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ABSTRACT TITLE	SH25A Taparahi Bridge – Accelerated Design and Construction							
(no more than 10 words)								
PROJECT NAME (if	SH25A Taparahi Bridge							
relevant)								
THEME (tick 1 from list)	1. Bridge Analysis, Design and Assessment YES							
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	3. Bridge Techr							
	4. Bridge Asset							
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Choose one or more keywords appropriate to your abstract from the list					lifecyc	le costs		
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SH25A Taparahi Bridge - Accelerated Design and Construction

Abstract Overview: Provide a 100 word overview of your presentation below. If accepted, this short paragraph will be published on the program to promote your presentation.

State Highway 25A Taparahi slipped in late January 2023 following a large rainfall event. The 115m long, 20m deep slip severed a vital connection between Kopu, Hikuai, and the wider Coromandel region. To quickly reconnect the communities required an innovative, collaborative approach.

The final solution involved a 124m long, 3-span steel composite girder bridge, and what makes this project truly remarkable is the accelerated timeline - from award to an operational highway in less than 7 months, a feat that typically takes up to 24 months.

ABSTRACT TEXT (*A* maximum of two images is allowed)

Abstracts are to be a maximum of 300 words and should briefly outline the main features, results and conclusions as well as their general significance, and contain relevant references if necessary.

State Highway 25A Taparahi slipped in late January 2023 following a large rainfall event. The 115m long, 20m deep slip severed a vital connection between Kopu, Hikuai, and the wider Coromandel region. To quickly reconnect the communities required an innovative, collaborative approach. This led to a joint effort by NZTA, McConnell Dowell, Fulton Hogan, Tonkin+Taylor, and Beca to bring new thinking in how to design, and construct a reliable solution. The objective of the team was to open the road as quickly as possible.

The final solution involved a 124m long, 3-span steel composite girder bridge, and what makes this project truly remarkable is the accelerated timeline - from award to an operational highway in less than 7 months, a feat that typically takes up to 24 months.

A key approach to this rapid delivery has been focused on adopting a Design for Manufacture and Assembly (DfMA) approach to the design and construction of the bridge. The DfMA approach aimed to maximise off-site works and minimise on-site construction with the objective to gain benefits in programme, risk reduction, health and safety, environmental impact, and quality. Standardised bridge components were developed with early material decisions to allow for prompt procurement, modular construction, and offsite manufacturing, minimising both time and costs and improving construction safety. An innovative example of this approach was to use a full-thickness precast concrete bridge deck unit system without an in-situ topping, which significantly reduced onsite construction activities, resulting in time savings, improved quality, and improved construction safety with less working at height.

This paper will cover the key innovations, methods and lessons learned from the project that resulted in increased productivity, reliability, quality, and the successful delivery in a record setting programme.

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PRIMARY RESENTING AUTHOR BIOGRAPHY (100 words):

Enter the bio for the primary presenting author. Limit to 100 words. Please note that bios for co-presenters will be collected at a later date if the abstract is accepted.

Yes

Liam is a Technical Director in the Beca bridges and civil structures team based in the Beca Hamilton office. He has 15 years of experience in the design, assessment, and construction of civil structures and bridges. Liam has worked on multi span viaducts, steel bridges, prestressed and post-tensioned concrete bridges, steel arch bridges, retaining walls, buried structures, culverts, bespoke footbridges and other civil structures. Liam was the bridge structures lead on the SH25A Taparahi Slip Remediation project where he led the new bridge design in an extremely fast paced design and build procurement model.

