

Kerris Cross, Paul, Cornwall

Conservation and repair



Historic Environment Projects

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Client	English Heritage
Report Number	2011R105
Date	November 2011
Status	Final
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Acknowledgements

This report describes work organised by Historic Environment Projects, Cornwall Council (CC HE: formerly Historic Environment, Cornwall County Council) to repair a medieval granite wayside cross at Kerris in Paul parish.

We would like to acknowledge the help support of the Edward Bolitho of the Bolitho Estate, owner of the monument, as well as local farmers Alan Sunderland of Kerris Manor Farm and Geoffrey Giles of Kerris Farm.

Conservation work on the cross was undertaken out by Adrian Thomas and David Cutting of St Just.

Within Historic Environment, the Project Manager was Ann Preston-Jones.

The work was undertaken as part of Cornwall Council's Scheduled Monument Management Project for 2011-12: a project funded jointly by English Heritage, the Cornwall Heritage Trust, Cornwall Council and other partners.

The views and recommendations expressed in this report are those of Historic Environment Projects and are presented in good faith on the basis of professional judgement and on information currently available.

Freedom of Information Act

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.



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Cover illustration

Work begins on the repair of the cross-head

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Contents

Summary	7
1 Introduction	9
2 History and description of Kerris Cross	9
3 Condition of the monument	10
3.1 Condition in the 19 th and 20 th centuries	10
3.2 Recent condition	10
3.3 Risk	11
4 Project background	11
4.1 Aims	11
4.2 Objectives	11
5 Results of the conservation work	11
5.1 Replacement of the central pin	11
5.2 Removing the ends of the iron staples	13
5.3 Straightening the cross	13
6 Archaeological involvement in the project	13
7 Conclusions/discussion	13
8 Recommendations	13
9 References	14
9.1 Primary sources	14
9.2 Publications	14
10 Project archive	14

List of Figures

- Fig 1 Location map
- Fig 2 Paul Tithe Map, 1841: showing the original location of the Kerris Cross at Carn-a-Langa (red cross shape)
- Fig 3 First Edition of the Ordnance Survey 25 Inch Map, c1880: of Carn-a-Langa (above) and Kerris (below)
- Fig 4 Second Edition of the Ordnance Survey 25 Inch Map, c1907: of Carn-a-Langa (above) and Kerris (below)
- Fig 5 Ordnance Survey digital mapping showing the site and its environs (2009)
- Fig 6 Drawing of the Kerris Cross by AG Langdon (1896)
- Fig 7 Letters L and A on the cross-shaft
- Fig 8 The Kerris Cross before conservation
- Fig 9 The Kerris Cross before conservation
- Fig 10 Removing the cross-head
- Fig 11 The iron pin, showing corrosion at the centre
- Fig 12 Removing the iron pin from the cross-shaft
- Fig 13 Removing the stub-ends of the staples
- Fig 14 The ironwork removed from the cross: the broken pin, the remains of the staples, and the feathers used to hold the staples in place
- Fig 15 Straightening the cross-shaft
- Fig 16 Lowering the cross-head onto the new pin
- Fig 17 Mortaring the joint between the cross-head and -shaft
- Fig 18 Full and present heights of the Kerris Cross
- Fig 19 The conserved cross

Abbreviations

CRO	Cornwall County Record Office
EH	English Heritage
HER	Cornwall and the Isles of Scilly Historic Environment Record
HE CC	Historic Environment, Cornwall Council
NGR	National Grid Reference
OS	Ordnance Survey
PRN	Primary Record Number in Cornwall HER
RIC	Royal Institution of Cornwall

Summary

A medieval granite wayside cross at Kerris in Paul parish was repaired by the Scheduled Monument Management project of Historic Environment, Cornwall Council in late summer 2011.

The main element of the work was to replace an internal iron pin, which had been holding the head to the shaft, with one of stainless steel, and to remove the stub ends of iron staples from the face of the shaft. In addition, the cross, which had been leaning, was straightened up.

The work proved timely since it was found that the old iron pin, which was originally one inch (25mm) in diameter, had rusted to less than half an inch (12mm) at the centre where it was open to rainwater penetration through the joint. Moreover it was found that the original pin had been slightly too long for the holes that had been drilled for it, meaning that the head rocked slightly on the pin. This may explain why the staples had been added when the cross was restored in the 19th century.

The Kerris Cross, located at SW 44334 27170, is a Scheduled Monument, Cornwall 303; and number 28717 in the Cornwall HER.

1 Introduction

At Kerris in Paul parish is a medieval latin wayside cross of possibly thirteenth century date. It was found at Carn-a-Langa and taken to Kerris in the nineteenth century, where it now forms a feature on the verge in front of Kerris Manor Farm.

At some point in its history, the cross had been broken in two, just below the horizontal arms. When it was moved to Kerris and restored, the two parts of the cross were united with an internal pin and iron staples on the front and back. By at least 1982, the iron staples had been removed, leaving the cross head supported only by the internal pin, but with the cross head slightly unstable and able to be moved. By 2010 the cross was also leaning.

This report describes a project eventually undertaken in 2011 to stabilise the cross head by replacing the central iron pin with one of stainless steel, and to straighten it up.

The Kerris Cross, located at SW 44334 27170, is Scheduled Monument Cornwall 303; and number 28717 in the Cornwall HER.

