Energy & Sustainability Services

Consulting Group

DLP Sustainability team provides a comprehensive service from design inception through the various stages of planning, up to building handover. We use the latest government approved software including EDSL Tas for detailed studies and Elmhurst for residential SAP and non-domestic SBEM work. Our consultants are fully registered with appropriate certifying bodies including CIBSE & Elmhurst to provide reassurance to our clients on all aspects of our work.

Ian Smith BEng MSc CEnv MISEP
Associate Director
(Sustainability)

Our engineers and built environment specialists have extensive experience assessing the sustainable performance of buildings, from individual homes to larger commercial, cultural and educational developments.

We collaborate with clients throughout the entire process, from the concept and planning stage to completion and certification. Our team has developed an integrated approach with our in-house architects and designers, ensuring that our solutions are both buildable and environmentally responsible, and the resulting spaces are comfortable and energy-efficient.

Key Services include:

- Energy / Sustainability Statements
- Daylighting / Sunlighting Assessments
- Low / Zero Carbon feasibility studies
- BREEAM Credits for Energy & Health
- DSM Detailed building thermal modelling
- UKBR Part L1 & L2 Energy calculations
- UKBR Part G Water Efficiency calculations
- UKBR Part O Overheating calculations
- CIBSE TM 59 / 52 Overheating Assessments
- BB101 Ventilation Assessments for schools
- SBEM non-domestic building calculations
- Heat Loss / Heat Gains calculations
- SAP 'As Built' calculations
- EPCs 'As Built' calculations & lodgement
- Sustainable materials / products consultation

We deliver practical sustainable solutions

ISEP Institute of Sustainability & Environmental Professionals

elmhurst energy APPROVED ENERGY ASSESSOR

LOW CARBON CONSULTANTS

Case Study
Overheating Assessment

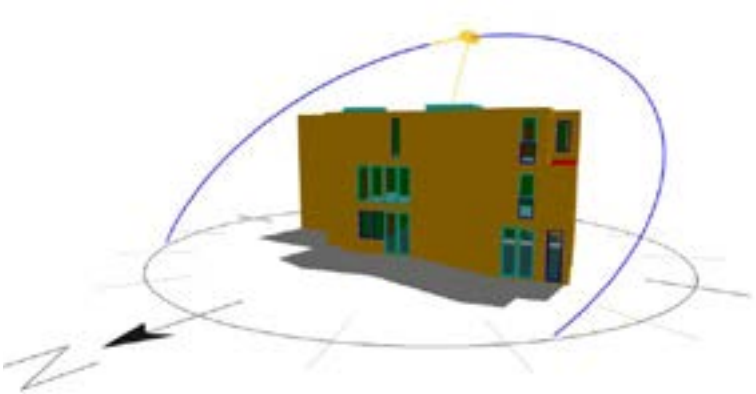
Site – Levedale
Client – Lewis & Hickey Ltd on behalf of Kinnerton Street (MKL)

We were instructed by Cass to produce an assessment of Summertime Overheating risk of the two dwellings, Of particular concern are ground floor facilities where windows cannot be opened freely due to security risks.

The assessment indicated that the dwellings were unlikely to entirely meet Part O criteria even with mechanical ventilation (4 ac/h. The provision of suitable mechanical ventilation (supplying 4 Ac/h) to occupied rooms and with the facility for openable windows under extreme conditions, most rooms would meet the requirements of CIBSE TM59.

In order to be assured of maintaining compliant conditions in all areas mechanical cooling / air conditioning was recommended particularly in areas where security did not permit windows to be opened freely.

It was noted that further reduction in overheating risk could be achieved through the reconfiguration of glazing area and specification (G–Value) or the provision of shading on south facing facades or additional ventilation supply.



Case Study
Daylight / Sunlight Assessment

Site – Courthaven
Client – Hexagon Designs Ltd

Pre Application advice was sought in relation to the proposals to 'renovate 2no two bed apartments to existing basement, to erect three bed apartments to proposed fourth floor storey and 2no one bed apartments or 2no two bed apartments to fifth (mansard) storey'.

