

## CON520: Submission on a Resource Consent Application – CRC190445

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### Summary

This submission is in relation to resource consent application CRC190445 by Christchurch City Council to discharge contaminants to land and water, including coastal water from within Christchurch City and the settlements of Banks Peninsula from:

- the existing and future stormwater network,
- stormwater generated from roofs of individual existing sites, greenfield development sites and redevelopment sites, and
- stormwater generated from hard standing areas of individual existing residential sites, greenfield development sites and re-development sites and is discharged within the site.

The application includes discharges from high risk sites from 2025 onward.

NZ Steel is a major national supplier of roofing products, including for the re-build of Christchurch, and has specific concerns regarding the classification of its products in relation to stormwater and contaminants.

NZ Steel produces a range of zinc/aluminium coated roofing and cladding products which, since 1994, have essentially replaced traditional galvanised products in the marketplace. These have reduced zinc loads from roofs by approximately 90% on a unit area basis. As a result, stream water quality with respect to zinc has improved in many urban environments, and continues to improve. Such products should not be 'punished' when they have resulted in environmental improvements. NZ Steel opposes the parts of the application that have implications for the use of roofing materials made by NZ Steel and the compliance costs for developers and home owners in relation to stormwater discharges if they utilise these products. We are also concerned that if products fall outside of the parameters of the consent, then it could require individuals to seek their own discharge consent from the Regional Council.

NZ Steel also opposes the use of proprietary roofing or cladding product names in the resource consent conditions, stormwater management plans and related documents (for example COLORSTEEL® and ZINCALUME® are used in Table 6 of the Otakaro/Avon River Stormwater Management Plan). Any reference to zinc coated products should use the generic descriptors set out in Australian Standard AS1397-2011 rather than NZ Steel product brand names and trademarks.

NZ Steel supports in part CCC's commitment to seek national measures and industry standards to reduce the discharge of contaminants including zinc and copper from metal roofs (Condition 38) for national consistency purposes, but is concerned that any changes to building materials need to be considered in the context of the cost to the industry and community over the life of the product, incremental environmental benefits, and other methods to avoid, remedy or mitigate adverse effects on the environment (i.e. the use or potential restriction of certain building products needs to be considered in the context of the Best Practicable Option).

NZ Steel wishes to be involved in the development, implementation and amendment of Stormwater Management Plans (Conditions 4, 9) and any approach by CCC to seek national guidance on the use of metal roofing products (Condition 38) to ensure that: 1) the company's technical knowledge is utilised and 2) the consent does not result in additional cost implications for clients of NZ Steel or, potentially unnecessarily preventing or constraining NZ Steel products from being used in the construction industry.

## The reasons for making our submission are:

### Background

New Zealand Steel's roofing materials, such as ZINCALUME® steel and COLORSTEEL® pre-painted steel range of products, minimise the occurrence of zinc in stormwater from roof run-off. NZ Steel is actively working to ensure good quality research is conducted into the sources and environmental effects of zinc in waterways, and ensuring misconceptions are corrected through market education.

GALVSTEEL® is the name for NZ Steel's continuously hot-dipped galvanised steel products, which are available in a variety of widths, gauges and mechanical grades. NZ Steel introduced ZINCALUME®, zinc/aluminium alloy coated steel, to the New Zealand market in 1994. ZINCALUME® steel represents a significant improvement on the traditional zinc coated galvanised steel. Since its introduction, ZINCALUME® steel has been widely accepted and has the major share of the steel building products market.

ZINCALUME® steel is produced by a continuous hot dip process similar to that used to manufacture galvanised steel. While both ZINCALUME® steel and galvanised steel products have a steel base, galvanised steel has a coating of 100% zinc, whereas ZINCALUME® steel has an alloy coating of 43.5% zinc, 55% aluminium and 1.5% silicon. ZINCALUME® steel conforms to AS1397:2011.

The COLORSTEEL® Endura® and COLORSTEEL® Maxx® paint systems consist of a ZINCALUME® steel substrate to which a pre-painted finish system is applied. The system is designed to provide protection against corrosion in areas where moderate to severe environmental conditions are experienced. COLORSTEEL® Endura® and Maxx® product are suitable for a wide range of roll formed roof and wall

claddings, rainwater accessories and general building products. The COLORSTEEL® pre-painted steel paint system will exceed the service life of most traditional post-painted systems.

The COLORSTEEL® Endura® and Maxx® pre-painted steel ZINCALUME® substrate is steel strip, commonly 0.40 mm or 0.55 mm thick and coated with a 45% zinc, 55% aluminium alloy to a nominal coating mass of 150g/m<sup>2</sup> or 200g/m<sup>2</sup> manufactured in accordance to AS1397:2011. A range of thicknesses, widths and strengths are available. Following pre-treatment, a corrosion inhibitive primer and top coat are applied to the outer surface and a corrosion inhibitive primer and a backer to the reverse side. These coatings are oven cured to provide colour and corrosion performance.

As the manufacturer and supplier of the above products to the building industry, including in the rebuild of Christchurch, NZ Steel is concerned about how the comprehensive discharge consent will be monitored and managed if granted, specifically in relation to controlling the use of metal roofing materials.

