

## Purpose of the Alliance

This collaboration of organisations comes together to drive reductions in embodied carbon in the building and construction industry. We seek to align with the Paris Agreement targets and principles of the circular economy and recognise that the building and construction sector is a complex ecosystem.

We will do this by:



**Demonstrating the demand** and activating the supply of materials which meet the needs of net zero carbon goals.



**Defining a best practice embodied carbon evaluation framework**



**Knowledge sharing** through best practice education, case studies, myth-busting, demonstrations, and supporting innovation in materials and processes as part of a pre-competitive approach.



**Developing common language** for design specifications, procurement guidelines and tendering criteria as standard practice for government agencies and companies.



Helping to manage industry's **climate transition risks**, risks associated with adopting **innovative materials** and the required skills development.



**Supporting materials** such as steel, cement and concrete, and aluminium to **reduce their carbon intensity** and giving **visibility to other low carbon and innovative materials incl Services/Systems** in the built environment.





### WG1 - Demand Signal

Send a clear demand signal for low/no embodied carbon materials.



### WG2 - Evaluation

Document current approaches to embodied carbon benchmarking.



### WG3/4 Knowledge and Language

Enable expansion of knowledge and capabilities in the sector.

## Materials Working Groups - Accelerating the Supply Side



Evaluate the (technical / funding / standards / capacity) barriers facing industry sectors and possible mechanisms and timeframes for Australian-based companies to overcome these to achieve significant emissions reduction per unit of output.



### WG6 - Residential

Identify barriers and opportunities for decarbonisation for residential housing development.

MECLA's direct environment

MECLA Founding Partners and Members,  
MECLA Financial Supporters  
10 Working Groups, > 15 subgroups, plus  
secretariat, PCG and PLG  
>60 WG meetings involving 1,000+  
participants in 2023 alone

MECLA's  
wider Community

Spotlight event participants  
Working Group public presentations  
CPD recipients

MECLA's  
wider network

MECLA representatives are showcasing  
the alliance in Australia and abroad  
Newsletter subscriptions  
LinkedIn followers  
MECLA database (national and  
international)



# MECLA's Footprint

**>250**

participating industry organisations and government agencies

**>450**

industry and government professionals

**>3,500**

industry and government professionals engaged

**>1,100**

CPD Points issued based on attendance of MECLA Spotlight events

## GOAL:

To drive reductions in embodied carbon in the building and construction industry & harness the opportunities for Australian industries prepared for a decarbonised and more resilient economy.

**>2,000 mins**

knowledge sharing through Spotlight events and other presentations delivered and available on our website

**19**

Industry Spotlight events on Innovation & materials

**7**

Publications - including Dictionary of Carbon, Discussion Paper on Upfront Carbon in Built Environment, International Review of Policies and Programs for Low Emissions Building Materials and brochures, snapshots

**>40**

case studies (on website or presented at event)

# Working Group 1

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## Demand Side



*Ann Austin*

*Head of Sustainability, Lendlease*

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[www.menti.com](https://www.menti.com)

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Or use QR code

# Working group one

Chair  
Ann Austin  
Head of Sustainability  
Lendlease Australia

## **Purpose:**

Send a clear, consistent and significantly increased demand signal for low/no embodied carbon materials....

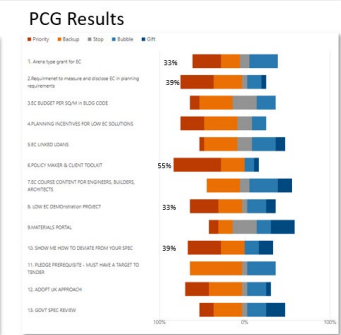
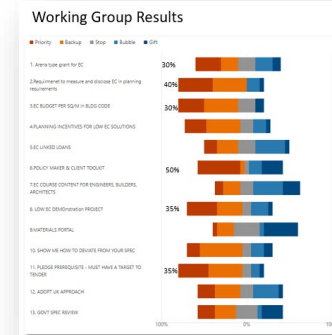
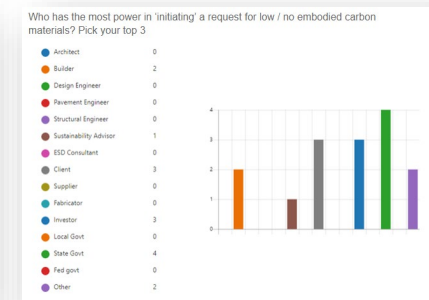
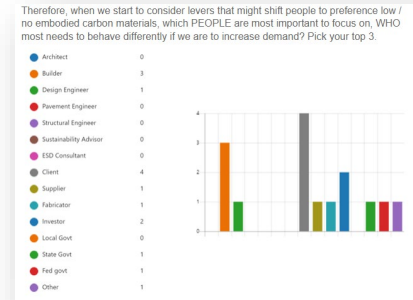
so that suppliers are confident to invest in decarbonisation innovation.

