

# ASK THE EXPERTS:

simplifying cost and carbon measurement and reporting in construction

March 2025

**BCIS®**



# QUESTIONS

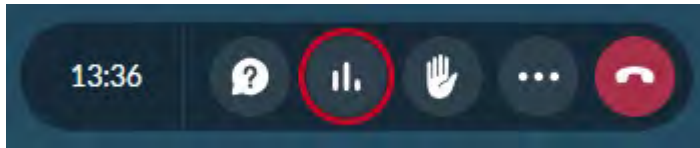
Ask a question:



- ▶ We'll answer as many as we can during the Q&A session

# POLLS

Answer the polls:



- ▶ Poll results won't be published during the webinar. We want to give you as much time to answer as possible!
- ▶ We'll send the poll results to you with the webinar recording

# THE PANEL



**Richard MacLean**

CMO BCIS



**James Fiske**

CEO BCIS and Chair of  
BECD Steering Group



**Karl Horton**

CDO BCIS



**Neil Barnett**

Supply Chain Data  
Manager BCIS

# AGENDA

- ▶ Setting the scene - poll results from last webinar
- ▶ Your questions
  - ▶ Benefits of combining cost and carbon
  - ▶ Practical first steps
  - ▶ Accessing quality data
  - ▶ Applying life cycle costing principles to carbon
  - ▶ BCIS Life Cycle Evaluator functionality (live demo)
  - ▶ The future of carbon reporting at BCIS



# BCIS LIFE CYCLE EVALUATOR

RICS MEMBER OFFER - open to RICS members, BCIS subscribers and all delegates registered for this webinar

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[RICS.org/Benefits plus/  
BCIS Life Cycle Evaluator](https://RICS.org/Benefits_plus/BCIS_Life_Cycle_Evaluator)



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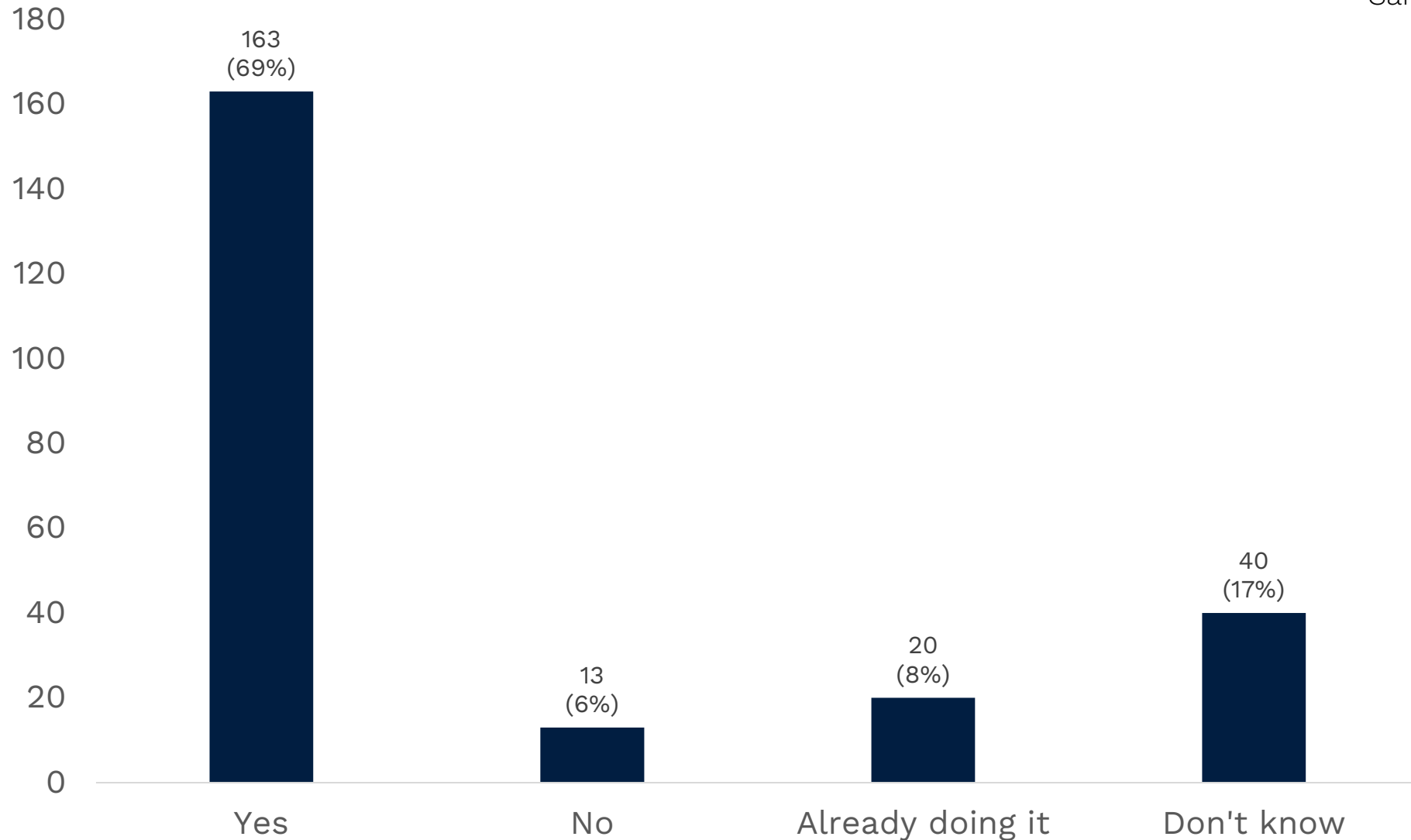
*Open to all delegates registered for this webinar*

