



# Rainstorm are your local dust management specialists

When it comes to rural road construction, dust control, soil stabilisation and rehabilitation, Rainstorm are the trusted total solution provider, offering a suite of products and specialist services for Mines, Civil Contractors and Local Government.

Operating in Australia since 1990, Rainstorm have grown with the industry from being an early pioneer of dust control to being a world-wide industry leader, developing specialty products and equipment which optimise safety and environmental standards for clients around the globe.



# Why Rainstorm

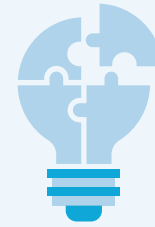
**Rainstorm have been a trusted partner in dust control for more than 30 years, enabling more productive, cost-effective and environmentally sustainable working environments.**

We are an Australian owned company based in Perth, with manufacturing and service yards throughout Australia – bringing local knowledge backed by prolific national presence and global experience.

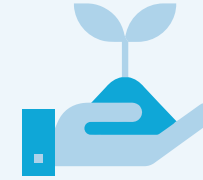
As industry specialists with on-site experience, Rainstorm are committed to being a holistic solutions partner for our clients, working closely with them to deliver tailored solutions and measurable results. We continuously develop new products and methods to ensure our clients are operating with industry best practices.

At the same time, we support more sustainable operations, using environmentally friendly products specifically formulated to be fit-for-purpose.

Rainstorm are approved vendors for most major mining companies in Western Australia, operating across sites at BHP, South 32, Fortescue, Rio Tinto, Atlas, Pilbara Minerals, Alcoa, Iluka, Talison Lithium and Karara.



**TOTAL SOLUTION PROVIDER**



**ENVIRONMENTALLY FRIENDLY**



**ADVANCING BEST PRACTICE**



**OVER 28 YEARS' EXPERIENCE**



**EXPERIENCED INDUSTRY LEADERS**



**LOCAL COMPANY**



**NATIONAL PRESENCE**



**ONSITE EXPERIENCE**



**APPROVED VENDOR STATUS**

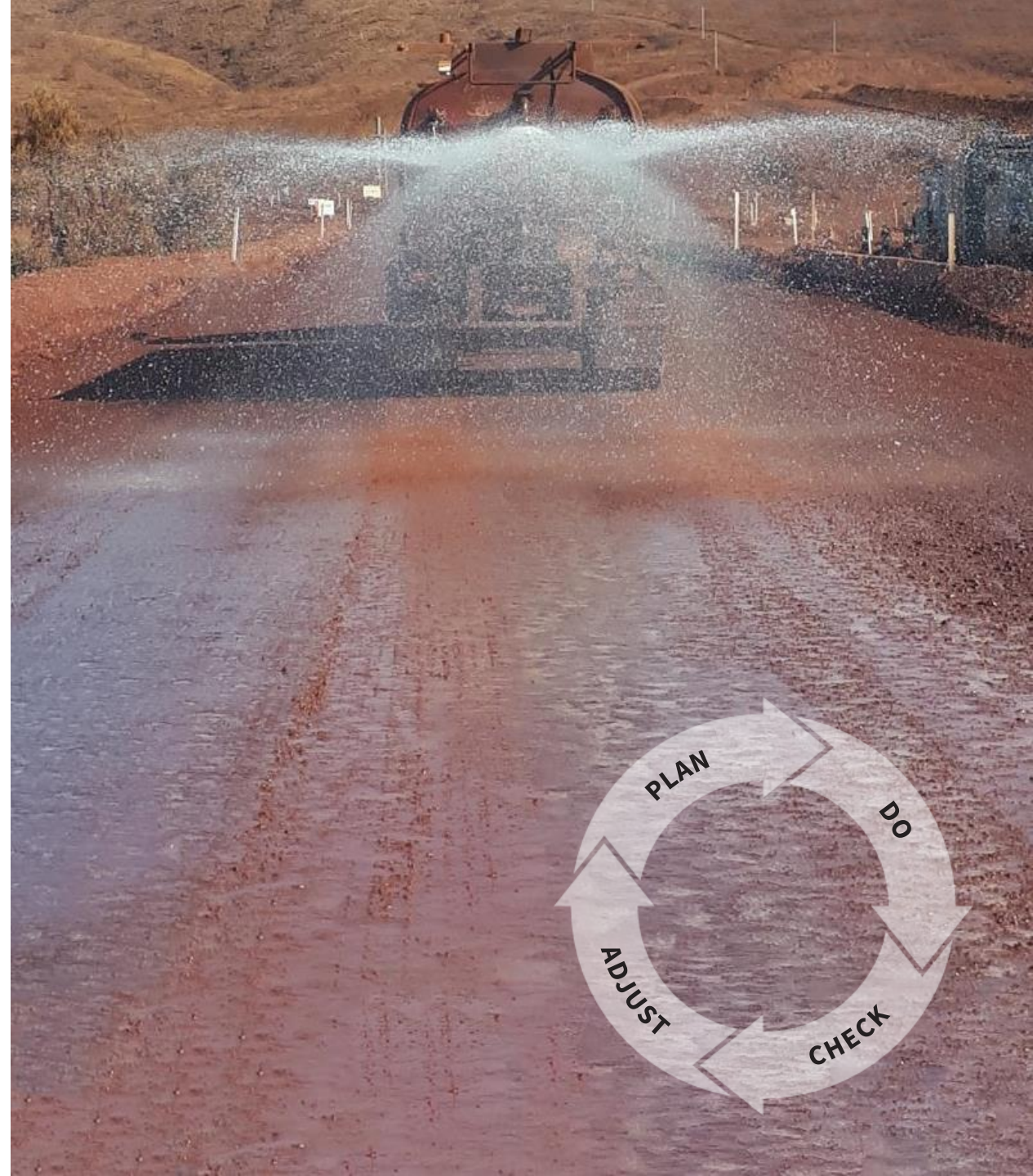
# Your 'one stop' provider for the complete solution

Rainstorm's complete dust management offering delivers the most effective solutions to meet all the needs of your project.

