



Aggregates

RANGE, QUALITY & SERVICE

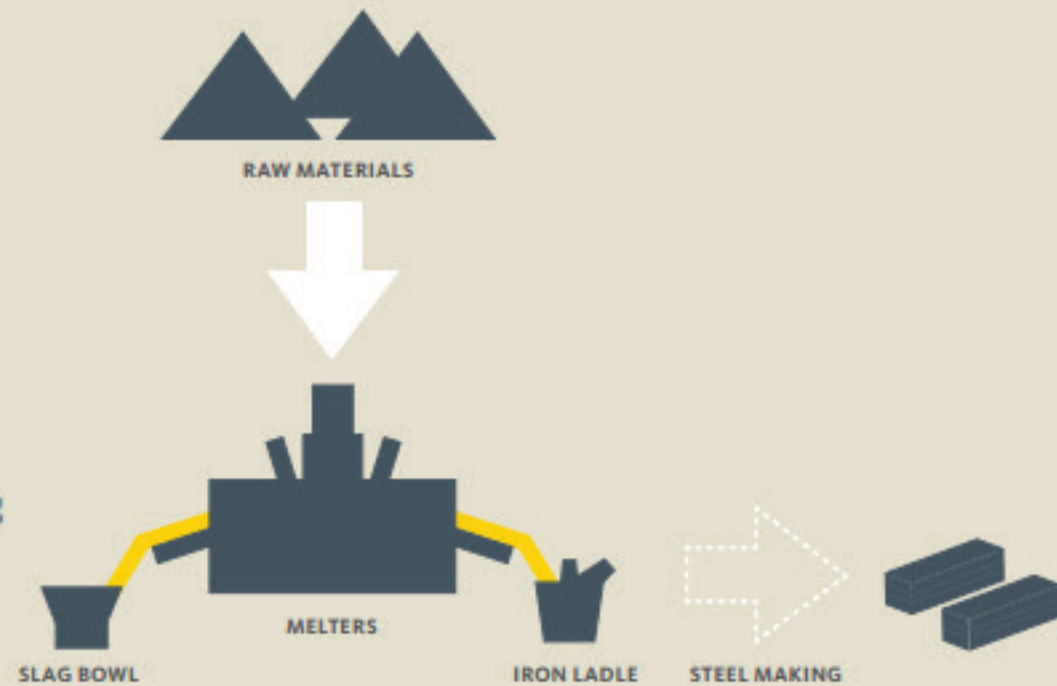
Process overview

Raw materials:

- Ironsand
- Limestone
- Thermal coal

Melters:

- Molten metal is tapped front side for steel making
- Molten non-metal is tapped reverse side for aggregate production



