

## Game of Stones... The Big Stone Alignment Posts of Ryde

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### ABSTRACT

*From 1833, legislation was in place for the Surveyor General “to set out the breadth of the carriageways and footways in the town and cause the footways to be marked by posts at the corners and intersections”. Hardwood posts, 150 mm square, were used for alignment and these appear to have been successful for almost 50 years. Wrought stone alignment posts were first used in Ryde in 1885 when it was recommended to Council, by a Lands Department staff surveyor, that sandstone posts be used in preference to wood, with the dimensions of the stones being stated “12 inches square 3 feet in length”. In 2009, the City of Ryde Heritage Committee, with assistance from the local community, identified nine remaining stone alignment posts. At this point the survey team at Ryde became very interested! Since 2009, a further 28 stone alignment posts (in varying states of preservation and condition) have been located. This paper deals with the finding of these additional stone posts and answers such key questions as: Why are these stone posts so big (they each weigh upwards of 240 kg)? Why has no effort been made in the past to preserve these stone posts? How do we preserve them now, as most are still survey accurate? And who was that Lands Department staff surveyor?*

**KEYWORDS:** Alignment stones, preservation, Ryde, heritage.

### 1 ALIGNMENT POSTS

In 1833, legislation was introduced requiring the Surveyor General “to set out the breadth of the carriageways and footways in the town and cause the footways to be marked by posts at the corners and intersections” (Marshall, 2006). Consequently, alignment posts are survey marks (monuments) placed at intersections and bends in the roadways to indicate the kerb lines. The first alignment posts were 6 inch (150 mm) square, dressed hardwood timber posts and appeared in Sydney City from 1836 when 400 posts were ordered and placed (Figure 1).



Figure 1: Timber alignment posts shown in an 1871 photograph of Buckingham Street, Sydney.

The Council of the Municipality of Ryde was similarly placing timber alignment posts in 1875 (Figure 2).



Figure 2: Part of alignment plan by Mr Surveyor George C. Hedgeland dated 1875, showing placement of timber posts at Belmore Street, Ryde.

The Council minutes of 30 August 1878 (Council of the City of Ryde, 2007) record correspondence from the Lands Department stating *“that alignment posts should be provided as soon as possible”* and Council proposing *“that a specification be prepared for alignment posts, the said posts to be sawn timber delivered in one lot and each post to have one coat paint”* (Figure 3).



Figure 3: Typical timber alignment post – photo taken at Blayney, NSW in 2013.

## 2 STONE ALIGNMENT POSTS

The first mention of stone alignment posts in Ryde occurred in the Council meeting minutes of 30 May 1884: *“that the works committee confer with surveyor as to road and streets to be aligned and consider whether stone or wood shall be used to show alignment”* (Council of the City of Ryde, 2007). At the next Council meeting on 13 June 1884 it was stated *“that he met the surveyor and presented him with a list of all the roads for alignment and that the said*

*surveyor recommended that stone posts should be used for the alignment – 12 inches square 3 feet in length”.*

However, back in April 1881 the notion of using stones to mark section corners in Crown Land subdivisions was raised by a “*Mr Surveyor Bucknell asking if any stones ... had been prepared by Municipality in accordance with an agreement*”. To which Council responded in May 1881, informing him “*that no stones had been prepared by the Council to mark corners of sections in the subdivision of Crown Lands ... neither had any agreement been made ... to provide any such boundary marks*” and in July 1881 “*that a reward of two pounds be given on conviction of any person found disfiguring or damaging alignment posts or any other property of the Council*”.

At a Council meeting on 25 July 1884 (i.e. 3 years later), a letter was tabled “*informing Council that it is customary to survey for alignment only those streets that are urgently required for public convenience and which the Council are about to form or expend money upon ... and to undertake to erect thoroughly substantial alignment posts in accordance with specifications enclosed ... and that alignment posts will be provided by Council*”. Unfortunately, the enclosed specifications have not been located. A proposal was put, by the Mayor, at a Council meeting on 8 August 1884 “*that permission be sought to use stone instead of wood for alignment purposes*”, and a letter was sent “*to Under Secretary Department of Works asking whether there would be any objection to stone being used for purposes of alignment in lieu of wood*”. At the same meeting, the Council Works Committee stated “*that no other works of importance be entered into by the Council this year unless it be for alignment posts*”.

