



A Consideration of the Proposed Design of *The New Zealand Emissions Trading Scheme*

A View from Holcim (New Zealand) Ltd

EMISSIONS TRADING IN
NEW ZEALAND



Foreword

In September 2007, the Government of New Zealand published “*The Framework for a New Zealand Emissions Trading Scheme*”¹ in which it set out the structure of a price-based measure to help reduce New Zealand’s greenhouse gas emissions and the related Kyoto Protocol obligations.

This *Framework* document established principles underpinning a national emissions trading scheme (the NZ ETS) covering “all sectors, all gases” – a uniquely broad scope of coverage. Subsequently, government has sought feedback on its proposal, within the constraint of the underlying principles.

In December 2007, the Government released the draft Climate Change (Emissions Trading and Renewable Preference) Bill.

Holcim New Zealand has carefully reviewed and evaluated the *Framework* proposal and has carried out a preliminary assessment of the Bill to assess the extent to which feedback has been incorporated.

In this document, we seek to summarise our views in a manner that is consistent with our previous discussion document “*Creating a Good Atmosphere: Insights on Emissions trading for New Zealand*”².

As always, we welcome any and all discussion of our views in this important national debate on responses to climate change.

Jeremy Smith
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¹ This Framework document, the subsequent draft Bill before Parliament, and a range of supporting material is available at: <http://www.climatechange.govt.nz/nz-solutions/trading-scheme-reports.shtml>

² “Creating a Good Atmosphere – Insights on Emissions Trading for New Zealand”, 1 February, 2007, Holcim (New Zealand) Ltd. Available at: <http://www.holcim.com/nz>

Executive Summary

Holcim New Zealand strongly endorses the decision to establish emissions trading as the core price-based measure to reduce greenhouse gas emissions for New Zealand.

We applaud the broad scope of coverage of the proposed NZ ETS.

We continue to advocate the use of comparative energy efficiency, or comparative emissions intensity, as the basis for performance measurement in an emissions trading scheme. In such a system, the emissions performance of any New Zealand energy intensive business is benchmarked against its international peers.

Holcim urges that draft legislation leaves room for the application of benchmarked emissions intensity as a basis of measurement and allocation.

We applaud the proposal that assigned amount units (AAUs) be tradable within the NZ ETS.

We urge government to include HFC23 CERs (Certified Emission Reduction units) in the suite of tradable instruments available in the NZ ETS.

We urge that liquid fossil fuels should enter the NZ ETS at the same time as stationary energy and industrial processes (2010).

We strongly urge a more robust, rational and sympathetic evaluation of competitiveness-at-risk (CAR) issues in policy. We assert that the consequences of failure in this area are extreme, and warrant more adequate consideration.

On principle, Holcim strongly opposes the use of grandfathering as the basis of allocation. However, we do understand that such an approach could be more acceptable in the case of smaller firms, where the transaction cost of benchmarking could be prohibitive.

We are not opposed to a phase-out of the allocation for CAR firms. Indeed, just such a phasing out is integral to emissions intensity-based allocation – where the allocation reduces over time, as the world's best practice benchmark itself tightens with the introduction of new technologies. We do oppose a unilateral phase-out that simply renders domestic industry uncompetitive for no net reduction in global emissions, with consequent leakage of income, jobs, and security.

We accept that it may not be the intent of the government that investment or re-investment by incumbent firms is discouraged, but we seek a detailed clarification of this matter in order to better inform our own investment decisions.

We urge the inclusion of liquid fuels emissions in the allocation calculation.

Holcim requests that pass-through effects on the CAR allocation for electricity be done on the basis of actual costs. Prior work has identified that the appropriate means for this is to determine a marginal emissions factor that reflects that the thermal generator sets the market price.

We urge that mandated electricity emission factors be audited and verified by an independent third party.

As emission factors and global warming potentials (GWPs) have a material impact on a firm's emissions inventory and consequent cost exposure, we strongly urge that:

- government should notify these well ahead of the commencement of the NZ ETS;*
- the exact basis of calculation should be explicitly defined;*
- the period of validity of each factor should be defined.*

More specifically, Holcim strongly advocates that the use of actual, calculated emission factors be permitted for individual firms, where they demonstrate the capacity to calculate these factors from traceable sources.