Tipped and water cooled melter slag

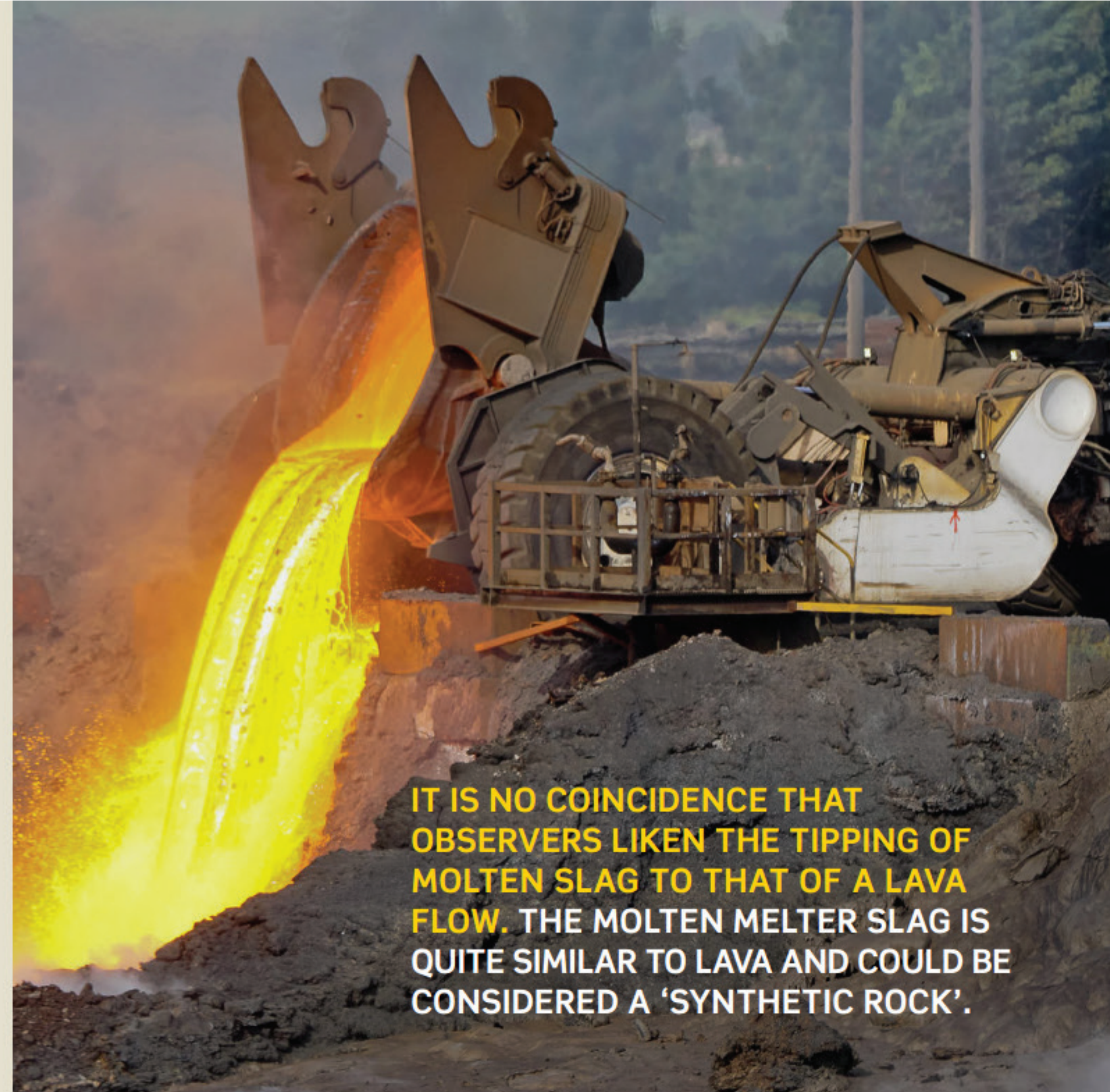


Aggregate Plant:

- Jaw crusher
- Cone crusher
- Metal separation (x3)
- Barmac Impactor (x2)
- Dry screen
- Wet screen

>> Melter Aggregates are a co-product of iron manufacture with uprisings of about 220,000 tonnes per annum at current iron production rates.

>> Melter Aggregates are a sustainable synthetic alternative to traditional aggregates.



IT IS NO COINCIDENCE THAT OBSERVERS LIKEN THE TIPPING OF MOLTEN SLAG TO THAT OF A LAVA FLOW. THE MOLTEN MELTER SLAG IS QUITE SIMILAR TO LAVA AND COULD BE CONSIDERED A 'SYNTHETIC ROCK'.

Attributes of Melter Aggregate

ATTRIBUTE	PROPERTY/TEST	AFFECT
Toughness and hardness	Polished stone value Repeat load triaxial strength Abrasion resistance	Skid resistance Rutting resistance
Cleanliness No clay content	Repeat load triaxial strength Plasticity index Hydraulic conductivity	Rutting resistance Drainage properties
Vesicular structure	Surface area Hydraulic conductivity	Skid resistance Surface area aids water treatment
Surface absorption of a range of dissolved elements	Absorption	Water treatment
No free lime	Kettle test	Non-swelling Non-expanding
Density	Compacted density	Heavier than quarried aggregates



**'HONEYCOMB' APPEARANCE
OF MELTER AGGREGATE**



Products & applications

PAVEMENT

- AP40
- GAP20
- GAP40
- GAP65
- PAP5
- PAP10
- Run of Pit



DRAINAGE

- Boulders
- Ecoflow 10/5
- Ecoflow 20/10
- Ecoflow 40/16
- Rip Rap 250/80



SURFACING

- Grade 3
- Grade 4
- Grade 5



CIVIL

- AP5
- PAP5
- GAP20
- GAP40
- GAP65
- Run of Pit



>> Melter Aggregates undergo the same process control, and are tested to the same standards, as quarried aggregates, including grading and source properties.

>> Please contact New Zealand Steel Aggregates for product data sheets, product safety data sheets and further technical information.

Note: Our product range and availability is dependent on demand. Please contact New Zealand Steel Aggregates for the latest product list.



Busting the myths

MYTH

Is it unusual to use synthetic aggregates?

Synthetic aggregates are new and unproven.

Synthetic aggregates are not as 'good' as quarried aggregates.

Melter Aggregates contain free lime and expand.

Did you know?