At a Council meeting on 19 September 1884, Council received a letter from “*surveyor enclosing plans of stone alignment posts*” and at the next meeting on 17 October 1884 approved payment for “*two alignment posts (specimen) 1 pound 0 shillings*”. At a Council meeting on 23 December 1884, Council proposed to accept “*the tender of P. McCarthy for furnishing 100 alignment posts at 5 shillings and 9 pence each*”. At a Council meeting on 23 January 1885, Council then approved the payment to “*P. McCarthy 28 pounds 15 shillings for 100 alignment posts*” (and in May 1885 to “*J. Hicks for providing 55 alignment posts at 5 shillings and 5 pence each*”). At the same meeting in January, a letter was received from the surveyor “*pointing out that some of the alignment posts supplied were not dressed square*”. Figure 4 shows part of an alignment plan with placed alignment post indicated, while Figure 5 shows a photograph of the same intersection.



Figure 4: Part of an alignment plan in 1885, showing placement of stone alignment posts at a street intersection.



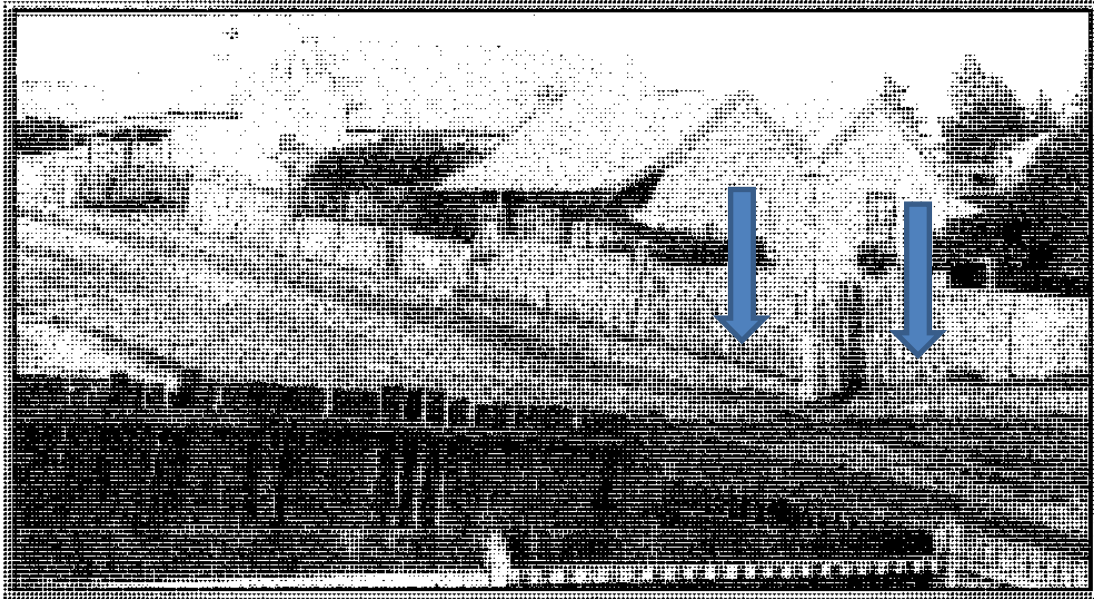


Figure 5: A photograph from 1898 of the same intersection, showing the stone alignment posts and the same buildings in position.

### 3 HERITAGE LISTING

In 2009, the City of Ryde Heritage Committee, with assistance from the local community, identified nine remaining big stone alignment posts. A report was tabled at the Heritage Committee which described the stone alignment posts as boundary markers (Mitchell, 2009), similar to the stone boundary markers of Sydney City and Parramatta, and steps were taken by the City of Ryde Council to heritage-list these nine known stones. At this point, the Council's survey team became very interested. Besides educating the Council as to the real purpose of the stone posts, the survey team took up the challenge to add to the list. Since 2009, a further 28 stone alignment posts (in varying states of preservation and condition) have been located. A sample from these first nine big stone alignment posts is shown in Figures 6-11. (The stone's 'number' refers to its order on the Heritage List.)



Figure 6: Stone 2, on North Road, Eastwood, showing the square dressed faces and weathered domed top. The stone has a broad arrow cut into one face, indicating that it was originally placed on a bend in the kerb line. This stone is in its original position.



