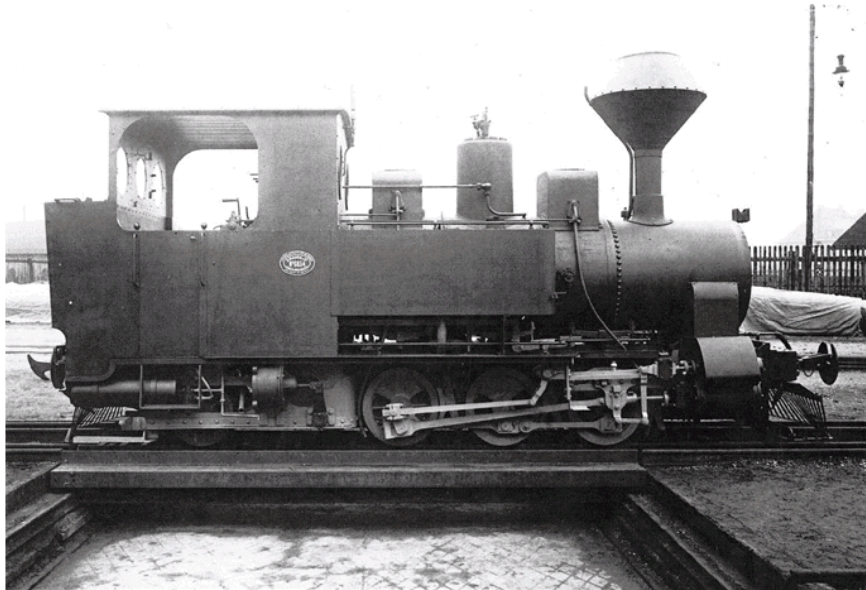


Buderim Krauss Locomotive

Buderim – Palmwoods Heritage Tramway Inc



Significance Assessment

19 July 2016

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Executive Summary

During July/August 2016, a significance assessment was undertaken on a steam locomotive identified as the Buderim Krauss B/No.6854. The Krauss locomotive has a very strong connection to the local history of Buderim and District and was assessed as being of local significance.

The Buderim Krauss locomotive is the only known object remaining from the Buderim – Palmwoods Tramway which closed in 1935. The locomotive is therefore well-placed to support a thematic interpretation of the heritage-listed Buderim – Palmwoods Tramway and its strong association with the growth and economic development of Buderim.

While the restoration undertaken by The Buderim – Palmwoods Heritage Tramway Inc was hampered by gaps in historical information, the team has done a credible restoration. In its current form, the locomotive has excellent interpretive potential.

It is recommended that the Buderim – Palmwoods Heritage Tramway Inc. seek advice from a specialist conservator regarding the appropriate approach for the care and storage of the locomotive on display.

It is exciting to see the future of the Buderim Krauss B/No.6854 in enthusiastic hands. It is hoped that The Buderim – Palmwoods Heritage Tramway Inc will be successful in their bid to put this important locomotive on display in the area it operated in for 21 years. There is no doubt that the co-location of the locomotive and tramway add to the importance of the other.

Introduction

During July/August 2016, a significance assessment was undertaken on a steam locomotive identified as the Buderim Krauss B/No.6854. Initial work was undertaken at the home of, Buderim resident, Helene Cronin, a committee member of the Buderim – Palmwoods Heritage Tramway Inc. where several reports, photographs and books researched by members concerning the Krauss locomotive were reviewed and discussed. We then travelled to Wise’s Farm, Maroochydore, where a close inspection of the Buderim Krauss locomotive was made. Several volunteers of the Buderim – Palmwoods Heritage Tramway group were interviewed whilst at Wise’s Farm. The Krauss locomotive was the only item requested by the Buderim – Palmwoods Heritage Tramway Inc. to be assessed for its significance.

As a whole, the collection of historical information, newspaper accounts and photographs assisted in identifying the Krauss locomotive as having a very strong connection to the local history of Buderim and District.

The Buderim Krauss locomotive is the only known object remaining from the Buderim – Palmwoods Tramway which closed in 1935. There are no other items of rolling stock in existence. There are some remaining sections of the tramway formation between Buderim and Palmwoods that have been identified and made into walking tracks with plaques advising of the interpretation of that section of tramway. This work has been completed in conjunction with the Sunshine Coast Council.

