PUBLIC DISCLOSURE STATEMENT

XYPEX AUSTRALIA

PRODUCT CERTIFICATION - ADMIXTURES

FY2021–22

Australian Government

Climate Active
Public Disclosure Statement

An Australian Government Initiative

NAME OF CERTIFIED ENTITY	Concrete Waterproofing Manufacturing P/L, trading as Xypex Australia
REPORTING PERIOD	1 July 2021 – 30 June 2022 arrears report
DECLARATION	*To the best of my knowledge, the information provided in this public disclosure statement is true and correct and meets the requirements of the Climate Active Carbon Neutral Standard.* 
	Name of signatory: Rob James Position of signatory: Strategic National Business Development Manager Date 07.11.2023

Australian Government
Department of Climate Change, Energy, the Environment and Water

Version March 2023.

1. CERTIFICATION SUMMARY

TOTAL EMISSIONS OFFSET	532 tCO_2-e
THE OFFSETS USED	100% VCUs
RENEWABLE ELECTRICITY	N/A
CARBON ACCOUNT	Prepared by: Pangolin Associates
TECHNICAL ASSESSMENT	Date: 6/10/2023 Pangolin Associates Next technical assessment due: FY 2025
THIRD PARTY VALIDATION	Type 3 (EPD Verification Process) Date: 15/9/2023 Name: Rob Rouwette Organisation: Start2See

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2. CARBON NEUTRAL INFORMATION

Description of certification

This carbon neutral certification covers Xypex's admixtures product range (Admix C-1000 NF and Admix C-5000). Through the EPD pathway for carbon neutral certification, Xypex is assessing the global warming impact (GWP-GHG) of its admixture products as quantified in Xypex Admixtures EPD.

Xypex Crystalline Technology has been established in Canada since 1969 and in Australia, with the one owner, Concrete Waterproofing Manufacturing P/L, who trade as Xypex Australia, since 1991.

As an industry leader, Xypex Australia embraces Corporate Social Responsibility very seriously and is conscious of all Social, Environmental and Economic factors that may impact on society. In recognition of this responsibility, Xypex Australia has adopted practices and research that supports the development of a "Whole of Life" sustainable construction philosophy to all Construction Industry Stakeholders. This philosophy is to advise the industry that by increasing the life and durability of Concrete Infrastructure, it will provide long term gains and benefits to not only the Building and Construction Industry, but also to the Environment and Society as a whole.

Our Vision is to support and drive Environmental Awareness in all that we do, ensuring that our business practices provide sustainable solutions for the world and its communities that leads and results in contribution to the delivery of creating durable and sustainable Concrete Infrastructure, for many generations to come.

"Our Vision is to support and drive Environmental Awareness in all that we do, ensuring that our business practices provide sustainable solutions to Society as a whole, that lead and result in contributing to the delivery of durable and sustainable concrete infrastructure for may generations to come."

We have long put sustainability and environment at the forefront of Xypex Australia's purpose. We understand the wider impacts to the client, environment and the industry by not placing environmental best practice at the forefront and how critical it is in determining the ultimate impact of construction.

Xypex Australia is an advocate for a Whole of Life Cycle approach to be considered for all concrete asset design. Our intention is to assist in increasing the life and structural integrity of our client's concrete assets, providing significant benefits, both environmentally and socially. These considerations are demonstrated through our adoption of practices and research to drive ecological resilience in the construction industry to benefit future generations.

The EPD and LCA methodology is in accordance with the international standards ISO 14025 and has been verified to be compliant with EN 15804:2012+A2:2019/AC:2021. As such, the carbon accounting

within the EPD and carbon calculator closely aligns with those principles set out in the Climate Active Product and Services Standards. The streamlined EPD certification pathway with Climate Active has therefore been adopted to cover the scope of this carbon neutral certification for **Xypex Admixtures** (Admix C-1000 NF and Admix C-5000). The emissions reported in this document are for FY2022, which is also our baseline year of reporting.

