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Project award winner: $2 million to $5 million project award for the Brisbane Valley Rail Trail (BVRT), Somerset Regional Council

The Brisbane Valley Rail Trail, a 157km long, off-road recreational trail is finished, with the final 27km recently completed by Somerset Regional Council. It is the longest trail in Australia and follows the disused Brisbane Valley rail corridor. Walkers, cyclists and horse riders can now experience the diverse rural landscape of the breath-taking Brisbane Valley.

The project is more than a successful engineering outcome – it has recycled a dormant rail corridor into an iconic, unique recreational trail that is attracting visitors and businesses to the Somerset region. This landmark project for Council was delivered on time and within budget.

The Brisbane Valley Rail Trail (BVRT) is an off-road, multi-use recreational trail that follows the disused Brisbane Valley rail line in South East Queensland. The 157km long off-road trail is the longest rail trail in Australia and provides walkers, cyclists and horse riders with a unique opportunity to experience the diverse rural landscape of the Brisbane Valley. The final 27km section, Toogoolawah to Moore (T2M), was completed by Somerset Regional Council in June 2018, after numerous rounds of unsuccessful funding election commitments, and finally realised through a collaborative funding push by the community, local and state governments.

The BVRT T2M is an example of collaboration at its best. The trail travels through the Somerset, South Burnett, Toowoomba Regional and Ipswich City local government areas linking the towns and communities in Wulkuraka, Fernvale, Lowood, Coominya, Esk, Toogoolawah, Harlin, Moore, Linville, Benarkin, Blackbutt and Yarraman.

The Brisbane Valley rail line was first developed as a branch line from the main Brisbane to Toowoomba line in 1884. The corridor winds its way up the Brisbane Valley from Ipswich to Yarraman, traversing farmland, forests, picturesque rural settings...
and country towns. The rail line was used to transport freight and passengers over the next 90 years. Rail transport ceased using the line in 1988. The corridor then lay dormant with the majority of the railway’s steel tracks and bridges removed and gradually replaced by overgrown grasses and weeds. The corridor remained wholly owned by the State Government with TMR responsible for the main head lease.

The reinvigoration of the Brisbane Valley rail corridor commenced in 1996, with the then Nanango Shire Council approaching the Queensland Government to open up and develop the rail trail for recreational use. The former Esk Shire Council (now Somerset Regional Council) was involved in these early negotiations (80% of the entire 157km corridor sits within Somerset Council’s boundary).

Nanango Shire Council was successful in securing TMR support and Queensland Government funding, and in 2006, the first stage of the BVRT was officially opened. This achievement was recognised by receiving The Queensland Outdoor Recreation Federation (QORF), Government Achievement Award (2006).

Fast forward to 2006, and the Queensland Government released the Brisbane Valley Rail Trail Plan, a long-term plan to upgrade the trail to help deliver a more relaxed, healthy and less stressful lifestyle for Queenslanders. This was a key component in the Government’s South-East Queensland Outdoor Recreation Strategy, and identified as a key regional outdoor recreation infrastructure project under the SEQ Infrastructure Plan and Program (2007-2026).

Over the next few years, incremental sections of the trail were completed. Funding for this work was limited and sporadic – opposing State Governments had different views on funding priorities and no clear plan and timeframe was confirmed for completion of the BVRT.

By 2014, the trail had been extended to Toogoolawah, with 130kms of the trail now complete. The largest section of the BVRT, 27kms between Toogoolawah and Moore, which sat squarely within Somerset Council’s boundary, remained in limbo. Labelled ‘too costly’ and ‘too difficult’, it was the longest section to construct and was technically challenging to upgrade. The corridor was so overgrown that to accurately scope the extent of the necessary works was virtually impossible. What was known however, was that any work on this section would require upgrading three major creek crossings, at least fifteen smaller creek crossings and a major bridge structure over Jimmy’s Gully.