The Buderim – Palmwoods Heritage Tramway Inc. are not actively seeking to build a museum rather they are focused on placing the Krauss locomotive on a suitable static public display in Buderim, near to the original Buderim Tramway terminus as a monument to Buderim’s pioneering past.

A portion of the Buderim – Palmwoods Tramway is heritage listed. Entry Number 601711 on the Queensland Heritage Register, Environmental Protection Agency’s Heritage Listing describes a section of Palmwoods to Buderim Tramway Track Foundation and Formwork remains of approximately 1.57 km in length near Telco Road, Buderim on the Queensland Heritage Register.

This has been developed into a walking track by the Buderim – Palmwoods Heritage Tramway Inc.

PART 1: The Collection

Process and Methodology

Using the Collection Council of Australia’s publication, *Significance 2.0*, the Collection was assessed against the primary criteria - historic, artistic or aesthetic, scientific or research potential, and social or spiritual – and the degree of significance was determined by assessing against the comparative

criteria – provenance, rarity or representativeness, condition or completeness, and interpretive capacity.

The Buderim – Palmwoods Heritage Tramway Inc.

The Buderim – Palmwoods Heritage Tramway Inc. was formed at a public meeting during June 2003 and duly incorporated as an Incorporated Association. Its first Annual General Meeting was held in September 2003.

It was known that the original Krauss steam locomotive that had been used on the tramway between 1914 and 1935 was still in existence at Murrumba Downs. Initial approaches, to the owner, Mr Graham Chapman, during 2003 were without success.

A further approach was made early in 2004 which was more successful with Graham Chapman, in a letter dated 25 February 2004 agreeing to accept the offer of \$8,000.00 for the purchase of the Buderim Krauss locomotive.

Physical Objects of the Buderim – Palmwoods Heritage Tramway Inc.

The Buderim – Palmwoods Heritage Tramway are focussed on the Krauss steam locomotive which had operated on the Buderim Tramway between 1914 and 1935. There are no other collection items held by the Buderim – Palmwoods Heritage Tramway Inc.

Policies Guiding the Buderim – Palmwoods Heritage Tramway Inc.

The Buderim – Palmwoods Heritage Tramway Inc. was formed with the following aims –

1. To establish the Heritage Tramway Walking Track and make it safe for public access.
2. To design and construct associated infrastructure to support the Heritage Tramway Walking Track.
3. To recover and preserve artefacts and memorabilia associated with the Buderim – Palmwoods Heritage Tramway
4. To work towards the acquisition of the original locomotives.
5. To record restore and preserve the botanical history along the Heritage Tramway Walking Track.

The Buderim Krauss Locomotive 6854

Brief Description: Locomotive – Krauss 0-6-2T Builder's No.6854

Built by: Krauss Lokomotivfabrik (Krauss Locomotive Works)
Sendling, Germany

Builder's Serial Number: 6854

Year Built:	1914
Wheel Arrangement:	0-6-2T
Track Gauge:	762 mm (2 feet 6 inches)
Horsepower:	80 h.p.
Agents:	Diercks & Co, Melbourne
Customer:	Maroochy Shire Council – Buderim Tramway

Housing of the Buderim Krauss Locomotive 6854

The Buderim Krauss locomotive is currently stored at Wise's Farm, Maroochydore. This is only a temporary location on private property.

The Krauss locomotive has been placed under a purpose made shelter with a roof which has allowed restoration and preventative work to be undertaken by the Buderim – Palmwoods Heritage Tramway group.

With the restoration work now basically complete the Krauss locomotive is usually covered with a tarpaulin to further assist in protecting it from the weather pending its transfer to a suitable interpretive display site in Buderim.

Public access to the Krauss locomotive is currently restricted as it is stored on private property pending relocation to Buderim for public display.

Research and Restoration of the Buderim Krauss Locomotive

Considerable effort has been made by the Buderim - Palmwoods Heritage Tramway Inc., members to research and document the locomotive's history.

