Goldsmith

The Pyrenees Heritage Preservation Magazine

No137 June August 2016

Lake Goldsmith Steam Preservation Association Inc

Registration No:- A0032895

Rally Grounds:-
1234 Lake Goldsmith-Carngham Road
Lake Goldsmith Vic.

Next Rally

LAKE GOLDSMITH SPRING RALLY No 108

29 & 30 OCTOBER 2016

Don't miss the Special Event:-Military Vehicle & Equipment Display

Ready for 2 Rallies, a Timber Jinker for last and a Truck for the Military Vehicle theme at the next.
The last Rally provided a fantastic collection of vehicles and machines from the timber industry
The next promises variety and a display of vehicles and gear with a military history.
The scope is enormous from Searchlights to Tanks, Motor Bikes to Field Kitchens and an incredible range of everything that is used by the military in peace and at war.
It is hoped that the 108th Rally will include a Road Trek and Convoy from our Beaufort Base at the Station Goods shed on the Friday before the Rally. Details will follow in the next Newsletter.

Editors Comment

The 107th Rally held last May had the timber industry as its Feature Theme. A demonstration of bush transport, and jinker loading was arranged in the centre of the arena, where a log ramp was built and used to load mill logs using a bulldozer.

The same gear was used to unload the trucks, although gravity assist helped too.

These demonstrations went on over Saturday and Sunday and created a lot of interest, as only a very small segment of the community ever gets a chance to see these traditional methods that had their origins with Bullock drawn jinkers.

Thanks to all concerned with this project, it was appreciated by all and there are plenty of photographs to record the event.

The arena was a hive of activity, steam traction engines were snigging logs and skidding them into position, and the arena track had a steady parade of steam and IC powered vehicles. The November Rally in October promises similar variety and demonstrations of gear from a bygone era. Come along and enjoy the day.

Mission Statement

To foster, nurture, encourage and demonstrate technical, agricultural and life skills associated with the Industrial Era.

To provide a quality environment where these skills may be used to educate and entertain members and visitors.

To run two weekend rallies each year, and be available at convenient time for other interested groups or individuals.

To conserve and develop a heritage collection.

Find us on the net at:- **www.lakegoldsmithsteamrally.org.au**

Or contact us by email **info@lakegoldsmithsteamrally.org.au**

Or write to: **The Secretary:- P.O. Box 21 Beaufort 3373**

Or contact the editor:- **goldsmithgazet@optusnet.com.au**

To register for this "cost & obligation free" bi-monthly e-magazine "Goldsmith" email:-

goldsmithgazet@optusnet.com.au or Ph 0425 744 052

107th Rally Rundown

The timber theme went from one extreme to another. At the ultra-delicate end Newton Williams plywood Humming bird was a masterpiece of ingenuity and patience as it hovered while it fed. For anyone who has not seen Newton's mechanised fretwork, drop in next rally, you will be amazed.

At the other end of the splinter spectrum things were a tad more brutal and provided their own spectacle

This pair of tracked forklifts made short work of this load while the D7 below sideloads the Jinker below.

These log loading ramps were once a common sight around the bush. These dozers and their operators can make this log handling seem like a seamless transfer from the ground to the truck. The above machines are fitted with logging winches for snigging logs in areas where the large machine is impractical. The loaded

jinker with the logs dogged down heads of around the arena to be unloaded for another demonstration. The Inter prime mover is fitted with a massive frame behind the cab as protection against the load slipping forward.

The inclined bars to the rear of the prime mover drive wheels help lift the jinkers axle when it is raised for transport when there is no payload. The bolster hinges in the middle to allow the trailer to shorten. The 6 wheel drive Mack truck on the cover of this edition shows the jinker trailer raised for road travel.

This Cat 955K makes light work of handling this mill log, it is not your average about town fork lift.

The AA International truck joined with the AR make a grand display. These single axle prime movers were once a common site, and it is great to see them in action.

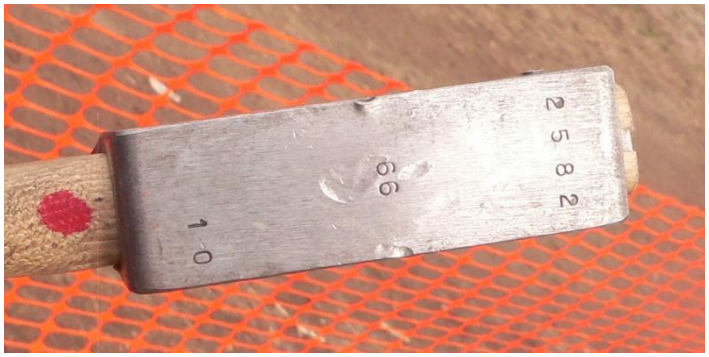
This Dodge with an Inter?? in tow was another blast from the past. Bonneted trucks from that era are always popular, not only did they have to work, they had to look good too.

Steam was not left out of the log handling demonstrations, here Scobie Bros go back to an earlier era when steam provided the motive force to move and mill timber. Steam provide the power for the Smith's Emu Creek Mill/ For this rally a portable was in action

The art of the axeman was on display with these events organised by the Wimmera Axeman's Association who are based in Beaufort . Below the low friction finish on the axes provides a mirror like reflective surface.

Axes from Australia and New Zealand were out in force, and they made a great display as all are kept in fabuluous condition. The Heads are pinned or secured to the handle to make sure that they stay together.

The crosscut saw competitions are another high energy burst sport that chew through the log. They need a human ballast to hold the log steady. The sawdust flys out 2 metres on each side of the cut. These axe and saw races are a spectacle to watch, and they added a dynamic feature to the timber industry rally.



Like Golf clubs, there seems to be an axe for all occasions, and a collection is an impressive and valuable sight neatly stacked away in their case. This M tooth saw was used in the competition above, and these axe head markings identify an axe.

Vic Forests had a tent with a good supply of historic timber industry pictures that drew a lot of interest. Thanks to Jamie Hutchings for coordinating these events and to the members and visitor who supplied the gear that made the 107th timber rally theme such a success. And so say all of us.

The timber industry is always well represented at Lake Goldsmith particularly the machinery that was liable to be used around farms and in small businesses.

Whist our Rally Themes highlight some specific heritage displays around the rally grounds, they also focus our visitors and members and encourage them to display gear that is not normally on site. This seems to promote a high degree of interest, and there is always something that you have never seen before, and often things that you may never have heard of.

Whilst these displays add an extra layer of interest for visitors, the backbone of the Rally is always the incredible array of steam and IC vehicles in attendance, and the variety of gear in the 65 display sheds.

Relaxing personal travel by miniature steam saves sadling up Shanks Pony, and on the next page,

A fine collection of yesterday's tractors line up for a few laps in the Grand Parade.

This Howard Hauler is something that I had not spotted before and the 2000 with dual drive tyres and the Stinger were some of the other Howards on site. This Australian company has made a wide variety of equipment in its long history and it is still going strong.

Another Inter that is a familiar sight at Lake Goldsmith and other Rally's is this D series twin cab International. It has been to Rallies in Western Australia Queensland and Tasmania transporting Plough Books Mobile Book shop. The original 280 petrol motor was replaced by a Perkins 6/354 and the transmission replaced by a Turner 5 speed.

The Ruston and the Bucyrus Steam Face Shovels were both hard at work, together again as they had been at Fyansford, although this time picking up buckets full of clay and soil and dropping it down, while a dozer waits on the sideline to push the heap back. The steam clouds, and the rattle of straight cut rack and other gears make these part of an industrial scene that cannot be duplicated by modern plant.

These demonstrations are a rare sight, and a highlight of our rallies, and the Bucyrus, which predates those used on the Panama Canal is a rare sight. It is difficult to imagine the visual impact that these machines had when they first appeared to be used on work done by horse and scoop or by Navvies who could after a few years training shift up to20 tons a day.

These early Landrover's seemed to have been adapted to every off road purpose.

Not a lot survive in their original condition like this one which is heading for a place in the Grand Parade

The is always time for a natter across the fence, while up the road Warwick Bryce's David Brown Dozer stops for a spell outside the book store.

Scienceworks Fowler warms up and a couple of model boats take a tour of the boat pool.

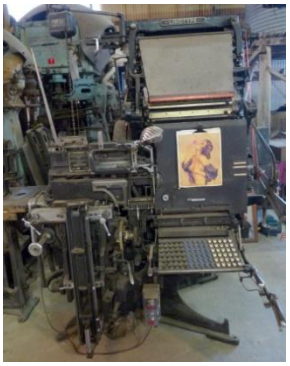
The Standard Sentinel Waggon across from South Australia does a lap or 2 with a Super Sentinel down from Sydney and a local Super Sentinel, while the Navy Steam clubs Foden takes the crew for a tour. The Land Rover is the Navy's backup and hopefully will be at the Military Rally in October.