## **We are:**

50+ Govt, consultants, head contractors

# Our Journey so Far

- Agreed our purpose
- Identified four key stakeholders who influence EC demand
  - Policy makers
  - Govt Clients
  - Non Govt Clients
  - Designers
- Brainstormed ideas to influence these stakeholders, prioritised 13 possibles
- Tested our 13 with MECLA PCG and NSW Govt
- Chose 4 initiatives to focus on
- Formed four subgroups
- Set subgroup plans
- Worked on actioning these plans for past 12 months
- Held a recent reflection and are considering 3 new possible subgroups



# Four Active Subgroups 2022/23

## 1. Pledge pre-requisite

Establish a policy to require head contractors to have a public commitment to reducing embodied carbon as a pre-requisite to be able to tender for Govt work

## 2. Requirement to measure and disclose

Include a requirement for new buildings to assess and disclose embodied carbon outcomes as part of the Bldg code or planning requirements

## 3. Show me how to deviate

Request clients map the approval process for contractors or designers to propose alternate, low EC materials that deviate from the client specifications

## 4. Toolkit

Provide an online toolkit to support policy makers and clients understand EC and set policy



# Strategy and Outputs by Subgroup

1. PLEDGE	2. MEASURE & DISCLOSE	3. DEVIATE	4. TOOLKIT
<p><b>Core Strategy</b></p> <ul style="list-style-type: none"> <li>- Head contractors choose pledge based on maturity</li> <li>- Pledge published by head contractor</li> <li>- Applies to whole organisation for scale</li> <li>- Provide warning and support</li> <li>- Take on 'tour' to policy makers</li> </ul>	<p><b>Core Strategy</b></p> <ul style="list-style-type: none"> <li>- Review of current policy / plans re EC disclosure</li> <li>- Workshop with potential regulators/ administrators</li> <li>- Lobby policy makers</li> <li>- Propose a suitable measurement framework</li> <li>- Run trials, including testing the planning approvals aspect.</li> </ul>	<p><b>Core Strategy</b></p> <ul style="list-style-type: none"> <li>- Identify key decision makers</li> <li>- Show examples of deviation and benefits</li> <li>- Test 'deviation' approaches with them</li> <li>- Collaborate on an industry 'way' to deviate</li> </ul>	<p><b>Core Strategy</b></p> <ul style="list-style-type: none"> <li>- Head contractor interviews / survey</li> <li>- Review existing toolkits</li> <li>- Based on engagement, agree key inclusions in toolkit</li> <li>- Source relevant content from other MECLA groups</li> <li>- Test concept (mock up before build)</li> </ul>
<p><b>Core Actions to Date</b></p> <ul style="list-style-type: none"> <li>- Drafted Pledge policy concept paper</li> <li>- Have taken the idea on tour to NSW, Vic, SA, Qld Govts, Fed Govt (Jim Betts), Aust Procurement Council</li> <li>- 2 states considering including in future procurement policy</li> </ul>	<p><b>Core Actions to Date</b></p> <ul style="list-style-type: none"> <li>- Met NSW, Vic Govt to understand measurement and disclosure commitments</li> <li>- Met NABERS re new EC tool</li> <li>- Identified gaps for assets not relevant for NABERS</li> </ul>	<p><b>Core Actions to Date</b></p> <ul style="list-style-type: none"> <li>- Presented case study of JHG deviation example</li> <li>- Selected 'deviation' pilot projects</li> </ul>	<p><b>Core Actions to Date</b></p> <ul style="list-style-type: none"> <li>- 7 head contractor interviews re EC targets</li> <li>- Mapped toolkit content</li> <li>- Coordinated with Wkg Gp3/4 and agreed 'gaps'</li> <li>- Mocked up a website format</li> <li>- To be 'gifted' to Wkg Gp3/4</li> </ul>