Bringing our suite of products, specialist in-house capabilities and extensive on-site experience, Rainstorm work hand-in-hand with our clients for the entire dust suppression program.

As experienced local manufacturers and importers, Rainstorm have long established supply chains as well as our own road and transport service division, giving us the ability to take control of the entire solution process for our clients – from supply to on-site application and ongoing maintenance.

We are also able to monitor the physical results after completion to bring about improved dust management practices and more effective spend.



# Take control of your dust management with science-based solutions

As a leader in innovative dust suppression methods, Rainstorm partner with our clients to educate and build understanding that empowers better informed decisions for more effective use of products and dust control solutions.



## WET SUPPRESSION

Uses water to wet fugitive material so that less dust is generated.

The resulting plan for initial and ongoing dust management can be compared with the ongoing operation and effectiveness of conventional methods such as water carts.



## CHEMICAL SUPPRESSION

More targeted approach using chemicals for a range of control applications to prevent fugitive dust, with the added benefits of surface stabilisation and ore treatment.

Rainstorm manufacture and supply all major chemical groups used for dust control – Hygroscopic, Binders, Super Absorbent Polymers, Wetting Agents and Specialised Hybrids.



## MECHANICAL SUPPRESSION

Uses mechanical systems to capture or drop fugitive dust from the atmosphere.

Having in-house engineering and construction capabilities, Rainstorm can provide fully automated, site specific application units, including installation and ongoing servicing.

# Dust management solutions tailored to your situation

Rainstorm offer a range of products and solutions designed to manage all aspects of dust across mining operations – roads and areas under traffic, materials handling, rail transport, open areas and rehabilitation.

Every dust control situation is assessed on-site to tailor a complete dust management program, either on a short-term or long-term basis, that delivers maximum effectiveness, durability and cost efficiency.



## ROADS

DustMag™ | Dustex™ | DustLig | PolyMag  
Paczyme | DustJel | Rainstorm Cement



## MATERIALS HANDLING

PDX™ | Dry Fog Systems



## OPEN AREAS

Gluon™ 900 | Hydromulch



## RAIL CAR VENEERING

Gluon™ 500

# The challenges we face

Dust from mining activities creates considerable safety, environmental and operational impacts, with ineffective or inconsistent management strategies resulting in needless spend and diminished outcomes.

## ENVIRONMENT

- ! Particle erosion creates significant challenges around environmental stewardship, causing dust deposition and siltation over wide areas that affect other off-site land users and surrounding communities.
- ! Conventional dust suppression methods only create further issues as it wastes limited water resources, contaminates runoff and can contain hazardous chemicals.

## MAINTENANCE

- ! Dust issues run across the mine site, impacting equipment and infrastructure that results in more frequent and costly maintenance, downtime and operational delays.
- ! On roads, conventional management using water is an ineffective stabiliser, leading to surface degradation, increased wear on vehicles, and increased maintenance and running costs.

## HEALTH & SAFETY

- ! Left untreated, dust on site impacts safety, visibility, communications and surface stability, creating high risk working environments.
- ! Dust particulate emissions and ultra-fine airborne particles are also extremely harmful, affecting respiratory health and impacting the quality of life of employees and nearby communities.

