Capability Statement

Australian Environmental Solutions

erizon.com.au
At Erizon, we are an industry leader in safely delivering environmentally friendly revegetation, dust suppression and erosion control solutions Australia wide.

With 25+ years of experience in our field, we have been presented with some of the toughest and most punishing environmental conditions. The root of our success has been the collaboration of innovative technology, science and field experience.

Taking the time to analyse and understand the client’s requirements, environmental conditions and substrate properties, enable us to tailor the best possible solution. With specialised equipment and a range of application methods, we treat vast areas both safely and efficiently to the highest standard.

Supporting our client partnerships is proven time and time again via our ‘Supply, Apply, Guarantee’ approach.
We are Erizon. An innovative, diverse, proudly Australian owned company. We are the industry leader in large scale mining and civil environmental solutions including revegetation, rehabilitation, dust suppression and erosion control nationwide.
Our products and services are supported by the expertise and consultation of our specialist team of agronomists, horticulturalists and soil scientists. Our products are made with the highest quality materials which are extensively tested for safety and performance on some of the most depleted and degraded soils in Australia. We are confident you will achieve project success the first time around.

Our highly trained technicians utilise specialist equipment to apply products with precision and accuracy, meeting Australian Safety, Environmental and Quality standards. Surpassing this, our ability to utilise drone technology for the application of solutions improves the quality and efficiency of our operations. Each project comes with a tailored Quality Management Plan and an Inspection & Test Plan (ITP) to identify and record project specifications and requirements.

Our scientifically developed solutions and expert application methods enable us to deliver an end-to-end solution which makes this guarantee possible. Each project solution is tailored for specific site requirements and longevity targets which requires a tailored guarantee to make sure our clients reach those goals.
Our Core Values

Safety
We are committed to providing a workplace that protects the health, safety and welfare of our team, including clients, contractors and visitors. The success of our projects relies upon the safety of our workforce and the communities around us. Safe management of the environment is integral to everything we do.

Innovation
We believe our clients deserve a methodology which is proven scientifically. We research, develop and implement cutting-edge solutions that are tailored to Australia’s climate and all individual project requirements. With an extensive suite of mine-specification HydroTrucks, restricted-access equipment and the latest drone technology, our innovations are unmatched.

Excellence
It’s more than what we provide, it’s what we think and how we act. Our business is not just about providing a solution that works, we build long lasting partnerships with our clients. Partnerships that ensure a quality service, prior, during and post project, paving the way for a successful working relationship with a focus on excellence.
Efficiency
With the ability to deploy from depots all across Australia, we are able to execute a swift response to environmental needs in Australia's most remote areas. The capacity of our equipment and skilled technicians allow us to cover large areas with accuracy and precision. Our on-site drone surveys use the latest 3D mapping software to get accurate surface area readings to reduce wastage and maximise project efficiency.

Integrity
At Erizon, we conduct business with the utmost professional behaviour and ethics. We believe in fulfilling our duties to the highest moral standards and value transparency, honesty and ethicality in all interactions with our clients, personnel, contractors and the public.

One team
Our customer-centered approach is provided by each and every member of our team. We work synergistically to understand the needs of our clients and put their satisfaction as our number one priority. Great efforts are made to make our place of work inclusive, safe and diverse for all. A place where everyone takes pride in what they do and how they treat each other.
Vision Zero

Workplace Safety
Erizon has taken a proactive approach to the safety, health and wellbeing in the workplace to ensure that our entire team, including clients, contractors, and visitors are protected.

Vision Zero is our primary safety strategy which has been placed at the heart of our company. The underlying approach has been designed to create a workplace culture where safety is our number one priority and ‘zero’ becomes the only acceptable number for accidents or fatalities in the workplace. To ensure the visibility, understanding and successful implementation of Vision Zero among employees, our focus is to promote awareness and accessibility of safety resources within the workplace and onsite projects.

We have strong leadership personnel that are responsible for ensuring that Vision Zero is effectively implemented within the workplace and onsite. This is maintained through regular training, protocol and service exercises, to ensure the correct safety methods and certifications are being implemented and align with the AS/NZS 4801:2001. Additionally, our safety and environmental systems are regularly audited by our clients in high-risk industries to ensure that we are compliant with their WHSEQ requirements.

