



Construction Materials Exchange (CMEx)

Rediscovery Centre November 2023

Rachel Loughrey



About the Irish Green Building Council

NGO

Registered charity

Membership



Our aim is to transform the building industry to become the best in class in sustainable building practices

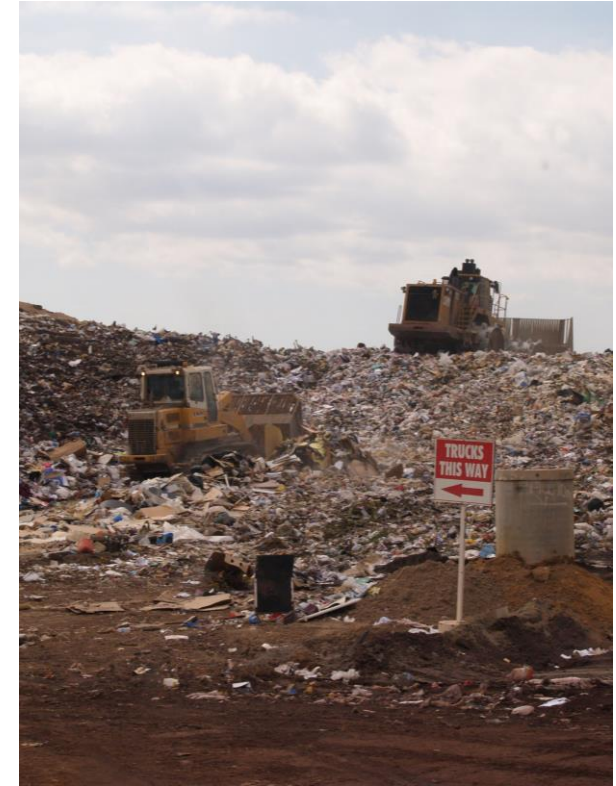
We deliver innovative projects funded by our members, the European Commission, Sustainable Energy Authority Ireland and Environmental Protection Agency Ireland



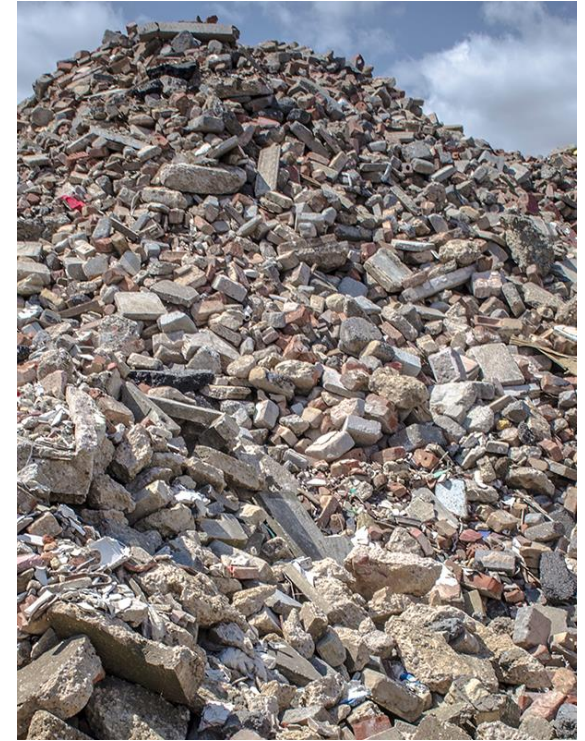
Reuse of excess and reclaimed construction materials:


A key element in the transition to the circular economy in construction

57.5% of our waste in Ireland comes from Construction and Demolition Waste. In Europe this number is one third.

