

# ENVIRONMENTAL PRODUCT DECLARATION

## CLEVEDON – NON-SPEC HARDFILL

EPD of multiple products, based on the average results of the product group. A full list of products covered by this EPD is presented within this document on page 8.

|                                     |                                                                                             |
|-------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Programme:</b>                   | The International EPD® System<br><a href="http://www.environdec.com">www.environdec.com</a> |
| <b>Programme operator:</b>          | EPD InternationalAB                                                                         |
| <b>Regional programme operator:</b> | EPD Australasia<br><a href="http://www.epd-australasia.com">www.epd-australasia.com</a>     |
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Environmental Product Declaration in accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com).



# PLANET EARTH. TEST WE'RE QUARRYING FOR THE FUTURE

At Stevenson Aggregates, we recognise the importance of providing transparent and independently verified environmental impact information about our products.

An Environmental Product Declaration (EPD) is a robust, science-based, independently verified and standardised method for communicating the environmental impacts of products.

This EPD groups the environmental impacts of Non-Spec Hardfill aggregate products from our Clevedon production site.

Our concrete aggregates are manufactured in accordance with NZS3121:2015. All other aggregates are manufactured to national or regional aggregate specifications or non-spec general products.

To create this EPD, we collected extensive data throughout the process of extracting and manufacturing our products. It is based on a cradle-to-gate Life Cycle Assessment (LCA). 'Cradle' refers to the raw material extraction and 'the gate' is the gate of Stevenson Aggregates where the product is ready to go out to customers.

As the EPD owner, Stevenson has the sole ownership, liability and responsibility for the EPD.

An EPD is a standardised and verified way of quantifying the environmental impacts of a product based on a consistent set of rules known as a PCR (Product Category Rules).

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804+A2:2019.

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# STEVENSON AGGREGATES

Over a hundred years ago, three pioneers from the Stevenson family transformed their modest drainage business into the large reputable organisation that Stevenson is today. We're an experienced team of industry forerunners dedicated to cutting-edge technology and values that take care of our people, our communities, and our planet.

Stevenson has a strong community focus and a culture built on loyalty and determination. We are environmentally responsible and our team is committed to innovation, new technologies and processes to improve our products. By applying up-to-date processes in our quarrying, we can provide the best quality solutions for our customers and the environment.

After decades in the sector, we have gained valuable industry insights and knowledge. Now a division of the large infrastructure company Fulton Hogan, Stevenson continues to be a thriving and successful business.

The leadership team at Stevenson is made up of a group of experienced and well-informed industry experts who strive to build a culture of inclusiveness.

We make it a priority to invest and engage with our staff, and our values-led culture is a core part of the business. It contributes to the success of securing long-serving and loyal staff members. We have a strong focus on personal development and offer our people varied career opportunities and several leadership programmes.

Stevenson prides itself on being a good neighbour through connecting and partnering with the people in our local community. We work alongside our communities to make sure we are supporting both the people and the environment.

At Stevenson, we are excited about quarrying for the future. We deliver a range of high-quality aggregate solutions for use in large-scale roading and infrastructure projects and heavy-duty pavements throughout New Zealand.

## OUR COMMITMENT TO SUSTAINABILITY

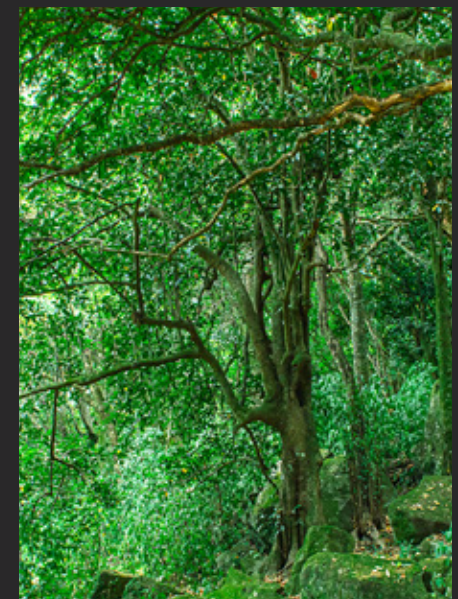
Reducing our impact on the environment is our priority at Stevenson Aggregates. We focus on new technologies and processes so we can provide the best quality solutions for our customers and the environment.

We work with ecological consultants to remove pest plants, weed infestations and eradicate pests. Pest control includes fencing, trapping and bait stations. Through these measures, we have seen an increase in the native bird population and native seedling germination across many of our sites, improving the local ecosystem.

At our largest site Drury, Stevenson Aggregates has planted approximately 85,500 eco-sourced native seedlings and is partway

through an eight-year ecological restoration programme that provides critical habitat for native lizards, birds and insects.