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# POLL RESULTS

## WOULD OFFERING WHOLE LIFE CARBON ASSESSMENTS ENHANCE YOUR JOB ROLE OR SERVICE YOU OFFER?

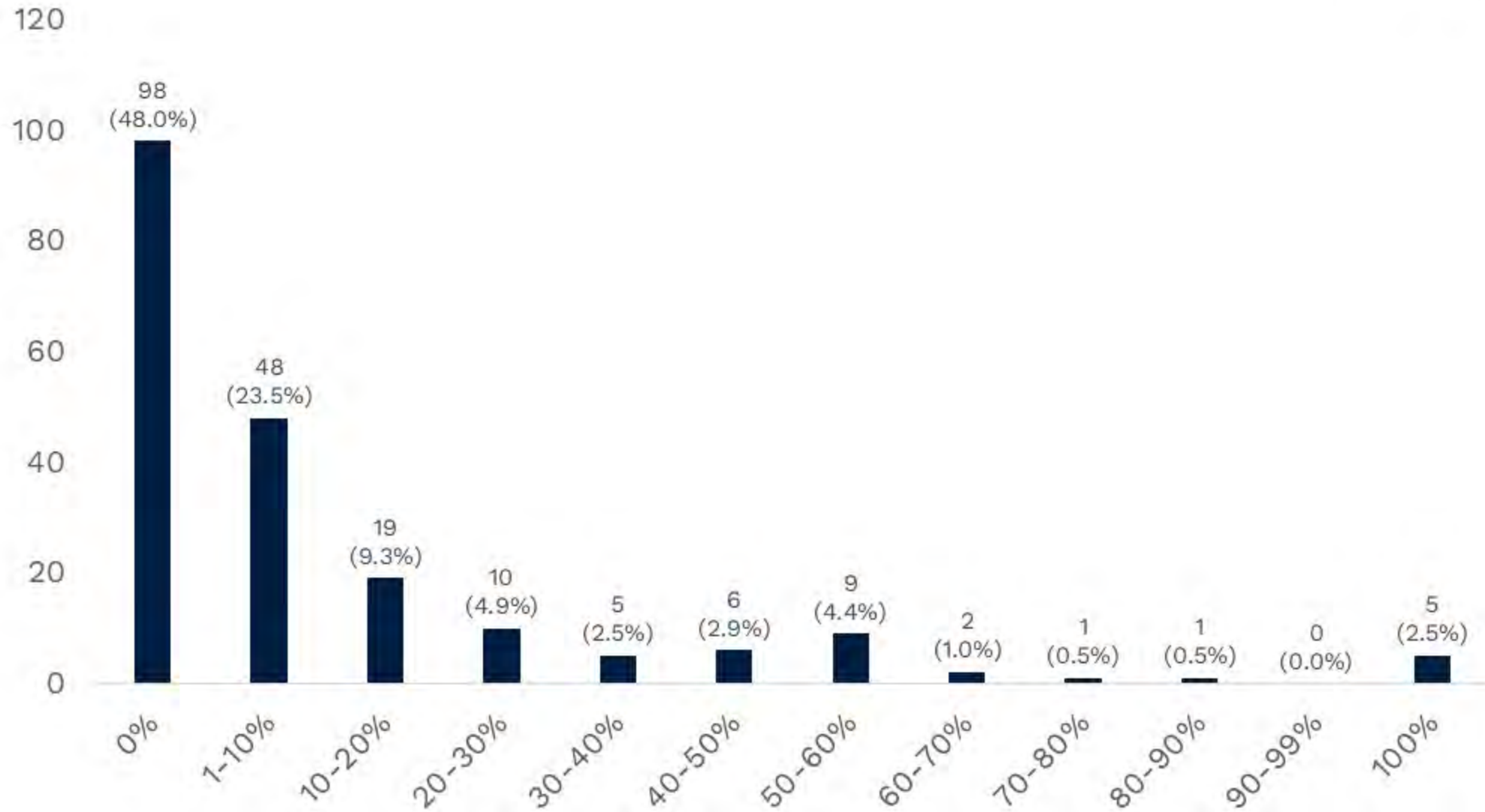