## Concerns

- One of the key objectives of the CSNDC Consent application is contained under section 1.4 of the AEE. Objective 3 in relation to waterways states: *“Reduce copper, lead and zinc levels in surface water to prevent adverse effects on aquatic biota”*. This objective is repeated in relation to coastal waters.
- NZ Steel supports in principle the over-arching objective to reduce metal discharges to water. However, any conditions of consent that form part of a consent if granted, and associated Stormwater Management Plans, must be workable in relation to the existing environment in Christchurch and with available products in the marketplace, and be supported by sufficient evidence that demonstrates a causal link between the material being used and an adverse effect on the environment.
- The development and implementation of stormwater management plans as part of the consent’s requirements could have direct implications in relation to the supply of roofing materials. Specifically, such plans could preclude the use of new or recently developed zinc-coated building products that release significantly less zinc to the environment than older products. The use of such products has been shown to have resulted in reductions in environmental zinc concentrations in other regions (e.g. Auckland) over the last 24 years.
- The proposed conditions of the consent include proposed condition 4 on Stormwater Management Plans. This consent condition says that the consent holder in consultation with Papatipu Runanga and the Christchurch-West Melton and Banks Peninsula Zone Committees will develop Stormwater Management Plans to meet the receiving environment objectives and attribute targets. The plans shall include mitigation methods to achieve compliance, which includes source control systems. As the largest supplier of roofing material to the city, NZ Steel considers it to be critical that it has input into the development of stormwater management plans as they relate to source control systems for runoff from metal roofs.
- Conditions are proposed relating to implementation plans, records and monitoring. The conditions state that the Implementation Plans shall give details of maximum stormwater contaminant concentrations that will be accepted into the network. NZ Steel considers that the Council as consent holder must work with stakeholders such as NZ Steel, and potentially architects and designers, in determining these concentration levels. NZ Steel has undertaken a significant body of research on this topic and considers the Council would benefit from its input and technical knowledge to ensure a workable system that does not result in landowners being unable to comply with the network discharge consent and being forced to obtain their own discharge consents from the regional council for what would be considered ordinary land use activities.
- There is a lack of assessment of costs and benefits of the consent conditions proposed. For example there is no assessment of the additional cost of stormwater treatment that could be imposed on private land owners and users of the products, or the additional building costs imposed on the market by potentially having to use a more expensive alternative product. This may have a direct economic impact on the local, regional and national economy, including a direct effect on construction costs, if the

conditions effectively require that low-cost building products be substituted for higher cost building products.

- NZ Steel's own extensive research suggests that the environmental benefits arising from the targets desired by the consent could be minimal, given the substitution of older galvanised products with COLORSTEEL® pre-painted steel since it was introduced to the market in 1994, and the acceleration of the replacement process during the earthquake “re-building”.
- The requirements of the comprehensive consent have the potential to impose significant additional costs on construction, either by encouraging specification of a more expensive coated product, or requiring the installation of a stormwater treatment facility/source control systems.
  - Stormwater treatment facilities potentially require significant additional land area to be provided (e.g. wetlands, swales and ponds) to treat run off from areas of roofing, spouting, cladding or architectural features. This would result in an inefficient use of land for little or no environmental benefit, and is a significant concern for a City that is already constrained in land area available for development and use.
  - Requiring the market to use more expensive products will affect the cost of building, when affordability is a significant concern already.
  - Overall, any additional cost is a significant concern to NZ Steel, both from a commercial perspective, but also from a social and community perspective. The New Zealand community should not be asked to accommodate additional costs where there is an unknown or nil environmental gain to be had.
- Imposing a resource consent hurdle for potential users of some NZ Steel products (if they are unable to meet the comprehensive discharge consent requirements) means that those NZ Steel products which have brought about environmental improvements in the past may not be specified at all in some instances, where they would normally be a standard “go to” product. Potential users of the product might simply be put off by the lack of clarity.
- NZ Steel also has concerns in relation to stormwater discharges from existing roof materials and whether the consent could require the acquisition of separate discharge consents from the Regional Council.

## **We wish the consent authority to make the following decision:**

Without limiting the generality of this submission – NZ Steel requests the consent authority makes the following decision:

- Ensure that there are no references to roofing and cladding products by proprietary names, either within the resource consent conditions or the Stormwater Management Plans. If references to product types must be made, they should use the designations set out in Australian Standard 1397-2011.
- NZ Steel would not oppose controls being put on unpainted versions of those categories which are known to yield the highest zinc loads to stormwater, which are Type Z (which includes unpainted GALVSTEEL) and, to a lesser extent, Type ZF. NZ Steel considers that painted GALVSTEEL and unpainted ZINCALUME® steel have comparable zinc runoff rates, which are an order of magnitude less than unpainted GALVSTEEL (*i.e.* unpainted category Z in Australian Standard 1397-2011).
- Amend the proposed conditions of consent to allow key stakeholders such as NZ Steel to be part of the development and review of Stormwater Management Plan and Implementation Plans.
- Delete any provisions which would require stormwater treatment to remove zinc on an ‘individual lot’ basis (as set out in the preamble to Schedule 3).
- Delete all provisions (either in the application, consent conditions, stormwater management plan or supporting documentation) that require any additional resource consent for existing metal roof materials.
- Include NZ Steel in the process of formulation of water quality trigger values, and engagement with Central Government in order to utilise the extensive body of data that NZ Steel has on the topic to ensure a workable set of parameters.
- Any further changes that would achieve the outcomes set out in this submission.

NZ Steel wishes to be heard in support of its submission.

If others make a similar submission, NZ Steel will consider presenting a joint case with them at the hearing.

NZ Steel does not consider it can gain an advantage in trade competition through this submission.



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(Signature of person authorised to sign on behalf of NZ Steel)

Date: 31 August 2018

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