XYPEX ADMIXTURE C-1000 NF

Xypex Admix C-1000 NF is added to the concrete mix at the time of batching. Xypex Admix C-1000 NF consists of Portland cement and various active proprietary chemicals. These active chemicals react with the moisture in fresh concrete and with the by-products of cement hydration to cause a catalytic reaction. This reaction generates a non-soluble crystalline formation throughout the pores and capillary tracts of the concrete that permanently seals the concrete and prevents the penetration of water and other liquids from any direction.

The Xypex Admix C-Series has been specially formulated to meet varying project and temperature conditions. Xypex Admix C-1000 NF is designed for concrete, where normal to a mild retarded set is desired.

Xypex Admix C-1000 NF complies with the requirements of AS 1478.1-2000, Chemical Admixture for Concrete, For Special Purpose Normal-Setting (Type SN) Admixture and AS 4020:2018 Standard for products for use with drinking water.

XYPEX ADMIXTURE C-5000

Xypex Admix C-5000 is a powdered additive consisting of various active proprietary chemicals and local materials. These active chemicals react with the moisture in fresh concrete and the by-products of cement hydration to cause a catalytic reaction which generates a non-soluble crystalline formation throughout the pores and capillary tracts of the concrete.

The reaction products of Xypex Admix C-5000 are in mineral crystal form and prevent the penetration of deleterious ions and water into ordinary or blended Portland cement concrete. Experimental investigations conducted in Australia, Canada and Japan have demonstrated that Xypex Admix C-5000 enhances the durability of the concrete exposed to aggressive environmental conditions such as, but not limited to, marine environment, sulphate attack and acid attack whilst maintaining excellent hydrostatic pressure resistance.

Xypex Admix C-5000 complies with the requirements of AS 1478.1-2000, as a Type SN Special Purpose Admixture and AS 4020:2018 Standard for products for use with drinking water.

Product description

- The declared unit for this certification is 1 kg of packaged Xypex Admix (C-1000 NF or C-5000) sold for the period of the submission.

- The products are available as carbon neutral products to all customers (full coverage).

- The assessment covers the cradle-to-grave life cycle stages of the product: extraction of raw materials, transport, manufacturing, installation, and disposal and/or recycling at the end-of-life. It excludes the use stage due to the inability to predict how the material will be used following its installation (different application scenarios for each product).

The table below summarises the life cycle stages included and excluded from the boundary, as per the EPD:

Module	Life Cycle Sub-stage	Life Cycle Main Stage	Module Declared
A1	Raw material supply	Product stage	X
A2	Transport		X
A3	Manufacturing		X
A4	Transport	Installation process stage	X
A5	Construction/Installation		X
B1	Use	Use stage	ND
B2	Maintenance		ND
B3	Repair		ND
B4	Replacement		ND
B5	Refurbishment		ND
B6	Operational energy use		ND
B7	Operational water use		ND
C1	Deconstruction/Demolition	End-of-life	X
C2	Transport		X
C3	Waste processing		X
C4	Waste disposal		X

*X = included in the EPD, ND = module is not declared in the study (such a declaration should not be regarded as an indicator result of zero)

3. EMISSIONS BOUNDARY

Inside the emissions boundary

All emission sources listed in the emissions boundary are part of the carbon neutral claim.

Quantified emissions have been assessed as 'attributable processes' of a product or service. These attributable processes are services, materials and energy flows that become the product or service, make the product or service and carry the product or service through its life cycle. These attributable emissions have been quantified in the carbon inventory.

Non-quantified emissions have been assessed as attributable and are captured within the emissions boundary but are not measured (quantified) in the carbon inventory. All material emissions are accounted for through an uplift factor. Further detail is available at Appendix C.

Outside the emissions boundary

Non-attributable emissions have been assessed as not attributable to a product or service. They can be **optionally included** in the emissions boundary and therefore have been offset, or they can be listed as outside of the emissions boundary (and are therefore not part of the carbon neutral claim). Further detail is available at Appendix D.