# Three new ideas are being explored

1. LOCAL COUNCIL	2. READINESS INDEX	3. PLANNING INCENTIVES
<p><b>Core Idea</b></p> <p>Support local council officers who are investigating the measurement and reduction of embodied carbon in their Council's capital works plan.</p> <p>Councils have unique construction projects (roads, parks, civil infrastructure) which is unique to the majority of the MECLA membership. A council sub-group could support members with these specific needs, offer them a forum to collaborate on common challenges and to learn from each other.</p>	<p><b>Core Idea</b></p> <p>Prepare and share a readiness index / dashboard with evidence of the industry readiness to use low / no EC material. To support confidence for the pledge and other demand policies.</p> <p>Work with a credible researcher to create survey that is issued to suppliers / MECLA / head contractors (all tiers) every six months that tests 'readiness' eg:</p> <ul style="list-style-type: none"><li>• # projects in progress with an EC reduction target</li><li>• % low EC products in use / in innovation</li></ul>	<p><b>Core Idea</b></p> <p>Encourage planners to adopt mechanisms to incentivise organisations seeking planning approval to drive lower embodied carbon outcomes, such as:</p> <ul style="list-style-type: none"><li>• Financial penalty or benefit for low embodied carbon outcomes</li><li>• additional area that can be developed per asset based on low EC outcomes</li></ul>

# **Working Group 2**

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## **Evaluation**



***Caroline Noller***

***Founder and CEO of the Footprint Company***



***Lucy Marsland***

***Environmental Designer at Atelier Ten***

# Working group 2 | Evaluation

Caroline Noller

CEO and Founder at The Footprint Company

Lucy Marsland

Environmental Designer at Atelier Ten

Purpose | Contributing to the advancement of embodied carbon measurement and benchmarking for materials, building and infrastructure.

Strategy | Analyse the opportunities and challenges in using different methodologies for benchmarking embodied carbon, creating assets industry can use to better understand the current state of play.

WG2 participants represent the building and construction industry from suppliers and measurement service providers, through engineering and design consultants to industry body leadership.

WG2a | Materials/ Products

[14 members]

WG2b | Buildings

[10 members]

WG2c | Civil and Linear Infrastructure

[15 members]

-  Standards
-  Quantification
-  Comparable units
-  Benchmarking
-  Tools and Data

Dec 2021

Dec 2022

Dec 2023

**UPFRONT CARBON IN THE BUILT ENVIRONMENT**

A discussion paper on upfront carbon standards, measurement methods, benchmarking and resources for construction materials, buildings and infrastructure prepared by MECLA.

October 2022









- 1. Quantification: Identify methods and their application to each and design stage
- 2. Comparable units: Consider functional or decarbon levels at the same lower levels of emissions
- 3. Benchmarking: Identify different approaches to benchmarking using averages at all levels
- 4. Tools and Data: Compile list of embodied carbon calculation tools and data sources
- 5. Survey: Seek feedback by an industry survey






Measuring Embodied Carbon

**Spotlight on Measuring Embodied Carbon**

Focus		Barriers	Next Steps
 <b>Standards</b>	Identifying and mapping standards related to embodied carbon including ISO and other standards at different scales: product, building and infrastructure.	<ul style="list-style-type: none"> <li>• Complexity of standards identification</li> <li>• More standards associated with broader environmental impacts than specific to carbon alone.</li> <li>• Emerging industry standards are targeted to specifically manage and assure carbon measurement.</li> </ul>	For each scale (sub-group) to integrate guidance on relevant standards for carbon measurement – both ISO and other industry standards.
 <b>Quantification</b>	There are different quantification measures to measure embodied carbon. Design stages and scale need to match quantification method selected.	<ul style="list-style-type: none"> <li>• Access to reliable and accessible data including navigating pay-walls.</li> <li>• Completeness of data in line with quantity surveyor standards (ICMS/RICS)</li> </ul>	For each scale (sub-group) to integrate guidance around quantification methods based on design stage and acknowledging cost for new / small businesses in MEC space.
 <b>Comparable units</b>	Identify some units of comparison useful to practitioners and decision makers in measuring embodied carbon at different scales.	<ul style="list-style-type: none"> <li>• Differing priorities for stakeholders and practitioners</li> <li>• Variation at different scales</li> <li>• Consistency in existing data for comparison</li> </ul>	For civil and linear infrastructure, defining scope and additional sample comparable units. For all, evaluate consistency in comparable units in industry guidance.
 <b>Benchmarking</b>	Exploring benchmarking methods that aim to compare a 'reference' performance for different projects at scales.	<ul style="list-style-type: none"> <li>• Agreement on how to defined 'suitable' or 'low carbon' benchmarks in alignment with industry commitments and goals</li> <li>• Data consistency and transparency in calculation</li> </ul>	Co-ordinate with MECLA working groups to provide and connect practitioners to benchmarking evaluation or guidance. Review and guide international alignment.
 <b>Tools and Data</b>	Compiling a list of sample LCI data sources and calculators.	<ul style="list-style-type: none"> <li>• Paywall access for small businesses entering the MEC space</li> <li>• Transparency of calculation method</li> </ul>	Explore opportunities for case studies and engagement with industry stakeholders including ISC, NABERS and GBCA.