Leadership Management
At Erizon we have understood the need to place leadership at the forefront of our Vision Zero strategy. Having structured leadership management provides a greater level of awareness, organisation, lead consistency and builds a climate of trust and communication at every level of the company. We strongly believe that having an appointed leader provides accountability to the team in ensuring that processes and procedures are continually updated and adapted to improve our performance in the workplace.

Control Management
We recognise the importance of having a strong management infrastructure that promotes individual responsibility. We require employees to have a strong awareness of their surroundings and have the knowledge necessary to take control of risk management procedures when required. Control Management is an ongoing process that is triggered by changes that affect the work or activities on site. It is a requirement that our employees participate in on-the-job training prior to certain projects, particularly in the mining, civil and infrastructure industries, along with the completion of a Job Safety Environmental Assessment (JSEA). The JSEA allows us to adhere to our Vision Zero strategy, which is aimed at assessing all the potential contingencies that may affect the completion of various tasks. This analysis is vital in preparing us for any potential risk that may contribute to the way that an employee would safely react to an issue. We also require our employees to carry a pre-task hazard assessment booklet with them at all times and must be aware of potential hazard and or change in work conditions that require them to take 5 minutes to assess the risk in order to effectively continue with Vision Zero in mind.

Process Safety
Process safety is a discipline framework that helps us maintain the integrity and operational systems of not only our own safety guidelines, but the safety requirements in accordance to our client’s processes and procedures. This ideology has been put in place in order to maintain the highest quality safety measures possible.
Our Approach

Environment

Erizon is committed to deliver personalised sustainability services that focus on innovative, practical and economic solutions, built for the environment. We have a team of highly qualified specialists who combine academic and practical experience to meet and exceed the sustainability requirements of our clients.

Environmental planning is an integral part of our approach to each project, allowing every aspect of our activities and operations to be conducted based on informed and considered decisions. Our commitment to the protection of the environment and its preservation is best demonstrated by our certification to ISO 14001:2015 Environmental Management Systems.

Further to this, we have a clear objective to minimise pollution and waste, with recycling processes in place to mitigate the wastage of our operations and site activities.

Quality

Erizon is committed to delivering state-of-the-art products and services that align with our valued clients needs and project goals.

To ensure the utmost quality standards are achieved in our industry, Erizon has implemented a quality management system aligned to the ISO 9001:2015 system. Our quality guarantee is managed by processes, policies and continual customer feedback company-wide. We use only the highest quality materials and have independent third party and internal audits conducted to ensure continual improvement and a high level of service is maintained.

Communication

Effective communication is a fundamental tool that drives our success. We have created a workplace dynamic where two-way communication is an inspired daily approach and strongly believe that we work better together. While our dedicated client liaison officers ensure that our clients receive vital project details and timely information throughout the entirety of the process.

Expertise

Erizon is backed by the experience and specialised advice offered by our team of leading agronomists, horticulturalists and soil scientists.

The foundations of our tailored client solutions are supported by our team of experts who develop effective resolutions, based on scientific analysis of the environmental issue at hand. We maintain our awareness of new and innovative solutions to optimise results in our service offering, so that we can stay at the forefront of environmental expertise.
Erizon Revegetation Process

Our revegetation process always begin with an on-site inspection by our highly experienced soil scientists. Samples of the soil are collected and taken to the lab where an extensive analysis takes place. The results create informed recommendations to create the best possible outcomes. The latest drone technology is used to accurately map the area that requires the solution so the correct amount is applied. A solution is then tailored to the specifications required and is tested before final application is made. The purpose built agitator within our HydroTrucks ensure an evenly mixed solution is applied to the target area accurately. Performance monitoring is carried out post application to ensure the project is a success.
1. Collect and assess
Soil sampling with complete analysis provides essential information to determine how vegetative growth can be optimised. This process allows Erizon to provide tailored recommendations to ensure a more favourable growing environment for faster growth and establishment.

2. Choosing the right plant species
To safeguard success, it is essential to select the best plant species to suit the project location, site conditions, intended use and maintenance requirements.

