

# **Engineering Heritage Australia**

## **75 Mile Dam**

### **Warwick**

### **Queensland**



## **CEREMONY REPORT**

**On the presentation of a**

**ENGINEERING HERITAGE MARKER**

**On 25 September 2025**

**At Warwick Railway Station**

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Engineering Heritage Queensland

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## **1. Introduction**

Some 20 invited guests attended a ceremony on 25<sup>th</sup> September 2025 at the Warwick Railway Station, Warwick to unveil a marker and Interpretation Panel awarding an Engineering Heritage Marker to the 75 Mile Dam located south of Warwick on the Warwick to Wallangarra Rail line.

The ceremony was organised by Queensland Rail who are the owners of the 75 Mile Dam and Engineers Australia Queensland Division. Representatives from these organisations and other invited guests from the community attended. Representatives from the Southern Downs Steam Railway also attended.

## 2. The Invitation and Run Sheet

### 75 Mile Dam – Engineering marker unveiling run sheet

|                |                                                                                                                                                                                |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>What:</b>   | Engineers Australia unveiling ceremony and morning tea event to recognise the engineering significance of 75 Mile Dam                                                          |
| <b>When:</b>   | From 11am, Thursday 25 September 2025                                                                                                                                          |
| <b>Where:</b>  | Warwick railway station, Lyons Street, Warwick, Queensland.                                                                                                                    |
| <b>Time:</b>   | 11:00am to 12:00pm approximately: <ul style="list-style-type: none"><li>• 11:00am – Formalities, remarks</li><li>• 11:25am – Photos</li><li>• 11:30 am – Morning tea</li></ul> |
| <b>Contact</b> | Lyndon James 0438 581 099                                                                                                                                                      |

### Background information

Engineers Australia (EA) has awarded Queensland Rail (QR) an engineering heritage marker for its 75 Mile Dam, the world's first concrete arch dam.

The dam was constructed in 1880 to supply water to steam locomotives. It is situated in a remote location, 32 kilometres from Warwick and is not accessible to the public.

In consultation with QR's Historian and Heritage team, it was decided to place the heritage marker/interpretation panel at Warwick station.

Queensland Rail will host EA representatives for an unveiling ceremony and morning tea at Warwick station on Thursday 25 September.

An invitation has been extended to the State Member for Southern Downs Mr James Lister MP to attend.

In addition, representatives from Southern Downs Steam Railway have been invited to attend.

Media have not been invited to attend – this is a non-publicised event.

| Attendees                                                                                                  |                                                                         |                     |            |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|---------------------|------------|
| <b>Dignitaries</b>                                                                                         |                                                                         |                     |            |
| 1. Mr James Lister MP – State Member for Southern Downs                                                    |                                                                         |                     |            |
| <b>Queensland Rail</b>                                                                                     |                                                                         |                     |            |
| 2. Gavin Anderson – Executive General Manager Regional Assets                                              |                                                                         |                     |            |
| 3. Greg Hallam – Historian, Marketing & Customer Strategy                                                  |                                                                         |                     |            |
| 4. Peter Osborne – Heritage Strategy, Property                                                             |                                                                         |                     |            |
| 5. David Reis – Customer and Stakeholder Interface Manager, Regional Assets                                |                                                                         |                     |            |
| 6. Lyndon James – Senior Adviser Stakeholder & Community Engagement, Brand, Reputation & Corporate Affairs |                                                                         |                     |            |
| <b>Engineers Australia</b>                                                                                 |                                                                         |                     |            |
| 7. Darren Beattie General Manager QLD                                                                      |                                                                         |                     |            |
| 8. Hinu Komene – Stakeholder Engagement Manager QLD                                                        |                                                                         |                     |            |
| 9. Andrew Barnes – Chair, Engineering Heritage QLD                                                         |                                                                         |                     |            |
| 10. Brian King – Secretary, Engineering Heritage QLD                                                       |                                                                         |                     |            |
| 11. Paul Coghlan – Member, Engineering Heritage QLD                                                        |                                                                         |                     |            |
| 12. Joan Coghlan – Member, Engineering Heritage QLD                                                        |                                                                         |                     |            |
| 13. Brian Beconsall – Member, Engineering Heritage QLD                                                     |                                                                         |                     |            |
| <b>Southern Downs Steam Railway</b>                                                                        |                                                                         |                     |            |
| 14. Kelvin Hutchinson – Chairman                                                                           |                                                                         |                     |            |
| 15. Representatives SDSR (approximately 9)                                                                 |                                                                         |                     |            |
| Time                                                                                                       | Action                                                                  | By                  | Duration   |
| 9:30am                                                                                                     | Bump in – Lyndon James                                                  | Lyndon James (QR)   |            |
| 10:00-10:40am                                                                                              | Catering and coffee van arrive                                          | Providers           |            |
| 10:45-11:00am                                                                                              | Guests arrive                                                           |                     |            |
| 11:00am                                                                                                    | Acknowledgement of Country and welcome to guests                        | Lyndon James (QR)   | 5 minutes  |
| 11:05am                                                                                                    | EA intro                                                                | Darren Beattie (EA) | 2 minutes  |
| 11:07am                                                                                                    | Historical information, brief description of the Marker program         | EA                  | 10 minutes |
| 11:17am                                                                                                    | Queensland Rail response                                                | Gavin Anderson (QR) | 5 minutes  |
| 11:22am                                                                                                    | Elected representative's remarks                                        | James Lister MP     | 3 minutes  |
| 11:25am                                                                                                    | Presentation, unveiling and photographs                                 | All                 | 5 minutes  |
| 11:30am                                                                                                    | Closing remarks, invitation to move to station platform for morning tea | Lyndon James (QR)   | 2 minutes  |
| 11:32am                                                                                                    | Morning tea                                                             | QR                  | 30 minutes |
| 12:02pm approx                                                                                             | Event ends                                                              |                     |            |

