



EcoBricks x ADB

2 February 2023

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The Problem



The Magic Number

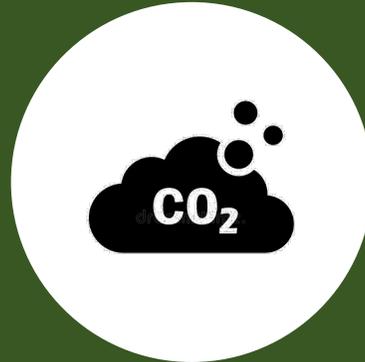


ZERO WASTE | CARBON

The Built Environment



Waste Generation



Carbon Footprint



Natural Resource
Consumption



Unprecedented
Growth

**A Big Part
of the
Problem...**

Tackling a Complex Global Problem

More Than Just Plastic...



Plastic Waste Crisis



- **8.3Bn tonnes** of plastic waste produced between 1950-2015
- **70%** of that plastic was used **just once**
- **1%** of that has been recycled and is **still in use today**
- **80%** of **ocean** plastic waste comes from **Asia**

Growing Populations



- There will be **9Bn people** on the planet by 2050 – **5.2Bn** in Asia
- The fastest growth is in **developing countries**, where **plastic is a necessity**, not a choice



Sand – A Hidden Crisis



- **10Bn tonnes** of sand are used for concrete every year
- Sand makes up **85%** of all mined materials, by weight
- It's a **diminishing resource** that takes **centuries** for nature to replenish
- Shipped across the globe with huge carbon footprint and maritime pollution

Massive Urbanisation



- By 2050, **6.1Bn** people will live in **urban areas** and 'mega-cities'
- This will create an extraordinary amount of **demand for concrete**

The Solution

A dark green diagonal shape is located at the bottom of the slide, starting from the bottom-left corner and extending towards the top-right corner.

EcoBricks – The Solution



Sustainable Concrete

Made with waste materials that outperforms conventional concrete



Unique Plastic Solution

Recycle plastics that no one else can; diverting them from landfills



Carbon Reductions

ISO 14040 Life Cycle Assessment validation



100% Circular Solution

Waste from the built environment into high-value materials for future construction



Saves Natural Resources

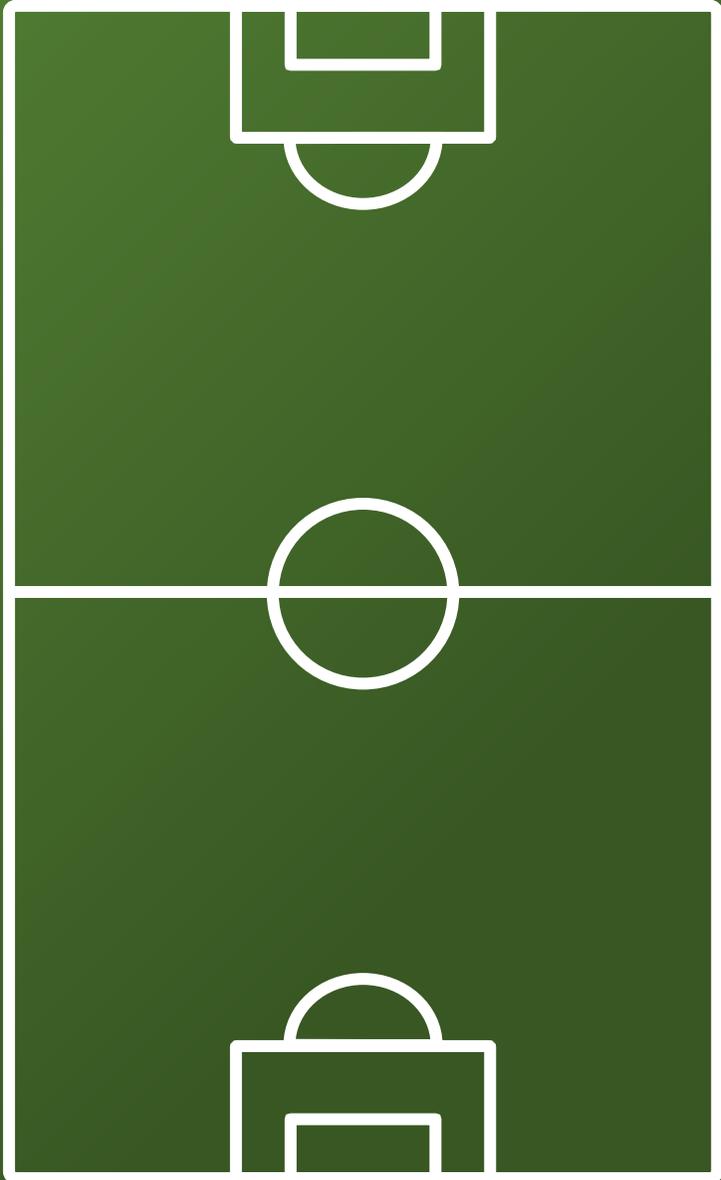
Natural aggregates replaced with local waste plastic & construction waste



