

# Case Study

## Soil Amelioration

**Bruce Highway Upgrade – Caloundra Road to Sunshine Motorway (CR2SM)**  
 Fulton Hogan Seymour Whyte Joint Venture

**\$812.95M**

Project Value

**\$1.37M**

Contract Value

**Potential Savings to Client**  
**\$2.88M**



**65%**

cost saving compared to importing topsoil



**550 tons**

less carbon emissions due to reduced truck movements



**130,000m<sup>3</sup>**

of material beneficially reused onsite instead of importing material

### Project description

The project involves upgrading the Bruce Highway to six lanes between Caloundra Road and the Sunshine Motorway. This includes major upgrades to both interchanges and the delivery of a two-way service road for local traffic on the western side of the highway between Steve Irwin Way and Tanawha Tourist Drive. CR2SM will transform the Caloundra Road interchange into Australia's first Diverging Diamond Interchange (DDI).

### The problem

The project forecast to strip and stockpile approximately 130,000m<sup>3</sup> of highly variable and very wet topsoil (in some areas) during road upgrade activities. The project required 90,000m<sup>3</sup> of MRTS16 specification topsoil for landscaping reuse.

Due to extremely high rainfall, some stripped topsoils had been stockpiled wet and the soil types varied dramatically across the site. The risk to the project was not being able to produce the required volume of compliant topsoil.

There was also a risk due to the change in waste legislation with respect to contaminant concentrations that may have incurred additional costs for unsuitable material disposal.

Ongoing high rainfall and an extremely large quantity of soil amelioration to be done in a short space of time meant there was a risk that self-performing these activities would not meet program or quality constraints.

As with all projects of this nature, budget was tight and they were seeking innovative solutions to do 'more' with less.



### Our solution

As the only contractor with experience completing soil amelioration projects of this volume and dealing with wet soils, SoilCyclers was an obvious choice. We were able to highlight risks to the project that could potentially compromise the outcome of permanent works. We proposed economical strategies to mitigate these risks during our tender prior to project award.

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In addition to soil amelioration, we worked with the environmental team to identify value for money options. By utilising site won mulch into the topsoil, provided both cost savings and a reduction in risk by reusing site materials.

### **Benefits to the client**

By recycling their site soil, CR2SM created a higher quality topsoil product for 35% of the cost of importing topsoil as well as reducing the cost of disposing of 90,000m<sup>3</sup> of unsuitable material. We estimate potential savings on this alone could be in excess of \$2.5 million.

By incorporating site won mulch through the soil screening process instead of importing soil conditioner, we potentially saved the project an additional \$378,000, bringing the total forecast savings generated by onsite recycling to \$2.88 million.

By costing the project appropriately, identifying opportunities to reduce the risk of importing potentially contaminated materials and working together to promote cost savings, we have cemented our reputation as a commercially astute subcontractor that communicates well and focuses on 'best for project' and 'best for client' outcomes.



*“SoilCyclers have been professional to work with from day one. They have a strong safety culture, they are competent and honest. Because they know their business so well, we can make informed decisions about our works. Some subcontractors focus on cubic metres and costs, however SoilCyclers focus on the outcome.”*

Dallas Frazier, Senior Environmental Coordinator and Landscape Representative, CR2SM