



**Independent
Cement**

Independent Cement and Lime Pty Ltd
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www.independentcement.com.au

Friday, 11 November 2016

The Secretary
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Martins Creek Quarry Project SSD 14_6612 - Letter of Support

This letter is to confirm that Independent Cement and Lime Pty Ltd supports the Martins Creek Quarry Project.

ICL is a specialist distributor of cement and supplementary cement products to the construction materials industry. ICL is part of a National network and is owned by the Adelaide Brighton Group Ltd and the Barro Group. We have a unique position in the cement industry being able to actively innovate and promote the throughput of Supplementary Cement Materials (SCM's) as an alternative to traditional Ordinary Portland Cement (OPC) .

These SCM's are recognised under the Australian Standards AS3582.1 and also the NSW RMS 3211 specifications.

The process of burning Limestone to produce cement clinker or burnt Lime, for a binder is very energy and resource intensive. One tonne of OPC is responsible for approx. one tonne of Carbon Dioxide Emission.

One of our cement alternatives or SCM's, is fly-ash. Fly-ash is a by-product or residue which comes from your local Bayswater power station. This fly-ash by-product is created in abundance and is very difficult and costly to dispose of. Daracon's Martins Creek operation has innovated one of it's product offerings to incorporate fly-ash as the binder instead of OPC and to reduce the amount of Lime used as a binder activator. This is at the forefront of innovation in our industry and meets the triple bottom line objectives we talk about in creating a sustainable product and supply chain.

This process helps our environment and social standing in the Hunter Valley on a few fronts:

- 1) The fly-ash utilised by Daracon Martin's Creek helps to underpin a commercial supply chain from the Bayswater Power Station. The volume consumed helps us to amortise the cost of capital which contributes to the operations viability.



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- 2) The fly-ash utilised also averts product going to land fill or into ash dams which have an impost on future generation in terms of monitoring and management costs.
- 3) Using fly-ash instead of OPC cement and minimising hydrated lime usage, also helps abate the carbon emissions associated with the production of Lime and Cement. These are significant savings.
- 4) The procurement of this fly-ash from Bayswater Power Station is responsible for local employment in terms of collection of the ash, despatching and loading the ash, transporting the ash and the administration of the business.

Our organisation has been conducting business with Daracon for many years in a number of market segments. Martins Creek provides an important logistical piece in ICL having the critical mass of transport available in the Hunter Valley. Our business is reliant on quarries such as Martins Creek Quarry to maintain our commercial viability.

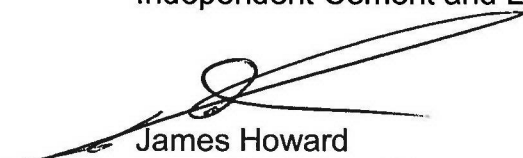
We understand the Environmental Impact Statement has addressed issues raised by various government agencies and community.

Daracon operates one of three hard rock quarries within the Hunter Region. Without Martins Creek Quarry operational, this reduces the supply and their market availability of quality hard rock material, with the potential to increase the cost of material, therefore increase the cost of construction. This will have cost implications for road building authorities such as RMS and local councils.

We also note that the recently released Hunter Regional Plan 2036 clearly outlines a growing Hunter population requiring approximately 70 000 additional houses to house the population by 2036. With this will come the need for construction materials that Martins Creek Quarry produces.