Sample size: 236





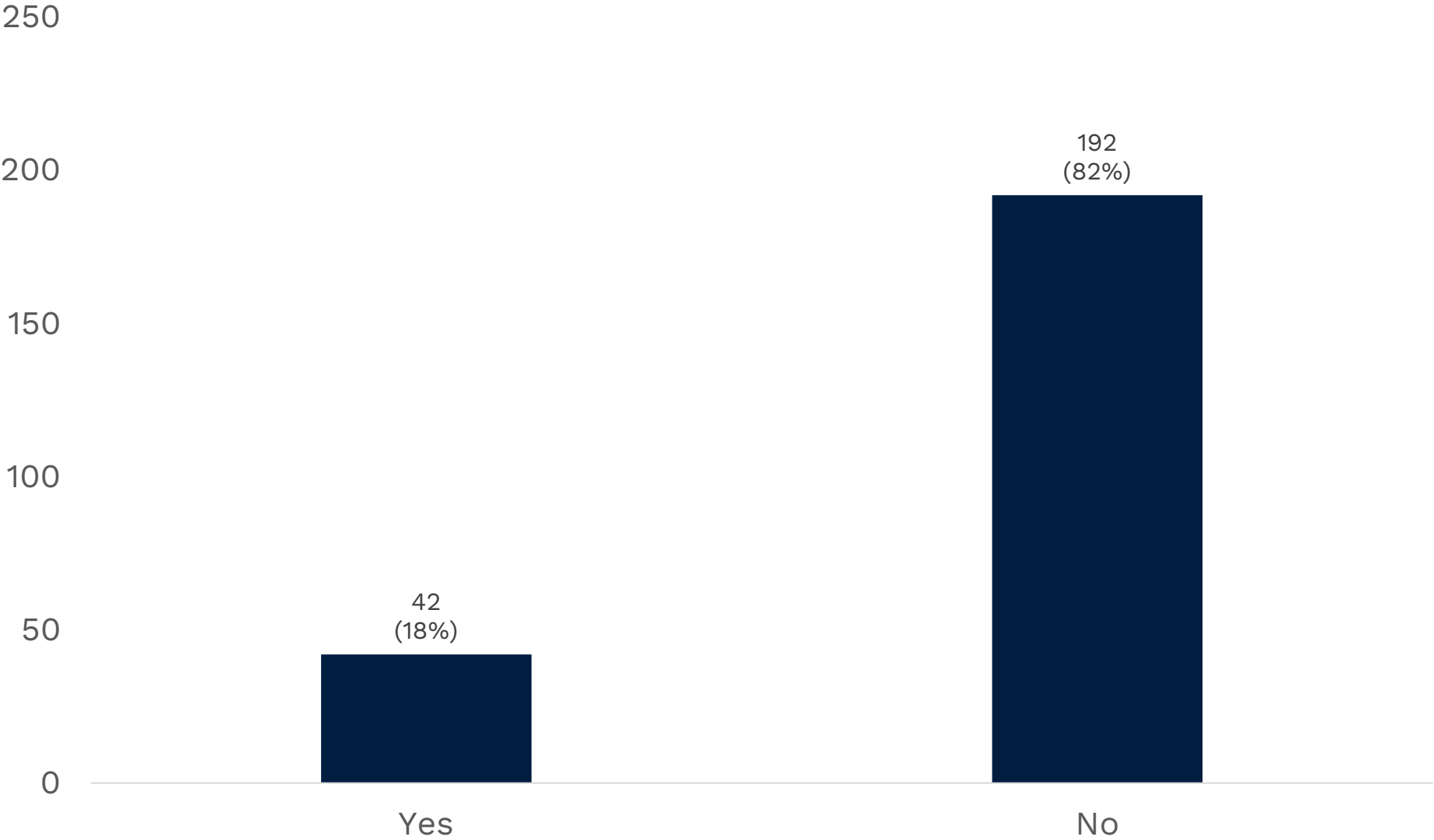
# WHAT PERCENTAGE OF CLIENTS YOU HAVE WORKED WITH IN THE PAST 12 MONTHS HAVE ASKED FOR WHOLE LIFE CARBON ASSESSMENTS ON PROJECTS?