2 History and description of Kerris Cross

The fullest account of the cross was recorded by JJ Beckerlegge, who had acquired information from a Mr Matthews, a former resident of the manor house at Kerris, born in 1861. According to Mr Matthews, the cross was erected by the French in AD 1200; he recalled that the cross had formerly stood on the left of the road on Kerris Moor, lying back from the road, and about 6 ft from the corner where the road leaves the moor and turns north-east to Carn-a-Langa. In this location, the cross would have stood in an area recorded on the 1841 Tithe Map as Common Moor, used as waste pasture, jointly owned and pastured in common by many tenants (Fig 2). Here, the first edition Ordnance Survey 25 inch map shows a 'Stone', used as a benchmark (Fig 3). As Cooke notes, the 'stone' is likely to be the cross, which still has a benchmark on the lower part of its shaft, but is not recorded as such in its present location (McNeill Cooke 2000, 21) (Figs 4 and 5). The fact that it is named as a 'stone', not a cross, may suggest that the head was missing at the time: it was perhaps lying on the ground somewhere nearby. Local farmer Geoffrey Giles relates a local tradition that the head of the cross was broken off during the Civil War, by one of two brothers who were on opposing sides at the time (G Giles *pers comm* to APJ).

Carn-a-Langa is the name of a cottage, established as part of the wave of agricultural improvement which swept the parish in the nineteenth century and which is evident now in the extensive pattern of small rectangular fields in the area. On the Tithe Map (Fig 2), the small square field just north of the cross (field number 1390) is recorded in the Tithe Apportionment by the name of Lower Langa, and its use as 'Improvement'. 'Carn' must refer to a rocky outcrop or tor: a feature which probably no longer survives, for the 1907 OS map shows a small quarry in the area (Fig 4).

At Carn-a-Langa, the cross stood on the east side of a wide, flat, marshy valley, and the area south of it (the Common Moor) is shown as marsh and rough pasture on the 1880 map (Fig 3). The cross is likely to have marked a route across the valley floor, for on the opposite side of the valley is a farm called White Counce: 'Counce' being derived from Cornish **car-bons* 'paved road, causeway' (Padel 1985, 38). The 'white' of the name may refer to the colour of the wet-loving grass *Molinia Caerulia*, which bleaches to a silvery-white in winter.

In 1960, the OS archaeological surveyor found a slight mound SW 4493 2713 which may mark the original position of the cross (Pitcher 1960).

When recorded by AG Langdon prior to 1896 (1896, 202-3: Fig 6) the cross, which he calls Carlankan Cross, was lying on a waste piece of land at the bottom of the hill, on

the left-hand side, before commencing the ascent towards Kerris. Langdon's drawing confirms that by that date, the cross had been fractured at the neck. However a footnote to Langdon's account records that since writing 'the cross has been removed and fixed up in Kerris village'. From Matthews we learn that it had been moved at the request of the Penzance Antiquarian Society. Mr Matthews helped to transport the stones that now form a base around the cross. Langdon adds further detail:

'This tall latin cross was found in the 1890s on a piece of wasteland at Carlankan in the valley below Kerris...The stone was set up...by Mr Bolitho but was wantonly thrown over by boys on two occasions, necessitating its removal to Kerris' (Langdon 1997, 52).

No 'stone' is shown at Carn-a Langa on the 1907 Ordnance Survey map, which does however depict the cross in its new location to the east of the manor house at Kerris (Fig 4). This is where it was when seen by Charles Henderson (1960, 384) and subsequent writers; this is where it stood when it was designated as a Scheduled Ancient Monument in 1950, and is where it remains.

The Kerris Cross is an undecorated latin cross with a total height (recorded by AG Langdon: see Fig 6) of 2.05m high, and 0.6 m wide across the arms. It has a strongly tapering shaft which is 0.29m wide at the neck and 0.45m at the bottom. Only 1.7 m of the shaft is now visible above ground. On the shaft are carved the letters L and A (Fig 7), perhaps representing a later use of the cross as a boundstone, and an Ordnance Survey benchmark. It is fractured just below the cross-arms. A square base is formed around the cross with blocks of granite filled in with earth and used as a small flower bed.

The cross at Kerris is one of a number of granite wayside crosses in the parish of Paul (see McNeill Cooke 2001; Langdon 1997, 50-53). In particular two other crosses which are extremely similar to the Kerris cross stood along the route leading from Kerris to the parish church, while in Kerris itself was a further cross (McNeill Cooke 2001, 47, Paul 6, 7, 15, 16,). This sequence of impressive monuments may perhaps reflect the status and wealth of Kerris in medieval times.

3 Condition of the monument

3.1 Condition in the 19th and 20th centuries

When described by Langdon in the late nineteenth century, the cross was already damaged, being 'fractured across the shaft just beneath the horizontal limbs, and ... much chipped at the bottom'. In a footnote he records that since writing 'the cross has been removed and fixed up in Kerris village'. (Langdon 1896, 203-4). The nineteenth century repair was made with a central iron pin and three staples, one in the front and two in the back, let into shallow grooves in the shaft. The staples had disappeared by at least 1982, at which time it was also noted that the top of the head had a large ancient chip (Sheppard 1982).

3.2 Recent condition

As noted above, the cross was repaired in the 19th century with a central pin and iron brackets front and back. The brackets have since been removed (although the ends of the brackets remain bedded in lead, in the stone) so that the head was held to the shaft by the pin only. The joint between head and shaft had lost its bedding mortar and by 2005 the head could easily be moved. It was therefore at risk of theft and further damage.

With the joint open to rain water penetration, a further threat was from corrosion of the central iron pin.

In early 2011, it was observed that in addition to this, the cross appeared to have been affected by recent freezing weather with associated frost heaving and was leaning to one side. (Figs 8 and 9)

3.3 Risk

In 2006 the cross-head was microchipped as an aid to identification in the event of theft. Nonetheless the threat still existed and so, because of this and the threat from iron corrosion, the cross was considered to be at high risk of damage, prior to the work described in this project.

