



Hiway Stabilizers

**NEW ZEALAND'S
LEADING ROAD
CONSTRUCTION
INNOVATORS**



EXCELLENCE FROM THE GROUND UP

Hiway Group has been delivering innovative ground improvement solutions throughout New Zealand and the South Pacific since 1986.

Today we are New Zealand's largest provider of specialist solutions for pavement stabilisation, soil mechanics, ground improvement and contamination remediation.

Our commitment to innovation, environmental sustainability and industry leadership has seen us introduce cutting edge technologies to the local market and develop our own advanced methodologies and stabilising products.

With a proven track record of ensuring high quality, lasting outcomes – even in challenging conditions – our in-house design and contracting teams are considered industry experts.



Hiway Stabilizers provides specialist pavement stabilisation services throughout New Zealand and the South Pacific. Our proven solutions increase strength and durability, and conserve diminishing resources.



Hiway Environmental's expert team provides cost effective, site-specific solutions for the remediation of contaminated sites and other environmental challenges, including treatment and processing of unsuitable materials.



Hiway Hire is a machinery hire company that provides purpose-built, state-of-the-art plant and equipment to Hiway Group's operating divisions, as well as external customers.



HIWAY STABILIZERS

Hiway Stabilizers is New Zealand's largest specialist road construction and stabilisation contractor.

With more than 25 years' track record in the industry, we have pioneered the use of many of the stabilising techniques employed locally today.

Our expert team also provides a proven one-stop-shop for design and construction.

We offer a range of subgrade, subbase and basecourse modification services that are more cost effective than traditional road construction and rehabilitation methods.

These include foamed bitumen stabilisation, aggregate modification, subgrade and subbase improvement, and fill drying. As well as the cost savings they generate our innovative solutions reduce construction time, increase strength and durability, and are more environmentally sustainable.

INNOVATIVE SOLUTIONS

We provide innovative, cost-saving solutions for:

- ▶ **New pavement construction.**
- ▶ **Subgrade and subbase stabilisation.**
- ▶ **Aggregate modification.**
- ▶ **Base-course improvement.**
- ▶ **Road rehabilitation and maintenance patching.**
- ▶ **Specialist heavy duty pavements for ports, airports and heavy duty pavements.**
- ▶ **Rail track stabilisation.**
- ▶ **Fill conditioning.**
- ▶ **Commercial platform slab optimisation.**
- ▶ **Residential developments.**
- ▶ **Pavement smoothing.**
- ▶ **Earthworks.**

SUBGRADE MODIFICATION

Hiway Stabilizers is an industry leader in subgrade improvement solutions.

Our subgrade stabilisation and fill drying services enable construction to be carried out faster and more cost effectively, even in adverse conditions.

They also offer the assurance that the subgrade will provide adequate performance, both during the construction period and in decades to come.

Our track record covers a wide range of applications, from local authority roads to site works for land developers and major infrastructure projects for central Government.

SUBGRADE STABILISATION

Hiway Stabilizers is New Zealand's most experienced subgrade stabilisation contractor.

Our solutions improve subgrade performance, while at the same time enabling faster construction and significant aggregate savings.

Stabilising a subgrade with lime and/or cement can cut aggregate requirements by more than half and reduce the amount of excavation needed during construction. It also provides a moisture-insensitive robust anvil for faster construction of overlying aggregate layers.

This creates significant time and cost savings, and ensures a pavement with superior strength and durability.

Our commitment to leading-edge technology means we can tackle the most demanding sites, achieving results quickly, while maintaining high production outputs.



FILL DRYING

Hiway Stabilizers pioneered the use of fill drying in New Zealand.

An effective way to combat wet soil, fill drying involves the chemical drying of existing ground, converting unusable, wet soil into a controlled engineered fill.

The process increases the strength of the subgrade substantially, reducing the requirements for cut to waste and enabling greater re-use of existing on-site materials.

Fill drying is particularly well suited to sites where tight construction programmes, winter earthworks programmes or limited drying areas are an issue.