Response was returned that

> *"A Daylight/Sunlight Assessment would be needed to be provided to ensure the lower ground floor accommodation would receive adequate light filtration.*
> *All units should have adequate light, space, and outlook. The lower ground floor (basement) layout would need to demonstrate adequate light filtration and outlook. Daylight/Sunlight studies would need to be submitted in support of the proposal."*

We were instructed by Cass provided an assessment of the possible impact on daylight and sunlight based upon BR209 methodology and included the following tests:

- Vertical Sky Component
- Average Daylight Factor
- Daylight Distribution
- Sunlighting (APSH)

Conclusions

The projected illuminance levels for all basement level habitable spaces were considered acceptable. The daylight distribution (DD) for some of these spaces was however lower than the 80% target. This was however considered not surprising given the locations. NB all room DD% were projected to be above 50%.

All living rooms in the basement met the criteria for sunlight provision in terms of hours of sunlight and window orientation.

Case Study
Daylight / Sunlight Assessment

Site – Myrtle Street, Ellesmere Port
Client – Mewbourne Properties

Mewbourne Properties commissioned us to provide an Energy Statement and a Daylighting / Sunlight Assessment of the impact of the proposed scheme on surrounding dwellings.

The proposals are for the redevelopment of the Site to incorporate a 4–storey Self–Storage building.

Proposed Front Extension

Proposed Rear Extension

Proposed Side Elevation 1

Proposed Side Elevation 2

The scheme (24/03808/FUL) successfully gained planning permission in September 2025.

Our involvement was the for the production of various consultancy reports including:

- Energy Statement
- Daylight / Sunlight Review

The proposed building itself has a very low proportion of conditioned space being primarily unheated storage. We advised that the scheme could not readily be considered under BREEAM and as result the LPA confirmed that there would be no requirement to meet their standard BREEAM requirements.

Ground Floor

Consideration was also given to the potential for linking up with proposed district heating schemes linked to various industrial process in the area. The scheme was however outside the potential beneficial area.

As a result of our input the scheme will be designed to follow a low carbon approach with inclusion of the following:

- Fabric First Approach (consideration of passive energy saving features)
- Use of Photovoltaic panels for the building to meet the LPA requirements.
- Use of Air Source Heat Pumps
- High Efficiency lighting with controls

Our analysis also demonstrated that the proposed scheme would provide limited impact on the surrounding dwellings.

A shading plot was generated using EDSL Tas (see schematics below) providing a preliminary indication of potential for daylight harvesting.

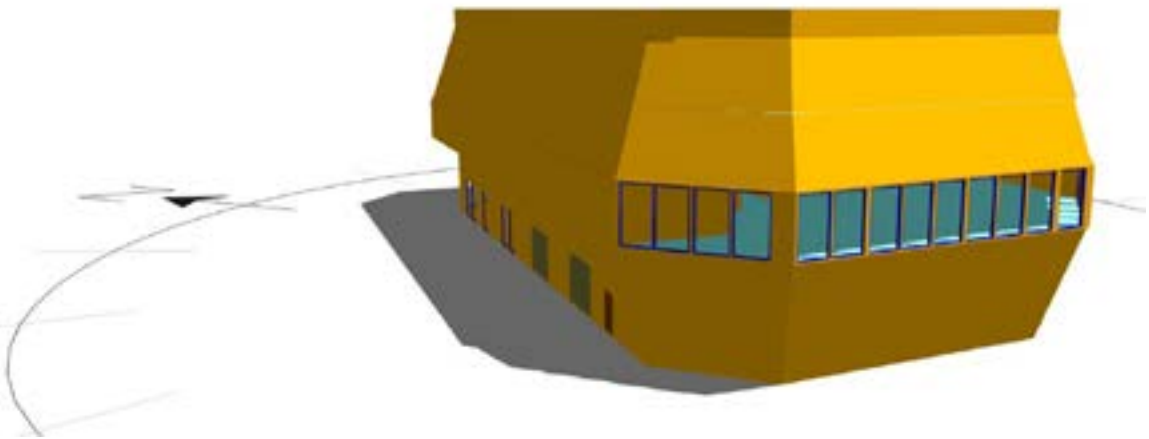


Figure 1: Plot of 3D Thermal Model of the Proposed Scheme

Figure 2: Solar Shading Plot (EDSL Tas)

Case Study
Energy Review

Site – Bolton Road
Client – Mewbourne Properties

We were instructed by Mewbourne Properties to provide technical support through the planning application process for this site.