- Melter Aggregates have one of the highest polish stone values of any aggregate (quarried or synthetic) in New Zealand.
- Melter Aggregate has been used in the New Zealand building industry for over 30 years and as a high value roading aggregate for over 10 years.
- Melter Aggregate has water treatment properties that can benefit the environment

FACT

No. Synthetic aggregates make up a considerable proportion of the total aggregate demand in industrial economies. Current annual production in Europe is 50 million tonnes, with Japan and the USA both producing 20 million tonnes per year.

New Zealand Steel has been producing Melter Aggregate for more than 30 years. In the UK synthetic aggregates have been used for over 100 years.

New Zealand Steel's Melter Aggregates undergo the same sampling and source property testing regime as required for quarried aggregates.

ABSOLUTELY NOT!

Melter Aggregates contain no free lime and do not expand as shown by the Kettle Test.

and has been used in New Zealand water treatment projects for over 20 years.

- The production of Melter Aggregates avoids quarrying, blasting and over burden removal which are effects of other aggregate production.
- New Zealand Steel is committed to environmental care and holds certification to ISO14001 for environmental management.



Service & contact

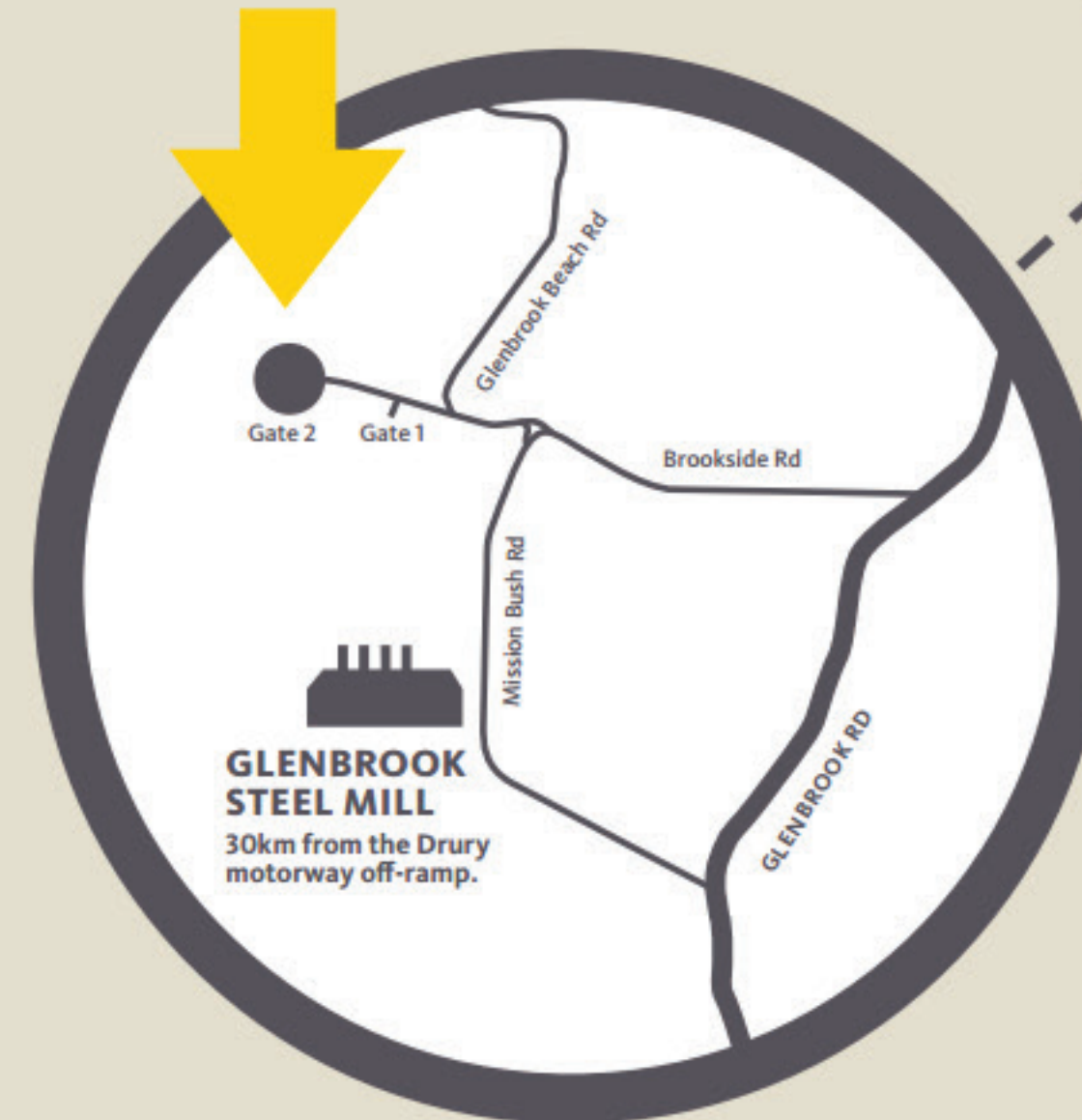