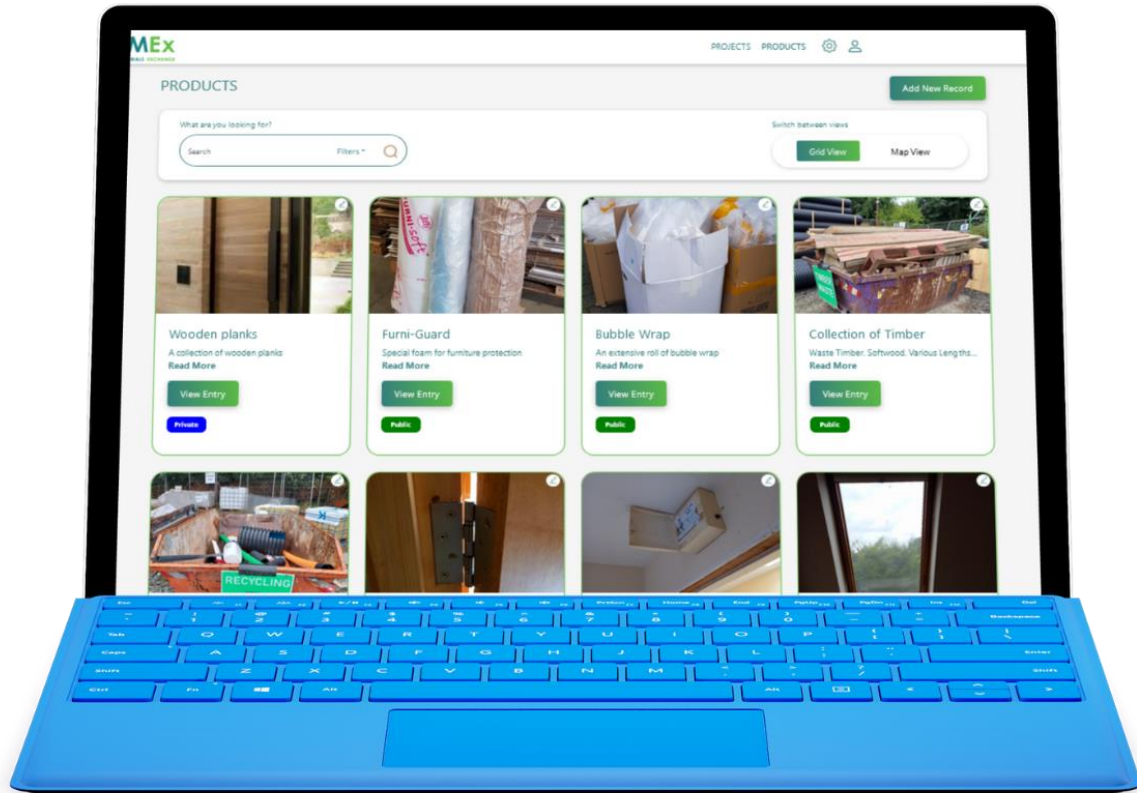


Currently only 1% of all construction materials are reused. Most of these materials are landfilled.





Construction Materials Exchange (CMEx)



- **Construction Materials Exchange (CMEx)** is a user friendly, digital platform that connects organisations with each other so that they can exchange or trade excess or reclaimed construction materials.
- Purpose is to divert construction materials from entering waste streams and supply materials to be reused.
- IGBC collaborated with The **Excess Materials Exchange (EME)** to create this circular infrastructure.

Construction Materials Exchange (CMEx)



Construction Materials Exchange (CMEx) enables construction materials:

- To be reused at their highest value
- Conserves the raw materials and energy that went into making the material

Construction Materials Exchange (CMEx)

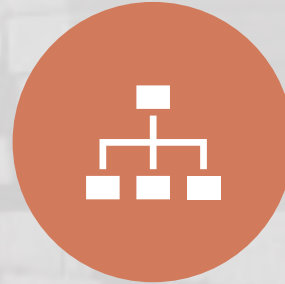


Construction Materials Exchange (CMEx):

- Protects biodiversity (caused by extraction) and mitigates climate change
- Enables the construction industry to take a big step in the transition to a circular economy



CMEEx aim is to demonstrate a feasible, transparent, fair, user-friendly system for the reuse of construction materials that would otherwise enter the waste stream.



The project will identify and track resources through the supply chain; identify the potential value of matching materials; and apply these insights to steer organisational processes towards supporting a circular economy.



It will identify materials from the waste stream with the potential for diversion to reuse and develop mechanisms to enable reuse through an online platform that generates materials passports, facilitates material matches, and utilises blockchain technology to document transactions.



The outcomes of the project will be a construction material marketplace, training workshops, training materials, materials data, match data and training about the creation of material passports.