4 Project background

In the course of routine visits to Scheduled Monuments in Cornwall, the English Heritage Historic Environment Field Advisor had noted that the condition of the Kerris Cross was deteriorating (eg Preston-Jones 1988, 1999). As early as 2005 a visit was made with stonework conservators Sue and Lawrence Kelland to consider the situation but it was not until 2011 that the circumstances and funding were in place to make the project to restore the cross a reality.

4.1 Aims

The central aim of the project was to reduce the threat to a cross which was at high risk of damage due to deterioration of 19th century repairs and the potential threat of theft.

4.2 Objectives

The primary objective of the project was to stabilise the monument by replacement of the central iron pin with a pin of stainless steel.

A secondary objective was to investigate the possibility of removing the stub-ends of the iron staples which were still bedded in the front and back of the stone, although they did not appear to be causing any significant damage.

A further objective was to straighten the cross up by digging down on one side and gently pushing it upright.

All of this was to be accompanied by appropriate archaeological recording and monitoring to ensure that the objectives were achieved without compromise to the monument.

5 Results of the conservation work

The conservation work was carried out by Adrian Thomas and David Cutting on Wednesday 31st August and Thursday 1st September 2011.

5.1 Replacement of the central pin

In summary, the cross head was removed, the old pin extracted from the shaft, and the pin replaced with a new one of stainless steel, set in a polyester resin. The initial plan had been to leave the joint between the head and shaft un-pointed, so that the appearance of the cross remained unchanged, but in practice, it proved necessary to re-point.

The work was carried out in the following stages

1. Scaffolding was constructed around the cross
2. The cross-head was lifted off using a block and tackle (Fig 10)

3. The old iron pin was removed from the lower part of the shaft, by gently chipping away at the mortar in which it was bedded. In practice, this proved a lengthy and painstaking process.
4. The lead in which the pin had been set in the head of the cross was carefully removed
5. The remains of the lime mortar originally used to bed the head on the shaft was carefully removed with a chisel from the top of the shaft and the bottom of the head
6. Polyester resin was squeezed into the dowel hole in the head and left until it was on the point of going off
7. A new pin of stainless steel, measuring 15 cm (6 inches) by 20 mm (3/4 inches) was set into the head
8. The dowel hole in the shaft was filled with polyester resin
9. Using the block and tackle, the cross head was carefully lowered onto the shaft and the resin left to fully set (Fig 16)
10. Finally, the joint was mortared, using a hydraulic lime mortar kept well back from the face of the stone (Fig 17) The mortar used was hydraulic lime (NHL 2.5) in a 2:5 mix with sand (CLS 25)

The work took longer than anticipated, particularly the initial removal of the iron pin from the shaft.

Prior to work commencing, the head could be moved from right to left but it proved difficult to lift off vertically. This was eventually achieved by inserting wooden wedges all around the joint and gradually lifting with the block and tackle. This left the one-inch diameter pin protruding three inches from the shaft of the cross; it was found to have been leaded into the cross-head, but grouted into the shaft with a solid lime mortar. At the centre, where the pin had been exposed to water penetration through the joint, the pin had corroded to half its original diameter and was extremely weak (Fig 11). Hence, once efforts were made to remove it, it broke and had then to be painstakingly removed by chipping away at the mortar with a small chisel and fine dental tools, until eventually it could be pulled out with a mole wrench (Fig 12).

A longer section of the pin – four inches (20 cm) - was found to be mortared into the shaft. With the three inch section that was in the head, the pin would originally have been seven inches long. However, when the dowel holes were measured and a trial fitting made next day with new pins, it was found that even with a six-and-a-half inch pin the head was binding slightly on the pin, and eventually a six inch pin was used to repair the cross. This fact may explain why the staples had been used. As the pin was too long for the holes that had been drilled for it, the head may have rocked slightly on the pin, even despite the existence of a bedding layer of mortar. The staples, though disfiguring to the monument's appearance, would have helped to stabilise this movement. But once they had rusted away and been removed, the head was again exposed to movement and pressure placed on the pin.

The original intention had been to leave the joint unmortared, so as to keep the appearance of the cross as unchanged as possible (even though it would originally have been mortared). However it was discovered that the break between the head and shaft is not even, and that they therefore do not fit neatly together; the bottom of the head being particularly uneven.

The reason for this is uncertain but may be explained by the fact that the head and shaft had been separated for some time prior to restoration, allowing time for the broken faces of both to be eroded and damaged. It was therefore necessary to mortar the joint to provide support for the head and reduce pressure on the pin and resin.

5.2 Removing the ends of the iron staples

Although they had broken off or been removed decades earlier, the stub ends of the iron staples, which had been used to help hold the cross-head to the shaft, remained buried in the stone, embedded in lead. The staples were made of rectangular iron bar fixed in place with lead and iron feathers.

All ironwork was removed by carefully chipping out the lead with a small chisel and fine dental tools (Fig 13).

After the staples had been removed, the holes were filled with the same hydraulic lime mortar as the joint.

All the ironwork that was removed from the cross is shown in Fig 14.

5.3 Straightening the cross

Before this project began, the cross was leaning quite noticeably (see Figs 8 and 9). The tenant in the manor house, Alan Sunderland, said that this had happened over the last couple of years and he considered it to be the result of two very cold winters. The cross was straightened by simply digging down on the side away from which it was leaning, and gently pushing it upright from the opposite side (Fig 15). The resultant hole on the opposite side of the cross was then backfilled and finally the ground all around the cross was firmed, as far as possible, given that the 'base' is used as a flower bed.