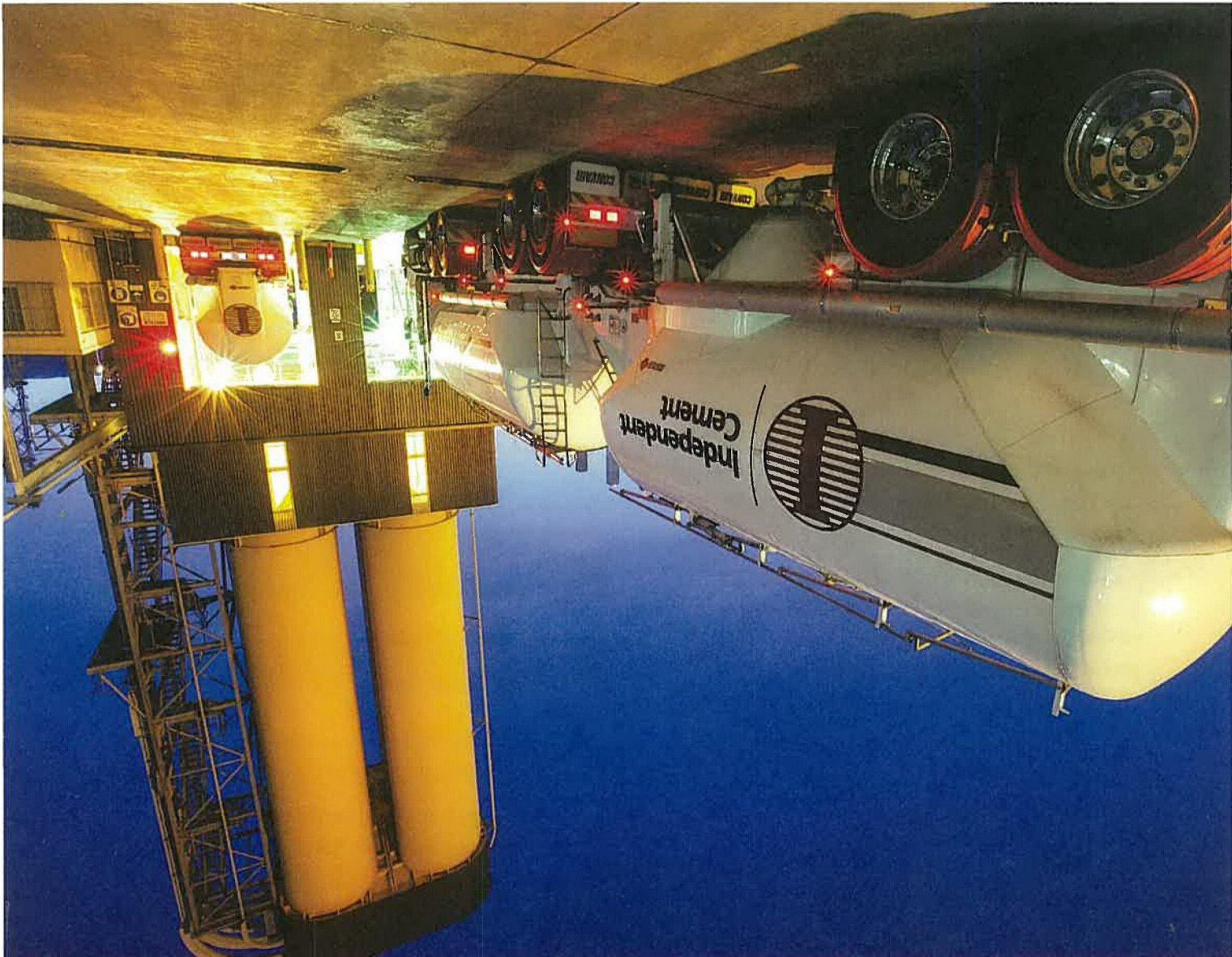
Our business supports the proposal by Daracon, and believe it will have a significant and direct impact on our business and that of the industry if it were not to be successful.

Yours sincerely
Independent Cement and Lime Pty Ltd



James Howard
Group Marketing Manager





Company Profile

Supporting the development
of independent operators
throughout Victoria
and New South Wales.



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Our History

Independent Cement and Lime Pty Ltd was established in 1987. The ICL group, which includes subsidiary companies, Steel Cement Limited and Building Products Supplies Pty Ltd, has experienced significant growth in its operations and market segments.

Whilst our profile and stature has grown significantly, we have remained committed to our fundamental objectives, as we maintain our focus on supporting the development of independent operators in a wide range of markets throughout Victoria and New South Wales.