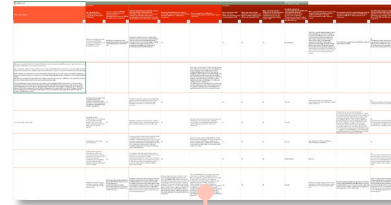
-  Standards
-  Quantification
-  Comparable units
-  Benchmarking
-  Tools and Data

-  Materials/ Products
-  Buildings
-  Civil and Linear Infrastructure

Dec 2021



Dec 2022

Dec 2033



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October 2022


**Spotlight on Measuring Embodied Carbon**

# **Working Group 3/4**

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## **Knowledge & Language**



***Jeremy Mansfield***

***National Sustainability Manager at Lendlease***



***Hayley Jarick***

***CEO of the Supply Chain Sustainability School***



# Working group 3&4 Knowledge

Chair & Co-Chair:  
Hayley Jarick  
Jeremy Mansfield

## Purpose:

- Guide the industry towards a common embodied carbon language
- Develop resources to build the construction industry's embodied carbon acumen

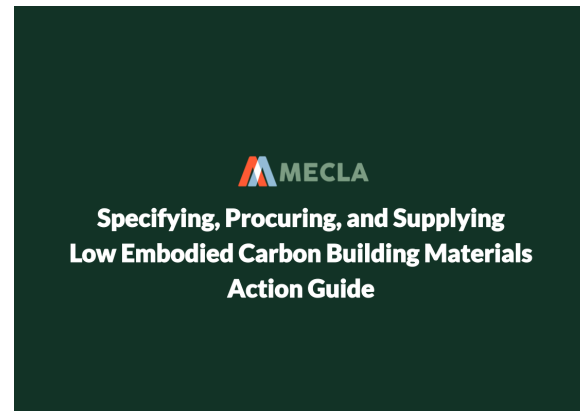
## Strategy:

- Members: combined old WG 3 and WG4, construction, government, sustainability consultants, lawyers, education institutes.
- Projects:
  - Case Studies
  - Dictionary
  - Common Legal Language
  - Guide on Specifying, Procuring and Supplying Low-Embodied Carbon Building Materials
  - Spotlight Event late 2023: "Embodied Carbon Hypothetical - Where Does Your Risk Lie?"

## HELP NEEDED

Share with us your strategies, actions, resources, tools and case studies; so that we can consolidate them into the guidance project

# MECLA Guide on Specifying, Procuring and Supplying Low-Embodied Carbon Building Materials



**Extract from The MECLA Dictionary of Carbon**

**Embodied Carbon**  
 GHG Emissions associated with materials and construction processes throughout the whole life cycle of a building or infrastructure, from the sum of upfront embodied carbon, in-use embodied carbon, and end-of-life embodied carbon, measured by CO<sub>2</sub>e.  
 (World Green Building Council, 2019)

**Embodied Upfront Carbon**  
 The emissions caused in the materials production and construction phases (Modules A1-5 in Figure 1) of the lifecycle before the building or infrastructure begins to be used.  
 (World Green Building Council, 2019)

**Product Embodied Carbon**  
 The emissions caused in the materials production cradle to gate (A1-3 in Figure 1) of the lifecycle before the product is transported or installed.

**The scope of the Specifying, Procuring, and Supplying Low Embodied Carbon Building Materials Action Guide is reducing product embodied carbon (A1-3).**

Figure 1: BSEN 15979:2011 Sustainability of construction works. Assessment of environmental performance of buildings. Calculation method - European Standard (EN) (amended to include whole life cycle carbon).