Sample size: 204



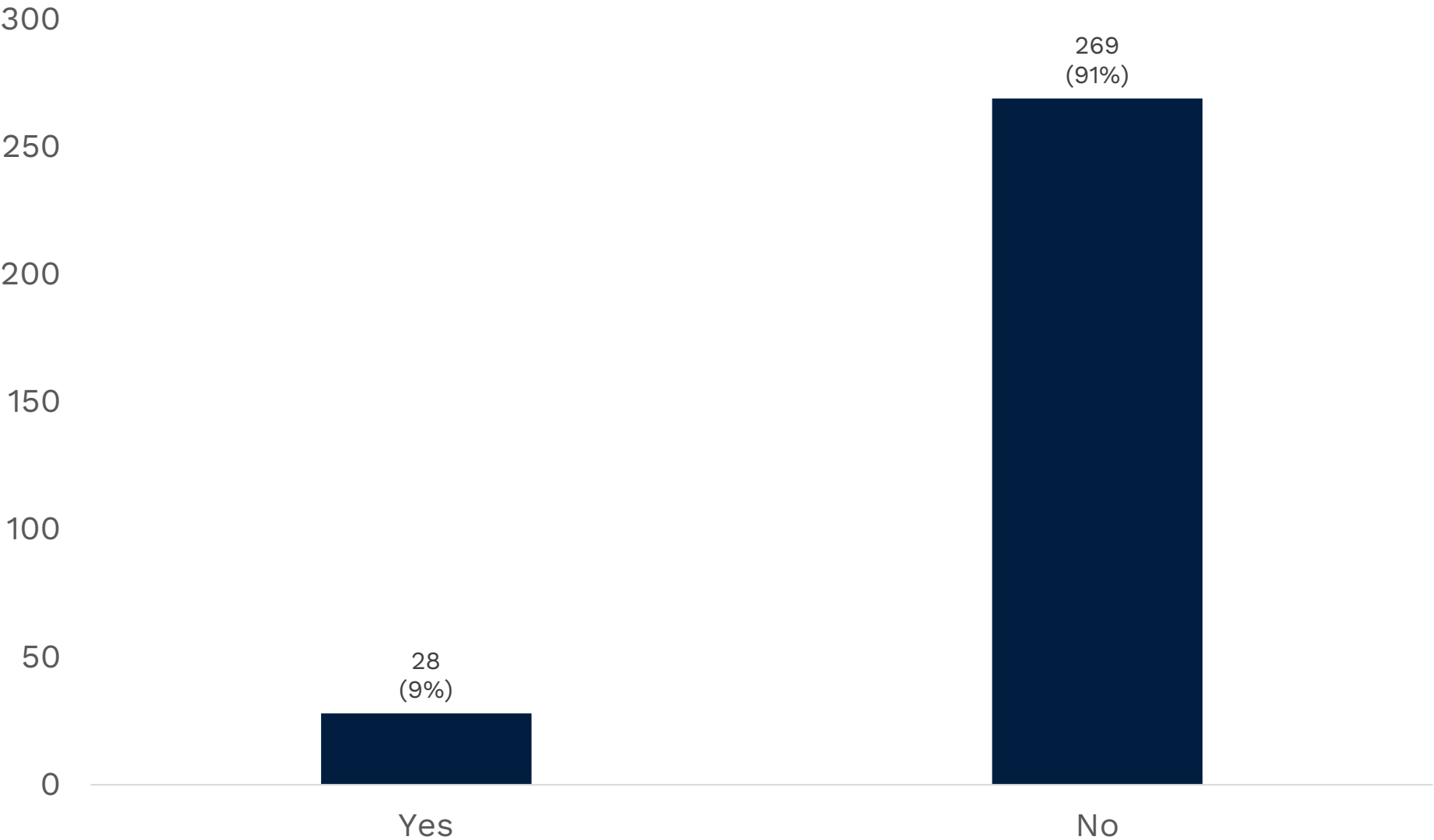
DO YOU THINK THE INDUSTRY WOULD BE READY IF WHOLE LIFE CARBON ASSESSMENTS WERE MANDATED THROUGH BUILDING REGULATIONS FROM NEXT YEAR?

