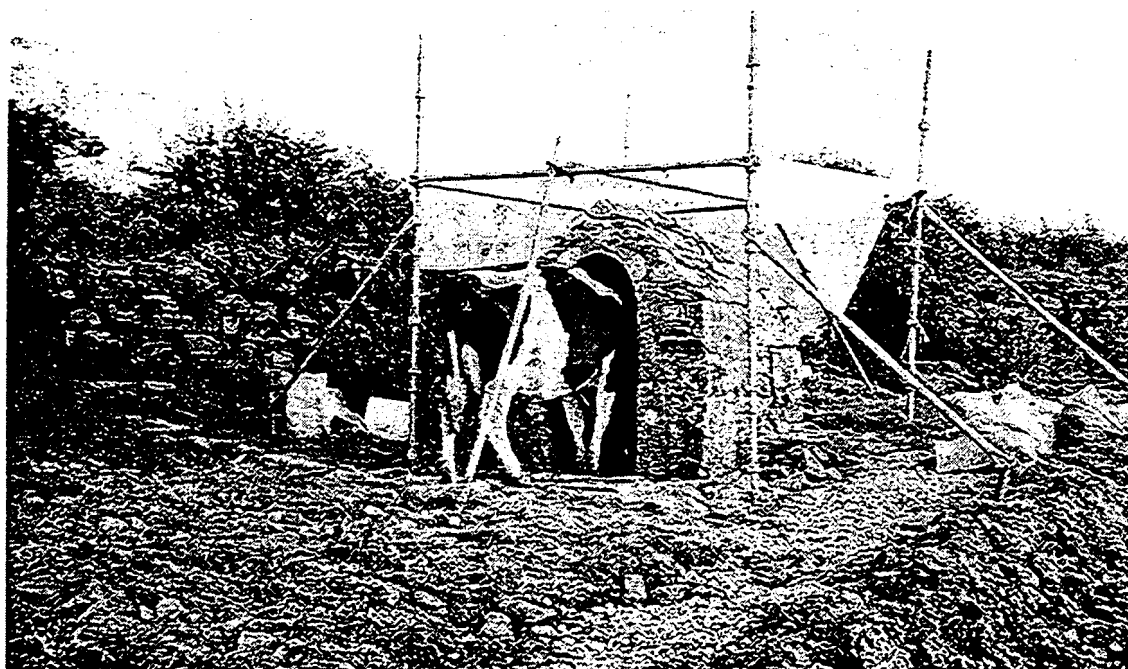


REPORT NO. 2003RO27
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St. Ruan's Well, Grade, Cornwall

Conservation and Landscaping



Cornwall Archaeological Unit

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ST. RUAN'S WELL GRADE

Conservation and Landscaping

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with
Eric Berry and Richard Marsh

March 2003

Report No: 2003RO27

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The work described in this report was precipitated by Dave Lewis of Cornwall County Council and Ray Lawman of English Nature. It was in the main funded by Cornwall Archaeological Unit's (CAU's) 'Monument Management' project – a project to which English Heritage, the Cornwall Heritage Trust and Cornwall County Council contribute – and by the Cornwall Landscape Project (run by Oliver Bennett of Cornwall County Council) in the early stages.

Within CAU, Jo Sturgess made the drawings of the well-house, and Jenny McLynn interpreted my handwriting and typed the report, which was edited by Peter Rose.

One of Chris Cattran's cows, enjoying the holy water.

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Abbreviations

CAU Cornwall Archaeological Unit

MS Manuscript

NGR National Grid Reference

OS Ordnance Survey

PRN Primary Record Number

SMR Sites and Monuments Record

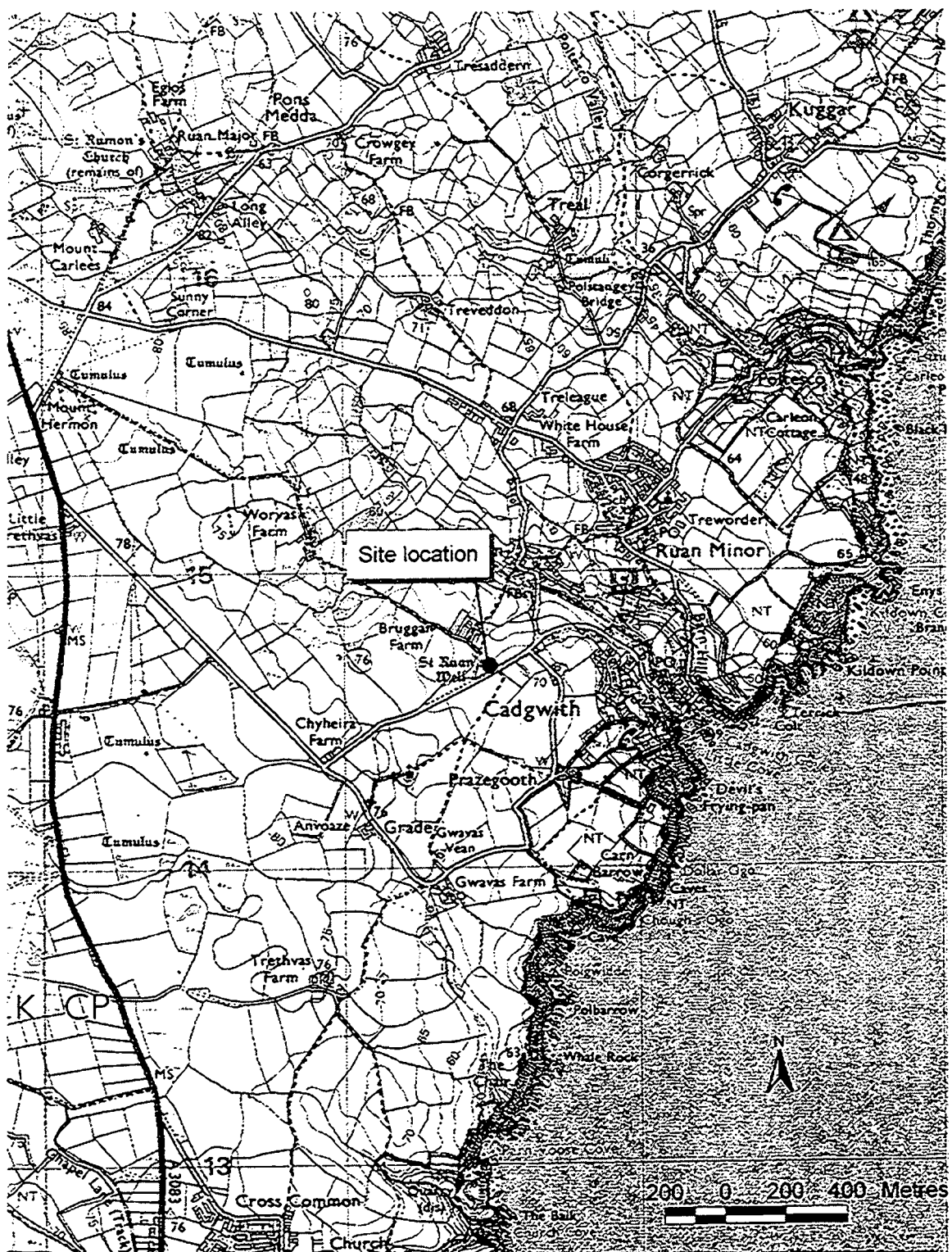


Figure 1. Location of St. Ruan's Well, Grade Crown Copyright. All rights reserved Cornwall County Council LA076538, 2002

1 Summary

Work to improve the setting and condition of St. Ruan's Well, Grade, was carried out in 2000 - 2001. The work included scrub clearance, drainage, infilling an eroded gully in front of the building, consolidation of the fabric and fencing.

This holy well is a Scheduled Monument (Cornwall No 13; CAU PRN 10411; NGR SW 7150 1466), and the work was carried out with funding from Cornwall Archaeological Unit's (CAU's) budget for conservation works to Scheduled Monuments, with the exception of part of the landscaping, which was organised by the Cornwall Landscape Project.

Prior to the commencement of the work described in this report, the well-house was in poor condition. There had been no repairs for many years, so that the building was overrun with brambles and the fabric had deteriorated, with mortar crumbling and breaking away, stones loose, and the whole building subject to water penetration. The repairs described below involved de-vegetating the building, re-pointing where necessary, and re-setting the facing slabs of the roof.

The setting of the well had also deteriorated. Access had become difficult because of gullyng caused by a thoughtlessly-sited drain from the adjacent road. Bramble, gorse and thorn had grown up, on and around the well, while very boggy ground added to the problems. Overall, the monument appeared overgrown and neglected.

Work commenced in May 2000, with drainage and scrub clearance by Peter Kemp of Mullion. In June 2000, Eric Berry carried out a detailed architectural appraisal of the building and in July, Jo Sturgess recorded it with photos and elevation drawings. Because the first phase of landscaping had been carried out under adverse weather conditions, leaving the area less boggy but bare, a second phase involving further drainage was undertaken in July 2001 and the building itself was consolidated in July and August of the same year. Finally, a new metal fence was erected and the whole area around the well re-turfed. The result has been to restore a beautiful and interesting old building, which can once more be properly appreciated, without having to thrust through gorse or wade through mud.

Another exciting outcome of the project has been the discovery, resulting from a rewarding confluence of building analysis, recording whilst carrying out the building work, and documentary research, that although it contains pieces of medieval carved stonework, the building in its present form is not a medieval structure. It is likely to be of 17th century origin, and underwent a major restoration in the mid 19th century. Further repairs may have taken place in the late 19th or early 20th century, but for most of the 20th century it remained untouched. Future generations must judge whether the latest phase of repair has been worthy of this interesting building.

2 Introduction

2.1 Project background

The condition of Grade Well had been a cause of concern for a considerable time. When it was Scheduled in the late 1920s, mention was made of the need for repairs to the roof. Then in the late 1970s and 1980s, concern was voiced by both owner and parish council about the state of the masonry, increasing scrub growth, access, and the problem of visitors interfering with stock in the field. However, it was not until 1998, that efforts were finally made to initiate some work. Even so, prolonged negotiations and the difficulties of finding suitable contractors meant that it was two years later before work at last began.

2.2 Project Aims

The main aims of the project were therefore to:

- Restore the setting of the well by clearing relatively recent scrub growth, infilling the gully which had developed in front of the well, and establishing turf all around the building.
- Improve access to the well by infilling the gully, attempting to improve drainage and by re-setting the stone stile.
- Record all of the above works with notes, sketches and photographs; make measured elevation drawings of the exterior of the well-house, to help in any reconstruction that might be necessary.
- Seek specialist advice on appropriate methods of consolidation, repointing, mortars.
- Carry out documentary research to help elucidate the history of the monument and any reconstructions that have occurred.
- Undertake an analysis of the fabric of the building to help in understanding its development.
- Finally, improve the condition of the well by re-pointing in an appropriate lime-based mortar, and reconstructing the roof as necessary.

3 Background

3.1 Topography

Three ancient parishes dominate the southern part of the Lizard peninsula: Mullion, St Keverne, and Landewednack. Sandwiched between them are the parishes of Grade, Ruan Major and Ruan Minor. These too have their roots in medieval times but topography and place-names suggest that they are of more recent origin than their neighbours. Yet within this cluster (now united to form one parish known as Grade-Ruan), equidistant between Grade and Ruan Minor churches and a mile and a half from the now-ruined church of Ruan Major, is the only holy well of repute in the area. This is the well now known as St. Ruan's Well, but originally as Grade Well, because it is within the parochial limits of Grade parish. It stands on the farm of Bruggan (*Bodrogan*, c1300 (Gover 1948, 546); from *bo*, *bad*, 'dwelling', and a personal name (Padel 1985, 23-6)), now re-named Ruan Well Farm.

Serpentine forms the bedrock here, and can be seen in the construction of the well-house and the adjoining hedge and stile. The well stands in a slight hollow on a gentle north-west facing slope, on the side of a small valley which is a tributary to 'the picturesque valley

between Grade and Ruan Minor' where, confusingly, there is another estate that has long been known as St. Ruan and where there is a field called Park Venton from a spring which is said to be a holy well (Henderson 1956, 189).

3.2 History of the site

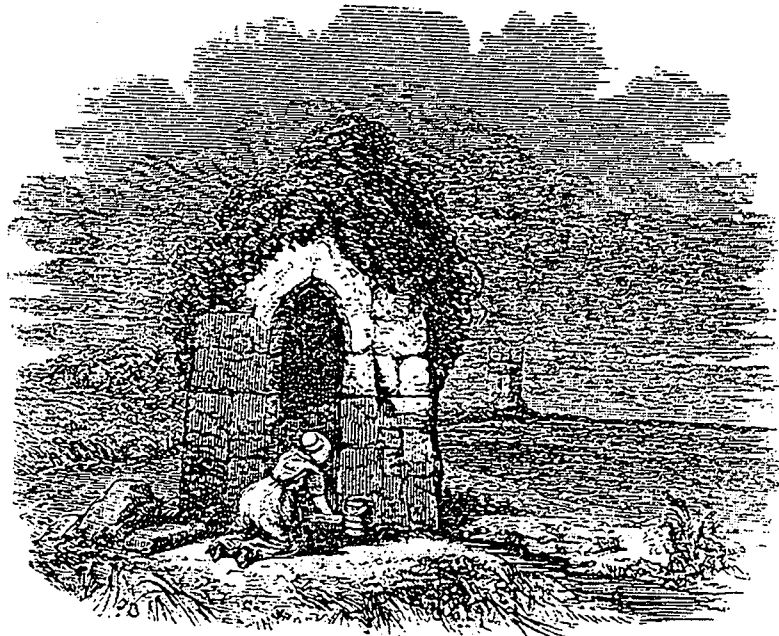


Figure 2. Illustration of the holy well from CA Johns (1848) *A Week at the Lizard*.

