Advanced Building Design
Our Advanced Building Design team offers a new approach to design aimed at bringing the most value for our clients.

Our advanced design methodology focuses on resolving early design challenges in an innovative, integrated and most importantly timely manner; it brings the following benefits:

- Consolidates a strategic multidisciplinary approach required at the early stages of building services design using in-house discipline experts.

- Delivers unique visual 3d sketch information quickly generated from our initial load assessments, effectively communicating plant requirements to achieve an integrated and coordinated design.

- Uses bespoke developed in-house computational modelling tools and parametric optimisation techniques to provide fast response data to inform the overall massing, façade detailing and quality of the external public realm, including terraces; focusing on user comfort and wellbeing.

- Challenges and drives the investigation of a wide range of innovative design solutions supported by informed engineering discipline experience and our energy and sustainability team.

We pride ourselves in being able to communicate the technical and non-technical aspects of the design in a concise and informative manner that engages the wider team and facilitates design resolutions.

Example services we can provide are listed below. These can be tailored to the project’s specific needs.

- Climatic and microclimatic analysis to derive overall environmental strategies
- Solar exposure assessment including programmatic/functional recommendations
- Massing analysis and masterplanning
- Passive design and energy strategies
- Façade environmental performance assessment
- Solar harm/benefit analysis
- Open space wind flow modelling
- Public realm annual comfort analysis
- Daylight design using climate-based daylight assessments and blind usage predictions
- Daylight quality assessments
- Special daylight interventions (heliostats, light pipes, etc)
- Multiparametric façade optimisation
- Natural ventilation design
- Energy demand assessments and design interventions for energy saving
- Design analysis and strategies for thermal comfort and wellbeing
- Quick 3d plant spatial assessment and coordination
- 2d and 3d early riser coordination
- New/Innovative technology appraisals
HDR | Hurley Palmer Flatt Group is the UK’s leading independent multidisciplinary engineering consultancy, providing solutions for the built environment. In 2019, we joined HDR, whose core businesses encompass: Transport, Water, Resources, Defence, Architecture and Building Services Engineering. Together the two firms represent more than 10,000 employees in over 200 locations around the world.

Advanced Building Design | Building Services Engineering | Building Structures & Civil Engineering | Commissioning Management | Critical Facilities & Data Centres | Digital Management | Energy & Sustainability | Smart Buildings

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