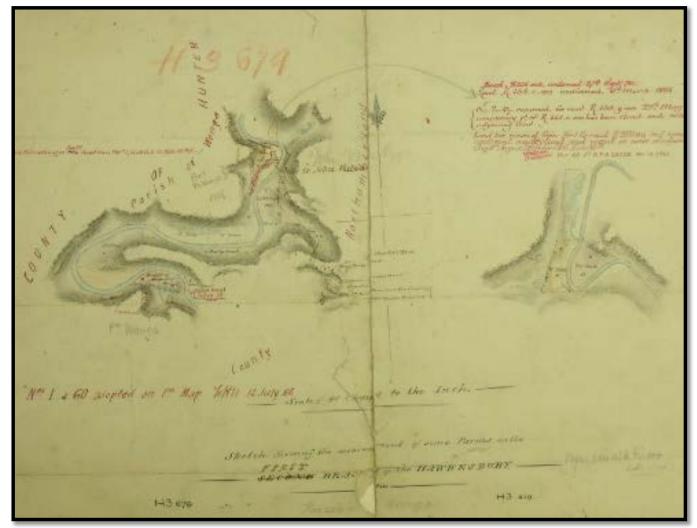


Pick Vol 9

EVIDENCE



Evidence about the Great North Road comes in many forms – written or drawn deduced and experimental, or physical. The latter comes from both the actual road and what it tells us, and from what we learn from sections that have collapsed, been damaged or deliberately taken down and reconstructed to remove bulges or replace badly damaged stone.

The initial Great North Road researcher was Grace Karskens, who researched the road for her MA, one of the first historical archaeology MAs to be written in Australia. Her research still forms the basis of our knowledge and many have added to it over time.

This Pick will look at the various evidence that has been found that adds to our knowledge of how the road was built and how the men who built the road lived and who they were. The articles are arranged as Experimental and Deduced Evidence followed by Physical Evidence Documentary and Archaeological or Observed.

thenter's Keve

This map H3 679 fond at State Records shows that Road parties were camped in a separate place to Iron gangs which in this case were guarded by soldiers. The map has been split on the fold and not quite matched in mending.





Pick Vol 9

Summaries Vol 9

9.0 Evidence

This article provides an introduction to the types of evidence available in relation to the Great North Road.

9.1 Experimental and Deduced (Elizabeth Roberts)

This article first discusses cases of Experimental evidence, through the examples of Corn meal porridge and bark huts. It then goes on to discuss Deduced evidence such as vegetables, Clares Bridge and Circuit Flat Bridge.

9.2 Physical Evidence (Elizabeth Roberts)

Physical evidence in the form of archaeological evidence has been found in the area. An example provided is of black bottles found at two convict encampments.

9.3 "I Survived" (Geoff Potter)

This article recounts the experience of the author in a journey to Lower Mangrove Creek. It tells of the moment he located a convict etching in stone and then reflects upon the meaning behind it.

9.4 Blasting and Quarrying (Grace Karskens)

This article describes the use of blasting and quarrying during the time of construction of the Great North road. It briefly explains the techniques employed and materials used.

9.5 Blasting (Compiled by Ian Webb)

This article provides a definition of the term blasting as well as a history both in general and then specifically regarding the Great North Road.

9.6 Physical Evidence of the Method of Building the Great North Road (E.A. Roberts)

This article reports the road works that have been conducted on the Great North Road in order to give insight into the road surfaces at particular sites.

9.7 Mitchells' Journal

A transcription of an extract from T L Mitchell's Memoranda Book 1826 – 1827, outlining his theory for the laying-out of roads.

9.8 An Investigation of Historical Evidence Regarding the Remnant Stone Bridge, Pyes Creek, Castle Hill (Dr Terry Kass, B A (Hons), M A (Hons), PhD)

This article outlines the study completed to assist in an archaeological investigation into the remains of a stone bridge on the former alignment of the Great North Road constructed by convict labour.

9.9 Following Simpsons Track (Gregory Powell)

This article recounts the experiences of the author in retracing the 1828 route of Simpson's Track between Wisemans Ferry and Lake Macquarie, providing insight into what the trail was like and the impressive natural and man-made sights observed along the way.

9.10 James Milson (Tony Palfreeman)

This article outlines the life of James Milson, who arrived in the colony in 1806, where he took land and established an abattoir. Milson was quite successful and would have used the Great North Road to drive his cattle along.

9.11 Shepherds Gully

9.12 Brave Peter Clark – A Tragedy on the Old Northern Road (Gregory Powell)

This article describes the event in which a drover, Peter Clark, was held up by a bushranger and in an attempt to fight back was killed by a shot to the neck. The bravery of Peter Clark was praised and a monument to him stands at the site of the shooting that occurred in 1863.

9.13 More Physical Evidence – Old Maitland Road-Sawyers Gully Section (Elizabeth Roberts)

This article discusses the controversy about the history of Sawyers Gully section of the Old Maitland Road with claims from locals historians based on oral history and newspaper stories that it was built in 1895 and the original road went over the top of the hill. The history of this matter is outlined and the authors opinion on the matter is expressed. It is supported by several images.

9.14 Water for Road Gangs (Compiled by Ian Webb)

References and extracts about the supplying of water to Road Gangs.

9.15 Wagons, Carts, Drays, Timber Carriages, Wheel Barrows, Cranes and Oxen – 1818 to 1840 (Compiled by Ian Webb)

This article is comprised of various extracts that discuss the use of wagons, carts, drays, timber carriages, wheel barrows, cranes and oxen, and the regulations regarding their use.

9.16 Bullocks

This contains extracts regarding the record and use of bullocks.

9.17 Cranes

These extracts refer to the use of cranes in 1833 and 1835.





EXPERIMENTAL & DEDUCED Elizabeth Roberts

Experimental Evidence.

Corn meal porridge

As part of a talk about food and what the convicts ate, some cornneal porridge was made as were porridges made from peas and lentils. From this experiment it was understandable why pease porridge was much preferred to cornneal porridge. No matter how long it was soaked and boiled the corn that was only cracked was very chewy unlike finely ground polenta. Both dried peas and lentils will boil to a pulp and are more tasty than dried corn.

Bark Huts

Just after my ninth birthday my parents moved from a property in the Bylong Valley to one of the highest properties in New England. Here the house had open fireplaces in most of the rooms including the kitchen and a large dry woodshed to store the wood needed. Both the woodshed and the roof of the highperch chook house were built of sheets of stringybark.

As I was a bush child being schooled by correspondence the environment, (built and natural), and my imagination were my play things and companions. As we had just completed rebuilding in fibro the slab back half of the house in which we had previously lived, I was aware of building materials and soon found out that stringybark was a building material used by the early settlers and a roofing material before the advent of corrugated iron sheeting.

One of my games of pretense was imagining living in a dirt-floored bark hut. As we never kept anywhere near as much firewood in reserve as the woodshed had been designed for this was easy.

My memory is that the dirt-floored fully enclosed stringybark sheeting wood shed was remarkably wind- and rain-proof and marginally warmer than the concreted floored, unlined fibro meat house or corrugated iron garage. Little did I know my childhood games would be useful so many years later.

Deduced Evidence.

Vegetables

Convicts' and soldiers' rations were much the same and remained so for most of the convict period in NSW. The diet was high on protein and carbohydrate with plenty of roughage and vitamin B but totally deficient in vitamin C. It was known that many men worked in the road parties and iron gangs for several years well over the one month it takes to develop scurvy with a total absence of Vitamin C from the diet. Scurvy is a disease caused by severe and chronic vitamin C (ascorbic acid) deficiency. Good sources of dietary vitamin C include citrus fruits and green vegetables.

Clares Bridge and Circuit Flat Bridge.

In 2004 when it became necessary to remove the metal decking from Clares Bridge in order to conserve the southern abutment there was a move to have the decking replaced. Under the Burra Charter this could only occur if we could find the original plans.

Heritage Engineer Bill Jordan explained the projecting corbels were to support struts that in turn supported the main bridge bearers. This was an old European design that had been invented as their timbers are not as strong as our hardwoods.

Where to start looking for original plans? The department that supervised road building was reorganised and changed in January 1830 and all the correspondence till about mid-1830 appears not to have survived. Clares Bridge was commenced in April 1830 after work had commenced on Thomas James Bridge at Wisemans Ferry.

This bridge was to be the showpiece of the Great North Road. Situated at the head of a gully it could be seen when approached from either direction.

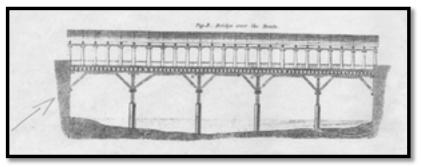
But where did the idea of this type of structure come from? Arnold Clare the convict overseer had been born in Lancashire about 1801. He was 25 when he arrived aboard *Speke* in 1826 with a seven-year sentence. He was single and a Protestant who could read but not write. He had been convicted in Liverpool of stealing clothes. He gave his occupation as an iron -foundry labourer so was unlikely to have known about bridges. After drawing a blank on Arnold Clare it was necessary to go back to archives and a search though all possible likely bundles and films. No bridge plans or mentions in letters could be found, nor could any drawings or paintings be found in Picture Australia.



Above: Circuit Flat bridge showing projecting Corbels



Below: The Bridge over the Brenta River Italy from Andrea Palladio book and reproduced in Tredgold's book



Then the search started overseas. Whilst many bridges could be found that had supporting struts none had projecting stone corbels having the struts supported by recesses or a step in the abutments. I corresponded with the Mayor of the Ionian Isle of Paxos where Percy Simpson was reputed to have built roads. All I found was that most road building happened after he was there and the bridges were not at all like Clares Bridge.

Whilst carrying on this research I also started researching engineering books that were printed in England before the Simpsons and Mitchell departed. The number is not great and some were on the internet. Others were in the State Library whilst others again were on the Goldsmith Kress microfilms of rare books. It was here that I think I found the answer. In 1820 Thomas Tredgold had published a book called Elementary Principles of Carpentry where he laid out the principles for building floors, roofs, bridges and other structures. Amongst the bridges he included the design for a bridge in Italy. The design had first been published in 1570 by Andrea Palladio as *I Quattro Libri dell' Architettura [The Four Books of Architecture]*. The book set out his architectural principles as well as practical advice for builders. The most critical element, perhaps, was the set of meticulous woodcut illustrations drawn from hisown works to illustrate the text. The bridge illustrated was a wooden bridge with supporting struts that sat on large projecting pieces of timber.

Having used a student carpentry book myself to physically build an extension onto my home I suggest that someone showed Arnold a book with a drawing of a cut-water pier and the Tredgold book with the bridge with the supporting timber struts and said "Build me a bridge like that" and he quite literally followed the pictures to produce Clares Bridge. I would love someone to come up with a better theory and challenge me but todate it is the only theory I put forward which makes sense of Clares Bridge and Circuit Flat Bridge.





PHYSICAL EVIDENCE Archaeological evidence Elizabeth Roberts

Back in the late 1960s early 1970s the site of the Dennis's Dog Kennel campsite was bulldozed to enlarge the permanent waterhole used by the Bucketty Bushfire Brigade as a source of water. Soon afterwards Ian Webb knowing it had been the site of a road gang camp investigated the site. What he found was a collection of rectangular prisms of metal approximately half an inch by half an inch by three quarter of an inch (1.5 X1.5.x 2 cms). These he gave to the Wollombi Museum. The question was what were these pieces and why had they been discarded or lost? When looking at the tools used it was realized that these small bits of metal were the unworkable remains of the metal rods sent to the blacksmith for repairing the tools. To work metal the blacksmith had to hold it in his tongs to be heated. These bits were what remained of the rods that were too small to be held in the tongs.

Black Bottles

The remains of black bottles have been found at two convict encampments many kilometers apart. Why is black glass associated with the convict occupation and not the later dumping of rubbish by passers-by? The finds included the base of one bottle and the neck of another. From the base that was very thick the bottle was identified as a cylinder bottle (pictured) of a type manufactured from the 1770s till about 1845 (the later date being debatable)

Their being found at two sites is likely to indicate they that were a common feature of the campsite and not an illicit aberration. What was in these bottles? There was nothing in the rations that would have been supplied in bottles.

There is a recent book 'Good Things Came from Glass - A History of Glass Making in Australia 1812—1987' by Mal Harrop from the subtitle of which it appears glass was worked in NSW from 1812 but unfortunately I have had difficulty in accessing a copy of the book. These bottles pose a question that has not yet been answered, why were they found in convict camp sites?

References:

http://dangilbert.tripod.com/index-2.html http://www.antique-bottles.net/forum/English-Black-Glass-or-Dutch-%3F/m-312339/tm.htm http://www.antiquebottles.com/blackglass/ http://www.britglass.org.uk/history-glass http://www.sha.org/bottle/colors.htm http://acms.sl.nsw.gov.au/item/itemDetailPaged.aspx?itemID=430888



"I Survived" Geoff Potter.

In the early 2000s, Graham Nelson and others began to search for sites and relics related to the early roads in the catchment of Mangrove Creek Dam. By 2005, Graham's research had reached a stage where he was ready to show others what he had found.

On the 11^a August I was lucky enough to be part of a group of Gosford Council employees, local historians and interested members of the public who journeyed to Lower Mangrove Creek and Dubbo Gully with Graham to see what road history had been uncovered.

A surprising find of Graham's was an almost complete timber road bridge, formerly part of the main Gosford-Wiseman's Ferry Road that had been found below shifting creek sands (This has since been reburied to help protect it).

Throughout the day we saw substantial rock walling, several stone and timber culverts, the remaining foundations of "Edges House" (famous for its role as an exterior set in the B-grade schlock-horror picture "Inn of the damned") and much evidence of the processes used in building the roads in the Ten Mile Hollow area in the latter part of the nineteenth century.



Eventually we headed up to Clare's Bridge, where the deck had been removed to allow stabilisation of stone walling. The bridge could be examined closely, and parts of the bridge once hidden in the dark below the deck were now open to the sky. Small ferns protruded from footholds between stone blocks. The artistry of the convict stonemasons who constructed the bridge was clearly evident.

While others in the group were in discussion, I went down below the bridge to take photographs of the approaches and central support. What I found next came as a great surprise! There wasn't much light reaching the pylon, as the sun had started going below the hill to the west. A very small patch of sun stretched across what seemed like parallel lines faintly etched in the middle of a substantial block, just above head height.