There are no references earlier than the 19th century to St. Ruan's Well at Grade. The medieval 'Life of St Rumon' is of little help, being an adaptation of a Breton saint's life (Doble 1939, 15-18); a fact which nullifies Whittaker's (1804) attempts to make details of the landscape in the 'life' fit the landscape of the Lizard. Whittaker does, however, indicate that the well was originally known as St Grade's Well, not St. Ruan's Well, and he had evidently seen it, for he also provides the first known description:

'It is walled up at the back and sides with dense black ironstone; but the front, and particularly the arched entrance, is composed of coarse granite.... The water [which] is very fine and pellucid.... is always up to the brim of the basin, [and] is remarkably cold in summer'

Polwhele (1803, 183) was also aware of 'a fountain of clear water called St. Ruan's Well' and it may be the writings of these two early historians which drew it to the attention of later authors. Johns, in *A Week at the Lizard*, first published in 1848 but with several subsequent editions, exactly repeats Whittaker's description and it is mentioned also in Murray's (1850) *Handbook for Travellers in Devon and Cornwall*. Johns includes an illustration (reproduced in fig 2) with a footnote warning that 'the visitor must not be induced to imagine that St. Ruan's Well, in its present 'restored' condition, bears any resemblance to the venerable and picturesque structure figured above.' His illustration shows a building slightly taller than the present one, but with the same pointed and chamfered arch and a thick thatch of vegetation (ivy?) on the roof and evidently pre-dates some radical repair work of which he strongly disapproved. Perhaps it simply looked very fresh and new, for Quiller-Couch was later able to write that 'the well has been altered by "restoration" but its former venerable and picturesque condition has been well preserved' (Quiller-Couch 1896, 205). The very clear photograph in Quiller-Couch (reproduced in Fig 4) shows the building



Figure 3 Illustration of the well by JT Blight, 1856

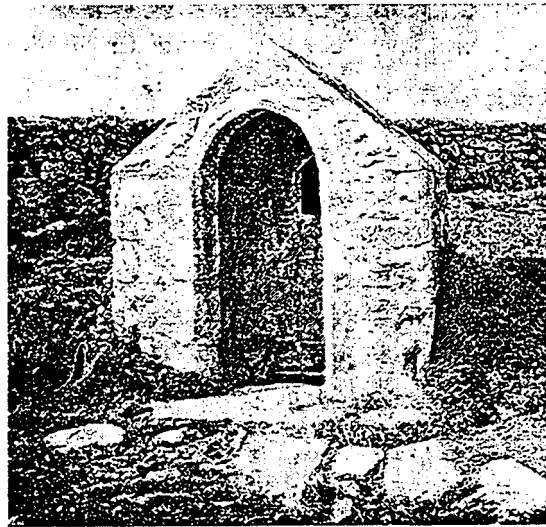


Figure 4. Photograph of the well in Qualler Cough (1894)



Figure 5. Copy of a watercolour of St. Ruan's Well, Grade, in about 1925. The watercolour is in the possession of Joanna Mattingly.

looking much as it does now, the surroundings open and grassy, and in front of the well, a line of slabs covering a drain to take away the excess water. Quiller-Couch also adds that 'a few crooked pins are to be seen at the bottom, but it is not in great repute as a wishing-well, and its water is never now used for baptismal purposes' (1894, 206).

In various sources compiled around 1920, Charles Henderson provides the first really full descriptions of the well. He provides several new pieces of information, for example that the surplus water, which was formerly carried off by a gutter under the stone steps forming the threshold, had by then been piped and could be drawn by tap at Bruggan. Henderson is also the first to mention the fact that a small chamfered cross at Grade Church (appendix 2) was brought from the holy well, which has a small socket in the ridge at its west end; his authority for this information is not known and now that the cross has been stolen, it cannot be checked whether the tenon on the cross would have fitted the socket on the well. He also emphasises the fact that locally it is known as Grade Well, though many writers call it St. Ruan's, a fact later repeated by the first edition of the Church Guide (Taylor 1929). The name 'St. Ruan's Well' seems to stick, however, perhaps because it is so-named on all Ordnance Survey maps.

A photo held by the Royal Institution of Cornwall and a watercolour owned by Joanna Mattingly (reproduced here in Fig 5) shows the well at the same time as Henderson was writing. Again, it appears much as it does today, although the surroundings are grassy, not scrub-covered. The well has a simple plank door, which is padlocked. On the front elevation, the pointing with lines incised in it to emphasise the joints is visible, but in other places, for example on the right hand gable, the pointing is in poor condition.

3.2.1 Changes to the setting

Comparison of the Tithe Award map with early editions of the Ordnance Survey (Figs 6 and 7) show changes to the setting of the well in the latter half of the 19th century. In 1840, the well lay on the southern edge of an area of unenclosed rough ground to the south and west of Bruggan, just to the north of an unfenced east-west track. By 1880, the well had been incorporated into the field to the east, the road hedged, and much of the rough ground enclosed, to create the pattern which exists today. When this was done, the footpath leading from Bruggan to Grade church, past the well, was also formalised. This change is reflected in views of the well. Johns' and Blight's illustrations both depict the earlier, open setting, with Grade Church visible on the horizon (Figs 2 and 3). Now, it is the hedge to the south which forms the backdrop to the building from which not even the pinnacles of the tower can be seen. More subtle changes to the setting of the well house have occurred over the last twenty to thirty years. It was noted above that early photos and illustrations of the well show it surrounded by short turf, with the hedge behind clearly visible. The same is seen in the photo in Lane-Davies *Holy Wells of Cornwall*, published in 1970. Yet from at least 1980, this state seems to have deteriorated. The photo in Meyrick's (1980) *Pilgrim's Guide to the Holy Wells of Cornwall* is not very clear but does indicate an increased growth of brambles and other vegetation. The English Heritage Field Monument Wardens' files, from the 1980s on, demonstrate the same, coupled with observations on the deterioration of the structure, and erosion to the ground in front of the well. By the late 1990s, gorse had grown up to such an extent, that it was not possible to obtain a good photograph of the building, comparable to those taken earlier in the century (see Fig 14).

3.2.2 Evidence for past alterations and repairs

Johns refers in strongly derogatory terms to a restoration of the well in the mid 19th century. Both his illustration (Fig 2) and Blight's (Fig 3), which pre-date this 'restoration' show the roof thickly covered in vegetation and possibly higher than it is now. The restoration may have involved the removal of this growth and a reconstruction of the roof

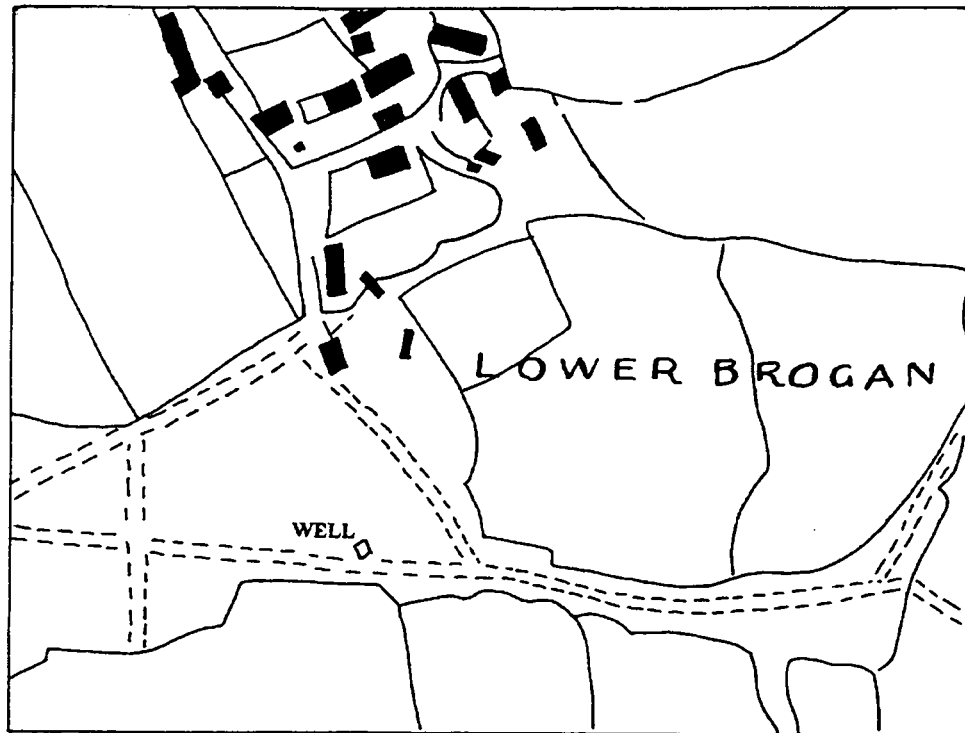


Figure 6. The setting of the well in 1840, re-drawn from the Grade Tube A ward map

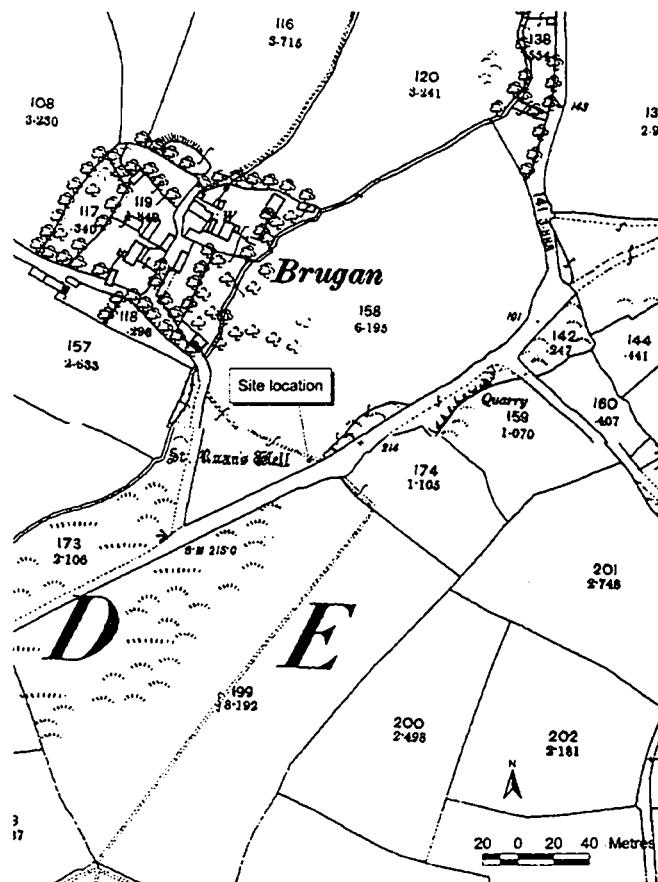


Figure 7. First edition Ordnance Survey map, circa 1880

at a slightly lower level, for the illustration in Quiller Couch (Fig 4) shows a lower roof line and a complete absence of vegetation. Quiller Couch notes that the building was then in good condition. In 1916, Henderson (221, 224) observed that before restoration, the walls were 'without mortar and are still of the rudest description'; his description of the well, made when it was Scheduled just over ten years later, notes that the well had been repaired (conservatively) from time to time, but that the roof was 'in need of slight repair'. The photo of circa 1920 at the Royal Institution of Cornwall bears this out, in showing the stones of the roof without any mortar, although, as noted above, pointing can be seen on the front, particularly to the left of the door, the joints emphasised with incised lines. At this time, the well-house had a door, although it is not shown with one in any earlier illustrations, and has not now.

4 Results of recording

4.1 Elevation drawings

On 27th July 2000, elevation drawings were made of St. Ruan's Well in Grade by Jo Sturges of Cornwall Archaeological Unit. These were made, at a scale of 1:20, to provide a basic record of the monument prior to the proposed conservation work, which was expected to involve the removal and replacement of stones, particularly in the roof. Only the exterior was drawn, as the interior was not likely to be affected by the conservation work. The drawings are shown in Fig 8.

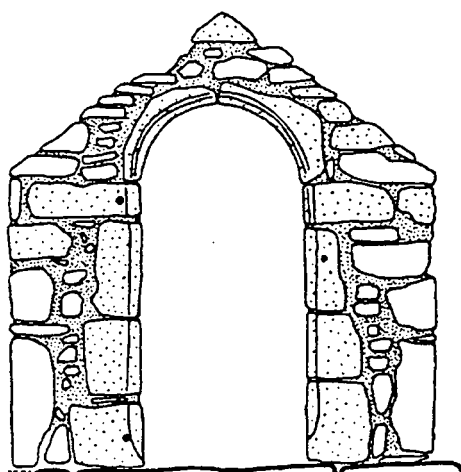
4.1.1 Description of the well

The holy well is a small, roughly square building, measuring approximately 1.8m square externally and standing up to 1.8m high at the front, but only 1.5m at the back. It is built from a mixture of serpentine and granite, with a little slate. The granite has been used mainly for the carved details of the arched doorway, the ridge, the socket of the gable cross, the vault and the arch of the statue niche; and the slate as springing for the granite vaulted roof. All the walls are of different thickness, the back wall being the stoutest at 0.6m and the north-west (side) wall the slightest at 0.39m thick. The walls are (or in places, were) pointed in a lime mortar, spread over the edges of the stones and scored to make the stonework look neater than it actually is. In the process of carrying out the conservation work, it was discovered that there were actually two phases of repair involving the use of two sorts of lime mortar. These are described below, in sections 4.3 and 4.4.

