



Laying and compacting the first layer of mechanically stabilised layer on the subgrade



Roads, Pavement
& Surfaces
Nº 487

Booth Transport Storage Facility Pavement

📍 Tasmania, Australia

CONSTRUCTED IN 2021

Benefits

Reduce pavement thickness by 40%

in areas where subgrade was
unexpectedly soft

Effective mechanical stabilisation

helps maintain original
pavement design across various
subgrade strengths

Timely construction

without the need for removal
& replacement of low
strength subgrade

Bridging various subgrade strength with ease

Soft subgrade was encountered unexpectedly at Booth Transport's container storage facility during construction that required a thicker pavement. Incorporating Tensor stabilisation geogrid, the pavement thickness was maintained as per the original design.

CLIENT'S CHALLENGE

Booth Transport needed assistance with a heavy-duty pavement solution to expand their existing container storage facility in Tasmania that would be trafficked by container-handling forklifts with axle loads of 80t. The consultant had designed the pavement based on CBR 9% as obtained from the soil investigation. However, during the construction, the actual subgrade CBR was 7% and some soft spots with CBR 2.5% were encountered which required a thicker pavement.

TENSOR SOLUTION

Together with our distributor, Geofabrics Australasia, Tensor proposed a solution using Tensor stabilisation geogrid to the client which maintained the original pavement thickness. Tensor mechanically stabilised layers (MSL) incorporating Tensor stabilisation geogrid were constructed which saved around 40% of the thickness than that proposed without a geogrid. Compaction testing of the granular layers was conducted and it was found that the MSL provided consistent results, even with variable subgrade strength.