Initially it seemed this was a trick of the light, but I decided to make closer investigation. Incredibly, beneath 175 years of blackened moss and lichen growth was a faint outline of a convict's left hand! Hairs stood up on the back of my neck. What a find!

It was obvious that the carving was carefully made by the convict mason who, highly skilled in stone but probably unable to read or write, had "left his mark". Was the mark a signature? Who made it? It seemed like a statement of some kind. Did it signify "I built this", or "I was here"? Perhaps it meant "I survived".

Whatever the meaning, I will never forget the personal connection I felt with the mason who built Clare's Bridge, when I found his hand on the stone so many years after his work had finished. If the sun hadn't been in the exact position that it was that day, and at the precise time that I was there to see it, I would never have found this link to the past.





Blasting and Quarrying. By Grace Karskens (ex. Conservation Management Plan)

Rock blasting with gunpowder was employed throughout the construction period. Early nineteenth-century blasting techniques were very traditional and fairly simple and the semicircular, triangular and facetted shafts left by the jumper, a long iron tool with a chisel-point end, are commonly found where the roadbuilders encountered rock outcrops, such as Wisemans Ferry Devine's Hill, Sampson's Pass, Mt Simpson and Mt Finch. On heavily-worked areas there are scores of shafts up to 1200mm long on the rock faces, but in less rugged places groups of more than two or three are rare. The convicts employed in 'jumping and blasting', as the operations were termed, worked 'double handed' in pairs, one holding the jumper and the other striking it with a sledge hammer or maul to chip out the shot shaft. As a result of the scarcity and irregular supply of gunpowder, the tasks of jumping and blasting were often divided , the former being undertaken well in advance of the arrival of the powder. It appears that clay was used to tamp down the powder before firing.

Simpson described the stone walls on his section of the road as 'lofty and massive side walls' which were built of 'stone quarried by force of maul and wedge'. These tools are often mentioned in reports and there are numerous examples of unused wedge pits or 'pool holes' cut into rock faces with chisels or picks. The wedges were driven into these pits with mauls (wooden hammers) until the rock split into large slabs. It was then removed for dressing to the required shape and size.



Blasting Compiled by Ian Webb

Blasting as defined by Encyclopaedia Britannica 1911.

The holes for blasting are made either by hand, with hammer and drill or jumper, or by machine drill, the latter being driven by steam, compressed air, or electricity. Drill holes ordinarily vary in diameter from 1 to 3 inches and in depth from a few inches up to 15 or 20 feet. The deeper holes are made in surface excavation of rock, the shallower, to a maximum depth of say 12 feet, being suitable for tunnelling and mining operations.

Hand drilling - The work is either single hand or double hand, the miner wields the hammer with one hand, and in the other holds the drill or bit, rotating it slightly after every blow, in order to keep the hole round and prevent the drill from sticking fast.

In double hand work, one man strikes, while the other holds and rotates the drill. For large and deep holes, two hammer men are sometimes employed.

A miner's drill is a steel bar, occasionally round, one end of which is forged out to a cutting edge. The edge of the drill is made straight, like that of a chisel, or with a convex curve, the latter shape being best for very hard rock. For hard rock the cutting edge should be rather thicker and blunter, and therefore stronger, than for soft rock.

The diameter of drill steel for hand work is usually from 3/4 to 1 inch, and the length of cutting edge or gatige, of the drill is always greater than the diameter of the shank.

Holes over 10 or 12 inches deep generally require the use of a set of drills of different lengths,-The shortest drill for starting the hole has the widest cutting edge, the edges of the others being successively narrower, thus the hole decreases in diameter as it is made deeper.

The miners hammer ranges in weight from $3\frac{1}{2}$ to $4\frac{1}{2}$ pounds for single hand drilling, up to 8 or 10 pounds for double hand. If the hole is directed downwards, a little water is some times poured into it at intervals, to keep the cutting edge of the drill cool and make a thin mud of the cuttings.

From time to time the hole is cleaned out by the scraper or spoon, a long slender iron bar, forged in the shape of a hollow semi cylinder, with one end flattened and turned over at right angles.

The jumper, is a long steel bar with cutting edges on one of both ends, which is alternately raised and dropped into the hole by one or two men.

In rock work, the jumper is rarely used, except for holes directed steeply down. Though for coal or soft shale or slate, it may be employed for drilling holes horizontally or upwards.

Holes drilled by hand, usually vary in depth from 18 to 36 inches, according to the nature of the rock and purpose of the work. Though deeper holes are often made. For soft rock, single hand drilling is from 20 to 30% cheaper than double hand, but the difference does not hold good for the harder rocks, for these double hand drilling is preferable, and may even be essential, to secure a reasonable speed of work.

J. Jeacocke. In a chapter called *The Gunpowder Era, in Explosives in the Service of Man; The Nobel Heritage* (1) wrote:

The earliest attempts at using Gunpowder for blasting consisted of simply pouring the powder into natural fissures and breaks in the rock. The idea of preparing special shot holes followed very quickly and were recorded in use by 1637.

These early shot holes were made by iron tipped borers driven by jack hammers and closed with wooden pegs called "shooting plugs". However by 1685, clay stemming was being used for this purpose with much greater effect.

During the 18^{*} and the first part of the 19^{*} century firing of gunpowder shots strikes one as being a somewhat risky procedure. A charge of gunpowder was poured into the shot hole and a long needle or stick inserted in the charge. The bottom of the stick was in the charge and the top protruded from the top of the shot hole. After the stemming with clay was carried out, the stick was withdrawn and the hole so left was carefully filled with loose, fine grained gunpowder. A piece of touch paper (which was supposed to take about half a minute to burn, but seldom did), was lit and laid on the gunpowder trail. The final, and from the shot-firers' point of view, the most important act of the performance, was for the shot-firer to run as fast as possible.

This method was used by the convicts building the Great North Road.

Heather Bourke in Devines Hill to Ten Mile Hollow an Historic. Archaeological Survey. 1988 wrote:

"Prior to blasting, the convicts were required to bore holes - using a jumper bar. Karskens has inferred - that two men were required - one holding the jumper - the other wielded the hammer". (ref. Page 13 of report).





Grace Karskens wrote in her thesis in 1983

"Although specific written reference to tools and techniques are rare, a number of points may be drawn from the Road Gang Reports and other reports. It appears that two men rather than one or three were employed in drilling each hole. The reports invariably list even numbers of convicts for the task of jumping. It is most likely, therefore, that the jumper was used in conjunction with a hammer or sledge rather than alone, in the "double handed" fashion described by Andre". (Ref. Page 294).

The trouble is that the drill shafts used by the road gang convicts are referred to as 'jumpers', which gets confused with an actual tool used to drill holes in rock called a 'jumper bar'. I have always referred to the drill shafts as jumpers, as this is what they were called by the men using them in the sandstone quarries at Somersby in the Gosford area in the 1960's. Grace most likely picked up this name for the drill shafts during our early discussions on the Great North Road, prior to her first written articles on the road.

To my knowledge, the only drill bar (jumper) found on the Great North Road, is the one that I found with a pick head in a small rock overhang adjacent to the road at the 7 mile. It was a steel 3/4 inch round bar just over 3 feet long, with the remains of a chisel shape one end, and burred over on the other from being struck with a sledge hammer. Unfortunately this relic, (the only one of its kind), is now buried with other relics from the road, along with the burnt remains of the building in which they were stored, at Mill Creek in Dharug National Park.

References to Drilling, Blasting and Quarrying from State Record Documents.

State records reel 590 :

No. 25 Road Party, 10 to 16 January 1829, 1 man blasting, 2 men jumping, 6 quarrying and 3 removing stone

No. 25 Road Party, 19 to 25 April 1829, 2 men jumping, 8 quarrying and 3 removing stone No. 25 Road Party, Monthly report for May 1830, work done, quarrying, jumping, blasting and

removing stone.

No. 4 Iron Gang, 3 to 8 March 1828, 2 men jumping and blasting, 14 quarrying and 10 removing stone

No. 4 Iron Gang, 12 to 17 January 1829, jumping holes and blasting 4 men

No. 4 Iron Gang, 20 to 25 April 1829, jumping holes and blasting 4 men.

No.8 Iron Gang, for May 1830, used 30 pounds of thick gunpowder at Sampsons Pass, but the gang reports do not mention any jumping and blasting.

No. 3 Iron Gang, 3 to 8 March 1828, quarrying 8 men, blasting 4 No. 3 Iron Gang, 20 to 25 April 1829, jumping 2 men, quarrying 6 Monthly report for May 1830, rock blasted 260 tons, used 115 pounds of gunpowder.





Simpson's Monthly reports, January 1830.

"Absence of a sufficiency of quarrying tools, a requisition for a further supply has been made". "There are many holes prepared for blasting and in the month of February, a great expenditure of gunpowder will be necessary".

For March 1830,

"in the absence of gunpowder, those men usually employed jumping and blasting have been sinking for foundations". Five barrels received on 28⁺. - due to weather none issued - Overseers ordered to get holes jumped - Simpson will be inspecting the holes and their charging and exploding, at the sites where blasting is absolutely necessary.

For April 1830,

No.3 Iron gang blasted away 60 tons of rock and used 20 pounds of powder.

No. 25 Road Party, blasted away 60 tons of rock and used 20 pounds of powder. No.8 Iron gang blasted away 60 tons of rock and used 20 pounds of powder. No.9 Iron gang blasted away 50 tons of rock and used 20 pounds of powder. Clares Bridge Party blasted away 50 tons of rock and used 40 pounds of powder.

For September 1830,

No. 3 Iron gang blasted 180 tons using 75 pounds of powder. No. 4 Iron gang blasted 20 tons using 20 pounds of powder. No. 25 Road party blasted 250 tons using 75 pounds of powder.

Simpson's reports for February 1832, has the No.25 Road Party blasting 110 tons of stone, the No.3 Iron Gang 300 tons and the No.4 Iron Gang 280 tons.

For the Road Gangs on the northern part of the Great North Road in the Hunter District of the Road Department, from 1827 to 1836, no mention of drilling and blasting has been found in the surviving documents studied. Only the terms quarrying, getting or breaking stone are used for any rock work done, other than stone wall or bridge building.

State Records Reel 3080.

A report by John Lambie for the seven Gangs under his charge on the Bathurst Road in February 1832, mentions blasting, quarrying, cutting and removing rock. For April, one Gang blasted 78 yards of rock, 3 yards high and 3 feet deep, another Gang at Hassans Walls, blasted 1052 feet of rock.

State Records Reel 3064.

A Return of Tools by Philip Elliot on 25 November 1830, mentions 54 iron mauls, 179 wedges, 37 stone hammers, 24 crow bars, 11 sets of blasting tools, 5 sledges, 4 powder bags and 6 powder horns.



State Records Reel 3090.

Stores issued to John Abbott at Emu Plains on 4 Oct. 1832, included 10 quarry mauls.

State Records Reel 3090.

A return dated 20 January, of Articles and numbers required of each for the Road Department for the year 1833, contained 800 iron mauls weighing 24 pounds each at a cost of 6 pence per pound, 150 stone breaking hammers at 2shillings and 6 pence each, 2000 quarry wedges at 4 pence per pound and 100 crow bars at 3 pence per pound.

State Records Reel 3080.

Tools listed as being with No.35 Road Gang on 10 July 1833, 3 iron mauls, 4 maul rings (these were for wooden mauls, which had an iron ring on each end of the head and at least 4 small iron wedges to spread the wood to hold the iron rings in place), 19 stone hammers, 1 rammer, 1 jumper, 1 needle and 1 scoop.

State Records Reel 3063.

Dulhunty on 12 October 1833, asks for an additional 20 iron quarry mauls, 6 crow bars for the Iron Gang at Green Hills, 15 iron mauls had previously been supplied from Newcastle.

State Records Reel 3017.

Tools proposed to be transferred from the Commissariat Department to the Road and Bridges Department on 27 September 1837, were 16 sets of blasting tools.

State Records Reel 3002.

Governor approves on 28 February 1839, that gunpowder and blasting needles to the value of 32 Pounds 7 shillings and 6 pence, be purchased for the Town Surveyor at Sydney.



Stone on occasions was split by force of maul (top) and wedge



Copy of a letter by Lieutenant T.C. Otway at Wingello to Major Mitchell, concerning a copper needle and rammer for blasting rock.

35/3 Entd. 3 A O Wingello February 28^a 1835

Sir

When I had the pleasure of seeing you at this Quarter, you were so kind as to attend to my request relative to a Copper Needle, and Rammer being provided for the use of these works, but those which arrived, have not been of the slightest use, owing to their length being only 3 feet, in lieu of 8. No accident occurred until this morning, when six of the Gang were seriously injured, One man in all probability will lose his eyesight, by the Powder igniting when drawing the Iron needle, which caused a sudden explosion of the material. If articles of the above dimensions are not in store, I will feel obliged by your giving orders for the material being forwarded to the Stockade, with as little delay as possible, which can be forged by the Blacksmith, superintended by the Principal Overseer, any old Copper (not cast) such as bolts etc., would answer the purpose. When Mr Lambie was last here, I ordered the Needle and Rammer submitted to his inspection, and he was satisfied that they were of no service, and as he is now in Sydney, I have been compelled to trouble you with the perusal of this letter. The line is rapidly progressing, and I think the work will meet with your approval when you next visit Wingello, We require an extra supply of tools, a list was given to Mr Lambie, by Rigby late Overseer at the Stockade.

I have the honor to be Sir Your very obedient Servant T.C. Otway Lieutenant 50th Regiment Commanding Detachment Wingello

[to] Major Mitchell Surveyor General etc etc etc Sydney.

Compiled from reference sources in the Ian Webb collection. Updated - 07 / 04/ 2006. No copying without approval. I Webb.

1: John Edmund Dolan, Stanley S. Langer editors *Explosives in the Service of Man*; *The Nobel Heritage*. Royal Society of Chemistry (Great Britain) 1997





Physical Evidence of the Method of Building the Great North Road E.A.Roberts

During the past 10 years, excluding the section managed by the NPWS I have observed nearly all the road works where for whatever reason the surface of the road was cut into or walls were deconstructed and reconstructed. Whilst most of these observations have been reported in the grey literature (2)this is the first time they have been collected and published for public consumption.