Sample size: 234

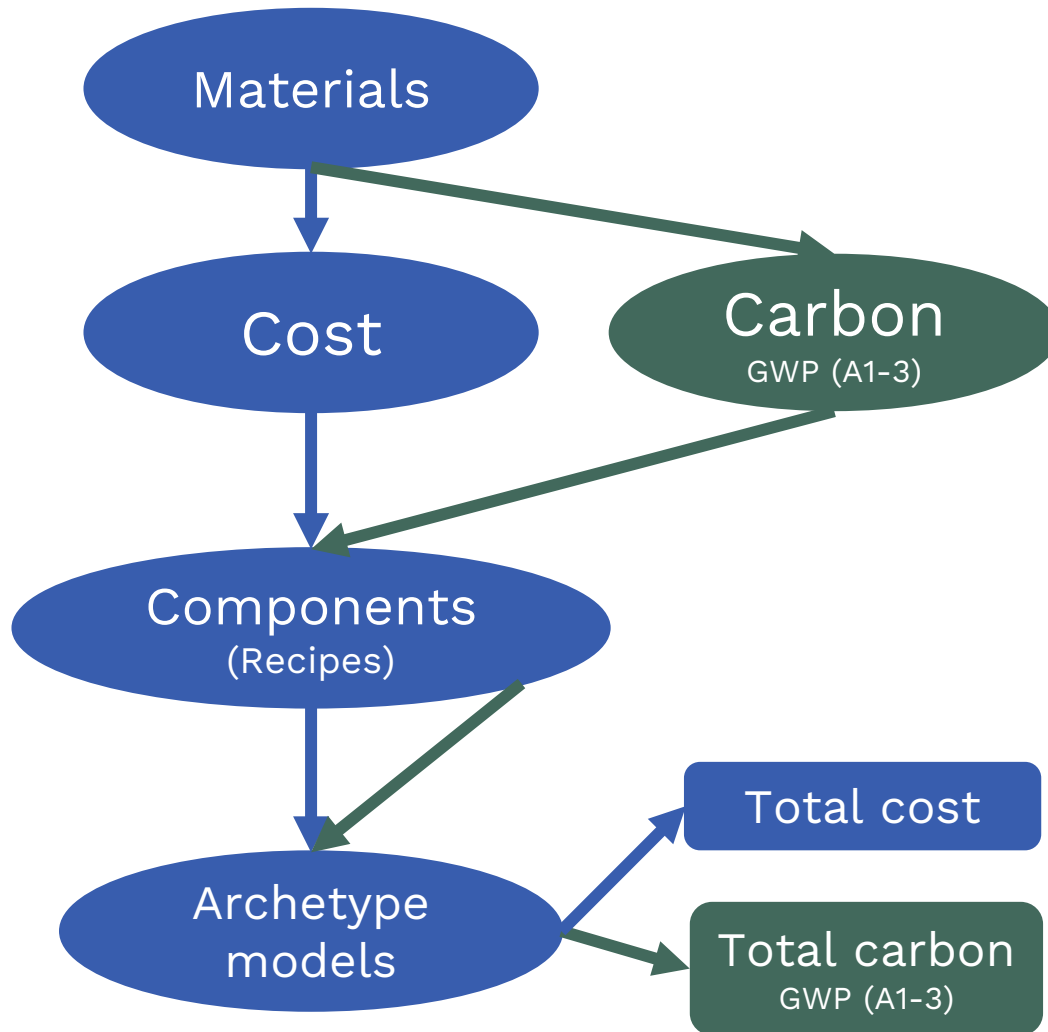


# HAVE YOU CARRIED OUT WHOLE LIFE CARBON ASSESSMENTS?

Sample size: 297



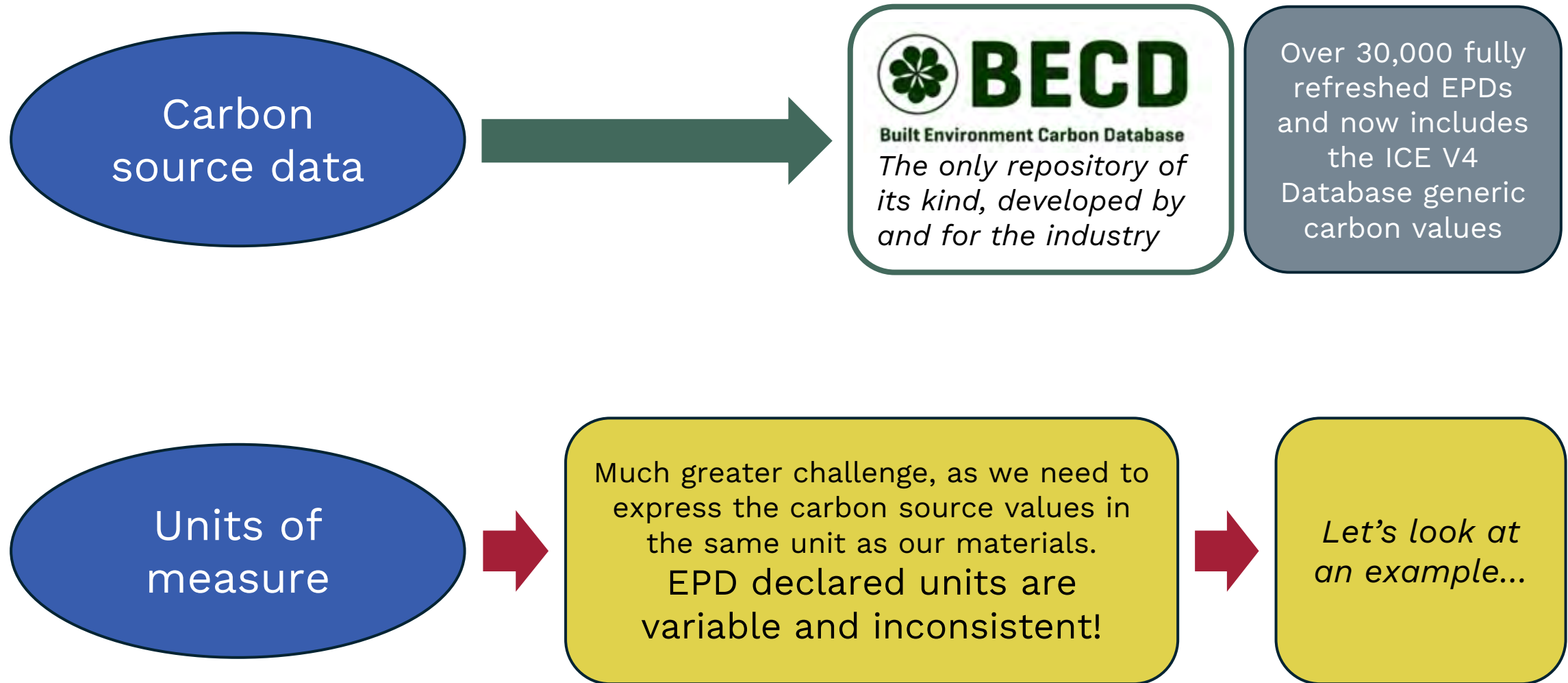
# PANEL DISCUSSION



*So, what's the carbon challenge?*



## TWO MAIN CHALLENGES



# EPD - DECLARED UNIT EXAMPLE:


### ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804

Owner of the Declaration	British Precast Concrete Federation
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-BPC-20170091-0001-EN
Issue date	11.07.2017
Valid to	10.07.2022