Our goal is to reduce our carbon emissions and to support New Zealand in meeting obligations under the Paris Agreement. Our Environmental Product Declaration provides us with a baseline and we will continually measure ourselves against this to track our carbon-reduction performance.



# WHERE WE PRODUCE OUR AGGREGATES

We have quarries in Bell Road, Clevedon, Drury, Poplar Lane, Tūākau, Tauhei and Waingaro.

This EPD covers Non-Spec Hardfill products from our production site in Clevedon.



## QUALITY CONTROL

Our quality control process is rigorous. We undertake comprehensive testing and provide advice to our customers around the correct application of our aggregate products.

Stevenson Aggregates Ltd are accredited to ISO 9001 certified by Telarc, for the design, manufacture and delivery of quarry aggregates and bulk transport services.

Our production quality control systems comply with the quality assurance requirements.

Stevenson operates an IANZ accredited civil engineering laboratory, ensuring all of our products meet the appropriate Australian and New Zealand standards.

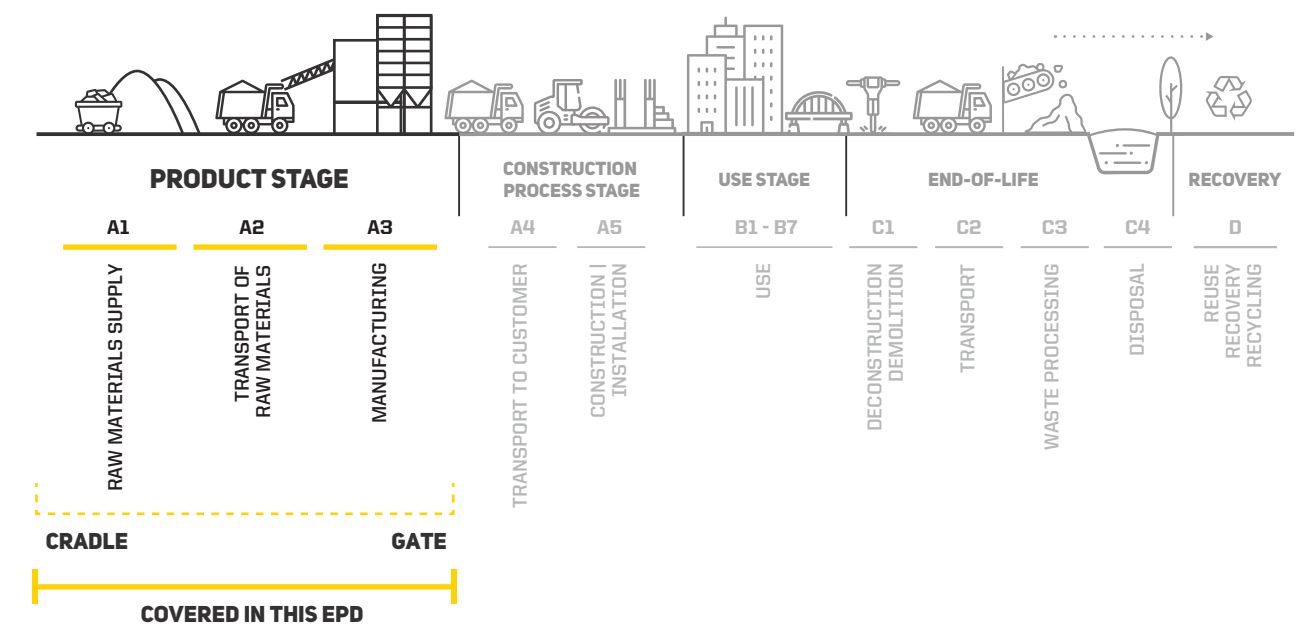


AGGREGATES

## PRODUCT LIFE CYCLE

This is a 'cradle-to-gate' type EPD. This means that the extraction and processing of raw material supply, transport of the raw materials to production site, and manufacturing stages are modelled in this EPD. The construction process (modules A4-A5), use stages (B1-B7) and end-of-life (C1-C4 and D) are not modelled.

Figure 1: Product life cycle ready-mix concrete



## INNOVATION

Our experienced team is committed to innovation and the aggregates industry. Stevenson is represented on a range of organisations including the Aggregate and Quarry Association (AQA) and various transport infrastructure committees.

PRODUCTS INCLUDED IN THIS EPD

The products reported in this EPD (see Table 1) are grouped by the processing stages required and the site it’s produced at. This means that all products within a group will have similar physical attributes, inputs, and outputs, leading to less variation in results.

Table 1: Products included in this EPD

| CLEVEDON          | ACRONYM | PRODUCT NAME     | CATEGORY |
|-------------------|---------|------------------|----------|
| Non-Spec Hardfill | Clay    | Clay Stripping's | Hardfill |
|                   | SPR     | Soft Pit Run     | Hardfill |

PRODUCT COMPOSITION

According to the General Programme Instructions, the EPD shall include a content declaration with a list of materials and chemical substances including information on their hazardous properties. All aggregate products do not require any packaging.