### 3. Presentations

#### Speech Notes – Paul Coghlan

##### The 75 Mile Dam

The first Queensland Railway from Ipswich to Grandchester was opened in 1859 and by 1867 was extended to Toowoomba with a branch line to Warwick. With booming tin mining around Stanthorpe the extension to the line to Stanthorpe was commenced in 1874. To provide water for the steam locomotives a dam was constructed above the railway line on Mineral Creek, approximately 20 miles from Warwick, called the 75 Mile Dam as it was 75 miles from Toowoomba.

##### Size

The dam was an arch dam 24.5 metres long by 5 metres high. Top thickness 1 metre, base thickness 2.8 metres. In 1901 it was heightened to 8 to 10 metres with vertical wall and 3 downstream buttresses. The 1880 dated cast iron plate on centre buttress was relocated from their original construction.

The dam relied on abutment reaction forces to resist sliding and overturning.

Reservoir capacity was 1295 cubic metres or 1818 cubic metres (conflicting information). It is of interest to compare it with the next arch dam built in Queensland in 1959-61, the Moogerah Dam - See Story Board.

##### Why Concrete

Concrete was a rarely used construction material in the late nineteenth century as cement had to be imported from England in barrels. Cement was not manufactured in Queensland till Circa 1911.

Dams of this size were usually built of stone masonry blocks and could have been considered for this dam as the bridge piers for the railway line were masonry stone blocks.

The decision to build in concrete was made by Henry Stanley, Chief Engineer for Railway Southern Division, subsequently the whole colony 1872-73, 1875-1901. The plans for the dams were signed by him.

However he could have been influenced by Charles Lambert Dupree (1845-1893), educated in Engineering in England, and coming to Queensland in 1869. He introduced the colony to concrete construction even by erecting his own house in concrete.

Dupree was responsible for the working surveys for the Warwick to Stanthorpe railway line. The tunnel and culverts were lined with concrete, all pointing to Dupree's role in choosing concrete for the dam.

Aggregate for the dam was obtained from the rock excavated from nearby railway tunnels. There was no need for steel reinforcing in the mass nature of the original dam. The 1901 vertical wall and buttresses were probably reinforced with railway lines as there was no steel reinforcing manufactured in Australia till 1911.

##### Water Tank

Although the dam was only 80 metres away and above the railway, feeding the steam engines with water was quite ingenious. A Water Tank was constructed beside the line, 775 metres down the range which allowed the tank to be filled by gravity through a 3 inch (7.5 cm) diameter pipe. The tank still stands.

It has been said that the gradient of the railway line at the dam site would have made it difficult for locomotives to restart from standing still after taking on water.

##### World's First Concrete Arch Dam

The claim to being the world's first concrete arch dam is based on scientific papers prepared by Professor Hubert Chanson (now Professor of Civil Engineering at Queensland University,) and D Patrick James. These papers study the construction of all the worlds early dams. The 1988 paper states the 75 Mile Dam could be the World's First Concrete Arch Dam.

Subsequent paper "The Historical Development of Arch Dams" states all the worlds arch dams prior to 1880 including Paramatta (1856) were cut stone masonry, thus 75 Mile Dam Warwick was the World's First Concrete Arch Dam.

Paul Coghlan



## 4. Media Items

No media or newspaper articles

## 5. Acknowledgements

Engineers Australia acknowledges the support, contribution, and agreement with Queensland Rail for recognising the engineering heritage value of the 75 Mile Dam and for the erection of the Interpretation Panel and Marker.

Engineers Australia wishes to acknowledge the work of Paul Coghlan (of EHQ) who undertook the research and drafted the Proposal, the successful Nomination and the design of the Interpretation Panel and Hinu Komene EA Qld for the organising of the ceremony and liaison with Queensland Railways.

Engineers Australia also acknowledges the important contribution and support from Queensland Rail staff for the ceremony.

Engineers Australia would also like to recognise the tremendous efforts of [Downs Explorer](#) (formerly Southern Downs Steam Railway) group for their voluntary work promoting the railway line and making available the historical connections. Their information can be found [here](#).

## 6. Photographs



The invited guests listen intently to the presentations at the Warwick Railway Station.



Lyndon James (QR)  
Master of Ceremonies



General Manager of EA Qld Division  
Darren Beattie outlined Engineers Australia  
and its role in recognizing engineering  
heritage.



EHQ Chair Andrew Barnes outlines the Engineering  
Heritage Recognition Program of Engineers  
Australia and the importance of such events as the  
award for the 75 Mile Dam.



Paul Coghlan outlines the engineering aspects of the 75 Mile Dam  
and the challenges in the construction of the dam in the late 19<sup>th</sup>  
century.





Gavin Anderson (QR) outlines the role QR undertakes in the maintenance of the Rail network.



The Interpretation Panel and Marker with L to R

Gavin Anderson  
Paul Coghlan  
Darren Beattie  
Andrew Barnes  
James Lister MP

Official photos taken on the day can be found [here](#)

**THE END**

Change Control

Version 30/10/25 Initial Draft 02. Amended photos, captions and added SDSC.