UK Manufactured DN600 Concrete Pipe with Class B Bedding  
Produced by members of the Concrete Pipeline Systems Association (CPSA)  
a product group of the British Precast Concrete Federation

[www.bpc-epd.com](http://www.bpc-epd.com) / <https://epd-online.com>



## LCA: Calculation rules

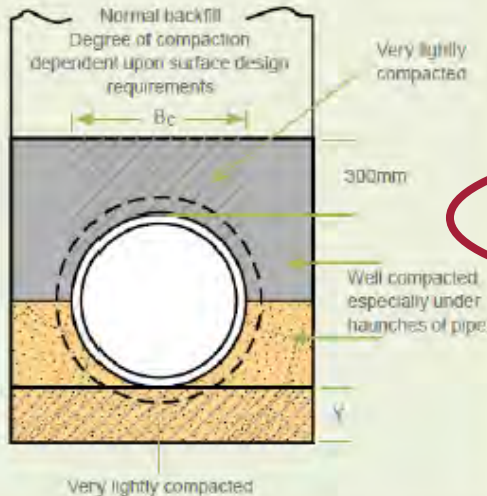
### Declared Unit

The declared unit is 1m length of DN600 precast concrete pipe with class B bedding. The data used in the LCA calculations is an average based on total annual production figures from 3 members of the CPSA. DN600 pipes are manufactured in 2.5m lengths as standard. Information on density and other physical characteristics are shown in the table below.

**Class B Bedding** – 180° Granular Bedding with normal backfill.

### Class B

180° Granular bedding. Bedding factor = 1.9



Granular material



Selected backfill material

**Bedding volume** - According to the CPSA online calculator (<https://www.concretepipes.co.uk/calculators/material-cost>) DN600 pipe Class B requires 0.49 cubic metres of imported granular material (per metre run).

**Bedding mass** - Assuming bulk density is 2.2 tonnes per cubic metre, the mass of granular bedding is  $2.2 \times 0.49 = 1078\text{kg}$  (per metre run)

**Pipe mass** - Mass of pipe is taken from manufacturer information (average of the participating companies), the average mass of 1m of DN600 pipe is 488kg.

### Declared unit

Name	Value	Unit
Density (excluding bedding)	2350	kg/m <sup>3</sup>
Declared unit	1.566	t

### System boundary

Type of EPD: Cradle to Gate with all options declared. The modules considered in the Life Cycle Assessment are modules A1-C4 inclusive.

### Cut-off criteria

/EN 15804/ requires that where there are data gaps or insufficient input data for a unit process the cut-off criteria shall be 1% of renewable and non-renewable

EPD - DECLARED UNIT EXAMPLE:

