

University of Surrey - Operations

Sustainable Principles for Construction Projects

- Follow the space hierarchy, adapt existing space, refurbish existing space, seek repurposing existing space, provide new space that meet sustainability principles.
- Building development preference should be using brownfield space before green field where possible.
- Increase energy efficiency and reduce carbon emissions supporting Net Zero Carbon emissions by 2030.
- Enhance occupant comfort, experience, and productivity.
- Drive reduced complexity and increase occupant ownership of the energy consumed by buildings.
- Drive design for long life, low environmental impact, low maintenance, flexibility, and end of life recycling.
- Reduce water consumption.
- Increase biodiversity.
- Promote and support sustainable travel modes.

Specific Items to consider within each project.

- Providing options for improving thermal insulation to different levels above and beyond building regulations.
- Propose alternative systems to gas boilers with low or zero carbon emissions.
- Provide a renewable energy supply technology assessment including solar, ASHP, GSHP and other appropriate technologies.
- Provide options for the reduction of water usage.
- Showers should be low flow.
- Utilise LED lighting and ensure communal spaces have absence detection.
- Ensure building systems are zoned and can be controlled at a flat level via BEMS.
- Where control of heating and lighting is given to users, ensure that there is absence or standby central control.
- Metering should be to flat or floor level to aid NZC activities.
- Waste production during construction should be reduced by efficient design and what waste is produced should be managed to achieve 100% diversion from landfill.

More specialist services

- Air conditioning should be connected to the University BEMs for control.
- Data Centre environments should have a low PUE (Power Usage Effectiveness), below 1.5.
- For Laboratory environments, variable volume systems should be used, with evaluation of low velocity fume cupboards. Where possible storage of chemicals should be separate from fume cupboards.
- Metering should be connected to the Building Management Systems to avoid time consuming manual meter reading.
- Where practical Low Carbon concrete should be utilised.

- Any increases in water consumption should be offset by other water reduction initiatives funded as part of the project.

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