Contact has been made with Siemens, Krauss – Maffei in Munich, Germany, who are the successors to the original manufacturer of the Buderim Krauss locomotive. This company has been most helpful with some information from their archives but the information is incomplete.

Photographs of the Buderim Krauss locomotive during its working life at Buderim and also at Bingera mill have been located. These have assisted to some extent in the restoration program that has been undertaken. Details of the locomotive shown on the photographs were enlarged to allow a member with engineering skills to make drawings. These assisted in the restoration.

Unfortunately, there are no plans or photographs depicting the interior of the cab layout and fittings, so a "best guess" approach from other locomotives was used.

The book *The Buderim – Palmwoods Tramway* by Garth Fraser and Neil McGarvie (2010) provides the methodology used to determine the restoration of the Buderim Krauss not having access to any original General Arrangement drawings from Germany.

History of the Buderim Tramway and its Locomotives

As early as 1903, agitation began for a tramway to be built from Buderim due to the poor roads but no agreement on a proposed route could be found. Tramway promoters renewed their efforts in 1910 for a tramway to provide Buderim with reliable transport to consign their fruit and produce to the markets in Brisbane. Mr George Phillips an eminent Brisbane civil engineer was engaged to make a trial survey for such a tramway. Phillips settled on a route linking Buderim with the Queensland Railways' station at Palmwoods. The *Queensland Government Gazette 28 July 1911* issued an Order in Council notice under the Local Authorities Act approving plans, specifications and defining an area for the proposed Tramway. The *Brisbane Courier 18 August 1911* reported on the Maroochy Shire Council's resolution to declare a Benefitted Area for a tramway linking Buderim and Palmwoods.

Construction of the new tramway commenced in August 1913. It is interesting that the civil engineer, George Phillips, had recommended a track gauge of 2 feet 6 inches considering that the State's cane tramway systems were all of 2 feet gauge. The Buderim Tramway was unique in Queensland as it was the only one, with the exception of a timber tramway at Hampton, near Toowoomba, built to that gauge in this State.

The narrow gauge was recommended as it was considered that the formation would be cheaper to build and the trains could navigate sharper curves. The tramway was laid with rails weighing 30 lbs per yard, sharp curves down to 14 chains radius and very steep gradients at 1 in 25, considered be the steepest advisable for an adhesion worked railway.

To celebrate the opening of the line on Friday 18 June 1915 the *Brisbane Courier 15 June 1915* noted that a special train would be run from Brisbane to Palmwoods for the opening of the tramline before returning to Brisbane. Initially the tramway was quiet successful but road transport and better roads soon started to intervene.

The Krauss locomotive 6854, received in March 1914, was used to assist in construction of the line and then in 1935 to assist in dismantling following closure.

A second locomotive was purchased in 1915 from the Lima Locomotive Works in Ohio in the United States but it was never really a success being advertised for sale "with all defects" as advertised in *The Brisbane Courier 21 January 1928* and again "as lying at Palmwoods" advertised in *The Brisbane Courier 1 April 1933*. It was finally abandoned there and some remains including the boiler may still be seen.

An announcement appeared in the *Courier Mail* in 1935 notifying that the Maroochy Shire Council was to close the Buderim Tramway effective 10 August 1935 due to competition from road transport and lack of support with loan costs and operating expenses far exceeding income.

The *Weekly Advertiser* 15 July 1971 headlined that the final loan payment to the Queensland government for the original tramway loan of £32,000 (\$64,000) taken out by the Maroochy Shire Council in 1913 had finally been paid out. The loan principle was never paid down, rather it had increased over the years. The repayments, including interest amounted to a total of \$177,000. The loan repayments had been a burden on ratepayers for 58 years.

Buderim Krauss Locomotive Builder's Number 6854

The first locomotive purchased for the Buderim Tramway was ordered on the 27 August 1913, through Diercks & Company, Melbourne who were agents for the Krauss Locomotive Works in Germany.

The locomotive cost £950 (\$1900) at that time.

It was used for construction work on the Buderim Tramway and was the main motive power used on the line being supported by a Shay geared locomotive from the Lima Locomotive Company in the United States. The Shay was not considered a success however.