The Navy will be having their own open day the weekend before the next rally HMAS CERBERUS. These open days are always worth a visit.



This veteran Flanders car a 1942 Ford Blitz, a B model Allis Chalmers Tractor, and below, a set of sturdy chairs outside the Phoenix shed invites a rest, a George Watts 11HP steam engine from the Highett Gas works, and Mark Hutchings works up a heap with an early Caterpillar Dozer.





A Linotype machine in the Phoenix shed, a Trojan Car made in Scotland, with a front opening door and this walk behind Garden Tractor all show the incredible variety of equipment that was on show.


As did a dozer that can be used around the backyard, Camerons Bridge General Store in Little Bride Street with the delivery Bike at the ready and an Ape that likes be up front in the Grand Parade.

This brings us to the end of our run down on the 107th Rally and the timber industry theme that was part of it. Thanks to all who displayed their gear, much of which was transported over long distances to be there. A special thanks to those who organised the timber loading action, and the Wimmera Axemen who did the hard yards swinging axes and pulling saws. All up it was a great 2 days.

Now we will have a look at the 108th Rally and the Military Equipment theme that will be part of it.

Next Rally

The 108th November Rally will be held on October 29 & 30 2016
The Special Theme for this Rally is Military Vehicles & Equipment.

This theme covers an enormous range. The military uses pretty much everything, and when it has finished its term of duty it is sold of to private owners for a new civilian working life. When their second life has expired collectors buy what is left and return them to their former glory.

One of many third generation rejuvenations that will appear at the next Lake Goldsmith Rally is Warwick Bryces Stuart M3 Tank

This Tank had been stripped down to be used as a farm tractor. The steel tub was cut down and gutted so that all that remained were 2 worn tracks under a cut down frame & a drive axle. (below left)

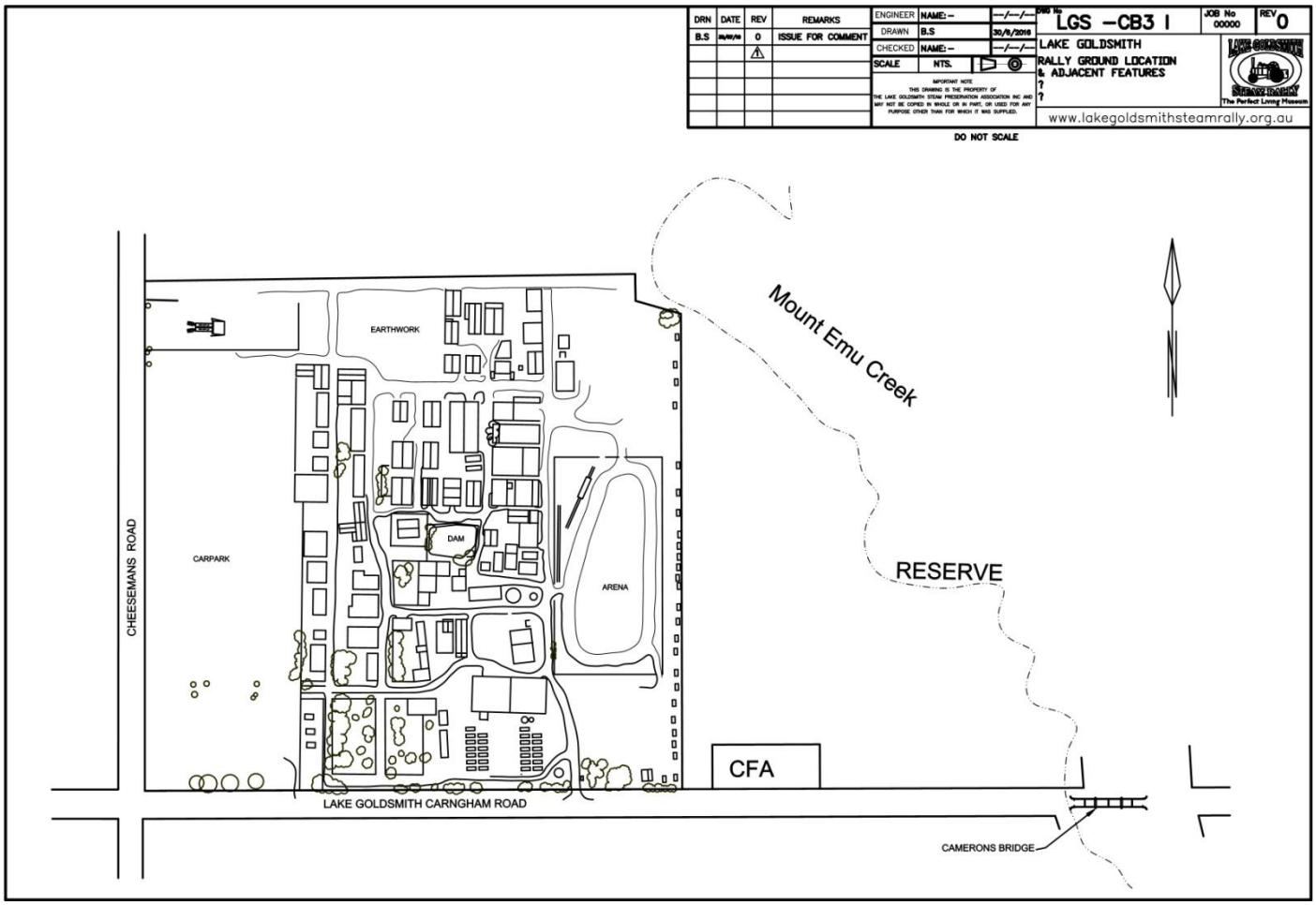
The steel tub was returned to its original shape and a GM 8/72 diesel engine and road ranger gear box were fitted to transfer power to the front drive axle and steering clutch assembly which had survived. This tank made its first appearance at Lake Goldsmith some years ago (below right) before an upper structure had been fitted. This tank can be transported on Warwick's Twin Steer Tandem Drive Leader. This pair have been seen at many Rallies around Victoria and are based at MSTEC in Scoresby Victoria.

2 extremes, the Stuart Mk 3 and seen earlier at Lake Goldsmith this Excelsior WW2 collapsible bike,

The next newsletter is due out in mid-October, so all being well it should arrive before the rally. If You expect to have a military exhibit at the rally, send in some pictures and notes, there are lots of readers who will like to know what to look for. See page 2 for the Editors contacts. Thanks. Ed.

Cameron's Bridge

Most members and visitors to Lake Goldsmith will be aware of this rustic masonry, concrete and timber bridge which crosses the Mount Emu Creek on the Carngham Lake Goldsmith Road near the CFA station to the East of the Rally Grounds.



The plan above shows the bridge at the lower right hand corner and the LGSPA rally grounds on the right. For some unknown reason the image converter forgot the show the creek.

The origins of this bridge date back to a notification in the Victorian Government Gazette No 17 page 509, Thursday March 25 1869.

Order of the council of the Shire of Ripon, made on the 5th day of March 1868.

The Ripon Shire Council, in the matter of proposed diversion of the Stockyard Hill to Carngham and Chepstowe road, through land and property of Messrs A and D Robertson, and through land and property of Messrs J and D Affleck, in the Parish of Lillerie and Yangerahwill, in the County of Ripon.

The Shire Council of Ripon, having complied with the provisions contained in sections 269 270 of *The Local Government Act* No 176, referring to such matters, and no objections having been made thereto by the said Messrs Robertson and the said Messrs Affleck; It is ordered that the work be executed according to the specification and map deposited in the office of the said council, subject to the confirmation thereof by the Board of Land and Works. And that such road shall be in lieu of the road running North of allotments 48 47 46 45 43, and South of allotments 61 62 63 64 Parish of Lillerie County of Ripon: and North of allotments 10 and 9 Parish Yangerahwill, County of Ripon. Signed D. G. Stewart Shire Secretary

Shire of Ripon Offices 5th March 1868.

The Roads referred to in the Parish of Lillerie, gave direct access to a large water reserve to the South on the Mt Emu Creek. This reserve gave access to roads in the Parish of Yangerahwill and, via Oddies road, to the district of Stockyard Hill to the South of Lake Goldsmith. At the time all stock required drovers to move it along the road, and all vehicles were drawn by draft animals. Many farms did not have direct access to water, bores and dams were few and far between and cattle had to be taken to a creek or water reserve regularly to survive.

