



EnviroShield

Pavement preservation
emulsion treatment

Product insights guide

March 2026

Road 
Science

Extend pavement life

EnviroShield is a high-performance surface treatment designed to extend the life of aging asphalt and chip seal surfaces that are beginning to fret and ravel.

An ideal cost-effective and durable solution – especially for residential street maintenance programmes and airport runways.

PROPERTIES



USED FOR



Chip Loss



Micro-cracking



Ravelling



Oxidation
Resistance



Waterproofing

ENVIRONMENTS



Airports



Rural



Residential

Pavement deterioration

When bitumen oxidises, it becomes brittle and loses cohesion, reducing the pavement's ability to retain aggregate and resist cracking under load. As the surface deteriorates, material is lost, waterproofing is compromised, and the pavement begins to fail.

EnviroShield is a light application, low-viscosity emulsion applied with a skid-resistant sand. It locks up the pavement surface, restoring cohesion and reinstating essential waterproofing.

Asphalt

Aged asphalt



Aged asphalt treated with EnviroShield

Chip seal

EnviroShield benefits

- Extends the life of aging asphalt and chip seal surfaces
- Quieter than chip seal
- A smooth ride and more cost-effective than asphalt
- Maintains skid resistance
- Improves aesthetics
- Rapid curing
- Durable
- Resistant to oxidation
- Delivered by Downer's specialised emulsion preservation (SEP) team operating nationwide

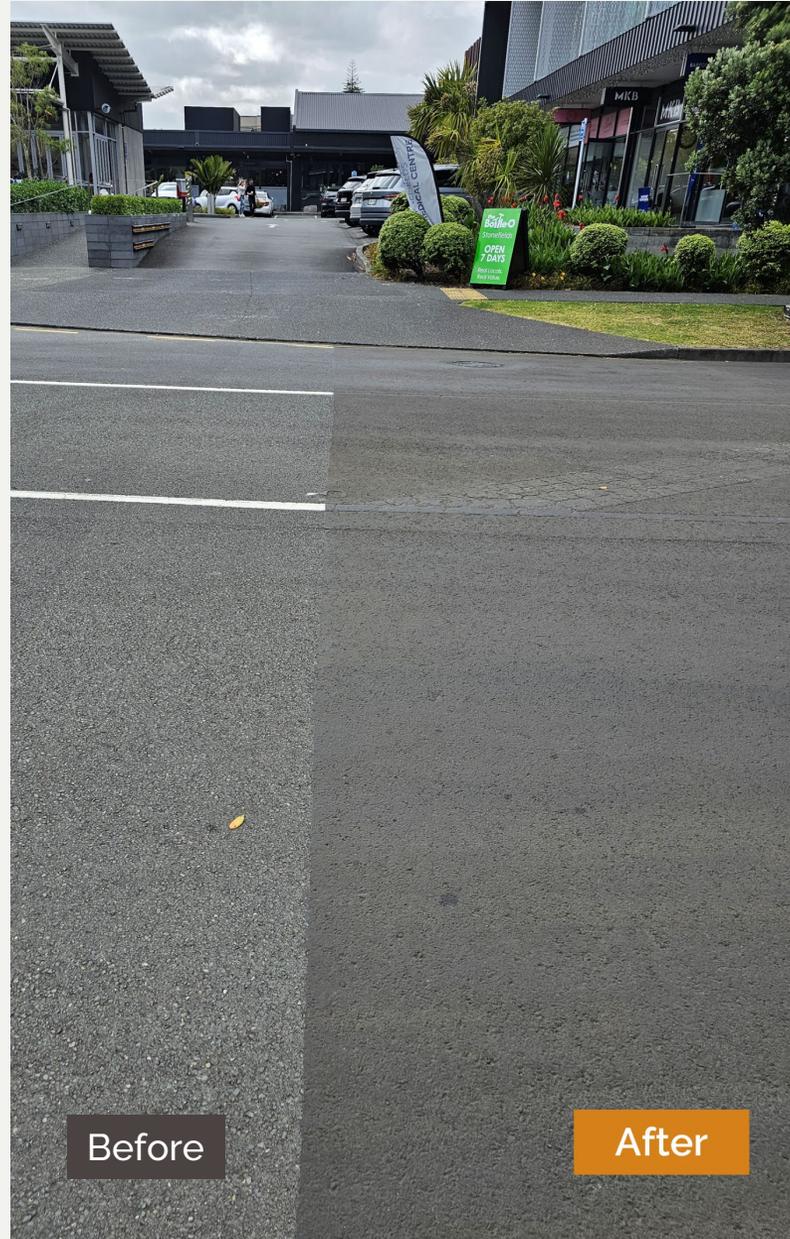


195 roads sealed

with EnviroShield since
2020. Proven performance
across skid resistance,
macrotexture, and faults
analysis.



Milford Sound
Piopiotahi Airport



Before

After



Whangārei Airport

Performance highlights



Skid resistance

British Pendulum testing + field measurements demonstrate that EnviroShield maintains high skid resistance in both wet + dry conditions with 99% of treated sites exceeding the required specification



Macrotexture

Analysis identified a reversal in deterioration trends. 94% of treated sites showed decreasing texture compared to 74% showing increasing texture (material loss) before treatment



Faults

Analysis of 195 roads demonstrated that EnviroShield fundamentally changes deterioration patterns, significantly reducing fault rates and extending functional pavement life

View full technical report here: [Pavement preservation + life extension](#)



EnviroShield

“ For pavement preservation, EnviroShield by Road Science is our preferred choice, it delivers improved aesthetics and a smoother ride at a fraction of the cost of asphalt, while providing a tidier, quieter alternative to traditional chip seal. ”



Trevor Otton
Regional Sealing Manager



Key contacts

Jeremy Boyd
Product Manager
Road Science
021 443 624
Jeremy.boyd1@roadscience.co.nz
(on-site enquiries)

Manaf Alshamsi
Product Growth Manager
Road Science
021 882 822
Manaf.alshamsi@roadscience.co.nz
(sales enquiries)

Manvir Singh
Contract Engineer (SEP team)
Downer
021 229 4362
Manvir.singh@downer.co.nz
(contract delivery)



roadscience.co.nz
0800 180 200