ENGINEERING & INFRASTRUCTURE SERVICES

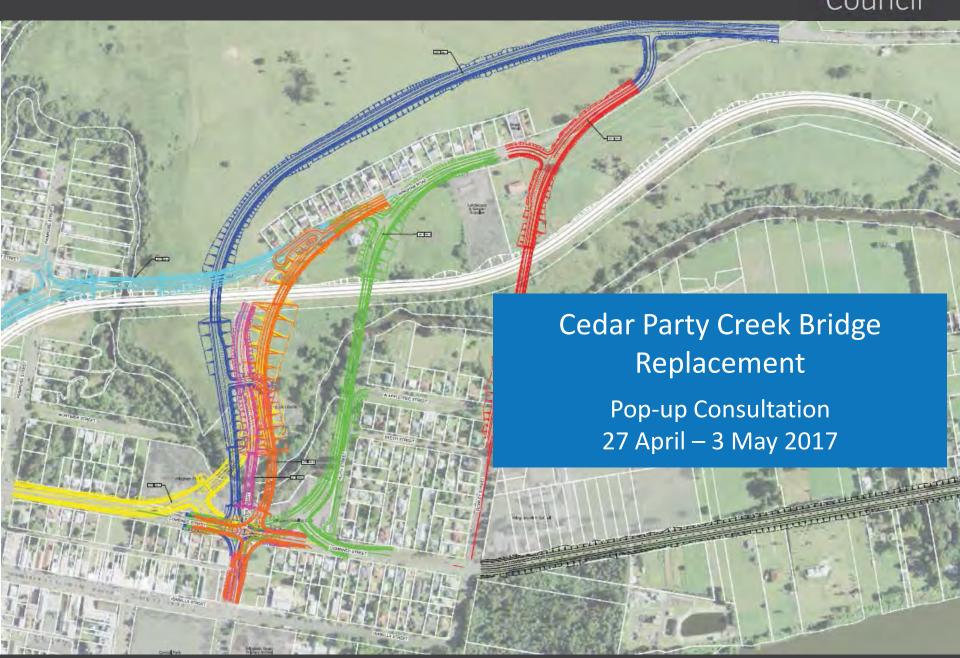
ATTACHMENT B

CEDAR PARTY CREEK BRIDGE REPLACEMENT – PREFERRED DESIGN OPTION

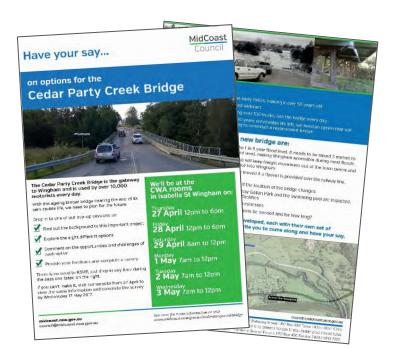
ORDINARY MEETING

28 JUNE 2017

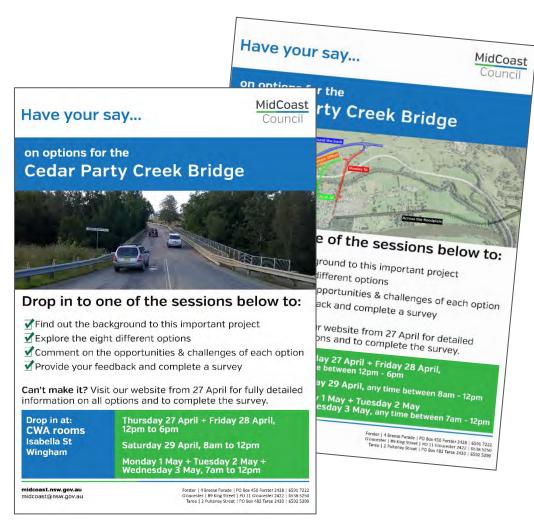




Flyers / Posters



A5 leaflets dropped in letterboxes across Wingham



A3 / A4 posters displayed in Wingham shops and businesses

Directional Signage





A-Frame signage outside pop-up consultation [CWA Rooms, Wingham]

Displays





Background: Current situation





- Timber bridge constructed in 1960s
- Deck replaced with a Stress Laminated Timber deck in 1994
- Replacement required in the next 10 years
- Services over 10,000 vehicles/day (100+ heavy vehicles)
- · Weight limits could be imposed to maintain safety

Via a **NSW - Fixing Country Roads** freight related grant, we have the opportunity now to investigate options and complete a design that allows us to apply for another grant to fund construction.









