

Macro Texture of Skid resistant Asphalt



SAFETY SOLUTION

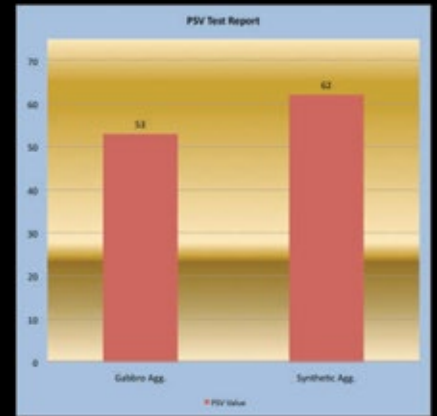
For many years there were recurring failures at junctions/traffic lights on major highways due to deformation/rutting. The solution to this was to replace these junctions with paving blocks. However the problem with paving blocks is that they have very low level of skid resistance, which creates a hazard in areas such as junctions where heavy braking is required. This problem is exacerbated at times of rain or heavy condensation.

Nass Asphalt looked to resolve this matter by not only making an asphalt that was resistant to rutting but making one that had much improved properties regarding skid resistance not just when compared to paving blocks but also to GW20 TM5 Conventional Asphalt.

In the first instance we had to choose a grading envelope which would give us the required macro texture. When we had the grading design for the macro texture we then went on to do the designs on the bitumen modification to ensure that the asphalt could resist the high stresses experienced at major junctions. (At a later stage we also found a synthetic aggregate that had improved PSV micro texture properties).



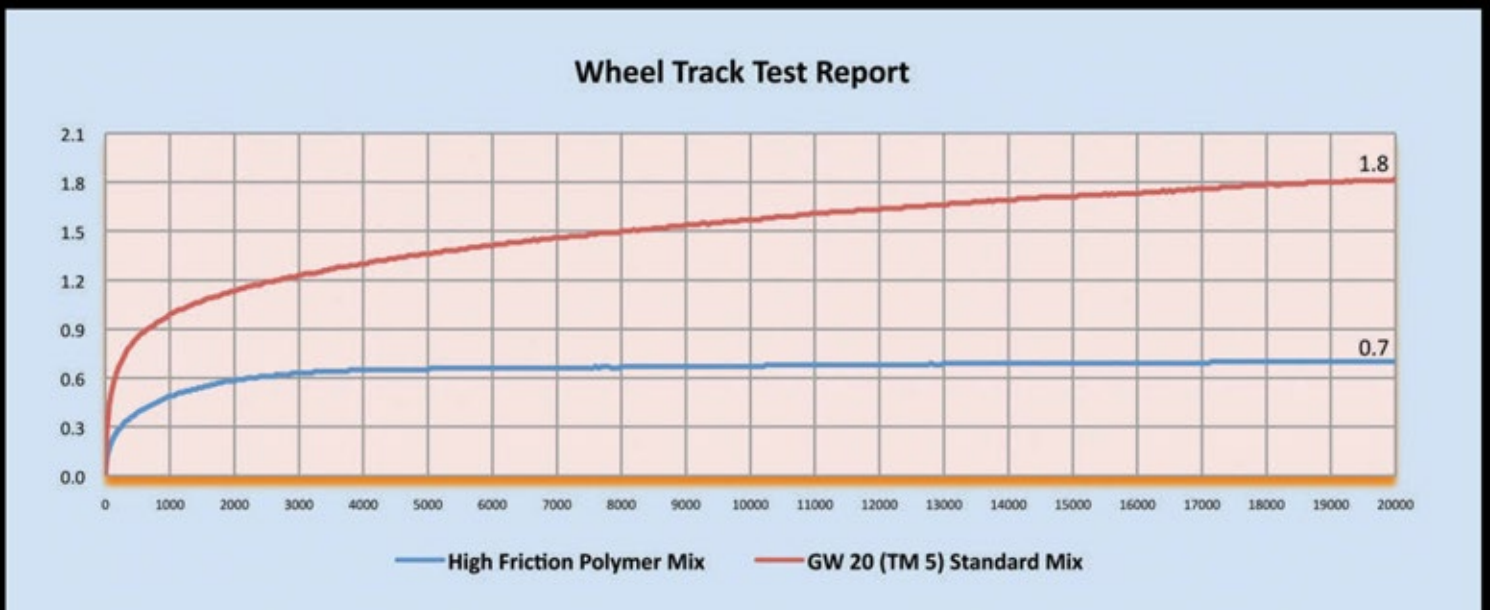
Polished paving blocks at Juffair traffic light.



SAFETY SOLUTIONS

The next stage was to carry out trials on the mix. We needed an area which experienced high levels of stresses from heavy vehicles similar to that experienced at junctions. We chose the roundabout and its approaches on Dry Dock Highway adjacent to the Delmon concrete factory.

The asphalt paving layer was 40mm although it is believed in many application this could be reduced to 35mm possibly even 30mm.



The area has now been placed for 20 months and despite the number of trucks with aggregates, concrete and asphalt using this roundabout it has maintained its integrity and texture. Our regular tests with a straight-edge on this area show that there is absolutely no signs of rutting occurring.