3. Drone survey
A 3D survey is undertaken of the proposed revegetation site to accurately measure the area size and map it to a high degree of detail for quality, planning and analysis purposes.

4. Tailor the best revegetation solution
Our experts carefully select the best solution for your project. They consider erosion control and product effectiveness including, its ability to facilitate growth and the functional longevity required for that protection.

5. EnviroSoil application
An active blend of thermally engineered plant fibres, soil conditioners, extracts and minerals work to rectify the soil’s rhizosphere and optimise outcomes.

6. Even and uniform application of revegetation solution
Our highly trained technicians ensure that solutions are mixed and applied according to experience and guidelines to maximize the performance of your project goals.

7. Drone spraying
The latest drone technology allows us to apply fertiliser, trace elements and soil probiotics 4-8 weeks after seeding application to ensure the ongoing success of your project.

8. Post-project monitoring
Continually monitoring how projects are progressing is the best way to ensure all site requirements and compliance issues are being addressed. Maintenance may at times be required to mitigate against unexpected challenges. Erizon is committed to keeping you informed every step of the way.
All Erizon's plant and equipment is mine compliant and maintained according to manufacturer specifications and requirements to ensure the safety and reliability of the equipment during operation. Erizon ensures that all plant and equipment is thoroughly washed and cleaned prior to and at the completion of each project to eliminate cross-contamination of solution materials.

**HydroTrucks**

With hydraulic cannons mounted on state-of-the-art HydroTrucks, Erizon has the ability to apply product to areas in a fast and efficient manner. Erizon’s HydroTrucks feature in-built agitators to maintain solution uniformity and homogeneity and are also fitted with hydraulic hoses with an extended hose capacity in excess of 500 metres. The power, speed and design of our machines optimise efficiency and effectiveness by providing unparalleled coverage of extremely large areas and difficult terrains such as steep slopes.

All Erizon HydroTrucks boast the ability to apply product to 50,000+ square meters per day. All our HydroTrucks are fitted with rollover protection systems, edge protection and harness attachment points, interlocks and emergency stops, fire-fighting equipment, spill containment kits and first aid equipment to protect the safety of our operators.

Erizon ensures that:

- Only competent personnel who hold current High-Risk Work Licences will operate mobile plants
- Pre-start inspections are conducted prior to use
- Plants are only to be used for the purpose for which they are designed
- All health and safety features on the plants will be used
- Guarding is permanently fixed and is not permitted to be removed
Lower Ground Pressure

The ability to utilise our HydroTrucks on soft and challenging terrain such as tailings storage facilities (TSFs) is highly advantageous. This means increased safety, more accuracy and reduced costs compared to alternative methods such as an aerial application by air tractor or helicopter.

These tracks are engineered to be quickly installed on-site and used to provide greater traction, floatation and reduced compaction. Once installed, the HydroTrucks pressure load per squared inch (PSI) is reduced to that of an average human standing on the surface.

Traction aggression levels can also be altered by modifying the track shoes to suit different project conditions and locations such as muddy ground, steep slopes and rocky embankments. These tracks are especially beneficial when soil compaction is a critical factor. Areas scheduled for revegetated often have restricted access due to the risk of compaction that would result in poor growth conditions. Our tracked system maintains the coverage and accuracy with the benefit of greatly reducing soil compaction.
Tracked Challenger Tractor

The latest addition to the expanding fleet of innovative equipment, the Challenger tractor. The low ground pressure workhorse pulls a tracked trailer fitted with a state-of-the-art HydroTruck. This combination takes soft ground applications to a new level.

We are now able to cover very large tailings storage facilities (TSFs) or steep batters safely and more accurately.

Safety is paramount which is why the Challenger comes installed with 30" tracks to ensure maximum surface footprint while onboard fire suppression systems are fitted as standard.

The Challenger tractor also features angled tread rubber tracks which reduce the disturbance of the surface when performing turns unlike smaller vehicles.
Agitated Tanks

Our specified HydroTrucks have been purpose built to apply hydromulch and or hydroseed solution at a distance of 100 meters and can only be effectively applied with the use of our in built agitators. The agitators are propeller like blades, positioned within the holding tanks and are intended to continually mix the product, to ensure that an even application is made to the soil surface.