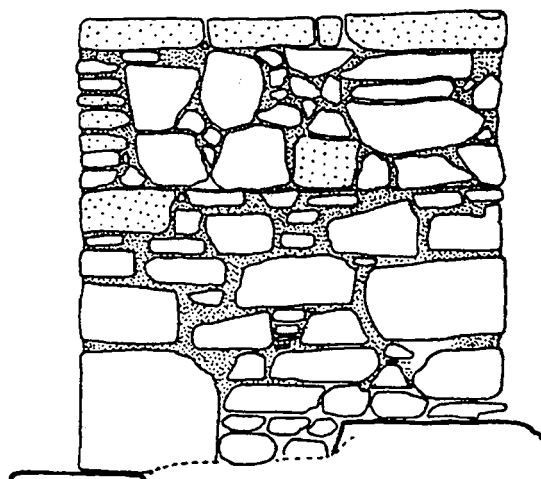
The roof of the well is unique, being made of flat-laid slabs of serpentine, fitted together rather like a jigsaw puzzle. Although at first appearing random, closer examination suggests that the original design of the roof involved the use of rows of vertically-set slabs. This effect is best seen in the front half of the north-west pitch. Elsewhere, the pattern has been disrupted to a greater or lesser extent by rebuilding in the past. The roof is further described in section 4.2. The front (north-east) edge of the roof on both pitches, is formed by a series of horizontally-laid small pieces of serpentine, which on the front elevation have the effect of framing the door arch, although they are not symmetrical with this and reach an apex which is just to the north-west of the apex of the arch – a feature made more obvious by the effect of the conservation work in 'tidying up' the building (see Fig 8). The roof is crowned by a row of triangular-section granite ridge-stones. That at the rear incorporates a shallow socket, believed to have been for a gable cross (see appendix 2)

At the front, the granite-arched doorway and part of the front wall are built over a sill formed by a single large slab of serpentine, polished and shiny with age and wear. The

NORTH-EAST ELEVATION

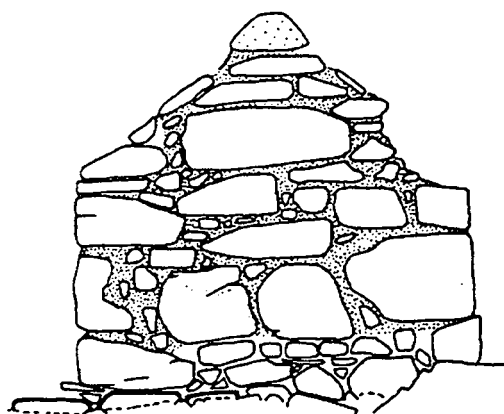


NORTH-WEST ELEVATION



2 metres

SOUTH-WEST ELEVATION



SOUTH-EAST ELEVATION

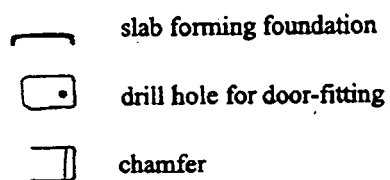
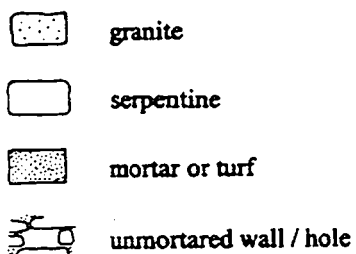
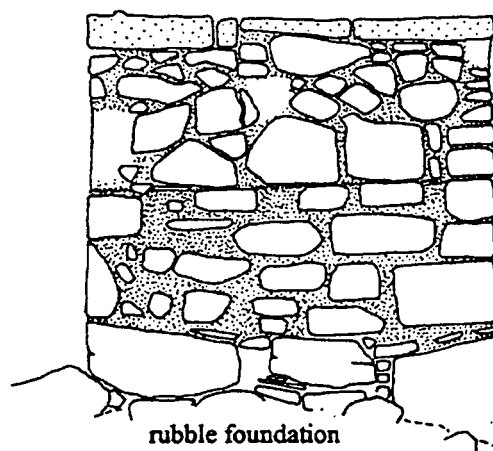


Figure 8. CAU's elevation drawings of St. Ruan's Well, Grade

north-west wall of the well-house and all of the internal faces of the building are founded on similar slabs of serpentine revealed after removal of a build-up of earth around the base of the building as a preliminary to the re-pointing. On the outside, on the west, this slab-foundation steps up by 0.2m, to fit with the natural slope of the land. In contrast, the south-west and south-east walls are set on rubble, one large chunk of stone having a drill-mark of early 19th century type in it (see the elevation drawings, Fig 8, and the plan, Fig 9).

The interior of the well-house is nearly square, measuring 0.98m x 0.95m, with walls of serpentine rubble and a simple granite-vaulted roof springing from slate slabs set – oddly – at slightly different heights. In the back wall is a small niche with asymmetrical ogee arch and jambs carved in a medium-grained granite. The interior walls and the back of the niche retain patches of lime plaster.

As noted above, a narrow (0.20m to 0.22m wide) sill of polished serpentine slabs surrounds the actual well basin, which measures 0.74m from front to back and is 0.54m wide. The basin is 0.45m deep, and full of incredibly cold, crystal-clear water. Its sides are undercut – by as much as 0.34m at the back – though whether this is the result of natural erosion, or because the well-house was originally constructed over a rough hollow, is uncertain. At 0.3m below water level, under the sill, is an iron pipe, to take the overflow away.

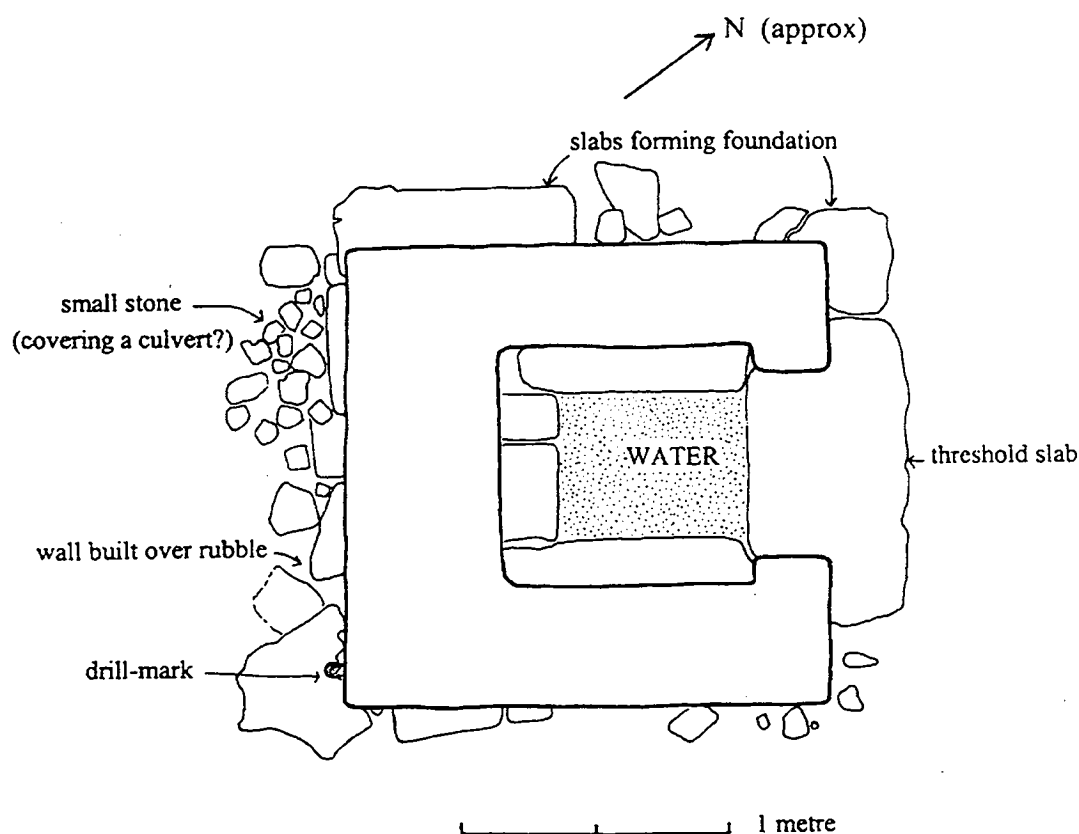


Figure 9. Plan of St. Ruan's Well, Grade

4.2 Building analysis

St. Ruan's Well in Grade was visited by Eric Berry and Ann Preston-Jones on 29th June 2000. The structure was fully appraised by Eric Berry and his comments recorded by Ann Preston-Jones.

In summary, the structure was considered to be 'an assemblage of parts'. Although it does contain medieval elements of 15th and 16th century date (the vault, the arch, the niche, the ridge), features of construction indicate that these elements have been re-set and need not all have been originally designed for this building. Construction features also indicate that the building was either built or substantially re-built in the 17th century, introducing carved stones characteristic of that era (the door jambs). The building was then restored again, perhaps in the 19th century. This conclusion was reached by examining each dateable element of the building in turn, and its relationship to the structure as a whole. These elements are described in more detail below.

The door arch

Two semi-circular stones of medium-grained granite with a simple raised moulding form the arch of the doorway. The stones are unevenly cut, by hand, and the arch is uneven, the greatest curvature being at the centre. Because of this, it is uncertain whether the arch is intended to be round or pointed, though on balance it may be slightly pointed, and therefore of probable late 14th or early 15th century date. The stone below the arch on the north-west side may be similar, but partially re-cut to align it with the rather different chamfer of the door jambs below. The similarity between the curve of the arch and the curve of the arched vault suggests that both were, in all probability, cut for the same structure. However, two pieces of evidence demonstrate that the arch is not *in situ* but has been reset. These are firstly, that the arch appears to be older than the jambs on which it stands (for which, see below), and secondly, the back of the arch is rough and unfinished and was never intended to be exposed, yet on one side only (the north-west elevation) it is visible, because the arch is not flush with the vaulted roof inside. On the other side, however (the south-east elevation), the arch is flush with the line of the vault.

The door jambs

The door jambs are of a medium grained granite, like the arch, but have a different moulding, indicating a later date. The simple chamfer and stop are likely to have been cut in the 17th century, and these stones are roughly dressed on the inner face, indicating that they were intended to be seen, unlike the arch stones. Between the arch and the jamb are two horizontally laid stones whose moulding matches neither but looks like an attempt at a compromise. These may have been introduced later, perhaps to heighten the doorway when the door was hung.

The vault

The vault is constructed of a series of fine/medium-grained granite blocks, carefully cut and finished so that their uneven curve, which is greatest at the centre, matches the curve of the door-arch. Being so simple, the vault in itself is undateable, but the fact that it matches the door-arch indicates that it is likely to be contemporary with this; and the small size of the arch indicates that it is unlikely to have been cut for anything except a very small feature - in all probability this well-house. There is evidence, however, that the vault has been re-set since its original construction:

1. The vault does not match the doorway perfectly, being flush with the door arch on one side (the south-east elevation) but not on the other (the north-west elevation) - though this of course might only indicate that the door has been re-set. The

springing of the arch to either side is not even, the north-west elevation being at a higher level than the south-east elevation. The springing has probably been re-set on the north-west elevation, since below the single projecting slate slab from which the arch springs is an ugly and rough area of small uneven stones.

2. Between the individual granites of the vault are areas of small stone, now held together with mortar. This poor quality work is unlikely to be of medieval origin.

The statue niche

The ogee arch of the statue niche, cut from a single block of fine/medium grained granite, indicates an early 16th century date, and yet it rests on jambs which are without moulding or chamfer and are not vertical, and it has no proper springing. In other words, it is set in walling which has been rebuilt. The possibility therefore exists that the arch of the niche was not an integral or original feature of the well-house, but added at a later date, perhaps in the 17th century when the building was reconstructed or in the 19th century, when it might have been retrieved from the restoration/rebuilding of nearby Grade church.

The ridge and cross-socket

The ridge of the well-house is crowned by a series of triangular-section ridge-stones of fine/medium-grained granite, of which that over the rear gable end is enlarged at one end to accommodate a shallow cup-like socket for a cross. The very small scale of the stones suggests that they were originally designed for a very small-scale building: in all probability this well-house. They are not, however, *in situ*. As there is plenty of evidence that the well-house has been rebuilt or repaired on many occasions, it is likely that the ridge has been frequently re-set. Moreover, it seems likely that the cross-socket (and the cross it was designed to hold) would originally have been at the front of the well, not the back. In other Cornish holy-wells with decorative features on the roof (pinnacles, niches, crosses), the elaboration is normally on the front elevation. Assuming the cross-socket has been moved, the reason why this was done is uncertain. Perhaps the intention was to make the cross it contained closer to and more visible from the road above, which was laid out at some time between 1840 and 1880 when the field containing the well was enclosed. (This would coincide with the period when Johns (1848) bewailed a recent restoration).

The stones themselves have no dateable mouldings, although they are likely to be late medieval at the earliest (15th or early 16th century) as granite was not generally being worked in this way until then. The degree of weathering of the granite suggests they are pre-19th century but does not rule out the possibility that they are part of the 17th century restoration - although the cross-socket is perhaps unlikely to have been included at that date. On balance, a late medieval date seems likely, but cannot be proven.