Our Markets

ICL is a marketing and distribution operation with an integrated, purpose built supply chain specifically designed to cater for our core markets. ICL is a specialist supplier of cement and cement-blended products supplying to a wide variety of industries throughout Victoria and NSW including:

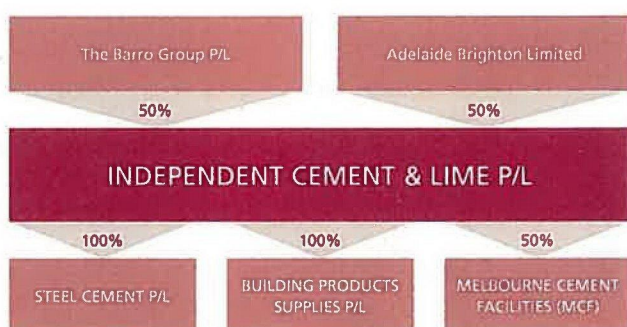
- Concrete manufacturing
- Concrete product and precast concrete manufacturers
- The mining sector
- Road construction and rehabilitation
- Cementitious building products
- Packaged cement products to the retail and hardware sectors

ICL is also a specialist supplier of Supplementary Cement Materials SCM's such as Slag and Fly-ash, focused on blended cements and their many benefits to our markets and customers.

Our Structure

Independent Cement is 50% owned by The Barro Group and 50% owned by Adelaide Brighton Limited.

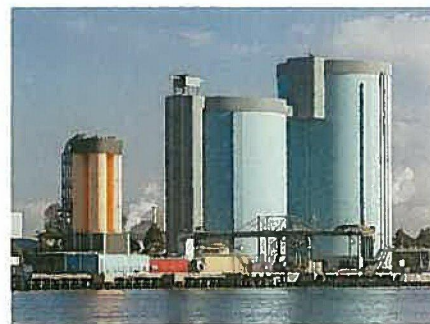
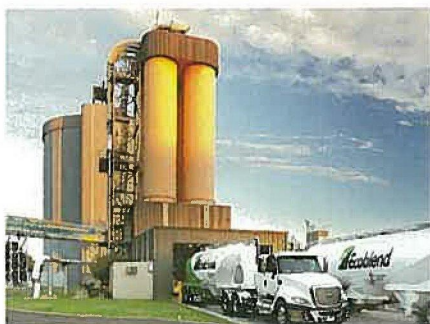
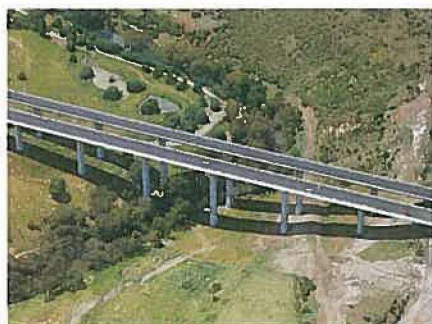
Independent Cement is the parent company of both Building Products Supplies P/L and Steel Cement Limited.



Steel Cement is a manufacturing arm with purpose-built, state-of-the-art grinding and blending facilities which primarily supplies Independent Cement with the cement alternative known as Ground Granulated Blast Furnace Slag (GGBFS). It is this GGBFS which underpins ICL's Ecoblend range of environmentally preferable cements.

Building Products Supplies Pty Ltd is a 100% owned subsidiary, which offers a complete range of bagged cement, drymix products and building related products on a wholesale basis throughout Victoria and New South Wales.

All three companies are certified to AS/NZS ISO 9001 and have an ongoing and total commitment to quality and customer service.





Ecoblend





Above and front cover:
Beacon Cove Marine works
Right: EJ Whitten Bridge
Far right: Bolte Bridge

The Ecoblend range of cements are specifically formulated to reduce the environmental impacts of cementitious binders used in concrete and stabilisation products. Ecoblend uses supplementary cements such as slag and flyash to ensure a significantly lower product life cycle impact; it provides the option of using a binder with significantly less material input, energy input and emission output. A very low embodied energy material can be created.