Heavy Lift Drones

Erizon are leading the way in the environmental sector by taking advantage of cutting edge technologies and engineering properties that have been built into our heavy lift drones. These drones have made it possible to improve our safety procedures by eliminating the need for employees to partake in high risk product application procedures. Instead, our drone pilot can navigate and apply product with ease in hard to reach and unsafe locations through the use of FPV and DGPS software.

Multi-spectral Monitoring

Fitted with intelligent sensor mechanisms, combined with high-performance motors and the latest multi multispectral 4k HD camera technology; these specialised drones provide access to sophisticated data that is obtained via 3D surveys. This information allows our team to effectively analysis the NDVI, NDRE and Chlorophyll, associated with the environmental and vegetation conditions of the project at hand, and assists in making accurate decisions that will provide the best outcome for our clients.

Thermal Mapping

Conducted by our specialised drones, allows us to monitor a range of environmental concerns, primarily associated with the temperature and moisture condition of the grounds surface. This generated data helps our specialist team determine the high risk areas that require a specialised risk assessment and approach to product application.
Our Services

Dust Suppression
Our dust control application methods such as aerial, HydroTruck, drone, hose and spray bar are the foundation of our success. The cutting-edge product technologies combined with our experience on large and remote sites ensures that your project will receive professional management and superior results every time.

Hydromulching
Damaged and depleted soils require more than conventional methods to achieve sustainable growth. Through the application of world-class growth mediums, we are able to support faster vegetation growth whilst minimising erosion.

Hydroseeding
Hydroseeding is an efficient and cost-effective technique for revegetating large areas including moderate slopes.

Soil Stabilisation
Erizon uses a cost-effective and long-lasting soil stabilisation method developed by a recognised global leader in the field of polymer soil stabilisation. Extensive investment in research has helped formulate some of the most effective and advanced soil stabilisation agents available.

Erosion Control Blanket
Erosion control projects present us with some of our most challenging work. There are substantial safety risks to staff in the installation of traditional erosion control matting products, particularly when there are steep inclines involved. Our innovative Australian designed and manufactured synthetic Erosion Control Blanket allows for safe and effective installation.
Soil Testing

With the endorsement of some of Australia’s most experienced and respected soil rehabilitation specialists, our social science expertise ensures that our analysis and preparation will give your revegetation project the optimum chance of success. It all starts with science.

Mine Site Rehabilitation

Our site rehabilitation involves a careful analysis of your site’s requirements and conditions to customise a solution that meets your goals. Our solutions can be used for land rehabilitation both during and after your project to minimise risk and maximise success.

Trial Testing

Envizo is our latest software developed to assist in determining the best solution for revegetation projects. The trial testing looks at variables such as seed types, mulch application rates and soil amendments. While the technology provides 24/7 Real-time Performance indicators including live video and reporting data.

Drone Performance Monitoring

As well as innovation through our focus on soil health, Erizon utilises the latest in drone, sensor and imaging technology to more accurately plan and manage operations and projects.

Heavy Lift Drone

Paving the way to better safety measures – our heavy lift drones have the capabilities to access hard to reach points, eliminating the need for employees to partake in high risk product application procedures.

Soil Testing

With the endorsement of some of Australia’s most experienced and respected soil rehabilitation specialists, our social science expertise ensures that our analysis and preparation will give your revegetation project the optimum chance of success. It all starts with science.
Revegetation

Successfully revegetating damaged landscapes following construction or mining activities can be particularly difficult in the harsh Australian environment. Diverse soils and weather conditions across the country mean there is no ‘one size fits all’ solution for every revegetation and erosion control project.

Revegetating with healthy, sustainable vegetation that supports existing ecosystems is the most efficient and effective way to meet environmental remediation requirements. The restoration of vegetation in areas that have been disturbed by activity in Australia can reverse the adverse impacts caused by clearing and disturbance. Vegetation controls erosion, reduces land degradation, stabilises batters through root reinforcement and provides a habitat for biodiversity and animal species. Hydroseeding and hydromulching have proven to be effective strategies for revegetating and stabilising batters.

