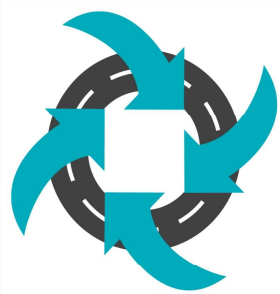


FBB Research at University of the Sunshine Coast

Greg White, Director, Airport Pavement Research Program

PhD, MEng, ME, MTech, BE(Civil), CPEng, MIEAust, RPEQ

University of the Sunshine Coast



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University of the Sunshine Coast

Mooloolaba, Sunshine Coast, Queensland

Commenced in 1996

Now 20,000 students across eight campuses

Major campuses at Mooloolaba and Moreton Bay

Law, Nursing, Paramedics, Engineering and Science



Airport Pavement Research Program

Established in 2016

Currently funded until 2026

Supported by Defence and private airports

Practical and applied research

Thickness design

Sustainable materials

Runway friction



Airport Pavement Research Program

Developed a specification for airport asphalt

Developed a specification for airport sealing

Expanded the asphalt specification for stone mastic

Introduced RAP to airport asphalt

Developed a DRAFT specification for airport FBB



FBB Production and Curing Comparison

Tom Weir (Defence) seconded to USC in 2019

Compared nominally identical FBB

Laboratory produced

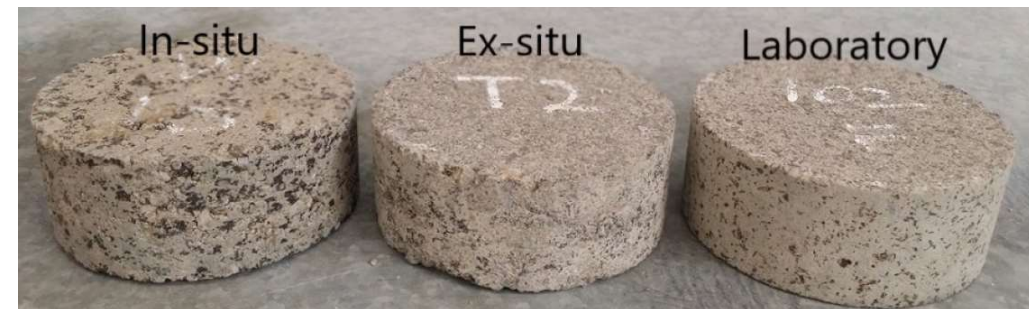
In-situ stabilised

Pugmil produced

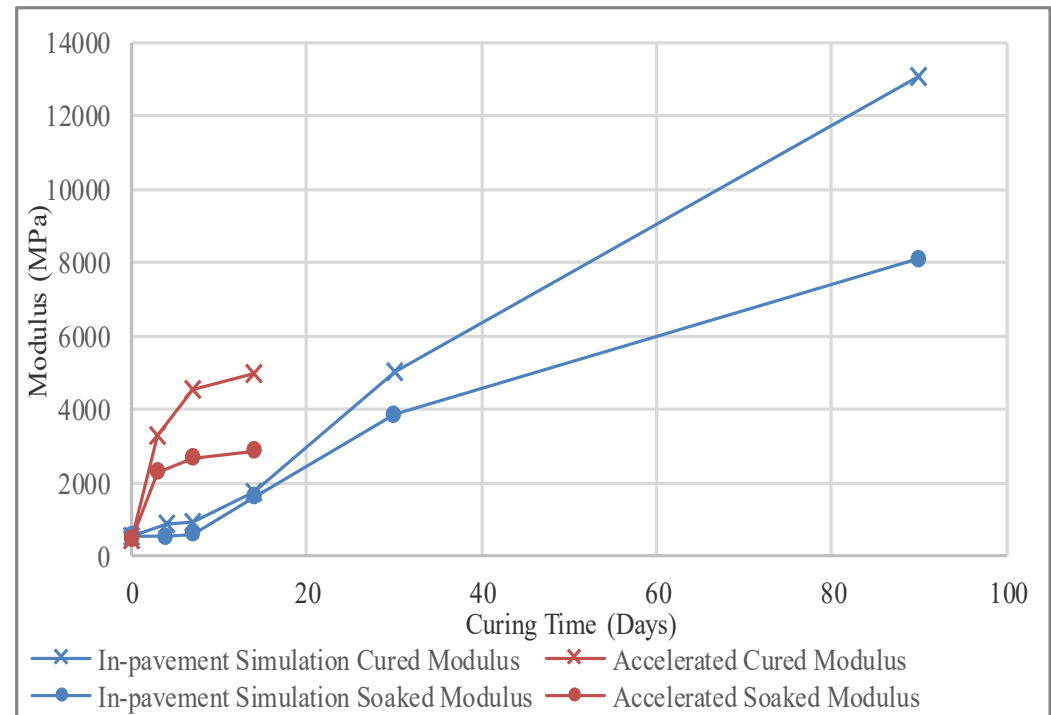
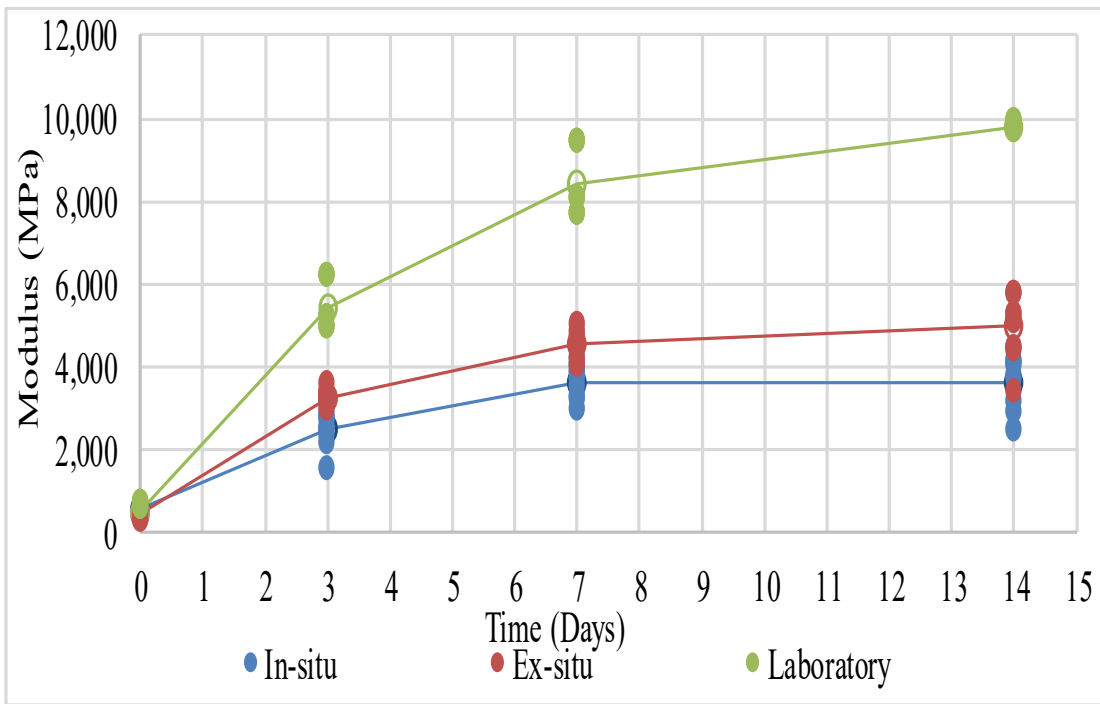
Compared modulus gain with aim

Laboratory oven

Simulated pavement



FBB Production and Curing Comparison



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FBB of Marginal Materials

Roberto Espinosa (Fulton Hogan)