We applaud the "opt-in/opt-out" opportunity provided for in the Framework, and we believe that the notice periods for opt-in and opt-out provided for in the draft Bill are achievable.

Holcim urges a careful revision of the excessively restrictive opt-in/opt-out threshold to more realistic levels that are consistent with prevailing industrial energy consumption levels in New Zealand.

Holcim urges government to commission an upper-bound analysis of carbon pricing – encompassing such factors as liquidity of allowances, availability of types of units, external market influences (such as the role of Japanese buyers in the CDM market), and influence of policy direction taken by major trading blocs (such as the EU ETS).

We suggest strongly that:

- Government considers, and consults with industry, on the possibility of a 'pooled purchasing' arrangement that would allow the New Zealand government to purchase a single block of AAUs on behalf of all domestic buyers, and subsequently issue these as converted NZUs onto the NZ ETS market. Such a 'co-operative' arrangement would allow government to discover the lowest achievable price – a price that would be substantially below what could be achieved by any individual firm trading only on its own account.*
- Government introduce a price cap as a means of limiting the liability of firms to any unsustainable swings in allowance price.*

A Consideration of the Proposed Design of *The New Zealand Emissions Trading Scheme*

The Principle

Holcim New Zealand strongly endorses the decision to establish emissions trading as the core price-based measure to reduce greenhouse gas emissions for New Zealand.

Coverage

We applaud the broad scope of coverage of the proposed NZ ETS.

It seems to us self-evident that the proposed New Zealand emissions trading market will be small by all international standards. Any initiative to expand the size and scope of our domestic market is wise and necessary – otherwise, illiquidity will inevitably drive up prices and disadvantage domestic firms against international competitors in larger and more liquid (less costly) markets.

The Performance Measure

The New Zealand national obligation under Kyoto is fundamentally absolute in nature (New Zealand is required to reduce national emissions to 1990 levels in the period to 2012). However, the decision to adopt absolute (gross) emissions level as the basis of measurement and performance at the individual company or sectoral level seems both unsophisticated and unnecessary.

We continue to advocate the use of comparative energy efficiency, or comparative emissions intensity, as the basis for performance measurement in an emissions trading scheme. In such a system, the emissions performance of any New Zealand energy intensive business is benchmarked against its international peers.

- a. It provides to government the quantitative information that allows it to precisely target (and penalise) measured under-performance by any domestic industry sector or individual industry player;
- b. It sends a message to company Boards that investment to improve emissions performance can be both necessary and financially prudent.
- c. It provides the quantitative information that Boards of companies require to justify capital investments to improve emissions performance;
- d. It is not distortionary - it does not unjustly punish domestic industry that is already at world's best practice; and it thereby preserves the position of such businesses against less efficient competitors domestically and overseas.
- e. The technical mechanism for such an emissions benchmarking approach has already been established, under the previous NGA

scheme, and has the support of most, if not all, emissions intensive businesses in New Zealand.

Holcim urges that legislation leaves room for the application of benchmarked emissions intensity as a basis of measurement and allocation.

The draft legislation goes only part way: any use of benchmarking as a basis for allocation is constrained within a pool of units capped at 90% of 2005 emissions. This arbitrary constraint is contrary to the sound design and correct application of performance based allocation.

The Unit of Trade

- a. *AAUs: We applaud the Framework proposal that assigned amount units (AAUs) be tradable within the NZ ETS.* However, the Explanatory Note to the Bill makes a provision to restrict access to some AAU's or even to exclude them altogether from the NZ ETS. We do not support such restrictions.

Whilst to date there has been little trading in these instruments globally, we strongly endorse their inclusion as they provide at least some degree of redress against the very real risk that the EU ETS will be the predominant influence on price in the New Zealand market – ensuring high costs of compliance.

The opportunity to trade in AAUs should assist participants in the NZ ETS to control their costs of compliance more than would otherwise be the case.

Moreover, Government has the option to use AAUs to meet its Kyoto obligations. Why, in devolving part of the national deficit, should government not allow AAUs to be used by business as well?

- b. *HFC23 Gases: We endorse government's decision to include HFC23 CERs (Certified Emission Reduction units) in the suite of tradable instruments available in the NZ ETS.*

Again, any initiative to broaden the range of tradable instruments in an NZ ETS will help to reduce costs of compliance.

