

Carbon Counting Calculators

Environmental Infrastructure
CEEQUAL, PAS 2080, ICE V3 & GBC
Infrastructure Bespoke Module

Carbon Counting Calculators

Environmental Property & Construction

BREEAM, Ska, ICE V3 & GBC V1 & V2

ACAN campaign to add BR AD Z

This Presentation on GBE:

- Find this file on GBE website at:
 - <https://GreenBuildingEncyclopaedia.uk/?P=39145>
- Intrapenny Intrapound Sustainable Infrastructure
 - <https://GreenBuildingEncyclopaedia.uk/?P=>
- Go there for:
 - the latest update
 - versions presented to different audiences
 - the whole presentation all of the hidden slides
 - other file formats:
 - Handout, Show, PDF, PPTX
 - Links to other related GBE CPD and related GBE content

This Presentation on GBE:

- Find this file on GBE website at:
 - <https://GreenBuildingEncyclopaedia.uk/?P=39145>
- Sustainable Property & Construction
 - <https://GreenBuildingEncyclopaedia.uk/?P=>
- Go there for:
 - the latest update
 - versions presented to different audiences
 - the whole presentation all of the hidden slides
 - other file formats:
 - Handout, Show, PDF, PPTX
 - Links to other related GBE CPD and related GBE content

Sustainable Infrastructure/Rail

- Global Imperative & Carbon Accounting
- UK Government Commitment to Net Zero Carbon
- Implementation by:
 - Development Control?
 - National Design Standards?
- Belgium's approach to 'fine not tax' development and substitution

Green or Violet Materials

- Infrastructure/Rail is energy, carbon and labour intensive to create
- Imported materials:
 - Cement, Concrete, steel, metals
 - Biogenic carbon: timber bio-based materials
 - Fossil carbon: plastics, petro-chemicals
- Heavy haulage of concrete, aggregates, soil, steel or waste

Material choices

- In particular cement replacement
- The risks of product or material substitution on the carbon count
- The importance of robust specification to control substitution,
- getting it right first time

Energy and Carbon Data

- Embodied Energy
- Embodied Carbon
 - ICE Inventory of Carbon and Energy V3
 - one dataset based on LCA sources
 - Infrastructure materials/products datasets
 - haulage datasets
- Sequestered Carbon
 - Biogenic carbon calculations

Life Cycle Analysis

- LCA databases and rapidly growing data sets
- Impact of road and rail transport in LCA
- Role of consolidation centres

Carbon accounting in Infrastructure development.

- CEEQUAL Infrastructure EAM
 - Environmental Assessment Method
- National Rail Specifications:
 - misunderstandings and lost opportunities

Services Carbon Accounting

- BSRIA carbon accounting for services:
- PAS 2080 & Guidance Notes
- Rules of engagement
- Metals and Plastics
- Section simplicity towards cable complexity
- Components & Accessories
- Circuit boards: generic values/mm2

Project Carbon Accounting

- CAD & BIM Apps: ready to interrogate the models and datasets?
- Or getting ahead of the game and doing it for yourself in Excel
- Green Building Calculator
 - Excel for now, BIM later V20
- Infrastructure datasets in V2
- Road and rail elemental Assemblies in V3 & V 4
- Future Infrastructure Module V10 (sooner?)

Feedback

- These files are created by generalists with a big dollop of green flavour
- These files are updated from time to time
- We are not experts so from time to time these file may get out of date or may be wrong.
- If you feel that we have got it wrong please let us know so we can put it right

© GBE 2021

- Brian Murphy ONC HNC Construction, BSc Dip Architecture (Hons+Dist)
 - Technician and Architect by Training
 - Specification Writer by Choice
 - Environmentalist by Actions
 - Writer and Educator as a Calling
 - Number Cruncher by Necessity
- Greening up my act since 1999
- Founded National Green Specification 2001
- Launched www.greenspec.co.uk 2003
- Created: GBE at <https://GreenBuildingEncyclopaedia.uk> 2012 – 2021
- Created: GBL Learning: <https://GBELearning.com> 2020 - 2021
- Created: GBC at <https://GreenBuildingCalculator.uk> 2011 - 2021
- E BrianSpecMan@icloud.com
- Twitter: <https://twitter.com/brianspecman>
- Twitter: <https://twitter.com/gbeGreenBuild>
- Twitter: <https://twitter.com/GBELearning>
- LinkedIn: [BrianSpecMan](#)
- Facebook: [BrianSpecMan](http://www.facebook.com/brianspecman) <http://www.facebook.com/brianspecman>
- GoogleMyBusiness: [National Green Specification](#)
- Pinterest: [Brian Murphy • GBE Green Building Encyclopaedia](#)
- Pinterest: <https://www.pinterest.co.uk/bmurphy1390/>
- [National Green Specification](#)