Figure 7: Stone 3, on Blaxland Road, Eastwood, showing the square dressed faces, domed top and rough-hewn base. The stone has a broad arrow cut into one face, indicating that it was originally placed on a bend or crest in the kerb line. The orientation of the broad-arrowed face indicates that the stone is not in its original position but has been moved and rotated.



Figure 8: Stone 6, on Pittwater Road, North Ryde, showing the square dressed faces and domed top. The stone has had one face removed, but a shallow excavation reveals the true extent of the remainder of the stone. This stone is in its original position.



Figure 9: Stone 7, on Badajoz Road, Ryde, showing the square dressed faces, weathered domed top and rough-hewn base. The stone has a broad arrow cut into one face, indicating that it was originally placed on a crest in the kerb line. This stone is in its original position.





Figure 10: Stone 8, on Parkes Street, Ryde, showing the square dressed faces, weathered and damaged domed top and part of the rough-hewn base. The stone shows damage from vehicle scrapes, however painted line markings on the roadway have since helped to preserve the stone from further car strikes. This stone is in its original position.



Figure 11: Stone 5, on Pittwater Road, Gladesville, showing the square dressed faces, weathered domed top and a startling revelation. This stone post is only 230 mm by 230 mm square (the sole stone post found in Ryde to date being of a smaller size). This stone is in its original position.

#### 4 THE BIG STONE ALIGNMENT POSTS OF RYDE

Then a moment of magic! Four stone posts were found in bushland at the site of an 1882 road intersection, waiting to be placed on alignment under the supervision of a Lands Department surveyor. The road is still unformed. This stone, which was never set into position, is in excellent condition (Figure 12) but does not fit the criteria to be heritage-listed. It provides the classic shape and dimensions of the big stone alignment posts of Ryde (Figure 13). This stone post, which has been donated to Land and Property Information (LPI) in Bathurst for inclusion in their survey mark museum, was retrieved from the idyllic bushland setting. One other identical stone post, to be used by the City of Ryde, was also retrieved at the same time. The two other stone posts were left in situ.

This was the first time Council's survey team was able to see several entire stones. The dimensions of each stone were identical. They were a massive weight, upwards of 240 kg each – estimated by using house brick volume and weight, but verified by a stonemason who quoted 2.6 tonnes per cubic metre as the norm for this type of sandstone. None of the four stones showed any broad arrow marking. The four stones had been laying there in the open for 128 years!



Figure 12: Stone 17, in Kitty's Creek bushland, East Ryde.

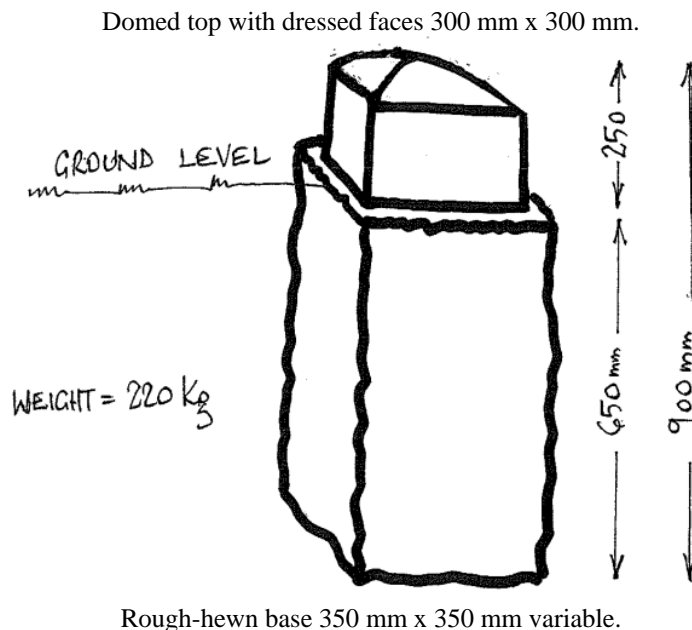


Figure 13: Classic shape and dimensions of the big stone alignment posts of Ryde.