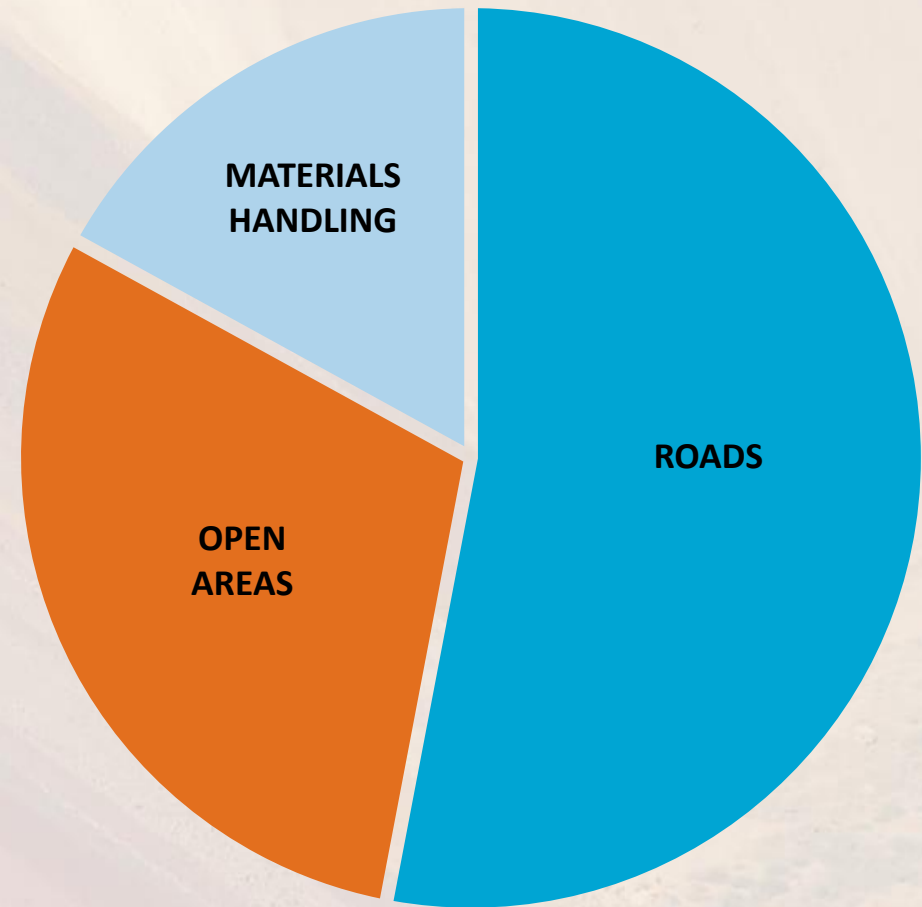
## PRODUCTIVITY

- ! Material lift-off during processing, stockpile and transport operations can equate to significant production losses and associated revenue.
- ! Conventional management methods are not only more costly, but also yield ineffective ore and water conditions that affect material flow and grading for suboptimal throughout.
- ! Excessive dust in various areas of mine sites also results in reduced productivity, downtime and operational delays.

# Tailored programs control dust across the entire mine site

Rainstorm's suite of products, specialist capabilities and on-site experience makes us a uniquely holistic solutions partner, delivering comprehensive, pit-to-port solutions for every dust generation point – limiting the impact of mining activities on employees, communities and the environment.

Sources of Dust Generation on an Average Mine Site







## Roads

Excessive dust generated from unsealed roads creates considerable issues, yet conventional management by continual watering is ineffective, leading to faster degradation and producing high maintenance, high-risk roads.

Proven to work effectively under extreme traffic and weather conditions on a wide variety of soil types, Rainstorm have developed and manufacture a range of specially formulated products for use on all types of trafficked areas. These not only prevent the generation of dust, but aid in stabilising surfaces for immediately safer, more high-performing road systems.

Site-specific solutions are tailored to project requirements, and are designed to deliver these benefits using existing or readily available equipment.

Rainstorm dust control products for roads include:

**DustMag™**

**Dustex™**

**DustLig**

**PolyMag**

**Paczyme**

**DustJel**

**Rainstorm Cement**



# Control and stabilise with DustMag™

DustMag™ is an extremely durable dust suppressant and a very effective stabilisation and compaction agent for use on roads and trafficable areas. As a hygroscopic solution, it attracts and retains moisture from the air to control dust.

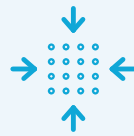
Requiring no mixing or special preparation DustMag™ is a bulk liquid delivered 'ready to go' and is easily applied to unsealed surfaces by water cart. After application, the surfaces are immediately trafficable and remain stable for months after, even under heavy traffic.

**Rainstorm are proud to be the only dust control provider that manufacture locally in Australia. DustMag™ is produced in Karratha, Western Australia using sustainable practices that convert bitterns streams for effective dust control applications.**



HIGHLY EFFECTIVE

## Delivers 90-95%\* dust reduction



STABILISES &  
COMPACTS



SUSTAINABLY &  
LOCALLY PRODUCED



NO WATER  
REQUIRED



EASILY APPLIED WITH  
EXISTING EQUIPMENT



EFFECTIVE  
FOR MONTHS

\* Independently verified. Compared with alternate products such as water extenders offering only 25-50% reduction in dust levels.

# Control and stabilise with DustMag™

DustMag™ works by drawing moisture from the atmosphere to maintain to hold dust through heavy equipment compaction under traffic.

Surfaces will remain dust free for extended periods with no watering required.

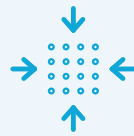
Running course can be re worked post rain events to re heal with Dustmag treated running course grader over the width.

**DustMag™ is effect way to slow set and hold the moisture for dust control, in heavy traffic use roads.**

**Rainstorm have enhanced DustMag blends to prevent leaching, and can be blended with a range of co polymers to seal and bind all road base materials.**