Table 2: Material composition of Stevenson’s aggregates

| PRODUCT COMPONENTS                 | WEIGHT, KG | POST-CONSUMER RECYCLED MATERIAL, WEIGHT-% | BIOGENIC MATERIAL, WEIGHT-% AND KG C/KG |
|------------------------------------|------------|-------------------------------------------|-----------------------------------------|
| Crushed rock, sand, clay materials | 1,000      | 0                                         | 0                                       |
| Total                              | 1,000      | 0                                         | 0                                       |

None of the materials in this EPD are on the Candidate List of substances of very high concern (SVHC), by the European REACH Regulation at a concentration greater than 0.1% by mass.

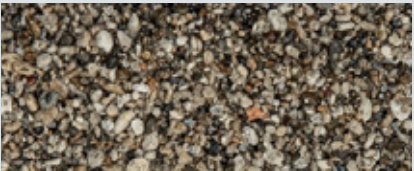
PRODUCT FUNCTION AND CATEGORY

Stevenson’s aggregate products provide solutions for commercial, infrastructure, and residential use. Some of their functions include:



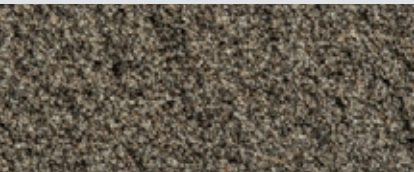
ROADING

Sealing chips, basecourses, sub-basecourses and subgrade aggregates manufactured for use in roads and heavy-duty pavements.



DRAINAGE

Permeable or blended aggregates in fine or coarse specifications for drainage or filter applications.



SAND

Sand and pumice aggregates produced in a range of specifications for use in a variety of applications including concrete manufacturing, sports turf and horticulture.



CONCRETE

Concrete aggregates manufactured for strength,superior particle shape, and consistency and workability.



SPECIALISED

Specialised products for use in landscaping, construction and infrastructure. Made to Order product options available.



DECLARED UNIT

EPDs that do not cover the full product life cycle from raw material extraction through to end-of-life use the term “declared unit”, rather than functional unit.

“Declared unit” will be used in the EPDs themselves and is defined as:  
**ONE TONNE (1 TONNE) OF PRODUCT.**

INDUSTRY CLASSIFICATION

The UN CPC and ANZSIC codes applicable to Stevenson aggregate products in this EPD are shown in Table 3.

Table 3: The UN CPC and ANZSIC codes applicable to Stevenson aggregates

| PRODUCT    | CLASSIFICATION | CODE  | CATEGORY                                                                                   |
|------------|----------------|-------|--------------------------------------------------------------------------------------------|
| AGGREGATES | UN CPC Ver.2   | 15320 | Pebbles, gravel, broken or crushed stone, macadam; granules, chippings and powder of stone |
|            | UN CPC Ver.2   | 15310 | Natural sands                                                                              |
|            | UN CPC Ver.2   | 15400 | Clays                                                                                      |
|            | ANZSIC 2006    | 0919  | Aggregate quarrying                                                                        |
|            | ANZSIC 2006    | 0911  | Sand quarrying, washing or screening                                                       |
|            | ANZSIC 2006    | 0919  | Clay quarrying                                                                             |

SYSTEM BOUNDARY

In Life Cycle Assessments (LCA), the system boundary is a line that divides the processes which are included from everything else. The system boundary of this EPD includes production ‘cradle-to-gate’, modules A1-A3.

The aggregate is physically integrated with other products during installation and cannot be physically separated from them at end of life. Aggrgate does not contain biogenic carbon.

Table 4: Modules of the production life cycle incl. in the EPD (X = module declared; ND = module not declared)