Phasing (Timing of Entry)

It bears repeating that the proposed New Zealand emissions trading market will be small by any international standard, and the timing of entry of our few small sectors will strongly influence market liquidity at any point in time.

- a. **Forestry:** We suggest that it is highly unlikely that NZUs (New Zealand Units) from post-1990 forestry will be available in large volumes for trading purposes – not least because foresters will be conscious of future deforestation liabilities, and will likely hoard some portion of their credits as a hedge against the future liability.
- b. **Liquid Fossil Fuels:** Whilst it may be the intent of government to capture transport fuels only in 2009, we note that stationary energy users of liquid fuels will also be captured.

Industrial users of diesel and fuel oil will be most affected. For mining activities and large transport sector activities which are linked to industrial processes, the transport fuel element could be significant.

We urge that liquid fossil fuels should enter the NZ ETS at the same time as stationary energy and industrial processes (2010).

- c. **Stationary Energy and Industrial Processes:** Again we note the mismatch between entry of these sectors in 2010 and liquid fuels in 2009.
- d. **Agriculture:** We note that the late entry (2013) of what is by far the most emissions intensive sector is at odds with government's stated objective of complying with our Kyoto Protocol obligations. Further, it seems disingenuous to argue the case for urgent action from industry, whilst simultaneously delaying the inclusion of the country's largest source of emissions. The problem of climate change is either urgent, or it is not.

The Issue of Allocation

We acknowledge the attempt to deal with this issue in the *Framework* document, but we assert that the matter is not adequately addressed.

- a. **Competitiveness at Risk (CAR):** The degree to which many energy intensive industries in New Zealand are competitive at risk (trade exposed) seems either underappreciated or under-regarded in the Framework document. This lack of regard seems all the more remarkable when compared with the obvious importance given to the same issue in the case of agriculture.

It is worth pointing out that *nearly all* energy intensive manufacturing industries in New Zealand are trade exposed to a significant degree. Most of these industries either export substantial proportions of their production, or they are at serious risk of import competition from opportunistic overseas players who can 'cherry-pick' key large metropolitan markets with little or no investment of cash or jobs. It bears repeating that such opportunists face *no* cost of carbon on their import tonnes, and can effectively price domestic producers out of the domestic market.

The consequences are: loss of jobs in New Zealand, increased social costs, loss of diversity and counter-cyclical fitness in the national economy, and *no net reduction* in greenhouse gases (since the gases are simply produced in the import country of origin).

We strongly urge a more robust, rational and sympathetic evaluation of CAR issues in policy. We assert that the consequences of failure in this area are extreme, and warrant more adequate consideration.

- b. **The Basis of Allocation:** In brief, the basis proposed for allocation to CAR firms is grandparenting.

Holcim *opposes* grandparenting in all forms: it is distortionary, penalises responsible early movers that have proactively lowered their emissions, rewards firms that have refused or failed to reduce emissions, and perversely fails in the primary objective to reduce emissions at least cost.

Holcim has directly experienced these perverse outcomes in the EU ETS (which allocates using grandfathering) – to the extent that, in Phase 1, its most efficient plant in Europe was penalised by an under-allocation, and its least efficient plant was *rewarded* by an over-allocation!

The *Framework* document appears to contemplate some limited choice of base years (2003, 2004, or 2005). However, it is not clear whether this choice would apply broadly to “industry” in general, to specific industry sectors, or most narrowly to specific firms or plants. This lack of clarity is critical for industries with more than one player, as it has the potential to cause intra-national anti-competitive distortions that advantage players with high emission levels in the base year(s).

We are surprised that intensity-based allocation has not been seriously contemplated in the *Framework*. The prior NGA scheme was intensity-based, had the support of emissions-intensive industry, and had an agreed formula for evaluating performance and for tightening the cap over time. It would be regrettable if this hard-won but amicable agreement was discarded in favour of a simplistic and demonstrably counter-productive methodology.

On principle, Holcim strongly opposes the use of grandfathering as the basis of allocation. However, we do understand that such an approach could be more acceptable in the case of smaller firms, where the transaction cost of benchmarking could be prohibitive.

On a more detailed level, we note that the means for determining eligibility for a CAR allocation is not dealt with in the *Framework*. This oversight seems inexplicable, given that a sophisticated and demanding eligibility model was developed during the prior NGA process. It would be regrettable indeed if this work was lost.