HIGHLY EFFECTIVE

**Delivers 90-95%\***  
**dust reduction**



**STABILISES &  
COMPACTS**



**SUSTAINABLY &  
LOCALLY PRODUCED**



**NO WATER  
REQUIRED**



**EASILY APPLIED WITH  
EXISTING EQUIPMENT**



**EFFECTIVE  
FOR MONTHS**

# Control and stabilise with DustLig

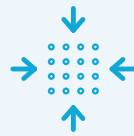
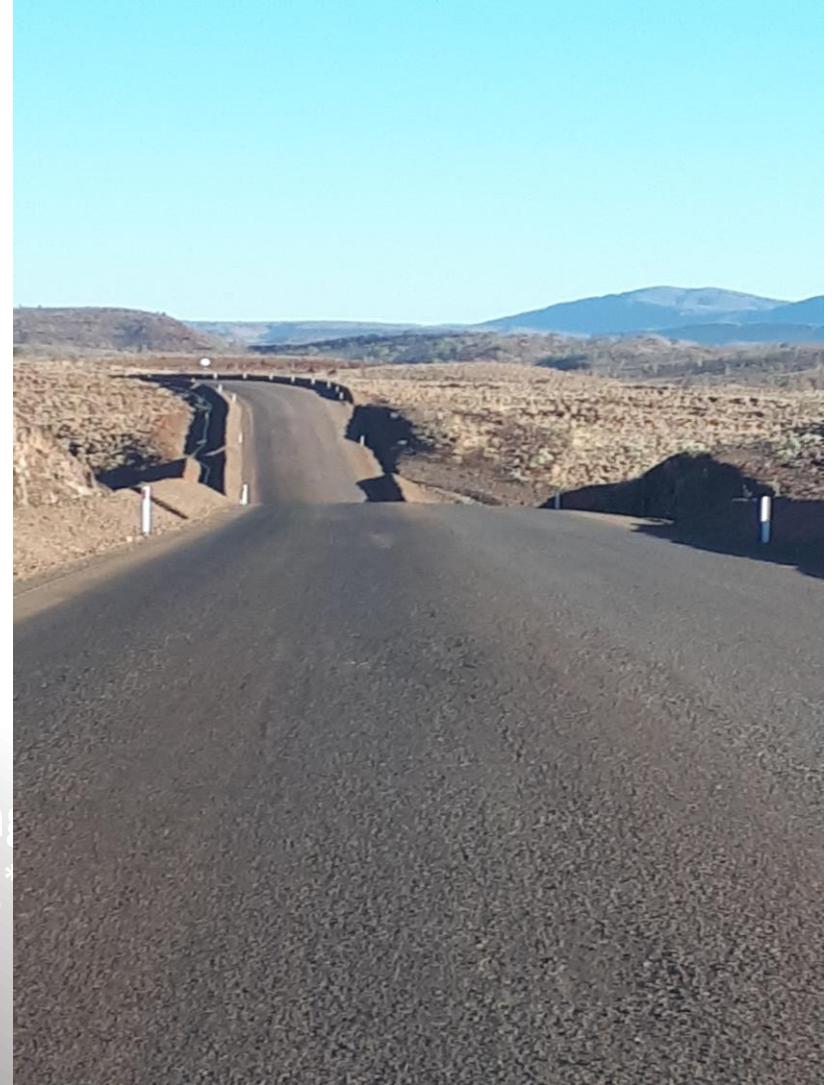
DustLig is Ligninsulphonate organic binder dust suppressant and effective running course stabilisation binder for use on roads and trafficable areas. As a binder it holds materials in place, and sets a bond. Can be used with DustMag to retain moisture for flexibility control dust under heavy traffic roads, suitable for Autonomous roads to prevent dust lift of under wheel impacts. The binding action will prevent dust lift of on areas between tram lines and shoulders, not under compact effort.

DustLig is water bound into the base and running base course DustLig is a concentrated liquid delivered in Bulk or IBC, blended with water. Is applied via water cart to unsealed surfaces. After application, the surfaces are immediately trafficable and remain stable for long periods under heavy traffic.

Rainstorm are proud to be the only dust control provider that manufacture locally in Australia. A blend the two properties of DustLig with DustMag to effectively control dust on extreme haul road conditions.

HIGHLY EFFECTIVE

Delivers significant  
control across varying  
haul road conditions



STABILISES &  
COMPACTS



SUSTAINABLY &  
LOCALLY BLENDED



SIGNIFICANT WATER  
REDUCTION



EASILY APPLIED WITH  
EXISTING EQUIPMENT



EFFECTIVE  
FOR LONG PERIODS

\* Independently verified. Compared with alternate products such as water extenders offering only 25-50% reduction in dust levels.

# Reduce water usage with DustJel

DustJel is highly concentrated water extender.

Added to dust suppression water in low dilution rates 1:10,000 average for use on roads and trafficable areas. Cost effective way to reduce water consumption when water on dust control is water lost.

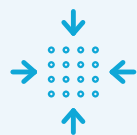
Plug and play dose systems inject DustJel into the water stream during a loading cycle using remote control with adjustable timers.

**Rainstorm Dose systems leased with maintenance or purchased outright. If your using water for dust suppression, make it last longer.**



HIGHLY EFFECTIVE

## Delivers significant water reduction > 40%\*



STABILISES &  
COMPACTS



LOCALLY SUPPLIED



SIGNIFICANT WATER  
REDUCTION



EASILY APPLIED WITH  
EXISTING EQUIPMENT



EXTENDS WATER > 40%

\* Independently verified. Compared with alternate products such as water extenders offering only 25-50% reduction in dust levels.

# A safer, low-maintenance and cost-effective road system.

## ENVIRONMENT

- + Establishes responsible stewardship, ensuring surrounding land users, communities and the environment are not adversely affected by mining activities.
- + Ensures environmental compliance and reporting with monitoring practices.
- + Significantly reduces water consumption for more efficient and effective use of limited resources.
- + Uses environmentally friendly products that are sustainably produced.

## MAINTENANCE

- + Effective road stabilisation prevents surface degradation, improves road conditions and lessens vehicular wear, reducing maintenance requirements and extending vehicle life.
- + Mitigates impact of fugitive dust on mining equipment and infrastructure, reducing frequency and extent of maintenance, further saving time, resources and costs.
- + Reduces maintenance downtime for more efficient, more profitable operations.

## HEALTH & SAFETY

- + Eliminates visibility, communications and safety risks around roads, carparks and trafficked areas, creating safer working environments.
- + Effective stabilisation improves road conditions and reduces slippage, negating incident risk for vehicular traffic.
- + Preventing fugitive dust emissions protects against harmful airborne particles affecting the health of employees and nearby communities.

## PRODUCTIVITY

- + Extended dust suppressing effects requires less frequent treatment compared to conventional methods, generating considerable cost savings and productivity improvements.
- + Improved road surfaces reduces roll resistance in vehicles and optimises performance, saving fuel, tyres, time and resources.
- + Prevents against excessive dust impairing productivity or causing operational delays.



## Materials Handling

Left untreated, dust emissions from materials during crushing, processing and transport operations can result in considerable production losses and operational inefficiencies.

Rainstorm have developed solutions to cost-effectively control dust through ore treatment processes, either with ore conditioners, high performance applications of water, or a combination of the two.

Not only an effective dust suppressant, when added into the mining ore stream ore treatment optimises ore conditions and moisture content for significant process efficiencies and improved export capacity.



Rainstorm dust control products for materials handling include:

**PDX™**

**Dry Fog Systems**

# Ore treatment with PDX™

PDX™ is the result of 25 years development into 'non-standard' ore and soil modification. It is a highly effective, non-invasive, concentrated ore conditioner used to control dust and reduce moisture content for significant processing capacity improvements.