6 Archaeological involvement in the project

The project was organised by Historic Environment, Cornwall Council. This involved liaison with the landowner, meetings and discussion with the contractor and gaining agreement for the work from English Heritage.

Some initial research on the history of the monument was carried out by HE CC, and an archaeologist was on site constantly when the work took place, to ensure that all proceeded according to agreed methods, as well as discuss and agree any necessary departures from the repair guidelines. The monument was recorded before and after conservation, and the repair process was recorded with notes and sketches.

7 Conclusions/discussion

In the course of undertaking this work it was discovered that the old iron pin was very weak and severely corroded at the centre, so that it broke once attempts were made to remove it. It is possible that if left it would eventually have rusted through and the cross-head might potentially have fallen. An additional problem discovered in the course of doing the work was that the original pin was a poor fit. The work could therefore be described as a stitch in time.

As a result of the work described in this report, the risk to the cross has been reduced from high to low risk and, barring unanticipated incidents, should be safe for many years to come (Fig 19).

8 Recommendations

As a result of research undertaken for this project it was revealed that a quite large proportion of the cross is buried in the ground (Fig 18). Therefore, although it is an undoubtedly attractive and interesting feature as it stands, it is far less impressive than it would have been originally.

An aspiration for the future would be to remove the cross from the flower bed in which it currently stands and set it in a morticed granite base. This would enable a far

greater proportion of its height to be displayed, would give it much greater stature and presence than it now has and would return it to something more like its original appearance.

9 References

9.1 Primary sources

Ordnance Survey, c1880. *25 Inch Map* First Edition (licensed digital copy at HE)
Ordnance Survey, c1907. *25 Inch Map* Second Edition (licensed digital copy at HE)
Ordnance Survey, 2007. *Mastermap Digital Mapping*
Tithe Map and Apportionment, c1841. *Parish of Paul*

9.2 Publications

Anon, 1890-1. *Penzance Antiquarian and Archaeological Society*, 215
Beckerlegge, JJ, nd *Private index* (notes recorded on Ordnance Survey Index Card SW42NW 84)
Henderson, CG, 1960. 'Ecclesiastical Antiquities', *J Roy Inst Cornwall* Vol 3, part 4
Langdon, AG, 1896. *Old Cornish Crosses*, Truro
Langdon, AG, 1997. *Stone Crosses in West Penwith*, Federation of Old Cornwall Societies
McNeill Cooke, I, 2001. *Crosses and Churchway Paths in the Land's End Peninsula West Cornwall, volume 4, Paul & Sancreed*, Men an Tol Studio, Madron, Penzance
Padel, OJ, 1985. *Cornish Place-Name Elements*, English Place-Name Society, Nottingham
Pitcher, GH, 1960. *Ordnance Survey Archaeological Index Card* SW42NW 84
Preston-Jones, A, 1988. *English Heritage Field Monument Warden's report*, 30.9.88
Preston-Jones, A, 1999. *English Heritage Field Monument Warden's note*, May 1999
Sheppard, PA, 1982. *English Heritage Field Monument Warden's report*, 19.11.82

10 Project archive

The HE project number is **20111203**

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

1. A project file containing site records and notes, project correspondence and administration, and copies of documentary/cartographic source material
2. Digital photographs stored in the directory R:\Historic Environment (Images)\SITES.I-L\Kerris\Kerris cross repairs
3. English Heritage/ADS OASIS online reference: cornwall2-110900

This report text is held in digital form as: G:\Historic Environment (Documents)\HE Projects\Sites\Sites K\Kerris Cross 2011



Fig 1 Location map



Fig 2 Paul Tithe Map, 1841: showing the original location of the Kerris Cross at Carn-a-Langa (red cross shape)