Main Category

Length:
Slabs are 595 wide; smaller pieces are 105mm wide

Width:
Slabs are between 850-1540mm in length; smaller pieces are between 1360 and 1435mm in length.

Depth:
40mm thick

Composition:
Italian Granite

Quantity:
500 sq m approx. (55 pallets total at approx. 1200mm W x 1600mm L each and weigh up to an estimated 2 tons each)

Ease of disassembly:
Already disassembled.

Toxicity:
Unknown (salvaged material)

Reuse potential:
High

Company Name:
PJ Hegarty & Sons U.K.

Contact Person:
Aisling O'Donoghue

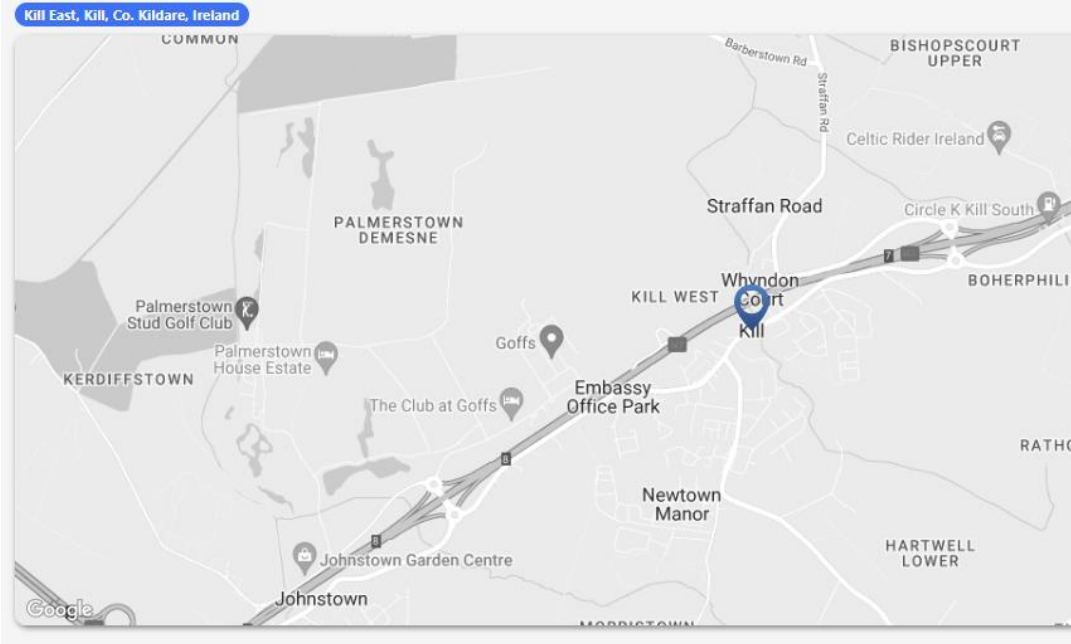
Contact Details:
aisling.odonoghue@pjhegarty.ie

Tracking & Tracing

Timeline Location History

July 19, 2023, 11:09:22 AM	
July 19, 2023, 10:18:36 AM	
July 19, 2023, 10:18:35 AM	
June 7, 2023, 9:52:59 AM	
June 7, 2023, 9:35:49 AM	

Location:



- Location Mapping
- Tracking and Tracing
- Material Data
- Clear Photographs

Potential Matches		
Entry –	Solution –	Description –
Hand selected Italian Granite, carefully packed and palleted	Provence Matériaux Anciens	Company specializing in reclamation of old construction and interior materials
Hand selected Italian Granite, carefully packed and palleted	Holyrood Architectural Salvage Ltd.	Holyrood Architectural Salvage is Edinburgh's only architectural salvage yard with over 8000 sq ft to explore. We specialise in the restoration and retail of antique fireplaces and original cast iron radiators, as well as supplying a huge range of doors, pews, wooden & brass handles, lighting and many other reclaimed items
Hand selected Italian Granite, carefully packed and palleted	Vermeulen & Zonen Sloopwerken Breda B.V.	Demolition company aiming to be circular. They recycle and resell reclaimed materials.
Hand selected Italian Granite, carefully packed and palleted	Martens & Dochters	Old buildingmaterials for reuse
Hand selected Italian Granite, carefully packed and palleted	Trend	Mosaic assembled on sheets composed of tiles made up to 66% of post-industrial recycled glass. It is mainly used for the realization of floors and claddings.
Hand selected Italian Granite, carefully packed and palleted	Vieille France	Old buildingmaterials for reuse

Match Analysis

- The use of AI and blockchain technology, tracking and tracing and location mapping enables materials to find new homes with ease.

