

## WELCOME TO OUR 9TH NEWSLETTER

Whilst the economy continues to be uncertain there appear to be some positive signs ahead with an increased demand for housing and the government's continued efforts to support infrastructure. Whilst the agriculture and forestry sector have benefited more recently from buoyant commodity prices

construction and infrastructure remain relatively weak. Our industry has seen some rationalisation with a squeeze on margins across the board but we are sure that those who come out the other side will be stronger for it. If we can take a positive out of the events in Christchurch then the rebuild process will create many spin offs across the region and throughout New Zealand. At Erosion Control

we have focussed on continued research and development, on-going training for our team, whilst striving to provide the highest possible levels of service to our customers. We would like to take this opportunity to thank those who have supported us over the last few years and we wish you all well for more prosperous times ahead.

# TE UKU WINDFARM



"Hick Bros Civil Construction engaged the services of Erosion Control Co. in early 2010 in relation to Meridian Energy Ltd's Te Uku Wind Farm project. The 28 turbine wind farm construction has involved the building of 24 kilometres of roading on 55 square kilometres of private land. In August 2010 the project won Environment Waikato's inaugural Earthworks Site of The Year Award due to the site's high level of compliance and the very high standard of erosion and sediment control. The Hick Spartan Joint Venture also won the prestigious 2011 NZ Contractors Federation Construction Award for projects in the \$10 - \$50 million dollar value range, which is another indicator of the high all round standards achieved on the site.

Over the duration of the project Mark Oxborough and his Hamilton based Erosion Control team stabilized and re-vegetated in excess of 150 hectares as the project progressed. Rob Fenwick from Hick Bros says "Mark's industry experience, knowledge and "can do" attitude has been invaluable in allowing us to successfully re-habilitate a site with very difficult topography and sometimes extreme weather conditions. The Erosion Control team have consistently delivered innovative solutions in a timely and professional manner ensuring full compliance with our consent conditions, the best possible outcome for the local environment and outstanding value for our client."

## STRAW WATTLES

Erosion Control Co Ltd's Straw Wattles are a uniform compacted 9" or 12" tubular roll either of Meadow Hay or Barley Straw encased in durable, biodegradable netting and can be manufactured to lengths of up to 12m. Straw Wattles are a practical and extremely effective option to assist with soil stabilization, sediment retention and vegetation establishment. Their widespread application has proved an effective and economical solution to Erosion Control issues around earthworks. When applied to slopes as SIDs (slope intervention devices) running along the contours, Wattles act as sediment barriers whilst reducing sheet flow and further reducing erosion.



A series of Wattles installed as SIDs (slope intervention devices) slowing water velocity across the slope.



Straw Wattles make extremely effective check dams allowing water to pass through whilst trapping material on the upside.



Straw Wattles were used as a major component of the Lucas Creek stream bank restoration. Our 12" Wattles were installed to protect the stream from potential sediment movement and retain topsoil on the upper slopes of the banks until vegetation was fully established. With all components of the Wattles breaking down over time they could be left in situ alleviating the need for further ground disturbance at a later time.







## ROOKS RESERVE STREAM RESTORATION

Earlier this year Erosion Control Co were contracted to restore and stabilise a section of Stream Bank in Rooks Reserve on Auckland's North Shore. As with any operation around watercourses, exceptional care had to be taken to prevent any material from entering the stream. Erosion Control Co engaged the services of Brackebush Construction for the earthworks using their 3.5 tonne digger, structural expertise and experience with working in a confined area. During a six day period of fine weather approximately 150m<sup>3</sup> of material was



removed and reintegrated using our Sock Wall System. A rock toe was constructed to protect the foot of the wall against storm flow and the wall and surrounding area hydroseeded as part of the revegetation process. Tom Mansell from Auckland Council says "Maintaining and improving the quality of our "green

spaces" is still a key focus for us. Structures such as Sock Walls provide a sound green and cost efficient alternative to Gabion and Timber retaining methodologies. They also allow for greater flexibility and can be easily integrated with outfalls and other natural stream bank features."

	HYDROSEEDING		NATIVE SEEDING
	EROSION CONTROL SOCKS		SPILL KITS
	STRAW WATTLES		LAWN ESTABLISHMENT

## EROSION CONTROL SOCKS

It is now 2 years since Erosion Control Co introduced a Double Skin Erosion Control Sock to the market. These have proved to be a highly effective and cost competitive sediment control solution across a range of situations. Benefits include the quick and easy installation, re-use and the ability to locate the devices where silt fence installation is not practical. The Erosion Control sock can contain a range of mediums to assist with the specifics of your site but typically a pine sawdust enables the sock to be relatively light for installation. Once the sock comes into contact with water, the devices sit down hard forming a uniform seal with the ground below ensuring optimum performance. We also supply our socks with stakes and twine for further securing as and when required. The purpose of the socks is to intercept, filter and contain sediment laden water and ensure that any water leaving your site meets local authority regulations. Erosion Control Co supply a "sock linking system" creating a continuous line from easy to manage lengths of 6-7 metres.