The location of this water reserve may well have provided for through traffic in summer or dry weather but may have been impassable in winter or during floods, which forced any traffic between Carngham (then a major centre) and Stockyard Hill had to use the Carngham Streatham Road, (which had 2 single lane stone bridges over the Mt Emu Creek built in the 1860's(the date stone of one of these bridges is near the Cameron's Bridge General Store in Little Bridge Street at the Rally Grounds)) and then up Oddies road to the Stockyard Hill turn off, or through to Cheesemans Road and other areas to the North.

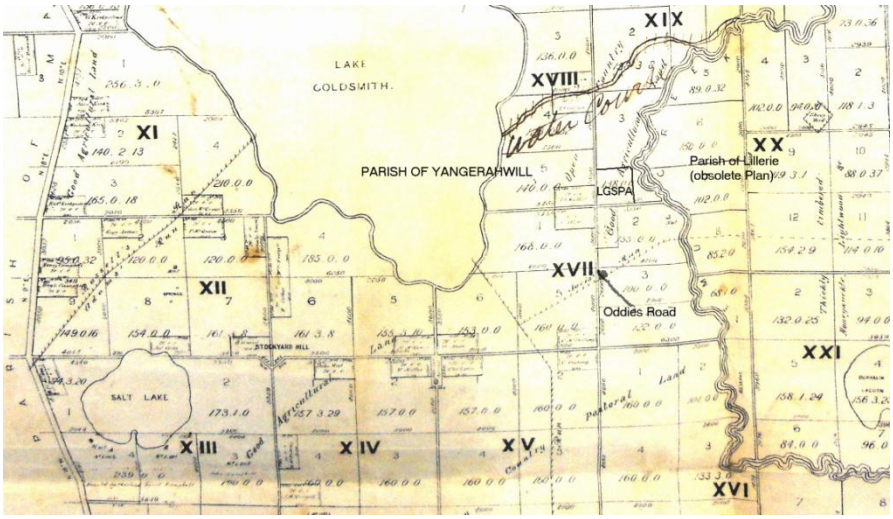
Many roads dead ended at creeks to provide access to water, but they did not align with a corresponding road on the other side so they could not be used as a thoroughfare.

The effected roads in the Parish of Lillerie were revoked and vanished from the Parish Plan, The adjacent properties were merged with neighbouring allotments accessible to a new East-West road to their North which ended at the Mt Emu Creek at a point opposite an existing road in the Parish of Yangerahwill.

The road formed by this new alignment is now the Lake Goldsmith Carngham Road . It forms a junction with Oddies and Cheesemans roads and it has a direct access to the Lake Goldsmith Reserve, and the Beaufort-Skipton roads at its Western End.

The diversion of the Stockyard Hill Carngham road to the new alignment provided a good location for a new bridge with stone nearby, and a water reserve for stock and transport. It provided a short route on high ground for transport from Carngham to Stockyard Hill and beyond. In the 1870's this would have been a major intersection. The Beaufort Skipton Road was on the high ground to the West of Lake Goldsmith via Stockyard Hill, with its stone pub, the remains of which can still be seen. Later when a road was constructed in the reserve on the East side of Lake Goldsmith the Stockyard Hill and Cheeseman's/Oddies roads lost their significance as major thoroughfares. Later still (abt 80 years) the CRB realigned the new Skipton road and built the causeway through the freshwater area of Lake Goldsmith to form the road we use today.

The following section of a plan was taken from an early preliminary survey plan prepared in January 1862 before the Parish plans were compiled around 1900. This plan was uncovered by Peter Evans who will be known to many from his feature articles in TOMM magazine. This plan was attached to a proposal by early settlers in the area, including the Kirkpatrick family, to construct a channel to carry water from Mount Emu Creek to Lake Goldsmith to provide drinking water for their cattle, and eliminate the repetitive trip to the creek for the cattle. The area was part of the Trawalla Estate and from the additional boundaries the LGSPA Rally site was part of Jaris' Run. The East West road that is our main frontage is shown ending at the creek



and it is obvious that even in these early days, there was no aligning road in the Parish of Lillerie which is on the East (right hand side) of Mt. Emu Creek.

Of interest, the plan also shows the original location of Stockyard Hill to the South of Lake Goldsmith. Stockyard hill is now the official name of a small undeveloped town on the West of Lake Goldsmith. This town started out as AUBURN but was renamed STOCKYARD HILL when the government eliminated the duplicating of names around 1960.

For any readers who are RACV members, page 18 of the July 2016 Royal Auto had a story on Volcanoes in Western Victoria. The lead feature is about Stockyard Hill which is the name of a property and a Hill (shown as Salt Lake on left of the previous plan) which is part of the Newer Volcanic Province between Melbourne and Mt Gambier which contains 437 Volcanoes.

Stockyard Hill is a form of Volcano known is a MAAR which is a crater created by a large explosion when hot magma comes in contact with ground water. That is STEAM, more of it than we have ever had at a rally. There must be some historic comfort in having a steam rally in an area formed by steam, it's quite humbling really.

Our Rally ground site is located at a corner that has had a strategic significance in the history of the area. The road diversion described by the shire required the construction of a bridge over the Mount Emu Creek. This bridge started of as a timber and masonary structure with a combined span of about 50 metres.

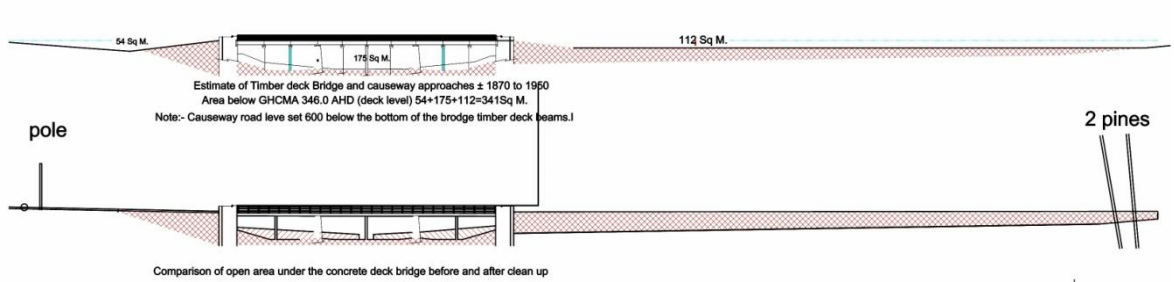
The end abutments are bluestone, as are 2 central piers. Timber piles, bearers and beams supported a timber deck. Typical of timber bridges of the day the deck and support beams were built above any expected water flow, to minimise any potential damage to the structure from water and floating debris. To further protect the bridge from flood damage the approach causeway was constructed at a level below the lower level of the bridge timbers. By setting this road level low flood waters would flow over the road and avoid damaging the bridge structure. Apart from the cost of a bebuild, its is better to be without the bridge for a few days every now and then, than to loose the bridge for months or years while damage is repaired. In this case the low causeway gave good access to water reserve areas on both sides of the creek for live stock and draft animals. It also gave access to the ford which still exists down stream from the bridge.

This story started trying to find some engineering detail for the bridge so that debris and later earthwork construction platforms could be removed to allow the creek banks to be reprofiled to something that approximated the origional works, and increase the water flow.

At the time it appeared that this information was no longer available, which meant that some field work was required before any works could be considered or undertaken.

Fortunatly we were able to contact a neighbour who had travelled to school across the timber bridge (before it was reenginered with a concrete deck and piles) who confirmed that the bridge approaches were much lower than the timber deck at both ends of the bridge The area was very wet in winter, and during bridge renovation the ford was used to cross the creek

At the time of our survey there were still enough original timbers around to reestablish the likely bridge design. The only ones missing were the main beams, so the number of rows of timber piles waqs estimated. The sketch below is a comparison of the probable origional



Comparison of open area under the concrete deck bridge before and after clean up

timber design (top) and the existing concrete decked bridge. The new bridge approach causeway was raised to the bridge deck level with some unintended but serious consequences for the association and its neighbours.

Before we get to look at the effct of these consequences, we will step back to our origional bridge which is known pretty much universally as Camerons Bridge. The name derives from the contractor who built it, J.H Cameron, who in 1863 was also the Crown Grantee of the property west of the bridge opposite the rally grounds which is currently owned by our neighbour Mick Frank, and was until recently the home of the late John Norris.

Cameron was a contractor regularly employed by the Ripon Shire, and prior to this by the Carngham Road Board who were responsible for the area prior to the start of the Ripon Shire in 1857. Searches of the Ballarat Star newspaper, which published council notices prior to the Advocate starting up later in Beaufort, regularly noted payment for works to Cameron.

As I understand it, he also constructed the channel in the reserve on the North side of Cushing Road, between Mt Emu Creek and Lake Goldsmith, including the stone weir bridge (the steel raising gear was built by Gelbart in Ballarat. It was removed and scrapped when it was decided to seal the weir) in Cheesemans Road, and another bridge near the bluestone school/hall at the Lake Goldsmith end which was demolished when the CRB constructed the Beaufort Skipton Road. It is also possible that he built the previously referred to bridges on the Carngham Streatham Road.

