

DOWN TO EARTH

ISSUE NO 001

WELCOME TO THE FIRST ISSUE

Welcome to the first issue of Down to Earth, a quarterly newsbrief designed to keep you up-to-date with events and activities at Erosion Control Co Ltd. As relatively new owners of a well established business the last year has seen Roy Timperley and myself taking the opportunity to fully understand the business and operational activities of Erosion Control. Everyday we learn and everyday we can see just how good a business this is, and just how much potential for growth

and expansion exists. We have been reticent to introduce too much change too quickly, simply put you don't fix what isn't broken. With a year's experience and the continuing support of former owner Steve Oxborough and the appointment of Matt Oxborough as Operations Manager, our feet are firmly under the table and we are now beginning to introduce the ideas we have been developing. Increasing our public profile, broadening the range of services we are able to offer to include silt fencing,

native planting and landscaping are all underway. As we look forward to the challenges of future years, Roy and I would like to take this opportunity to thank everybody who has helped us through our first year. Please take the opportunity to read through this first issue of Down to Earth. Your feedback would be very welcome..... *Lynda Baldwin*



Hydroseeding on your site

Hydroseeding (or hydro mulching, hydraulic mulching) is a planting process that utilises a slurry of seed and mulch. The slurry is transported in a tank, either truck or trailer mounted, and sprayed over prepared ground in a uniform layer. This is an alternative to the traditional process of broadcasting or sowing dry seed. It promotes quick germination and inhibits soil erosion.

The mulch in the hydro-seed mixture helps maintain the moisture level of the seed and seedlings. The slurry often has other ingredients including fertiliser, tackifying

agents, (optional dye) and other additives used to stimulate and sustain growth.

Hydro-seeding is used to seed on commercial sites (motorways etc.) golf courses, large (and increasingly small) scale property development and areas too large or unsuitable for conventional methods. Starting a lawn for example, is considerably more cost effective than laying turf and vastly quicker than sowing seed. Hydro-seeding is also used to spread mixtures of wildflower and natives (often eco-sourced). The slurry may also be used as a substrate for stolons (runners) or rhizomes.

This process is often referred to by the slightly different term of "sprigging" or hydro-sprigging.

There are many different versions of hydroseeding mixes available on the market. Some are overseas products and some are New Zealand made. Tackifiers are a horticultural glue that binds together the various compounds of the hydromulch and "stick" it to the soil. This can be a big advantage to you at this time of year when high rainfall, warming ground temperatures and lengthening days make ideal conditions for vegetation growth.



EL NIÑO LOOKING LIKELY

Once again El Nino is back on the agenda with climatologists talking of an increased likelihood of an event by the end of 2006 through 2007. The effect on our weather will depend on the strength of the event however even a mild El Nino will produce observable changes to the generally expected weather patterns. During an El Nino event New Zealand tends to experience stronger or more frequent winds from the west in summer, typically leading to drought in east coast areas and more rain in the west. In winter, the winds tend to be more from the south, bringing colder conditions to both the land and the surrounding ocean. In spring and autumn south-westerly winds are more common. The North Island will see more high pressure systems (anti-cyclones) and the South Island moderate to strong westerlies. From a construction perspective drier eastern conditions will be favourable but dust is likely to become an issue. In the west higher than normal rainfall will result in run-off issues for sites not appropriately managed.

In the short term it is expected that the dominant pattern of the September to November period to be westerly, but with the west-erlies frequently interrupted by other weather patterns.

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A touch of...

GRASS is a specialist golf course construction company making a statement in the increasingly active New Zealand market.

GRASS is well known for its work on some of New Zealand's leading courses including the Gulf Harbour Country Club, the Peninsula Golf Club and the Manukau Golf Club. GRASS has built a reputation not just for a quality finish at the top of the international standard, but equally for an approach that recognises the need for environmental risk management at all stages of development.

The success of GRASS is a direct result of proprietor Adam Jones' depth of experience. Having served as both a course superintendent



and as a shaper/contractor Adam has the advantage of being able to view golf projects from the green-keeper's perspective as well as the owner's perspective and, of course, always from an environmental perspective.