Inside emissions boundarv

Quantified

Raw material supply (silica sand, cement, polypropylene, steel, base mix)

Transport of raw materials from factories (Australia and Canada) to Xypex factory (Albury, NSW, Australia)

Production and packaging of materials

Transport to customer (road freight)

Installation at customer

Dismantlement and transport to waste process at end of life

Recycling or landfilling

Non-quantified

n/a

Excluded

n/a

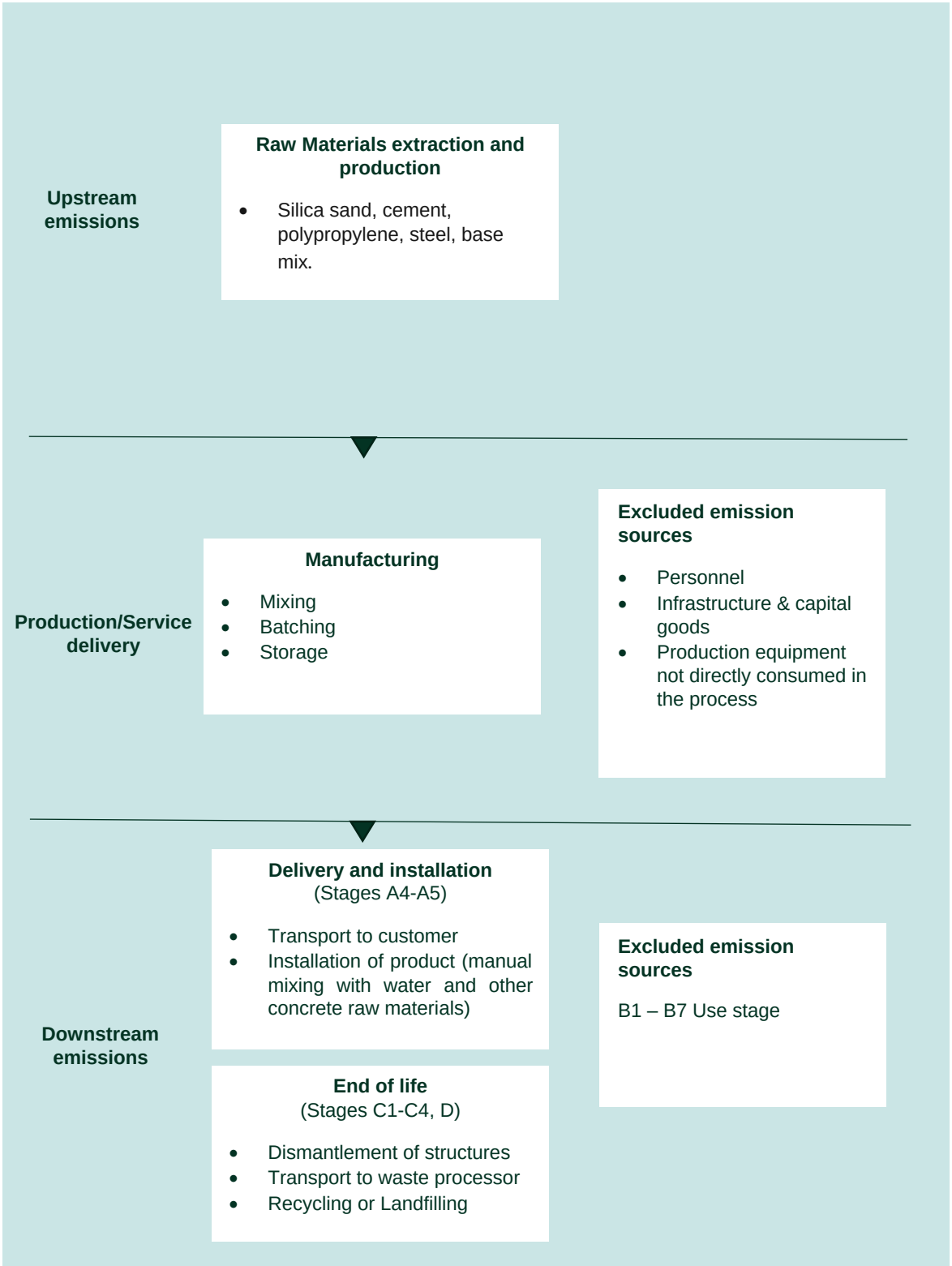
Outside emission boundary

Non-attributable

- Use stages of the product (module B1 to B7)
- Personnel
- Infrastructure & capital goods
- Production equipment not directly consumed in the process

Product process diagram

The assessment covers the cradle-to-grave life cycle stages of the product: extraction of raw materials, transport, manufacturing, installation, and disposal and/or recycling at the end-of-life. It excludes the use stage due to the inability to predict how the material will be used following its installation (different application scenarios for each product).



4. EMISSIONS REDUCTIONS

Emissions reduction strategy

The following emissions reduction strategy outlines the measures that Xypex Australia are taking to reduce the emissions of our activities.

Xypex Australia commits to reduce scope 2 emissions by 40% by 2030, compared to a FY2022 base year. We also commit to reduce scope 1 emissions by 10% within the same timeframe, relative to the same baseline.

The emissions reductions strategy:

- Xypex Australia will add an additional 68 No. 480W solar panels to our manufacturing facility roof to provide renewable energy to power our operations and reduce Scope 2 emissions. It is anticipated that this will achieve a self-sufficiency improvement from 45 to 65% representing a saving of approximately 24MWh per annum equating to a reduction of 19 tonnes of CO_2e emissions per annum versus a baseline of FY21/22.