Both the Krauss and Shay locomotives were fitted with Westinghouse air pumps to provide air braking for the trains descending the mountain on the steeply graded line. The provision of Westinghouse air brakes on the Buderim tramway was unusual but obviously very necessary on the steep 1 in 25 grade. Unlike all other narrow gauge Krauss locomotives that came to Australia, which were fitted with Outside Stephenson's Link Motion Valve Gear, the Buderim engine had Walschaert's Valve Gear.

Following closure and dismantling of the Buderim Tramway, the Krauss locomotive was offered for sale. According to *The Courier Mail* 24 June 1936. It was eventually purchased for £120 by the Queensland Machinery Company, a machinery merchant.



*Krauss locomotive on a train at Guy's Siding on the Buderim Tramway circa. 1915
Image: Collection G Bond*

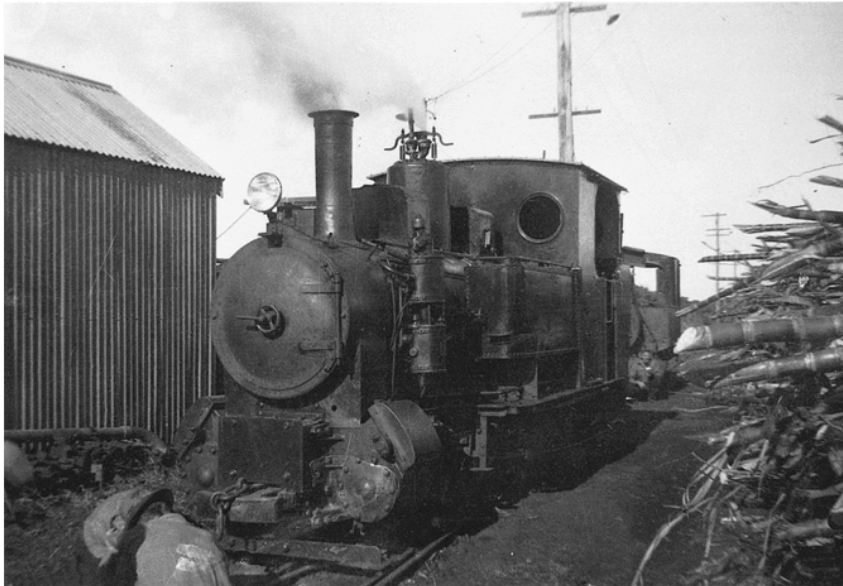
Walkers Ltd, Maryborough overhauled and converted the Buderim Krauss locomotive from 2 feet 6 inch gauge to 2 feet gauge to suit operation on a cane tramway. The Buderim Tramway's track gauge of 2 feet 6 inches was almost non-existent in Queensland while the cane tramway systems operated by sugar mills in Queensland used 2 feet gauge as their standard.

The Krauss joined the locomotive fleet at the Bingera sugar mill owned by Gibson & Howes Ltd at South Kolan, near Bundaberg in 1937.

The Krauss worked around the Bingera cane tramway network hauling sugar cane to the mill until 1961 when it was taken out of service and placed in store as the mill steam locomotive fleet were being replaced by diesel locomotives. All brass work, cab fittings, motion work, headlights and the turbo-generator were stripped off the Krauss locomotive by the mill before it was despatched to Scott Scrap Metals located at Albion in Brisbane in 1967.

The Krauss was purchased from the scrap dealer by Mareeba resident Mr Eric Michael (Mike) Loveday who had grown up on a farm at Telco near the tramway terminus at Buderim. Mike had worked as a locomotive driver on the Douglas Shire Tramway at Mossman following World War 2 until it closed in 1959. He had a great fondness for steam locomotives and was a passionate supporter of narrow gauge railways. A few members of the Australian Railway

Historical Society – Queensland Division (ARHS), including myself, assisted Mike to remove the Krauss to a vacant block of land located on Hudson Road, Albion for storage. This property at 105 Hudson Road was owned by a friend of Mike's, Mr Neville (Nev) Witty.