Later, I have been told, he was engaged on work constructing civil structures for the Ballarat to Arrarat railway.

Eventually he owned about 1100 acres in the area of the Bridge, including the Rally site. When horsepower for contract work came from horses you needed a large area to feed and breed them. These properties were sold by auction in the late 1800's.

Since this project started some 5 years ago, it has come to lite that the Public Records Office in Ballarat holds Ripon Shire records from 1857 on, so some of the information on bridge and weir history, (which may include drawings and specifications), which were thought to have been destroyed, may still exist.

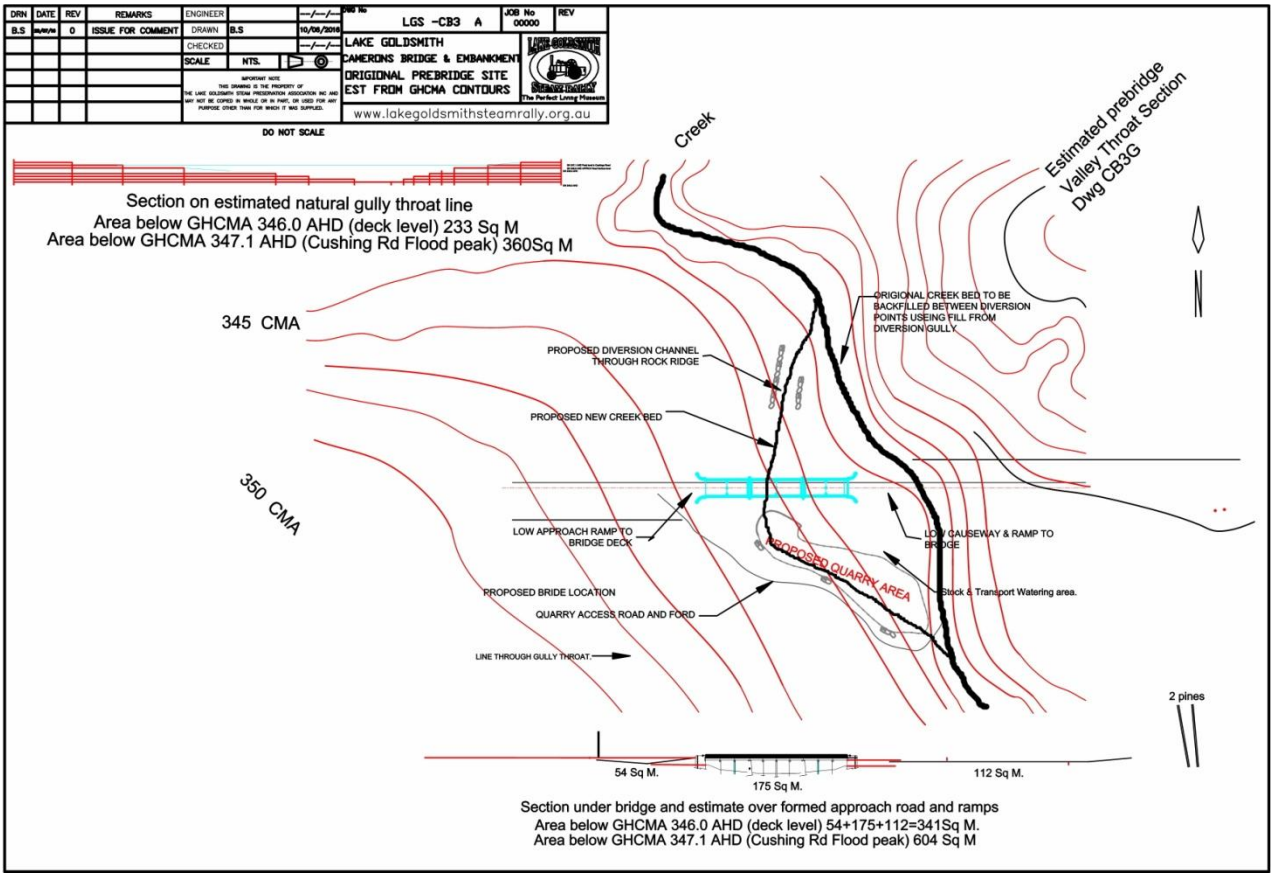
Further, the completion of the Camerons bridge rebuild was signed of in the CRB Fortieth Annual Report in June 1953 page 26 as an unclassified Road:-

" *Ripon Shire*:-- Carngham-Lake Goldsmith Road, new bridge 168 feet long (Cameron's) over Mount Emu Creek, with 6 spans, combined rolled steel joists and concrete deck, existing masonary abutments and two piers, with three new mass concrete piers.".

There may be information in these CRB files, although to date there has not been an oportunity to check.

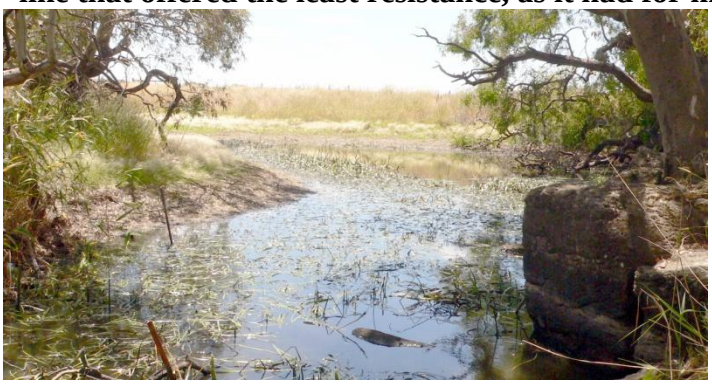
The Fisheries and Wildlife, when it existed, did a lot of work on the channel, including levels from Lake Goldsmith to Mount Emu Creek, (George Mulcahay cleared the area for them using a traction engine and drag chain). These records were in their Beaufort Office but were later moved, hopefully to the public records office.

Partial view of Camerons Bridge after the clean up works organised by the GHCMA
Fortunatly the rebuild in the early 1950's retained the appearance and rustic timber handrails

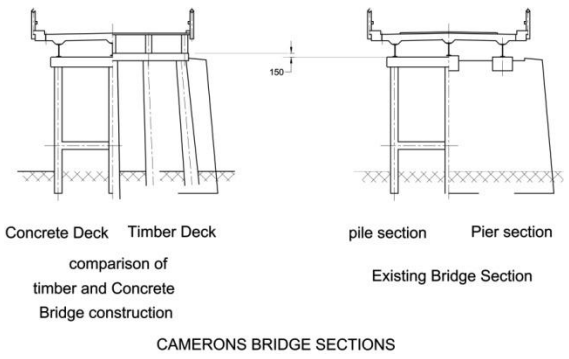


The plan above is an estimate of what conditions may have been before work commenced on the bridge. The Parish plans of Yangerahwill and Lillerie show that the creek flowed through the billabong behind the CFA Station. Flood deposits and accretion appear to have shifted the creek to the East through what was shown as a swamp area on the plans. The excavations for the bridge masonry and quarry for the stone seem to have been dug on the West bank of the creek. When the construction was complete a diversion channel was cut through a stone ridge and the creek was diverted to a new channel under the bridge and through the quarry to re-join the original creek near the ford. The old creek bed was filled to be used as a watering reserve, and a low causeway was built up to provide a ramp to each end of the bridge. The contours have been estimated back from the GHCMA LIDAR survey, and blended to approximate the natural features.

In view of later works it is difficult to be sure of the original creek location. The stone diversion channel is a good indicator that the creek was redirected, and flood damage to the asphalt on the current high embankment was at its worst over the old creek bed, which is the line that offered the least resistance, as it had for millennia before.



The photo above on the left is taken looking through the diversion channel. The photo on the right was taken looking West at the road surface damage over the line of the original creek bed. 45 metres of asphalt was lifted, indication a high water velocity in this area.



CAMERONS BRIDGE SECTIONS

The picture above shows the steel beams secured to concrete pads set into the masonry end wall. The long recess in the wall was previously fitted with a 12" square timber which was a pad for the end of the timber beams that carried the 3" *12" wide deck boards. The remains of a 12" square pad board and a deck board were found in the construction debris from the 1953 rebuild. Bolt holes in these boards proved the beam centres used in the drawings above. These drawings show the existing construction arrangement (right) and the comparison of the concrete/steel construction and the earlier timber construction.

The bulk of the timber removed in 1953 was stacked for public use. Much of this ended up at the rally grounds, and some of the beams formed the early loading ramp on Mt Buckwell. It all ended up in fireboxes.