- Xypex Australia will source 50% GreenPower Renewable Energy for our Head Office and Manufacturing Facility to reduce Scope 2 emissions.
- The additional solar panels are estimated to reduce the required usage from the grid to 42 MWh. At 50% GreenPower replacement level, 21 MWh will be from renewable sources equating to a 17 tonne CO_2e reduction per annum.
- Xypex Australia will replace two current LPG powered Forklifts with electric Forklifts in their Manufacturing Facility and implement battery charging practices to maximise the use of solar and Green Power energy and reduce Scope 1 emissions from LPG.
- Further emissions reduction actions will be identified and implemented to reduce Scope 1 and 2 emissions.

5.EMISSIONS SUMMARY

Use of Climate Active carbon neutral products and services

N/A

Emissions summary

Stage / Attributable Process	Admix C-1000 NF (kg CO_2-e)	Admix C-5000 (kg CO_2-e)	Total (kg CO_2-e)
Stages A1-A3 / Raw materials, transport and manufacturing	264,072.60	200,102.40	464,175.00
Stage A4 / Transport to customer	20,205.56	15,633.00	35,838.56
Stage A5 / Installation	13,863.81	10,833.67	24,697.48
Stage C1 / Demolition	724.20	565.92	1,290.12
Stage C2 / Transport to waste processor	2,560.70	2,001.02	4,561.73
Stage C3 / Waste Processing	682.19	533.09	1,215.27
Stage C4 / Disposal	90.42	70.66	161.09

Emissions intensity per functional unit	1.49 kg CO_2-e / kg Admixtures
Number of functional units to be offset	356,385 kg Admixtures
Total emissions to be offset	532 tCO_2-e

6. CARBON OFFSETS

Offsets retirement approach

This certification has taken an in-arrears offsetting approach. The total emission to offset is 532 t CO_2-e. The total number of eligible offsets used in this report is 532. Of the total eligible offsets used, 0 were previously banked and 532 were newly purchased and retired. 0 are remaining and have been banked for future use.

Co-benefits

Canopy Blue Kelp Reforestation

Each Kelp Reforestation Credit represents one kelp plant grown at Kalbarri Western Australia site.

