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CASE STUDY

University of the Arts London Decarbonisation plan

UAL has set a target to achieve net zero carbon on its own estate by 2030 (Scope 1 and 2 emissions) and a target to achieve net zero carbon for Scope 3 emissions by 2040.

Buro Happold is providing sustainability consultancy services, embracing the unique nature of UAL's buildings. Buro Happold's Sustainability team are developing discrete solutions that align with UAL's climate ambitions and support the university's international reputation as a leader in the creative academic field.

HEALTHCARE PLANNING, CONSTRUCTION CONSULTANCY AND ANCILLARY SERVICES (HPCCAS) – SBS10190

> **"UAL's estate is complex and includes listed buildings, buildings in conservation areas, new buildings with different uses."**

Catherine Arotsky
UAL, Associate Director (Sustainable Operations)
Estates Department

www.sbs.nhs.uk

THE CHALLENGE

Europe's largest specialist arts and design University made up of six distinctive and distinguished Colleges

The University of the Arts London (UAL) has its origins in five previously independent art, design, fashion and media colleges, which were brought together to form the London Institute in 1986.

The University is committed to two clear and feasible targets, recognising the climate emergency is one of the most urgent problems facing society and the planet.

UAL's targets, from a 2018/19 baseline are;

- for the emissions UAL controls directly (scope 1 & 2 emissions), net zero no later than 2030, with an ambition to reach a 92% reduction by 2030
- for the emissions UAL can influence (scope 3 emissions), net zero no later than 2040, with an ambition to reach a 54% reduction by 2040.
- In 2030 and 2040 the university will consider approaches to carbon offsetting that are consistent with an institution committed to promoting climate justice across the world.

UAL's estate is complex and includes listed buildings, buildings in conservation areas, new buildings with different uses including academic and student halls. Academic buildings include extensive workshop and studio spaces with specialist equipment. UAL's estate diversity demands unique Net Zero Carbon strategies for each site with careful considerations of the local opportunities and constraints.

THE SOLUTION

Individual net zero strategic plans for each of the UAL buildings

Buro Happold is developing individual net zero strategic plans for each of the UAL buildings. These strategies will be integrated with UAL's asset management and investment strategies to develop a clear pathway to minimising UAL's site emissions.

At Buro Happold we have developed an eight-step approach for understanding the specific challenges and developing a bespoke decarbonisation pathway for client' organisation and key assets to achieve net zero carbon.

Buro Happold approach aligns with the UKGBC Net Zero Carbon framework definition for net zero carbon buildings. This is considered to be the most robust industry standard for defining net zero.

Our overarching approach is outlined below:

- Minimise operational energy demand
- Upgrade plant & fabric
- Use onsite renewable energy
- Renewable energy procurement

THE RESULT

Clear understanding of the baseline performance and agreed set of energy conservation measures to further develop

The baseline performance for UAL buildings has been established and specific carbon reduction measures (CRMs) have been identified and agreed with UAL. Buro Happold used a range of approaches for this including site visits, energy data analysis, Building Management System audits, and stakeholder engagement workshops.

Key strategies have been outlined as follows:

- Implement a behavior change campaign to reduce overnight baseload and small power equipment being left on unnecessarily
- Upgrade energy submetering, where poor, to identify waste and enable effective targeting of measures
- Upgrade fabric insulation within the constraints of listed buildings and/or upsize heat emitters to allow low temperature heating operation
- Replace gas boilers system with low temperature electric heat pump solutions approaching end of life

The energy & carbon emissions reduction of each identified CRM will be modelled including their interrelationships, allowing UAL to understand the most effective measures and what order to roll them out.

Energy demand review, enhanced metering, and fabric first approach are key!

> “Having a robust and deliverable NZC pathway is critical for starting the journey and securing backing from key stakeholder and funders .”

Jake Williams
Buro Happold, Director
UK Sustainability & Physics