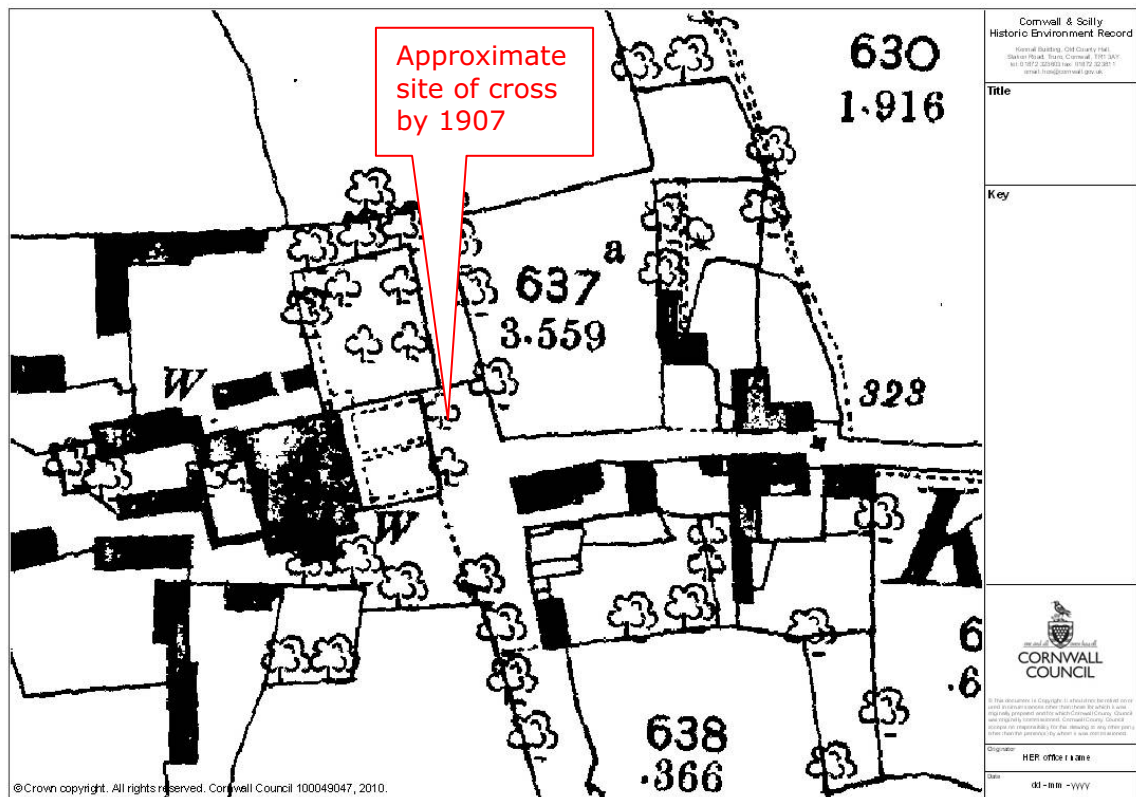
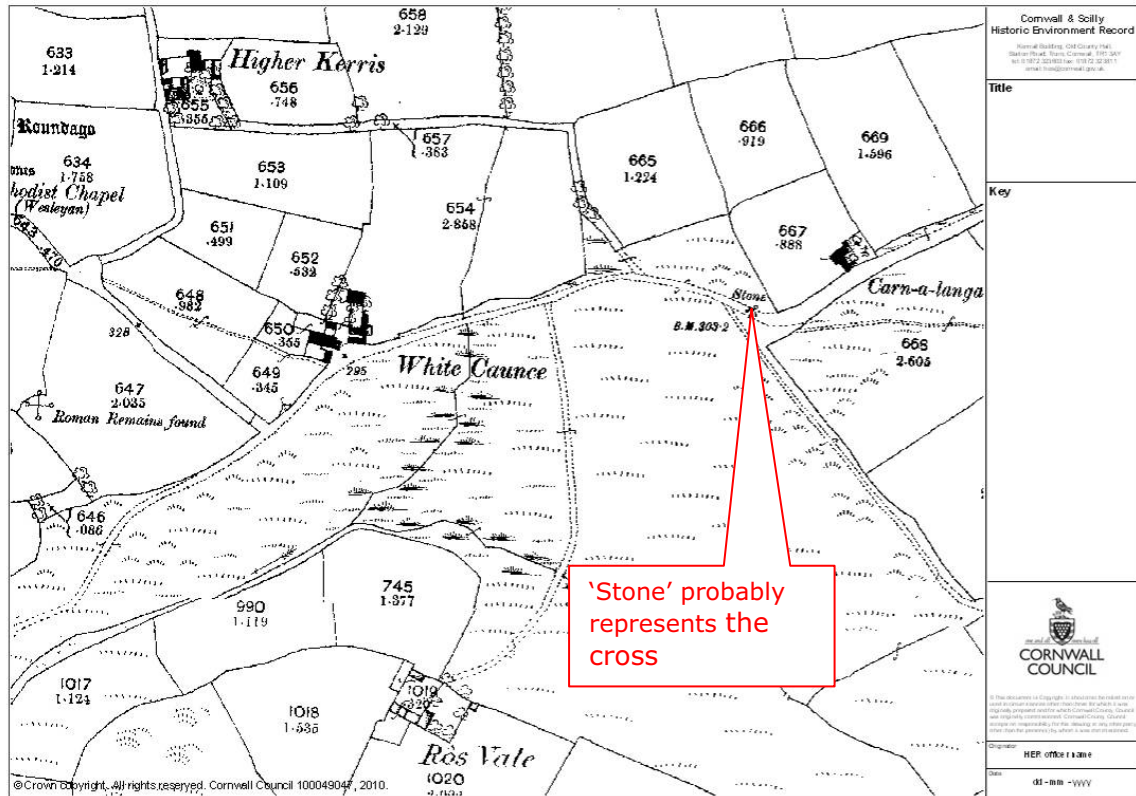


Fig 3 First Edition of the Ordnance Survey 25 Inch Map, c1880: of Carn-a-Langa (above) and Kerris (below)