Seeing golf course plans become reality often requires extensive excavation and topographical changes to the land, as well as dramatic changes in vegetation patterns. It is no surprise therefore that



during course construction there is great potential for damaging soil erosion particularly during the winter season.

Because of the emphasis on aesthetic appeal, golf courses have every incentive to take proper, proactive measures to control soil erosion. Establishing grass in a dense, uniform manner is an obvious construction objective. Hence, the loss of fertile topsoil due to erosion can hinder efforts to establish vegetation after construction ceases, not to mention added

cost for re-grading and possible course opening delays. In addition, topsoil lost to erosion is generally bound for the nearest waterway where sediment-laden runoff is now entirely unacceptable.

Presently GRASS is contracted to the Remuera Golf Club and has found its partnership with Erosion Control Co Ltd invaluable during the winter months of unstable and unpredictable weather. Faced with a likely washout situation as a result of a near-stationary low pressure weather system Adam sought the services of Erosion Control to protect his

carefully prepared surfaces from topsoil degradation and local waterways from downstream silting. By careful application of Erosion Control's "Liquid Soil" hydroseed mix, the soil surface was stabilised and protected from the effects of the torrential rain. The hydroseed layer then supported rapid germination of the seed mix in an optimal environment.

The "before" and "after" pictures clearly show just how successful this approach can be. Silt run-off was entirely avoided and a rich green and importantly robust playing surface the result.

healing the scars of progress



HYDRO SEEDING



DUST SUPPRESSION



STRAW MULCHING



NATIVE PLANTING



LIQUID SOIL

DOWN TO EARTH

ARC change Erosion and Sediment control rules

ARC are doing a review of the TP90 (Technical Publication 90). This is the document that deals with erosion and sediment control. The new version is due out on 1st October 2006. ARC are suggesting that the review is only "minor". At this stage we haven't been able to obtain details of the "minor" changes. The new version should be available on-line at www.arc.govt.nz soon after the completion date. We will keep you posted.

Auckland Regional Council Sediment Management Team 2006 Annual Workshop



The recent ARC Sediment Management Workshop held at Long Bay Regional Park on the 21st September on Auckland's North Shore provided a wealth of opportunity for industry members to discuss common topics and share ideas. Of particular interest were presentations given by

members on a variety of differing approaches to meeting the TP90 controls. Held annually by the ARC the workshops are growing in size, a good indicator that the environmental issues associated with land development are no longer the preserve of industrial development but have an impact across the scale.

How many silt control fences are too many???!?



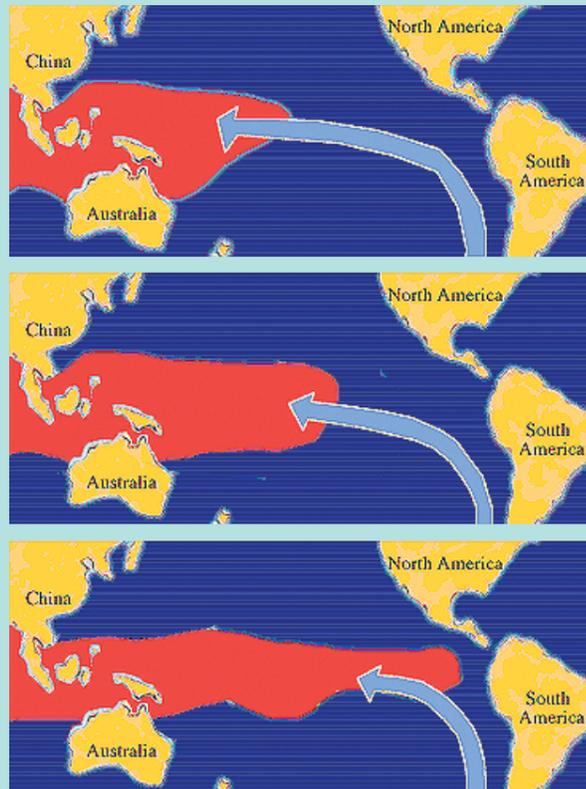
5 ways you can save money on compliance

Complying with ARC consent conditions is costly. They recently put out the following hints on how to save money on this exercise.