Resources Passport

17/03/2020



EME0245

General information

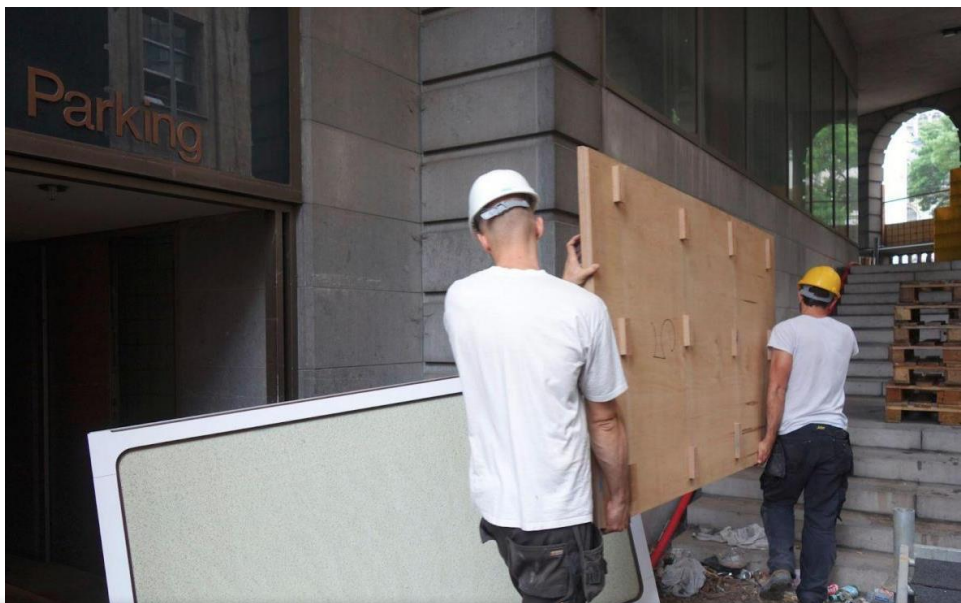
Product name	Weight
Ceiling tile	1.35k g
Year of manufacture	Year of last use
16-03-2020	16-03-2020
Legal owner	SBI-code of owner company
Name of client	12345678
Available quantity (EOL)	Expected lifetime
500 tonnes	12345678



- A Material Passport is an identity document for materials. All materials uploaded on CMEx have a material passport.
- Material Passports contain data that describes the defined characteristics of materials in products, that ultimately give them value for recovery and reuse.
- Material Passports increase or keep the value of materials, products and components over time.



- Reusing this granite on CMEx means that 214 kgCO₂-eq emissions associated with producing a new material are mitigated.
- This approach minimises the carbon footprint and offers financial benefits by lowering the costs of acquiring new materials.
- All Resources Passports can be accompanied by an estimate of the end-of-life value for both re-use and re-cycle options



- An organisation that would like to create a profile and upload materials for exchange from their projects
- An organisation that would like to find materials for their projects
- An individual that would like to find material for their projects

Organisations who joined Construction Materials Exchange (CMEx)

- Choice of internal and external platforms.





Plasterboard to rooflight wells

N/A

[See More](#)



Suspended ceiling & tiles

N/A

[See More](#)



Existing kitchen units

N/A

[See More](#)



All Stairwell Balustrades

N/A

[See More](#)

OPW Internal Marketplace: CMEx Case Study

- As a direct result of the OPW implementing an internal CMEx platform into their organisation, they have written a clause into contract tenders stating that certain materials must be reused and uploaded to their internal CMEx platform.



Sign up to CMEx





Rachel Loughrey
Programme Manger CMEx



Thank you.
Email rachel@igbc.ie to ask queries
or get involved with the Construction
Materials Exchange.