100% Clean & Zero Waste

No heating or chemical processing. All waste can be recycled into new bricks

**Sustainable
concrete** building
materials, made
with **waste**, that
reduce **embodied
carbon**



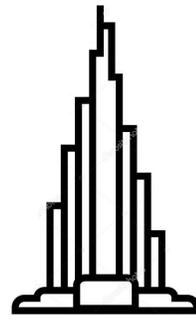
1

Football
Pitch



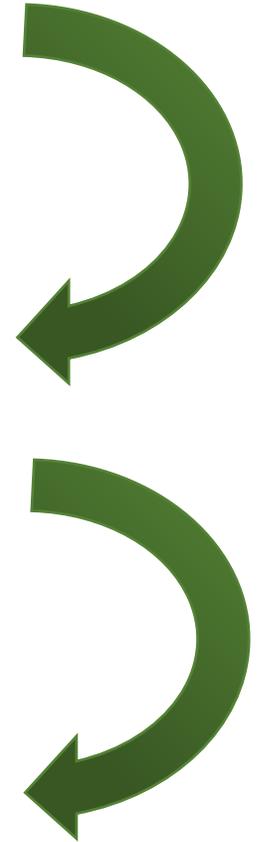
14,300,000

Plastic Bottles



3,450

Burj Khalifas Tall



Our Positive Impact



Lower embodied carbon



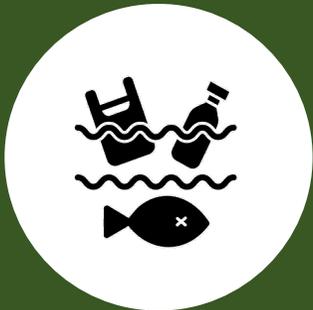
Less waste to landfill & incineration



No harmful emissions/pollutants



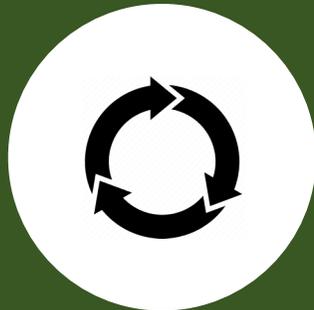
Protecting natural habitats



Reducing plastic in the oceans



Less transport
Less pollution



Circular economy



Helping local communities

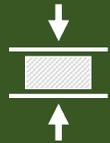
**Building a
Greener Future,
Brick by Brick**

EcoBricks: High-Grade and Low-Carbon



V1.0
HiStrength

V2.0
HiWaste



Compressive
Strength

48MPa

38MPa



CO₂ Saving
%

19%

32%



CO₂ Saving per
1,000 sqm

6.1 tonnes

10.2 tonnes



Recycled Waste
%

25%

65%

The Big Picture



Demand for Sustainability



Investor Activism

Pressure from key financial stakeholders demanding clear actions and measurable outcomes



Reporting Requirements

Regulators & Government bodies requiring more detailed ESG reporting (e.g. SEC, HKEX, ISSB, TNFD)



Industry Accreditations

Green building standards no longer a 'nice to have' but a market standard (e.g. LEED, Beams)