Former Buderim Tramway Krauss locomotive still with its Westinghouse brake pump fitted working at Bingera Mill. Date Unknown. Image: Collection G Bond

In 1975, members of The Australian Narrow Gauge Railway Museum Society (ANGRMS) which had been formed in 1971 from that core of ARHS members involved in 1967 transferred the Krauss to the Brisbane Tramway Museum site at Ferny Grove for storage along with several other cane tramway locomotives owned by the Society. The Krauss was relocated again, in 1983 when it was transported to the ANGRMS museum site at Woodford. Graham Chapman approached Mike Loveday with a view to restoring the Krauss at his engineering works at Murrumba Downs. Accordingly Mike transferred his Krauss locomotive to Murrumba Downs in 2000. Little work had been done on the locomotive, other than an occasional coat of paint or rust preventative, since its time in open air storage began in 1967 and it was now showing signs of neglect.

Mike Loveday passed away soon after, and with his own health issues, Mr Chapman agreed to sell the Krauss to the Buderim – Palmwoods Heritage Tramway in 2004. It was subsequently removed to Wise's Farm at Maroochydore

PART 2: Assessment of the Object against Significance Criteria

STATEMENT OF SIGNIFICANCE

Locomotive – Krauss 0-6-2T Builder's Number 6854 of 1914

The history of the former Buderim Tramway Krauss locomotive B/No.6854 is well documented and is obviously inextricably linked to the Buderim – Palmwoods Tramway.

The history of the economic development of the Buderim District through the construction of the Buderim Tramway is a highly significant story in relation to the pioneering history of the Buderim District and the Maroochy Shire. The Krauss locomotive's association with the history of the Buderim Tramway and the history of the District itself is, a very significant factor and they cannot be separated from the Buderim District's history.

The Buderim Tramway and the Buderim Krauss locomotive demonstrate a very strong social link to the development of the Buderim District and along its route to Palmwoods. During its relatively short life it provided a transport solution that encouraged population growth and economic stimulus. The ability to economically transport local produce, especially packing cases of fresh fruit, for forwarding to the Brisbane Markets through the Queensland Railways link at Palmwoods station was important financially for local farmers. The promotion of Buderim as a day excursion and tourist holiday destination also had a significant economic impact on Buderim. Queensland Railways promoted these day excursions with their first excursion offered for the opening of the Tramway on the 18 June 1915 signifying the importance of this event. The improvement of roads and road vehicles, especially in the years just following World War 1 saw a diminishing of the Tramway's importance. Despite local ratepayers having to continue payments for the initial Tramway Loan (taken out by the Maroochy Shire Council in 1913) until 1971, the Tramway was still much loved by most of the local population.

The Provenance of the Buderim Tramway Krauss locomotive has generally been well documented with the owners and period of ownership all known.

The locomotive was significantly altered in 1936 when it was converted from 2 feet 6 inch gauge to 2 feet by Walkers Limited, Maryborough to allow its use on the cane tramway system operated by Gibson & Howes Ltd at their Bingera mill, Bundaberg. The coupling system was altered to suit the Bingera mill system. Strangely the Westinghouse air pump remained on the locomotive for some years though it was not required for use at the mill being removed later during its working life. Fortunately the overall profile of the locomotive including the boiler, side tanks, cab structure and bunker appear to have remained generally unaltered. The gauge conversion appears to have only affected the main frames with a six inch section removed lengthwise parallel to the mainframes to reduce the width and the axles being also reduced by six inches.

The condition and intactness of the Krauss locomotive before it was acquired by the Buderim – Palmwoods Heritage Tramway Inc. is considered detrimental to the overall significance.

The Buderim – Palmwoods Tramway members established a restoration plan within their financial means and in consideration of the data obtained, mainly from photographs, giving details of the original Buderim Krauss locomotive.

The Locomotive – Krauss 0-6-2T Builder's Number 6854 of 1914 is regarded as being of local significance. It meets the Primary significance criteria of historic, social and technical significance. It also meets the comparative criteria of provenance, rarity and representativeness, and interpretive potential.

PRIMARY CRITERIA

Historic

The Locomotive is considered as being of historical significance due to its association with the Buderim – Palmwoods tramway. As one of only two locomotives that plied the tramway responsible for both transport of produce and tourism, it is regarded as a key element of the economic development in the area.