Grace Karskens researched and wrote about Telfords and McAdams theories of road construction and how she believed from external observation they were applied and modified to suit the conditions in NSW. In this article I do not attempt to interpret or reinterpret how the road was constructed but just to record what has been found so engineers and others know what to expect under the road surface and can use the information to predict future occurrences or repair current occurrences.

From the road reports and letters we know that where the road was built across sections that needed no more than stumping and surface construction the stumps had to burnt until they were 9 inches (20 plus cms) below the top of the soil. From observation we know the road fill was laid directly on top of the ground.(3)

Where the road was laid across bedrock, depressions in the roadbed were filled with large pieces of broken rock.

The magnificent stone walls built by the convicts consist of a facing wall with a roughly constructed sustaining wall behind, and behind this again the void was filled with "fine". Generally, that from what was seen at Bucketty Culvert this was sand collected and brought by the cart load. Behind the Bucketty Culvert there was a distinctly grey load of sand used as fill. This load was not laid level but tipped at the edge of the filled material on a working face working from the level ground out into the void to be filled.(4)

It was observed that the fill used behind the abutments at Clares Bridge and the large culvert at Bucketty was fine sand. As sand is a material which drains well this is a sound practice while the surface remains watertight and the drains functioning. When for whatever reason water has been allowed to penetrate for any length of time the fines have been washed out leaving hollows and cavities behind the walls. These cavities were picked up with geotechnical drilling at both Thomas James Bridge and Clares Bridge.(5) At the latter they were observed when the central part of the southern abutment wall was deconstructed. Here, behind the western side wing wall there were cavities large enough to thrust an arm into and deeper than an arm's length where the fines had been

washed out. Similar cavities have been observed on the southern descent to Wisemans Ferry where movement in the wall allows one to look into and poke sticks into the cavities.

Where sections of wall that had moved or partly collapsed had been deconstructed thin layers of dirty dust had been found between the stones. After observing this in several places and it being recorded on various roads etc it was suspected this could be stone dust inserted as a pad when the stones were laid. Because the wall at Ramsays Leap is a concave curve movement and pressure tightened the wall rather than splaying it. The day before new work works would have prevented it happening a truck accident smashed a number of stones and it became necessary to remove some of them. Perfectly dry, clean, bright yellow stone dust was found between the stones. This confirmed that stone dust was used when laying the cut shaped stone walls.

There appear to be no guidelines to follow when cutting and filling a road round a cliff-face or across a gully. From my observations and those of other people it seems the amount of bedrock into which the drain has been cut can vary from nil to approximately 7/8 the width of the road. Where the drain had been cut into the road on the descent of Mt Manning it had beautifully vertical sides and flat gently sloping base.

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The "retaining" walls are not retaining walls as understood by today's engineers, in that the width at the base is not one third their height wide at their base. In some cases there are smaller stones at the base than there are on further up the wall. Generally it appears the base stones are just dug into the soil, roughly levelled and the wall built up. In places the natural stone is used as the base or rather a large rocks in the way of the wall were built round with out any cutting or shaping. In these cases small unshaped stones were used to pack round and level the larger stones.

Reference

2: Grey literature refers to unpublished reports of works undertaken, sometimes lodged with the Heritage Office, sometimes lodged with a council library but often just lodged with the person commissioning the report or providing the grant.

- 3: Bedlam Point and Ramsays Leap
- 4: Bedlam Culvert; Clares Bridge; St Albans Road Ramp.
- 5: Geotechnical testing reports by RCA





MITCHELL'S JOURNAL

A transcription of an extract from T L Mitchell's Memoranda Book 1826-1827 outlining his theory for the laying-out of roads. The original is in the Mitchell Library at ML C 37. Transcribed by Elizabeth Roberts

On Laying out roads

A variety of circumstances require to be taken into consideration, but the principal are evidently their line of direction, and its inclination to the horizon.

When the intervening country is broken into hill and dale, or if one ridge of hill only intervenes, a straight line of carriage road is seldom compatible with perfection. In this case, which is nearly general, the best skill of the surveyor lies in tracing the midway between the straight and the level line. The line of perfection, for agricultural purposes, is to be calculated, by the time and exertion, jointly considered, which are required to convey a heavy burden, with a given power of draught from station to station. On great public roads, where expedition is a principal object, time alone may be taken as a good criterion.

<u>A regular method of finding out the true line of road</u>, between two stations where a blank is given, where there is no other obstruction than what the surface of the ground to be got over presents, is to ascertain, and mark at proper distances, the straight line; which is the only certain guide to the surveyor. If this straight line be found to be eligible, each mark becomes a rallying point, in searching on either side of it, for a better. If two lines of equal facility, and nearly of equal distance from the straight line, present themselves, accurate measurements are to determine the choice. If one of the two best lines which the country affords is found to be easier, the other shorter, the ascent and the distance are to be jointly considered; the exertion and the time required are to be duly weighed.

<u>The nature of the ground, the sourcing of materials, and the comparative expense</u> of forming the road, by two doubtful lines as well as their comparative exposure are also to be taken into consideration.

In one way you may be led over ground of a wet bottom, where even, 12 or 14 inches deep of metal, would not preserve a good road, while in the other you may have such a dry bottom, that it would be upheld much better with 7 or 8 inches of metals. So that a tract which may be most eligible to the eye at first sight may not always be the one which should be adopted.

<u>Roads should be laid out as nearly as may be, in a straight line, but it must be also remembered that hills must be avoided, towns must be resorted to, and the sudden bends of rivers must be shunned.</u>

It is obvious, that, where the arc described by a road going over a hill, is greater than that which is described by going round it, the circuit is preferable; but it is not known to every overseer, that within certain limits it will be less laborious to go round the hill, though the circuit should be much greater than that which would be made in crossing the hill. Where a hill has an ascent of no more than one foot in thirty, the thirtieth part of whole weight of the carriage, of the load, and of horses, must be lifted up, whilst they advance thirty feet. In doing this, one thirtieth part of the whole load continually resists the horses' draught; and in drawing a wagon of six tons weight, a resistance equal to the usual force of two horses must be exerted.

<u>A perfectly level road is not always the best in every species of draught.</u> Slight and short alternating of rising and falling ground are serviceable to horses moving swiftly; the horses have time to rest their lungs, and different muscles' and of this experienced drivers know well how to take advantage.

<u>A dry foundation and clearing the road from water</u>, are two important objects which according to Walker ought to be kept in view in lining out roads. "For obtaining the first of these objects it is essential that the line for the road be taken so that the foundation can be kept dry, either by avoiding low ground, by raising the surface of the road above the level of the ground on each side of it, or by drawing off the water by means of side drains. The other object, viz. that of clearing the road of water, is best secured by selecting a course for the road which is not horizontally level, so that the surface of the road may in its longitudinal section, form in some degree an inclined plane; and when this cannot be obtained, owing to the extreme flatness of the country, an artificial inclination tract may generally be made. Where a road is so formed every wheel-tract that is made being in the line of the inclination, becomes a channel for carrying off the water much more effectually than can be done by a curvature in the cross section or rise in the middle of the road, without the dangers, or other disadvantages[sic] which necessarily attend the rounding a road much in the middle - I consider a fall of about one inch and a half in ten feet, to be a minimum in this case if it is attainable without a great deal of extra expense.

<u>The ascent of hills,</u> it is observed by Marshal is the most difficult part of laying out roads. According to the theory, he says, an inclined plane of easy ascent is proper; but as the moving power on this plane is "neither purely mechanical nor in a sufficient degree rational, but an irregular compound of these two qualities, the nature and habits of this power" require a varied inclined plane or one not a uniform descent, but with levels or other proper places for rests. According to the road act – the ascent or descent should not exceed the rate or proportion of one foot in height to thirty-five feet of the length thereof, if the same be practical without causing a great increase in distance.

<u>As precedents for roads through hilly countries</u> Telford refers to those which he has lately made through the most difficult and precipitous districts of North Wales. 'the longitude inclination are in general less than one in 30 - ; in one instance for a considerable distance there was no way avoiding 1 in 22 and in another for about 200yds 1 in 17 - but in these two cases the surface of the road way being made peculiarly smooth and hard, no inconvenience is experienced by wheeled carriages. On flat ground the breadth of the roadway is thirty two feet; where there is side cutting not exceeding three feet the width is 28feet, and along any steep ground and precipices, it is twenty two, all clear within the fences; the sides are protected by stone walls, breast and retaining walls and parapets; great pains have been bestowed on the cross draining, also the draining the ground, and likewise in constructing firm and substantial foundations for the metalled part of the roadway.





2

<u>Cutting through low hills to obtain a level</u> is recommended by some, who will argue that where the hill of ascent is not very long it is better, in that case to cut through it in a straight line, and embank over the hollow ground on each side than to wind along the foot of it. This however should only be done when the cutting is very little indeed, and an embankment absolutely necessary.

<u>All crossings, intersections, and abuttings of roads</u>, should be made at right angles, in the obvious reason of facilitating the turning space one road to the other, or the more speedily crossing. Where roads cross each other obliquely or where one road abuts on another at an acute angle turning in, or crossing, can only be conveniently performed in one direction.

In laying out a road over a hill or mountain of angular figure and considerable height, much practical skill as well as science are requisite in order to preserve a moderate inclination, or such a one as will admit of the descent of carriages without locking their wheels. A much longer line will be required than the arc of the mountain. In reaching the summit or highest part to be passed over the line must be extended by winding or zig-zagging it along the sides, so as never to exceed the maximum degree of steepness. If a hill, 50 feet in perpendicular height has an arc (a,b,c,), or would require 150 feet of road (a,b,c) to go over its summit in a straight line, there to pass over the same hill on a road rising at the rate of two inches in six feet (the slope of the Simplon road) would require a length of 600 feet. If this length were extended in a straight line (d,b,e) on each side, it would require an enormous mound and an immense expense; but by being conducted in a winding direction (b), up the hill on one side, and down the other, the same end is gained at a more moderate cost.

<u>In laying out a road towards a river, stream, ravine, or any place</u> requiring a bridge or embankment an obvious advantage results from approaching them at right angles; and the same will apply in regard to any part requiring tunnelling or crossing by an aqueduct etc.

On an estate composed of gentle hills chiefly intended for arable or convertible husbandry the best situation for roads will generally be found about halfway between the bottoms and the highest surfaces. By this means the labor of carting up the produce from the fields below the road, and carting up the dray to the fields above it, is evidently much less than if the road were either entirely on the highest ground or the lowest. Bridges over the brooks or open ditches necessary for drainage in valleys are also rendered less frequent.

<u>Accurate Sections</u> of the rises and falls on the natural surface on which a road is to be formed should always be taken before the line is finally determined on.

If the figure of an exact section of this sort on any ordinary scale, would convey no data sufficiently accurate for execution, it is usual to adopt one scale for the length and another for the rises and falls on the road, and to mark the latter with the dimensions as taken on the survey.



ANNOTATION:

These notes were written in a tiny pocket note book about 8 ½ by 5 ½ cms, by a dip-pen with a very fine nib.

Simplon Road Between 1801 and 1805 the Simplon Road was constructed through Simplon Pass between Italy and Switzerland by the engineer <u>Nicolas Céard</u> at the direction of <u>the emperor</u> in order to transport artillery pieces through the pass between the <u>Rhône</u> valley and <u>Italy</u>

An enquiry was made on the engineers' chat list regarding the 'Marshal' quoted above. I was told that Mitchell was quoting from An Encyclopædia of Agriculture, vol.1, John Claudius Loudon, 1825, p.514. On looking at Loudon's book on the internet, I saw that Mitchell was indeed copying out the relevant paragraphs for future reference. This information came as the Pick was going to press so there has not been time for further research.





An Investigation of Historical Evidence Regarding the Remnant Stone Bridge, Pyes Creek, Castle Hill Dr Terry Kass, B A (Hons), M A (Hons), PhD

1.0 Introduction

This study was commissioned by Hornsby Shire Council to assist an archaeological investigation and stabilisation project for the remains of a stone bridge on the former alignment of the Great North Road constructed by convict labour.

The major issue regarding this bridge was whether this bridge was built on the original line of the Great North Road or whether it was built on part of a new line of that Road constructed soon after the original line was completed. This can only be determined by examining a range of evidence, much of which does not directly relate to the bridge itself.

2.0 Evidence for the Bridge at Pyes Creek

The remnant bridge at Pyes Creek is located near Woodlark Place, Castle Hill. The land was originally part of a grant of 60 acres to James Pye dated 13 September 1819 bounded on the west by Thomas Pye and on the south by Garraty and Murphy.(6) This grant was later numbered as Portion 245.(7)

Early Crown Plans were checked to see if there was any data regarding these roads. The charting map of the Parish catalogued as N.425.or showed Portion 245 Parish South Colah granted to James Pye with only the boundaries shown. The line of road R.882.1603 was later added to the map(8).An amended version of the same map catalogued as N.2.425 showed the portions but no legible details.(9) The early charting map F.489.or also showed no details of value.(10)

In September 1825, surveyor Heneage Finch surveyed the original line of the Great North Road, which was planned to connect the County of Cumberland with the growing Hunter region and places to the north. His survey traced the line as far north as Wiseman's property on the Hawkesbury River.(11) Finch's map does not include enough detail of the grants over which it passed to permit precise location of the land over which the road would pass.(12)

Finch's line was altered by Surveyor-General, Thomas L Mitchell as well as during construction.(13)Construction appears to have commenced in September 1826 when two road gangs were set to work at 'Castle Hill North'.(14)

On 27 August 1828, it was announced that the Great North Road would receive a new direction. Three road gangs had already been placed on 'a new line from Billy Blue's on the North Shore, opposite Sydney, by which the road will be shortened twenty miles'.(15) This became the New Line Road on which this bridge is situated. There is little information about this road and any bridges on it.

However, surveyor William Romaine Govett had been instructed to survey the dividing range between Berowra and Cowan. The completed plan sent in on 14 August 1829 also showed the 'road ... from Parramatta River to Wiseman's Rd lately laid out by Major Lockyer'. Govett's map showed how the road turned in a south-westerly direction to cross an unnamed creek, which equates to Pyes Creek.(16) The map is only dated as '1829' on the face of the map but Govett's letter of 14 August 1829 equates to this map.(17) Unfortunately, his letter provided no details about the road. It is significant that the alignment and position shown by Govett is directly mirrored in the parish map dated as 27 March 1835 that shows two lines of road. It is notable that the position of the unnamed creek (Pyes Creek) is shown on the 1835 parish map and readily equates to where the road on Govett's map crosses an unnamed creek. The northerly road later formed the line on which the current New Line Road was later positioned, with some minor alterations. The southern line of road on Govett's map confirming it was not the 'road ... from Parramatta River to Wiseman's Rd lately laid out by Major Lockyer'. It may have been a local road or it may have been a new line of the Great North Road laid out soon after Govett completed his survey.