These significant environmental savings are complemented by Ecoblend's superior technical qualities and comes with no adverse cost implications. In fact first and second cost savings are often experienced. Hence the much talked about "Triple Bottom Line" concept is easily met in adopting Ecoblend in your next project.

CEMENT BINDERS AN ENVIRONMENTAL PERSPECTIVE

ESD and "Sustainable architecture is forcing architects (and engineers) to re-evaluate the basic principles of building design. Academics around the world are claiming green buildings are healthier, more productive to occupy and cheaper to run."

Graeme Findlay (Partner) Warren and Mahoney Architects.

Life Cycle Analysis (LCA), gives us a way of investigating the life cycle of certain materials in terms of their environmental footprint. ISO 14040 defines standard LCA methodologies and protocols; this allows consistent embodied energy comparison of materials used in construction.

"LCA considers a range of environmental impacts such as resource depletion, energy and water use, greenhouse emissions and waste generation etc..."

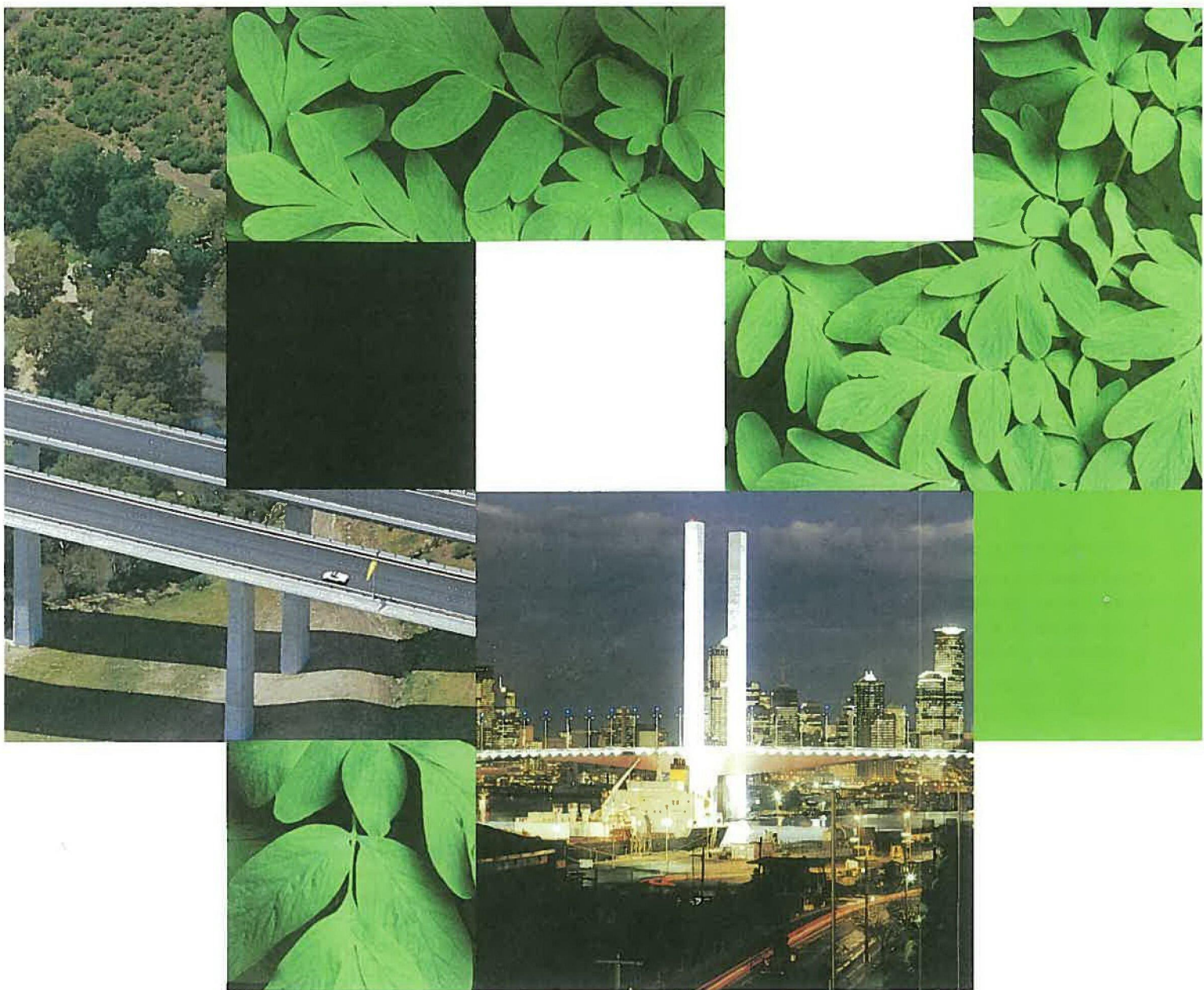
Ecoblend cements perform significantly better than OPC in all of these LCA categories.