The roof

The original construction of the roof appears to have consisted of large but slightly irregular slabs of serpentine, set close together in roughly vertical lines. This arrangement is best seen on the south side, in the front half of the roof. However, large areas have been very poorly and inaccurately re-set, so that there are gaps between the slabs which have been filled with mortar and smaller stones. In one place, formerly covered with mortar, the back of a vault-stone could be seen, very close to the surface of the roof, suggesting that the roof has been rebuilt and lowered at some time. This possibility may be corroborated by Johns' illustration (Fig 2), first published in 1848, which appears to show the roof at a slightly higher level than it is now - although this effect could simply be due to artistic licence.

The stonework of the walls

The walls of the well-house are built of random serpentine, with pointing in a hard lime mortar. None of the stonework in the existing building is felt to be of a quality or style appropriate to medieval masonry. Inside, the back and south-east elevation below the level of the springing of the arch, may be original to the 17th century reconstruction but the north-west elevation is likely to have been rebuilt: there appears to be a straight joint between this wall and the back wall, the arch springing is higher on this side and poorly constructed with small stone, and it is not flush with the door arch. Outside, the masonry is poorly constructed and there may have been an almost complete facing, coupled with the re-setting of the roof (described above).

These observations on the probable re-building of part of the well-house in the 19th century were entirely borne out by observations made while the conservation work was in progress: for which, see the next section.

4.3 Observations made in the course of the conservation work

While undertaking the conservation work to the well-house, a number of observations were made and recorded by Richard Marsh in his report (see appendix 3). They are summarised here.

1. Prior to commencement of the work, a build up of stones and earth was removed from the base of the well-house. This accumulation is not shown on the early photos and its recent origin as (presumably) field clearance and material falling from the roof, was confirmed by the discovery of fragments of modern pottery, glass and tile amongst it.
2. Beneath this build-up, larger earth-fast stones, supporting the structure, were found. The two contrasting types – the flat slabs and the rubble – have been described above, in section 4.1 and are shown in the plan, Fig 9.
3. Outside the south-west wall, an area of small random stones was interpreted as possibly the covering for an earlier culvert.
4. Several pieces of evidence were found indicating that the southern end of the roof had been rebuilt at some time in the past. This evidence included:
 - The edges of the roof slopes at the southern end of the building (ie at the back) and the underlying areas of wall were largely made up of mortar and small replacement stones, with no attempt at building in courses.
 - Empty voids within the core of the wall at roof level on the southern end of the building, found during the removal of the outer facing stones, indicated that this area may have been exposed to the elements for some time before being repaired.
 - Three of the large, flat stones forming the outer facing of the roof on the southern end of the western slope had been bedded horizontally rather than vertically, which is incorrect and does not allow for the run-off of water. These stones covered the voids mentioned above and further illustrate the disruption at this end of the building.
5. The fact that a large part of the roof had been re-set at some time has already been noted (see above, section 4.2), but was re-iterated by Richard Marsh. He concluded that many of the slabs forming the roof appeared to be random-sized, and crudely positioned. 'It is hard to believe that these are of early origin, and were probably inserted either during alterations to the roofs design, or after the building had fallen into a state of disrepair.'

6. The walls of the building appear largely intact and unaltered, except on the south, rear elevation, where mortar has been used to carry out repairs. Elsewhere all the stones are bedded in earth, and this earth extends up to roof level.

7. The earth joints of the walls have at some time been pointed with a lime mortar to a shallow depth of perhaps $\frac{1}{4}$ inch. This lime mortar is consistent with that used for bedding and pointing the outer facing stones of the roof. The sand used in this mix appears to be crushed granite, is fine and grey in colour. The set is soft.

8. There is evidence of a later re-pointing. On this occasion, a thin covering has been smeared over previous mortars and lined with the edge of a trowel, to resemble masonry. This mortar is grey, and hard and brittle.

9. A third type of mortar was noted in the construction of the roof's vault. Here, between the granite ribs, are small stones compacted with mortar. This mortar contains lime and a coarse yellow sand, possibly from a river estuary, as fragments of sea shell could be seen.

Rather belatedly, samples of three of the mortars were taken for closer examination. Observations made on these by Stephen Tucker, Historic Buildings Consultant, are described below.

4.4 The mortars

At the risk of repeating comments already made above, it is worth summarising the number and type of mortars used in the well.

1. All walls were originally constructed with an earth mortar. This was not analysed, but hand examination of small samples showed it to contain flecks of lime. Small quantities of lime were frequently used to consolidate mud/clay mortars, to give them more body for building work.
2. A lime mortar containing a yellow sand was used in the construction of the vault (to set small stones in between the individual vault stones)
3. The earth joints of the walls were re-pointed at some time, in the same lime mortar as that used for bedding and pointing the outer stones of the roof. This same mortar was used for repairing the top of the back (south) wall.
4. The final mortar was used for a later re-pointing of many of the joints in the stonework. This was lined, to imitate close-jointed ashlar work, and was so hard that it was initially mistaken for cement.

Richard Marsh notes that all the lime (with the possible exception of that used in the vault (mortar 2)) is associated with repairs to the building, and that the original construction, ie the 17th century work, involved the use of earth mortar, with the addition of only a little burnt lime to add strength. The main phase of repairs made, probably in the mid 19th century, after the structure had deteriorated quite badly, involved the extensive use of a soft lime mortar, particularly in the roof, the back wall and for re-pointing (mortar 3 above). According to Stephen Tucker, who analysed this material, this is likely to have been a feebly hydraulic lime, possibly made from a local beach sand containing a high quantity of shell, and burnt in a local kiln. The aggregate - a mix of rounded grains derived from a range of rock-types (local metamorphic fragments, granitic material, meta-sedimentary grains) and much shell, suggests that the aggregate was also obtained from a local beach. On the other hand, a later phase of re-pointing, probably in the late 19th century, involved the use of lime made from an imported limestone, possibly from the Plymouth area (for which, see Isham 2000, 19 - 21), together with a fine-grained river gravel: the high proportion of serpentine suggesting a very local source for the aggregate (mortar 4 above).

4.5 Results of the watching brief

Ann Preston-Jones of CAU was on site while the initial phase of work at the well, involving scrub clearance, drainage and restoration of the gully in front of the well, took place. Photography (black and white, colour slide and colour prints), sketches and notes were used to record the work, which is more fully described in section 3.

The most intrusive was the drainage work, involving as it did, the excavation of a hole or sump behind (to the south-west of) the well, and a trench to carry a drainage pipe to link with land drains, to the north-west. The sketch plans in Figs 10 and 11 show, firstly, the degree of erosion here before the drain was laid and secondly, the position of the sump, trenches, and pipes.

The sump to the south-west of the well measured 1.8m x 1.8m x 1.3m deep, and was located just over 1 metre from the well-house. In this trench, a very thin topsoil indeed (0.1m) was visible, above a 0.5m thick layer of solid grey clay and below this, a red-brown, slightly grittier clay with, at the bottom of the trench, the gritty subsoil. All the clays appeared uncontaminated and clean, and (according to Peter Kemp) typical of what is encountered on the serpentine areas of the Lizard.

The trench leading from this sump to the field drain was on average 1m from the well and 7.5m long, 0.6m wide and up to 0.85m deep at the south-west end. At the north-west end, scarcely any excavation was needed as the ground here had already been eroded away by storm water from the road. The topsoil in the trench was 0.4 to 0.5m deep, above the same red-brown gritty clay which appeared in the lower part of the sump pit. A small wedge of the grey clay appeared at the south-west end of the trench, but was otherwise absent. Again, there was no obvious disturbance, though the muddiness of the ground and the speed with which the work was executed, gave little time to examine the sections. A handle from a late 19th or early 20th century earthenware jug was found in the section to the south-west of the well, buried 0.25m deep in the topsoil. It was considered at the time that this could have reached this position as a result of being dropped into a poached rut in the damp soil.

In the drainage trench to the north-north-west of the well, a 2 inch diameter wrought iron pipe was encountered, laid in a stone-filled trench approximately 9 inches across, its direction indicating that it emanated from the north corner of the well. This is almost certainly the pipe referred to by Henderson, by which water was piped to the hamlet of Bruggan.

To the north-east of the well, where a drainage pipe was laid from the road culvert to the land drain, hardly any excavation was necessary to accommodate the pipe, the ground having already been severely eroded by storm water from the road. The extent of erosion here is shown on Fig 10 and the degree to which this had removed material from the north and north-east of the well can be judged by comparing this with any of the early photos. Gullying had cut into the ground in front of the well by over half a metre and the threshold stone, seen bedded in turf in the old photos, was severely undercut and almost hanging on a thin wedge of solid ground. Further signs of disturbance and previous attempts at drainage in the area were found in the form of a 4 inch diameter plastic pipe and a length of BT ducting, the latter inserted beneath the big slab at the threshold of the well.

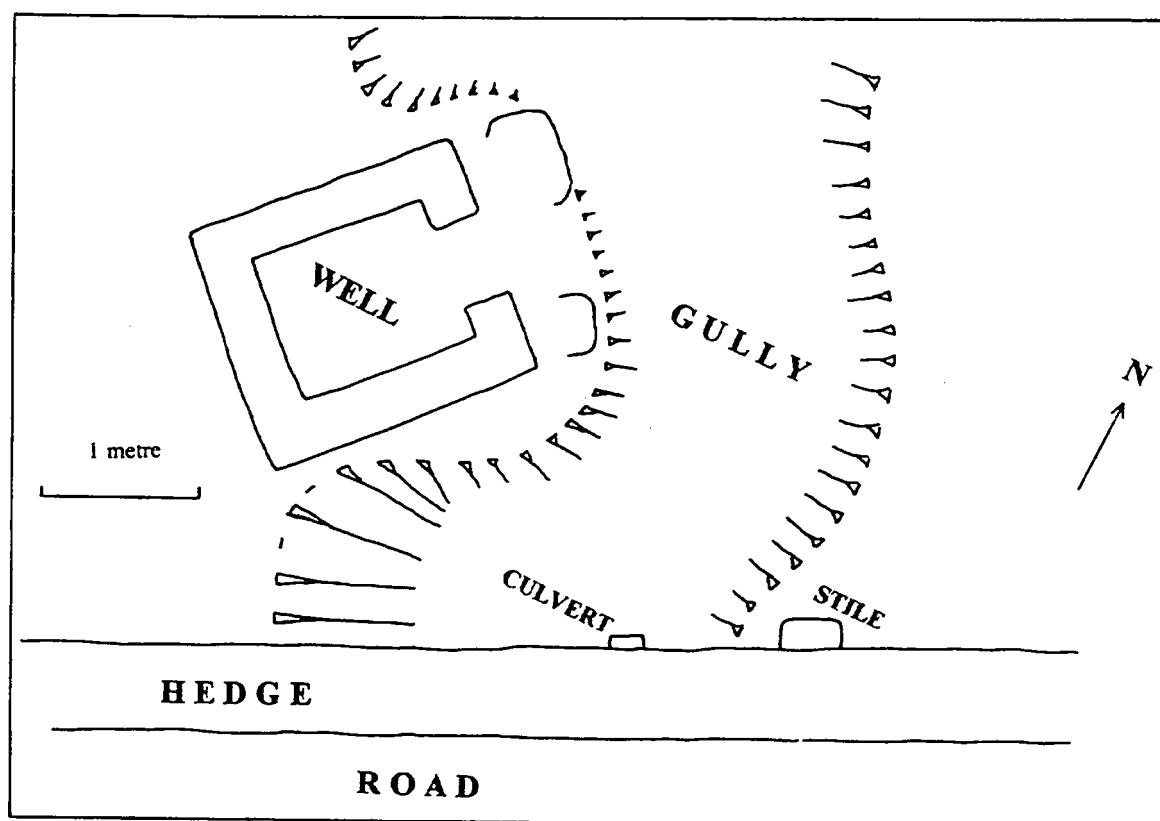


Figure 10. Sketch plan showing the extent of gulying in front of the well-house, before restoration of the ground.

5 The Conservation Work

5.1 Drainage and landscaping, phase I

Before the work described in this report took place, the ground all around the well was extremely boggy, leading to poaching by cattle and making access very difficult indeed. There must have been a fundamental change in the water table here over the last thirty years, for early photos, including that published by Lane-Davies in 1970, suggest that the ground around the well was formerly reasonably dry. For example, a photo in Henderson's *Parochial Antiquities* of 1916 shows a lady sitting on the grass by the north corner of the well: this is not something one would have chosen to do recently, unless clad in a wet suit!

The reason for this change is not entirely clear. No doubt water running under the road in the culvert and emptying into the field to the north-north-east of the well has not helped, but it does not explain the great wetness all around the well. Perhaps the well is not working as it did in the past, with a steady flow of water in and out; perhaps changing agricultural practice has had an effect; perhaps there was some form of maintenance practised in the past, of which we are simply not now aware, or perhaps the position of the spring has changed slightly.

The overall aim of the drainage work was to restore dry ground around the well, but without interfering with the spring to such an extent that the water was lost from the well. A secondary aim was to restore the ground level in the gully created by flood water from the road culvert scouring out the ground in front of the well. Peter Kemp, a contractor

with considerable experience of drainage work and who had actually laid land drains in this field some years before, was employed by Oliver Bennett of the Cornwall Landscape Project to meet the challenge, in May 2000.

To help drain the ground to the south and west of the well, a sump was dug behind the well and a 4 inch pipe laid from this to connect with the existing field drain to the north of the well (see Fig 11). The sump and trench were backfilled with a mixture of stone and the clay originally excavated from them. To take away the water running from the road-culvert, a 9 inch pipe was connected from the culvert to the existing land drain (which had a similar diameter); then the eroded gully in which this was laid was also backfilled with stones and clay, to restore the ground level in front of the well.

