

## Moisture Sensitivity Protocol

Have other operators done specific moisture sensitivity testing of HMA with the HVS?

➤ No

Does a protocol exist?

➤ No

If not, what should a test plan include?

- Independent test or with rutting or fatigue test:
  - Rutting test but at lower temperatures (20-50°C).
- Section construction; poor compaction:
  - Poor, but not outside the bounds of reasonableness.
- Instrumentation:
  - P-SPA
  - RSD
  - V-meter
  - No MDDs
  - Profilometer
  - Lightweight FWD
  - No GPR
  - Permeability
- Loading:
  - 40kN
- Trafficking pattern:
  - Uni-directional
  - Bi-directional?
- Wander pattern:
  - Restricted wandering
- Temperature:
  - 30-40°C range
- Water application; when, how much, how applied:
  - At start of test
  - Enough water for the tire to pick up (thin film)
  - Pre-soak with dam to build up water
- Section modification; drilling, sawcutting:
  - If pre-soak is ineffective, consider drilling or sawcutting
- Expected failure mechanism:
  - Stripping, cracking and rutting.
- Failure criteria:
  - 25mm rut, plus visual inspection and cores
  - Stiffness reduction measured by P-SPA or lightweight FWD
- Associated laboratory testing:
  - Hamburg
  - Permeability test
  - Lottman test
  - Water conditioned flexural fatigue
  - Surface energy test
  - Nottingham moisture sensitivity test

Dave Jones will write up a protocol for circulation. Feedback to be sent to Dave.