



RETAK ROAD



This case study explores the challenges of fugitive dust control at Mound Farm and the innovative solutions implemented by Erosion Control Contractors Inc. By applying ReTak Road, a plant-based, eco-friendly dust suppressant, the company reduced airborne dust, improved air quality, and minimized water usage. Their expertise in sustainable dust control enhanced site safety, optimized operational efficiency, and demonstrated the effectiveness of environmentally responsible solutions.



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WHO WE ARE

Erosion Control Contractors Inc. (ECC) was founded in 2008 with a mission to provide environmentally sustainable erosion control solutions. Our services primarily include hydroseeding and fugitive and road dust mitigation, among others, all designed to maximize efficiency and minimize environmental impact.

At ECC, we are certified **Erosion and Sediment Control Specialists** who implement industry-leading Best Management Practices (BMPs), integrating research and innovation to deliver effective, eco-friendly solutions. We prioritize environmental stewardship by sourcing and using only plant-based, biodegradable, and natural materials wherever possible.



Beyond service delivery, ECC is committed to education and knowledge-sharing, empowering individuals and organizations to make sustainable choices for **land preservation and habitat protection.**



Introduction

Mound Farm, located within the City of Surrey, faced challenges related to fugitive dust generated from its unpaved roads and operational areas. Airborne dust poses environmental concerns, potential health issues, reduced visibility, and increased wear and tear on vehicles and equipment. Seeking an effective and environmentally responsible solution, Erosion Control Contractors Inc. was contracted to manage the dust control project. They selected and implemented ReTak Road, a plant-based dust control agent, to address these issues.



The Challenge: Fugitive Dust

Unpaved surfaces at Mound Farm were susceptible to generating significant amounts of dust, particularly during dry periods or high-traffic activity. This presented several challenges requiring professional intervention:

-  **Environmental Impact:** Dust settling on surrounding vegetation and potentially entering waterways.
-  **Operational Efficiency:** Reduced visibility impacting safety and workflow.
-  **Asset Management:** Accelerated wear on vehicles and machinery due to abrasive dust particles.
-  **Regulatory Compliance/Community Relations:** Need to manage airborne particulates effectively.
-  **Resource Consumption:** Traditional dust control often relies heavily on frequent water application, consuming significant water resources and personnel time.

The need was for a durable, cost-effective, and environmentally friendly solution, expertly applied, that minimized water usage and maintenance requirements while effectively suppressing dust.



The Solution: ReTak Road Application

ReTak Road was selected by Erosion Control Contractors Inc. as the optimal dust control solution due to its unique properties aligning with the project's needs for sustainability and performance.

 **Product Profile:** ReTak Road is a chloride-free, plant-based formula designed for eco-friendly dust control.

 **Mechanism of Action:** The solution works by utilizing its natural components to absorb fine dust particles and aggregate larger particles together. This process binds the surface materials, increasing stability and significantly reducing the potential for dust to become airborne.

 Key Features & Benefits Addressed:

- **Environmentally Friendly:** Non-toxic to roadside vegetation and biodegradable, leaving no harmful residues.
- **Non-Corrosive:** Safe for vehicles and application equipment, preventing damage associated with chloride-based products.
- **Water Conservation:** Significantly more effective than water alone (claimed >25x), drastically reducing the need for frequent water truck applications.
- **Durability & Reduced Maintenance:** Its interval-based application provides lasting dust control (product literature suggests up to 6 months depending on conditions), minimizing re-application frequency and associated costs.
- **Cost-Effectiveness:** Achieved through reduced water consumption, lower maintenance frequency, and protection of assets.



Implementation by Erosion Control Contractors Inc.

Erosion Control Contractors Inc. managed the application of ReTak Road at Mound Farm, leveraging their expertise to ensure adherence to best practices and tailoring the process to the specific site conditions.

 **Application Rate:** While the recommended starting rate is approximately 1.0 Litre per square meter (L/m²), the experienced team at Erosion Control Contractors Inc. adjusted the actual dosage based on factors such as soil type, expected traffic levels, and prevailing climate conditions at Mound Farm to ensure optimal performance and longevity.

 **Method:** Recognizing the extremely dry and dusty conditions at the site, the Erosion Control Contractors Inc. team first pre-wetted the ground surface with water. This initial step helped to slightly condition the fine dust particles and prepare the surface for optimal penetration and bonding of the ReTak Road product. Following the pre-wetting, Erosion Control Contractors Inc. utilized appropriate spraying equipment (e.g., water truck with calibrated spray bar) to apply the ReTak Road solution, ensuring precise and even coverage over the targeted roadway or surface area.

 **Goal:** To expertly create a stable, durable, dust-resistant surface layer meeting the client's requirements.



Results & Outcomes

Through the professional application of ReTak Road by Erosion Control Contractors Inc., the following outcomes were observed and anticipated for the Mound Farm project:

-  **Significant Dust Reduction:** A noticeable decrease in visible airborne dust was achieved compared to untreated conditions.
-  **Observed Longevity:** Under the specific traffic, soil, and environmental conditions present at Mound Farm during the observation period, the ReTak Road treatment maintained effective dust suppression for approximately 45 days before breaking down and requiring re-application. While the product can last up to 6 months depending on conditions, this real-world result highlights the influence of site-specific factors on functional longevity.
-  **Improved Air Quality:** Lower levels of particulate matter in the air around the treated zones were expected during the effective period.

Results & Outcomes

-  **Enhanced Safety:** Better visibility on roads and work areas was likely achieved during the 45-day effective period.
-  **Reduced Water Consumption:** Compared to daily or frequent watering, the 45-day effective period represents a significant reduction in water usage for dust control during that time.
-  **Lower Operational Costs:** The need for daily watering was eliminated during the treatment's effective lifespan, reducing associated fuel, labour, and equipment costs for that 45-day period.
-  **Environmental Protection:** Minimal impact on surrounding vegetation and soil was expected due to the non-toxic, biodegradable nature of the product.
-  **Asset Preservation:** Reduced abrasive wear on vehicles and equipment operating on treated surfaces was likely during the effective period.



Conclusion

The implementation of ReTak Road at Mound Farm, professionally executed by Erosion Control Contractors Inc., demonstrates a practical application of sustainable dust control technology. By adapting their application method to include pre-wetting for the dry conditions and applying their expertise with a plant-based, chloride-free solution, Erosion Control Contractors Inc. delivered significant dust suppression which was observed to be effective for approximately 45 days under the site's specific conditions. While this duration was shorter than the maximum potential longevity stated in product literature, it nonetheless provided a period of effective control, reducing water consumption and operational effort compared to frequent watering during that time. The project highlighted the real-world performance of ReTak Road and the importance of considering site-specific factors in determining treatment longevity and re-application schedules.





Let's Work Together

Erosion Control Contractors Inc. delivers sustainable solutions for soil erosion and dust control. We specialize in hydroseeding, slope stabilization, sediment control, and DustFloc application, working with construction companies, mines, developers, and municipalities.

With years of expertise, our team provides tailored, eco-friendly services that meet regulatory standards and minimize environmental impact. At **Erosion Control Contractors Inc.**, we are dedicated to protecting the environment and ensuring the success of every project.



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