Over the top of the backfilled areas, a layer of three-quarter inch gravel and earth was laid, to help form a firm but well drained surface. A few larger blocks of stone were set randomly in this to form stepping stones, should the ground become boggy again in the future, and finally, grass seed was scattered over all the bare areas.

At the same time as this was taking place, the gorse and scrub was cleared from around the well. It is to be regretted that an unfortunate combination of circumstances conspired to make this phase of work only partly successful. Firstly, the ground was really too wet when the work was done, and so was extremely badly churned up. Yet the work could not be delayed, as the Cornwall Landscape Project - the source of grant-aid - was due to finish soon after. Secondly, cattle were put into the field almost as soon as the work was over, and so the newly restored ground was rapidly poached and the grass seed failed to germinate - leaving the ground bare for the rest of the summer. Finally, the cleared scrub was not burnt or removed but mostly piled to one side and left to rot down:- the dying vegetation adding to the rather dismal appearance of the well.

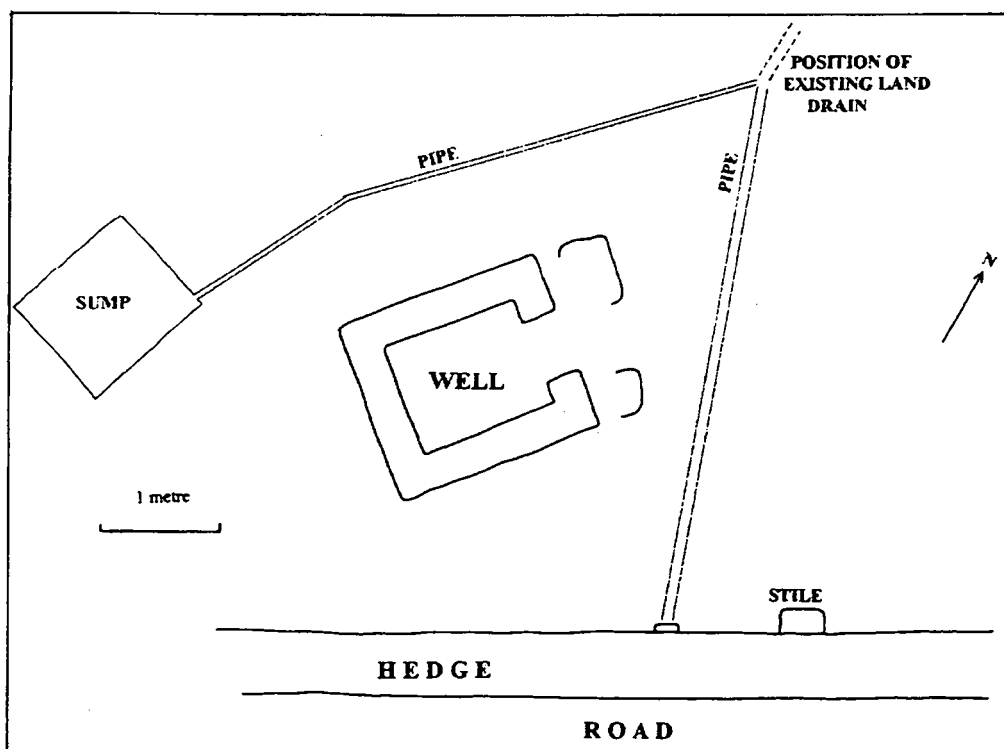


Figure 11. Sketch plan showing the position of sump, trenches and new pipework.

Unfortunately, all these very obvious problems tended to create an adverse impression, outweighing in their impact the considerable gains. In fact, it had now become possible to approach the well without battling with gorse and bramble and without traversing a gully, and it was also possible to walk all around the building without losing a welly in the mud. But as it is essential that all elements in the presentation of an old, interesting and much visited structure like this should be harmonious and pleasing, it was concluded that a second phase of landscape improvement should take place as soon as weather conditions allowed.

5.2 Drainage and landscaping, Phase II

The second phase of drainage and landscaping took place over a year after the first, in July and August 2001; the lapse of time enabling us to see how effective the earlier measures had been, and where further work would be required. This re-assessment showed that over the year, the grass had grown only patchily, that although the ground in front of the well remained solid and dry, that to the north-west was still wet and badly poached by cattle coming to the well to drink. It was therefore concluded that further works were needed, including a second attempt to sort out the drainage, fencing to exclude cattle and prevent erosion, and re-turfing to tidy up the whole area after all this and the building repairs had taken place. At the same time, the stile was rebuilt to make it safer: although it remains difficult for the less able to negotiate. These various works are described in more detail below.

5.2.1 Drainage

In spring 2001, it was obvious that the ground to the north-west of the well remained boggy, despite the interventions described above in section 4.1. A re-evaluation, by Adrian Thomas, of the work which had been carried out previously, concluded that the continuing problem was due to the fact that an unperforated pipe had been laid from the sump behind the well to the land drain. This was successfully taking water from the sump to the land drain, but was *not* collecting water arising to the north and west of the well, which percolated to the surface, saturating the ground here. The solution proposed was to re-excavate the pipe trench from land drain to sump, to replace the unperforated pipe with two 4 inch corrugated and perforated land drainage pipes, and to backfill with stone chippings to allow free drainage into the pipes. This work was carried out at the beginning of 2001 and proved entirely successful in drying out the ground to the north-west of the well.

5.2.2 Stile

The holy well is on a footpath leading from Grade Church to Bruggan. Coming from Grade Church, the path crosses the road adjoining the well to the south and then drops down into the field containing the well over a stone stile. This stile, located about 5 metres south of the well, is formed of two stone steps projecting from the hedge; but it was difficult to use because the stones projected only a short way, sloped out and down from the hedge, and being of serpentine, were highly polished from repeated use, and slippery and dangerous when wet.

To alleviate the problem slightly, while retaining the character of the steps, the hedge here was taken down and rebuilt, re-setting the stones forming the steps so that they slope inwards rather than out, project slightly more than before, and are staggered rather than set one above the other. The shiny, worn surface was kept uppermost, however, so that the appearance of age would not be lost.

As a result, the hedge and steps here look neater and are safer, but do still remain difficult to use because it is a fairly high drop from the road to the field. In the long term,

consideration should be given to rebuilding in a different style, or to at least providing some sort of hand-hold.

5.2.3 Fencing

As the project progressed, it became apparent that the regular use of the well-field by dairy cattle would make attempts to landscape and drain the ground around the well unsustainable (particularly as one or two of the beasts were in the habit of drinking out of the well (see front cover). It was therefore decided that the well should be fenced off from the surrounding field. This decision was not taken lightly, since part of the beauty of the well lies in its setting within a lush agricultural landscape, with views across the valley to Ruan Minor. Even more difficult was the decision over what sort of fence or boundary to use. In the first instance, the plan was to put in a simple and basic wooden fence, but this was rejected early on as being too unsightly and inappropriate to the monument. A Cornish hedge would have been more traditional but was not possible in the marshy ground around the well, and would also have very effectively cut the well off from its surroundings. Finally, at the suggestion of Eric Berry, it was decided to go for a black-painted park pale-type metal fence. This, it was felt, would be entirely appropriate to a small structure being set aside and treated henceforth as a 'monument'; but by being less intrusive than any other form of barrier, and painted black, would still enable the well to be seen as an element in the landscape.

The process of making a durable metal fence is by no means straightforward, certainly in comparison with putting up a post and rail or barbed wire fence. For the record, the steps involved are enumerated here.

1. Site surveyed and measured up for a fence.
2. Lengths and sections of steel ordered.
3. Fence fabricated, away from the site.
4. Fence sections brought onto site for fitting.
5. Any further welding carried out before
6. Fence sections sent away for galvanising.
7. Final assembly on site – sections bolted together.
8. Fence painted with neutraliser.
9. Fence finished with two coats of neutraliser.

To withstand the size and weight of the substantial dairy cows that use this field, the fence had to be a substantial one. So although the basic design is similar to park railings, as seen for example just outside Helston at the National Trust's Penrose estate, the fence at Grade is actually heavier than most. The fence is of galvanised mild steel, with 2in x 1/2in uprights 3 feet apart, and 5 x three quarter inch round section rails, each 10 inches apart. Posts 6ft or 9ft apart are set in concrete to within 6 inches of the surface, then backfilled with stones and earth so that the concrete does not show through.

The size and shape of the enclosure created around the well is shown in Fig 12. Overall, it measures 8 metres by 5.5 metres and is at least two metres from the well-house in all directions. To accommodate the public footpath which leads into the enclosure from the road on the south, a small kissing gate was fitted in the western corner of the enclosure. Owing to the uneven fall in the ground towards the north, the fence proved difficult to fit

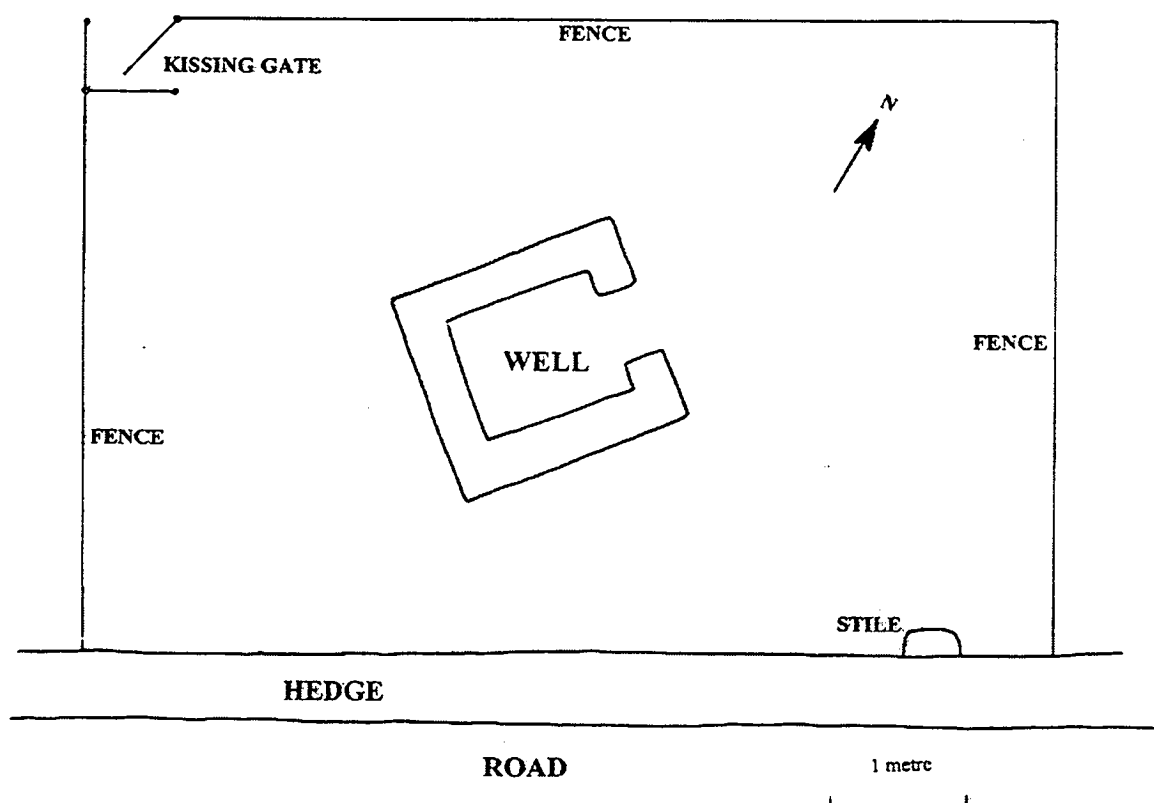


Figure 12. Sketch plan showing the position of the new fence and kissing gate.

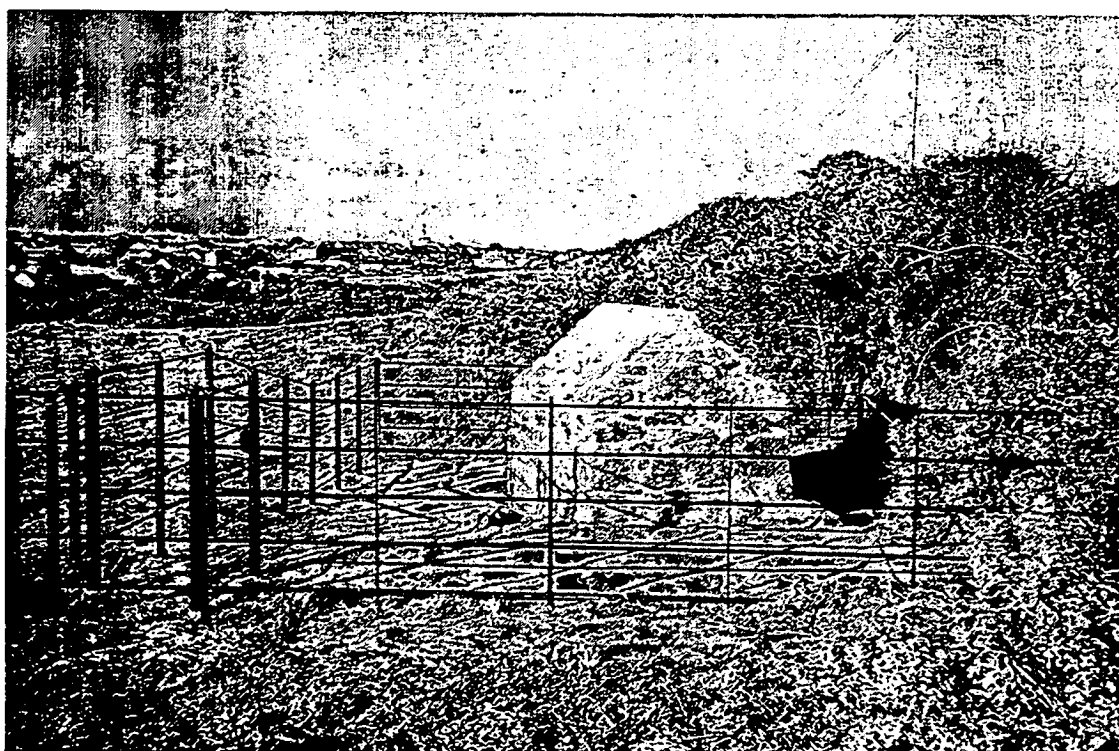


Figure 13. The new fence at St. Ruan's Well, Grade, shortly after construction and before tufting of the enclosure

to the slope and in places, particularly adjacent to the kissing gate, is perhaps a little too high. Nevertheless, this does not detract significantly from the appearance of the site as a whole.