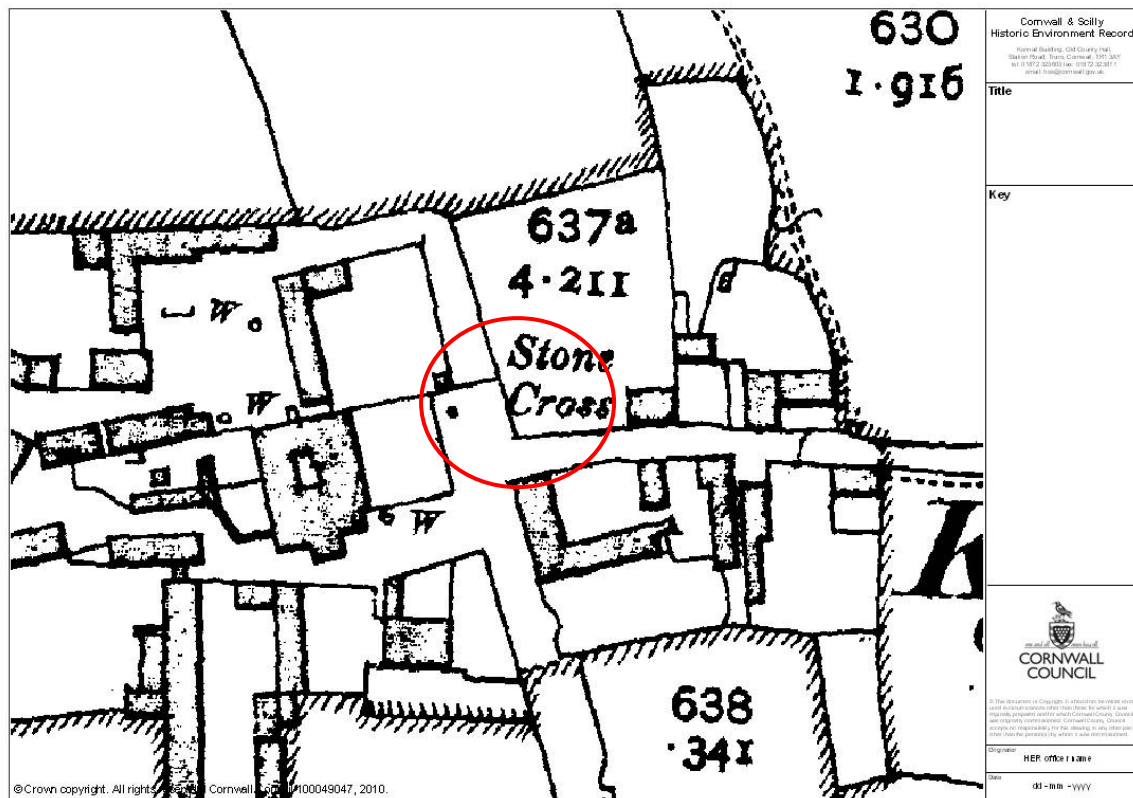
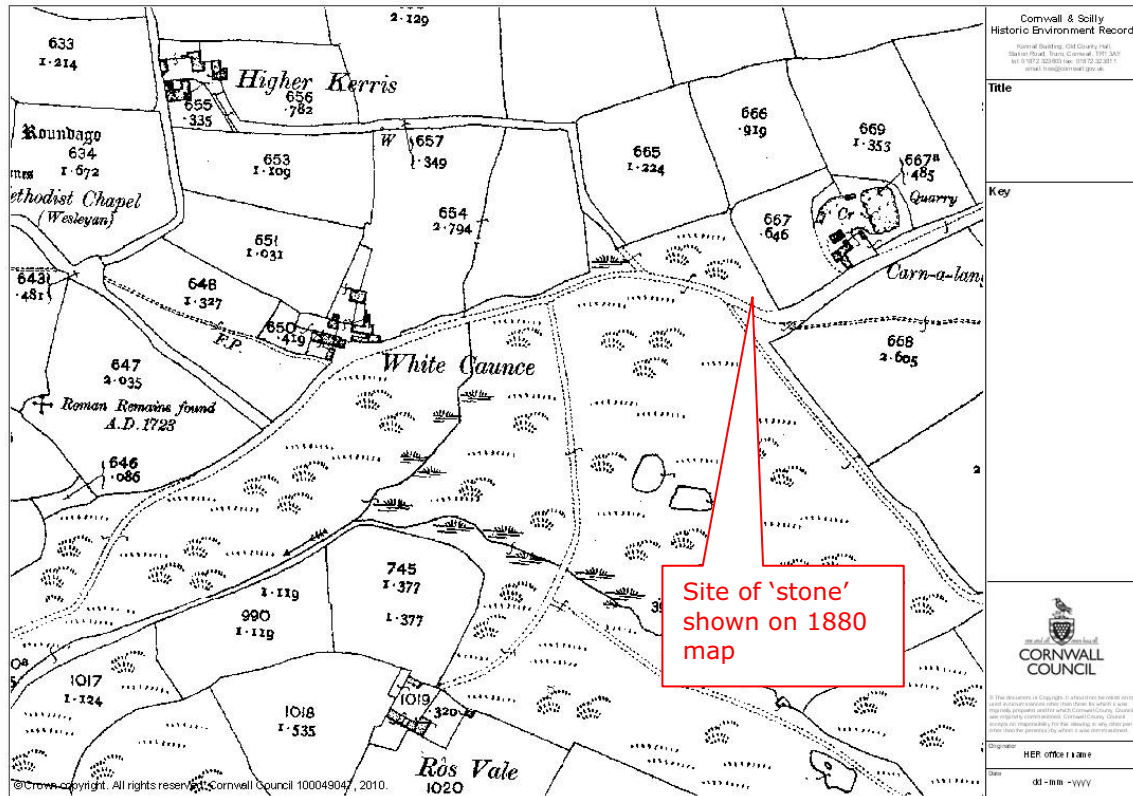


Fig 4 Second Edition of the Ordnance Survey 25 Inch Map, c1907: of Carn-a-Langa (above) and Kerris (below)