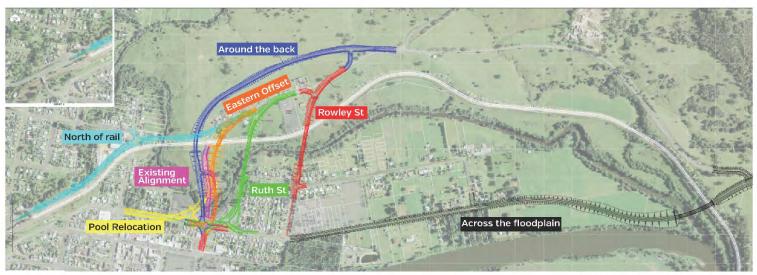
Key Considerations

- Important access to Wingham
- Confusing intersection priority right turn for heavy vehicles
- On a Regional freight route
- Currently impacted by flooding (averge 1 in 5 years)
- Adjacent to a level rail crossing (boom gates)
- Community impact during construction phase

To be considered for funding, a new bridge design will need to demonstrate improvements on the current bridge - it's an opportunity to address a number of key issues.



Background: Eight options and criteria



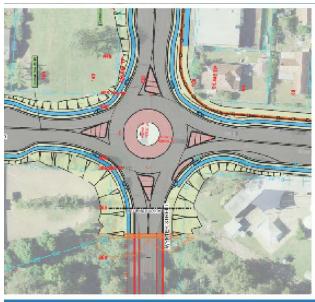
Eight options

- As part of the design and investigation phase, a range of options was narrowed down to eight.
- These form the starting point for the potential future replacement of the Cedar Party Creek Bridge
- Each comes with a complex set of opportunities and constraints.
- Take time to be guided through each option in detail and help us identify the preferred option.

Funding Criteria	Refurbish existing	Replace bridge
Improve flood access	X	\checkmark
• Improve freight route	X	\sim
 Provision to remove level crossing 	X	\checkmark
Improve intersection	X	\checkmark
• Improve an asset	\sim	\checkmark
Availability of grants	X	\checkmark



The Roundabout





- •All options that include the current Wynter St / Combined St intersection have a common roundabout design
- •The roundabout requires a large volume of fill on the low side and a large cut on the high side
- •Significant retaining walls would be required on the south / west corner of the roundabout
- •It is a single lane roundabout with a mountable central island for trucks.

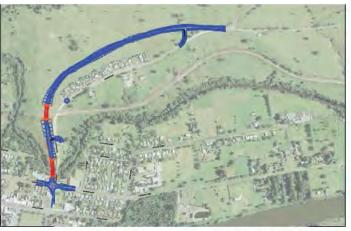


Around the Back

Timeframe: 11 months

Detours: Local detours to permit roundabout construction

Budget with rail overpass \$39.2M without overpass \$20.4



Pros

- Can be constructed offline (partially)
- Minimal impact to Chrissy Gollan Park
- Less visual/noise impact on existing residences
- Will enable future subdivision development

- Cons
- · Only an option if constructed with rail overpass
- · Additional 1km of road construction (\$)
- Staging of roundabout complicated/costly
- Impact of roundabout on properties (acquisition)
- · Visual impact and costly retaining walls



Rowley Street

Timeframe: 12 months

Detours: None Traffic control to permit road connections at Wingham Rd and Rowley St

Budget with rail overpass \$28.9M without overpass N/A



Pros

Cons

- · Provides for a neat and visually aesthetic solution
- Can be constructed offline
- Includes railway overpass

- · Diverts traffic past school and numerous residents
- Long and expensive bridge structure (120m)
- Requires upgrade to intersection of Rowley and Combined St
- Chrissy Gollan Park removed



Ruth Street

Timeframe: 12 months

Detours: None

Traffic control to permit road connections at Combined / Wynter St and Wingham Rd

Budget with rail overpass \$35.8M without overpass N/A



Pros Cons

- Constructed offline minimises disruption
- Removes a turning manoeuvre for majority
- Easier for heavy vehicles to move through town safer
- Includes railway overpass

- Takes traffic past Ruth St residents
- New road height approx. roof height
- Complicated long and expensive bridge structure [140m]
- Chrissy Gollan Park removed



North of rail

Timeframe: 11 months

Detours: Local detours to permit construction on Price St

Budget with rail overpass \$25.6M without overpass N/A



Pros Cons

- Decommission two existing level crossings
- Only requires one small bridge
- Unappealing town entrance - bypasses Wingham
- Diverts light vehicle traffic away from CBD
- Requires upgrade to Farquar Street for B Doubles plus acquisition/demolition of numerous properties
- Chrissy Gollan Park removed
- Primrose Street dissected [no access across rail]