As mentioned earlier, alignment posts are survey marks placed at intersections and bends to define the boundaries of roads, with one dressed face being aligned with the kerb line. When a stone alignment post was used to define a bend or crest in the road then a broad arrow mark was cut into one dressed face to indicate the bend in the kerb line. Why four dressed faces if only one is needed? The dressed top of the stone post stands above ground level and is therefore visible, so it may have been a matter of aesthetics.

At this point the Ryde Council survey team became interested in how much bigger these stone posts are when compared to the stone alignment posts found in other metropolitan locations (Figure 14). Although stones were used for alignment posts in these diverse districts, their size is much smaller: 230 mm x 230 mm square dressed faces. This results in the weight of the stone being half that of the big stones of Ryde. Could this have been a contributing factor in the downsizing? It would be interesting to find out if these smaller stones were, in fact, placed after 1885.





Figure 14: Alignment posts of (a) Hornsby, (b) Stockton, (c) Hunters Hill and (d) Parramatta.

Still the questions remained: Why stone, and why so big? Was the local council trying to make a statement? Was the surveying industry making a statement? After 50 years, had timber alignment posts had their day? Were the timber alignment posts rotting and deteriorating and was therefore a more durable material needed? One person recently suggested that it was to deter surveyors from souveniring them for their own office displays!

The Lands Department surveyors, during a major land release at North Ryde in 1882, requested Council to supply stones with which to mark the section corners. Council declined. Three years later, however, when the alignment surveys were requested by Council, stone posts were to be used. Land surveys in Ryde through to the 1950s and 1960s always used the alignment posts to fix the street boundaries. Adopt a pair, and you only have to worry about fixing side boundaries. Then road and drainage works had a major impact. Raising or cutting of the road shoulders, to allow full pavement width for road surfaces, and construction of concrete kerb and gutter meant the stone alignment posts were buried, trimmed, damaged or removed and effectively ignored.

## 5 PRESERVATION

How can the remaining big stone alignment posts be best preserved? Figures 15-17 provide some examples. Another idea, yet to be trialled, is to erect a metal barrier or guard at any stone that is situated in the footpath zone in order to minimise the risk of trip hazard.





Figure 15: Stone 14, on Bridge Road, Ryde, showing a complete stone post which has been relocated sometime in the past and preserved to be used as a property corner post. This stone post cannot be heritage-listed as it stands on private property.



Figure 16: Stone 11, on Quarry Road, Ryde, showing that the domed top and dressed faces have been removed while the rough-hewn base still remains. Road works have raised the ground surface level, so a metal cover box enables access to the stone. Note that the survey mark (i.e. the dressed face) is gone, however comparative measurements, on all stones discovered so far suggest that an offset of 30 mm or 35 mm from the rough-hewn base closely approximates the position of the original dressed face. This stone is in its original position.



Figure 17: Stone 31, on Wolfe Road, East Ryde, showing domed top and 30 cm dressed faces. The stone has a broad arrow facing the road, indicating that it was originally placed on a crest in the kerb line. The stone has been buried for many years and now resides under an improvised metal cover. This stone is in its original position and in perfect condition.



However, the Ryde Council survey team's best attempt at preservation has occurred at the Forrest Road / Malvina Street intersection (Figure 18). Here, seven of the original eight stones were found in place. It is intended that this intersection be maintained as a heritage site.



Figure 18: (a) Orange cones indicating the location of each of the stone alignment posts, and (b) part of an 1885 tracing showing the alignment survey at the intersection.

During 2013, major road works were planned for Forrest Road. The works included replacing the existing concrete kerb and gutter on each side of the road. The damaged remainder of an 1885 stone alignment post was visible on the southern side of the intersection and had been incorporated into the old kerb (Figure 19). It was decided to replace this stone with one retrieved from Kitty's Creek bushland in order to have a full sized alignment post, with dressed faces, to enhance the intersection as a heritage site (Figure 20). It was, after all, a stone from the original 1885 alignment survey!



Figure 19: Damaged remainder of an 1885 stone alignment post on the Forrest Rd / Malvina St intersection.



Figure 20: Setting of the replacement stone alignment post, which is now incorporated into the new kerb.

At the other end of Forrest Road, removal of the old kerb had already exposed the base of an original stone alignment post. The dressed top had been removed by the previous construction. This remnant was left in place and re-hidden beneath the new kerb. However, a distinctive survey mark was placed above in the new concrete gutter to indicate the position of the road alignment (Figure 21).