When blended with ore types, PDX™ alters the physical and chemical characteristics of the material without affecting downstream processing.

PDX™ is most effective when added to an ore body early in the materials handing process. When applied to ultra fine grade ores the resultant lower moisture content aids wettability, friability and workability, optimising material handling and export capacity.



## Highly effective moisture control



REDUCES DUST EXTINCTION  
MOISTURE POINT



RETAINS  
ORE PROPERTIES



IMPROVED PROCESS  
EFFICIENCIES



IMPROVED ORE  
EXPORT CAPACITY



BIODEGRADABLE  
& NON-TOXIC



# High performance Dry Fog Systems

More water does not equal better dust control. Compared to traditional water deluge systems, Rainstorm Dry Fog Systems minimise water usage using high pressure systems that match water droplet size to the ore dust particle size to drop dust. This makes for extremely efficient use of water for maximum control of ultra-fine airborne dust particles.

Able to be applied throughout the entire materials handling process, fog zones can be installed directly next to dust generation points, preventing dust from escaping to transfer points.

Rainstorm can provide a full service solution, from in-house design and build, to on-site install and commission with ongoing servicing and maintenance.



**Minimum water  
for maximum  
dust control**



**SIGNIFIGANT  
WATER SAVINGS**



**DOESN'T AFFECT ORE  
MOISTURE CONTENT**



**FIT FOR PURPOSE  
SOLUTIONS**



**COMPLETE SOLUTION  
BY RAINSTORM**



**ONGOING SERVICING  
PROVIDED**

# Optimised ore conditions yield maximum throughput.

## ENVIRONMENT

- + Prevents air particulate emissions and contaminated run-off adversely affecting surrounding land users, communities and the environment.
- + Significantly reduces water consumption for more efficient and effective use of limited resources.
- + Ensures environmental compliance and reporting with monitoring practices.
- + Uses environmentally friendly, non-toxic products.

## MAINTENANCE

- + Mitigates impact of fugitive dust on mining equipment and infrastructure, reducing frequency and extent of maintenance, further saving time, resources and costs.
- + Reduces maintenance downtime for more efficient, more profitable operations.

## HEALTH & SAFETY

- + Minimises air particulate emissions, preventing extremely harmful ultra-fine particles or contaminated run-off affecting the health of employees and nearby communities.
- + Eliminates visibility, communications and safety issues, for safer working environments.

## PRODUCTIVITY

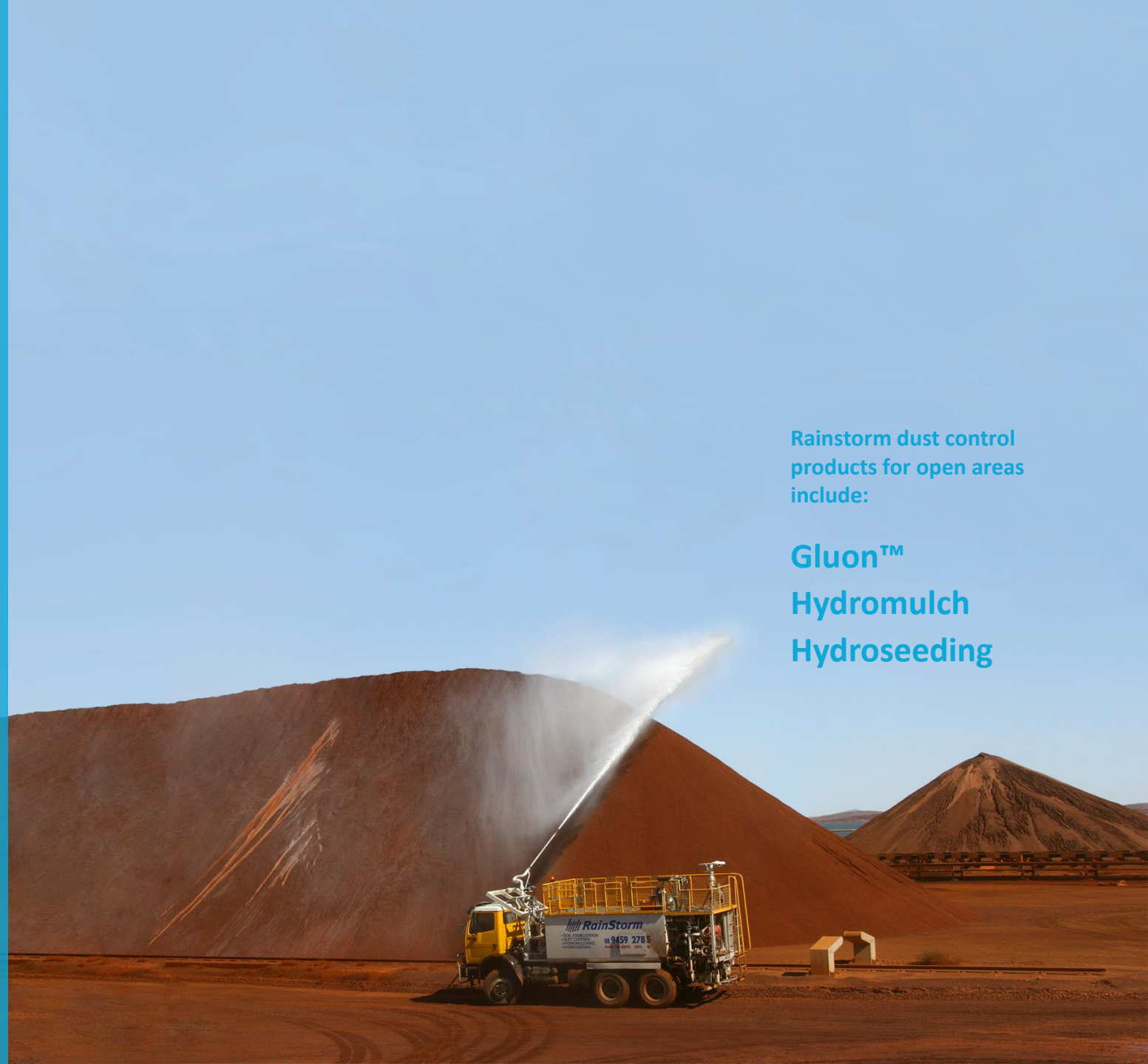
- + Prevents material lift-off and associated revenue losses during processing, handling, and transport operations.
- + Ore treatment optimises ore and moisture conditions for improved material flow and processing capacity that yields optimal throughput.
- + Optimises overall operations for productivity and profitability increases that can be measured and monitored.