- c. **The ‘Phase-out’ Period:** The Framework and the default position of the draft legislation proposes a linear phasing out of the allocation from 2013 to 2025 (at which point the allocation would be zero).

In considering this proposed phase-out, it is worth recalling the fundamental purpose of an allocation: namely, to provide some degree of protection to competitive at risk firms from predatory pricing by competitors that are unburdened by an equivalent – or, any – cost of carbon.

If that is the case, then surely the basis for a phase-out should be ongoing determination by the regulator of the degree to which CAR firms remain competitive at risk?

We can hope that by 2025 a substantial proportion of the world will have committed itself to meaningful greenhouse gas reductions. Until such time, it seems both entirely unnecessary and counter-productive to commit to a particular path for total phase-out of the allocation. Moreover, by unnecessarily committing to such a path at this stage, there is a strong disincentive for CAR firms to invest in emission reduction improvements where there is still significant uncertainty of the competitive risk posed by unburdened import or export competitors.

We are not opposed to a phase-out. Indeed, just such a phasing out is integral to emissions intensity-based allocation – where the allocation reduces over time, as the world’s best practice benchmark itself tightens with the introduction of new technologies. We do oppose a unilateral phase-out that simply renders domestic industry uncompetitive for no net

reduction in global emissions, with consequent leakage of income, jobs, and security.

- d. **Firm Entry and Exit:** Holcim New Zealand is currently evaluating a proposal to construct a modern, high-efficiency cement plant in New Zealand – to replace its older, existing plant. To a great degree, the impetus behind this proposal is Holcim’s requirement on its group companies to minimise their greenhouse gas emissions as a matter of sound and responsible business practice. Whilst Holcim New Zealand has a history of process energy improvements and emission reduction investments at its Westport operation (commencing in earnest in 1994), it has become clear that the “low-hanging” fruit of reductions have been plucked and that further substantial reductions require substantial investment in new technology.

Not unnaturally, Holcim has a keen interest in the provisions for firm entry and exit in the *Framework* document, and we note with interest that the topic is dealt with in a little over half a page. The brevity with which this topic is treated belies its potential to extinguish any or all re-investment in new plant in New Zealand.

We accept that it may not be the intent of the government that investment or re-investment by incumbent firms is discouraged, but we seek a detailed clarification of this matter in order to better inform our investment decisions.

More broadly, we suggest that the issue of firm entry and exit is not simply a ‘detail’ in an emissions trading scheme. It is firstly, and perhaps primarily, a macro-economic strategy issue: to what degree does a nation believe that economic growth and economic diversity is a desirable end?

If continued investment is desirable, then it must be recognised that this objective may conflict to some degree with the objective to reduce overall emissions. Whether this conflict is real or imagined remains to be seen. It is worth pointing out that investment decisions are invariably (and, unsurprisingly) driven by consumption demand. In general, such demand exists irrespective of decisions to invest in local production capacity. Consequently, if demand cannot be met by local production, it is highly likely to be met by imported supply – culminating in *no* net reduction in global emissions.

In any event, this uncertainty of treatment is likely to exercise the minds of potential investors; and it seems a wise precaution that the matter be fully explored by government and its advisors in order to tease out any unintended consequences.

It has been suggested by some participants in the somewhat limited national debate on this issue that even if we ‘get it wrong’ to start with, and lose some investment, then such investment would still be available in the future under a changed regime.

We disagree strongly with such logic. Investment decisions, most particularly those that involve large capital plant, are one shot affairs. The opportunity cost of an investment lost to China or Indonesia is almost certainly much larger than the simple cash value of the founding investment (multiplier effect). And it seems simplistic to assume that if future conditions were to somehow change in such a way that they once again favoured investment in New Zealand, they would not also change equally in favour of investment in other countries – particularly in the

case of a global issue like climate change. In other words, an investment lost is lost forever.

- e. **Coverage:** We note that the proposal for an allocation to CAR firms excludes emissions from liquid fossil fuels. This decision seems arbitrary at best. In what sense are liquid fuels 'less' deserving than solid fuels – or electricity?

We urge the inclusion of liquid fuels emissions in the allocation calculation.

- f. **Pass-through and Electricity:** We endorse as entirely appropriate that electricity cost increases are intended to be counted in the allocation calculation. However, we are less certain about the basis of calculation of the pass-through.