The Buderim – Palmwoods Tramway was an important communication method between Buderim and Palmwoods before roads and motorised road transport began to take over.

Packing cases of fruit from Buderim were transhipped at Palmwoods for forwarding by Queensland Railways to the Brisbane Markets then located in Roma Street, Brisbane. The Buderim Tramway also transported sugar cane for forwarding to the Moreton Mill at Nambour as well as timber for sawmilling.

Passengers were also carried on the Tramway while Queensland Railways promoted day-trip excursions from Brisbane to Palmwoods and on to Buderim for tourist traffic.

Social or Spiritual

Buderim is considered to be one of the pioneer settlements on the Sunshine Coast. The 7 mile long Shire Tramway built by the Maroochy Shire Council linking Buderim with Palmwoods in 1914 encouraged a rapid increase in settlement and also popularised Buderim as a tourist destination for day excursions and as a holiday resort.

The Buderim Tramway was a significant social and cultural asset to the Buderim District and Palmwoods and was much loved by the local population. The association of this locomotive with the tramway means that the locomotive has social significance to the local region.

COMPARITIVE CRITERIA

Provenance

The Provenance of the Krauss locomotive is known and well documented. The Krauss Lokomotivfabrik, Sendling, Germany built this locomotive for their Australian agent, Diercks & Co, Melbourne following an order placed in 1913, by the Maroochy Shire Council, Queensland for the Buderim – Palmwoods Tramway. The locomotive arrived in March 1914, the second last Krauss locomotive to arrive in Australia before the outbreak of the First World War. The Krauss was used on construction work for the tramway and was the main motive power used until closure in 1935.

The *Nambour Chronicle 17 July 1936* reported the Krauss had completed the dismantling of the tramway and the rails had been forwarded from Palmwoods to the Moreton Central Mill at Nambour.

The Maroochy Shire Council accepted a tender of £120 (\$240) from the Queensland Machinery Company for the Krauss locomotive at its meeting in June according to the *Courier Mail 24 June 1936*.

Walkers Limited, Maryborough overhauled the Krauss locomotive and regauged it from 2 feet 6 inches to 2 feet to suit the track gauge of Gibson & Howes Ltd, Bingera mill at South Kolan, near Bundaberg where it commenced work during the 1937 crushing season.

The Krauss spent the next 24 years hauling harvested sugar cane from the farms to the mill before being retired from service in 1961.

The locomotive was stripped of parts before being sold to Scott Scrap Metals, Albion in Brisbane as scrap in 1967.

After being alerted by fellow narrow gauge rail enthusiast in Brisbane it was purchased by Mr E M Loveday of Mareeba.

The Krauss was stored for 37 years in the open in Brisbane, Woodford and then Murrumba Downs before being purchased by the Buderim Palmwoods Heritage Tramway in 2004.

Rarity or Representativeness

This locomotive is the largest Krauss built steam locomotive to have worked in Australia. It is the only surviving locomotive to have worked on the Buderim Tramway with the only other locomotive used on the Tramway, a Shay, built by the Lima Locomotive Works in the United States, being dismantled by 1935 although its boiler and some remains may be seen buried in an embankment in Palmwoods station yard.

There are several other Krauss built locomotives preserved in Australia and many more around the world either preserved or still in regular commercial use.

Condition/Completeness/Intactness/Integrity

The locomotive is regarded as having limited significance related to completeness and integrity. It has been substantially altered from its original configuration and has few original fittings left.

Following sale to the Queensland Machinery Company in 1936, the Krauss had major surgery when Walkers Ltd, Maryborough overhauled and converted it from 762 mm (2 ft 6 ins) gauge to 610 mm (2 ft) gauge to suit the cane railway system of its new owners Gibson & Howes Ltd, Bingera Plantation, South Kolan, near Bundaberg.

Before the Krauss locomotive was sold by Gibson & Howes Ltd to the Brisbane scrap metal merchant in 1967 it was stripped of all cab fittings, headlights and turbo-generator as well as all brass work such as injectors, bearings, whistle and safety valves. The motion work was cut off from the wheels by the expedient of an oxy-acetylene cutter and likewise the brake rigging was similarly treated. This left the locomotive as a basic shell.