Figure 1 above W R Govett's survey of the ranges showed the Great North Road. Note the bend to the south-west it makes to cross what was later named as Pyes Creek.Figure 2 below The complete map. Source: SR Map 5002



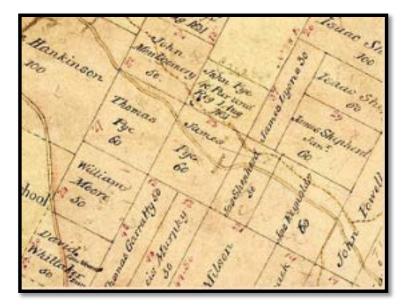


Figure 2 The 1835 edition of the parish map of South Colah showed the Great North Road as the southern line of road bisecting James Pye's 60-acre grant. Note the turn to the south-west in the road to cross the creek [now Pyes Creek], which is also shown. Source: Parish Map, Parish South Colah, County Cumberland, 1835

These maps strongly support the conclusion that the southern line of road, which crosses Pye's Creek at the bridge that is the subject of this study, was the original alignment of the New Line Road.

Thus, the southern line of road appears to have been the original line. However, a contrary piece of evidence needs to be considered.

On 1 November 1830, John Pye wrote to the government complaining that 'a short time ago a new line of Road' was completed under Major Lockyer which bisected John Montgomery's grant of 50 acres (Portion 251). Pye had bought that land some years before. Pye requested a grant of the land to the north since the new road cut off the northern part of Montgomery's grant from access to water. On 2 December 1830, Surveyor-General T L Mitchell confirmed these details.(18) This letter implies the north road was the road on a new alignment. Lockyer's appointment as Roads Superintendent had ended in December 1829, implying that the road across Montgomery's grant would have been completed between August and December 1829.(19)

The equation of Govett's map with the southern line of road on the 1835 parish map is strong evidence that it was the original line. The road cutting across Montgomery's grant (Portion 251) appears to be a new line of road cut by the road gang. The road gangs returned to areas previously worked on, as shown by Grace Karskens in her thesis.(20)

The relevant road gang reports are not extant for the relevant months of 1829. Road Gang 34 under overseer David Frew was working on the New Line of road to Dural from January 1830 to early May 1830.(21) At the same time, a Bridge party under William Lynne and later under Michael Dollard was working on the same roads. On 9 January 1830, the bridge party was at Kissing Point, at Dural on 13 January, then at Kissing Point again on 16 and 23 January. Then from 27 January until 10 April the





party was near Dural, after which it seems to be out of the area.(22) It is possible the bridge may have been built at that time, if it had not been built earlier.

James Pye does not appear to have made any significant use of the land in Portion 245. On 4 and 5 February 1831, by a deed of Lease and release, he sold it to John Pye.(23)This deed was listed in the Real Property Application when this land was converted to Torrens Title in 1887. However, the deed was not registered. The Search Notes for this Real Property Application at LPI show the official searchers could not find a registered copy of the deed either. Nevertheless, the title was accepted as correct and a Torrens Title certificate was issued confirming that the transaction was legitimate.

Another relevant plan was a portion survey by Surveyor Felton Mathew. On 7 May 1832, he sent in a plan of three portions in the Parish of South Colah. A 40-acre portion (later Portion 113) measured for Thomas Wilkinson north-east of James Pye's 60-acre portion (Portion 245) showed a road across its easternmost point also passing across James Pye's land. Another section of the same road was shown on John Montgomery's land (Portion 251) following the current line of the New Line Road. Another road was shown to the south of it across Thomas Pye's 60 acres (Portion 250), which was the road on which the Pye's Creek bridge was located. The road from the easternmost corner of Pye's 60 acres across Wilkinson's land was shown as joining with the road across Montgomery's land.(24) Crucially, the northern line of road is only dotted in and is not shown with a straight line, implying it was a lesser or non-official road.

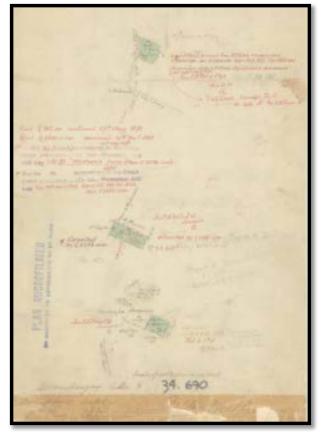
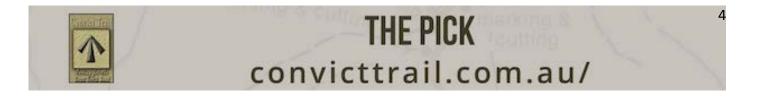


Figure 3 Felton Mathew's original plan of the portion north-east of James Pye's 60 acres showed the original line of the Great North Road to the south with solid lines and the other road to the north only with dotted lines. Source: C.34.690, Crown Plan



Felton Mathew's Fieldbook dated 4 May 1832 showed the road running diagonally across Portion 113 but not the southern road across Thomas Pye's 60 acres (Portion 250).(25)

The land that became Portion 113 had been measured for Wilkinson in error. A revised version of this Crown Plan to correct the alienation of Portion 113 to its correct purchaser, John Pye, showed similar detail though the detail was partially obscured by the charting of the alignment of R.5340a.1603 across the later line of the New Line Road to the north.(26)

Figure 4 Felton Mathew's Fieldbook only showed the road across Wilkinson's grant. Source: Surveyors' Fieldbook, No 381, F Mathew, SRNSW 2/5006, p 40

No letters regarding these surveys were found in Mathew's correspondence to the Surveyor-General.(27)



The 1833 *NSW Directory* included a Road Itinerary, which listed the New Line Road. It showed the following for this part of the road:

17 Cross the Pennant hill road at miles 2 1/2 Bridge across small creek. 19 1/2 Creek 2 ½ 20 1/4 Creek 3/4.(28)

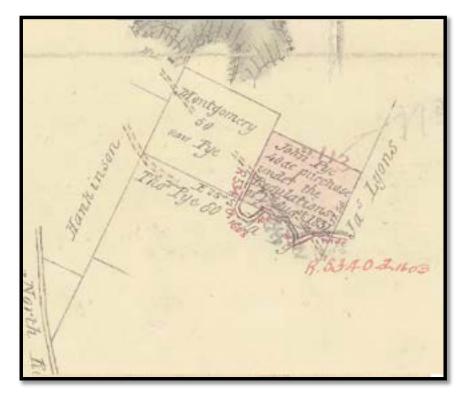


Figure 5 Felton Mathew's final plan of Portion 113 only showed the northern road but it was still shown with dotted lines signifying it was not an official road. To further confuse the issue, on this map, the southern road is also shown with dotted lines. Source: C.34a.690, Crown Plan

The following piece of evidence is the parish map of South Colah dated as 27 March 1835, which showed the original southern alignment of the road, which crossed Pyes Creek shown with straight lines, plus the other alignment to the north shown with <u>dotted lines</u>. Crucially, the northern line of road is only dotted in and is not shown with a straight line, implying it was a lesser or non-official road. This has been dealt with above in relation to Govett's map of 1829.

Another slightly less reliable source is a copy of the parish map of South Colah, probably made by surveyor P L Bemi about 1834. His map showed the line of road as running across James Pye's grant, with no sign of the later line of road to the north. Yet, the line of the road on his map appears to combine parts of the line of both the northern and southern roads. It matches the southern road where his road passes through James Pye's Portion 245 but seems to follow the northern line where the road passes through John Montgomery's Portion 251. (29)





Figure 6 A copy of the South Colah parish map completed by P L Bemi combined details of the northern and southern roads. Source: P L Bemi [?], Ph of South Colah, Sydney, nd 1834?, ML Map Z/M2 811.147/1899/1

Other evidence was checked in an attempt to locate more data about the road or about this part of the land owned by the Pye family. No letters from James Pye or John Pye relating to this land of the roads were found in either the Colonial Secretary's letters received or in those received by the Surveyor-General. (30) Similarly, a search of the newspapers from 1828 to 1835 revealed nothing of relevance either.(31)

James Pye's 60-acre grant (Portion 245) was devised by will to Mary Elizabeth Jenner, wife of Samuel Jenner, of Parramatta, gentleman, who was also recorded as a farmer of Baulkham Hills. On 17 February 1854, they leased six Portions of land to John Purchase, timber merchant of Parramatta, including Portion 245. The land leased was described as bounded on the south-east by John Purchase, Mr Shepherd [Portion 244] and Mr Milson [Portion 243] and on the south-west partly by a road leading out of the Dural Road to Pennant Hills, Mr Garratty [Portion 247] and Mr Moore [Portion 249]. The lease included 'all Timber and other trees' along with the right to cut them and cart them away and 'to have free and uninterrupted ingress, egress and regress to the said several pieces of land and farms from the road leading from Cross Roads to Dural' [i.e. from New Line Road].(32) The road mentioned along the south-west boundary does not appear to be the former line of the New Line Road but what is now Moore Road.

Surveyor E J H Knapp completed a road survey of a revised alignment of New Line Road on 31 August 1869. The old road, i.e. the original line of the Great North Road to the south, was not shown.(33) This may imply it had fallen into disuse. The new alignment of the road R.882.1603 was officially confirmed on 27 May 1870.(34) Attempts to locate the relevant correspondence about this



road in case there was any information about the old road to the south proved abortive since the files were not in the relevant boxes.(35)



Figure 7 E J H Knapp's survey of 31 August 1869 of a revised alignment of the road to the north that had become the main road showed no detail of the original Great North Road to the south. Source: R.882.1603, Crown Plan

The edition of the parish map of South Colah dated as 13 November 1883 showed both alignments of the New Line Road but the alignment to the north is filled in with firm lines to the western boundary of John Pye's 40 acres (later Portion 113).



Figure 8 The parish map of South Colah dated as 13 November 1883 still showed both lines of road. Source: Parish Map, Parish South Colah, County Cumberland, 13 November 1883



A survey was made of James Pye's 60-acre grant plus some others nearby for a Real Property Application about 1889. The New Line of Road is shown but there is no detail of the former road to the south.(36)

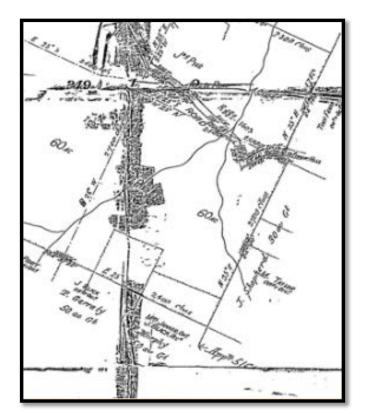


Figure 9 A Real Property Application survey of 1889 showed no detail of the original road alignment, or the bridge. Source: DP 57160

A subdivision of the land in Real Property Application 7160 dated as 3 May 1892 showed no detail of the old road to the south.(37)

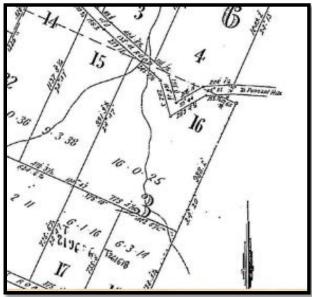


Figure 10 The subdivision plan of James Pye's 60 acres also showed no details of the original road or bridge. Source: DP 2771



The 1907 edition of the parish map of South Colah showed only the northern road alignment.



Figure 11 The 1907 parish map showed only the northern or later alignment of New Line Road. Source: Parish South Colah, County Cumberland, 1907

An aerial photo of 1943 showed a track running south from the hairpin bend in New Line Road to cross Pye's Creek. No sign of the old road alignment is visible.



Figure 12 The 1943 aerial photo did not reveal the original road or the bridge. Source: NSW -Roads and Traffic Authority, From the Skies: Aerial photographs of Sydney in 1943, CD-ROM, RTA, Sydney, 2005



Conclusions

There is no definitive information about when the bridge across Pyes Creek was built. It is positioned on the original line of the Great North Road as it passed through Castle Hill and across James Pye's 60 acre grant (Portion 245). It may have been that the bridge was built as part of the original works on that alignment of the road. However, it cannot be discounted that it may have been built at a slightly later date, though it would be more likely that a bridge would have been built as part of the original works on the road to make it trafficable.

References

6: Grant Register, Vol 3, 1816-22, SRNSW 7/448, p 47, No 113

7: RPA 7160

8: N.425or, now 1-N425, Crown Plan

9: N.2.425, Crown Plan

10: F.489.or. Crown Plan

11: Grace Karskens, The Grandest Improvement in the Country: An Historical and Archaeological Study of the Great North Road, NSW, 1825-1836, MA thesis, University of Sydney, 1985, p 45

12: Plan of proposed road northerly from 19 mile stone, Windsor Road, towards Hunter River (R.492), H Finch 1825, S R Map 4987A & 4987B

13: Grace Karskens, Grandest Monument, p 48

14: Grace Karskens, Grandest Monument, p 81

15: Australian, 27 Aug 1828, p 3

16: SR Map 5002

17: 14 Aug 1829, Surveyor-General, Letters Received from Surveyors, W R Govett, SRNSW 2/1541.1

18: 30/8581, in Colonial Secretary, Letters Received re Land Matters, John Pye file, SRNSW 2/7953

19: 'E Lockyer (1784-1860)', ADB, volume 2, p 123; Australian, 9 Dec 1829, p 3

20: Grace Karskens, Grandest Monument, p 48

21: Surveyor of Roads and Bridges, Weekly and Monthly Road Gang Reports, 1827-30, SRNSW 9/2689

22: Surveyor of Roads and Bridges, Weekly and Monthly Road Gang Reports, 1827-30, SRNSW 9/2689

23: RPA 7160

24: C.34.690, Crown Plan

25: Surveyor-General, Surveyors' Fieldbook, No 381, F Mathew, SRNSW 2/5006, p 40

26: C.34a.690, Crown Plan

27: Surveyor-General, Letters Received from Surveyors, F Mathew, SRNSW 2/1558A

28: *New South Wales Calendar and General Post Office directory, 1833*, compiled by James Raymond, Stephens & Stokes, Sydney, p 80

29: P L Bemi [?], Ph of South Colah, Sydney, nd 1834?, ML Map Z/M2 811.147/1899/1

30: Joan Reese's index to the Colonial Secretary's letters received was checked for this period as well as the Surveyor-General's index and the box Surveyor-General, Correspondence from Individuals, P 1822-33, SRNSW 2/1699

31: TROVE search of newspapers 1828-1840 under a variety of likely terms such as Baulkham Hills, Castle Hill, North Road, road party etc did not locate any relevant references.