1. Have a pre-construction meeting. This is compulsory but they believe it will assist in communication and give them a chance to update you on any new rules. Therefore saving costly mistakes.
2. Have a copy of the ARC communication protocol handy. These tell you what changes to environment methodologies can be authorised by the ARC representative who comes on site, and what changes have to have formal approval by the ARC.
3. Ensure all your controls are built in accordance with the appropriate technical documents: TP90 (erosion and sediment control) TP10 (storm water controls) etc. All available, of course, from the ARC.
4. Understand how the "auditing matrix" works and how scores are marked on your site: ARC will give you this information.
5. Maintain good communications with your ARC representative.



EL NIÑO LOOKING LIKELY "CONTINUED"



Confirmation of the expected El Niño event should occur by early to mid summer leading, as discussed, to more frequent anticyclones over the North Island and moderate westerly airflows over the South Island. Because of this wide range of weather systems it seems unlikely that any major climate anomalies over the September to November period will be seen. Notwithstanding this, a predominantly westerly pattern over the country suggests generally milder and drier conditions in eastern districts, wetter in western districts, especially in the South Island, and cooler in the south of the South Island. These conditions fit the pattern of an El Niño event but do not guarantee it.

Looking much further to next year and into Autumn and Winter if the El Niño

takes hold then the winds will tend to be more from the south, bringing colder conditions to both the land and the surrounding ocean.

What is El Niño? What is La Niña?

A definitive translation of El Niño is hard to find. A quick search of the net finds translations of "warm little mule" – well actually "too hot beast of burden" but that's just too much of a mouthful, through to the more commonly accepted "the little boy". The conveniently apposite La Niña meaning "the little girl".

The first mention of the term "El Niño" to refer to climate occurs in 1892, when Captain Camilo Carrillo told the Geographical society congress in Lima that Peruvian sailors named the warm northerly current "El Niño" because it was most noticeable around Christmas. However even before then the phenomenon was of interest because

of its effects on biological productivity, with its effects on the guano industry.

El Niño is a natural feature of the global climate system. Originally it was the name given to the periodic development of unusually warm ocean waters along the tropical South American coast and out along the Equator to the dateline, but now it is more generally used to describe the whole "El Niño – Southern Oscillation (ENSO) phenomenon", the major systematic global climate fluctuation that occurs at the time of an "ocean warming" event. El Niño and La Niña refer to opposite extremes of the ENSO cycle, when major changes in the Pacific atmospheric and oceanic circulation occur.

When neither El Niño nor La Niña are present, (usually referred to as "neutral" or normal conditions), trade winds blow westward across the Pacific, piling up warm surface water so that Indonesian sea levels are about 50 cm higher than those in Ecuador. Cool, nutrient-rich sea water "wells up" off the South American coast, supporting marine ecosystems and fisheries. Relatively cold sea temperatures also extend along the equator from South America towards the central Pacific. High rainfall occurs in the rising air over the warmest water to the west, whereas the colder east Pacific is relatively dry.

During El Niño events, the trade winds weaken, leading to a rise in sea surface temperature in the eastern equatorial Pacific and a reduction of "up-welling" off South America. Heavy rainfall and flooding occur over Peru, and drought over Indonesia and

Australia. The supplies of nutrient rich water off the South American coast are cut off due to the reduced up-welling, adversely affecting fisheries in that region. In the tropical South Pacific the pattern of occurrence of tropical cyclones shifts eastward, so there are more cyclones than normal in areas such as the Cook Islands and French Polynesia.

During La Niña events, the trade winds strengthen, and the pattern is a more intense version of the "normal conditions", with an even colder tongue of sea surface temperatures in the eastern equatorial Pacific.

La Niña events have different impacts on New Zealand's climate. More north-easterly winds are characteristic, which tend to bring moist, rainy conditions to the north-east of the North Island, and reduced rainfall to the south and south-west of the South Island. Therefore, some areas, such as central Otago and South Canterbury, can experience drought in both El Niño and La Niña. Warmer than normal temperatures typically occur over much of the country during La Niña, although there are regional and seasonal exceptions.

RECENT EL NIÑOS

1986-1987, 1991-1992, 1993, 1994, 1997-1998, 2002-2003. The events of 1982-83 and 1997-98 being particularly significant in recent times.

SOURCES: NIWA, WIKIPEDIA, METSERVICE, NOAA

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