Bluestone blocks removed to provide the concrete pads can be found around the site. They arrived in the spoil that was delivered to our site when the debris was cleaned out in 2012.

As can be seen, the underside of this bridge is well maintained by the Pyrenees Shire.

Fortunately the conversion of the timber sections of this bridge to concrete and steel was done in a way that retained much of the original appearance and all of its rustic charm. For anyone who has any interest early masonry structures it is worth taking a few minutes to have a look underneath, the standard of stone work is excellent. The water hole and the area above it are easily accessed from a track at the South West abutment. It is a nice spot to rest up, and would make a good spot for some vintage pumping demonstrations.

The above photo on the left shows the stone work on each of the 2 piers. On the right is a view looking at the water hole/ quarry downstream of the bridge.

Cameron's Bridge has quite a place in local history and we are fortunate to have it near the rally site. The interest in this bridge followed the flood in January 2011 which did so much damage to Skipton to our South when heavy rainfall upstream in the Lake Burrumbeet/Baillie Creek and the Mt Emu catchments combined. A comprehensive report of this flood, and others that went before was prepaired by the GHCMA and can be downloaded. Just Google :-

Skipton Flood Investigation Summary Study Report

Major floods have occurred at Skipton in the Mount Emu Creek in 1870 1896 1909 1933 1964 and 2011. The 2011 flood also did a lot of damage in Beaufort, which led to a lot of clean up in the creek from its source near Waterloo. The water from any future upstream flood will arrive with us sooner.The 2011 flood followed a wet 2010 which had left the ground well wetted.

Our rally grounds are on the Mt Emu Creek upstream of the junction of the Baillie and we are at the end of lesser flood plain. In the past the North end of the rally ground has been subject to minor inundation. The response was to raise the floor level of any new sheds. This work was carried out by Rod Jones with the faithful Huff Loader and Cat Grader using material excavated from the dam.

The 2010 and 2011 floods combined to fill Lake Goldsmith which was a picturesque sight and a haven for wildlife. That was the upside. The downside was road damage to the causeway in the freshwater section of the lake (the thin ribbon of water above) and damage at the West end of Cushings Road when Channel flow exceeded capacity. Lake Goldsmith is unusual in that no water flows out of it, seepage and evaporation are the only way out for water in this shallow lake, which has a catchment area of about 58 Sq Km. The Channel can be used to add water, and under extreme conditions water can flow into the fresh water area of the lake over a natural saddle near the West (top) end of the central dark patch in the paddock pictured above.

This saddle is about 5 metres above the peak water level that was in the lake and it is (to my knowledge) the lowest natural level on the catchment rim. If the lake were ever to fill above the road and Causeway it would ultimately drop to about 2 metres above the last level by reverse flow along the channel to Mt Emu creek. After that it is evaporation and seepage or pumps, and the road is closed for a very long time. Whilst this outcome is not a likely event, the last one came very close to covering the road. Common sense tells me it is wise to ensure that any future event stays below the last, so that road infrastructure is open and costly damage is reduced or eliminated.

After the 2011 flood the Association, with the Glenelg Hopkins Catchment Authority, did an investigation to see if there was any way that the effect of any future events could be reduced.

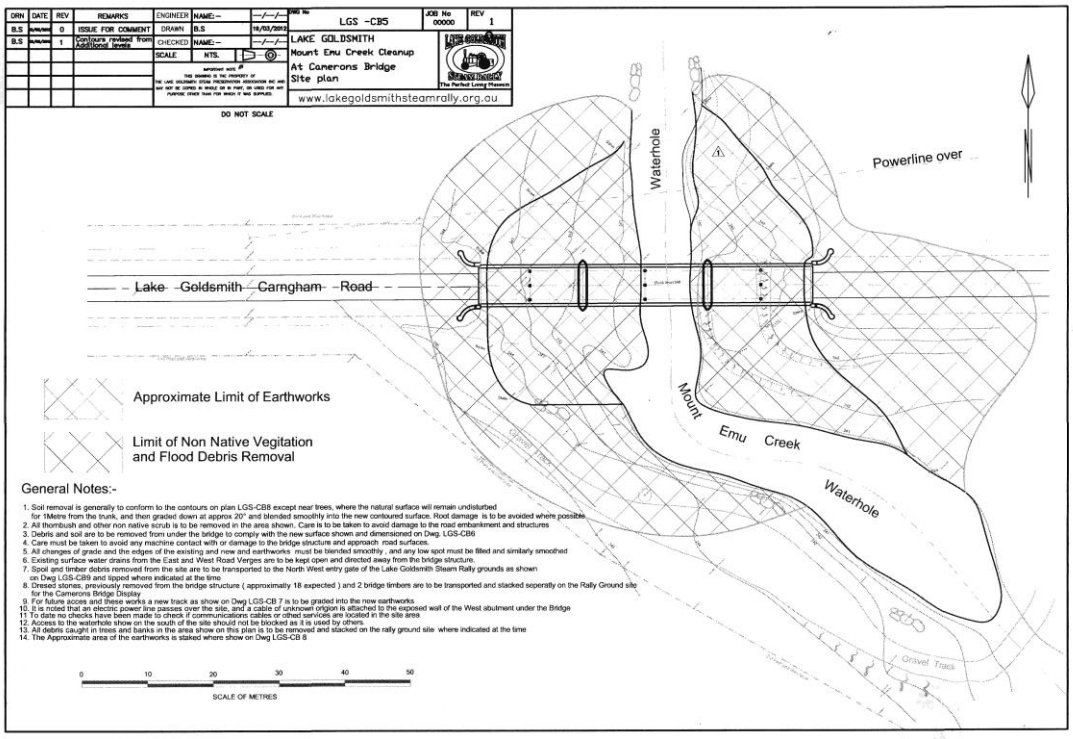
The obvious place to start was Cameron's Bridge and the approach Causeways. At its peak the flood water was over a metre above the bridge and causeway level, the total length is over 250 metres on a near level surface, all up that is a lot of water.(about a megalitre per second)

Inspection under the bridge showed that debris and construction earthworks had never been removed after the 1953 rebuild as can be seen below. This debris should not have been there and it was obviously a serious impediment to flow

The plan on page 18 shows a double profile of the existing and likely original ground surface under the bridge. The before and after open areas are 145 & 175 Sq metres, an increase of 20%

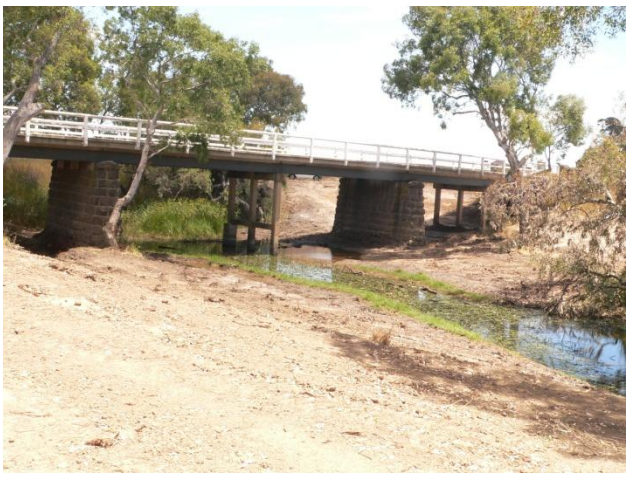
If we take an average depth of 0.8 metres over the 250 metre bridge and causeway, we get a combined 350 Sq metre water cross section of water at peak flow for the 2011 event. The extra 30 sq metres gained from the clean-up is then an 8% improvement. For more common events the 30 sq m is a great help, for peak events it is only a marginal gain, and would do very little to prevent damage to fences, roads and other assets.

The Association's contribution to the clean-up was the field survey and preparation of the plans which were used to define earthworks and non-native plant clean-up requirements of the project, and to obtain cost estimates. The site plan is shown below.



The Glenelg Hopkins Catchment Authority (GHCMA) managed the project and liaised with the Pyrenees Shire and all other authorities, organised quotations, raised funds and supervised the onsite works.

The work was carried out by Sean Hunwick of DownRyte Excavations, (with some help from Ken McLeod driving the Mack that brought the 1000 Cu Metres of spoil to our site).