A series of Erosion Control Socks to form check dams reducing water velocity and potential scouring during high rainfall periods.



Erosion Control Socks installed in a continuous line as a silt fence alternative to contain sediment run off prior to grass establishment. In this example socks were installed in 7m lengths with Erosion Control Co Ltd's Sock Linking System.



Once vegetation has been fully established the Sock can be easily removed and relocated to the next stage of earthworks. Tide marks in this photo show water levels from recent rainfall where the water was allowed to pass in a controlled manner.



Inlet Protection. Erosion Control Co provide a range of solutions for the protection of cesspits and inlets. The devices are quick and easy to install and are highly effective at arresting sediment prior to entering the storm water system.

## SPILL KITS



In line with our philosophy of protecting New Zealand's water from all forms of contaminants Erosion Control Co. have put together a practical and effective Spill Kit for fuel or oil spills that may occur on site. The kit comprises the following items:

- 20 litre watertight bucket & lid for storage of contents and disposal of contaminants;
- 2m x 100mm absorbent wool fibre boom sock
- 2 x absorbent pads
- 1 x 3kg bag of absorbent material (peat moss)
- 1 pair disposable gloves
- 1 disposable pan & brush

## COIR MATS FOR STABILIZATION



It is our philosophy at Erosion Control Co. that wherever possible we provide environmentally sound solutions that provide minimal impact on the environment. Introducing a new 100% natural coconut fibre from R J Reid product called Coconet which comes in 700gsm - 2m x 30m rolls. The product is designed to prevent soil erosion on slopes while simultaneously aiding in the growth of grass or plants. The net has an aperture of approximately 20mm which when hydroseeded, lets the sunlight through and retains moisture to aid germination. The Coir is 100% biodegradable, has a high tensile strength and has a 3-5 year life span. It should be installed down or across the slope with a ground staple every square meter. This product can be supplied and installed by the team at Erosion Control Co.

## A BEGINNERS GUIDE TO GRASS TYPES, CHARACTERISTICS & APPLICATION

The table below is set out to give a basic understanding of the prevalent species of grasses to be found in New Zealand. We are always pleased to consult in relation to specialized requirements for a specific site or project.

Common Name	Characteristics	Application
Nui and Agricultural Ryes	A faster growing relatively hardy grass in relation to other Rye Grasses with germination all year round.	Agriculture, Roadside, parks and reserves.
Amenity Ryes	Typically a higher end Rye requiring periodic treatments to maintain a higher quality end product.	Lawns, sports fields & fairways.
Fine Fescue	A hardy species that is shade, cold and drought, tolerant. Limited germination in the colder months.	Lawns, in the rough, shady areas and some roadside situations.
Tall Fescue	A broad dark green leaf with good drought tolerance with a growing popularity for lawn area. Establishes in summer months only.	Lawns, parks & reserves, in the rough and some roadside situations.
Browntop	Drought tolerant and suitable for cooler climates. Good drought and low fertility tolerance	Greens, tees and fairways. Roadside cuts and batters and higher altitudes.
Bermuda grass / Couch	A creeping species for areas of warmer climate with a strong drought tolerance. Susceptible to frosts and winter dormancy	Fairways & lawns in northern areas.
Kikuyu	An extremely drought tolerant species that prevails in the upper north island. Invasive and dominant and prevalent in coastal regions. Susceptible to prolonged frost periods.	Increasingly popular for sports fields and recreation. Coastal lawns and areas requiring stabilization. Drought prevalent and nutrient poor areas where alternative grasses will fail over time.
Clovers & Lotus	Clovers and Lotus species act as a legume by fixing nitrogen from the atmosphere and returning it to the ground via its root structure. They complement grass species by providing "natures fertilizer".	Typically beneficial where it is expected that chemical or organic fertilizers will not be applied after establishment.

## Do I need a professional Sediment and Erosion Control Consultant?

Some ideas about best practice can be achieved by reading local Erosion and Sediment Control guidelines and District and Regional plans. However this only provides a theoretical understanding of what is required rather than a practical approach to design and implementation.

There are a number of professionals within New Zealand who specialise in Construction Management including erosion and sediment control. These consultants spend a large amount of time designing and implementing industry best practice Erosion and Sediment Controls on a range of projects throughout the country. In this regard they have taken the theory and put this into practice.

### A few steps to success:

- Get a specialist to review the Erosion and Sediment Control Plan at tender
- Ensure efficient and cost effective controls are installed onsite
  - i. Building controls once only
  - ii. Keep things simple
  - iii. Minimise maintenance costs and time
  - iv. Minimise effect on construction programme
  - v. Minimise overall cost
- Positive communication with Council (likely to reduce delays through approval processes)

As an example, following award of contract, we recently reviewed and then re-designed an Erosion and Sediment Control Plan. With our expert knowledge we were able to rationalise the controls, propose and agree with Council best practice options that were not specifically within their guidelines. This saved the contractor \$500,000 from the original engineer's schedule and plans.

Remember we are there to build and complete a project within time and budget. Like any other aspect of the project, good design and planning will minimise cost and time delays.

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