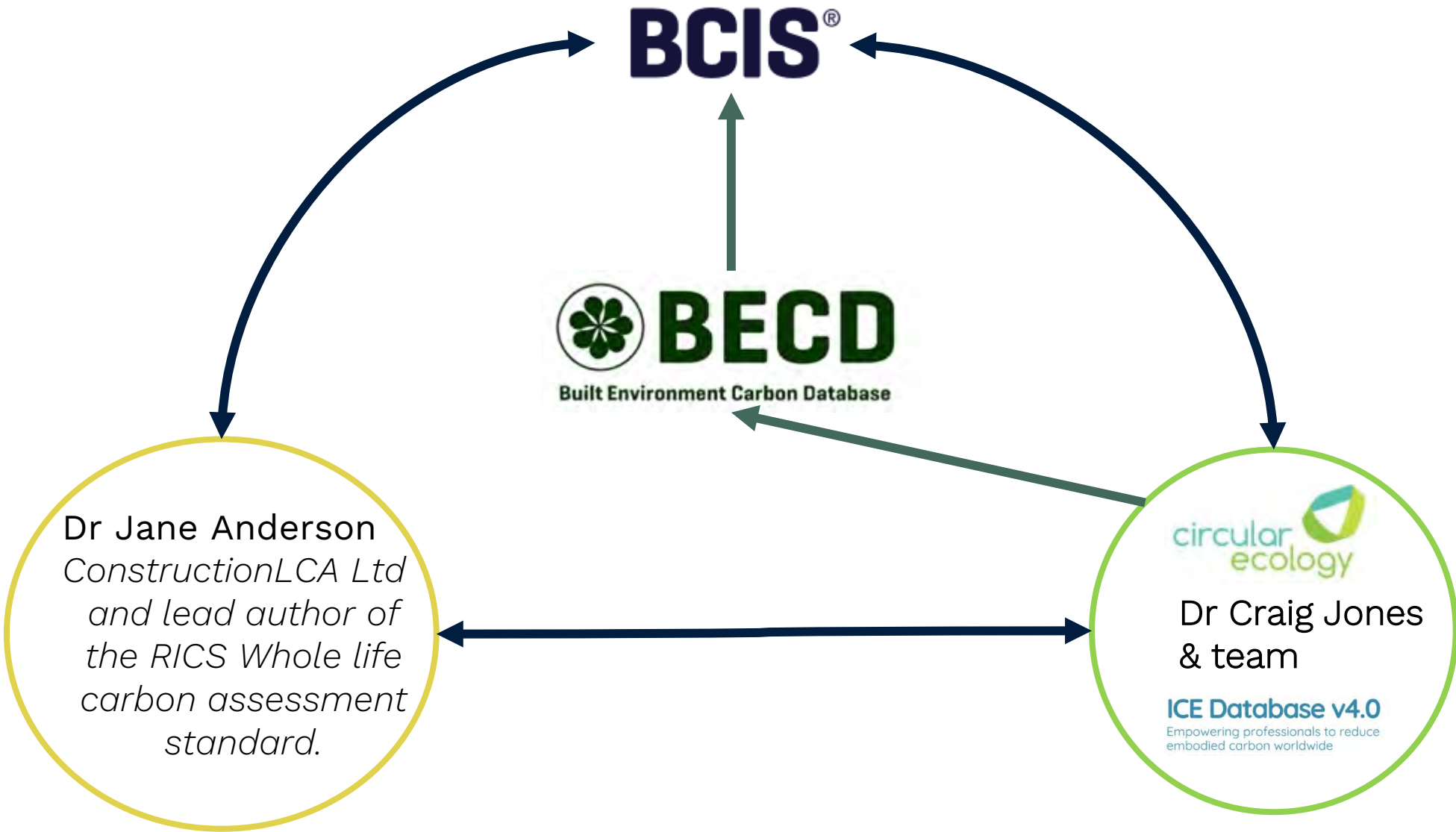
RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: 1m DN600 Concrete Pipe (Class B Bedding)															
Parameter	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
GWP	[kg CO <sub>2</sub> -Eq.]	7.03E+1	9.67E+0	1.64E-2	-2.70E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	4.48E+1
ODP	[kg CFC11-Eq.]	5.15E-7	6.56E-12	3.60E-13	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.42E-7
AP	[kg SO <sub>2</sub> -Eq.]	1.23E-1	4.04E-2	6.01E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	7.76E-2
EP	[kg (PO <sub>4</sub> ) <sup>3</sup> -Eq.]	1.18E-2	9.89E-3	1.21E-5	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.52E-3
POCP	[kg ethene-Eq.]	3.75E-2	-1.51E-2	7.50E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	2.03E-2
ADPE	[kg Sb-Eq.]	1.33E-4	1.82E-7	1.23E-8	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.87E-5
ADPF	[MJ]	397.50	133.10	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	231.40
Caption	GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources														



BCIS not only maps materials to the representative carbon source in BECD but also converts the carbon value to the same material unit



*Carbon values can now be processed through our existing calculations for activities, components and archetype models in the same way as costs.*





# QUESTIONS



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**This webinar is now over. Thank you for joining!**