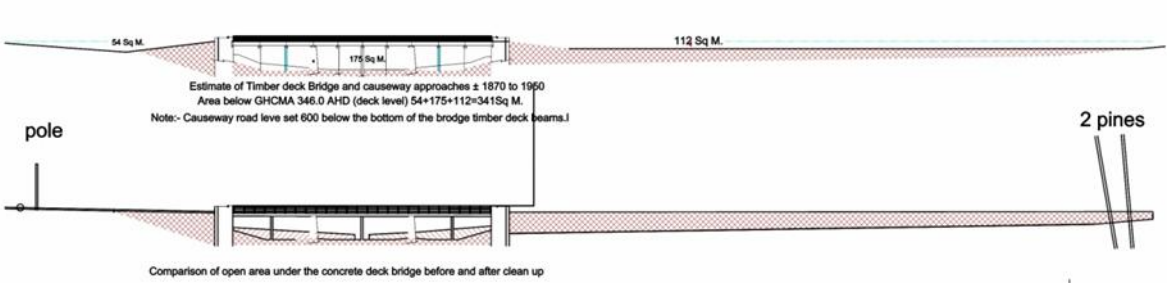
The result was a bit stunning, the extra open area and the blending of smooth surfaces will go a long way to improving the water flow under the bridge. This is one of those projects that went well from the start and had an excellent outcome. A lot of people were involved along the way but our thanks must be directed to Graeme Jeffery and Katrina Amor of the GHCMA who brought it all together.

The creek clean-up is the first stage of controlling the level of inundation up stream of the Bridge. The AHD level of the flood, as staked by the Cushing family in Cushings Road at 2.30AM when the level peaked was 347.1. The AHD level of the Rally site near the dam is 346.0 and by coincidence so is the road surface in Cheesemans Road near the weir bridge, and the road surface of the Eastern approach causeway and deck of Cameron's Bridge.

If the high-water could be held below this level, water would not have flowed over the Causeway, water would not have escaped down the channel to Lake Goldsmith in serious quantities and the Skipton Road would not have been damaged. Damage to historic records and machinery at the Rally grounds would have been reduced if not eliminated. A lot of damage was done to rural fences up stream of the bridge (some kilometres as I understand it), and , it is hoped that a drop in the level would have gone a long way to reducing this. An optimum level to aim for would be AHD345.5 as this leaves a buffer to minimise the risk of bridge damage from floating debris and the causeway would still be usable by emergency services, particularly the CFA which is located near the Western end of the Bridge.

For the following exercises AHD 346.0 has been used as a reference target for peak level, and a 350Sq Metre crossection of water at any point where the water velocity is the same (it will be less if the water is moving faster) have been used to determine the extent of works that may be necessary to achieve this result and determine an estimate of costs.

On page 18 there was a drawing (repeated below) of what is believed to be a reliable approximation of the original timber bridge and low causeway. The current steel & concrete bridge with its high causeway is shown below as a point of comparison.



Comparison of open area under the concrete deck bridge before and after clean up

Using our criteria of AHD 346.0 as the upper water level, and 350Sq Metres as the total water crossection needed to handle the peak flow, we find that the area available on the original bridge was about 50 on the West, 175 under the bridge and 112 over the East causeway for a total of 341 Sq metres This assumes the the East causeway was 600 below the timber bridge beams. It is unlikely to be less and probably was more.

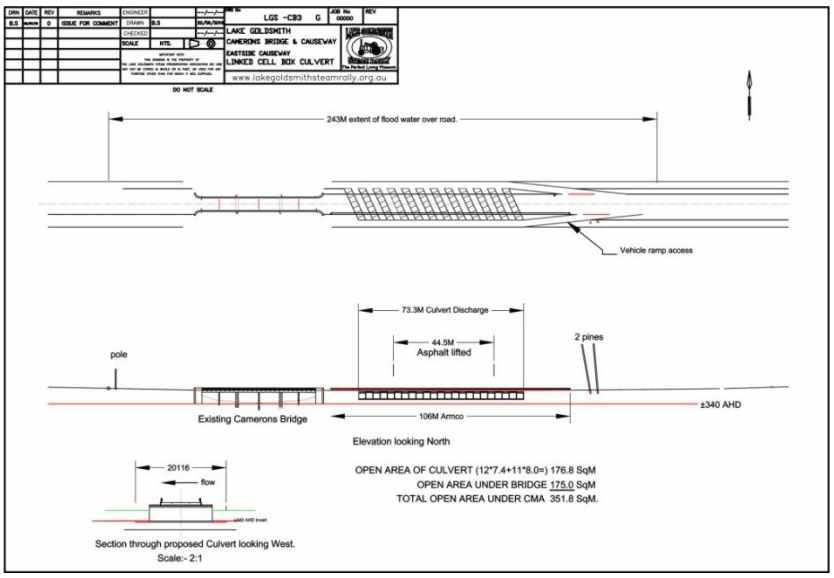
This compares with the existing bridge and causeway where the total area is 175 Sq metres

A reduction of 166 from 341 is a 49% reduction

Just how this came about is open to conjecture, In 1953 the requirement to provide easy access of stock and draft animals to water was greatly reduced, and the concrete and steel deck upgrade provided much more resistant to bridge damage from flooding. What may have been overlooked was that the the clearspan of the bridge was never designed to cope with extreme flows, it did not need too, the low approach causeways was expected to handled that.

The higher speed, and presumably, the increased motorised traffic in 1950 would have benefited from the improved safety and convenience of the elevated causeway. Whatever the reason, a serious oversight seems to have been a major factor in the high water level, and consequence damsge of the 2011 flood.

to



the

The plan on the left is a proposal return the open area lost to the Causeway by constructing a culvert in the causeway embankment, which had inadvertently become a dam.

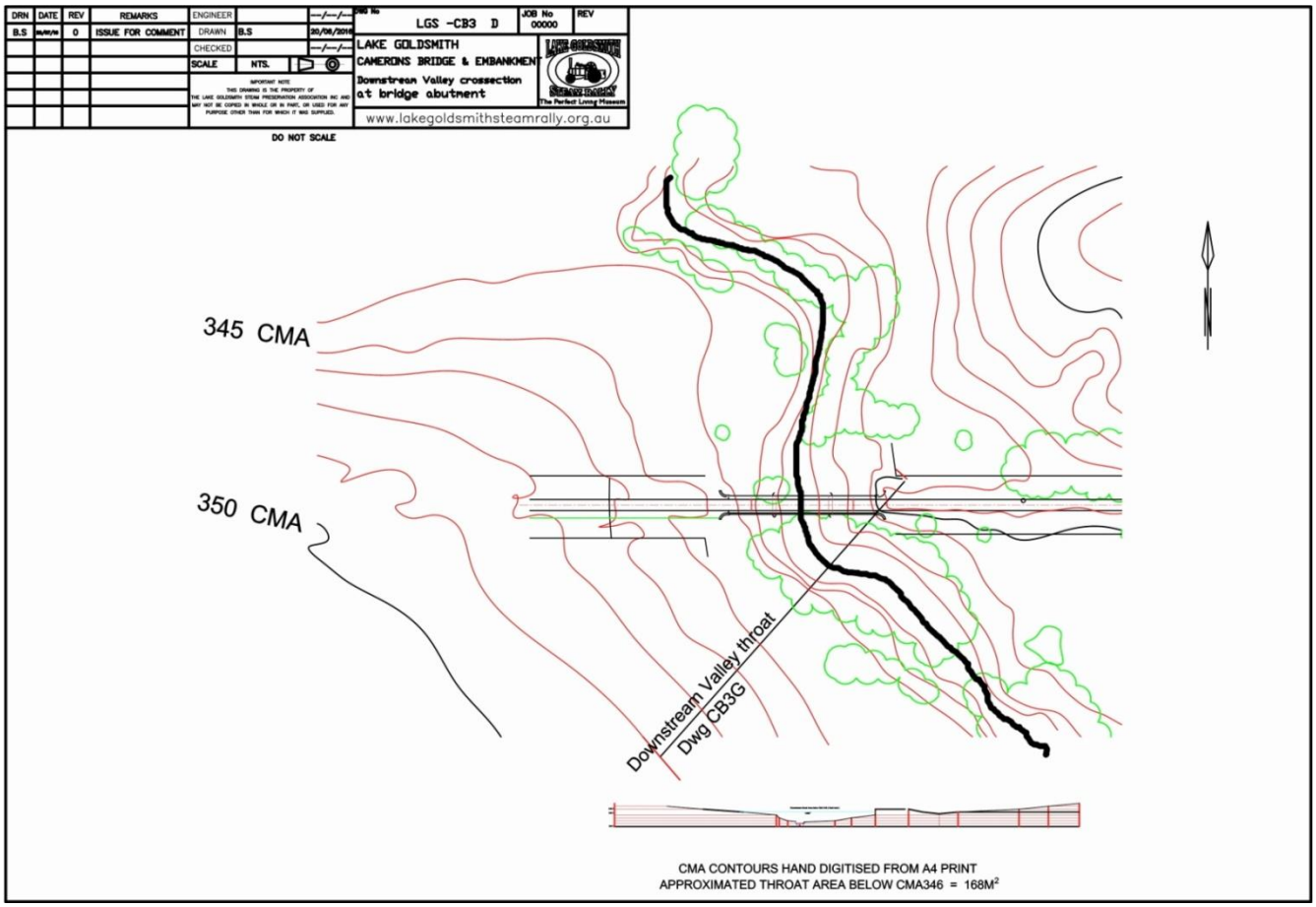
This has the advantages of retaining the safety and convenience of the existing elevated roadway, and reclaiming open floodway area which was incorporated in the original bridge and crossing design

The open area of the culvert as shown is about 177 sq metres which when added to the 175 under the existing bridge meets the target of 350 sq metres of open area below AHD 346.0

The design shown is a linked cell box culvert. The open culvert sections sit inverted on a a concrete base
The space between the culvert boxes is similar to their opening, and the spaces atre covered with a concrete slab, and a road is formed over the top of the structure. There are 12 rows of box culverts and 11 slabs shown.