Laboratory produced and cured FBB

Produced FBB with

- Standard gravels

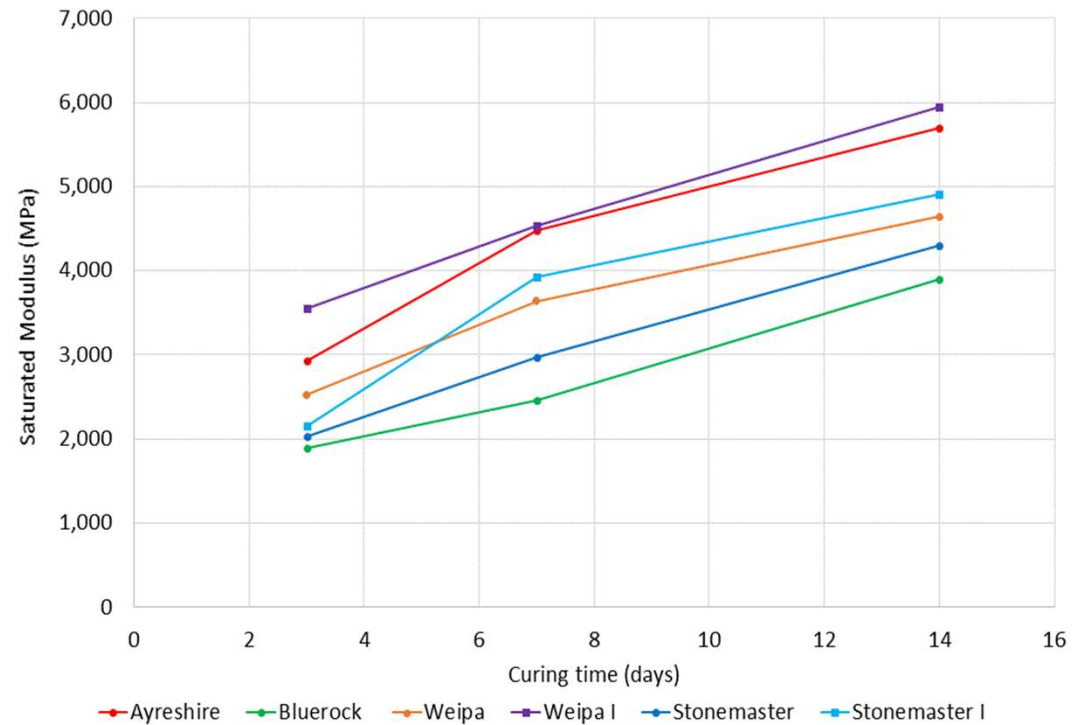
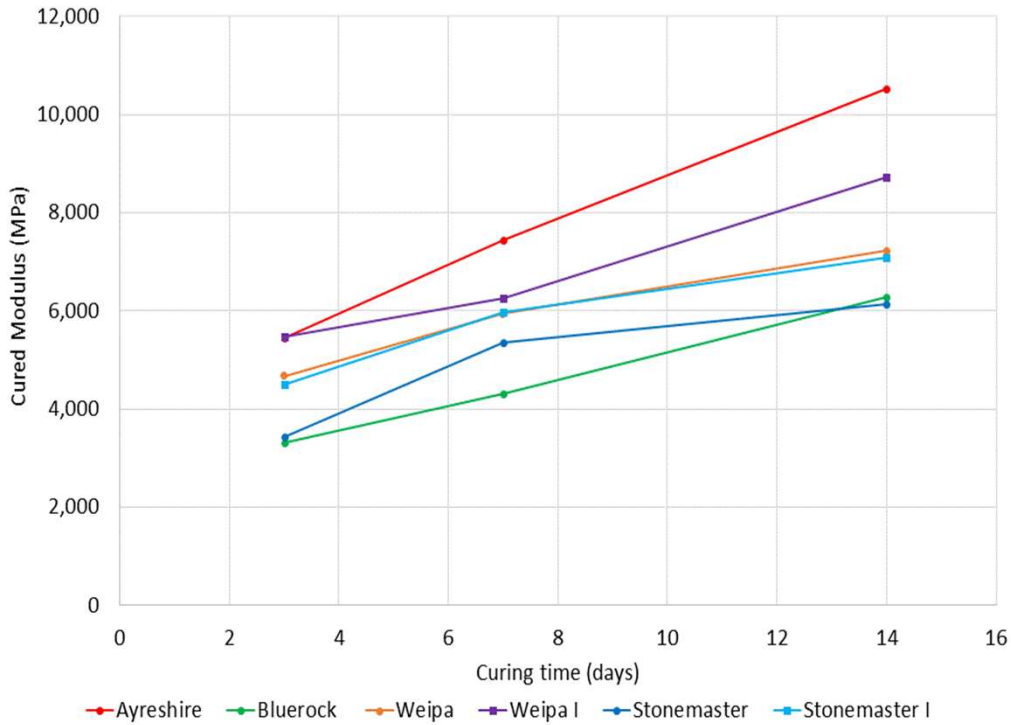
- Marginal gravels

- Improved marginal gravels

Compared soaked and cured modulus after 3, 7 and 14 days



FBB of Marginal Materials



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FBB Specification for Airport Pavements

Covering insitu/pugmil production and paver/grader construction

Outcome focussed

Based on best practice (SRA) specifications

Airport requirements incorporated

- Surface texture regulations

- Surface level and grade regulation

- High degree of compliance testing

Pilot project at Merimbula Airport in 2022



FBB Specification for Airport Pavements

Lessons learnt from Merimbula

You can drive a steel rod through FBB to survey the 'floor'
But not in the wheel paths

Airports work on grid based surveying
Road contractors and surveyors do not

Bitumen dosage tolerance was too high
Contractors target between the nominal and lower limit values



FBB Specification for Airport Pavements



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Thanks for having me.....



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