Specifying, Procuring, and Supplying Low Embodied Carbon Building Materials Action Guide | v1 | MECLA WG/3/4

Project Phase	★ Leader ○ Support	Owner	Designer	Constructor	Material supplier	Service supplier	Facility Manager	Action Guidance
Plan		○	★	○	○	○	○	Action item linked to action page
Design			○	○	○	○	○	Action item linked to action page
			○	○	○	○	○	Action item linked to action page
			○	○	○	○	○	Action item linked to action page
Construct			○	○	○	○	○	Action item linked to action page
			○	○	○	○	○	Action item linked to action page
			○	○	○	○	○	Action item linked to action page
Operate			○	○	○	○		

MECLA - Page 4 -

Specifying, Procuring, and Supplying Low Embodied Carbon Building Materials Action Guide | v1 | MECLA WG/3/4

Action	Project Phase	★ Leader > Owner/Constructor/etc. ○ Support > Owner/Constructor/etc.
	Plan > Pre-Design	
		<b>BEST PRACTICE</b>
STRATEGIES	Insert text here	Insert text here
STEPS	1. Insert text here	1. Insert text here
RESOURCES	Insert text here	Insert text here

MECLA - Page 10 -

# **Working Group 5a**

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## **Knowledge & Language**



***Hayley Jarick***

***CEO of the Supply Chain Sustainability School***



***Joe Karten***

***Head of Sustainability and Social Impact at Built***

# Working group 5a Steel

Chair & Co-Chair:  
Hayley Jarick  
Joe Karten

## Purpose:

- Accelerating emissions reductions in steel through knowledge sharing

## Strategy:

- Members: steel manufacturers, academics, constructors and government
- Meetings: Monthly 30 min
- Tasks:
  - Development of 'steel snapshots' (simple language explainer documents)
  - Steelworks tours and events

# Steel Snapshot Pipeline

Not started	Drafting	Reviewing	Updating	Complete	PCG
<ul style="list-style-type: none"> <li>1 SteelZero</li> <li>8 worldsteel StepUp</li> <li>9 worldsteel LCI</li> <li>10 worldsteel indicators</li> <li>11 worldsteel low carbon</li> <li>14 Electricity</li> <li>17 project summary</li> </ul>	<ul style="list-style-type: none"> <li>6 Reuse</li> <li>15 Scrap</li> <li>19 sliding scale steel GHG targets based on % scrap</li> </ul>			<ul style="list-style-type: none"> <li>5 Stewardship</li> <li>3 Steel Sustainability Australia</li> <li>4 Hydrogen</li> <li>12 biomass bio char</li> <li>13 carbon capture</li> <li>18 LEC</li> <li>Steel Product Explainer</li> </ul>	<ul style="list-style-type: none"> <li>2 ResponsibleSteel</li> <li>16 Where do steel making CO2 emissions come from?</li> </ul>

