



Courtesy: Mike De'Ath, HTA Design

Construction Methods & Materials

20/01/2021

- **We face challenge and complexity in the use of materials and methods both now and going forward – we need to continue the conversation across disciplines, clients and communities to set and achieve the vision needed.** We have demonstrated commitment on key issues such as climate change but now is the time to put words into action. Changes with the highest long term impact are often most difficult to achieve, however the UK pandemic response offers hope that we can work together to meet future challenges.
- **Brickwork is a traditional material but can be used 'irreverently', in a playful way. It is particularly good in use for articulation in facades and also dealing with complex development footprints.** It stands the test of time but can be challenging to use in panel construction due to its weight, and articulation can make fire proofing and insulation more complex. Flatter facades can be used but can compromise interest and character.
- **In meeting net zero the [London Energy Transformation Initiative](#) offers a route map showing what needs to be achieved and how this impacts on the use of materials.** The use of timber for example is currently restricted in higher buildings due to regulation changes post Grenfell, however it is a very sustainable material and we need to work through these conflicting requirements to harness its potential in storing carbon.
- **Sustainable design means airtightness, however this poses challenges for the specification and maintenance of good ventilation systems and works best with at least a 'front and back' dual aspect.** Without these air quality and overheating problems may result post handover. Goldsmith Street in Norwich is a great example of best practice in sustainable design for low rise housing but we need to find equally good examples for mid and high rise highly sustainable homes.
- **Volumetric construction sites are cleaner and more efficient and can employ more diversity in the workforce.** Used carefully this method can equal the place making potential of other types of construction. Modular homes have many advantages, for example stacking of units of different types can improve vertical sound transfer between different rooms. There are transport constraints and a pressure to simplify to improve manufacturing efficiencies, resulting in challenges where a less repetitive treatment works better. However if you can have collaborative



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long term relationships over multiple schemes you can develop better solutions and successful outcomes.

Useful Links

National Design Guide

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/843468/National_Design_Guide.pdf

The construction material pyramid: <https://vandkunsten.com/en/news/material-pyramid>

Paasivhaus Design Guide <https://www.levittbernstein.co.uk/research-writing/easi-guide-to-passivhaus-design/>

Build homes build jobs build innovation report: <https://www.hta.co.uk/news-description/major-report-calls-building-75000-new-modular-homes-year-create-50000-new-jobs>

Brick Development Association publication: Good site practice and workmanship (December 2015)
<https://www.brick.org.uk/admin/resources/g-good-site-practice-workmanship.pdf>

<https://www.architecture.com/riba-books/books/residential-and-domestic-buildings/houses-flats/product/9781859468654-the-modular-housing-handbook.html>

https://issuu.com/swanhousing/docs/development_brochure_2020

The [PLACE](#) project

Speakers:

Jonathan Drage, Senior Associate, Metropolitan Workshop

Pia Berg, Associate, Metropolitan Workshop

Attendees: 128



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Dominic Milner, Associate Director, Maccreanor Lavington

Zoe Watson, Sustainability Lead, Levitt Bernstein

Mike De'Ath, Partner, HTA

Roberto Bruni, Head of Development for Place, LB Tower Hamlets

Justin Laskin, Associate Partner, Pollard Thomas Edwards Architects

Matthew McColl, Associate, Pollard Thomas Edwards Architects