32: Old System Deed, No 70 Bk 30, LPI

33: R.882.1603, Crown Plan

34: NSWGG, 27 May 1870, p 1186

35: Lands, Roads Branch, Correspondence, At Rds70/1274, SRNSW 10/15043; Rds70/1701, SRNSW 10/15043 36: DP 57160

37: DP 2771

Funding acknowledgement



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CT Certificate of Title DP Deposited Plan LPI Land and Property Information SRNSW State Records of New South Wales

MAPS – STATE RECORDS OF NSW

Castle Hill, Rough sketch of Castle Hill, showing farms with names. (C.121.or), W Harper, nd, SR Map 1664 **Road**, Plan of proposed road northerly from 19 mile stone, Windsor Road, towards Hunter River (R.492), H Finch 1825, S R Map 4987A & 4987B

Road, Plan showing Castle Hill, Lane Cove, Wiseman's & Sawyers roads around Berowra Creek & ranges, also road tinted green from Parramatta River to Wiseman's Rd lately laid out by Major Lockyer, (R.4.589), Govett, 1829, S R Map 5002

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FOLLOWING SIMPSONS TRACK Gregory Powell

During Easter 1969, I and fellow Kotara Senior Scout, David Morgan set out to retrace the 1828 route of Simpson's Track between Wisemans Ferry and Lake Macquarie. We wanted to discover any evidence of the old route and to get a feel for travelling conditions of the time. We were inspired by the descriptions in Keith Clouten's book, *Reid's Mistake*, published by Lake Macquarie Shire Council, 1967.

Simpsons Track was an unofficial branch of the Great North Road. Many people at the time lobbied unsuccessfully to have it developed as the official road northwards.

As an 18 year old I was naïve in the history of the area and have learnt a lot since that first exploration to the Hawkesbury region. This log is as I wrote it over 40 years ago, with some current comments shown in italics.

Good Friday 4th April 1969. We began the first leg of our journey at the beginning of the Great North Road on the northern bank of the Hawkesbury River. The first few miles of the Great North Road remain in much the same condition as they did when the road was first built 140 years ago, a tribute to the many convicts who toiled on the road in chains. The road cuts deep into the side of the mountain and is supported on the open side by mighty sandstone embankments.

One cannot help but to think of the Egyptian pyramids when observing these man-made walls, not 100 miles from our home city. Mighty stone walls, 40 feet high supported by large protruding buttresses which gives the road a fortress-like appearance. These buttresses also serve as drainage outlets. The water from the mountain side of the road would run down into the drain hole, through a tunnel under the road and come out of a hole in the buttress and then it is channelled down into the valley by way of steep stone troughs. The tunnel under the road is large enough for a man to crawl through. A system of dry-walling was used, where each block is placed into position without mortar to hold it there.

Farther along the road, it was noticed that some steps had been cut into the solid rock which led up to a platform inside a small cave. In the Wisemans Ferry area there is a place known as the Hanging Rock where convicts were hanged if the authorities thought it necessary. This cave with its stone platform inside could have been the place of execution. Whatever it was the steps and the platform were man-made and very old. (*It is now accepted that this cave was not used for executions.*)

The Great North Road soon became worse but it still could take 4WD traffic. It kept mainly to the ridges and flat areas never dropping into the valleys or climbing steeply. It must have taken the early surveyors such as Mitchell and Finch many months to map out a suitable route through some of the most rugged land in the state.

There was nowhere along its route to Ten Mile Hollow for settlement. Farming and grazing would be useless because of the lack of water and good soil. The ground was too rocky and steep for anything, but an excellent road went through. From high points on the road the Blue Mountains and ranges to the south and west could be seen stretching for hundreds of miles. The great fortress of Mount Yengo could be seen standing above all with its flattened summit. At one place the road went up over a hill while another branch went around the hill. The road going around the hill may have been built a few years after when it was seen that it would be better to go round than up and over. Both of these roads were convict built because they had the characteristic stone embankments. Both roads came together again on the other side of the hill.

Steep valleys stretched away into the distance below the road. Often a mountain would be on one side and a steep drop on the other. The road kept mainly to the western side of the ridges and thus views of the west were more common than views of the east or south. In many places the road had washed away but the stone walls, which were only about 6 feet high or smaller, were still evident. Occasionally we came to a part of the road where the wall had crumbled but generally the walls stood firm.

Eight miles from Wisemans Ferry we came to a large intersection of roads probably built for the Electricity Commission whose power-lines came close to the road at this point. A sign on a tree said, "11 mile" another said, "Wisemans Ferry 8 miles" in the direction that we had come.

Before reaching this point, the broken pick-head was found. It was lying half in the sand on the road, the same colour as the rock and if I hadn't kicked it with my foot it would still be there now. What a story it could tell if it could talk. It would tell of the convict who used it, of the sweat and blood that dripped on it and of the Great North Road that it helped to make. Why was it broken? Where is the other piece? (*This "relic" was more likely to be a piece of an old iron insulator holder from the telegraph line that followed the route of the GNR*.)

From this junction the road dropped steeply into the valley of Ten Mile Hollow. There were once many buildings here but all except one are now gone. Some were destroyed by fire. The only house at this peaceful place is just being built. The owners told us that it was on the site of an older house now gone. The people were building the house and planned to farm the surrounding land. A small creek behind the house would supply water but the land was very sandy and only along the creek was it fertile. This was the only house on the Great North Road from Wisemans Ferry to Ten Mile Hollow.

From here Simpsons Track headed off to the right and we left the Great North Road to continue its colourful route to Wollombi.

Simpsons Track now led down to Mangrove Creek. The remains of this track could not be followed by any vehicle. When we came to a small tributary of Mangrove Creek (*Ten Mile Hollow Creek*) we were surprised to see so much cleared land. For about three quarters of a mile along this creek trees





and undergrowth were cleared to leave a strip of barren land as wide as a three lane highway. The farmer later told us that he planned to farm this strip. The strip followed the banks of the creek and so would be quite fertile, yet not much farming was done in the area. It was mainly all cattle raising. It was good country for cattle.

We made camp for the night near the creek about a quarter of a mile before Mangrove Creek. High mountains and cliffs rose all around us. The moon came over the hills at 7.15 pm.

Saturday 5th April 1969. We left our campsite and proceeded to the Mangrove Creek. We followed this downstream for about half a mile along a track overlooking the creek and grazing land. A rich fertile, though small flood plain unfolded below us with the sandy creek running through the middle. As early as 1828, there were a small number of settlers in this area. We inspected the stone ruins of one of these buildings. All that remains was a stone stairway, a few crumbling stone walls and an old iron water tank. Unnatural palm trees grew about it. This once fine home was in an excellent position overlooking the creek.

Another old wooden house was later passed. We could see through the windows, the inhabitants inside having breakfast. It was beautiful, not in looks but in construction. It must have been a fine home many years ago. The walls were rough wooden planks with a tin roof and occasional fancy carved woodwork around the verandahs. (This *was the old house later known as the Ghost House and featured in the movie "Inn of the Damned"*. *It was destroyed by fire in 1979*). More dry-walling could be seen here where settlers cleared their land of rocks and built walls, fences and roads.

We then forded Mangrove Creek which was only about a foot deep in the deepest parts. Ahead of us could be seen the sheer cliffs of the Kulnura Plateau which we knew we would have to climb. We followed the creek down for a little way passing an old home on piers, with a lattice verandah. This too was beautiful in construction but long disused. (*This was Albert Crafts old house.*)

We came to the house marked on the old map as the post office, which it no longer was. Beside this house was an old ruin of a building. For the first time in the journey we saw mortar used between the sandstone blocks of this very old building ruin.

The road leading to the top of the plateau began here and we began our steep ascent. This road was built up by large sandstone blocks and thus must be very old in construction. 4WD vehicles could probably make it along this road, but it is very steep. (*Pemberton's Hill Road.*)

Waterfalls dropped into the valley below and we could see that the flood plain became larger as we could see farther down-stream.

Mangrove Creek views disappeared as we reached the top of the plateau and the undulating skyline was once more in view stretching for many miles in all directions.

By 10.15 we were on the plateau. Orange orchards spread for miles around. These were the first orchards that we had seen since leaving Wisemans Ferry. We followed the main road heading across the plateau. (*Wisemans Ferry Road.*) Many fine old homes are situated along this road, surrounded by tall pine trees. Orange orchards spread as far as we could see across the plateau and the rugged





ranges could be seen on the horizon beyond. Mount Yengo was once again visible to us. We passed the Mangrove Mountain turnoff (*Waratah Road.*) There was a hall, post office and public telephone here. More orchards were passed until we came to the Gosford Road turnoff (*Wisemans Ferry Road.*) There was an old church on the corner dedicated to the memory of two soldiers who enlisted from the area and didn't return from the 1914-18 war. (*We followed Bloodtree Road.*)

More orchards were passed before reaching the Kulnura turnoff (*George Downes Drive.*) There was no fruit on any of the trees as oranges were out of season. A small wooden church was built here in 1960. We now left the road and followed an old bush track off into the dense scrub. The track came out under the powerlines (*most easterly of the two lines*) and Dead Horse Creek gorge (*Ourimbah Creek*) was lying across our path. It was the most formidable barrier that we were to encounter during the whole trip. A much better way round would be to go further to the north-west around the higher country.

We started down into the gorge and the track died away to nothing. We had to crawl and crouch to get through the undergrowth. The only way we knew where we were was by keeping the powerlines overhead. We would often come to a solid wall of scrub and not know which way to go next. We couldn't go through the scrub so we had to go under it.

Suddenly we burst through a wall of scrub and we were at the creek. We had actually only crossed a tributary (*Ourimbah Creek*) of Dead Horse Creek but very close to the main creek junction. This tributary was fast flowing and we crossed by jumping from rock to rock.

After resting here for a while we began the ascent. The northern side was all rainforest which was very thick and damp whereas the southern side was dry scrub.

While ascending through the rainforest we kept the wires overhead, hundreds of feet above us, so as not to lose our way. At the top the rainforest ended and we looked back to the far side of the gorge. The route of Simpsons Track would not have crossed here but to the north-west.

We looked about for a suitable place to camp and chose a flat sandy area and pitched camp under the wires. Although there was no water, it was a pleasant campsite. The view was excellent and all was calm and quiet. Only two lights could be seen far off on the horizon. One was from Kulnura behind us and the other from Bumble Hill ahead of us. A few clouds glowed red in the sunset but by morning no clouds could be seen. Wallabies could be heard in the bush at night.

Easter Sunday 6th April 1969. The next morning we followed the powerlines up to Bumble Hill. Another small ravine was crossed on the way (*This would have actually been the head of the main Dead Horse Creek*). Although only small this ravine was very dense and damp. The undergrowth was about 5 feet thick in some places and we fell right through it. We headed for a small scenic waterfall and had a rest.

We climbed up from the waterfall and soon came to the road leading off to Bumble Hill. A very large house was situated up on Bumble Hill but we were not close enough to see it clearly.





At the road junction we followed the steep spur road down into Yarramalong. Excellent views of the Wyong Creek valley were seen and orchards were evident again.

Yarramalong was a quiet little settlement. Children were singing in the old Sunday School hall. In the early days cedar getting was the main business of the valley.

Wyong Creek was not fordable so we crossed at the road bridge and proceeded up the spur. It was very steep climbing but once on top very good views were obtained of Yarramalong and our route from Bumble Hill. On top of this spur was a small rainforest which we climbed through to reach the ridge top.

This ridge has many spurs leading off. We followed a wrong one to a sheer dead end. The early explorers must have had similar experiences in this area. A track now follows the main spine of the ridge. Some parts are very narrow and farms can be seen in the valleys below. We passed a blazed tree where the axe cuts looked very old. This track across the ridges is now a forest road known as Siding Road. Large sandstone outcrops were passed before we came to Deverells Forest Way (*Watagan Forest Road*).

This is one of the main roads into the Watagan Mountains. After following this road northwards for about half a mile we turned off onto a minor road called Whiteheads Road (*Whiteman's Ridge Road*). Very tall trees grew on either side of the road and the undergrowth at the sides was very thick. An old sign said, "Whiteman's Dam" but we couldn't locate the dam anywhere.

This track finally brought us out on a spur overlooking Dooralong and the Jilliby Valley. It was a beautiful sight with orchards and crops stretching across the valley cut by the tree-lined banks of the creek. Dooralong could be seen about a quarter mile north of us so we descended the spur to the settlement leaving behind Wyong State Forest.

Dooralong is a small settlement on the junction of two roads. One leads up into the valleys of the Watagans and the other leads to Mandalong. It was also a major intersection in the 1820s and 1830s when people would come up from Wyong to join Simpsons Track.

We made camp near the bridge over Jilliby Creek. Some cloud came over the mountains to the west but soon disappeared. After sunset, a thick mist rolled across the field that we were camping in and made the whole field glow.

Monday 7th April 1969. The mist began to clear as the sun came up and we headed off on the last leg of our journey along the Mandalong Road. This road, 11 miles long, is little used as we only saw 2 cars go past all morning.

Jonathan Warner commented in his writings on the swampy flats in this area which are still evident today. In places the only dry land was the built-up road. At one place, the frogs in the swamp sounded like a tractor speeding along the road. Bee hives were kept on the higher ground.

Mandalong, once a large timber and cattle area is now just a few scattered farms. Mandalong is a town that died from old age.





We came out on the main road, half a mile from Cooranbong and walked along to the old Catholic Church, the approximate site of Percy Simpson's farm house. The church was dedicated in 1909 and some graves dated back to 1868.