Revegetation involves a careful analysis of your site requirements and conditions to customise a solution that meets your goals. Our solutions can be used for land rehabilitation and stabilisation both during and after your project to minimise risk and maximize long term success.

“Revegetation involves a careful analysis of your site requirements and conditions to customise a solution that meets your goals.”

Hydroseeding

Hydroseeding is a method of using water as a carrier to apply seeds and fertiliser onto the seedbed. It is important to note that this is different from hydromulching. Our specially designed HydroTruck allows the operator to agitate the mixture to ensure even and constant mixing of ingredients, maximising erosion protection and soil stabilisation.

Representing an advanced way to revegetate compared to conventional direct seeding and drill seeding methods, our EnviroSprout allows for the revegetation of difficult to reach areas, as well as batters when a binder is added to the mix.

EnviroSprout is best used on large areas where quality soil is present, mulch is not required, and quality irrigation is present.
Hydromulching HGM

EnviroPro is a high-quality mulch comprising Australian-tested growth mediums such as Hydraulic Growth Mediums (HGM). With water used as a carrier, seed, fertiliser, binder, cellulosic mulch and tracking dye are applied to the seedbed in a similar way as hydroteeding.

Our EnviroPro combines the benefits of biologically active soil conditioners and fertilisers with the perfect blend of organic mulch fibres, binders and soil stabilisers. These fibres are hydroscopic, delivering up to 50% more water-holding capacity as they are designed to hold moisture longer and promote germination. This supports faster vegetation growth while minimising erosion and reducing water requirements. Hydromulching assists in suppressing weed growth and supporting native growth to thrive.

Hydromulching BFM

Essentially a heavy-duty growth medium, BFM employs a combination of two passes over the surface area. The first step involves a combination of water, seed and amelioration being applied onto the surface to ensure effective seed-to-soil contact. The second step consists of spraying cellulosic mulch and proprietary binder and tackifier at a high application rate to ensure erosion effectiveness. BFM’s viscous bonding agent dries to form a protective skin over the treated surface area, while interlocking fibres work to retain a high level of moisture, promoting an ideal growing environment.

EnviroLoc BFM has been designed to provide increased performance in comparison to standard hydromulching solutions when applied to steep batters, slopes, verges and flat areas. EnviroLoc follows and moulds to the contours of the surface and is perfect for all terrain types. This provides extended protection against erosion for up to 18 months by offering complete soil surface cover and improved seed germination. This means improved revegetation outcomes and a greater ability to suppress weeds for your project.
Hydraulic Top Soil

Biotic Soil Amendments (BSA) are soil amendments that have been designed to improve the composition of poor soils that lack essential nutrients and bioactivity after they have been disturbed by land activity. These BSAs act as a complete topsoil and compost erosion control solution.

These engineered soils enhance natural microbial activity and natural topsoil forming processes. The top soils are designed to be hydraulically applied through a HydroTruck, spraying onto the surface in a consistent slurry.

“EnviroSoil is a smarter way to reclaim your land and replace depleted soils, overcoming site challenges.”
EnviroSoil

EnviroSoil has been designed as a topsoil alternative for when your soil is unable to support revegetation. It is a smarter way to reclaim your land and replace depleted soils.

The active combination of thermally-refined organic fibres with high carbon and organic soil conditioners, seaweed extracts and mineral blends, including basalt and microbial inoculants, work as a coactive solution to rectify and improve the growth potential of the rhizosphere. The unique blend of nitrogen-fixing bacteria in conjunction with mycorrhizae work to stimulate the soil to mimic the natural cycle, thereby creating a sustainable growing medium for the germination of plants. Thermally treated fibres not only provide an interlocking matrix to minimise erosion but act as an initial food source for microbial colonies to regenerate during initial plant strike.
Our Solutions

Dust Suppression

Erizon have been market leaders in superior dust suppression solutions for over 25 years in commercial mining, civil, oil & gas, environmental and infrastructure projects Australia-wide. Conventional dust control solutions tend to have a short life span and require re-application. At Erizon, we have taken a different approach and utilised advanced dust suppression methods that consistently achieve better dust control solutions, are environmentally friendly and offer functional longevity.