Holcim requests that pass-through effects on the CAR allocation for electricity be done on the basis of actual costs. Prior work has identified that the appropriate means for this is to determine a marginal emissions factor that reflects that the thermal generator sets the market price.

We urge that this emission factor be audited and verified by an independent third party. Under no circumstances should generators be permitted input to this process, except as data providers.

As anticipated, we note the explicit acknowledgement in the *Framework* that “generators, and in particular those with large renewable portfolios, will make a windfall gain with the introduction of emissions trading”.

This fact was noted repeatedly by Holcim in its emissions trading document “Creating a Good Atmosphere” (February, 2007); and it has continuously astonished us that some generators have been tolerated and even encouraged in their ‘contributions’ to the climate change debate in New Zealand – notwithstanding that they have effectively arbitrated their invulnerability to a cost of carbon to their financial advantage.

It will be interesting to evaluate the degree to which windfall profits are reaped by these businesses - at the expense of all New Zealand consumers.

Emission Factors and Global Warming Potentials (GWPs)

The actual financial liability of firms under the NZ ETS will be calculated using emission factors and GWPs.

As emission factors and GWPs have a material impact on the emissions inventory and consequent cost exposure, we strongly urge that:

- *government should notify these well ahead of the commencement of the NZ ETS;*
- *the exact basis of calculation should be explicitly defined;*
- *the period of validity of each factor should be defined.*

More specifically, *Holcim strongly advocates that the use of actual, calculated emission factors be permitted for individual firms, where they demonstrate the capacity to calculate these factors from traceable sources.*

The default emission factor quoted for cement clinker calcination is highly debatable. This should be corrected with appropriate reference to the industry.

The Point of Obligation

We applaud the “opt-in” opportunity provided for in the Framework, and we believe that the notice periods for opt-in and opt-out provided for in the draft Bill are achievable.

This is a necessary and thought-provoking flexibility provided for by government, and deserves careful consideration by all affected parties.

Disappointingly, however, the draft legislation proposes opt-in/opt-out thresholds that would exclude even major energy consumers. Indeed, we estimate that all energy-intensive businesses in New Zealand would be excluded from the opt-in opportunity – barring two specific firms. Recognising that an appropriate balance needs to be struck³, it would seem evident that the proposed threshold is excessively restrictive and makes the opt-in/opt-out proposal almost redundant.

Holcim urges a careful revision of the excessively restrictive opt-in threshold to more realistic levels that are consistent with prevailing industrial energy consumption levels in New Zealand.

As a major source of *process* emission in its own right, Holcim will necessarily have to manage that source of liability. However, its thermal emissions (from coal combustion) are equally large, and it would seem ‘natural’ and rational to simply aggregate the two sources of emissions to better leverage our trading position⁴. That is, Holcim would “opt in” to assume *direct* responsibility for its coal emissions liability, thereby displacing the coal suppliers as the default point of obligation. Nevertheless, this would presumably impose some inconvenience and cost on our coal suppliers who would then have to somehow ‘split out’ the Holcim coal emissions from their portfolio.

Holcim supports the opt-in flexibility (especially given that the company has direct process emissions liabilities in any event), but recognises the administrative burden that might arise if a myriad opt-ins were taken up. We suggest that a sensible de minimus threshold for opt-in be imposed as a means of limiting overhead costs to fuel supplier and regulator.

³ If many small firms decided to opt in, presumably the compliance burden for *both* the upstream fuel supplier *and* the trading scheme regulator would increase.

⁴ Presumably, such a decision would also obviate the need to pay a trading risk premium to the coal supplier.

Economic Impact

Government has conducted an evaluation of the impact of the NZ ETS on the New Zealand economy. This appears to show a minimal impact of 0-1 to 0.15% reduction in GDP over business as usual.

Holcim has reviewed this work, and finds it both unconvincing and simplistic.

All mathematical models are constrained by chosen *initial conditions*. These initial conditions are assumptions, chosen to either limit the complexity of the model-building task, or to limit the scope of the output.

In the model chosen by government, it is assumed (as initial conditions) that employment is held constant, that the international price of carbon varies only within a limited range (\$25-\$50 per tonne), that the allocation is linked to output (which it is not, by design), and that the cost of capital is constant.

These are intriguing assumptions: effectively the model assumes that everything under an NZ ETS will be OK, then proves that assumption.