Eastern Offset

Timeframe: 12 months

Detours: Local detours to permit roundabout

construction

Budget with rail overpass \$33.0M without overpass N/A



Pros

- Some of this project could be constructed offline
- Includes railway overpass

Cons

- Only an option if constructed with rail overpass (significant cost)
- Chrissy Gollan Park removed
- Major property impact (acquisition of bowling club and three lots)
- Roundabout staging complicated and costly



Across the Floodplain

Timeframe: 14 months

Detours: Traffic control required to permit Wingham Rd connection & construction along East Combined St

Budget with rail overpass N/A without overpass N/A



Pros

Can be constructed offline - minimal disruption

Cons

- Diverts traffic past school and residents
- Requires massive amount of fill (or viaduct) to cross the floodplain
- Unstable ground
- Flood prone / flooding issues



Preferred option 1: Pool relocation Preferred for traffic flow and safety

Construction timeframe: 10 months

Detours: No detour required

• Traffic control for around one month to enable

connections to new road

Budget with rail overpass \$29.0M without overpass \$19.1M





Pros

- Cost effective
- Attractive town entry
- · Best option for cars trucks to manoeuvre
- Minimal land acquisition / retaining walls
- Constructed offline option with least disruption to traffic
- Can be implemented without a bridge over the rail line

Cons

- Pool to be relocated (funded in this project)
- Some impact on Chrissy Gollan Park
- · Bridge located on a radius/extra width for turning lanes





Budget cost estimates

Bridge cost (length 102m) \$9.1M \$8.5M Roadworks Pool relocation \$1.5M



A replacement pool for Wingham?



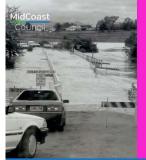
Outdoor 50m pool

Outdoor 25m pool + childrens play area

- Fixing Country Roads support the cost to relocate the swimming pool if this is the preferred option
- Swimming pool funding can not be more than a "like for like" replacement
- Pool estimate is \$1.5M to replace
- \$1.5M would provide either:
 - > a 50m 6 lane outdoor non heated swimming pool; or
 - > a 25m 6 lane pool with a covered children's wet play area

Spotlight on the pool:

- Total visitations per year = 17,000 (93 per day)
- Maintenance cost = \$50,000 per year
- Operating cost = \$140,000 per year
- Significant upgrades required to extend the life of the pool



Preferred option 2: Existing alignment

Preferred due to least impact on existing facilities

Construction timeframe: 12 months

Detours:

- 4 month detour for heavy vehicles via The Bucketts Way and Gloucester Rd (24km, 21 mins) • Light vehicles via temporary bridge to Mortimer St.
- · If in flood, detour via Tinonee if Bight Bridge is
- passable (otherwise Burrell Creek)

Budget with rail overpass \$32.1M without overpass \$18.4M



Pros

Cost effective

- Minimal change to the current approach to Wingham
- Can be implemented with or without a bridge over the rail line

Cons

- Significant impact on traffic during construction
 - > Temporary bridge crossing connecting to Mortimer St for light vehicles for 6 months+
 - > Detour for semi-trailers and B-doubles via Gloucester Road for 6 months+ (additional time and running costs, deterioration of detour route)
- Visual impact retaining walls and full concrete roundabout
- More difficult for trucks to manoeuvre
- Impact of roundabout on properties
- Impact to Chrissy Gollan Park





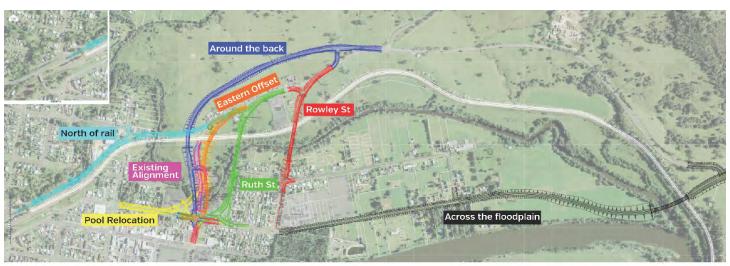
Budget cost estimates

Bridge cost (length 88m) Roadworks

\$7.3M \$11.1M



Next Steps



- Community consultation 27 April to 3 May 2017
- Complete survey:
 - > at consultation
 - > online at www.midcoast.nsw.gov.au/CedarPartyCreekBridge
 - > via hard copy at our Taree Customer Service Centre or Taree or Wingham Library
- Survey collation and analysis of community feedback May 2017
- Report to Council to endorse preferred option June 2017
- Proceed to detailed design for the preferred option July 2017
- Complete design end of 2017
- Seek grant funding opportunities for construction 2018