The culvert has been centred on the location where the where the asphalt was lifted off the road which is also the estimated location of the original creek bed. The culverts boxes are shown angled to match the direction of flow to minimise turbulence and maximise flow.

Had these culverts or an equivalent been incorporated in the 1950 bridge upgrade, the 2011 flood would have have peaked at a lower level.
There are other restrictions in the creek in the same area which could restrict flow and possibly increase the flood level.



The above drawing shows a section from the bridge abutment masonry across the valley. The cross section area below AHD 346.0 is about 168 sq meters which is pretty much the same as the 175 under the bridge. There is not much to be gained by a culvert on the West end of the bridge, or by further excavation under the bridge without earthworks in this area. As this area is very rocky (it is the old quarry area) any work would be very expensive. The bend in the creek at the bridge discharge is sharp and restrictive at high flow rates, making this area a backwater at high flood levels.
The Plan on the next page outlines some works which may be necessary to make the proposed

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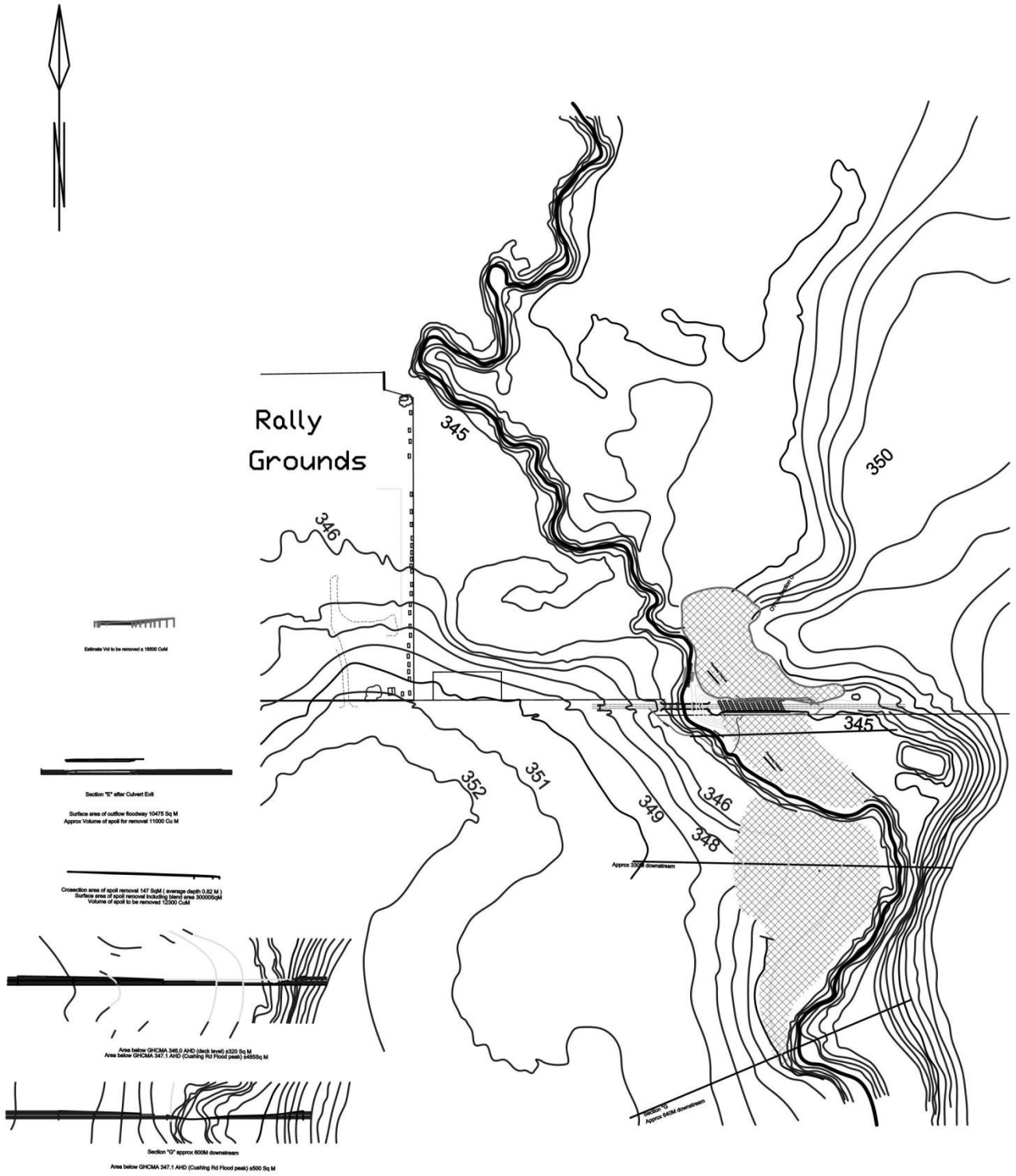
DWG No LGS –CB3 K | JOB No 00000 | REV 0

LAKE GOLDSMITH
CAMERONS BRIDGE & CAUSEWAY
Proposed Earthworks to
to form culvert floodways

LAKE GOLDSMITH STEAM RALLY
The Perfect Living Museum

www.lakegoldsmithsteamrally.org.au



Proposed Floodway Earthworks and Culvert location

culverts under the causeway a workable proposition.

Whilst the proposed location of the culverts is over what is believed to be the original line of the creek, we cannot excavate to the old bed depth as this would realign the creek for normal flow rates. It would also be expensive to build such a high structure.

The alternative is to use the long row of shallow culverts and set their invert above the water level which occurs with normal seasonal variations. This keeps the water in the creek bed and minimises the accumulation of silt or other debris in the culverts under low flow conditions. The invert shown is about a metre above the creek, but can rise dependent on final design, with some saving in cost.

An approach floodway channel will be necessary to ensure that all 23 box sections are able to carry their maximum capacity under flood conditions. This area North of the road is shown hatched on the previous plan. This area covers about 1.25 Ha, much of which is necessary to blend the floodway area with the surrounding pasture.

A similar hatched area is shown South of the road and North of the creek. This area is an outlet floodway channel and is below the invert of the box culverts. It covers an area of about 1 Ha including the blend area.

During flood conditions the water flowing through the culverts is expected to be moving faster than the water emerging from the area under the bridge. To minimise turbulence and minimise any restrictions to flow it may be necessary to re-profile the area South and West of the creek. The area shown covers about 3 Ha, but most of this is required to seamlessly blend the new surface with the surrounding pasture. The extent or necessity of this work, and the final design of the floodway channels will be determined by hydraulic analysis and other engineering considerations.

The plan also shows a cross section South of the earthwork area. It is not expected that work will be needed here as it is only 300 meters to the end of the gully area and the open area is expected to let the surface level to drop while the water speed increases.. In the end it all depends on how big a flood you design for.

For those who have made it this far without nodding off, thank you, we are down to the summary

It appears that the level of floodwater during the 2011 flood was aggravated by raising the causeway road level to match the deck level of the bridge.

For the peak of the 2011 flood the causeway halved the open area that was available when the previous low causeway as in use.

The restriction of this high causeway forced the water to flow about 1 metre above the causeway with the result that damaging flows escaped through the channel to Lake Goldsmith, damaged other roads and exhibits at the rally ground, and destroyed fencing along the creek.

It appears that it is possible to reverse the restriction by constructing a series of box culverts in the causeway embankment and constructing floodway channels to direct water to and from the culverts. The merging of the dual water flows, and the need to maintain a surface gradient may require some downstream surface reprofiling.

If an engineered version of this proposal is implemented it will reduce the impact of any future flood events up to the2011 flood level (which is believed to have been the worst on record at Skipton), and provide a predictable flow to places downstream.

Subject to design and cost estimates it is believed that the cost of the works will be less than the damage done in the area in 2011 and that this is a low maintenance solution that will provide protection well into the future for the many who have been affected.