Our 1969 journey was able to confirm the general route of Simpsons (MacDonalds) Track. In most places the terrain matched the written descriptions by early travellers such as Jonathan Warner. Since our journey, some small variations to the route have been determined by researchers. Over those four days we sought the evidence of that historic route and the results were positive. This trek led to many more trips to the area to survey and explore the historic region of the Great North Road.

Greg Powell is a retired teacher and is still a keen bushwalker. He particularly enjoys walks with an historical flavour and has written books on bushwalking and bushrangers. He is a long-time member of the Convict Trail Project.





JAMES MILSON Tony Palfreeman

This edition of The Pick coincides with the 150th anniversary of the establishment of the Royal Sydney Yacht Squadron at Kirribilli, on the shores of Neutral Bay.

What, you may ask, has that got to do with the Convict Trail? The connection lies with one of our more distinguished pioneers, James Milson Esq.

James Milson arrived in the Colony in 1806. He came from a farming family in Lincolnshire, near Grantham, not far from the home farm, at Newborough, of my own great-great grandfather, Robert Lemmons.

Milson was granted land along Careening Cove, just off Neutral Bay, in Sydney Harbour; and developed a business victualling visiting ships to the Harbour with fresh meat, which he prepared in his abattoir, built near where the Ensemble Theatre now sits. James and his wife Elizabeth built their new home, Carabella Cottage, overlooking the Bay, in 1829. The house was extended at various times and was acquired by the Squadron in the 1870s. The old house, its stonework and windows remain the centrepiece of the Squadron building today.

The abattoir needed to be assured of a regular supply of beef cattle, some of which came from farms around Parramatta and the Hawkesbury. But Milson decided to go further afield and establish a larger cattle property to supply his growing business; and the pastures around Sydney in the summer of 1822 were particularly dry.

Milson, accompanied by Andrew Murray and John Blaxland, and attended by six assigned servants, set out from Castle Hill at the end of November, 1822, on the lookout for agistment. The pioneers swam their cattle across the Hawkesbury River and started the upward climb through the ranges towards the rich valleys of the Wollombi, eighty miles away. About twenty miles past the crossing they drafted the cattle, leaving Murray's stock behind to graze, and pushed on with the rest of the mob to the Wollombi, taking up Murray's Run, Blaxland's Arm and Milson's Run respectively. With this relief country available they were able to save their stock, which flourished on the rich natural grasses. (1)

Work did not begin on the Great North Road from the Hawkesbury to the Wollombi until 1826, when the surveyors and convict gangs had been assembled, so it seems possible that Milson's team pioneered the route, although from the Macdonald River to Blaxland's Arm they carved out a track somewhat further West than the current Road from St.Albans to Bucketty; and then followed the Valley floor northward. It is recorded that on a rock face near Murray's Run, close to where the Road is now, was carved

J.M A.M. J.B. 1822

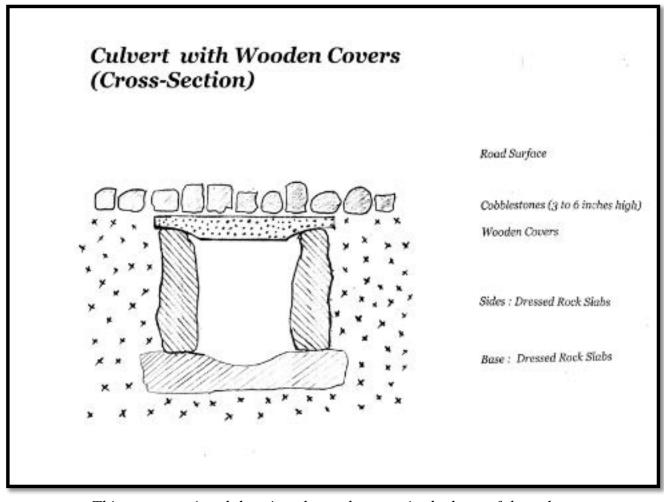
Once the Road was built, Milson no doubt travelled it frequently, driving his cattle to Kirribilli, an exciting adventure in itself, and then relaxing with Elizabeth at Carabella Cottage. Milson was a keen sailor, as well as a cattleman and sailed a number of well-known yachts on the Harbour; and he was a member of the Squadron's first sailing committee. But that's another story.

(1) Goddard, Roy H. The Life and Times of James Milson (Georgian House 1955) p51

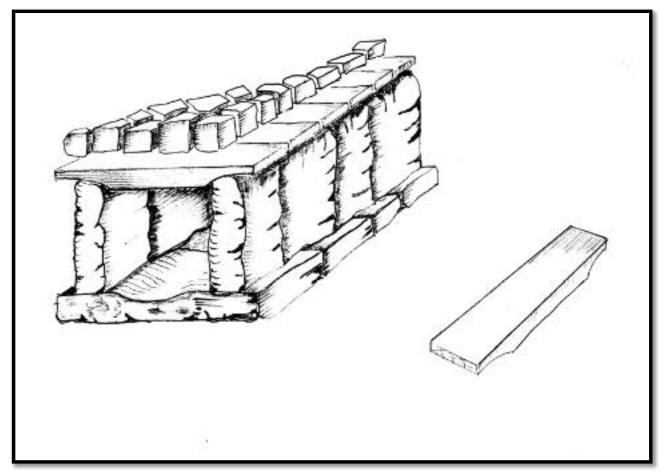




SHEPHERDS GULLY Stone Culvert with Wooden Capping, Shepherds Gully Road. Measured & drawn by Fong Loon Chong 2012



This cross sectional drawing shows the wear in the base of the culvert.



A projected view showing how the culvert has been constructed.

Large slabs of dressed stone form the base of the culvert with upright dressed stones forming the sides of the culvert and the wooden capping slabs shaped to sit into the top of the culvert.

Culvert dimensions Road surface cobbles 3 to 6 inches in diameter Wooden culvert capping boards 36 inches long 12 inches wide 2-3 inches thick Depth of culvert approximately 2 foot 6 inches Width of culvert approximately 2 foot





BRAVE PETER CLARK. A Tragedy on the Old Northern Road By Gregory Powell

On a remote mountain spur near Blandford in the Upper Hunter Valley is a prominent obelisk dedicated to the bravery of Peter Clark. Occasional visitors may question the reason for such an isolated location for such an important monument, but when it was erected this now rural stock route was the Old Northern Road, one of the few sections now existing in original form in the Upper Hunter Valley.

Apart from the monument, other evidence of the road still exists along the 8km that has been bypassed between Wingen and Blandford. The incident that led to the death of Peter Clark is tied to the old road and it is best to start with that story.

On the night of 8th April 1863 Peter Clark was camped below the crest of Warland's Range on the Old Northern Road between Scone and Murrurundi. With him were fellow drovers and friends Samuel Partridge and James and Ashton Clark. The latter two were brothers but not related to Peter. All were from the Bulga area near Singleton and all were heading across the border into Queensland to purchase cattle. Joining them for a short time was John Conroy who was returning to his home at Breeza. Peter was one month short of his 26th birthday and was to be married on his return from the current droving trip.

The next morning, the party continued on its way northward. They reached the crest of the range on a long spur snaking down from the 1151 metre high dome of Mount Murulla, locally known as The Murlow. They were descending towards Blandford before riding the flats to Murrurundi when a commotion was noted ahead. A horseman was galloping fast towards them, pursued by another horseman brandishing a pistol. This second rider was the bushranger Henry Wilson who had been bailing up travellers on the road ahead all morning. His face was covered in black crepe and he had added the extra disguise of fake whiskers. Some of his victims were still tied to trees near the road ahead.

When Wilson reached the drovers, he reined in and let his fast-riding intended victim escape. With a revolver shot from Wilson, the drovers scattered, but the bushranger moved in on Peter Clark. He later stated that he was attracted by Clark's fancy gold watch chain that was visible on the drover's vest. At revolver point, Clark was ordered to dismount as did the bushranger. The watch and chain were confiscated, and Wilson demanded Clark's money, but he stated that he had none.

Meanwhile the other drovers, who were edging closer from a safe distance, were also ordered, at gun point, to dismount and come no closer. Wilson ordered Clark to turn around while he searched his pockets for money. Peter Clark, who knew his mates were circling the bushranger now saw his chance for retaliation and sprang at Wilson, who was on his guard and stepped back, firing his revolver as he did so. The shot caught the drover in the neck, but he kept up the plunge and grappled with Wilson. By now James Clark and John Conroy were rushing in to help but in the close encounter, Wilson fired twice more. One shot hit Peter Clark in the chest and the other hit Wilson's own hand. The bullet in Peter Clark's chest caused a fatal wound, but his death-grip on the bushranger gave time for his friends to move in and subdue the villain.

The drovers removed the revolver and bound Wilson up with saddle straps. Another traveller was sent galloping to Murrurundi for a doctor and the police. Meanwhile young Partridge who had galloped off after Wilson fired his first shot, had met up with Constable Bruce along the road. Bruce returned to the scene of the action and soon took Wilson into custody, but Peter Clark was beyond the skills of a doctor.

A cart was obtained, and the body of the drover and the trussed up bushranger were placed inside. The now very different party continued its journey to Murrurundi, liberating the tied-up victims as they went. The 21- year-old, Wilson was lodged in the lock-up and an inquest was held. Wilson was described as wearing an old cabbage-tree hat, ragged red and black Crimean shirt and moleskin trousers tucked into Wellington boots. Wilson's trial was held in Maitland in August 1863. It took the jury only ten minutes to find him guilty of murder.

Executions at Maitland Gaol had long been held in public at the entrance gates, but times were changing and from 1861 the hangman carried out his work in the more private confines of the gaol yard. In early October 1863, the young bushranger Henry Wilson went to his death with his final words expressing sorrow for his deeds. He was one of 16 prisoners to be executed at Maitland Gaol.

The bravery of Peter Clark the drover was praised in stories around campfires far and wide. The people of Murrurundi started an appeal to erect a monument near the place where Clark fought the bushranger. Subscriptions came in from all corners of the country. James Clark and John Conroy received 50 pounds reward each for their part in the capture.

Peter Clark had been well known in the Maitland-Singleton area. The Maitland Mercury of Saturday 11th April 1863 stated that his family was highly respectable, and that Clark was born in the area and was a fine, well-built, athletic, sober, industrious and deserving young fellow. The same article states that the bushranger, Wilson (if that was indeed his real name) was entirely unknown.

There seems to be no other criminal record for Wilson and he did not divulge anything further during his captivity. Perhaps the string of criminal events that took place on 9th April 1863 were the only major crimes of the 21 year old bushranger.

There are some variations in the story of Peter Clark and Henry Wilson, but most versions follow the basic accounts that are related here.



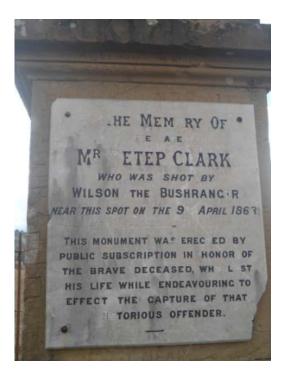




Monument to Peter Clark at the site of the shooting on Warland's Range, 3km from Blandford. Photo G.Powell

Today's evidence.

Peter Clark's obelisk on the ridge above Blandford is possibly the most impressive for a bushranger victim, apart from the police monument in Mansfield, Victoria, commemorating the three policemen who died at the hands of the Kelly Gang. To reach it, drive across the railway at Blandford, keep left and follow the Old Northern Road for a kilometre of tar and a further kilometre of gravel. A wet gully just beyond the last farm may stop progress but the route ahead makes for pleasant walking.



Plaque on Peter Clark's monument on Warland's Range Photo G.Powell



The old bridge still exists here as a ruin. The four rotting squared wooden beams still span the gully from the concrete abutments. A short distance later, a 50cm terracotta pipe forms a culvert under the road which is about 6m wide. One end has collapsed. An interesting feature is the curved sandstone capping block above each end of the pipe. Tool marks are still evident in each face. This culvert has a twin on the other side of the range.

It would have been in this area that Wilson had tied up his earlier victims and that he began his pursuit of the traveller that finished at the droving party up the hill. Constable Bruce would also have approached from this direction and the sad little cart would have travelled out towards Murrurundi in this direction.

The Clark memorial obelisk is located about 1km up the hill on a small level space beside the old road – very isolated now but very prominent when this was the main road north. The late Herbert Stanley Hall, once a long time resident of Ardglen, suggested that the original plaque was worn and vandalised and that the current plaque and wording is a replacement. He also quotes the Murrurundi Times of 11^a June 1920 where the local Warrah Shire was calling for donations to restore the monument. There are good views up here on Warlands Range. Settler William Warland named the town of Blandford in 1829, after his English birthplace.

The crest of the spur is soon reached with wide views over the Upper Hunter Valley and the Murlow looming above. After passing through the summit saddle the road descends southwards keeping just above a tributary of Kingdom Ponds. Four pieces of evidence will be noticed along the descent each where the old road crosses a short side gully.

The first is a jumble of old timbers that may have been part of a bridge. The second is the remains of another small wooden bridge supports and some stone abutments. The road now runs beside these. The third is a small bridge with the four of the five spanning timbers still in place across the small gully. Once again the road now runs beside the gully with a small upstream culvert.

A very short distance away is the culvert like that on the other side of the range, except that this one has two curious upright 30cm squared posts flanking the downstream capping sandstone arch block. The posts are about a metre high and have metal bolts through the bottom and are of similar width to the horizontal bridge timbers seen along the route.

The droving party would most likely have camped in this valley in order to have access to water prior to climbing the range the next day and meeting the bushranger on the other side of the saddle.

A short walk onwards leads to a ford over the creek and some cattle yards where the road now has a major modern use as access to the properties of Murulla North and Kingdom Park. This end of the road can also be easily accessed from the south by turning left prior to crossing the railway at Burning Mountain when heading north on the current highway. The major feature here is the remains of the major bridge over Kingdom Ponds. The northern approach is the current road from Murulla North which then disappears into a grassy paddock. The southern approach disappears into improved pasture paralleling the current highway which it meets in a messy roadside gravel dump about 3km north of Wingen.



This has been an impressive bridge with four sets of supports plus abutments and many of the large spanning timbers are still in place across the pleasant stream and its flood-plain southern bank. Most of these culverts and bridges would have been built after the bushranging incident and would have carried motor vehicles. Apart from the boggy patch near Blandford the road can be driven along with care today.