## Open & Non-Trafficable Areas

For large open areas in mining operations, such as stockpiles, embankments and tailings, exposure to wind and water generates dust and material erosion, resulting in harmful dust deposition and siltation over widespread areas.

Rainstorm have developed control practices for managing fugitive dust in open areas, proven over a wide range of projects of varying site and climatic conditions.



Rainstorm dust control products for open areas include:

**Gluon™**  
**Hydromulch**  
**Hydroseeding**

# High performance Gluon™ veneering

Gluon™ is a versatile water-bound polymer emulsion that, when applied to soils or ores, creates a surface veneer that prevents wind-blown dust and the erosion of the granular materials in open areas, stockpiles, embankments and tailings dams.

Gluon™ is easily diluted with water and sprayed onto the surface using standard on-site equipment such as water carts.

Upon application the Gluon™ polymer bonds to create a stable and flexible surface mesh, fixing the soil or ore in place, with the ability to vary the degree of resistance depending on the concentration used to suit the intention of the application.



HIGHLY EFFECTIVE  
**Delivers 90-95%\***  
dust reduction



EASILY APPLIED WITH  
STANDARD EQUIPMENT



REDUCES SOIL  
EROSION



OPTIONAL SURFACE  
COLOURATION



ACCELERATED  
REVEGETATION



EASY TRANSPORT FOR  
OCCASIONAL USE

# Ensuring material stays where it should be.

## ENVIRONMENT

- + Prevents air particulate emissions and contaminated run-off adversely affecting surrounding land users, communities and the environment.
- + Significantly reduces water consumption for more efficient, effective and responsible use of limited resources.
- + Ensures environmental compliance and reporting with monitoring practices.
- + Uses environmentally friendly, non-toxic products.

## MAINTENANCE

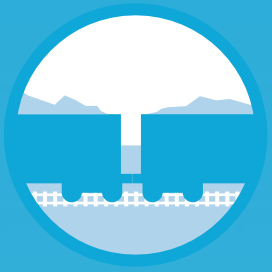
- + Mitigates impact of fugitive dust on mining equipment and infrastructure, reducing frequency and extent of maintenance, further saving time, resources and costs.
- + Reduces maintenance downtime and operational delays for increased efficiencies and cost savings.
- + Reduced use frequency of equipment to apply dust control measures results in less wear and servicing requirements.

## HEALTH & SAFETY

- + Surface stabilisation protects against the adverse effects of wind and water erosion, preventing extremely harmful ultra-fine particles or contaminated run-off affecting the health of employees and nearby communities.
- + Eliminates visibility, communications and safety issues, for safer working environments.

## PRODUCTIVITY

- + Prevents windborne material losses during stockpile, generating measurable profitability improvements.
- + Extended dust suppressing effects requires less frequent treatment and maintenance compared to conventional methods, generating considerable cost savings and productivity improvements.