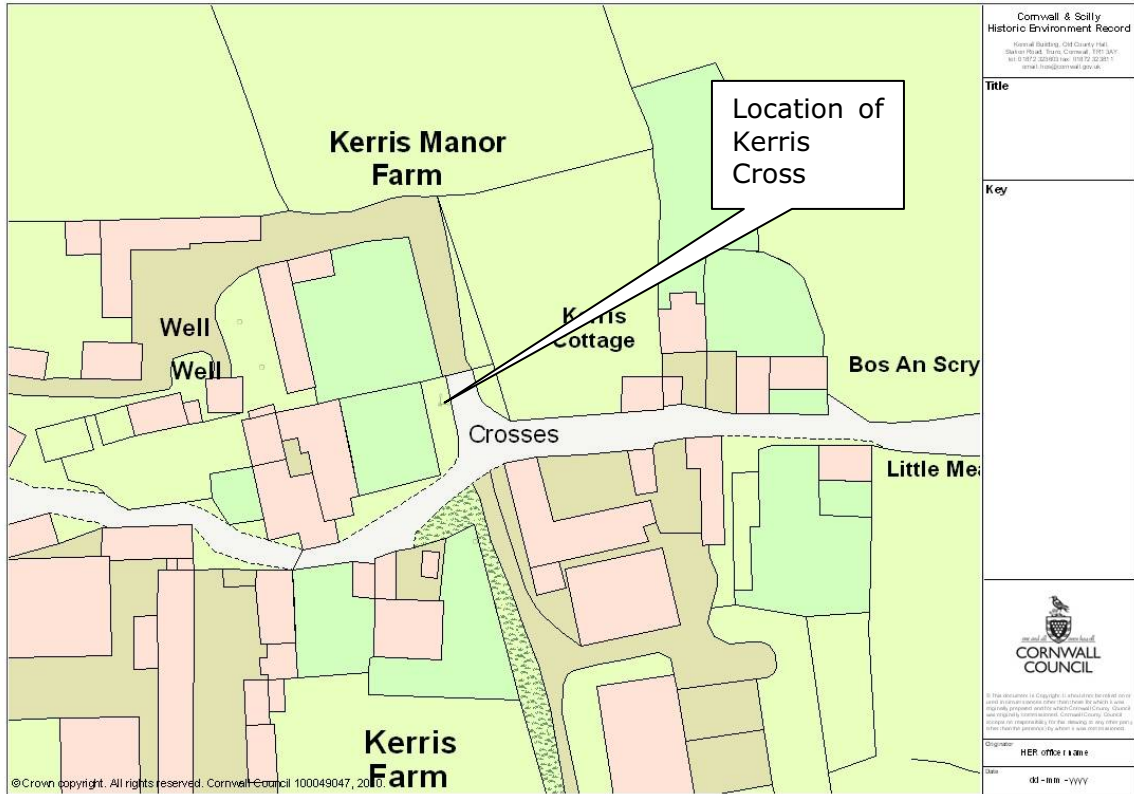


Fig 5 Ordnance Survey digital mapping showing the site and its environs (2009)

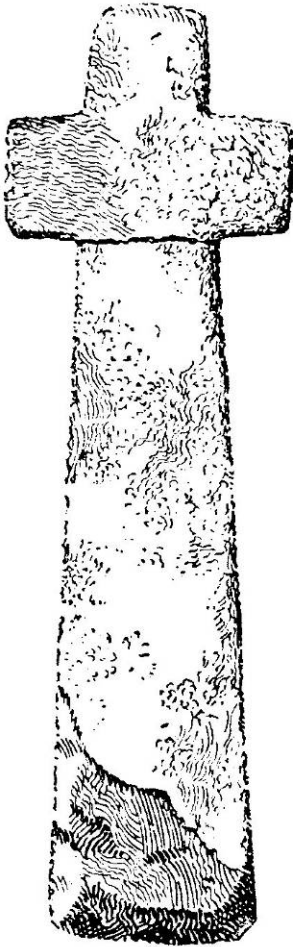


Fig 6 Drawing of the Kerris Cross by AG Langdon (1896)