Resource depletion – Ecoblend reduces demand for Ordinary Portland Cement (OPC) a product derived from our inherent natural resources.

Energy use – Ecoblend reduces the demand requirements for the burning of fossil fuels used in the energy intensive cement clinker production.

Greenhouse emissions – Ecoblend use will displace CO₂ emissions. Displacement of approximately 500kg of CO₂ for each tonne of slag used as an OPC replacement, is achieved.

Waste generation – Ecoblend uses an industrial byproduct as its major blended component; Granulated Blast Furnace Slag (GBF Slag) a by product of steel production. This creates a diversion from land fill for this GBF Slag.



From this LCA we can see how important embodied energy is. Equally important is a construction materials quality, and longevity contribution to the structure.

SUSTAINABLE CONCRETE

Sustainable concrete design can be achieved in two ways:
1. the reduction of embodied energy in specified materials and
2. increased durability. Using Ecoblend both criteria can be satisfied.

The Ecoblend LCA illustrates the reduced embodied energy associated with using slag blended cements.

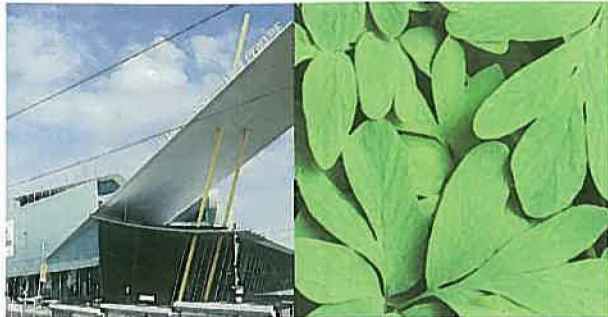
“The single most important factor in reducing the impact of embodied energy is to design long life, durable and adaptable buildings”

Australian Greenhouse Office – Good Residential Design Guide Technical Manual 3.1 Materials.

Ecoblend provides superior durability qualities to concrete, enabling that structural longevity which ESD strives for.

Ecoblend 50 meets the Australian Standard AS 3972 Low Heat (LH) Special Purpose Cements. Ecoblend 65 meets AS 3972 Sulphate Resisting Cement (SR) other wise known as Marine Grade Cement. Use of an Ecoblend 30 will, deliver significant durability enhancement over the use of a singular OPC.

| Environmental Benefits | Technical Benefits | Economic Benefits |
|--|---|--|
| Reduced CO2 emissions | Higher ultimate strengths | Longer structural life |
| Use of an industrial waste. Diversion from landfill | Increased durability – chloride and sulphate resistance increased | Reduced structural maintenance cost |
| Reduced demand for virgin limestone resource | Lower Heat of hydration | Equivalent or lower initial and secondary cost (in \$ terms) |
| Energy resources saved – less requirement to burn fossil fuels | Enhanced workability – both concrete & stabilisation products | |
| Heat Island effects reduced | Protection against AAR | |
| Lower embodied energy | Efficient hydration at higher strengths | |
| Extended structural life | Self compacting abilities increased | |
| | Dye & pigments more readily accepted | |



Left: Melbourne Exhibition Centre

ENVIRONMENTAL QUALIFICATIONS

Good Environmental Choice label – ICL's Ecoblend, Australian Builders (Type GB) and Steel Cement has achieved the Good Environmental Choice declaration, offered by Australian Environmental Labelling Association Inc (AELA).