Overall, the conclusion is that the metal fence was the right choice. It is attractive in its own right; it clearly marks out the well as important; it is remarkably solid, and should last for many years. It also has other, unexpected advantages. You can climb on it, and lean on it to admire either the well or the view and (if you are a small child) you can swing on the kissing gate! A small section of the field has been set aside for inspecting the well without the worry of the wet ground, cows, or gorse.

5.2.4 Turfing

After all work on site had been completed, the ground within the newly-fenced enclosure was completely re-turfed. With all the disturbance associated with the drainage, building and fencing works, combined with cattle trampling round, the ground had become very uneven and the grass patchy, and so a layer of topsoil was spread over before re-turfing took place. Outside the enclosure, any bare areas were simply re-seeded since cattle walking around and rubbing against the fence would rapidly have torn up any turves.

Despite some concern when dry weather immediately followed the re-turfing, the work proved very successful and provided the instant gardening needed to 'lift' the appearance of the site.

5.3 Repointing and roof repairs

Richard Marsh carried out repair of the roof of the holy well and re-pointing in July and August 2001. His report on the work is reproduced in Appendix 3. It is analytical and reports observations and discoveries made in the process of carrying out the work, as much as the methods used in conserving the well-house. A summary of the repair work is given here; a summary of his observations on the history of the structure has already been given in section 4.3. His notes on the condition of the building are summarised first, by way of describing the condition of the building before work commenced:

1. The largest areas of missing stones were to be found on the western edge of both roof slopes, and it was within these areas that the greatest bramble growth was found.
2. On the north-east corner of the roof's eastern slope, approximately four of the uppermost edging stones were missing.
3. Approximately 75% of the pointing mortar of the two roof slopes had either cracked or disintegrated, and most of the stones had become displaced due to the ingress of soil, water, and vegetation.
4. Excavation around the base of the walls revealed many entry points of mature bramble root systems. These were growing within the earth core of the walls, where they caused disruption to many of the adjacent stones. The bramble roots also extended well up into the roof structure, growing between the inner vault structure and the flat outer facing stones. This had caused some of the flat outer stones to disintegrate, and was clearly the cause of the areas of missing stone on the sides of the roof slopes.
5. Despite all this, the overall stability of the building was considered to be sound!

Before work commenced, the following principles of repair were agreed between Richard Marsh, Eric Berry and Ann Preston-Jones:



Fig 14. The well-house in 1997, before repairs.

- Wherever possible, old mortars would be retained.
- New mortar would be carefully chosen to blend with the existing pointing and general colour of the stone. In the event, a 4:1 mix of coarse crushed limestone and St Astier NHL 3.5, a moderately hydraulic lime, was used.
- Any missing stone would be replaced only with locally sourced material (ie, serpentine from the field the well is in).
- Any stones in the fabric, which had to be removed in the process of consolidating the building, would be replaced in exactly their original positions, except where agreed with Eric Berry.

The actual work involved the following stages:

1. Vegetation clearance was carried out both before work commenced *and* after all loose stones and failed mortar had been removed. As already noted, it was discovered that mature brambles growing at the base of the walls and rooted into the earth core of the walls and roof were the main source of trouble, causing fracturing and loss of some of

the roof slabs, and disintegration of the mortar. As far as possible, roots were removed, but where this was not possible, they were treated with a brushwood killer.

2. A 25cm (8 – 10in) deep accumulation of soil and stones at the foot of the building was cleared in a 40cm (16in) wide strip. This was cleared in order to expose the footings of the building and to retrieve any useful stones for re-building. Observations on the nature of the foundations thus revealed are recorded in section 4.1.1. No *in situ* stones, related to the structure, were disturbed.
3. All the outer facing stones of the roof and the four granite ridge stones had to be removed as vegetation penetration and mortar disintegration was found to be so extensive. These were set out on the ground in numbered positions, to enable them to be correctly replaced. All deteriorated mortar, and much earth and vegetation were then removed from the roof.
4. The stones were then replaced in order to plan the rebuilding of the roof. Some new stone was needed to fill holes and three of the existing slabs were re-aligned to fit the way the roof is believed to have been originally designed (ie with the long axis set vertically, not horizontally).
5. A smaller number of stones were removed from the wall where they had been disturbed by bramble roots.
6. All stones removed from the structure were cleaned, while taking care not to disturb the lichen or natural patinas on the exposed faces.
7. The entire building was gently cleaned with a soft brush.
8. The outer facing stones were again removed from the roof and set aside.
9. The backs of the vault stones, thus exposed, were cleaned.
10. The facing stones of the roof were replaced individually, bedded on mortar of appropriate thickness.
11. The ridge stones were re-set in their original positions.
12. Finally, all stones on the roof slopes and ridge were re-pointed, followed by the open joints in the walling stones.



Figure 15. The well-house in 2001 following restoration (but prior to re-turfing of the enclosure)

6 Discussion

This has been a rewarding project, in terms both of restoring and protecting a neglected building, and also in the light that has been thrown on its history. We started the project with a building assumed to be of medieval origin, poorly preserved and standing in a boggy patch on the edge of a pasture field. Yet in the course of the project, all these facts have been overturned or altered.

The building and its surroundings are no longer overgrown and boggy, but dry, grassy, and enclosed by railings which protect the well from stock but do not prevent access or spoil the view. The disruption caused by the drainage works could hardly be imagined now. The building itself, which had been host to vigorous brambles and saplings whose roots were causing immense damage to the stonework, is now weed-free, having been painstakingly consolidated and re-pointed with a lime mortar whose colour is harmonious and blends well with the stone of which the well is constructed.

Changed too is our understanding of the building. The accumulated evidence now points to the fact that this is not a medieval building, but a 17th century one, which underwent a major restoration in the mid 19th century, followed by further re-pointing, perhaps fifty or so years later. The fact that the present building incorporates medieval carved stones suggests that there *was* an earlier building, perhaps of similar design, although it remains a

possibility that the stones were retrieved from nearby Grade Church during a phase of restoration there.

Even our picture of the setting must change, for we now know from maps that the present lush green pasture replaced an open heath environment in the 19th century. Soon after the conservation work had been completed, some unknown person planted a small Heather at the foot of the well. No doubt this was meant as a gift in recognition of the improvements made, rather than an echo of the past environment. But it was happily chosen, and a year later, is still thriving.



Figure 16. Undated photograph of the well with a wooden door

7 Recommendations

Despite all this work, some maintenance will be needed and the parish council has agreed to take on the responsibility for this. The main requirements are:

- To cut the grass in the enclosure.
- To trim back the hedge.
- To monitor the condition of the building (though in theory, it should not need any attention for many years).
- To repaint the fence (since the fence was first painted it has peeled in places revealing the steel). It is recommended that following painting, an electric fence should be erected around the fence, temporarily, whilst the paint dries to prevent the cows causing any damage.

And for the future, consideration should also be given to:

- Sign-posting the well from the road.
- Lowering the hedge from the road slightly, to make access easier.

8 References

- Blight, J T, 1856, *Crosses and other antiquities of the West of Cornwall*.
- Doble, G H, 1939. *St Rumon and St Ronan*, Cornish Saints Series 42, Shipston upon Stour.
- Henderson, c, 1916. *Parochial Antiquities* IV, manuscript at the Courtney Library of the Royal Institution of Cornwall.
- Henderson, C, c1920. *Ecclesiastical Antiquities*, manuscript at the Courtney Library of the Royal Institution of Cornwall.
- Henderson, C, 1956. 'Ecclesiastical Antiquities', ed HL Douch, in *J Roy Inst Cornwall*, new series II, part 4.
- Isham, K, 2000. *Limekilns and Lime Burners in Cornwall*, St. Austell.
- Johns, C A, 1848. *A week at the Lizard*, London (first edition).
- Johns, C A, 1863. *A week at the Lizard*, London (second edition).
- Lane-Davies, A, 1970. *Holy Wells of Cornwall*, Cornwall
- Meyrick, J, 1980. *A Pilgrim's Guide to the holy wells of Cornwall*.
- Murray, A (ed), 1850. *A Handbook for Travellers in Devon and Cornwall*, London.
- Ordnance Survey, 1878, 1st Edition 25 Inch Map.
- Ordnance Survey, 1907. 2nd Edition 25 Inch Map.
- Polsue, J (ed), 1868. *Lake's Parochial History of Cornwall* I, Truro.
- Polwhele, R, 1803. *History of Cornwall*, I, Truro.
- Quiller-Couch, M & L, 1896. *Ancient and Holy Wells of Cornwall*, London.
- Robertson, R and Gilbert, G, 1979. *Some Aspects of the Domestic Archaeology of Cornwall*, Institute of Cornish Studies and Cornwall Committee for Rescue Archaeology, Truro.
- Taylor, T, 1929. *Ruan Minor and Grade* (church guide).
- Tithe Award, 1840. *Map and Apportionment for the parish of Grade*.
- Whittaker, J, 1804. *The Ancient Cathedral of Cornwall Historically Surveyed*.

9 Project Archive

The CAU project number is 2001022/11.

The project's documentary, photographic and drawn archive is housed at the offices of Cornwall Archaeological Unit, Cornwall County Council, Kennall Building, Old County Hall, Station Road, Truro TR1 3AY. The contents of this archive are listed below:

1. An administrative file containing project correspondence, notes, copies of references, colour prints: 8.9610/1999-2002.
2. Field drawings: GRE 389
3. Finished drawings: GRH 331/1,2
4. Black and white photos: GBP 1381/11-37; 1382/17-37; 1391/0,1; 1417/2a-8a
5. Colour slides: GCS 32206-32240; 32244-32256; 32352-32355
6. This report is held in digital form as: H:\DOCUMENT\SITES\SITES S\ST. RUAN'S WELL\REPORT.

APPENDIX I REFERENCES TO THE WELL

- Doble 'Life of S Rumon' is an adaptation of a Breton saint's life with a postscript added describing the translation of St Rumon's body from Ruan Lanihorne (centre of St Rumon's cult in Cornwall) to Tavistock, a newly founded abbey. Origin of dedications on Lizard not known.
- 1803 Polwhele vol I, 183, mentions 'a fountain of clear water called St. Ruan's Well'.
- 1804 Whittaker, *Cathedral of Cornwall*
 Gives the details of the St Rumon legend, which he locates on the Lizard; then mentions that
 'About a quarter of a mile to the north-east of Grade Church is a noted well, from which is fetched all the water used in baptism at the church. It has also a saint and a hermit belonging to it, being denominated St Grade's Well; this 'Sancta Grada, alias Grade,' settling at it in some later period so superseding the names of Rumon at it...'
 'It is walled up at the back and sides with dense black iron stones; but the front, and particularly the arched entrance, is composed of coarse granite... The water is very fine and pellucid [; it] is always up to the brim of the basin, is remarkably cold in summer.
- 1813 1st Edition *Ordnance Survey*. Does not show the well-house.
- 1840 Tithe Award map shows the well to the north of an unfenced track running over a strip of unenclosed land. It is not within the large field it now occupies.
 Part of field 357, Chas.Croft (furze).
 Unenclosed; no associated features.
- 1848 C A Johns, *A week at the Lizard* (1st Edit)
 Text, description are identical with Whittaker, except that in a footnote he adds 'The visitor must not be induced to imagine that St. Ruan's Well, in its present 'restored' condition, bears any resemblance to the venerable and picturesque structure figured above.'
 It sounds as though the picture pre-dates some radical repair work.
 Johns' illustration suggests a building which is taller than the present one, but with the same pointed and chamfered arch and a thick thatch of vegetation [ivy?] on the roof.
- 1850 J. Murray(ed) *A Handbook for Travellers in Devon and Cornwall*
 '½ mile NE of Grade Church is St. Ruan's Well, an ancient baptistry, with an arched granite entrance'.
- 1880 *Ordnance Survey 25"* 1st Edition
 The field the well is now in has been created and the hedge separating the well from the road to the south built. Footpath leading to well from Bruggan to Grade formalised.
- c1870 Polsue, J (ed). *Lake's Parochial History of Cornwall*. Mention.
- 1907 *Ordnance Survey 25"* - similar to 1880.