Kelp forests provide critical ecosystem services to humans, similar to those provided by coral reefs and tropical forests. They also possess a much greater capacity for rapid growth and regeneration than most other ecosystems, taking 2 years to grow to their full biomass.

The benefits provided by kelp forests span 14 of the 18 categories of nature's contributions to people identified by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

Biodiversity

Kelp creates underwater habitats (like corals and mangroves) that support high biodiversity by supplying a physical structure for nurseries for juvenile fish. Key species in a kelp forest include crayfish, octopus, reef fish and in many places also mammals such as seals and sea lions, otters, dolphins and whales. Australia's kelp forests form the Great Southern Reef (GSR) which is a global biodiversity hotspot.

- 70% of the fish, seaweeds and invertebrate species in the Great Southern Reef are found nowhere else in the world! (comparable rates of endemism for the Great Barrier Reef are <10%).

Carbon sink

Kelp forests represent an important and underappreciated carbon sink in the ocean. They are some of the fastest growing plants on the planet. Kelps store organic carbon as standing biomass and sequester carbon through the export and burial of detritus in the deep ocean. Kelp plants take up inorganic carbon (including CO_2) from water and convert it into plant tissue (i.e., organic carbon biomass). In this way kelp forests can be regarded as a carbon sink. Also, living kelp are continuously exporting biomass and carbon to adjacent environments where it is long-term buried in seafloor sediments or transported to deep ocean carbon stores.

Projected rates of global loss: While there are many unmonitored kelp forests with unclear status, the most recent measure is 1.8% instantaneous loss each year. This means that 3 million hectares of marine forests needed to be restored globally in 2021 just to keep pace with current declines.

Eligible offsets retirement summary

Offsets retired for Climate Active Carbon Neutral Certification											
Project description	**Type of offset units**	**Registry**	**Date retired**	**Serial number (and hyperlink to registry transaction record)**	**Vintage**	**Stapled quantity**	**Eligible quantity retired (tCO_2-e)**	**Eligible quantity used for previous reporting periods**	**Eligible quantity banked for future reporting periods**	**Eligible quantity used for this reporting period**	**Percentage of total (%)**
Canopy Blue Kelp Reforestation						532	0	0	0	0	
Stapled to:											
Akocak Hydroelectric Power PlantTurkey	VCU	Verra	07/10/2023	10579-230001989-230002783-VCS-VCU-279-VER-TR-1-535-01012015-31122015-0	2015	0	532	0	0	532	100%
Total offsets retired this report and used in this report										532	
Total offsets retired this report and banked for future reports									0		

Type of offset units	Eligible quantity (used for this reporting period)	Percentage of total
Verified Carbon Units (VCUs)	532	100%

7. RENEWABLE ENERGY CERTIFICATE (REC) SUMMARY

Renewable Energy Certificate (REC) Summary

N/A.

APPENDIX A: ADDITIONAL INFORMATION

EPD: https://epd-australasia.com/wp-content/uploads/2023/09/SP10223-Xypex-EPD-admixs_Sep23.pdf

Stapled unit certificate:

APPENDIX B: ELECTRICITY SUMMARY

N/A

APPENDIX C: INSIDE EMISSIONS BOUNDARY

Non-quantified emission sources

N/A

Excluded emission sources

N/A

Data management plan for non-quantified sources

N/A

APPENDIX D: OUTSIDE EMISSION BOUNDARY

Non-attributable emissions have been assessed as not attributable to a product or service (do not carry, make or become the product/service) and are therefore not part of the carbon neutral claim. The exclusions align with the requirements of the Product Category Rules (Product Category Rules - Construction Products - PCR 2019:14 VERSION 1.2.5).

The following activities have been excluded:

- Use stages of the product (module B1 to B7) - inability to predict how the material will be used following its installation (different application scenarios for each product) and deemed immaterial.
- Personel – aligning with PCR requirements
- Infrastructure & capital goods – aligning with PCR requirements
- Production equipment not directly consumed in the process – aligning with PCR requirements

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