The community’s interest in completing the BVRT became evident when a petition featuring 1,400 signatures was presented to the Queensland Deputy Premier’s Office in 2016. This was the second petition the community had prepared and public pressure was growing – the community realised the benefits completing the last 27km section would deliver for the region – a social media campaign was established and a series of cycling events to demonstrate the value of the BVRT as a tourism asset were undertaken.

Council, armed with the support of the local community, approached the State Government again and in 2017, was successful in securing $1.8 million to complete the final 27km section, and $2 million was earmarked to maintain the BVRT over the next 10 years. However, Council’s concept planning had identified that $1.8 million would only cover the upgrade of the three creek crossings and bridge structure – it would not provide for any work required on the paths.

Council identified they could contribute $100,000 towards the project, but no more. Whilst the State Government conveyed their desire for Council to
commence the project, Council could not – this was the trigger point for Council to investigate grant funding options. Council prepared a business case to secure an additional $1.55 million in funding from the Australian Government’s Better Building Regions Fund. The business case was solid – community support was evident, and the cost/benefit ratio confirmed the project’s benefits would clearly outweigh the delivery cost. However, the ‘design’ of the required works was high-level and very much in the concept phase.

The business case was submitted in July 2017 and in September 2017 the funding grant was approved. Council had successfully secured a total of $3.35 million to complete the BVRT T2M. However, grant funding was dependent upon construction commencing within 12 weeks and all works being completed by 30 June the following year – a nine month construction timeframe.

Despite the technical challenges and extremely tight delivery timeframes, construction of the BVRT T2M commenced on-site in December 2017. The project was overseen by Council, administered by GHD Pty Ltd and constructed by A&M Civil and Timber Restoration Systems. It was completed on schedule and within budget in June 2018.

The overarching objectives of the project were achieved plus much more:

- The region is benefitting from the delivery of world-class recreational infrastructure that is resulting in increased visitation to the region
- It’s recycled a dormant infrastructure corridor with long-term community and economic benefits to the region
  - Local residents have easy access to a multi-purpose recreational trail delivering health, social and cultural experiences
  - Employment growth was achieved during construction, and jobs relating to rail trail operations and in the tourism sector are now being created
  - The visual outlook of the corridor has been improved delivering benefits for both users, and adjacent property owners
  - The community’s profile is flourishing from increased public exposure due to the project
  - And Queensland’s reputation as a cycling tourism destination has been strengthened.

Stakeholder engagement
The BVRT T2M project is a shining example of the benefits of genuine stakeholder engagement. The local community played an integral role in delivering this project for the Somerset region. Their unwavering effort to harness the community’s support to complete the final section of the BVRT, resulting in two petitions to State Government, a social media campaign and regular interactions with Council and the State Government, is acknowledged by all involved in the project.

Council’s proactive stakeholder engagement approach, which centred around an honest and open dialogue with project funding partners, contractors and supporters, was a key element in its ability to deliver the project successfully on time and within budget.

The project’s stakeholders were far reaching and included Federal and State Government departments, Council staff and elected representatives, public utility providers, adjacent land owners, the local Somerset community (residents and businesses), the BVRT community supporters, and all members of the project team.

Community and economic contribution
It was clear from the outset that completing the final section of the trail would deliver a raft
of community and economic benefits to the Somerset and broader South-East Queensland community. By their very nature and location, rail trails are very effective recreational and tourism drawcards due the fact that there is existing or easily developed tourism infrastructure in or near townships along the rail trail. There are places to eat, places to stay, nearby destinations to explore. The best rail trails are located in highly scenic surrounds. The entire length of the BVRT, and particularly the final stretch between Toogoolawah and Moore, features an abundance of local history, and spectacular diverse landscapes that showcase the Brisbane Valley.

The business case concluded that at five years post construction it is estimated the Brisbane Valley Rail Trail would increase direct tourism expenditure in the region by $1.5 million per annum and as a result improve employment opportunities in the region.