We can effectively tailor a site-specific solution to solve the most complex dust abatement issues. Our methods are designed to create durable, water resistant and environmentally friendly surface crusts over dust, soil and aggregate. We also offer dust control solutions to cater to sites suited for vegetation growth.

Our environmentally sustainable approach to dust suppression involves the use of cutting-edge technologies that not only preserve water, but also dramatically minimise all site activity, time, and costs spent on project management tasks.

The best type of dust control solution for your site will depend upon a host of variables that are site-specific, such as the time available to establish vegetation, micro-climate, seasonal conditions, soil type, the area topography, drainage and project duration.

FibreLoc

FibreLoc is a market leading solution designed to solve dust suppression issues in the mining, civil and infrastructure industries. Specifically, purpose built for areas where unpredictable and harsh weather conditions contribute to dense dust erosion issues, which can rapidly become a health hazard.

Erizon has developed FibreLoc as a robust dust suppression solution that can quickly eliminate further issues caused by unstable substrates that traditional polymer solutions are ineffective. The unique construct is made up of interlocking wood fibres incorporated by strong hold, environmentally friendly binders to form a flexible yet sturdy blanket, aimed to withstand erosion, unpredictable and varying weather conditions.

The structure of the solution once in contact with the soil becomes a resistant protection, for functional longevity of 12 – 24 months.

“We use cutting-edge technology to reduce risk, water usage, time and money spent on large scale dust suppression projects.”
SuppressX

Scientifically formulated, SuppressX is engineered to eliminate dust lift without changing or compromising the substrate beneath it. Drawing on cutting-edge technologies, this non-toxic solution, has been developed with retentive, cross-linked water-soluble polymers, and engineered to save water and minimise site activity.

Upon application to the soil, the solution penetrates into the substrate below, binding to fine particles to form an interconnected flexible crust. The newly formed layer is an efficient and cost-effective approach to dust suppression, helping to resist erosive winds and rains.

This tailored approach is dependent on environmental considerations, however, has had proven success in non-trafficked areas, such a coal and copper mines, ash dams and power stations.

HydroBond

Offering efficient and economical dust suppressant solutions, HydroBond, has been backed by science and has proven to effectively suppress dust while simultaneously promoting faster germination with added seed protection.

Formulated using a specialist blend of polymers and propriety additives, is mixed with water to act as a binder to assist in ease of application. Offering superior technologies, HydroBond is both permeable to air and water allowing for germination and seeding to take place.

HydroBond can be tailored to the client needs, with the addition of hydromulching and hydroteeading products such as tackifiers and fibres, which are designed to promote greater vegetation growth, based on the project environment and soil conditions. With application possible with and without mulch, HydroBond is both an efficient and cost-effective solution.
Erosion Control Blanket

Erosion control projects present us with some of our most challenging work. There are substantial safety risks to staff in the installation of some traditional erosion control products, particularly when there is a steep slope involved. After a great deal of research into the best erosion control products on the market, we have created a groundbreaking, Australian designed and manufactured product that allows for safe and effective installation.

“A set and forget erosion solution that provides sustainable longevity for 20+ years”
EcoArmour

EcoArmour is a ground-breaking, Australian designed and manufactured solution that allows for safe and effective installation on all surfaces. EcoArmour is a synthetic erosion control blanket that has been designed to be sprayed through high-pressure HydroTruck equipment. Once sprayed, it dries and sets in a matter of hours, providing extended high-shear resistant erosion control.

A blend of minerals, interlocking fibres and specialty binders form EcoArmour’s durable, non-flammable crust. The specialty binders adhere to and incorporate themselves onto the substrate below, forming a tough, resilient cover that is also flexible enough to bind and move with the ground below it, eliminating cracking of the coating. For aesthetic purposes, a colouring agent may be added to the EcoArmour blend, achieving a range of custom colours to blend in with the surrounding environment.

Advanced technology means that surfaces will be stabilised for up to 20 years, making it the ideal erosion control and stabilisation product for vertical walls, roadside batters, steep slopes, swales and drains, levees and as bund and culvert lining. EcoArmour meets or exceeds all relevant transport and main road specifications.
Revegetation Trial & Envizo Real-time Monitoring

The revegetation of large scale areas can be an uncertain process, especially in harsh environments with varying conditions. While damaged and depleted soils require more than the conventional approach to achieving healthy and sustainable long-term growth. Understanding that this can be a very expensive and timely exercise, Erizon have worked together to create a service that can exponentially increase project success rates through the means of Envizo, our real-time performance monitoring software system.