Finally, we are astonished that a model of GDP effects is chosen as a proxy for micro-economic effects. A general equilibrium GDP model is not appropriate to model micro-economic decision making. By definition, GDP is a measure (of sorts) of macro-economic output. Crudely, on a business level, GDP measures sales *revenue*⁵. It does not measure profit. Unsurprisingly, decisions to invest, or reinvest, or even disinvest, in capital plant are made on measures of profitability – not on sales revenue. It is disingenuous to use a GDP model as if it had anything at all to say about capital decision-making, and it is therefore dangerous to assume it can genuinely reflect or predict the true cost of a particular climate change policy.

Holcim endorses the recommendations for more modelling as proposed in the Government-commissioned review of the NZ ETS by Dr Suzi Kerr of Motu Economic and Public Policy Research

The Cost of Carbon

The Framework has assumed an emissions price of either \$15 or \$25 per tonne, and government has tended to favour the former number in public discussion of the NZ ETS proposal.

On the contrary, it seems inescapable that the cost of units in New Zealand will be highly correlated with the price of quality CDM CERs⁶ – at a probable *minimum* cost of \$30 per tonne – since these are likely to be the primary source of offshore allowances for New Zealand firms.

Unfortunately, the price of CERs is itself driven by the cost of units in the EU ETS. As the actual price of carbon in the EU ETS (Phase 2, 2008-2012) is currently roughly NZ\$42 per tonne, and is likely to increase if promises of

⁵ Or, more precisely, value-added at each stage of a supply chain of goods. For *most* energy intensive industries in New Zealand, they are effectively the 'primary' producer in the value chain and their GDP contribution is actual total sales revenue. Even for those who are not the primary producer (such as steel or aluminium), their value added is a high proportion of the total value in the chain.

⁶ CDM CERs: *Clean Development Mechanism certified emission reduction* units.

increased stringency are realised, the direct financial effects on New Zealand firms are far in excess of that conceived in the Framework.

Holcim urges government to commission an upper-bound analysis of carbon pricing – encompassing such factors as liquidity of allowances, availability of types of units, external market influences (such as the role of Japanese buyers on CDM market), and influence of policy direction taken by major trading blocs (such as the EU ETS).

Pricing and Trading Risks

Whilst Holcim favours emissions trading, and has some direct experience of the EU ETS, we are also conscious that the NZ ETS will be a comparatively small market.

Individual domestic firms entering that market will be very small players indeed, and uniquely vulnerable to price pressure. In short, domestic firms will not have sufficient buying power to avoid being price takers.

We suggest strongly that:

- *Government considers, and consults with industry, on the possibility of a ‘pooled purchasing’ arrangement that would allow the New Zealand government to purchase a single block of AAUs on behalf of all domestic buyers, and subsequently issue these as converted NZUs onto the NZ ETS market. Such a ‘co-operative’ arrangement would allow government to discover the lowest achievable price - and substantially below what could be achieved by any individual firm trading only on its own account.*
- *Government introduce a price cap as a means of limiting the liability of firms to any unsustainable swings in allowance price.*

Seeking More Information?

This paper is No. 2 of a series that is intended to explore in detail the design and operation of an emissions trading scheme, as it might apply in New Zealand. For more information on this Digest and views of Holcim expressed in it, please contact:

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This Digest, with a variety of other materials, is also available online at www.holcim.com/nz. Limited print copies are also available by contacting the above address with full mailing details.

For more information about Holcim (New Zealand) Ltd: www.holcim.com/nz

For more information about the Holcim Group of Companies: www.holcim.com

About Holcim

Holcim was founded in 1888 as Milburn Lime and Cement Co. Holcim directly employs in excess of 500 people across more than 35 operating sites in New Zealand. The company manufactures cement at Westport and lime, concrete and aggregates at a multitude of locations. In addition, it operates two ships and a fleet of rail and road tankers and concrete delivery trucks.

Holcim (New Zealand) Ltd is a member of the Holcim Group of Companies, which is one of the world's leading suppliers of cement and aggregates, as well as further activities such as ready-mix concrete and asphalt. The Holcim Group holds majority and minority interests in more than 70 countries on all continents and employs some 90,000 people.

Disclaimer

Unless otherwise stated, all opinions expressed in this Summary are those of Holcim (New Zealand) Limited.

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