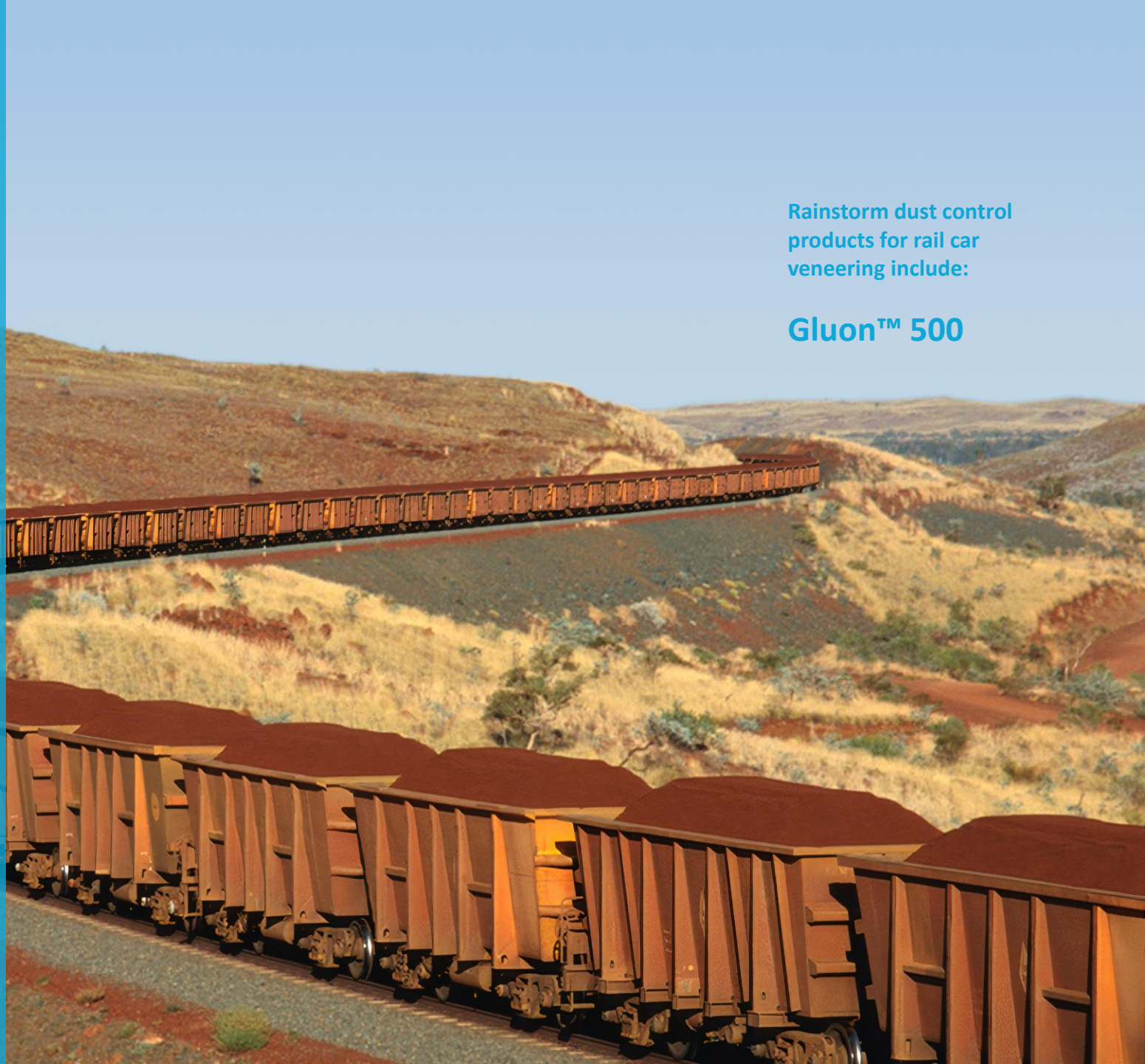


## Rail Car Veneering

Rainstorm specialise in veneering ore for transport and can provide system-specific, site-specific solutions that reduce ore loss, save cost and improve operational efficiency.

Rainstorm dust control products for rail car veneering include:

**Gluon™ 500**



# High performance Gluon™ 500 veneering

Rainstorm's zero harm, Gluon™ 500 veneering agent has been developed over 30 years, in response to client and site requirements.

Gluon™ is a versatile water-bound polymer emulsion sprayed onto ore to form a 'veneer' which is resistant to wind whilst allowing water to pass through.

Applied as a surface coating to ore for transportation from the mine site, the Gluon™ polymer bonds upon hydration, creating a surface mesh and binding the ore, acting as a dust suppressant. The bonding chain remains stable and flexible, to fix ore in place; reducing ore loss, saving costs and improving operational efficiency.



HIGHLY EFFECTIVE  
**Zero dust lift-off for  
20 metres per second\***



HIGHLY  
EFFECTIVE



AUTOMATED  
APPLICATION



INTEGRATES WITH  
EXISTING OPERATIONS



COST  
EFFECTIVE



MINING  
CERTIFIED

# More productive, profitable and environmentally sustainable operations.

## ENVIRONMENT

- + Eliminates dust generation issues along the rail corridor, significantly reducing the environmental impacts and effects on surrounding land users.
- + Ensures environmental compliance and reporting with monitoring practices.
- + Uses environmentally friendly, non-toxic products.

## MAINTENANCE

- + Protects the integrity of the rail infrastructure, reducing maintenance and downtime for increased efficiencies and cost savings.

## HEALTH & SAFETY

- + Protects against dust fines that can destabilise ballast, reducing risk of derailment.
- + Prevents fugitive dust emissions protects against harmful airborne particles affecting the health of employees and nearby communities.
- + Eliminates visibility, communications and safety issues, for safer working environments.