- 1896 Quiller Couch, *Ancient and Holy Wells of Cornwall*.
Photo shows wall behind well. Stones of drain in front, grassy all round.
‘The well has been altered by “restoration” but its former venerable and picturesque condition has been well preserved. The present building, which has a large niche at the back, is in good condition; cold water in summer... .. ‘A few crooked pins are to be seen at the bottom, but it is not in great repute as a wishing-well, and its water is never now used for baptismal purposes.’
- 1916 Henderson, *Parochial Antiquities* I, 221-4
The first note of the cross at Grade Church ‘brought from the holy well nearby’. He states that the walls before restoration were ‘without mortar and are still of the rudest description.’
The water is now piped and can be drawn by tap at Brugan.
It is locally known as Grade Well, though many writers call it St. Ruan’s.
Grass in roof. Ground to S dry.
- c1920 Henderson, *Ecdesiastical Antiquities*
First really full description
Mentions surplus water formerly carried off by a gutter under the stone slabs which form the threshold, but it has now been piped to the adjoining hamlet.
Water still used for baptisms.
- 1922 Photo, RIC
Shows the well, completely surrounded by short grass though a bit of bramble along the S Wall. It has a simple plank door which is padlocked. It appears as it is today, though some of the pointing is in poor condition. Cement pointing on front with lines to emphasise joints, appears to have been done. Slabs visible in front of door. Ground to south and in front of door not eroded.
- 1927 Henderson, Scheduling document (OW819)
Very brief description + drawing. Notes that the well has been repaired (conservatively) from time to time. The gable cross from the roof is now lying in the neighbouring church of Grade. Roof is ‘in need of slight repair’.
- 1929 *Ruan Minor and Grade* (Church Guide). Thomas Taylor
Mentions the well. Calls it St Grade’s holy well. Say it has suffered at the hands of the restorer. I take it this refers back to Johns’ comments, not to a very recent restoration.
- c1930? Photo at Falmouth Public Library, Ref E77
Shows the door fallen off and propped by stones. All open and grassy around. Build up of ground to sides.
- 1970 Lane-Davies, *Holy wells of Cornwall*
Adds nothing, but has a nice photo.
Open and grassy around, ground not eroded.

APPENDIX 2 THE GABLE CROSS

On the roof of Grade well, at the apex of the rear (west) gable end, is a small socket, presumably to take a cross (or pinnacle?). Charles Henderson, in his *Parochial Antiquities* of 1916, is the first to record that a small cross in Grade Church had been brought from the well.

Until recently, the cross remained in safe-keeping, on the windowsill on the south side of the nave, in Grade Church. It is a latin cross 22cm across the arms, with chamfered angles forming an octagonal cross section, and a recessed cross carved on front and back. On the bottom is a small rounded tenon designed, in all probability, to fit the socket on the ridge of the well-house. The cross is carved of a fine-grained granite which is hardly weathered, so that it retains crisp angles and a fresh appearance. The degree of weathering, compared to the socket stone, suggests either that the cross, if medieval, has been stored under cover for most of its life, or that it was carved at a relatively late date to fit the existing socket. A possible context for this might have been the mid to late 19th century when, it was suggested in section 5.2, the socket could have been moved to the back of the building.

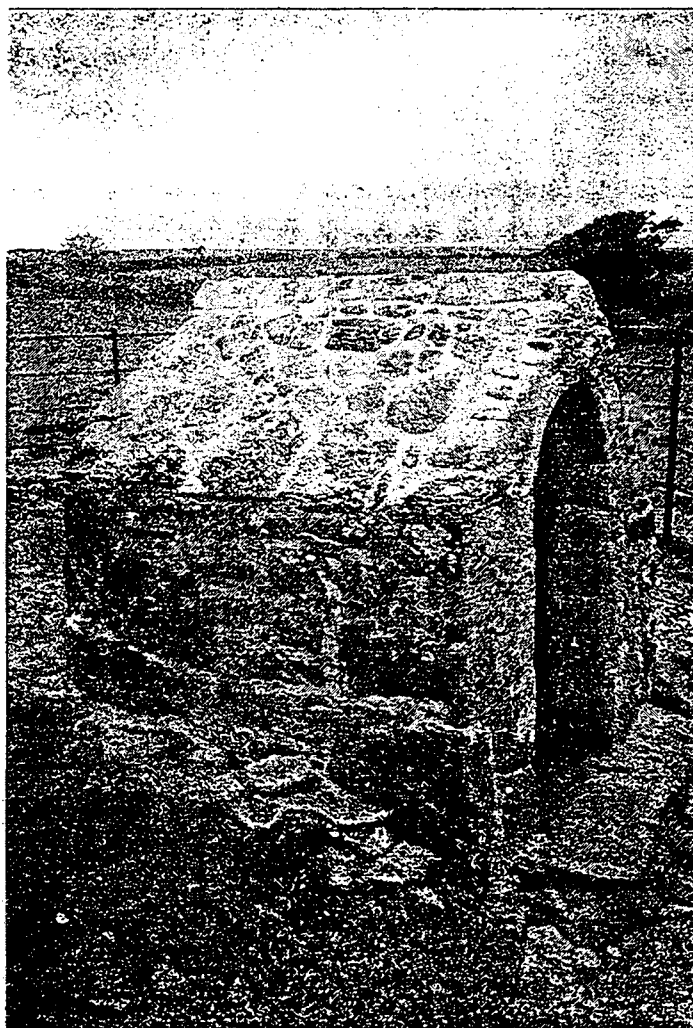
Sadly, the cross has been recently stolen, so details cannot be checked.



Figure 17. Gable cross from St. Ruan's Well, until recently at Grade Church

APPENDIX 3 ST. RUAN'S WELL, GRADE: CONSERVATOR'S REPORT

ST. RUAN'S WELL. GRADE.



The Well after conservation. Summer/2001.

INTRODUCTION.

The programme of repair to St. Ruan's Well was preceded by a meeting, on site, with Ann Preston-Jones, Eric Berry, and myself, on the 27th. June 2001. The purpose was to assess the current condition of the building after many years of neglect, and to agree on a conservation strategy that would leave the building in a sound and weatherproof condition, whilst adhering to a policy of minimal interference to the original fabric, and respect for subsequent repairs and alterations to the building.

From the meeting the following schedule of work was approved:

- a) Excavation of the raised soil level surrounding the base of the construction, to enable, a) a thorough survey of the footings or foundation stones of the monument, b) possible retrieval of fallen stones, and c) the removal of roots and vegetation.
- b) The removal of failed pointing mortars to the roof to enable a thorough de-vegetation.
- c) Cleaning of the underside of the roof stones only, to enable good adhesion to new bedding mortar.
- d) The replacement of missing stones throughout and possible re-alignment of a few existing, subject to consultation.
- e) The re-bedding and re-pointing of all loose stones.
- f) The investigation of cracks in damaged corners, the possible pinning and reinforcement of loose stones, grouting, and re-pointing.
- g) The general removal of loose pointing only to the walls of the well both internally and externally, and the re-pointing in coloured and textured mortars to match the existing.
- h) The investigation of the well itself to determine the stability of the stones forming the rim, and to carry out any remedial work as found necessary, after consultation.

Work on site began on 23rd. July 2001, and concluded on the 11th. August, covering a period of 80 hours on site.

THE REPORT.

Preliminaries:

A cover, supported by a scaffold was erected over the building.

De-vegetation, groundwork, and cleaning:

The grass, bramble, and nettles which had grown up around the perimeter walls of the building, with the exception of the front north elevation, were removed, taking care not to disturb the soil beneath.

The soil, banked up against the three sides of the building to depth of 8"-10", contained many medium to large stones, thought perhaps to have fallen from the building.

The soil was carefully removed from around the stones in a 16" wide strip.

Approximately 50 kilos of soil was collected and sieved.

Some small fragments of pottery, glazed tile, and glass were found and set aside.

They were later thought not to be of significance to the history of the well.

The loose stones, likewise, were thought not to be significant resembling random field stones which could be found in abundance over the site.

Underlying the excavated soil were also found larger fixed stones which were clearly used as a means of supporting the structure.

These stones projected outward from the face of the wall positioned just below the level of the rising ground. Below ground level these three elevations showed interesting characteristics.

The foundation courses of the east elevation are crude in construction, using random shaped and sized stones. Indeed the south-east corner of this elevation is supported by a large irregular shaped stone (complete with drill hole for blasting from a quarry) which one would expect to find in any Cornish stone hedge. Perhaps this elevation was originally built into an earlier boundary hedge.

The foundation courses of the south or rear wall are also built of irregular small random stones, which have the appearance of spilling out below ground level well beyond the area of excavation. They resemble the covering of an earlier culvert, perhaps draining water into the well from the adjacent higher ground.

On the west elevation the wall's lower courses are more formally built, in a stepped construction to allow for the slope of the ground, and incorporate a substantial rectangular block of cut Serpentine to the rear of the building.

It should be noted that no stones, loose or otherwise, were disturbed, and all findings were left in-situ, later to be covered with turf in the landscaping scheme.

The excavation around the base of the walls revealed many entry points of mature bramble root systems. These were growing within the earth core of the walls and extended well up into the roof structure, growing between the inner vault construction and the outer flat facing stones. This had caused some of the outer flat stones to fracture, mortar between the stones to disintegrate, and was clearly the cause of missing areas of stone on the sides of the roof slopes.

It became clear that it was necessary to remove the entire outer facing stones from the roof slopes. This was done in sections, setting out the stones on the ground in their numbered positions. This provided the opportunity to clean out the deteriorated bedding mortar and failed pointing, large quantities of earth and vegetation. As the work proceeded the stones were returned dry to their exact locations.

The lower entry points (at the base of the walls) of the bramble systems had caused disruption to many of the adjacent stones, and these were removed and set to one side. The brambles were excavated as far as possible inside the walls, cut, and treated with three coats of selective S.B.K. Brushwood Killer. The stones were replaced dry to their exact locations. All root systems found in the soil surrounding the building were dug up and removed.

All stones temporarily removed and returned to their locations were cleaned with clean water. Care was taken not to disturb any lichen or natural patinas on their exposed faces.

The entire building was gently cleaned with a dry soft bristle brush.

Approximately six rubble bags were filled with vegetation, soil, and debris from the building.

Discoveries after cleaning.

With the building cleared of all vegetation it was possible to inspect its condition and take note of previous repairs, attempts at pointing, missing stones, and unstable areas. I list below my observations:

- a) The overall stability of the building was sound.
- b) The largest areas of missing stones were to be found on the western edge of both roof slopes, and it was within these areas that the greatest bramble growth was found.
- c) The edges of the roof slopes at the southern end of the building, and the underlying areas of wall were largely made up of mortar and small replacement stones, with no attempt at rebuilding in courses.

- d) Empty voids within the core of the wall at roof level on the southern end of the building, found during the removal of the outer facing stones, indicated that this area may have been exposed to the elements for sometime before being repaired.
- e) Three of the large flat stones forming the outer facing of the roof on the southern end of the western slope had been bedded horizontally rather than vertically, which is incorrect and does not allow for the run off of water. These stones covered the voids mentioned above and further illustrates the extent of the disruption at this end of the building.
- f) It was noted that on the north east corner of the roof's eastern slope possibly four of the uppermost edging stones were missing.
- g) Approximately 75% of the pointing mortar of the two roof slopes had either cracked or disintegrated, and most of the stones had become displaced due to the ingress of soil, water, and vegetation.
- h) The original construction of the outer covering of the roof slopes consisted of large, thin, flat stones (serpentine) laid in a vertical pattern. There is good evidence of this surviving in parts of the western slope, and the lower stones of the eastern slope. The rest, however, appear to be random sized and crudely positioned. It is hard to believe that these are of early origin, and were probably inserted either during alterations to the roofs design, or after the building had fallen into a state of disrepair.
- i) The walls of the building appear largely intact and unaltered, except on the south, rear elevation as previously mentioned, where mortar has been used to carry out repairs. Elsewhere all the walling stones are bedded in earth, and this earth extends up to roof level.
- j) The earth joints of the walls have, at some time, been pointed with a lime mortar to a shallow depth of perhaps ¼". This lime mortar is consistent with that used for bedding and pointing the outer facing stones of the roof. The sand used in this mix appears to be crushed granite, is fine and grey in colour. Lime is evident in this mortar and the set is soft.
- k) There is evidence of a later attempt at re-pointing to many of the joints in the stonework. On this occasion a thin covering has been smeared over previous mortars, and lined with the edge of the trowel to resemble masonry. This mortar may have contained cement, it is harder than a lime mortar, quite brittle, and grey in appearance.
- l) The third type of mortar noted was in the construction of the roof's vault. Here between the granite ribs are small stones compacted with mortar. This mortar contains lime and a coarse yellow sand, possibly from a river estuary, as fragments of sea shell could be seen.
- m) Samples of all mortars were taken for analysis. Early indications show that the earth mortar from the walls contain fragments of lime.

Alterations and replacements to areas of the fabric.

Before any reconstruction or repairs were carried out a meeting took place on the 2nd. August, on site, to discuss what appropriate action should be taken. Ann Preston-Jones, Eric Berry, and myself were present, and the following points were noted.

- a) Wherever possible old pointing mortars should be retained, and where these were missing, or had failed, an approved lime mortar should be replaced.
- b) All areas of missing stones should be replaced in order to make the building secure and watertight. New stones should, wherever possible be found around the site, or in adjacent fields or hedges.
- c) As the outer stone covering of the roof had been dismantled it was agreed that the three horizontal stones should be returned to their original vertical positions. This would require the re-location of some smaller neighbouring stones.
- d) As the bedding mortar beneath the four loose ridge stones had disintegrated, they would need to be re-set.
- e) Repairs to the interior of the building were to be kept to an absolute minimum.
- f) A mortar sample for pointing and stone replacement was accepted as being suitable. It achieved a balanced match with existing pointing and the general colour of the stonework. The mortar to be used was a mix of four parts coarse crushed limestone, to one part St. Astier lime, NHL 3.5, a moderately hydraulic lime.

Consolidation methods and pointing.