# Working Group 5b

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## Concrete & Cement



***Ali Kashani***  
***Senior Lecturer at UNSW***



***Evan Smith***  
***National Sustainability Lead at Holcim***

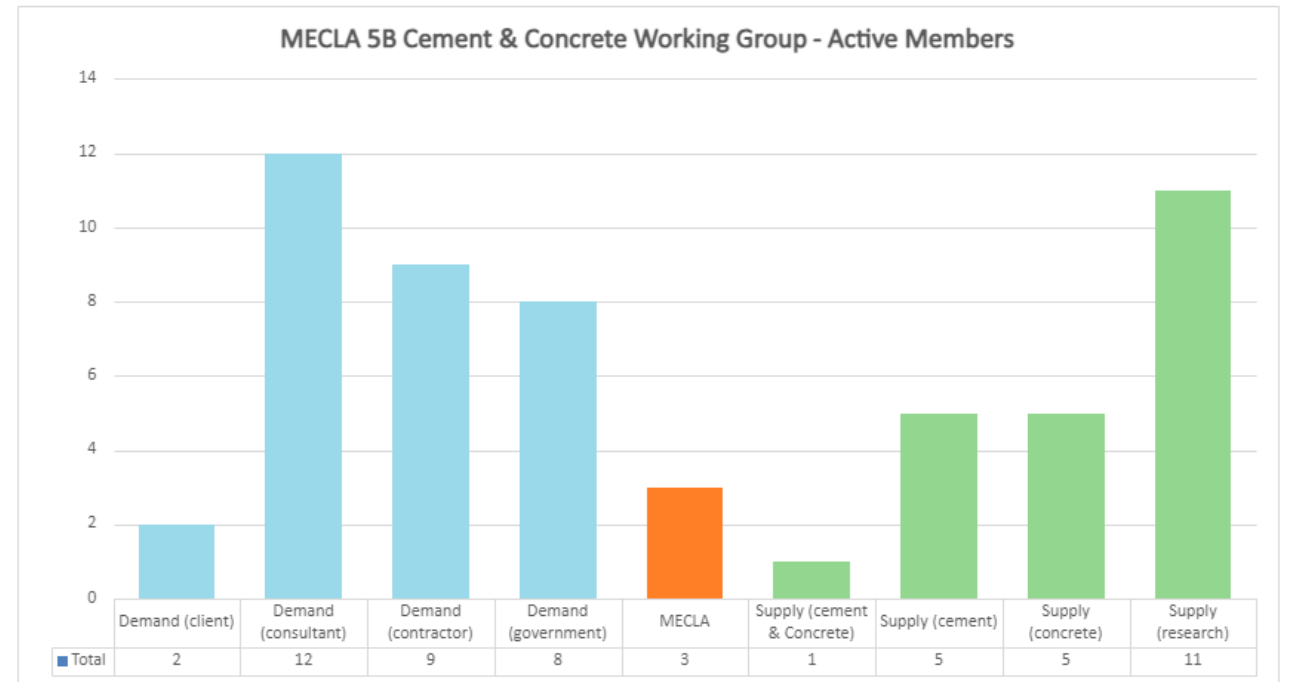
# Working group 5B

## Purpose:

- Concrete & Cement working group
- Approximately 50 active members across the supply chain.
- Approximately 50:50 split between demand side and supply side
- Active participation is required to maintain involvement
- Concrete supply chain is complex and multifaceted
- The road map to zero requires levers involvement both the supply and demand side of the supply chain

## Co-Chairs:

- Ali Kashani UNSW - Senior Lecturer (Assistant Professor)
- Evan Smith Holcim - National Sustainably Lead



# Working group 5B

**Objectives 1** - Facilitating collaboration and knowledge transfer for accelerating the recognized pathways for decarbonisation of the sector

- A. Monthly knowledge sharing presentation. Equal balance of supply verse demand presentations
- B. Monthly facilitated round robin group discussion on key topics to help increase the use of low carbon concrete.

Meeting date	Supply or demand side	Presentation themes / speaker
February	Demand	John Beurle - Sustainability Advisor at Development Victoria
March 2023	Supply	Title: "The Future of Cement Manufacturing" - Olivia – Cement Australia
April 2023	Demand	A constructor’s perspective on the challenges of concrete decarbonization and the need for early engagement”. Andrew Durant - Supply Chain Sustainability Strategy Lead - LOR
May 2023	Supply	“Australian Biochar 2030 Roadmap” Don Coyne - CEO - ANZ Biochar Industry Group (ANZBIG)
June 2023	Demand	Christine Mueller (CPB)

## **1<sup>st</sup> 2023 Topic - What is low carbon concrete?**

- How does your company or clients define or specify low or lower carbon concrete?
- How is it measured?
- What does your company or clients use as a reference case?
- Is your reduction target specified or included in tender documents
- - Any resources relating to the measurement of embodied carbon for concrete and construction materials to share



# Working group 5B

Objectives 2 - Advocating on the behalf of the sector to mitigate the recognized problems in the decarbonisation pathways

A. Working group develops and shares information to help with recognized problems in the decarbonization pathways

- 5B working group define what is low carbon concrete, how it is measures and against what?
  - Input from group survey and discussion
  - Formulation of a draft for review by group
  - Add to MECLA 5B working group webpage

A. Performance Based Specification – CCAA & Smartcrete will be leading

Appendix - Library of additional resources relating to the measurement of embodied carbon for cc							
#	Document/ Event Title	URL	Region	Author / Publisher	Type	Category	Date Published
1	Slattery Upfront Embodied Carbon Benchmarks	<a href="#">Link</a>	Australia	Slattery	Resource	Guidance	01-May-2022
2	Upfront Carbon Emissions calculation guide – interim	<a href="#">Link</a>	Australia	GBCA	Resource	Benchmark	06-December-2022
3	AusLCI Carbon Emissions Factors	<a href="#">Link</a>	Australia	AusLCI	Resource	Benchmark	10-May-2022
4	Embodied Carbon & Embodied Energy in Australia's Buildings	<a href="#">Link</a>	Australia	GBCA	Resource	Benchmark	20-August-2021
5	Australian buildings and infrastructure: Opportunities for cutting embodied carbon	<a href="#">Link</a>	Australia	CEFC	Resource	Guidance	13-July-1905
6	LETI Embodied Carbon Primer: Supplementary guidance to the Climate Emergency Design Guide	<a href="#">Link</a>	International	LETI	Resource	Guidance	01-January-2020
7	First Movers Coalition backs deal for low-carbon concrete and cement at COP27	<a href="#">Link</a>	International	WEforum	Industry News	Informative	09-November-2022
8	American - Buy Clean Executive Order	<a href="#">Link</a>	International	CarbonCure	Industry News	Informative	13-July-2022
9	Dictionary of Embodied Carbon on the MECLA resources page:	<a href="#">link</a>	Australia				
10	Standards Australia is calling for interested Associations / Bodies to nominate to an International Participation on ISO/TC 59/SC 17 Sustainability in buildings and civil engineering works.		International				
11	Netherlands with their 2018 Concrete Agreement? Built hosted a Circular Economy event some months ago which Prof Jacqueline Cramer presented at. It might help focus how we can best use the use the input of this broad group. <a href="https://www.betonakkoord.nl/wp-content/uploads/sites/43/193234/iabs-e-keynote-concrete-agreement.pdf">https://www.betonakkoord.nl/wp-content/uploads/sites/43/193234/iabs-e-keynote-concrete-agreement.pdf</a>	<a href="#">link</a>	International				
12	"Low Carbon Concrete Routemap - Setting the agenda for a path to net zero" by the The Green Construction Board -	<a href="#">link</a>	International				