**Monitor Performance**
Envizo becomes a fundamental tool throughout the monitoring process, allowing our team and clients 24/7 remote access to a full range of performance indicators including live video and reporting data on growth performance, advanced weather data, rainfall volume, soil moisture and salinity levels. This collated data allows our team to accurately study the behaviour of each suggested method to define the best possible solution for the entirety of the revegetation area.

**Trial**
Envizo is used in conjunction with our revegetation trial service, where we can effectively test the behaviours, of suitable variables such as; seed type including native and cover crop, hydraulic topsoil, hydraulic growth mediums, woodfires, varying application rates, irrigation, dust and erosion control. The trial period is an integral factor in perfecting the right vegetation solutions particularly for project areas located in regions with harsh and unpredictable weather conditions.

**Perfect and Implement**
Once the trial is completed our clients will receive a comprehensive report based on the analysis of the trial period. This recourse is an invaluable asset, proving insight into the specialised solutions designed specifically for the project area substrate. Based on the report our clients can make an informed decision that will ultimately, save them time, money and allow them to align with a sustainable approach to the environment.
Paving the way to better safety measures – our top of the line heavy lift drones have assisted in improving safety standards aligned with our Vision Zero policy.

These drones have been engineered with state of the art technology, designed to lift an excess of 100kg weight. Intended to be used in some of the toughest and most durable industries in the world, this type of drone allows us to utilise the lifting capabilities to access hard to reach points, eliminating the need for employees to partake in high risk product application procedures.

The sophisticated engineering combined with the FPV software allows the drones to navigate and complete precise route flights to the specified location and apply the custom solution with ease. At all times while the drone is in flight mode, our drone pilot can visually scope the surrounding environment to ensure to avoid obstructions that may affect the application process.

“An Industry first: Erizon pioneering the use of heavy lift drones in the environmental sector.”
Our Clients
In January 2018, Erizon was approached by Rio Tinto to undertake 32.8-hectares of revegetation works for early rehabilitation and soil stabilisation. The project would take place at one of their prominent coal mines, located at Hail Creek, 120 Kilometres from Mackay in Central Queensland. The project involved delivering a high-quality, successful solution by utilising expert personnel, specialist equipment and a wealth of experience in working within mine site regulations.

Upon inspection of the site, Erizon put forward a framework that articulated Rio Tinto’s industry commitment to establish a safe and sustainable area underpinned the future of the local ecosystem.

An essential obligation in commencing the rehabilitation works consisted of the examination of the overburden area and batter structures, in conjunction with independent soil testing. The investigation also utilised 3D multispectral drone mapping of the site, which provided a high degree of area-specific data, including land characteristics, positioning, Normalised Difference Red Edge Index (NDRI) and Normalised Difference Vegetation Index (NDVI).

This site evaluation prompted a proposal suggesting a tailored amelioration and fertiliser program where soil conditioners and probiotics at the time of seeding would be essential in achieving the long-term establishment of vegetation growth. The suggested mulch application would assist in the erosion protection during high-intensity rainfall of the batters until visible signs of growth would appear and naturally protect the substrate.

This tailored solution took approximately two weeks to establish vegetation. The development and restoration of the plant cover underpinned the establishment of a biodiverse root system embedded into the surrounding soil particles. The healthy growth provided substantial ground surface protection, which created a mechanical barrier from the impacts of rain and erosion.

For more details on this project visit;

In early May 2018, AGL Macquarie required a dust suppression and erosion control solution for an ash dam, located at the Liddell Power Station, in NSW. The ash dam measuring approximately 20.2 hectares had raised concerns with onsite officials due to the levels of dust emissions detected in the surrounding air.

The client had requested an immediate solution that relied heavily on combating the dust issues, which had the potential to cause adverse health and safety problems for employees and the local community. The basis of the project would need to be completed by the end of June 2018 and would require a practical solution that would withstand the minimum benchmark of 9-months.