This north-south running bypassed section of the old road has been replaced by the present alignment of the New England Highway which curves away north-eastwards and then back north-westwards following the valley of the Pages River from north of Wingen to south of Blandford. This of course eliminated the climb over Warlands Range which appealed to a bushranger 150 years ago.

Peter Clark's monument over his grave in Muswellbrook cemetery is an impressive ornate gothic spire. It is located in the Church of England section towards the playing fields.

Maitland Gaol is now open for tours. The old execution trapdoor can be seen above the main gate but by Wilson's time the executions were held in the vicinity of the large grass area towards the back wall. It is possible that Henry Wilson is buried here.





MORE PHYSICAL EVIDENCE Old Maitland Road – Sawyers Gully Section Elizabeth Roberts



Light leg irons probably worn by someone in Iron Gang no 9. They were found in cave near Ten Mile Hollow in the early 1960s

There is controversy about the history of Sawyers Gully section of the Old Maitland Road with claims from local historians based on oral history and newspaper stories that it was built in 1895 and the original road went over the top of hill.

Despite this and the road over the culverts being called the deviation, I believe it was the original road. I also believe this is a typical problem with second and third generation oral history or family stories. The land either side of the culverts or Twenty One Bends (as it is known locally) was Crown land until gazetted for closer settlement in 1885 and not taken up till 1893. What I think happened is the road was built and with not a lot of usage made of it the drains became blocked and in a big storm one or more culverts were washed out making the road impassable.

In 1857 there were two large floods in two months, the Maitland Mercury of 4 August 1857 records

"The distance to which the back water extended is almost incredible, and one wonders where such a body of water could come from. It is stated that on Sunday a boat was taken from the Northumberland Bridge to the public-house near Bishop's Bridge - a distance of many miles." Further on in the newspaper article it was reported that one road in Maitland with a stone drain had a channel six foot deep gouged out of it by flood waters. The telegraph line was built in 1859 and either to avoid excess poles or because there was already a track there, it was built over the ridge in a straight line, this track was used as a by-pass around the washed out culverts and was gradually accepted as the main route. When the surveyors arrived in the late 1880 to survey the land subdivision they found the original road and its survey marks, which was then used that as the boundary of the new closer settlement blocks.

People came to settle in the area after the survey but before the repairs to the original road so the bypass route was accepted by them as the main route was not rebuilt till 1895 when a newspaper article referred to it as 'the Deviation'. Ancestors of some of the local residents worked on repairing the original road and their stories together with the newspaper calling the bends 'the Deviations' gave rise to the claim the bends not being the original road. The bends are built level while the road over the top goes steeply up hill and down with no culverts. My argument is that if the road over the top was the original road, it would have been the boundary when the closer settlement blocks were surveyed. Also it is not marked on Parish Maps.

I believe the claims of building the culverts relates to repairs and possible rebuild of some of the culverts and possibly the addition of extra culverts. When Bill Jordan inspected culvert 7 (8) he said it was not original as there was lime mortar plaster on one of the stones.

This series of photos was taken in late 2011 and indicate the work needed.

1st Culvert past Native Dog Hill heading towards Cessnock (14) Piped culvert, entry nearly blocked, stone placed above pipe, Exit appears to be covered.





Below: 2nd Culvert past Native Dog Hill heading towards Cessnock (13) Stone inlet blocked, outlet trickling, did not go down to investigate it, Some depressions in road.



3rd Culvert past Native Dog Hill heading towards Cessnock (12) Pipe

4th Culvert past Native Dog Hill heading towards Cessnock (11) In inner corner, Concrete pipe wide angle across road outlet clear, could be old culvert in corner.

5th Culvert past Native Dog Hill heading towards Cessnock (10) Pipe and old stone culvert beside pipe exit difficult to see, Presumed this is a new pipe replacement since last viewed. Not how Bill Jordan said to repair culverts in this section of road.

6th Culvert past Native Dog Hill heading towards Cessnock (9) Double box culvert. Western side blocked, eastern side open, Deep drain recently cut into road edge on western side. Dug out to box entry Grassed inlet on East side filled high with road over grade material. Only one exit functioning, 2nd exit on the western or Cessnock side blocked with over grade, water running off road at this point. Two small creeks flowing down from hills above.





7th Culvert past Native Dog Hill heading towards Cessnock (8) Just after bend heading west, Concrete sill over stone culvert. This was repaired under Bill Jordan in Ken Phelans time at Cessnock Council. Capping stone gave way and was replaced with a large concrete slab much wider than the culvert so pressure taken on soil fill behind culvert walls. This culvert had been rebuilt using reused stone at sometime probably in 1895s. Exit blocked, road fill spilling over culvert exit two trees marked for removal?



8th Culvert past Native Dog Hill heading towards Cessnock (7) Pipe and deviation replacing old low bridge, shown below, it has collapsed since last visit. It needs archaeological recording particularly in section of original road leading onto bridge. Inlet stones have been stolen in the past.



Below: 9th Culvert past Native Dog Hill heading towards Cessnock (6) at inside curve above Bike race track, entry nearly blocked, Outlet appears OK, lowest point in road, water runs off road here.





10th Culvert past Native Dog Hill heading towards Cessnock (5)

Opposite above race /bike track. Some entry stones dismantled/stolen? Grading material running down into culvert space, small wattle tress growing in front of entry will catch debris, Sag in culvert base stone water sitting there, Capping stone may be sitting in culvert base at entry end. Culvert outlet partly blocked with over grading.



11th Culvert past Native Dog Hill heading towards Cessnock (4) Pipe with stone surround. Below.



12th Culvert past Native Dog Hill heading towards Cessnock (3)

Approximately 25 meters east of 13th culvert from Native Dog Gully Road on high side lots of dumped rubbish, concrete pipe clear entry and exit.



13th Culvert past Native Dog Hill heading towards Cessnock (2) At head of big bend. Camber of road such that water will run off road here, Entry OK but needs maintenance and rubbish removal. Exit all but blocked with road grading.

14th Culvert past Native Dog Hill heading towards Cessnock (1) Culvert under start of first bitumen when heading from Native Dog Road. Entry OK Exit partly collapsed and nearly blocked with road over grading.

Culverts were numbered from Native dog Hill end with the numbers in brackets being the numbers form the Cessnock end.



There was another stone culvert closer to Cessnock but during road maintenance it was damaged by a road ripper. It was replaced by the maintenance staff by placing a concrete pipe parallel to the culvert. This work was carried out without consultation with Heritage Advisor Convict Trail Project etc. I just happened to drive past about half an hour after they had stopped work for the day and stopped to investigate the obviously new road works. The council staff denied ripping the road but the ripper was parked about 50 meters away and a pipe had been put under the road. No recording of digging into road was made.

The above was recorded for the updating of the Conservation Management Plan when the following suggestions were made:

All road maintenance staff be put through induction course re GNR, All new maintenance staff be put through the same course.

Develop induction course for maintenance staff.

Needs discussion re how to not end up with over grade material,

Hand clearance of drains after grading.

Instructions on how to repair culverts with collapse capping stones as per Bill Jordans instructions.

Reinstatement of damaged culverts.



Clean up Australia/tidy towns need to work in this section, re dumping of rubbish.



A candle lantern, earlier versions had thin sheets of horn where the glass panels are.





Water for Road Gangs.

References and Extracts about the supplying of water to Road Gangs. Complied by Ian Webb with notes at end.

SR 590 - Most of the surviving Road Gang Reports list men in each Gang as Water Carriers.

No. 3 Iron Gang - March 1828 to April 1829 - 3 to 4 water carriers.

No. 4 Iron Gang - January 1828 to April 1829 - 4 water carriers.

No. 4 Iron Gang - January 1829 to April 1829 - 4 men delivering to the Gang, and 2 men delivering to the Lock up and Military at Wisemans.

No. 4 Iron Gang - May 1830 - Water Carriers: John Cullen "John Barry"- John Wild "Marquis of Hastings"- William McCullock "Marquis of Hastings".

No. 7 Iron Gang - November 1829 - 2 water carriers.

No. 8 Iron Gang - March 1828 - 2 water carriers; January 1829 - 3 water carriers; April 1829 - 5 water carriers.

No. 9 Iron Gang - January 1829 - 4 water carriers; April 1829 - 3 water carriers.

No. 27 Road Party - January to March 1830 - 2 water carriers; October 1830 - 1 carrier.

No. 42 Road Party - January to February 1830 - 2 water carriers.

SR 3064 (pp22) - The Storekeeper, Mr. Mason, of the Roads Depot at Parramatta, on the 25th November, states to the Assistant Surveyor of Roads: That 4 Water carts had been returned from the Road Branch at Bathurst.

SR 3064 - Asst. Surv. John Elliott at Mount Clarence on the Bathurst Road, in a list of articles held in the District states: 1 Water cart; 4 Water casks; and 51 Buckets.

SR 3080 - In a correct list of tools etc. in No. 35 Road Gang, Overseer William Cooke states on the 10th of July 1832; 1 Water cart and 4 Buckets.

SR 3090 - 20th January,1833, Mason states that there are 10 Water carts in the Road Branch Store at Parramatta.

SR 3080 - Asst. Surv. John Nicholson on 10 January 1835, mentions that the result of an enquiry at No. 2 Stockade, into the escape of a convict from his Gang , occurred as a result of his being sent alone by his Overseer to obtain water.

SR 3017 - A letter dated the 6th September 1832, from the Col. Sec. to the Surveyor General, states that Asst. Surv. Richardson had retained two men and a Water cart with bullocks from the No.43 Road Party, to supply the Military Barracks, Hospital and Goal at Windsor with water.

SR 3017 - 14 December 1832, Col. Sec. mentions a requisition from Mitchell dated the 26th of October, for water buckets, iron boilers, tin dishes, plates, pint pots and razors.

SR 3090 - On 27 December 1832, Percy Simpson mentions the above articles on a requisition dated the 26th October, are for men in Road Parties.

SR 3090 - 30th January 1833, Simpson submits a list of stores required for the Road and Bridges Branch for the year 1833. It includes 30 buckets, this number was a reduction from the list submitted to him by Mr. Mason the Storekeeper for the Department, who had requested that 50 buckets at 4 shillings each would be required.

SR 3051 - 20 Sept. 1833, Asst. Surv. Abbott to Surveyor General, see "Convict Road Gangs 1826 - 1836". By Ian Webb, Page 20.

Box 4 / 1984 - The Code of Regulations for the Guidance of the Road Department - 1828. "a water cart with a good cock, is recommended to be furnished to each Road and Iron Gang". *Blood, Sweat and Irons*, by Ian Webb, page 11.

S. A. Perry, Deputy Surveyor General to Mitchell, 11 December 1835, states that of the two sites he had inspected for the Stockade site at Harpers Hill with the Overseer of the Iron Gang, George Doyle, both of which were on firm, dry ground. He preferred the first site, which was on recently cleared land near running water, between Mr Harpers buildings and his cultivated land, it was 3 to 4 hundred yards from the Hunter River and half a mile from the works.

The other site on Anvil Creek, was about three quarters of a mile from the works, near deep water holes, liable to become brackish in a drought, and the water rendered impure, by the drainage from the camp, and the men washing near it. (See *Harpers Hill Stockade and Works*, Ian Webb, 2002)

A water cart was supplied to every gang, the cart loaded with wooden barrels, was pulled by a bullock or bullocks, it and the men allocated to the cart, would collect the water from the nearest supply of fresh water. It was then delivered to the camp of the men, as well as to a convenient site near to where the men were working. From here the water was distributed to the groups of men working on the road in buckets, with a ladle for drinking.





In the Wollombi, Hunter, and Cockfighters District, the locations of all the Road Gang camps were on sites near permanent water. Therefore water was only required to be carted short distances to the camp and work sites.

In the Lower Portland Head District (Wisemans), again most of the camps were near permanent water, the exceptions being the descent and ascent from the Hawkesbury, and sections of the Judge Dowling Range, where water had to be transported a distance to the works from the permanent supply. This water was supplemented in certain locations by soaks or springs, where both natural and manufactured water holes were used.

The Bathurst Road had similar water distribution to the Wisemans area, where some of the camps were located on permanent water courses, and others where the water had to be transported a distance to the works as well as some of the camps.

Water was also used in the process of blasting away the rock on the line of road as well as on the road edges. It was used in some instances to moisten the dust accumulated in the hole made during the drilling process, thus making it easier to remove this material with a long metal rod which had a spoon bowl at right angles made on the bottom of the rod.

Using this method meant that the holes would have to be left for a period of time to dry out before gunpowder could be inserted into the hole for blasting away the rock.

Water was also used to moisten the clay used to tamp down the gunpowder charge.

Researched and compiled by Ian Webb. 20th July, 2006. No copying without permission.





Wagons, Carts, Drays, Timber Carriages, Wheel Barrows, Cranes and Oxen - 1818 to 1840. Compiled by Ian Webb

SR 6039 (pp 175) Carts etc., - Regulations respecting Breadth of Wheels.

Government Public Notice Secretary's Office, Sydney, 28th November, 1818.

The various turnpike roads and other public roads lately constructed by Government for the service of the public, being much injured by the iron rims or tires of the wheels of the several Timber carriages, Carts, Drays and Trucks being of so narrow a breadth as to cut up and form ruts thereon and it being absolutely necessary for the preservation of the said roads, that such injuries should in future be guarded against and prevented as far as circumstances will admit.

It is hereby notified and ordered and directed, that no Timber carriage, shall be used on the Highways or Turn Pike roads except such as have four wheels and that the fellies of such Timber carriages and those of all manner of Cars, Carts, Drays, Trucks and Wagons plying thereon which may hereafter be built or constructed, shall have Iron rims or Tires of not less than two and one half inches in breadth, and that no Carriage of any of the foregoing descriptions shall be hereafter licensed unless constructed in conformity with this Regulation.

A reasonable time will however be allowed to the owners of Timber carriages not having four wheels, and of Cars, Carts, Drays, Trucks and Wagons already licensed whose Fellies and Tires are not of the prescribed breadth to make such additions and alterations as may accommodate them to the present Regulation and for this purpose six months will be allowed from the date hereof, after which period all Timber carriages, Cars, Carts, Drays, Trucks and Wagons not constructed conformably with this Regulation will be required to pay double Toll on passing through any of the Turnpike Gates of this Colony.

By His Excellency the Governors Command J. T. Campbell, Secretary.



