

HYDRAULIC PUMPING TEST REPORT

PaveVent - Pothole Relief Device



PaveVent
Pothole Relief Device



TEST DATE:
3rd May 2026



TEST COMPLETED BY:
PaveVent R&D Team



SAMPLE REFERENCE:
HP-TEST-001



TEST EQUIPMENT:
Hydraulic Tank
(Pumping Simulation)

1 OBJECTIVE

To evaluate the performance of PaveVent Pothole Relief Devices under hydraulic pumping conditions, simulating water-saturated sub-base environments.

The test aimed to determine:

- Resistance to hydraulic pressure build-up
- Ability to relieve trapped water
- Behaviour of fines/slurry under load
- Structural stability under agitation

2 TEST METHOD

- Transparent tank used to simulate saturated ground conditions
- Layered system constructed:
 - Sand base layer
 - Coarse aggregate layer
- PaveVent device installed within system
- Water and slurry introduced to replicate pumping conditions
- Manual pressure applied to simulate traffic-induced agitation
- System observed for:
 - Water movement
 - Slurry displacement
 - Drainage behaviour
 - Retention of structural integrity

4 KEY OBSERVATIONS



Hydraulic Activity

Water and slurry mobilised under applied pressure, replicating real pumping behaviour.



Drainage Performance

Water visibly migrated away from the central area, indicating pressure relief.



Slurry Behaviour

Fines dispersed rather than accumulating beneath the surface layer.



Structural Integrity

No movement or displacement of the device observed during testing.

3 EVIDENCE / RESULTS

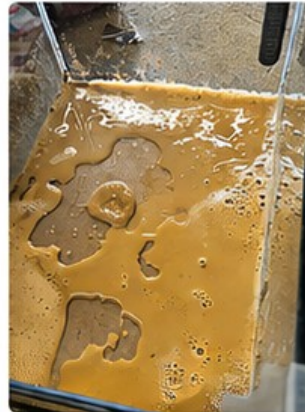
TEST SETUP – LAYERED SYSTEM



ACTIVE HYDRAULIC PUMPING



SLURRY DISPERSION & FLOW PATHS



5 CONCLUSION

The hydraulic pumping test demonstrates that the PaveVent system effectively relieves water pressure under saturated conditions.

This indicates:



High resistance to hydraulic pressure build-up



Active drainage during loading conditions



Reduction in slurry-driven pavement failure



Suitability for waterlogged environments

OVERALL CONCLUSION:

All tested configurations successfully demonstrated the ability to relieve hydraulic pressure and manage water flow under saturated conditions. The PaveVent Pothole Relief Device is considered suitable for mitigating pumping-related pothole formation in real-world applications.

6 RECOMMENDATIONS / NEXT STEPS



Conduct cyclic loading under saturated conditions



Measure flow rates and pressure reduction



Benchmark against non-drainage control systems



Validate performance in field trials and water-affected roads

Note: This is a simple test conducted in a laboratory environment for observational purposes. Further controlled testing in real-world conditions is recommended to validate long-term performance.