|                      | PRODUCT STAGE       |                            |               | USE STAGE             |                             |     |             |        |             |               |                        |                       | END-OF-LIFE                 |                               |                  |          | RECOVERY                                             |
|----------------------|---------------------|----------------------------|---------------|-----------------------|-----------------------------|-----|-------------|--------|-------------|---------------|------------------------|-----------------------|-----------------------------|-------------------------------|------------------|----------|------------------------------------------------------|
|                      | Raw material supply | Transport of raw materials | Manufacturing | Transport to customer | Construction / Installation | Use | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | Deconstruction / demolition | Transport to waste processing | Waste processing | Disposal | Future reuse, recycling or energy recovery potential |
| MODULE               | A1                  | A2                         | A3            | A4                    | A5                          | B1  | B2          | B3     | B4          | B5            | B6                     | B7                    | C1                          | C2                            | C3               | C4       | D                                                    |
| MODULE DECLARED      | x                   | x                          | x             | ND                    | ND                          | ND  | ND          | ND     | ND          | ND            | ND                     | ND                    | ND                          | ND                            | ND               | ND       | ND                                                   |
| GEOGRAPHY            | NZ                  | NZ                         | NZ            | -                     | -                           | -   | -           | -      | -           | -             | -                      | -                     | -                           | -                             | -                | -        | -                                                    |
| SPECIFIC DATA        | >90%                |                            |               | -                     | -                           | -   | -           | -      | -           | -             | -                      | -                     | -                           | -                             | -                | -        | -                                                    |
| VARIATION - PRODUCTS | 0%                  |                            |               | -                     | -                           | -   | -           | -      | -           | -             | -                      | -                     | -                           | -                             | -                | -        | -                                                    |
| VARIATION - SITES    | 0%                  |                            |               | -                     | -                           | -   | -           | -      | -           | -             | -                      | -                     | -                           | -                             | -                | -        | -                                                    |

PRODUCT STAGE

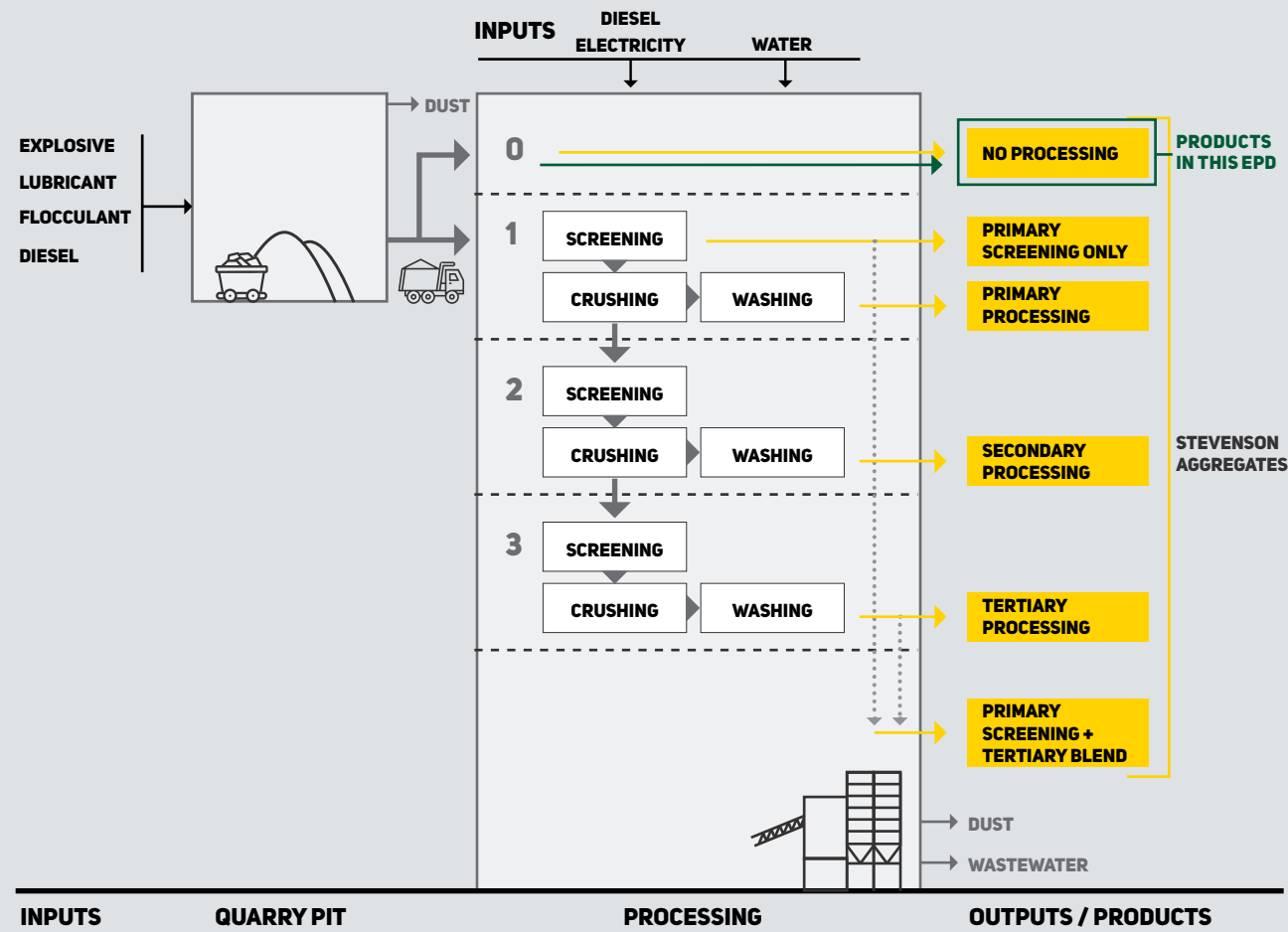
The product stage looks at the environmental impacts associated with manufacturing the aggregate products until it leaves the production site.