SR 6038 (pp 27) Notice Secretary's Office, Sydney, 3[™] April, 1819.

And notice is also given, that the period limited in the Government Notice of the 28th November, 1818, for the increased breadth of the Wheel tires of Carts etc., is extended a further period of six months, to be reckoned from the 1th instant, in consideration of the difficulty of obtaining suitable iron for the purpose, as has been reported to His Excellency the Governor.

By His Excellency's Command J. T. Campbell, Secretary.



SR 6038 (pp 83) Civil Department Government and General Orders. Government House Parramatta, 8^a August, 1819.

The Owners or Drivers of Timber carriages are hereby strictly enjoined, under the penalty of seizure and paying double Toll, not to convey timber in log on any of the Turnpike roads, from and after Monday the 6° of September next, in any Timber carriage not having four wheels bound round with tires of the regular prescribed breadth, and the Keepers of the several Turnpike Gates and all Peace Officers, are hereby enjoined to carry this order into the fullest effect.

By His Excellency the Governors Command J. T. Campbell Secretary.



Government Notice Secretary's Office Sydney, 16^a October, 1819.

It being ascertained that iron suitable for the construction of tyres for Cart and other Carriage wheels, as directed in the Government Public Notice issued under date of the 28^a November, 1818, cannot be procured. His Excellency the governor is pleased hereby to notify to all persons concerned, that the period for complying with the said Order, or for its enforcement, is deferred until the 1^a day of May next ensuing.

J. T. Campbell Secretary.







SR 3064 (pp 92)

Return of Tools and other Utensils in Charge of the Surveyor General's Department, Roads Branch in the District of Bathurst – This 25^a day of November, 1830.

1 Yoke; 4 Water carts; 9 Shaft harness; 16 Trace harness; 3 Hand carts; 9 Carts; 1Timber carriage; 32 Wheel barrows.



SR 3063 (pp 90) Liverpool Range, 15th March, 1831.

The Surveying Equipment in my charge not being in such situations as to allow of it being submitted to the inspection of any Public Officer or Magistrate - I do report to have found them as follows, viz. - 8 Pack Bullocks; 1 Pack Horse; 3 Pack saddles with straps; 3 Bridles with blinkers; 4 Tether ropes; 8 Spancells.

R. Dixon Assistant Surveyor [to] The Surveyor General.



SR 3090 (pp 162) Commissariat Office Sydney, 7 May, 1832

Sir,

Your Tender to supply the Public Service until the 31st December next with such quantities of the undermentioned articles as may be required is accepted.

Wheel barrows at 15 Shillings each; Horse carts at 7 Pounds 7 shillings each; Bullock carts at 7 Pounds 7 shillings each; Hand carts at 5 Pounds 3 shillings each.

The articles to be subject to the approval of such persons as may be appointed to inspect them.

I am Sir Your obedient servant, James Laidley, Deputy Commissary General [to] Mr. John Walker, Parramatta





SR 3090 (pp 147) Parramatta, 20^h October, 1832.

Sir,

I hope you will excuse the liberty I take in addressing you on the present subject. About the middle of August, Captain Simpson of this place in the Road Department, sent to me to inform me that Thirty Bullock Carts was immediately required and after I produced your authority as Contractor, He (verbally) authorised me to get on with the same as quick as possible, assuring me the written order should be given me forthwith. But to my astonishment last week, I was informed by an Officer in the same Department, that tenders would again be received for Eighty Carts, as they did not consider that my contract embraced their Department, this after employing the whole of my means and waiting with the greatest anxiety, their appears to be disappointment. I therefore beg to call your attention to the circumstance of my case. When I contracted to supply the Public service in April last with Carts etc., according to the nature of my Tender, I expected I had become responsible to supply the whole of the Government Establishment with what they might require not being aware of any division in the Departments of the Commissariat and Colonial (which division I believe had not taken place when I obtained the contract). The former contractor having an order to supply the Road Department with a number of Carts. I hope you may think proper to refer to the time when I accepted the contract and if there existed no division in the Departments, then I consider myself justly entitled to receive their orders. If on the other hand I have through ignorance of the different Departments being misled. I hope when you consider the trouble and expense I have been at and the reasonableness of my price. You may be kind enough to consider me entitled to the whole of the Government work and with your interest recommend me to the same which will ever be gratefully acknowledged.

Your most obedient servant John Walker, Sydney. [to] Deputy Commissary General



SR 3090 (pp 278) Depot Roads Branch Surveyor General's Department, Parramatta, 20th January, 1833.

Return of articles required for the use of Road Parties for the current year. Drays - 10; Bullock carts - 40; Hand carts - 18; Water carts - 10; Cart boxes - 50 pair. Estimated expense of the undermentioned articles:

Wheel barrows - 100 at 16 Shillings each.



Bullock carts - 80 at 14 Pounds each. Shaft harness - 80 at 45 Shillings per set.

Percy Simpson Asst. Surv. Roads. [to] Surveyor General. Sydney.



SR 3090 (pp 269) Road Branch Surveyor General's Department Depot Office, 21st January, 1833.

Sir,

I have the honour to request your instructions hoe seven new Bullock carts lately received from the Contractor, Mr. Walker, and which are at present in the Lumberyard, are to be employed.

I at the same time beg leave to report, that on the Western road there are only 7 carts, where you directed 15 to be employed, per your letter dated 25th August, 1832, No. 32/96, on the Sydney road there are only 3, where you also ordered 15 to be employed, and on Pennant Hills there are but 2 at present and that Gang can keep 10 constantly employed.

I have the honour to be Sir Your most obedient servant Percy Simpson Asst. Suvr. Roads. Sydney. [to] The Surveyor General

Written across letter "Answer that the Iron Gang on the Cox's river station are badly supplied with about everything - But that if carts are among the articles wanted there, these must be sent, otherwise 4 to go to the Pennant Hills and three to the Sydney road. T. L. M."



SR 3090 (pp 346) Form of Certificate.

We the undersigned having carefully inspected the undermentioned article supplied by Mr. John Walker of Parramatta on the 4^a April, 1833, for the service of the Road Department.

THE PICK

convicttrail.com.au/

5

One Bullock Cart - 1 Do certify that the same is substantially built in every respect fit for the Service required. Sydney 1833.

signed () Members.





SR 3090 (pp 349) Surveyor General's Department. Road Department, Parramatta, 25th April, 1833.

Sir,

In returning the enclosed letter from the Honourable Colonial Secretary, dated the 9^{th} instant, No.33/353. Authorising the purchase of part of the articles mentioned in your estimate of the 5^{th} February No.33/111 for the Bathurst bridge, from the person whose tenders have been accepted for the Colonial Service, published on the 9^{th} instant for the present year.

I beg leave to represent that Bridle winkers necessary to complete the harness mentioned in the margin are not provided for in the Tender, and to add that these articles may be purchased from Mr. Bowen at Sydney on the most advantageous terms, namely for 5 Shillings and 6 pence each, and therefore request the necessary authority for providing them accordingly.

I have the honour to be Sir Your most obedient servant Percy Simpson ASR [to] The Surveyor General Sydney.



Bullock Yoke, hung upside down. Timber sat across the necks of a pair of bullocks, the metal was under their necks







THE PICK of the great north road

Pick Vol 9.16

Bullocks and Oxen Complied by Ian Webb

No Bullock	Brand	Name		
1 Brindled	R C offside hip	Boxer		
(Shaft) white back				
2 Strawberry	D M J nearside hip	Magpie		
3 Strawberry	CI	Dragon		
4 Dark brown	D J nearside hip	Boxer		
5 Dark Brindled	J H nearside hip	Trooper		
6 Light Brindled	R G offside hip	Lion		
	D J nearside hip			
7 Dark Brown	D J nearside hip			
White back & belly	Brand on off side hip			
1 Dark Red	D J nearside hip	Redman		
(shafter)	G I offside hip			
2 Light Red	E P nearside hip	Smiler		
White back & belly	G I offside hip			
3 Light Red	D R near side hip	Star		
Star in forehead				
4 Dark Red	D J nearside hip	Brandy		
	E I offside hip			
5 Light Brindled	J R on near side hip			
Star on forehead & white patch on rear flank				



SR 3051 (pp 236) Emu, September 20, 1833.

Sir,

I regret to be under the necessity of informing you that an unfortunate accident happened last week on the road, one of the bullocks of the Water cart which was proceeding to supply the work with water took fright at the sentry who was standing at the edge of the gully, and after rushing at him and then rushing back on the other bullocks, the team became unmanageable and one of the wheels going over the side, the whole was precipitated to the bottom of the gully, two of the bullocks were killed the other escaping nearly unhurt. The cart has been in the habit of travelling the road since its commencement, and in lieu of it, it takes three men to supply the works with water, as they have to fetch it some distance with pails.

I have the honour to be Sir Your most obedient servant John Abbott ASR [to] The Surveyor General



SR 3018 (pp 191) Sydney, 15^a July, 1833. Tender

Sir,

The Governor approves of the Tender of William White of Macquarie Street Parramatta, to the supply of the following, for the present year:

Drays at Eight Pounds each. Carts at Seven Pounds each. Wheel Barrows at Thirteen Shillings each. Hand carts at Five Pounds each.

I have the honour to be Sir Your obedient servant Col. Sec. [to] The Surveyor General



SR 3082 (pp203) Black Creek, Hunters River, 15th April, 1835. Tender.

Sir,

I have the honour to acknowledge the receipt of your letter of the 7th instant, wishing to know if I propose tendering for the construction of such Timber carriages, Drays, Carts therein described for the use of the Road Department.

In reply I beg to furnish you with the following tenders, viz.,

Timber Carriages - Diameter of Hind wheels - eight (8) feet. Breadth of Hind wheels - 9 and one half $(9 \frac{1}{2})$ inches. Size of Boxes - four and one half $(4 \frac{1}{2})$ or (5) five inches. if to be procured.





The axle tree to be in one, and iron work to be of the strongest and most durable kind.

Two smaller wheels Two (2) feet diameter and Six (6) inches broad.

It is requisite to observe that the forepart of the Carriage in contemplation is similar to the front of a Wagon, with front wheels Axle, circular frame and shafts complete.

Drays –

Diameter of wheels Four (4) feet (8) eight inches.

Tyres Three quarter(³/₄) thick and Four (4) inches broad.

The Axle trees to be in one and all Iron work to be of a very strong description, the bottom of the Drays to be close, with moveable side boards, pins, side irons etc., complete.

Carts - On the Scotch principle, to tip up and an iron bar to be affixed in front for that purpose. The wheels to be about the same diameter as Dray wheels Three (3) inches wide and Three quarters ($\frac{34}{4}$) of an inch thick.

The timber for all the above articles to be well seasoned.

Three (3) Timber carriages,		each (sixty)	£ 60
Three (3) Drays,	each	£18	
Six (6) Carts,	each	£15	

Should the above Tender be accepted, I engage to deliver the whole in six (6) months certain or sooner if possible, and in six (6) weeks from receiving intimation that my tender is accepted, will prepare ready for delivery at Black Creek, One (1) Timber carriage; One (1) Dray and One (1) Cart.

I have the honor to be Sir Your most obedient servant John Leed. [to] P. G. Ogilvie Esquire Assistant Surveyor Cockfighter's Creek.



SR 3082 (pp 205) Maitland, 23^{ad} April, 1835.

Sir,

Having understood that a Tender is required for Timber carriages, Drays etc., for the use of the Road and Bush apartment. I have the honor to furnish the following, viz.,

Timber carriages	£ 58 Sterling.
Drays	£ 17 sterling.
Carts	£ 14 sterling.

Should however the above articles be required of extra quality, a note from you will be punctually attended to and the order completed to your satisfaction and within the proposed time.



I have the honour to be Sir Your most obedient servant. William Smith Greenman, Maitland [To] P. G. Ogilvie Esquire, Assistant Surveyor, Cockfighters Creek



SR 3082 (pp 200) Road Department, Cockfighters Creek, 6th May, 1835

Sir,

I have the honour to transmit to you two estimates for Timber carriages, Carts and Drays, and beg to remark that I do not think them high. Considering the description of the articles, which should you be pleased to have made in this District. I beg to recommend that Leeds be employed as he is a better workman, and has better timber at his command than Smith.

I have the honour to be Sir Your obedient servant P. G. Ogilvie, ASR [to] The Surveyor General

ps. One Timber carriage and 3 Carts are immediately wanted. P.G.O.

Notes on letter Very good workman, but very dear - He charges 5 Pounds for a common plough. Mr. Burnett - Get Leeds specifications copied out and I will see what our Contractor will build the Carriages for - The price charged for one formerly was about 40 Pounds. S.A.P. Specifications herewith. J. C. B Put away, some man at Parramatta has the Contract. S. A. Perry.



SR 3082 (pp 202)

Specification for Timber carriage.

Diameter of Hinder wheels - (8) eight feet. Breadth of Hinder wheels - (9 ½) nine and a half inches. Size of Boxes (4 ½) four and a half or (5) five inches. The axle tree to be in one - The iron work to be of the strongest and most durable kind. The forepart of the carriage to be similar to the front of a Wagon, with wheels (2) two feet in diameter and (6) six inches broad, and axle, circular frame and shafts complete.

We the undersigned consider the above specifications out of all proportion. Barns and Mansfield.







Cranes Ian Webb

SR 3063

16th March, 1833 - Assistant Surveyor L. V. Dulhunty to Mitchell, requests a moveable crane with iron chains for the placing of stone blocks.

SR 3017 (pp315) - Colonial Secretary to Mitchell, 25th November, 1833. An estimate of Thirty - six Pounds, has been approved for a Stationary crane with chain blocks, rollers etc.

SR 3081 13^a October, 1835 - Asst. Surv. John Nicholson to Surveyor General Mitchell - States that he has submitted drawings of the frame of a crane which was to be used on the Breakwater at Newcastle. He requests permission to contact Messrs. Castle and Dawson of Newcastle to discuss the casting for the boxes for the spindles, wheels and pinions for the two cranes, which would be capable of lifting three and a half tons, with four men operating the winches.

In November, Nicholson submitted two patterns of the mechanical parts for the cranes and asks for permission to forward a requisition to Castle and Dawson for their manufacture.

Researched and compiled by Ian Webb. 20th July, 2006. No copying without permission.



Bullock chain. Hooked into the yoke.