# Working Group 5c

## Aluminium



*Jeff Morgan*  
*Principal at Hassell*

Go to  
[www.menti.com](https://www.menti.com)

Enter the code

4862 0028



Or use QR code

# Working group 5c

Chair & Co-Chair:  
Jeff Morgan  
Principal, Hassell

## Purpose:

- Understand the challenges and opportunities for a low carbon aluminium future in the Australian built environment

## Strategy:

- Fluctuating members 15-20 with broad representation from suppliers, manufacturers, contractors, consultants
- Multi-phased, looped approach – Gathering, Distilling, Sharing...and Sharing!
- Raise awareness and knowledge, dispel myths, empower action

# Working group 5c

## Objectives:

- Educate the built environment ecosystem
- Bust myths on price, quality, and availability

## Progress:

- Progress across the value chain - Capral, Clients, Manufacturers, Miners / Smelters
- Two biggest barriers remain - time and availability
- Broadening our understanding in an outreach phase connecting with external groups – Aus Energy Transition Initiative, Coreo, Deloitte and AAC.

## Outputs:

- Low Carbon AL Brochure, 2x Spotlight Events, 3x Deep Dives
- Upcoming - '1 Pager' and a Specification Guide

# **Working Group 5d**

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## **Other Materials**



***Cathy Inglis, National Director HIA  
and General Manager Brickworks***



***Dr. Josephine Vaughan  
Lecturer in Construction Management at WSU***

# Working group 5D

Chair & Co-Chair:  
Cathy Inglis  
Dr. Josephine Vaughan

## Purpose:

- A network of construction materials suppliers, university academics, builders, architects and government

## Strategy:

- Broad group of members representing a wide range of products
- Circularity - utilisation of waste materials
- WG has 40 plus members
- Subcommittees:
  - Asphalt, glass & windows, masonry, bricks, roof tiles & pipes

# Working group 5D

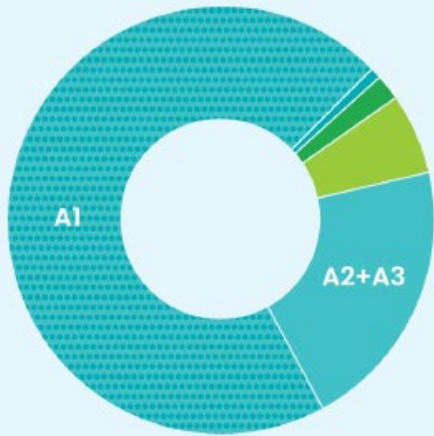
## Key Objective:

Develop template for roadmaps for key areas that impact on embodied carbon & embodied carbon “landmarks” for each material:

- **Measures** - to understand embodied carbon influence in the landmark areas
- **Benchmarking** – using the measures, so manufacturers can identify where they sit in the scale and compare to the existing targets or minimum requirements and a project team could ask a manufacturer with understanding about what they seek
- **Barriers** - market barriers across different market segments;
- **Strategies** - concise information-rich detail on each landmark, with existing known or potential ways to get closer to zero carbon or beyond!
- **Circular Economy and Carbon** - how the product can fit into the circular economy, both as a finished product and through its constituent materials, and the resulting embodied carbon impacts
- **Beyond Carbon** - any ways that decisions around the material might impact on other environmental criteria e.g. pollution (of air, land or water), water consumption, biodiversity, local communities.