Extracted aggregates undergo up to four stages of screening and crushing to produce varying sizes and grades of aggregate products. The final products are then washed and delivered to the customer without any packaging. Distribution is not included in this EPD.

Figure 2 below illustrates the productions stages A1-A3 and the processing steps leading to the final products.

Figure 2: Production stages A1 - A3, processing steps and products.





# LIFE CYCLE INVENTORY (LCI) DATA AND ASSUMPTIONS

Primary data provided is representative of the production of aggregates during 1 July 2021 – 30 June 2022 at the Clevedon production site.

Background data for raw materials, energy, and transportation are all from the ecoinvent v3.10 database (Wernet, 2016) with reference years between 2020-2023. Both primary and background data fall within the EN 15804 and PCR requirements of 10 years for generic data and 5 years for producer specific data.

### SOFTWARE AND DATABASE

The LCA was conducted in Microsoft Excel. The LCA utilises lifecycle inventory data from ecoinvent, Allocation, cut-off, EN15804, ecoinvent database version 3.10 (Wernet, 2016) for several of the raw and process materials obtained from the background system.

The ecoinvent datasets have not been adapted as they are provided in Excel and have not been used in conjunction with an LCA software. This includes capital goods and infrastructure as they are included in the background datasets provided by ecoinvent database for Excel and it is not possible to subtract them in Excel.



### CUT OFF CRITERIA

Cut-off criteria is compliant with EN15804 6.3.5 and PCR 2019:14 (EPD International, 2024). For the processes within the system boundary, all available energy and material flow data have been included in the modelling. In cases where no matching life cycle inventories are available to represent a flow, proxy data have been applied based on conservative assumptions regarding environmental impacts.

The main raw materials are extracted from the quarries and do not have any packaging. Packaging for other raw materials is minimal and was excluded from the study.

### ELECTRICITY

The composition of the residual electricity grid mix of New Zealand is modelled in LCA FE based on published data for the year 1st April 2021 – 31st March 2022 (BraveTrace, 2023). The New Zealand residual electricity mix is made up of hydro (56.6%), geothermal (19.7%) natural gas (12.5%), wind (6.55%), coal (4.25%), biomass (0.266%) and biogas (0.160%).

Onsite consumption (3.00%), and the medium voltage (1kV-60kV) grid's transmission and distribution losses (3.17%) are calculated based on data from the Ministry of Business, Innovation & Employment (MBIE, 2023).

The emission factor for the New Zealand residual grid mix for the GWP-GHG indicator is 0.156 kg CO<sub>2</sub>e/kWh (based on EF3.1).

### TRANSPORT

Raw materials used on site were all sourced within New Zealand and average distances from each supplier was calculated. Truck was used as the transport mode for all materials. The ecoinvent dataset used was transport, freight, lorry 7.5-16 metric ton, EURO3.

### ALLOCATION

All primary data was collected at a site level and allocated to each relevant processing stage based on the production quantities. This includes data for electricity, diesel, explosive, flocculant, lubricant, and water. For products that require more than one processing stage, energy and materials used are accumulated from each previous stage.

Allocation of background data (energy and materials) taken from the ecoinvent databases is documented online at <https://ecoquery.ecoinvent.org/3.10/EN15804/search>.

# ENVIRONMENTAL IMPACT INDICATORS

An introduction the core environmental impact indicators is provided below. The best-known effect of each indicator is listed in the descriptions and the abbreviations, in brackets, correspond to the labels in the following results tables.



## CLIMATE CHANGE (GLOBAL WARMING POTENTIAL) [GWP-total, GWPf, GWPb, GWPluc]

A measure of greenhouse gas emissions, such as CO<sub>2</sub> and methane. These emissions are causing an increase in the absorption of radiation emitted by the earth, increasing the natural greenhouse effect. This may in turn have adverse impacts on ecosystem health, human health and material welfare. The Global Warming Potential (GWP) is split into three sub indicators: total (GWPt), fossil (GWPf), biogenic (GWPb), and land-use and land-use change (GWPluluc).



## ACIDIFICATION POTENTIAL [AP]

Acidification Potential is a measure of emissions that cause acidifying effects to the environment. A molecule's acidification potential indicates its capacity to increase the hydrogen ion (H<sup>+</sup>) concentration in the presence of water, thus decreasing the pH value. Potential effects include fish mortality, forest decline, and the deterioration of building materials.



