

KENT DESIGN

Meeting to shape our built environment

Masterclass

Sustainable and Low Carbon Design Principles

Tuesday 18th October 2022

Online (Zoom)

Synopsis

If the UK is to meet its target of Net Zero Carbon by 2050, new developments must be designed to be low carbon and facilitate sustainable lifestyles. However, sustainability is not only about carbon emissions and new developments must also ensure the health and wellbeing of residents, opportunities for social connection and improved biodiversity.

This online masterclass explored urban design principles for sustainable masterplanning, transport and landscape in new developments. Presentations were delivered by a range of expert speakers and the session ended with an interactive exercise in which attendees assessed the sustainability of a concept masterplan.

Speakers and facilitators

James Woodall – Head of Sustainability, Allies and Morrison

Antje Saunders – Director, Allies and Morrison

Emad Sleiby – Director, Allies and Morrison

Bob Allies – Co-Founder, Allies and Morrison

Robert Huxford – Director, Urban Design Group

Vinita Dhume – Director of Urban Design, Savills

Ross O’Ceallaigh – Programme Manager, Design South East

Key Takeaways

Masterplanning

- To deliver sustainable places we need a shift in mindset away from the 20th century approach to planning around the car. In this new era, we need to plan and design

places with efficiency and connectivity in mind, so we make the best use of space and resources while promoting quality of life.

- A group of sustainable buildings don't make a sustainable place. At the masterplanning scale, it is essential to consider how location, connectivity, open spaces and buildings all work together as a system.
- Good urban design practices such as active frontages and walkable streets can create virtuous cycles of sustainability as they promote active and low carbon lifestyles, foster social interaction and improve local economies. It is difficult to quantify the impacts of good urban design but it is essential to sustainable places.
- Sustainability cannot come at the end of the design process. It must be the starting point, setting the basic principles that every member of the design team follows to create a cohesive and sustainable masterplan.

Landscape Design

- Landscape design should come early in the masterplanning process and be considered at all scales, from neighbourhood to detail. Landscape is one of the most important elements in creating sustainable and successful places and offers many benefits to residents.
- Landscape design isn't just about parks. Making streets green with trees and sustainable drainage can mitigate flooding and heat waves, boost biodiversity and encourage walking and socialising. Landscape should be multi-functional.
- As climate change intensifies, there is an opportunity for urban landscapes to be more productive and make better use of resources. Urban food growing is very popular and could contribute to local food security. Rather than discharging water out of settlements, green infrastructure could store and clean water for use as irrigation.

Transport

- From a transport perspective, a sustainable development is one that is well-located, well-connected, and well-designed.
- The location of a development will largely define the transport modes people decide to use, even if the internal streets promote walking and cycling. A suburban or rural development will necessitate car use to reach services and employment.
- Latest policy and guidance states clearly that new developments should be designed to prioritise pedestrians and cyclists. Local authorities also have a statutory duty to protect vulnerable members of society from risks such as traffic collisions. Developments that are well-designed create streets rather than distributor roads, avoid roundabouts, design for low speeds, use tight corner radii and prioritise pedestrians at crossings.
- Commuting to work only constitutes two fifths of total travel. We need to consider all reasons for movement when designing places, such as visiting friends and family, and going shopping.

Links for further reading

[LETI — Climate Emergency Design Guide](#)

[Video: Urban Nous — Our Sense of Place and Direction — Prof. Kate Jeffrey](#)

[UK GBC — The State of Sustainability in the UK Built Environment](#)

[UK GBC - Whole Life Carbon Roadmap](#)

[CAT.ORG.UK — Zero Carbon Britain](#)