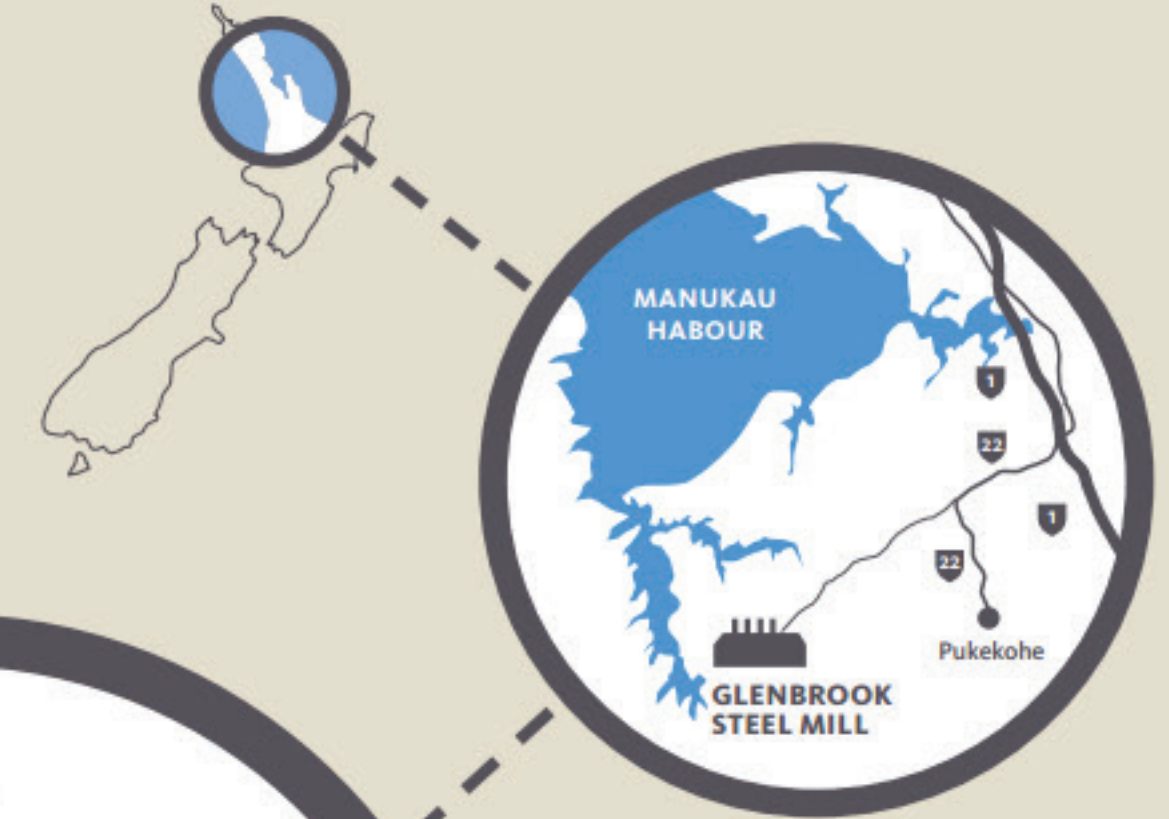
New Zealand Steel services:

- >> Opening hours for Gate 2 are Monday to Friday:
 - Peak season 7:00am to 5:00pm
 - Off season 7:30am to 5:00pm
- >> A fully equipped laboratory for grading and source property testing.
- >> Two weighbridges for quick turnaround.
- >> One weighbridge is newly installed to service new HPMV vehicles with dynamic axle weighing.
- >> Loading is via large loader (CAT 988 etc) aiding quick turnaround.
- >> The route to New Zealand Steel is an approved 50max route and NZTA can also approve heavier HPMV vehicles with application.
- >> For further information please contact the aggregates office on 0800 ROCK TO GO or refer to our website www.aggregates.co.nz

Location

The Gate 2 entry on Brookside Road is for:

- Aggregate sales and despatch.
- Bulk product despatch and receipt.



Please respect our neighbours

- >> A full drivers code of conduct will be provided to all drivers inducted into the aggregates yards.
- >> Our opening hours are fixed, please do not arrive before this time.
- >> Please do not park on the side of the roads. Parking bays are provided on the New Zealand Steel site.
- >> Please do not use engine brakes within a 5km radius of New Zealand Steel.



New Zealand Steel Ltd

www.nzsteel.co.nz

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