# Working group 5D

## Lifecycle stages of pipes



- 91% A1-A3 Product Stage  
Raw Material Supply,  
Transport & Manufacturing  
*Note: A1 – Raw Material Supply  
is the most emission-intensive phase*
- 6% Disposal & recycle
- 2% Use & maintenance
- 1% Installation



Product  
stage



Disposal &  
recycle



Use &  
maintenance



Installation

## AfPA Sustainability Tools



AfPA  
asphalt  
calculator



afpa.asn.au



# Working Group 5e

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## Building Services



*Jeff Robinson, Global Sustainable Design Expertise Leader at Aurecon*



*Mark Vender, Publishing and Strategic Communications at AIRAH*

# Working group WG5e

Chair & Co-Chair:  
Jeff Robinson  
Mark Vender

## Purpose:

- Drive the development and uptake of low-embodied carbon building services.

## Strategy:

- Raise awareness of the need to reduce embodied carbon in building services across the full range of stakeholders.
- Improve measurement and benchmarking of embodied carbon in building services.
- Demonstrate demand for low-embodied carbon building services.
- WG5e members include consultants, developers, contractors, manufacturers, government, equipment suppliers and industry bodies.
- The working group has about 40 members.

# Working group WG5e

## Objectives:

- To represent the building services industry in conversations about embodied carbon, within MECLA and with external stakeholders.
- Organise events to raise awareness about embodied carbon in building services.

## Progress:

- Input provided to NABERS embodied carbon framework.
- Awareness, education and engagement through sessions with manufacturers and industry events. We are working towards a Spotlight event.
- Sharing examples of how embodied carbon can be measured in building services.
- The group has developed a standard slide deck that we are enhancing for target audiences: architects, manufacturers, government procurement departments.

# **Working Group 5f**

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## **Engineered Timber**



***Stephen Simpson***

***Lecturer in Construction Management at WSU***



***Hamid Valipour***

***Professor at UNSW***

# Working Group 5f – Engineered Timber

## Purpose:

- To improve the adoption of 'engineered timber' in low to mid-rise buildings

## Strategy:

- A two-pronged strategic approach is the focus:
  - Identify Key barriers and/or perceptions limiting more widespread use of timber
  - Gather data via available industry bodies / leaders in assessing embodied carbon metrics
- Our key objectives are to focus on 2 / 3 items, research, report on and seek advocacy with aim to influence tangible outcomes in standards & industry services within a 12 mth period
- Sub Groups for WG5f:
  - Insurance and Regulatory | Supply chain | Financial & Logistics

Chair & Co-Chair:

Stephen Simpson - Mirvac

Hamid Valipour - UNSW

# Working Group 5f

- Membership is represented by diverse groups – suppliers, manufacturers, designers, engineers, builders, developers, advocacy groups and related associations, with a rolling attendance of 15-22 monthly from a cohort of 65 members listed

## Objectives:

- Identify barriers, needs and educate team and industry on how to approach product
- Timeline for these objectives is 9-12mths staggered

## Progress:

- WG5f in early stages of strategy – data research, presentations & case studies - learning the complexities on detail
- Barriers to unlock - insurance, fire & cost – rely on industry data
- Engagement with contractors & timber associations (costs & insurance), standards
- **Outputs:**
- Upcoming Myth Busting session planned in next few months – guideline ultimately

# Working Group 6

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## Residential



***Karla Fox-Reynolds***  
***Sustainable Design Leader at Hassell***



***Julia Halioua***  
***Senior Sustainability Advisor at Frasers***

# Working group 6 (Residential)

Chair & Co-Chair:  
Karla Fox-Reynolds  
Julia Halioua

## Purpose:

- To stimulate demand, raise awareness and build capacity to drive the use of low embodied carbon solutions in the residential building sector

## Rationale:

- The residential sector was responsible for more than 50% of the construction industry's embodied carbon in 2022\*
- The residential construction sector is not yet addressing embodied carbon at scale. Single residential dwellings are relatively small, but cumulatively consume a significant volume of materials
- The working group will address single residential dwellings as well as apartment buildings noting that as part of the whole industry, they are at a varied stage of maturity due to the involvement of different players

\*based on construction value (\$)



# Working group 6 (Residential)

## Objectives:

- Apply the MECLA collaborative model to support early movers, share information and demonstrate what decarbonisation options are possible
- Identify and disseminate quick wins
- Raise sector awareness and capability ahead of regulatory measures to address embodied carbon

## Strategy:

- Engage with the other existing working groups to leverage their specific material knowledge and impact so far
- Refine the key objectives of the working group and agree the intent of the sub-working groups amongst members

The working group is well represented by experienced industry professionals – we would especially welcome new expertise from the finance system, social and affordable housing providers as well volume builders