This makes it of significant benefit in subdivision and infrastructure projects, where the completion of earthworks is critical to the construction programme.

Our solutions improve subgrade performance, while at the same time enabling faster construction and significant aggregate savings.

APPLICATIONS

- ▶ Construction of new pavements.
- ▶ Earthworks for residential subdivisions.
- ▶ Earthworks for civil and infrastructure projects.
- ▶ Earthworks for industrial and commercial developments.

BENEFITS

- ▶ Significantly improved subgrade stability.
- ▶ Subgrade strength gains of up to 20 times.
- ▶ Cost savings due to reduced requirement for imported aggregates, fewer transport costs and faster construction time.
- ▶ Reduces risk of costly subgrade pavement failures.
- ▶ A robust, durable platform for aggregate construction.
- ▶ Substantially reduces moisture susceptibility.
- ▶ Creates a more uniform pavement layer.
- ▶ Stabilised subgrade forms a soil particle and moisture barrier that protects overlying aggregate layers from upward migration of plastic fines.
- ▶ Dries large volumes of water-logged soil instantly.
- ▶ Can be undertaken in any weather conditions.
- ▶ Reduces down time by enabling earthworks to continue immediately after wet weather.



SUBBASE MODIFICATION

Our subbase stabilisation services enable faster, more cost effective delivery of new pavement construction and existing pavement rehabilitation.

Hiway Stabilizers has led the development of subbase stabilisation and aggregate modification processes in New Zealand.

Our expert team is responsible for numerous long-term road maintenance contracts around the country. The technology we use meets all local engineering specifications and is accepted by NZTA.

Our in-house design and project management team also offers a range of complementary consultancy services, including aggregate testing and pavement design and modelling.



SUBBASE STABILISATION

Subbase stabilisation is the process of stabilising existing subbase layers or imported subbase materials to substantially improve performance.

As well as enabling re-use of existing materials, the performance improvements delivered by subbase stabilisation also lower the volume of premium aggregates needed. Both benefits create significant cost savings and reduce road construction time.

AGGREGATE MODIFICATION

Traditionally, New Zealand pavements have been constructed using premium quality, imported aggregates. High production costs, limited sources and transportation requirements make this an expensive construction material.

Aggregate modification is a proven pavement construction technique that delivers a long-term solution, with significant cost savings and environmental benefits.

It involves improving aggregates of a marginal quality to a point where they exhibit structural and performance properties equal to, or better than those of premium quality aggregates.

Aggregate modification can be used in both subbase and base-course applications. The result is a structurally sound pavement, created with minimal effort and at a much lower cost than traditional cut and granular reconstruction methods.

Aggregate modification reduces the need for new aggregates, improves the strength of the existing pavement and can be implemented quickly to reduce inconvenience to motorists.



APPLICATIONS

- ▶ Stabilisation of aggregates for new pavements.
- ▶ Remediation of failed pavements.
- ▶ Area wide pavement treatments.
- ▶ Use of locally-sourced marginal aggregates, previously not suitable for road construction.

BENEFITS

- ▶ Strengthens and improves performance of marginal aggregates.
- ▶ More cost effective than using premium aggregates.
- ▶ Aggregate can be placed much faster – up to 1km of two lane road can be stabilised or modified in a day by a single crew.
- ▶ Prepared surface (prior to sealing) is more durable and requires less maintenance than a premium aggregate alternative.
- ▶ Significantly reduces the need to cut out failed pavement material.
- ▶ Final trimming and surface preparation requires less time and effort.
- ▶ Significantly reduces the amount of imported material needed to rebuild the pavement.
- ▶ Conserves aggregate resources.
- ▶ Quick turn-around process minimises inconvenience to the public.

BASECOURSE MODIFICATION

Hiway Stabilizers' quick-turnaround services rejuvenate aged pavement materials, leaving them as good as or better than a premium basecourse, at a fraction of the cost.

Our solutions cost much less to implement than traditional pavement reconstruction and remediation methods, and are proven to deliver lasting strength in New Zealand conditions.

Our 'one-stop-shop' design and project management service gives clients access to world-leading methodologies, delivered by local experts.