## PHOTOCHEMICAL OZONE FORMATION POTENTIAL [POCP]

Photochemical Ozone Formation Potential gives an indication of the emissions from precursors that contribute to ground level smog formation, mainly ozone (O<sub>3</sub>). Ground level ozone may be harmful to human health and ecosystems and may also damage crops. These emissions are produced by the reaction of volatile organic compounds (VOCs) and carbon monoxide in the presence of nitrogen oxides and UV light.



## EUTROPHICATION POTENTIAL [EP-fw, EP-fm, EP-tr]

Eutrophication covers all potential impacts of excessively high levels of macronutrients, the most important of which are nitrogen (N) and phosphorus (P). In aquatic ecosystems where this term is mostly applied, this typically describes a degradation in water quality. Eutrophication can result in an undesirable change in the type of species that flourish and an increase the production of biomass. As the decomposition of biomass consumes oxygen, eutrophication may decrease the available oxygen level in the water column and threaten fish in their ability to respire.



## ABIOTIC RESOURCE DEPLETION [ADP-mm, ADPf]

The consumption of non-renewable resources decreases the availability of these resources and their associated functions in the future. Depletion of mineral resources and non-renewable energy resources are reported separately. Depletion of mineral resources is assessed based on total reserves.



## OZONE DEPLETION POTENTIAL [ODP]

Depletion of the ozone leads to higher levels of UVB ultraviolet rays reaching the earth's surface with detrimental effects on humans and plants. The Ozone Depletion Potential is a measure of air emissions that contribute to the depletion of the stratospheric ozone layer.



## WATER USE [WDP]

Water scarcity is a measure of the stress on a region due to water consumption.



ENVIRONMENTAL  
IMPACT INDICATORS

## EN15804+A2 CORE ENVIRONMENTAL IMPACT INDICATORS

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks. The EN 15804 reference package based on EF 3.1 is used.

Table 5: Environmental impact (EN15804+A2) covering modules A1-A3

| EN15804+A2 - ENVIRONMENTAL INDICATORS                  |              |                            | PRODUCT STAGE |
|--------------------------------------------------------|--------------|----------------------------|---------------|
| INDICATOR                                              | ABBR.        | UNIT                       | A1-A3         |
| Climate change - total                                 | GWP-total    | kg CO <sub>2</sub> -eq.    | 5.76          |
| Climate change - fossil                                | GWP-fossil   | kg CO <sub>2</sub> -eq.    | 5.76          |
| Climate change - biogenic                              | GWP-biogenic | kg CO <sub>2</sub> -eq.    | 7.57E-04      |
| Climate change - land use and land use change          | GWP-luluc    | kg CO <sub>2</sub> -eq.    | 6.24E-04      |
| Ozone Depletion                                        | ODP          | kg CFC 11-eq.              | 1.34E-07      |
| Acidification                                          | AP           | Mole of H <sup>+</sup> eq. | 0.0478        |
| Eutrophication aquatic freshwater                      | EP-fw        | kg P eq.                   | 1.87E-04      |
| Eutrophication aquatic marine                          | EP-fm        | kg N eq.                   | 0.0209        |
| Eutrophication terrestrial                             | EP-tr        | Mole of N eq.              | 0.228         |
| Photochemical ozone formation                          | POCP         | kg NMVOC eq.               | 0.0742        |
| Depletion of abiotic resources- minerals and metals ** | ADP-mm       | kg Sb-eq.                  | 2.42E-06      |
| Depletion of abiotic resources - fossil fuels *        | ADP-fossil   | MJ                         | 122           |
| Water use *                                            | WDP          | m³ world equiv.            | 0.248         |

\*The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

\*The results of the impact category abiotic depletion of minerals and metals, may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.



## ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS

Optional environmental impact categories provide further information on environmental impacts.

Table 6: Additional environmental impact indicators covering modules A1-A3

| EN15804+A2 - ADDITIONAL ENVIRONMENTAL INDICATORS |         |                         | PRODUCT STAGE |
|--------------------------------------------------|---------|-------------------------|---------------|
| INDICATOR                                        | ABBR.   | UNIT                    | A1-A3         |
| Climate Change ^                                 | GWP-GHG | kg CO <sub>2</sub> -eq. | 5.76          |
| Respiratory inorganics                           | PM      | Disease incidences      | 0.00143       |
| Ionising Radiation - human health ~              | IRP     | kBq U235 eq.            | 0.0395        |
| Eco-toxicity (freshwater) °                      | ETP-fw  | CTUh                    | 12.6          |
| Human Toxicity, cancer **                        | HTPc    | CTUh                    | 2.27E-08      |
| Human Toxicity, non-cancer **                    | HTPnc   | CTUh                    | 1.33E-08      |
| Land use related impacts / soil quality **       | SQP     | Dimensionless           | 1,330         |

^ The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

~ This indicator is calculated using the characterisation factors from the IPCC AR5 report (IPCC 2013) and has been included in the EPD following the PCR.

