

ST TEILO'S SCHOOL SITE

Pentan Architects

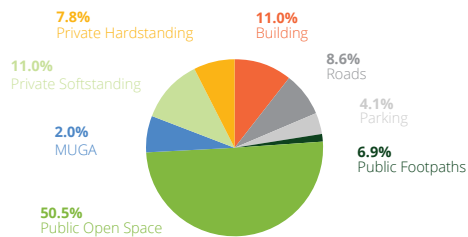
Carbon and Placemaking Case Study 02

KEY ASPECTS:

- Brief and target setting giving clear direction and priorities to the design team
- Responding to the site constraints and existing topography whilst minimising road infrastructure and hardstanding
- Passivhaus standard with timber frame construction

Site: 3.14ha
Units: 53 plus 10 supported living
Density: 44 dwellings/ha
Parking: 1.2 per unit\ (plus supported living)
POS: 1.55ha / 49%

Indicative Area Split:



MULTI-FUNCTIONAL SPACES

Intensification of use and activity through creating multi-functional spaces can lower carbon impacts and instill a sense of public pride.

ACCESS AND ROAD NETWORK

Using existing street infrastructure where possible minimises embodied carbon impacts of new roads and hard surfaces.

ROOF FORM

There is a need to balance factors such as maximising the potential for solar PVs, minimising embodied carbon, potential maintenance issues and creating an attractive street scene.

ECOLOGY AND BIODIVERSITY

Focus on green and blue infrastructure contributes positively to biodiversity and the wellbeing of residents, but also minimises hardstanding and associated embodied carbon impacts.

SITE LOCATION

Urban sites have an advantage in terms of access to public transport, and can maximise the potential for active travel through connecting to the surrounding area.

FORM FACTOR

Terraces create a more efficient built form, lowering embodied and operational carbon at the same time and making it easier to achieve Passivhaus standards.

OVERSHADOWING

The impact of surrounding trees or built forms that have an effect on solar gains and amenity spaces needs to be considered at the outset.

TOPOGRAPHY

The existing plateaus and topography of the site were retained despite a negative impact on unit numbers in order to reduce the embodied carbon impacts of earthworks and site preparation.