Our state-of-the-art fleet includes specialist foamed bitumen recycling equipment, as well as more conventional cement, lime and polymer stabilisation plant.

BASECOURSE STABILISATION

Basecourse stabilisation improves the performance of pavements by modifying in-situ or imported materials with cement, specialist blends, polymers or foamed bitumen.

Hiway Stabilizers has pioneered the use of cement stabilisation of basecourse layers in New Zealand, consistently creating pavements with greater strength and performance, and a longer design life.

Our proprietary binders and polymers enable cost effective stabilisation, regardless of aggregate properties, traffic loadings or intended pavement use.

In recent years, the failure of some non-stabilised premium quality aggregates under heavy loads has led NZTA to recommend that NZTA M4 AP40 basecourse aggregate also be stabilised.



FOAMED BITUMEN RECYCLING

Foamed Bitumen Recycling is a proven solution for the long-term rehabilitation of pavements that have reached the end of their useful life or need strengthening to accommodate increased loading.

It is a highly cost effective alternative to traditional remediation methods, and is particularly useful in level-constrained settings where a significant overlay is not feasible.

Foamed Bitumen Recycling is quick to deliver and results in a strong and durable basecourse, with viscoelastic performance approaching that of asphalt.

The process also eliminates the need for new aggregates and the end product can be trafficked almost immediately, making it perfect for environments where works are carried out adjacent to active lanes.

Hiway Stabilizers has pioneered the use of cement stabilisation of basecourse layers in New Zealand, consistently creating pavements with lasting strength and performance.

APPLICATIONS

- ▶ Remediation of failed pavements.
- ▶ Strengthening of existing pavements.
- ▶ Construction of new pavements.
- ▶ Maintenance patching.
- ▶ Area-wide pavement treatments.
- ▶ Seal smoothing.

BENEFITS

- ▶ More cost effective than traditional methodologies.
- ▶ Considerably cheaper than deep lift asphalt.
- ▶ Foam bitumen recycling produces a strong, durable and flexible pavement, with viscoelastic performance similar to asphalt.
- ▶ Proven as an effective treatment for mitigation of pavement deterioration due to freezing and thawing.
- ▶ Conserves diminishing aggregate resources.
- ▶ Significantly reduces or eliminates excavation volumes.
- ▶ Quick turn-around process minimises inconvenience to the public.
- ▶ Can be carried out in unfavourable weather conditions.
- ▶ Can be trafficked almost immediately.
- ▶ Reduced maintenance requirements and whole-of-life costs.
- ▶ Significantly improved resistance to moisture and pumping of fines.
- ▶ No risk of shrinkage cracking.



INNOVATION

Hiway Stabilizers has pioneered the use of many of the stabilising techniques employed in New Zealand today.

Our expertise and commitment to innovation has seen us develop solutions that optimise material properties to make them ideal for New Zealand conditions. This approach ensures lasting performance in the projects we deliver, and has earned us a reputation as industry leaders.

As part of our commitment to remaining at the cutting edge of the industry, we have the largest fleet of purpose-built stabilisation plant in New Zealand.

We have also developed a range of specialist binder blends and polymers that enable us to deliver exceptional performance in aggregate modification and infrastructure stabilisation.





DESIGN & PROJECT MANAGEMENT SERVICES

Hiway Stabilizers is the only specialist stabilising contractor in New Zealand to provide extensive in-house design services.

From concept design to delivery, our in-house team provides a 'one-stop-shop' for design of roading, foamed bitumen, stabilising, asphaltic concrete, rehabilitation and overlay pavement solutions.

We offer a range of consultancy services, from pavement investigation and subgrade analysis, to bitumen 'foamability' testing and foamed bitumen mix design.

Our track record covers a variety of pavement types, from heavy duty pavements for port and airport applications to high level structural and modified highway pavements.



AUCKLAND
10 Ingot Place, Silverdale, Auckland
PO Box 225, Silverdale, Auckland 0944
T. +64 9 426 3419 F. +64 9 427 4709

www.hiways.co.nz