ESG Targets

Governments & companies across the world committing to zero waste and zero emissions



Financial Incentives

Green finance, EPRS, waste levies and carbon taxes provide major financial incentives



Consumer Activism

Pressure from consumers demanding sustainable products, practices and accountability

The future
is green

The ESG Reporting Challenge

Scope 3 Will Redraw the Reporting Landscape

The Greenhouse Gas Protocol: Scopes 1, 2 & 3

Scope 1



Company facilities



Company vehicles

Scope 2



Purchased electricity, heat and steam

Scope 3

Upstream



Purchased goods & services



Transportation & distribution



Waste disposal



Business travel & commutes

Downstream



Investments



End-of-life of sold products



Use of sold products

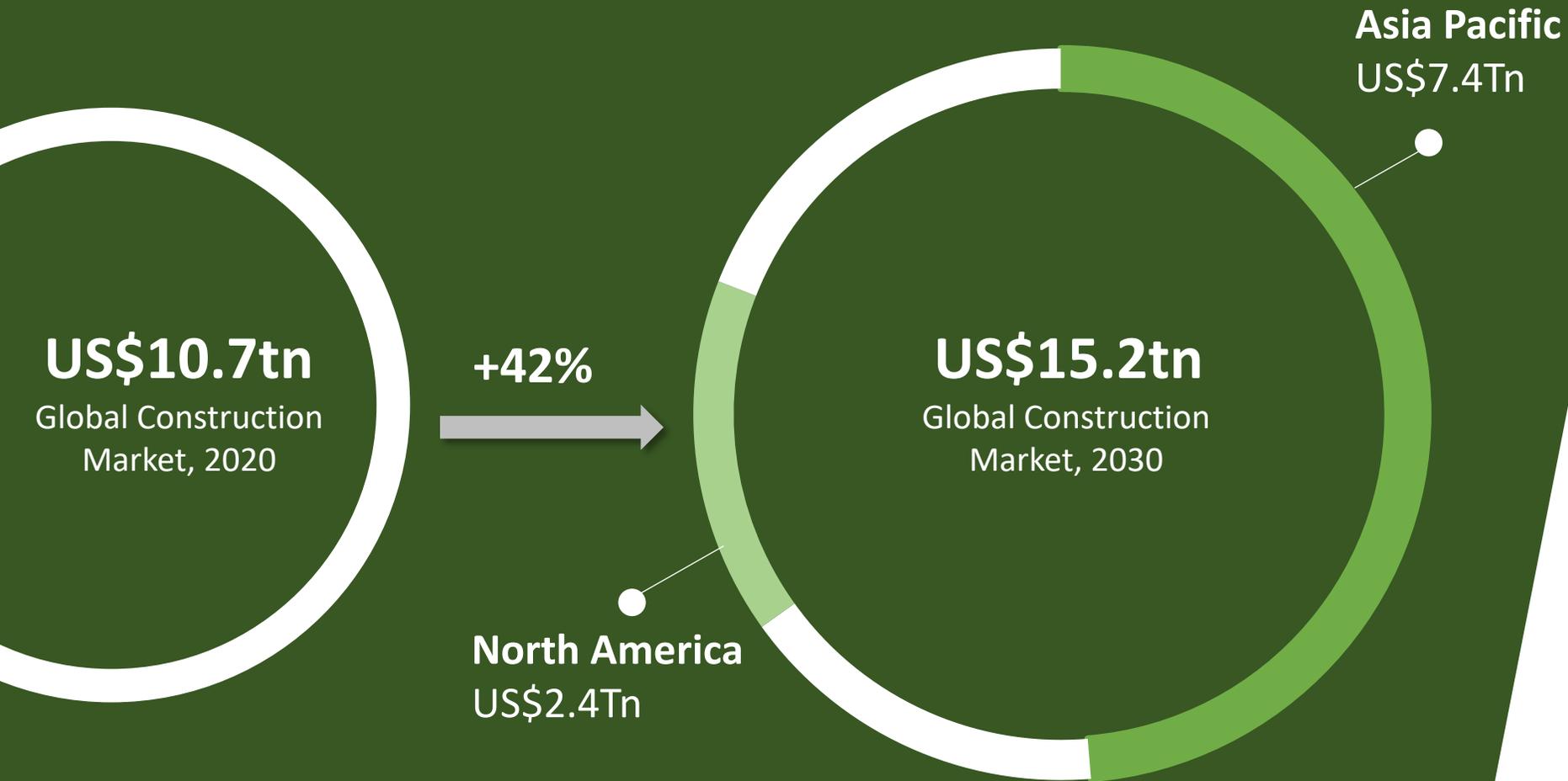


Leased assets

For most companies, Scope 3 emissions represent from **65% to 95%** of a company's broader carbon impact —Carbon Trust

Demand for Construction Materials

APAC >3x Larger than North America



**APAC will
account for 49%
of the global
construction
market**

The Embodied Carbon Challenge



Population growth and rapid urbanisation across the world will require **huge amounts of construction** to support these major demographic trends



Global building stock & global consumption of raw materials expected to **double in size by 2050** – the **largest wave of construction in human history**