Fig 7 Letters L and A on the cross-shaft



Fig 8 The Kerris Cross before conservation



Fig 9 The Kerris Cross before conservation



Fig 10 Removing the cross-head



Fig 11 The iron pin, showing corrosion at the centre

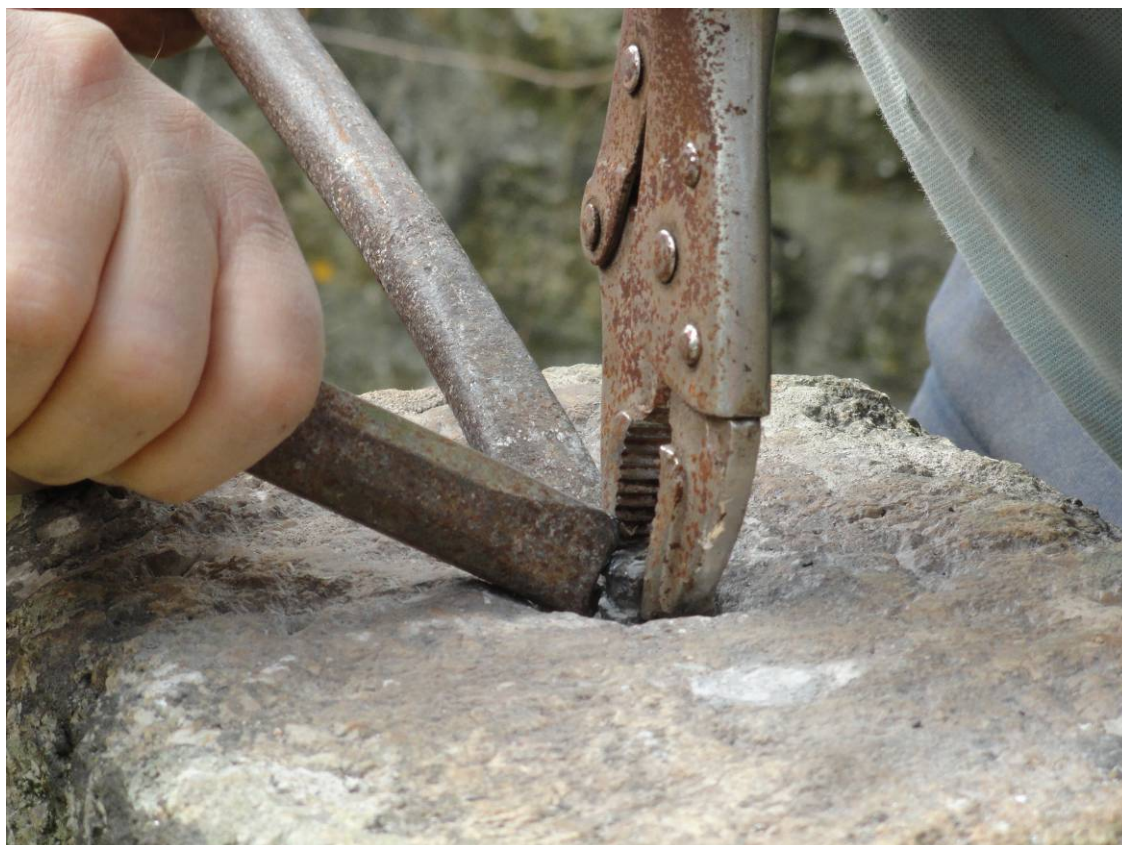


Fig 12 Removing the iron pin from the cross-shaft



Fig 13 Removing the stub-ends of the staples



Fig 14 The ironwork removed from the cross: the broken pin, the remains of the staples, and the feathers used to hold the staples in place



Fig 15 Straightening the cross-shaft

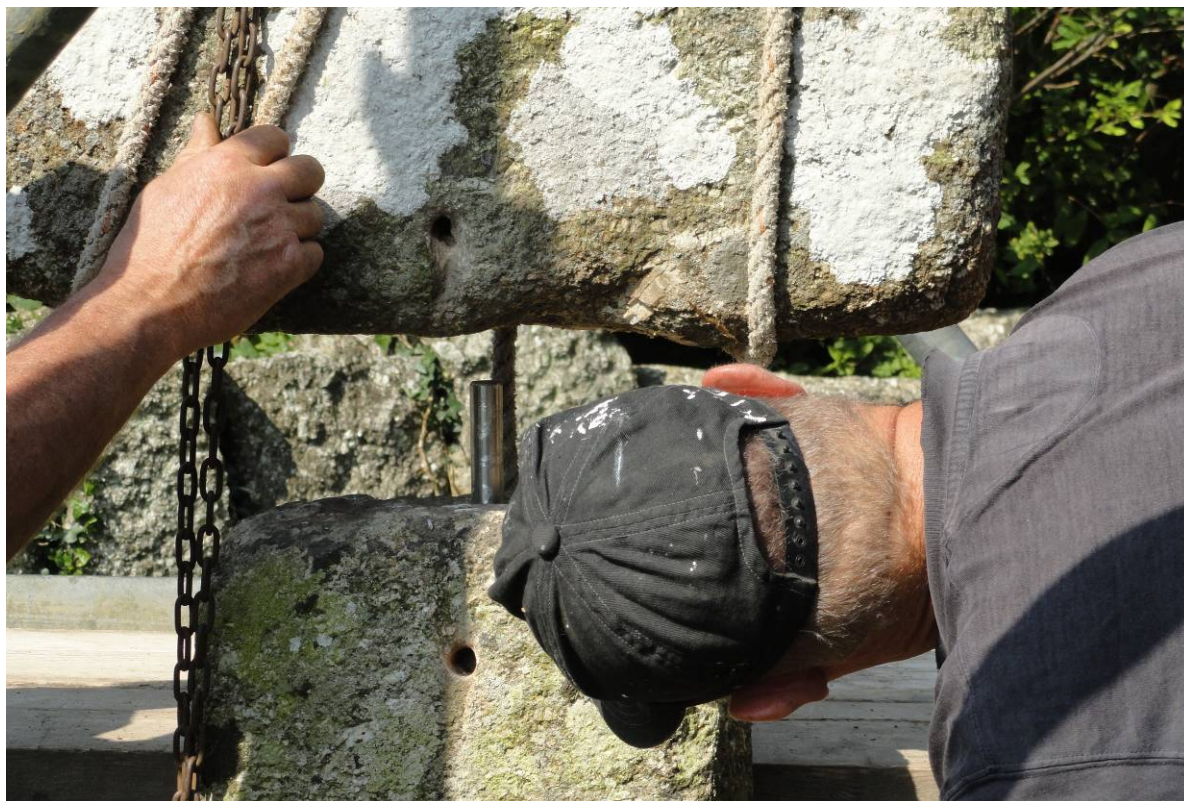


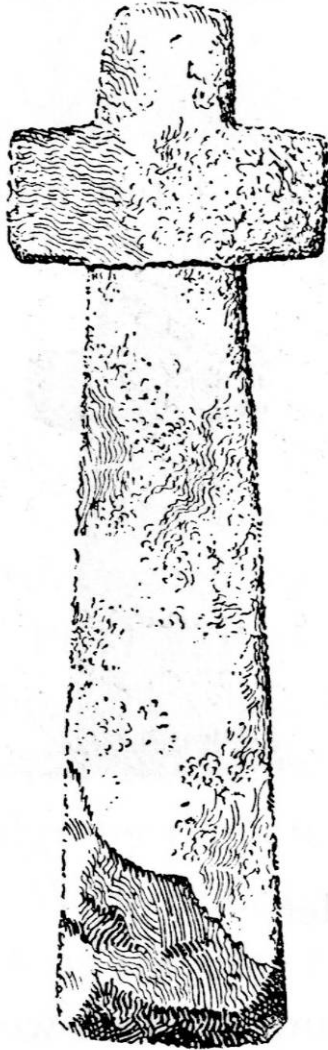
Fig 16 Lowering the cross-head onto the new pin



Fig 17 Mortaring the joint between the cross-head and -shaft



South face, 2011



From *Old Cornish Crosses*, 1896

(probably the north face)



North face, 2005

Fig 18 Full and present heights of the Kerris Cross



Fig 19 The conserved cross