The proposals are for the redevelopment of the Site for a mixed-use development comprising of a new self-store building on the western part of the Site and residential apartments to the east of the Site. The development was proposed over the following phases:

- Phase A (detailed element) – Self-store Unit (Class B8 use)
- Phase B (outline element) – Residential Unit (Class C3 use)

Conditional Planning consent has recently been granted for Phase A

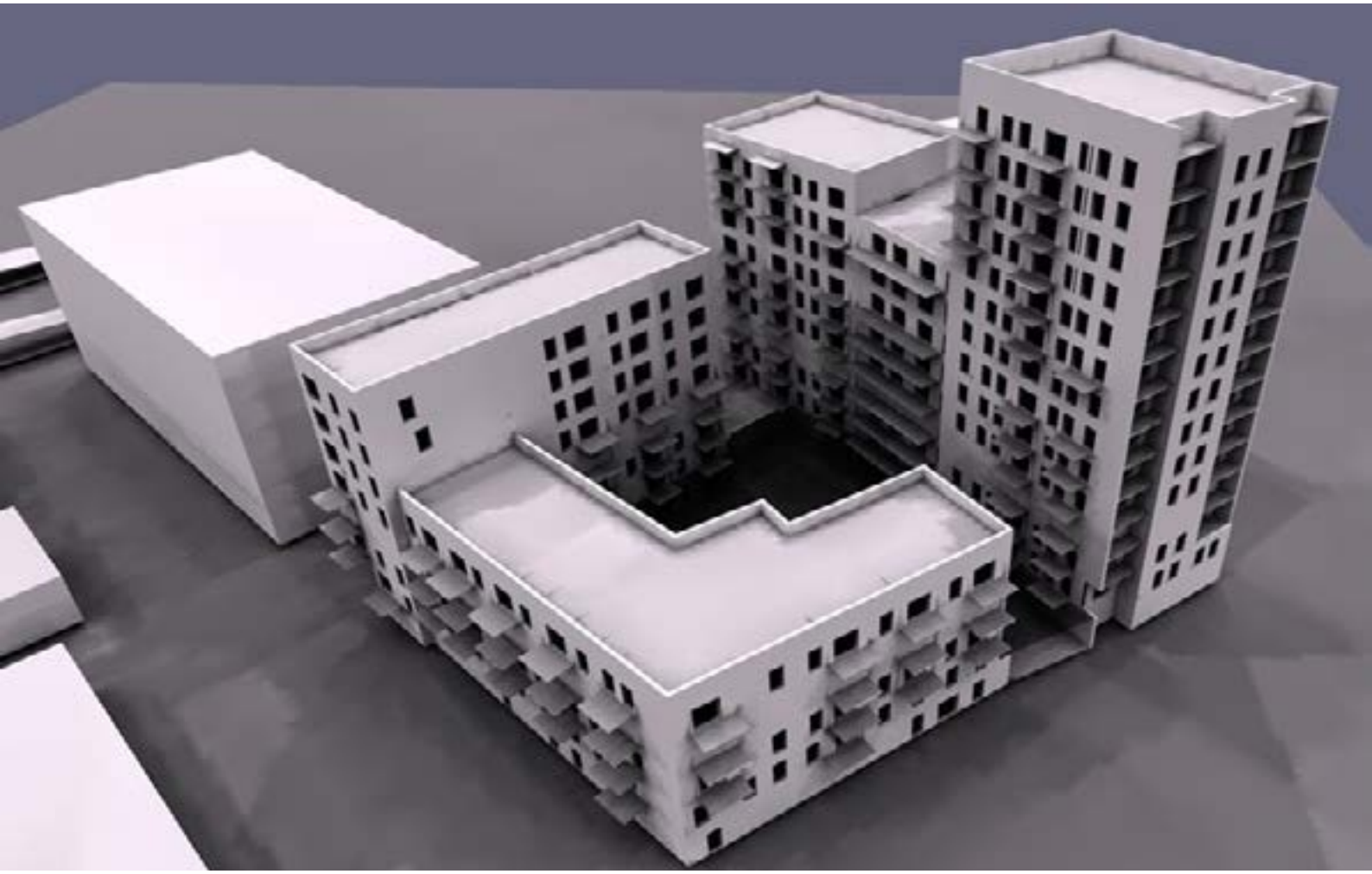
Our involvement was the for the production of various consultancy reports including:

