

GBC GBE GRC
 https://GreenBuildingCalculator.uk https://GreenBuildingEtcyclopedia.uk https://GreenBuildingCalculator.uk

Brownfield Greenfield Greenbelt & Self-build

© 2023 Brian Murphy at Grand Designs Live
 NEC Sunday 8th October 2023 14:00

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This Presentation on GBE:

- Find this file on GBE websites at:
- <https://GreenBuildingEtcyclopedia.uk/?p=41025>
- 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 related: GBE & GBC CPD & other content

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Greenbelt

- Urban outer limits:
- Greenbelt to limit gradual expansion
- Transport routes and nodes
- Agricultural land and villages
- Scattered brownfield sites
- Urban lungs?

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Urban lungs?

- Potentially cleaning the atmosphere?
- Urban heat Island effect may draw replacement air inwards as urban plume rises in summer
- But urban canyons will push air above roof level
- Pollution likely to stay at street level in winter

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Greenfield Site

- Previously undeveloped sites
- Flood plain that should not be developed
 - despite government letter to planners and
 - Despite engineers who think they can
- Agricultural land that may be full of chemistry
 - May need Bioremediation to clean up
 - Change of use to housing required 'nutrient-neutrality'.
 - But Conservative Government decided to pollute the rivers again after voting for water companies to discharge sewage.
- Organically farmed land free of chemistry
- Development risks destroying or decanting any existing biodiversity, licenses permitting.

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Brownfield Site

- Previously developed site, might be:
 - Occupied building humans or nature
 - Building to reoccupy, retrofit, refurbish, extend, adapt, reuse
 - Derelict building being consumed by nature
- Building materials resource bank
 - Deconstruct, reclaim and reuse
 - Demolition materials wasted and landfilled
 - Carbon burp or hiccup from wasted materials going to landfill and buying new to replace them

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Self-build and brownfield

- Aspire to find brownfield sites:
 - Will they be cheaper? I have no idea
 - Very much depends on what is on the site
 - Developers will try to avoid them, looking after profit margins
- Aspire to reuse existing buildings:
 - That could save materials costs: Brexit Covid and Ukraine pushing prices ever higher
 - But retrofit is usually more expensive £/m2
 - Try to reuse as much materials as possible
 - Landfill is expensive too:
 - £1600 value of average 8m3 skip of materials
 - Let alone labour filling skip, skip hire, gate fee and landfill tax

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Existing buildings

- You may need guidance on what to do with historic buildings:
 - Listed, Conservation areas and Ancient Monuments
 - Pre 1919 historic wall construction
 - Solid walls need special attention
 - Better choice of materials to be compatible
 - Breathing construction
 - Avoid plastics and cement
 - Using tree and biobased breathing materials

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Self Build and Greenfield

- Restrictions are down to the Planning officers
- Probably no Conservation Officers
- Environment Agency (but no teeth)
 - Avoid flood plains or use stilts or floats
- Respect carbon campaigns
- Build environmentally:
 - Healthy Environmental Resourceful
 - Appropriate Competent Effective Yardstick Construction

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Biodiversity Net Gain

- Biodiversity (broad mix of nature supporting each other)
- Biodiversity related to development sites
- Gain: encourages more nature at end of project
- Net Gain is a bit of greenwash
 - There must be more after development than before
 - But need to protect, maintain, reinforce existing biodiversity, not move it on
- Planting saplings will not replace 40-year-old trees for another 40 years
- Wrong bats or bird boxes for the species won't help

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What Biodiversity exists?

- Understand what you already have
- What enables it to be there?
- What is important to its persistence?
- Protect and do not destroy it
- Add to and reinforce it
 - but not to unbalance it

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Existing Biodiversity

- May be:
 - Flight paths/navigation routes:
 - tree lines hedge rows
 - Forage-ing grounds, ponds and woodland
 - Food sources: nectar flower beds, trees, supported insects
 - Existing roosts or nests
- Legally protected as an indicator species
 - £5000/bat fines or imprisonment
 - For disturbance interference and entrapment

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Topsoil

- Is a precious commodity
- It has taken centuries to create
- Its full of life: bacteria, insects, worms
- Don't scrape it and stockpile it too deep
- 1m maximum (weight, water, air)
- Keep it alive
- Reuse it on the same site or sell excess³

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Turf and plants

- Wild-turf especially
- Plants: Dig out and pot up protect for reuse later
- Use turf to cover topsoil stockpile
 - Supress weeds
 - Keep it alive
 - Relay it later on reused topsoil
- Excess: sell on websites FreeCycle etc⁴

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Trees

- Indigenous species are very important
- English Oak can support up to 380 different species and many instances of each
- Lime trees support moth that support bats
- Many others support many others

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Don't investigate yourself

- Get a survey done by biodiversity experts, yes it will cost you
- Don't use lights or sticks to find out what is inside dark cavities
- Determine quantities and which species
- Then support them with all year round appropriate and effective provisions and accommodation

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- 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.green-spec.co.uk 2003
- Created: GBE at <https://greenbuildingencyclopaedia.uk> 2012 - 2022
- Created: GBL Learning: <https://gbllearning.com> 2020 - 2021
- Created: GBC at <https://greenbuildingcalculator.uk> 2011 - 2022
- E Brian.Spec@man.ac.uk
- Twitter: <https://twitter.com/brianmrspecman>
- Twitter: <https://twitter.com/engbebuild>
- Twitter: <https://twitter.com/enggbllearning>
- LinkedIn: <https://www.linkedin.com/company/brian-spec-man-murphy/9494492/>
- Facebook: <https://www.facebook.com/brianmrspecman>
- GoogleMyBusiness: [National Green Specification](https://www.google.com/maps/place/National+Green+Specification)
- Pinterest: <https://www.pinterest.com/engbebuild/>
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