If you have any pictures or information or stories about this Bridge, let me know. Ed.

35TH ANNUAL DISPLAY

HISTORIC COMMERCIAL Vehicle Show

HISTORIC COMMERCIAL VEHICLE CLUB of AUST.

Sunday 13th November 2016
Yarra Glen Racecourse
Admission $10.00 • Kids under 14 FREE
Gates open to Public 9:00am

All vehicles must be in by 9am and not leave until 3pm.
Entry available from 3pm Saturday 12th November.
Camping available Saturday Night $20 bookings close 7/10/16 ***MUST BOOK!***
Saturday night meal at Yarraview Dining Rooms $20 available bookings close 7/10/16
Park together - arrive together! ***See website for details: www.hcvc.com.au***

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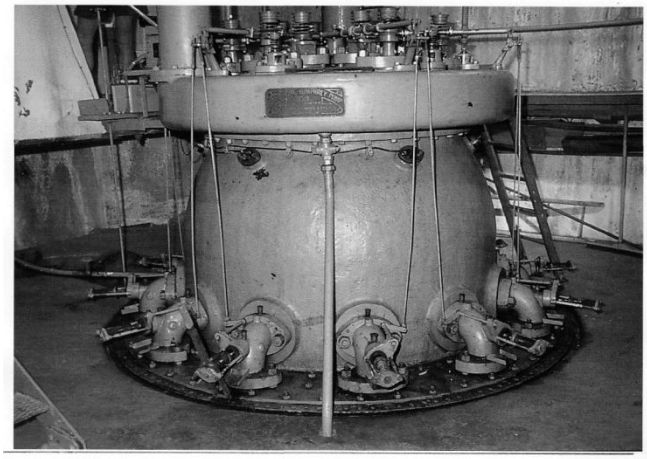
COBDOGLA IRRIGATION & STEAM MUSEUM



Subject to Safety Upgrades Being Completed,

The Humphrey Pump Will Be RECOMMISSIONED on 2nd October 2016

Full Steam & Humphrey Open Day
11.00 am to 4.30 pm

Please contact the museum before travelling to confirm the Pump will be Operating
enquiries@cobdoglasteammuseum.com.au ph 08 85882323 or 0417883353

16th NHMA National Rally

Hosted by
Hamilton Pastoral Museum Inc
Bringing Back The Memories

21st, 22nd & 23rd April 2017

Hamilton Harness Racing Club

Contact Information for Host Club
Email: hamiltonpastoralmuseum@live.com
Web: www.hamiltonpastoralmuseum.com.au

Hamilton Pastoral Museum Inc.
Cnr Hiller Lane & Ballarat Rd.
P.O. Box 220
HAMILTON, VIC, 3300. Ph. 03 5571 1595

Lake Goldsmith
108th, Steam & Vintage Rally

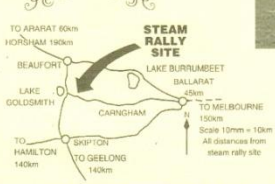
Military Equipment
Oct 29th & 30th 2016

Additional to our 65 display sheds, steam & oil engines, operational 90 ton Ruston steam shovel, Bucyrus rail mounted steam shovel. Furphy tank rebarreling, blacksmith, radio controlled model boats. Trucks, tractors, cars, motorcycles & vintage caravans. Steam ploughing, threshing & chaffcutting. Dragline & steam powered sawmill demos. Two Grand Parades daily. Attractions for ladies and children. Mothers facilities, stalls, crafts and food available. Camping for exhibitors only (free, non-powered).

Featuring Military equipment. Including transport vehicles, weaponry, memorabilia & associated equipment.

Admission price: Adults $15.00
Children aged 5-16 $5.00
Exhibitors and Children under 5 free.

FUTURE RALLY DATES:
108th - Oct 29th & 30th, 2016
109th - May 6th & 7th, 2017
110th - Nov 4th & 5th, 2017



VIC ROADS DIRECTORY MAP 75 G5 2,4

For more information contact:
PO Box 21 Beaufort 3373
Ph. Trevor 0407 539 041 or Graham (03) 9723 3310
www.lakegoldsmithsteamrally.org.au

LAKE GOLDSMITH STEAM PRESERVATION INC.
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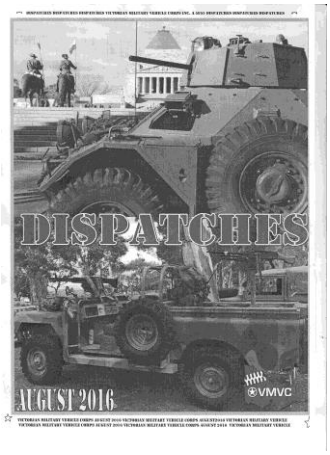

There have always been Military vehicles and gear at our Rallies, and I can recall a Muzzle Loading field Gun and crew in Period costume some years ago. The Military Theme for the 108th Rally is a reminder that there are clubs dedicated to preserve and operate this gear.

One of these clubs is the Victorian Military Vehicle Corp who, if all goes well have some members with their vehicles at the Rally.

Goto www.vmvc.org.au

and you will get some idea of variety of gear and events that this group is involved in. Ed,

Many readers will be aware of the
Engineering Heritage Australia Magazine
which is published by Engineering Heritage Australia which is a centre within Engineering Australia. You can visit their website at:-

https://www.engineersaustralia.org.au/engineering-heritage-australia

or you canlook at their current (July 2016 Vol 22 No 3 on
www.engineersaustralia.org.au/engineering-heritage-australia/activities-publications

In this there is a feature story by Owen Peake highlighting some of the features that are on display at our Rallies. This gives a comprehensive cover of the range and variety of what is on offer. In addition there are articles on many other Australian historic gems covering all aspects of our past. Thanks To Owen for the story, and Peter Jackman who brought it to my attention. Ed.

Another electronic magazine arrived the other day,
Stars of Sandstone

As usual this excellent Newsletter brings you up to date with what is going on the Sandstone Estates. They closed last year to undertake some on site changes which will be ready for the 2017 season. These events are well attended by Australians, and all that I have spoken to want to go back. Some of whom will be be there for 2017. Sandstone is unusual in that some go as volunteers and are involved in the action, and others go as visitors for the week long event.

Goto www.sandstone-estates.com

They are taking bookings now. As you will see on the website the rural setting for this 26Km rail way and the display areas for everything from Military Tanks to planes, traction engines and cars mark this unique event as something not to miss. Ed.

If anyone can be in Alexandra on the 10th and 11th of September they will see the 1909 Fowler 2' Steam Locomotive in action. There will also be a blacksmith in action and a display of working engines. A BBQ will be on the platform and some activities for the children. For Saturday only there will be a market.

For anyone who has never been up the Black spur out of Healesville or Mount Slide out of Yarra Glen this is a good chance to catch some magnificent scenery with a great afternoon at the Tourist Tramway and Museum. Enjoy the day.Ed

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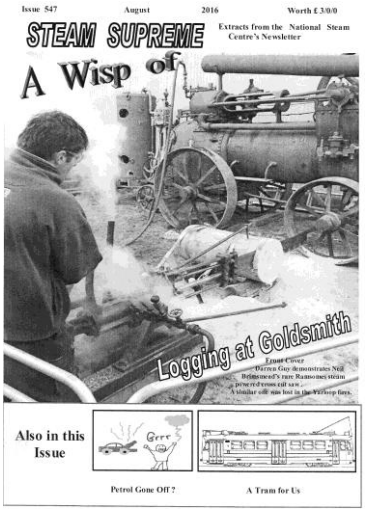

While we are on railways, Melbourne Steam have the 12" train running on Sundays For details try www.melbournesteam.com.au . the kids love it, and there is pleny on show for the big kids too. Download the latest Wisp of Steam for some additional pictures of the Timber Rally Thanks Ed.

Peter and Rosie are a familiar sight mowing lawns, for which we are all most grateful. A moment of grate dedication was revealed when they had to reactivate on the establishment's grader and hitch it to their trusty K& L Bulldog to remove rocks before they could mow the lawn. Thanks from all for a job well done.

A club acquires a storage container for bin storage, it will be near the loading ramp.

There is more action at the Beaufort Goods Shed. Ron and Linda Harris have taken the veteran rail carriage that they saved from a Ballarat backyard. They have also acquired a very early Victorian Railways flat top to mount it on before it starts its third life under cover to support the new displays in the shed.

This will be worth a visit for all of those who have missed the chance.

One group that made it to the Goods shed came from the Goldfields Car Club in Ballarat who were on tour through the area.. It is amazing how many places there are to visit in the Pyrenees area. That brings this edition to a close, next issue in October.