3rd party accreditation to ISO 14024 "Environmental Product Declaration" verifying Ecoblend's:

- Environmentally preferable characteristics
- Are fit for purpose
- Meet environmental best practice
- Manufacturer complies to a high standard with worker obligations – www.geca.org.au

Green Building Council of Australia, "Greenstar – Office Design Rating Tool."

Ecoblend can be used to gain credit points under the Greenstar program, as "supplementary cementitious material replacement of Portland Cement." Technical Manual V2, Materials Spreadsheet page 2 www.gbcaus.org.

BDP Environment Design Guide – Pro 31 November 2003
"Concrete and Sustainability" (pages 6, 7 & 10) www.bdp.asn.au

Other Environmental Listings include

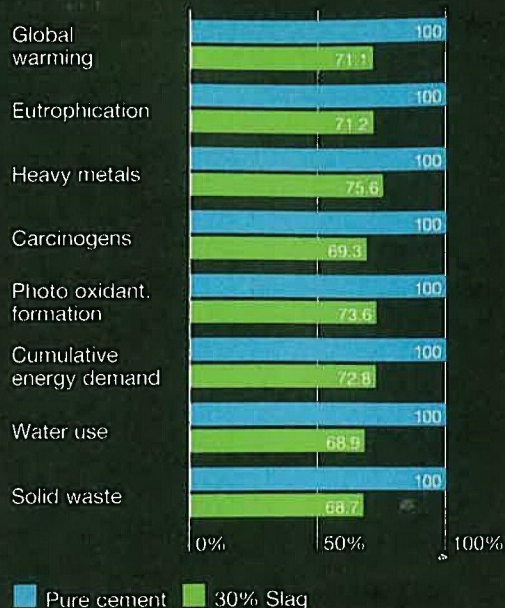
- Municipal Association of Victoria – Eco Buy program www.mav.asn.au/ecobuy
- Eco-specifier www.ecospecifier.org
- Catch online resources by Infolink www.infolink.com.au

Australasian Slag Association www.asa-inc.org.au

PRODUCT DETAILS

Ecoblend is a type GB cement conforming to AS3972. It consists of various specified proportions of Ordinary Portland Cement (GP), Ground Slag (GGBFS) and/or Fly ash (in the case of a triple blend). Ecoblend cement has a minimum supplementary cement material (SCM) component of 30%.

Comparison of pure cement against 30% slag blended cement (Pure cement has been set to 100% and blended cement is shown relative to that)



Comparing 1kg material 'Pure cement' with 1kg material '30% Slag'; Method: SimaPro 3.0 Eco-indi Australian Database/Australia revised/characterisation

DESIGNER AND CUSTOM BLENDS

Modern ESD often requires a flexible engineering approach. ICL is conscious of these engineering requirements, and will blend to meet specific project requirements. The Ecoblend range is available in many combinations of blends, with a supplementary cement content over 30%.

QUALITY

The Ecoblend range of blended cements conforms to AS 3972 Type GB General and Special Purpose Cement. Independent Cement and Lime's specialised blending facilities provide consistent, homogeneous cement products with predictable performance characteristics. Continual blend analysis ensure tight controls on quality.

Quality Assurance to AS/NZS ISO 9001

AVAILABILITY

The Ecoblend range of products is available throughout New South Wales and Victoria in bulk or bagged form.

Our branded "Australian Builders Type GB" bagged cement conforms to and carries the "Good Environmental Choice" label it is part of the Ecoblend range.



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