## The Quality Pathway - Defect Avoidance

## MORGAN SINDALL CONSTRUCTION

## Roads / Hardstandings - Macadam

To facilitate this ambition of getting the quality right, these checks should take place:

- Ensure formation suitable and to specification, (proof rolling / vane, etc.)
- > Have all services / ducts and drains required been installed?
- > Determine which materials need frost susceptibility certificates. This test can take several weeks
- Ensure capping is to specification, material thickness, moisture content, compaction, (proof rolling / CBR etc.)
- > Ensure sub-base to specification, material thickness, moisture content, compaction, (proof rolling / CBR etc.). Is the surface tolerance compatible with the overlying layers?
- > 'Type 1' material requires grading certificate
- > Consider changing to a higher quality material to allow continuity in poor weather
- Compaction of materials other than Type 1 requires close control of moisture content
- Is the tarmac to be machine or hand-laid? Hand lay can be very variable
- ➤ Is the wearing course suitable for its application? Is the thickness compatible with the size of aggregate? Seek guidance
- > Check grading and binder contents of base course and wearing course
- ➤ Check delivery and laying temperatures of bituminous materials. Delivery base 150/195°C. wearing 160/195°C approx.
- ➤ Laying base 110°C, wearing 130°C approx. Check the specifications and BS.
- > Beware the cooling effects of wind
- > Check that the preparation of oil joints in base and wearing is correct and that joints are offset a min of 300mm from those below
- > Ensure compaction is to the specification
- > Check Polished Stone Value (PSV) and Aggregate Abrasion Value (AAV) of chippings and aggregate
- > Ensure adequate spread of chippings in hot rolled asphalt (usually 10-14 kg/m)
- Also check embedment inadequate embedment can cause plucking out
- > Check that all edge joints have been cut properly, cleaned and tack coated
- $\succ$  Check that the bituminous thicknesses have been checked by dipping
- Ensure Marshall Asphalt equipment has been calibrated