The impact of the Brisbane Valley Rail Trail is expected to become progressively greater at ten and fifteen years post construction due to greater usage rates. At fifteen years post construction the Brisbane Valley Rail Trail is estimated to increase economic output in the region by $2.2 million per annum and support 58 jobs.

**Project sustainability**

The design and construction of the BVRT T2M was underpinned by a number of sustainability principles, most notably:

- Council’s objective to deliver excellence in project management to ensure that decisions made during the concept planning and business case phase of the project resulted in the construction of a community asset with a minimal ongoing maintenance cost to Council, and ultimately the local community as ratepayers.

- A strong commitment by Council’s project team to minimize the cost of the capital works. Council was proactive in seeking a commitment from the Queensland Government to maintain the corridor and infrastructure asset once complete. Council was successful with the Queensland Government pledging to contribute $2 million towards maintenance of the rail trail over the first 15 years following construction.

- Leveraging Council’s skill-base developed during the delivery of major flood mitigation works throughout the region (between 2011 to 2015), and capitalizing on opportunities to build workforce capacity and broaden Council staff’s skill-base.

- Council’s role in leading the growth and shape of a sustainable Somerset region for future generations – Council need to lead by example by incorporating sustainable practices through all of its developments and activities.

- Utilising the natural amenity and celebrating local history to create an asset that is appropriate to the area, is easy and attractive to access, and is embraced by the local community. These principles underpinned the project team’s commitment to ensure sustainable practices were delivered. Examples of this include:

  - Designing a fit-for-purpose, multi-use recreational trail that delivers long-term benefits to the Somerset community.
  - Utilising existing and recycled materials wherever possible during construction. Identifying and utilising the original substructure of the Jimmy’s Gully Bridge is demonstrated evidence that this was a key focus of the project team. Remnants of the original rail infrastructure is present throughout the corridor – this not only celebrates the cultural heritage of the area, it adds value to the user’s experience and naturally beautifies the infrastructure corridor.
  - Ensuring the design of bridge and crossing structures resulted in a functional, long-serving and sustainable infrastructure asset.
  - The engineering solutions devised for all creek and gully crossings provides the infrastructure with high levels of flood resilience. Time and effort spent on identifying the most appropriate solution for each location delivered a raft of environmental and sustainability benefits – crossings align with creek banks to reduce environmental impacts and will limit deterioration over time.

- All land owner issues were resolved before project completion - there are no outstanding land owner issues for Council to resolve or tackle in the future.

- Using low-cost, low-maintenance native shrubs that would have a high chance of establishing and require minimal maintenance visits by Council post-construction. Koala-friendly vegetation was also planted –
Council is committed to strong sustainable fauna practices in the region that help protect the local Koala population.

- The project management systems developed and deployed to manage the delivery of this project are being conveyed back to Council’s other project delivery teams, thus ensuring continued improvement and the sharing of knowledge.

**Regulator environment and environmental impact and management**

An integral part of Council’s role is to maintain and enhance the Somerset region’s natural assets, liveability and environmental credentials. The project team were committed to sustainable practices to meet the environmental needs of the project and the broader Somerset community. Environmental investigations were undertaken during the project’s concept planning phase which identified a range of issues requiring analysis and management. The key environmental impacts/issues identified were:

- Vegetation clearing - the extent of the vegetation clearing required was unclear upon project inception. However, it was well understood and was visually obvious that it contained 20 years of overgrown weeds and shrubs. Council was certain it did not want to remove any more vegetation than was absolute necessary.

- Protection of private property from potential weeds and pests traversed through the site by construction traffic and/or trail users - strict usage guidelines have been developed for trail users which is effectively managing the potential spread of weeds and pests, particularly via horses using the trail. The responsibility of weed and pest management through the corridor resides with the asset owner, TMR.