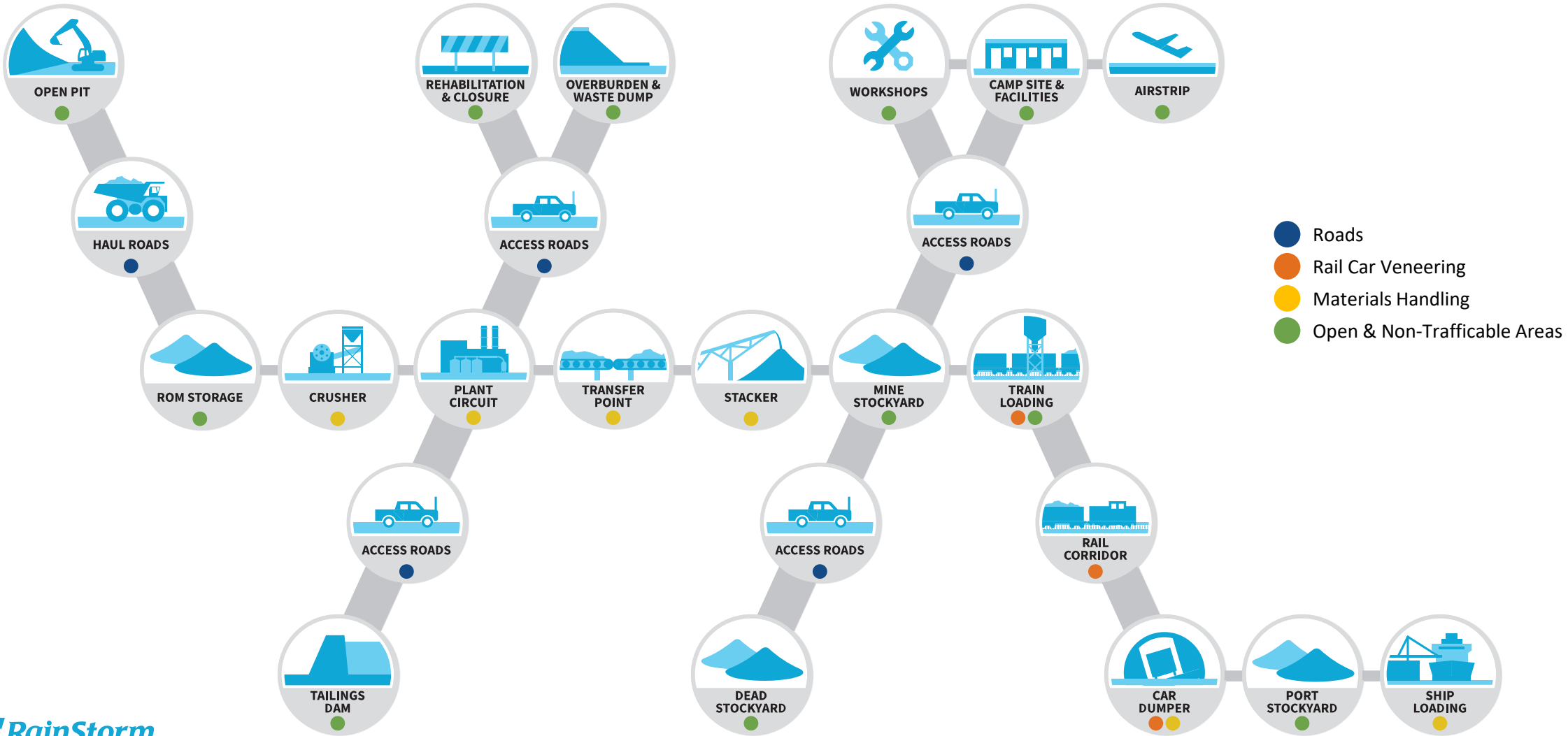
## PRODUCTIVITY

- + Eliminates loss of ore from dust generation during rail transport, optimising overall operations for measurable productivity and profitability improvements.
- + Integrates into existing operations, ensuring no impact to load out facility operations or loading times.
- + Holistic oversight eliminates ownership issues at rail location interfaces, enabling effective dust control management that benefits multiple business units across the mining group.



# Eliminating dust as a hazard

Rainstorm offer site-specific solutions to manage dust across the entire mining value chain.



# Science-based solutions

Our range of specialty products have been tailored for use across mining operations.

	Chemical or Binding Technology	Areas Applied	Suppressant	Stabiliser	Compaction Aid	Ore Treatment	Water Extender	Veneering Skin	Manufacturing	Delivery	Application	Depth	Effectiveness	Lifecycle Longevity	Maintenance Frequency	Enviro. Friendly	Compliant systems to Standards	Iron Ore Suitability
<b>DustMag</b>	Hygroscopic	Roads	●	●	●				Local, Pilbara	Bulk Tanker	Water Cart	Top Coat	Highly Effective	10 to 12+ Weeks	3 Months Cycle	✓	✓	✓
<b>Dustex</b>	Organic Binder	Roads	●	●					Imported	IBC 1000lts or Bulk	Water Cart	50-100mm / Top Coat	Mid to High	7 to 10 Days	Weekly Top Coat	✓	✓	✓
<b>DustLig</b>	Hygroscopic / Organic Binder	Roads (Heavy Vehicle)	●	●					Local, Pilbara & Imported	Bulk Tanker	Water Cart	50-100mm / Top Coat	Highly Effective	10 to 12 Weeks	Weekly Top Coat	✓	✓	✓
<b>Gluon 900</b>	Co Polymer Binder	Roads	●	●			●		Imported	IBC 1000lts or Bulk	Water Cart	50mm lifts	Effective	12 Months	None Required	✓	✓	✓
<b>PolyMag</b>	Co Polymer Binder / Hygroscopic	Roads	●	●					Local, Pilbara & Imported	IBC 1000lts or Bulk	Water Cart	Top Coat	Highly Effective	10 to 12 Weeks	Weather Dependant	✓	✓	✓
<b>DustJel</b>	Super Absorbent Polymer	Roads	●				●		Local, Australia	1000lt IBC	Water Cart	Top Coat	Effective	Short Term	Daily Application	✓	✓	✓
<b>Paczyme</b>	Wetting Agent	Roads			●		●		Local, Perth	1000lt IBC	Water Cart	Top Coat	Effective	Short Term	Daily Application	✓	✓	✓
<b>Gluon 500</b>	Co Polymer Binder	Open Areas					●		Imported	1000lts	Automated System	Top Coat	Highly Effective	3 to 12 Months	None Required	✓	✓	✓
<b>Hydromulch</b>	Organic Binder	Open Areas					●		Local	Bulk Speciality Truck	Specialty Truck (Rainstorm's)	Top Coat	Effective	3 to 12 Months	Weather Dependant	✓	✓	✓
<b>Proganics</b>	Organic Binder	Open Areas					●		Imported	Bulk Speciality Truck	Specialty Truck (Rainstorm's)	Top Coat	Highly Effective	3 to 12 Months	None Required	✓	✓	✓
<b>PDX</b>	Wetting Agent	Materials Handling	●			●			Local	Bulk Speciality Truck	Automated System	N/A	Highly Effective	N/A	N/A	✓	✓	✓
<b>Dry Fog Systems</b>	N/A	Materials Handling	●						Local	N/A	Mechanical Unit	N/A	Effective	N/A	N/A	N/A	✓	✓



T: +61 8 9452 0235

E: [info@rainstorm.com.au](mailto:info@rainstorm.com.au)

W: [www.rainstorm.com.au](http://www.rainstorm.com.au)