- Energy Statement
- Sustainability Statement
- Daylight / Sunlight Review

As a result of our input the scheme will be designed to follow a low carbon approach with inclusion of the following:

- Fabric First Approach (consideration of passive energy saving features)
- maximise passive solar gain whilst reducing the impact on cooling requirement.
- Efficient use of water fittings across the site.
- Use of Photovoltaic panels for flats where required.
- Maximise use of natural light and daylight where feasible.
- Consideration of Green / Blue Roofs if practical
- Use of Air Source Heat Pumps for dwellings and the self-storage building where needed.

A shading plot was produced by Cass using EDSL Tas (see schematics below) providing a preliminary indication of potential for daylight harvesting.



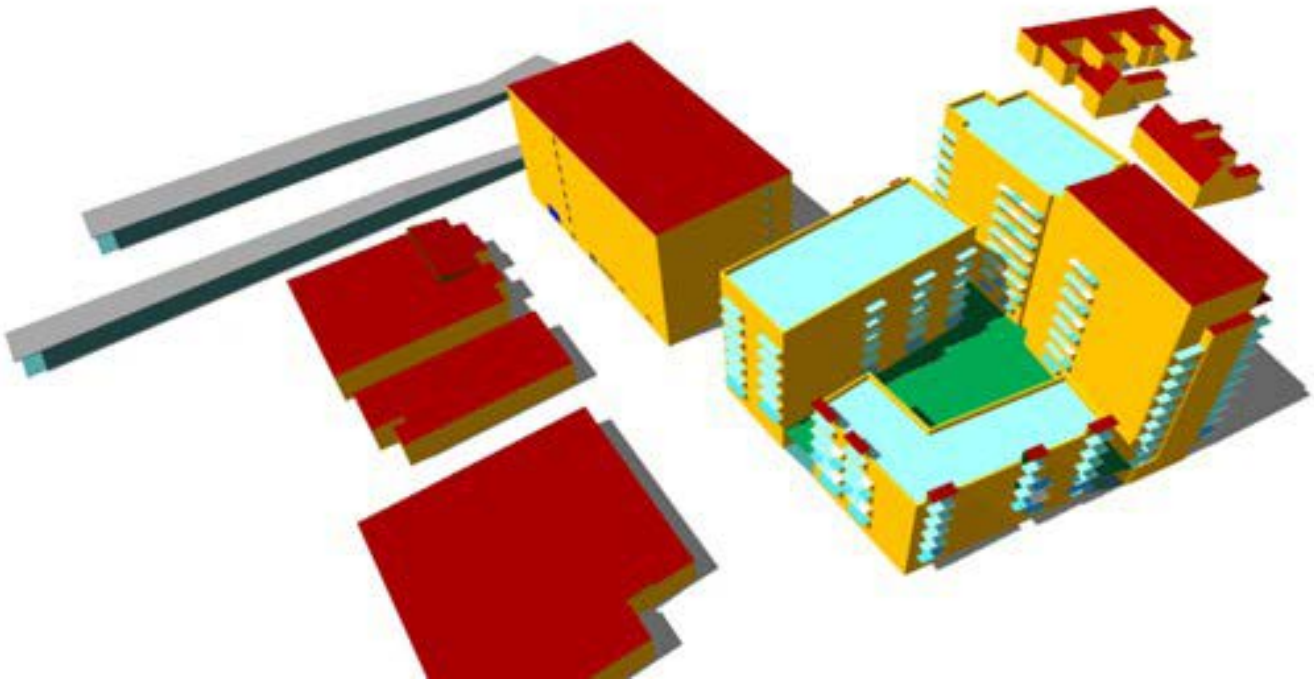


Figure 1: Solar Shading Plot (EDSL Tas)

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A plain text version is avaliable on request