The outer layer of facing stones from the roof were again removed, numbered, and set aside. The backs of the vault ribs and inner construction were cleaned of debris and loose mortar. Outer stones were replaced individually, dampened, and set on mortar varying in depth according to their thickness.

All voids were filled, compacting small stones and mortar to achieve a suitably flush bed for the outer stones.

The bedding mortar was kept well back from the surface of the stones in the jointing areas, to allow for full depth of pointing.

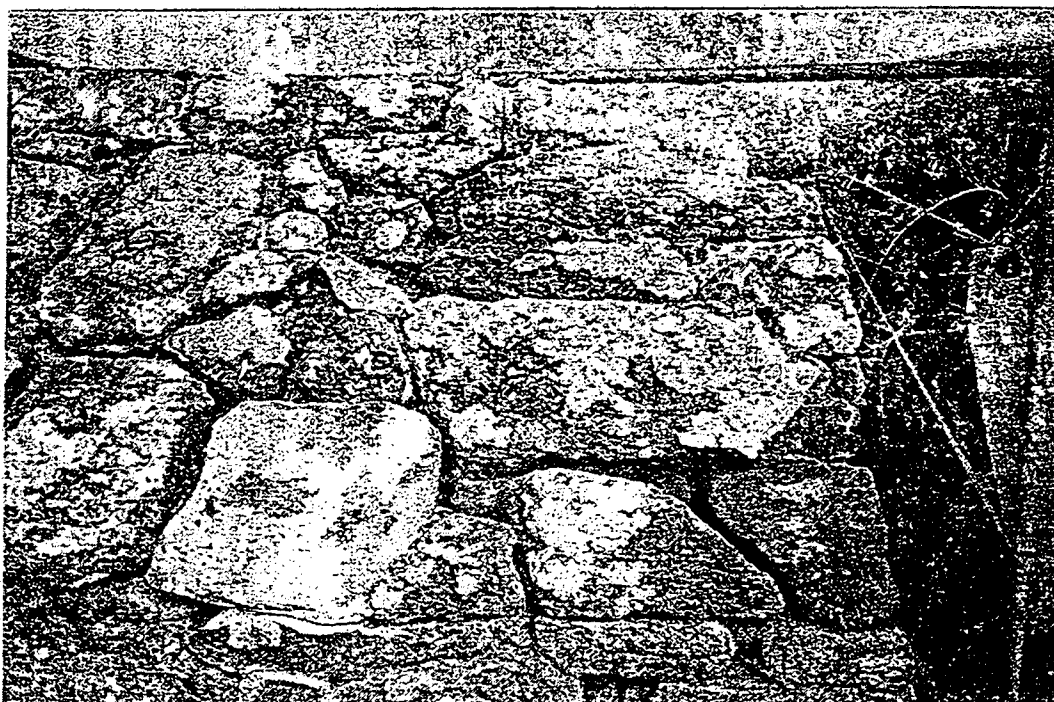
The ridge stones were re-set in their original locations.

Replacement stones for missing areas were found around the site, and in the neighbouring field where out-crops of Serpentine stone can be found. Most stones were used as found, but a limited number required trimming in order to gain a sloping front face to maximize the run-off of water.

Once the bedding mortar had reached a suitable set, all the stones on the roof slopes and ridge were pointed using the same lime mortar mix as described previously, followed by the open joints in the walling stones.

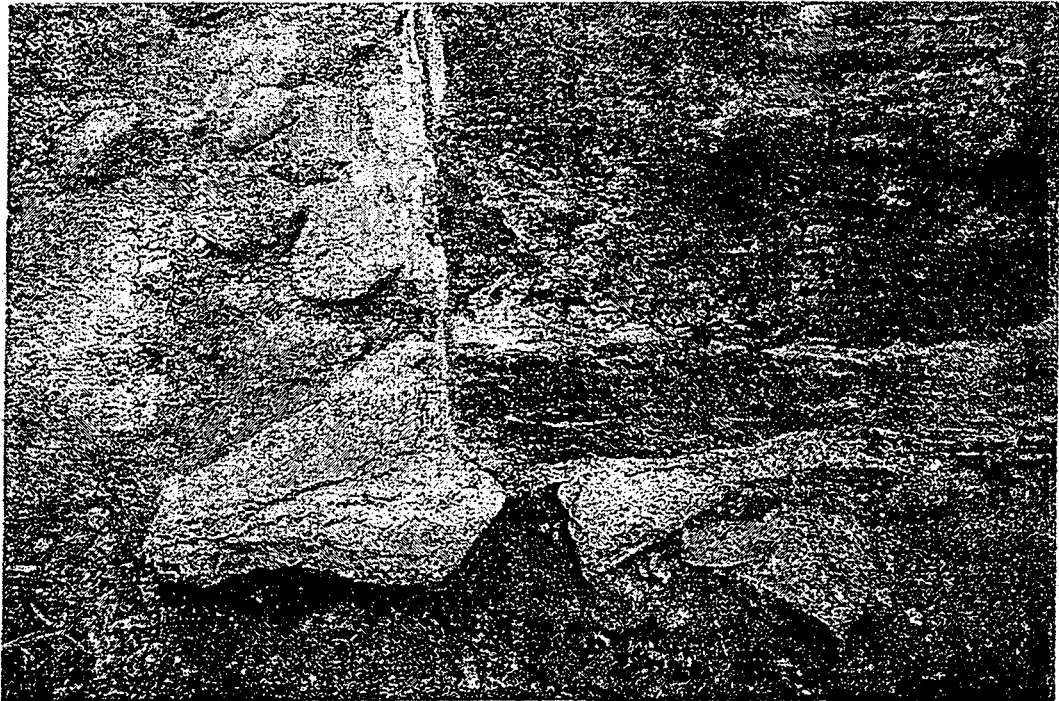
Richard Marsh.

25/10/01.



Above: The northern roof slope. The three horizontally positioned facing stones at odds with the vertical design. Also area of missing stones to the right.

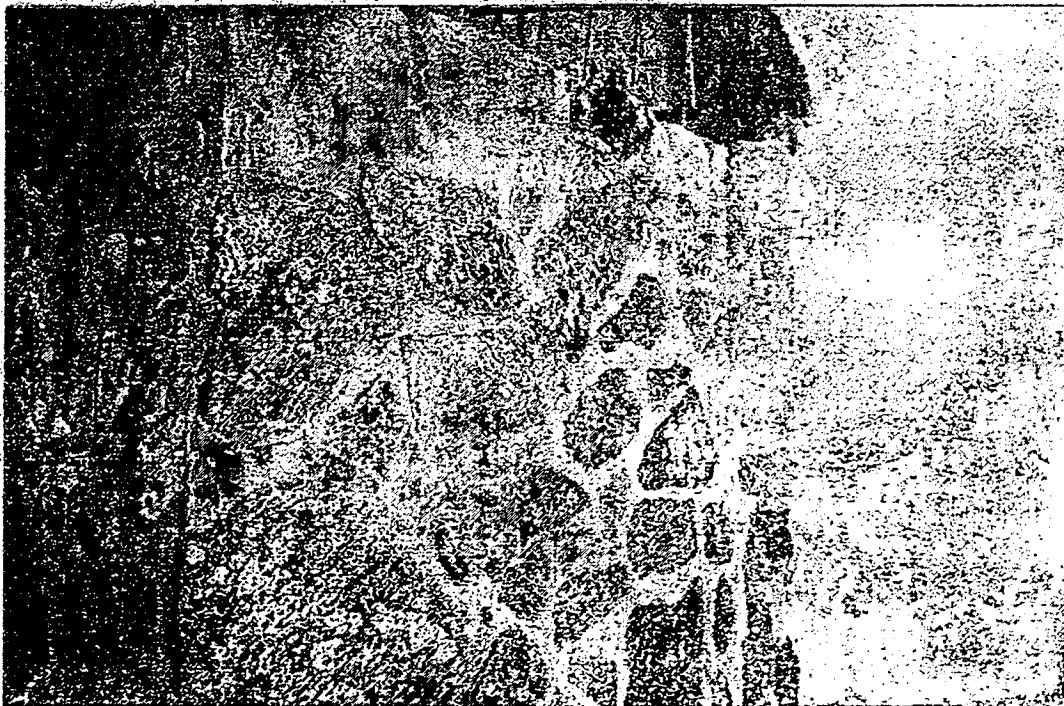
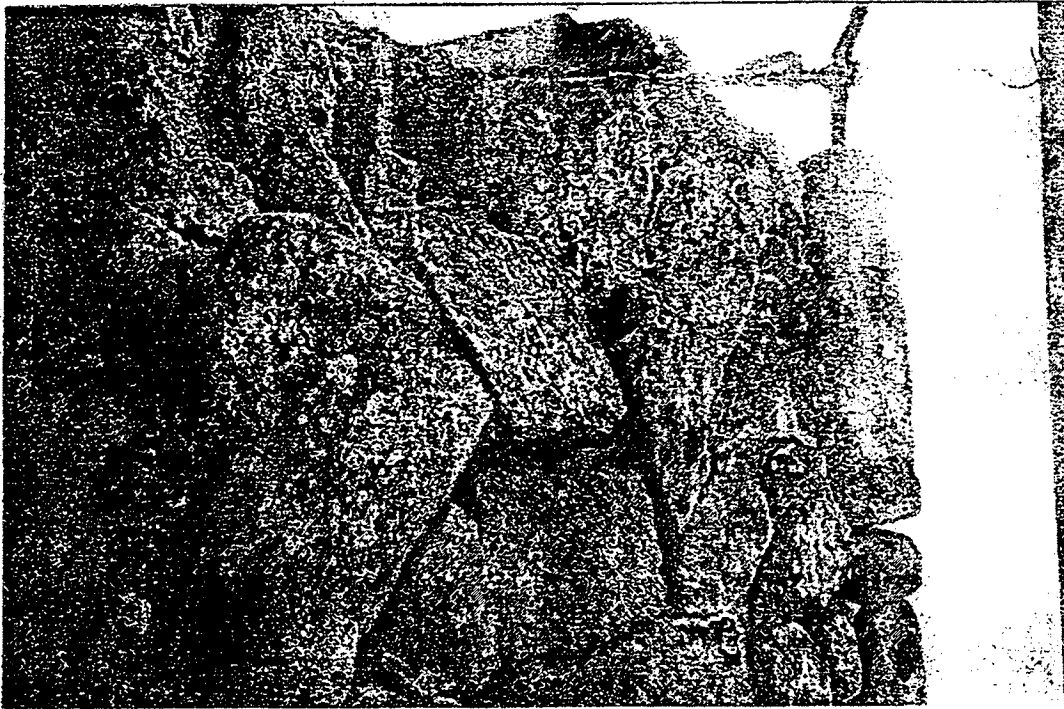
Below: After re-construction showing re-alignment of facing stones, and replacement stones on western edge of roof.



Above: The south-west corner at foundation level showing the random nature of the supporting stones. Possible culvert covering in background on west elevation.

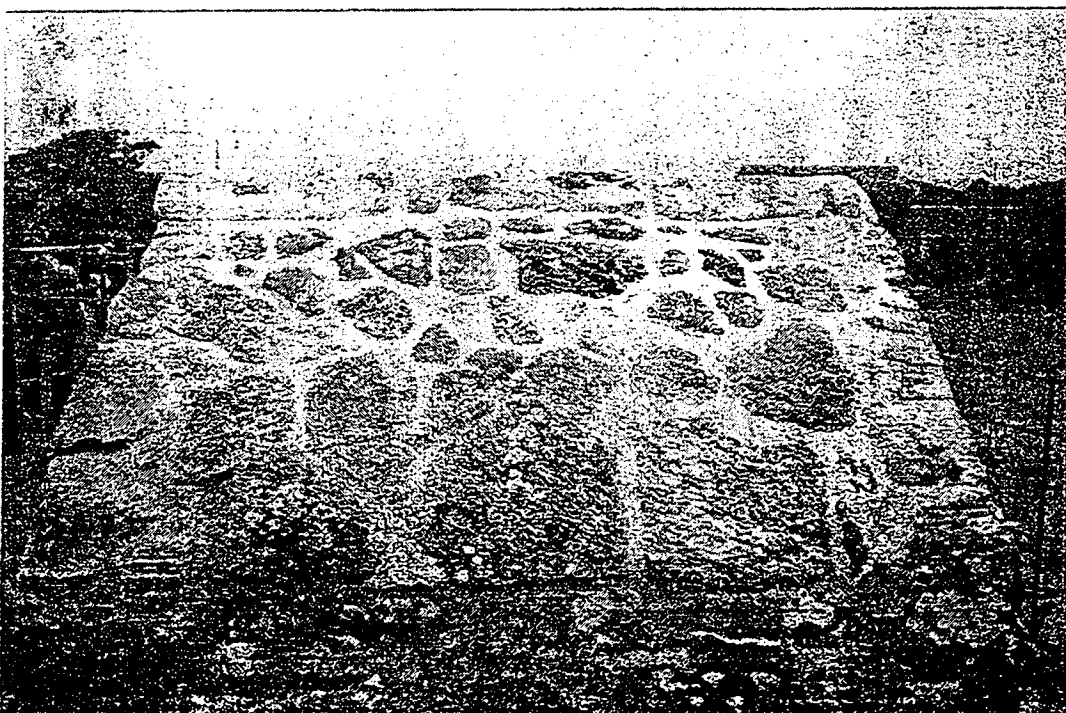


Below: Better quality supporting Serpentine stone in foundation of north elevation.



Above: The south-west edge of the roof, showing area of missing stonework, just prior to rebuilding.

Below: After re-building and pointing.



Above: The completed north facing slope of the roof.

Below: The completed south facing slope of the roof.