- Construction impacts to Ivory, Emu and Wallaby Creeks (location of the three creek crossings) and to Jimmy’s Gully (location of the new bridge structure) – in addition to considering the impacts of installing the new infrastructure, the team needed to ensure the design of the new structures were fit-for-purpose, cost effective, complementary to the aesthetics of the natural environment, maintained water flow and did not negatively impact the area’s environmental landscape.

- A considerable amount of energy was invested by the project team to safeguard the environmental integrity of the area’s waterways - soil types, steepness of the banks, existing rail/bridge infrastructure, anticipated water flows and end-user needs were also considered by the team.

- The removal of vegetation and opening up the corridor for use raised a potential privacy issue for adjacent land owners - as a result vegetation screening was installed along several sections of the corridor to shield the view to private dwellings from the road corridor. This vegetation featured native tree and flower plantings that were appropriate for the local environment and provided a suitable habitat for local wildlife, particularly Koalas.

- Input from cultural heritage stakeholders during the concept planning phase identified the requirement to protect the culturally significant and heritage listed Yimbun Railway Tunnel - this structure was built in 1910 and is 100m in the length and features local stone. The structure is visually one of the key features of the corridor that all project stakeholders agreed needed to be protected and celebrated. The project team liaised with the Queensland Department of Environment and Heritage Protection to ensure all cultural heritage regulatory requirements to preserve this valuable structure had been met. Strict construction processes were identified that were implemented and monitored at all times during the construction process.

- While the remnants of several timber bridges were dotted throughout the rail corridor alignment, the most significant of these was the Jimmy’s Gully Crossing Bridge. Jimmy’s Gully is steep and required a new bridge structure to complete the upgraded trail. Council engaged a specialist bridge engineer to inspect the bridge to determine the condition of the existing timber components. It was identified that the sub-structure (piles) were in reasonable condition, however, the superstructure (the deck) was in very poor condition. Armed with this information, Council explored opportunities to retain as much of the sub-structure as possible – this would reduce project costs but more importantly, would retain the structure’s heritage value.

**Project management**

To ensure the project was successfully delivered within cost,
time and budget constraints, effective and efficient planning and control of the project’s scope, program and budget was essential. Council invested significant time and effort in considering the most effective delivery methods for the construction of the project. Project risks and opportunities were identified early, with a strong emphasis on finding innovative and effective methods to overcome the challenges associated with delivery.

It was evident early that a collaborative working relationship would be required by all involved in the construction task – it was front of mind that several design elements, namely the engineering solutions required for the creek and gully crossings, were yet to be fully scoped and confirmed. The project team established a management reporting structure that ensured all governance, probity and reporting requirements were effectively met, both within Council and to State and Federal Government departments.

Council engaged GHD Pty Ltd early to help facilitate project delivery and administer the civil construction contracts. Council involved GHD in the preparation of the contract documentation and they were actively involved in the tender evaluation process.

The appointment of a single Council Project Manager from inception to delivery ensured that all components of project management were understood, controlled and effectively managed. Council’s Management Team was first hand listening to the community’s requests for action, was responsible for preparing the business case and securing funding from the Commonwealth Government. Council Project Manager then managed all aspects of project delivery, including the construction tender process and daily project management.

Attention to detail ensured that various engineering disciplines were closely managed to deliver an exceptional recreational infrastructure solution within a constrained footprint and under challenging conditions.

To ensure the project was delivered within cost and time constraints, effective and efficient program planning and control was essential. Project risks and opportunities were identified early, with a strong emphasis on achieving project innovations and sustainable features that would deliver cost benefits and result in an asset that is fit for purpose, value for money and future-proofed to provide long-lasting returns to the community.

Construction pre-start workshops ensured that all expectations about what the team was delivering was clear – setting clear expectations about the quality of the end product, but constraints and challenges the team were dealing with was essential. It is a testament to the successful delivery of the project, entirely by Council, that construction was officially completed on 30 June 2018.