Figure 21: Remnant base of an original stone alignment post and distinctive survey mark placed above in the new concrete gutter.

No stone was visible on the northern side of the Forrest Road intersection, and it was unknown if any part of that stone alignment post remained beneath the old kerb. A dig exposed stone remains, although badly damaged by previous drainage works (Figure 22).

There was so little left of this stone that it was decided to re-instate another. One other previously retrieved stone alignment post was available from the 1885 survey (stone 28), which has a substantial part of its base removed and a large post-hole drilled into its domed top. Construction of the new kerb and gutter incorporated the replacement stone alignment post (Figure 23). So yes, the new concrete kerb is laid on the kerb line! A patch-up job to fill the hole to restore the domed top is currently underway.



Figure 22: Badly damaged alignment post remains on the northern side of Forrest Road.





Figure 23: Construction of the new kerb and gutter, incorporating the replacement stone alignment post.

It should be noted that sometimes, in the absence of human disturbances, stone alignment posts are remarkably well preserved by nature itself (Figure 24).



Figure 24: Stone 34, on Pittwater Road, North Ryde, showing remarkable preservation after so many years.  
This stone is in its original position.

## 6 RESTORATION

What to do with the damaged stone alignment post retrieved from the southern intersection? It was removed with the mad idea to re-dress one end of it into a domed top with four squared faces. Ryde Council has a stonemason by happenstance, who agreed to give it a go, using basic hand tools. Just how difficult would it be to replicate the work of the 1885 artisans? The exercise of recreating a dressed stone post took the stonemason about one day (Figure 25). As yet, no plans have been made to use this stone at any site.



Figure 25: Dressing of a stone alignment post using traditional methods and hand tools. Firstly, an even surface from which to measure is created. Then the four squared faces are chiselled and the domed top is created.

## 7 FOOTNOTE IN HISTORY

And just who was that Lands Department staff surveyor who, so many years ago, recommended that stone alignment posts be used in Ryde, and that they should be so big? He was registered in 1880. In 1881-82 he undertook Crown Land subdivision work at Ryde, followed in 1885 by numerous alignment surveys in the same area (Figure 26).



Figure 26: Part of his 1885 tracing showing alignment of roads in Field of Mars Common.



His name...? Charles Robert Scrivener (Figure 27)!

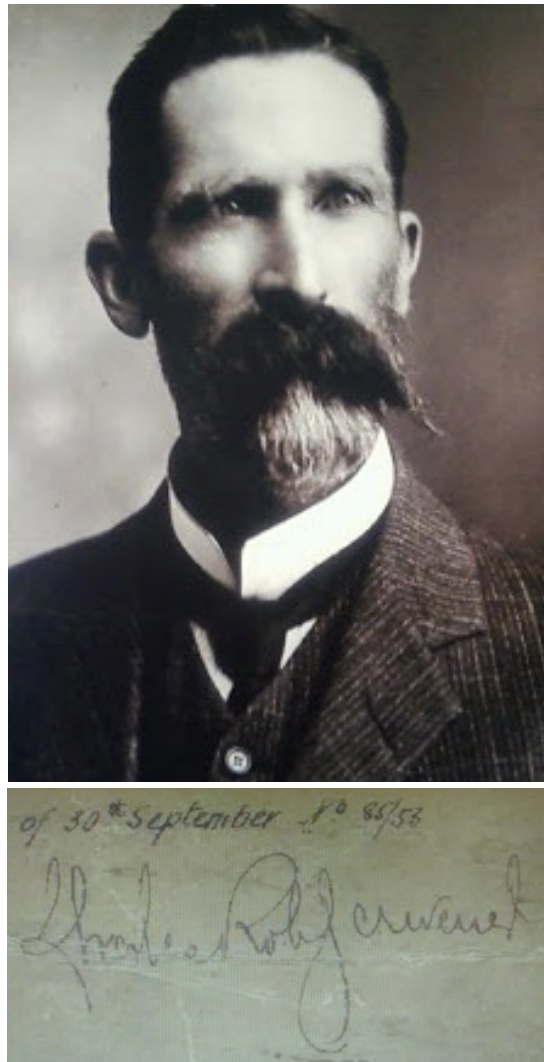


Figure 27: Charles Robert Scrivener and his signature on said 1885 tracing.

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