The SuppressX solution had been chosen based on its effectiveness to quickly and effectively eliminate dust prone areas, such as the Liddell ash dam. SuppressX is a scientifically formulated product, engineered to eliminate dust lift, without changing or compromising the substrate beneath it, and for its ability to withstand harsh weather conditions on non-trafficked areas.

The client required a fasted passed mobilisation plan that would quickly and effectively combat extensive dust issues in and around the ash dam. Optimal weather conditions and clear communication with onsite AGL specialists assisted in completing the project with ease over a two-day application process.

The client was impressed with the efficiency that Works took place between the 23rd-24th of June 2018, where Erizon was provided with a short window of opportunity to commence work and eliminate dust in response to the rising levels in the area. The team worked together to tailor an appropriate solution that would cater to the health and safety of the environmental concerns at hand.

Erizon was able to provide by successfully fulfilling the dust requirements promptly with the use of the tailored SuppressX solution, which far exceeded the proposed guarantee beyond the nine-month guarantee.

For more details on this project visit:
Hillgrove Resources previously attempted to rehabilitate a section of batters within their Kanmantoo Copper Mine site, however, failed to deliver sufficient vegetation growth. The methodology consisted of a hydroseeding solution combined with a dust suppression binder. As a result of utilising the binder, a sealed crust was formed on the substrate causing limited access of water and air to permeate through the surface, affecting the germination of vegetation.

Comprehensive soil samples were taken from locations around the site, which showed that soil pH levels were in-between alkaline to moderately alkaline with major imbalances of low levels of calcium, elevated levels of potassium and magnesium with some areas also high in sodium.

The basis of these findings suggested that the soil profile consisted of a poor structure, underpinning the rationale behind the lack of vegetation on site. In response to these results, Erizon designed the following hydromulching and ameliorate program as a remediation strategy to underpin successful root growth and development for optimal vegetation coverage.

The project was undertaken in a two-part application process rendering across the 40-hectare project area twice. The first pass contained native onsite seed, custom fertiliser, and mulch to ensure favourable seed to soil contact. The second pass consisted of the mulch and binders, designed to provide a protective moisture shield for the seed.

Hillgrove Resources was extremely pleased with Erizon's efforts, professionalism and execution of the services provided. Communication and experience played a vital role in the success of this project, with environmental specialists working in collaboration with Erizon throughout the entirety of the program.

Feedback from the client suggested that the mulch approach assisted in the germination of the seed, by helping draw in moisture and suppressing weed growth. Given the limited rainfall in the region, the mulch also provided addition dust suppression and protection of the topsoil and seed from wind erosion.

For more details on this project visit:

In early 2017 the Flinders Power Station ash dams measuring a total of 275ha had been coved with topsoil from an adjacent borrow pit to the depth of 150-250mm. In July-August of 2017 earthworks were carried out across the property with a mixture of native chenopods, grasses, and other species – this was conducted with a drill and either dropped or spun onto the soil surface and lightly incorporated by following harrows. After the application of seed, there was approximately 100mm of water over a period of two months, which contributed to poor germination and establishment of vegetation, with close to failure over most of the dam’s surface.

In May 2018, Erizon’s team of environmental experts met with Flinders Power key personnel upon their request, to discuss a working solution for their dust suppression and revegetation concerns associated with their ash dam.

During the site visit, the team thoroughly examined both the ash dam and nearby burrow pits, via drone mapping and site surveying. During this time, a substantial number of soil samples were also taken and sent off for comprehensive analysis. The results indicated that the substrate profile was not suitable to support productive plant life, with high to very high salinity levels detected in the soil. In conjunction with the host environment, this became a critical factor in the failure to germinate and establish vegetation.

The objective of this project was to suppress topsoil dust while providing an amendment to the highly saline soil by underpinning plant germination.

Over the eight-month guarantee period, monthly monitoring and inspections were conducted onsite, involving: dust resistance, surface crust integrity, and weather conditions. Erizon was able to provide a solution that met the client’s goals by providing a dust control solution and vegetation growth that was significantly greater than anticipated – the client was pleased with the overall outcome.

For more details on this project visit; www.erizon.com.au/project/port-augusta-ash-dam