When the Krauss locomotive finally came under the ownership of the Buderim – Palmwoods Heritage Tramway Inc in 2004 it was in poor condition having suffered many years of open air storage. The group transferred the locomotive to Wise's Farm at Maroochydore where they placed it under a shelter to assist in minimising further deterioration.

The Buderim – Palmwoods Heritage Tramway members since that time have made an attempt to restore the locomotive to what they view as original condition as it was on the Buderim Tramway although it is now 2 feet gauge rather than 2 feet 6 inches, as originally built. Detail enlargements taken from photographs were used to draw the parts to aid in replication.

Despite the changes from the original fabric and configuration, the long-established practice of removing and replacing parts and reconfiguration for different use mean that the locomotive is still regarded as intact. The sympathetic restoration carried out by Buderim – Palmwoods Heritage Tramway members means its condition is now very good.



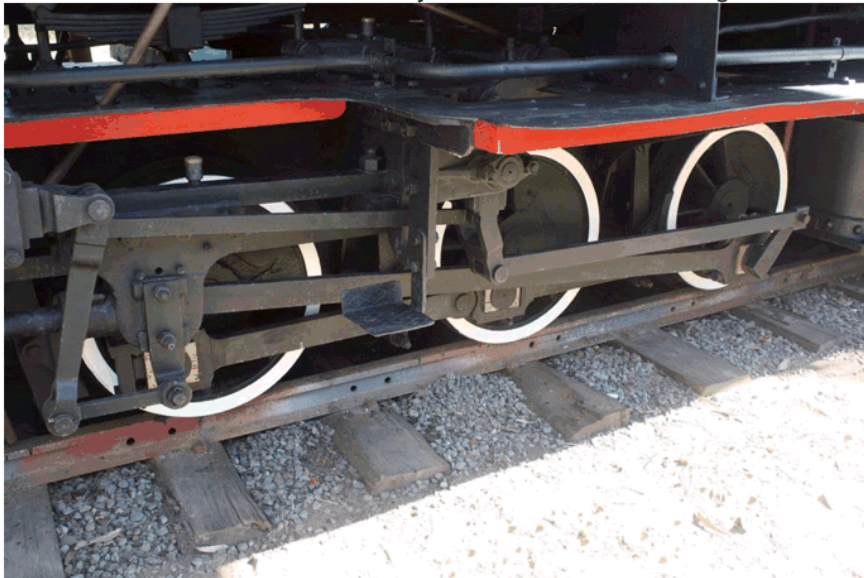
*Mock-up of a Westinghouse Pump as fitted to the Buderim Tramway Krauss locomotive at Wise's Farm, Maroochydore. 19 July 2016
Image: D J Mewes*



*Replica "chopper" coupling made from timber as fitted to the Buderim Tramway Krauss locomotive. 19 July 2016
Image: D J Mewes*



Replica cowcatcher similar to that fitted when the Buderim Tramway Krauss locomotive was built in 1914. 19 July 2016. Image: D J Mewes



Replica motion work on the Buderim Krauss locomotive with some parts made from timber. 19 July 2016 Image: D J Mewes



*Replica headlight on the Buderim Tramway Krauss locomotive. 19 July 2016.
Image: D J Mewes*



*Replica Builder's Plate as fitted to the Krauss locomotive from the Buderim Tramway as stored at Wise's Farm, Maroochydore. 19 July 2016
Image: D J Mewes*

Interpretive Potential

This Krauss locomotive has interpretive potential in Buderim representing a pioneering transport system, the Buderim Tramway. The tramway allowed the development of Buderim as a fruit growing area providing the transport of freight (mainly fruit and timber) from Buderim Mountain to Palmwoods where it

was transferred to the Queensland Government Railways destined for Brisbane. In addition, the Buderim Tramway was promoted as a day excursion, holiday and tourist destination.

Display of the Buderim Krauss locomotive in Buderim will enable the story of the Buderim Tramway to be interpreted with its links to the economic development and growth of Buderim and District. Appropriate display will allow a significant icon of Buderim's pioneering past to attract visitors to view and engage with the history of the area.