° The results of the impact categories land use, human toxicity (cancer), human toxicity, noncancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

~ This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and some construction materials, is also not measured by this indicator.

## RESOURCE USE INDICATORS

The resource use indicators describe the use of renewable and non-renewable material resources, renewable and non-renewable primary energy and water.

Table 7: Resource use impact indicators covering modules A1-A3

| INVENTORY INDICATORS - RESOURCE USE                        |       |      | PRODUCT STAGE |
|------------------------------------------------------------|-------|------|---------------|
| INDICATOR                                                  | ABBR. | UNIT | A1-A3         |
| Renewable primary energy as energy carrier                 | PERE  | MJ   | 0.521         |
| Renewable primary energy resources as material utilization | PERM  | MJ   | 0             |
| Total use of renewable primary energy resources            | PERT  | MJ   | 0.521         |
| Non-renewable primary energy as energy carrier             | PENRE | MJ   | 73.7          |
| Non-renewable primary energy as material utilization       | PENRM | MJ   | 48.5          |
| Total use of non-renewable primary energy resources        | PENRT | MJ   | 122           |
| Use of secondary material                                  | SM    | kg   | 0.0312        |
| Use of renewable secondary fuels                           | RSF   | MJ   | 7.98E-05      |
| Use of non-renewable secondary fuels                       | NRSF  | MJ   | 0             |
| Use of net fresh water                                     | FW    | m³   | 0.0296        |

## WASTE MATERIAL AND OUTPUT FLOW INDICATORS

Waste indicators describe waste generated within the life cycle of the product. Waste is categorised by hazard class, end-of-life fate and exported energy content.

Table 8: Waste categories and output flow indicators covering modules A1-A3

| INVENTORY INDICATORS - WASTE MATERIAL AND OUTPUT FLOW |       |      | PRODUCT STAGE |
|-------------------------------------------------------|-------|------|---------------|
| INDICATOR                                             | ABBR. | UNIT | A1-A3         |
| Hazardous waste disposed                              | HWD   | kg   | 0.0915        |
| Non-hazardous waste disposed                          | NHWD  | kg   | 1.23          |
| Radioactive waste disposed                            | RWD   | kg   | 9.62E-06      |
| Components for re-use                                 | CRU   | kg   | 0             |
| Materials for recycling                               | MFR   | kg   | 2.55E-04      |
| Materials for energy recovery                         | MER   | kg   | 1.24E-06      |
| Exported electrical energy                            | EEE   | MJ   | 0.00361       |
| Exported thermal energy                               | EET   | MJ   | 0.00191       |

## BIOGENIC CARBON CONTENT

1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>.

Table 9: Biogenic carbon content covering modules A1-A3

| INVENTORY INDICATORS - BIOGENIC CARBON CONTENT |          |      | PRODUCT STAGE |
|------------------------------------------------|----------|------|---------------|
| INDICATOR                                      | ABBR.    | UNIT | A1-A3         |
| Biogenic carbon content - product              | BCC-prod | kg   | 0             |
| Biogenic carbon content - packaging            | BCC-pack | kg   | 0             |



### VARIABILITY OF RESULTS

Since the primary data for this EPD is based on a distinct site and processing stage and has been equally allocated by mass, all products included in this EPD have the same results per tonne of aggregate.

Therefore, there is no range or variation in results between products included in this EPD.

**Life Cycle**

A view of a product system as “consecutive and interlinked stages ... from raw material acquisition or generation from natural resources to final disposal” (ISO 14040:2006, section 3.1). This includes all material and energy inputs as well as emissions to air, land and water.

**Life Cycle Assessment (LCA)**

“Compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle” (ISO 14040:2006, section 3.2)

**Life Cycle Inventory (LCI)**

“Phase of life cycle assessment involving the compilation and quantification of inputs and outputs for a product throughout its life cycle” (ISO 14040:2006, section 3.3)

**Environmental Product Declaration (EPD)**

“Independently verified and registered document that communicates transparent and comparable information about the life-cycle environmental impact of products.” (EPD Australasia Ltd, 2023)

**Product Category Rule (PCR)**

“Provide the rules, requirements, and guidelines for developing an EPD for a specific product category.” (EPD International AB, 2024)

**Functional / Declared Unit**

“Quantified performance of a product system for use as a reference unit.” (ISO 14040:2006, section 3.20)

Functional unit = LCA/EPD covers entire life cycle “cradle to grave”.

Declared unit = LCA/EPD is not based on a full “cradle to grave” LCA, common in construction product EPDs.

**Allocation**

“Partitioning the input or output flows of a process or a product system between the product system under study and one or more other product systems” (ISO 14040:2006, section 3.17)

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EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison.