Embodied carbon accounts for 11% of all global carbon emissions – more than 4x the global aviation industry



As operational carbon is reduced, **embodied carbon will continue to grow in importance** as a proportion of total emissions



More than **50% of carbon emissions** from construction in 2020-2050 will be due to **embodied carbon**



The World Green Building Council's vision is that by 2030, all new building & development will have **at least 40% less embodied carbon**

Embodied carbon coming under the spotlight, as the scale of its impact becomes clear

Asia's Plastic Waste Crisis



1.3Bn

increase in urban populations by 2050



140Mn

tonnes of plastic waste p.a. by 2030



26Bn

tonnes of plastic to be produced in next ~30yrs



15

of the world's top 20 polluting rivers are in Asia



US\$1.3Bn

cost of ocean plastic to tourism, fishing & shipping industries

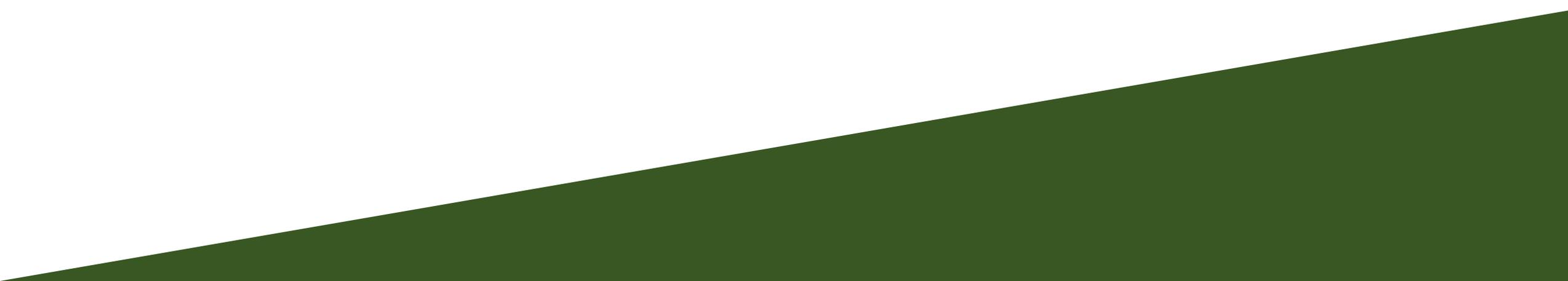


up to **4.6%**

of plastic waste ends up in the ocean i.e. 6.4Mn tonnes p.a. by 2030

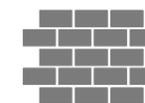


Project References



Gold Coast Piazza

Paving Bricks, Q1 2022



10,719
bricks delivered



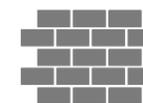
3.3 tonnes
plastic upcycled



339
washing machines

Citywalk Mall

Christmas Decor, Q4 2022



3,200
bricks delivered



1.0 tonnes
plastic upcycled



101
washing machines

Thank you!

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