For further information about comparability, see EN 15804 and ISO 14025.

PROGRAMME-RELATED INFORMATION AND VERIFICATION

|                                                                                   |                                                                                                                                                                                                                                                                       |                                                                                       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| DECLARATION OWNER                                                                 | Stevenson                                                                                                                                                                                                                                                             |    |
|                                                                                   | Post: Private Bag 94000, Manukau City<br>Auckland, 2241, New Zealand                                                                                                                                                                                                  |                                                                                       |
|                                                                                   | Web: stevenson.co.nz                                                                                                                                                                                                                                                  |                                                                                       |
|                                                                                   | Email: action@stevenson.co.nz                                                                                                                                                                                                                                         |                                                                                       |
| GEOGRAPHICAL SCOPE                                                                | New Zealand                                                                                                                                                                                                                                                           |                                                                                       |
| REFERENCE YEAR                                                                    | 2021-07-01 to 2022-06-30                                                                                                                                                                                                                                              |                                                                                       |
| EPD PRODUCED BY                                                                   | thinkstep ltd<br>Barbara Nebel<br>Noa Meron<br>Edwin Chu                                                                                                                                                                                                              |    |
|                                                                                   | Post: 11 Rawhiti Road, Pukerua Bay,<br>5026 Wellington, New Zealand                                                                                                                                                                                                   |                                                                                       |
|                                                                                   | Web: thinkstep-anz.com                                                                                                                                                                                                                                                |                                                                                       |
|                                                                                   | Email: info@thinkstep-anz.com                                                                                                                                                                                                                                         |                                                                                       |
| EPD PROGRAMME                                                                     | The International EPD® System                                                                                                                                                                                                                                         |    |
|                                                                                   | Operator: EPD International AB                                                                                                                                                                                                                                        |                                                                                       |
|                                                                                   | Post: EPD International AB, Box 210 60,<br>SE-100 31 Stockholm, Sweden                                                                                                                                                                                                |                                                                                       |
|                                                                                   | Web: www.environdec.com                                                                                                                                                                                                                                               |                                                                                       |
|                                                                                   | Email: info@environdec.com                                                                                                                                                                                                                                            |                                                                                       |
| REGIONAL PROGRAMME                                                                | EPD Australasia Limited                                                                                                                                                                                                                                               |  |
|                                                                                   | Post: 315a Hardy Street<br>7010 Nelson, New Zealand                                                                                                                                                                                                                   |                                                                                       |
|                                                                                   | Web: www.epd-australasia.com                                                                                                                                                                                                                                          |                                                                                       |
|                                                                                   | Email: info@epd-australasia.com                                                                                                                                                                                                                                       |                                                                                       |
| CEN STANDARD EN 15804+A2 SERVE AS THE CORE PRODUCT CATEGORY RULES (PCR)           |                                                                                                                                                                                                                                                                       |                                                                                       |
| PCR                                                                               | PCR 2019:14 Construction Products version 1.3.4                                                                                                                                                                                                                       |                                                                                       |
| PCR REVIEW WAS CONDUCTED BY                                                       | The Technical Committee of the International EPD System.<br>See www.environdec.com for a list of members.<br><br>Review Chair: Claudia A. Peña, University of Concepción, Chile.<br>The review panel may be contacted via the Secretariat www.environdec.com/contact. |                                                                                       |
| INDEPENDENT VERIFICATION OF THE DECLARATION AND DATA, ACCORDING TO ISO 14025:     | <input type="checkbox"/> EPD process certification (Internal)<br><input checked="" type="checkbox"/> EPD verification by individual verifier(External)                                                                                                                |                                                                                       |
| THIRD PARTY VERIFIER, APPROVED BY EPD AUSTRALASIA                                 | Life Cycle Logic Pty Ltd<br>Andrew D. Moore                                                                                                                                                                                                                           |                                                                                       |
|                                                                                   | Post: PO Box 571 Fremantle WA 6959<br>Australia                                                                                                                                                                                                                       |                                                                                       |
|                                                                                   | Web: lifecyclelogic.com.au                                                                                                                                                                                                                                            |                                                                                       |
|                                                                                   | Email: Andrew@lifecyclelogic.com.au                                                                                                                                                                                                                                   |                                                                                       |
| PROCEDURE FOR FOLLOW-UP OF DATA DURING EPD VALIDITY INVOLVED THIRD-PARTY VERIFIER | <input type="checkbox"/> yes<br><input checked="" type="checkbox"/> no                                                                                                                                                                                                |                                                                                       |
| VERSION HISTORY                                                                   | 1.0                                                                                                                                                                                                                                                                   |                                                                                       |



# CONTACT

For more information about  
Stevenson Aggregates visit:  
[stevenson.co.nz](http://stevenson.co.nz)

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