

UWE Estates and Facilities Design Guide

Chapter 1: Introduction



UWE
Bristol | University
of the
West of
England

SOUTH WEST
BUILT ENVIRONMENT
AWARDS
2017
CLIENT OF THE YEAR
WINNER

Green Gown Awards
International
Winner

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1.1 Change Control

Version Number	Date of Issue	Chapter Ref	Brief Description of Change(s)
1.5	01/05/19		All sections have changes, all separately itemised in 2019 version.
1.6	NOV2019	1.5.5 & 1.6	1.5.5 Structure of the Design Guide updated. 1.6 Strategy 2020 replaced with 2030
2021	JAN2021	1.3.2	Aesthetic Design removed from this Chapter 1 and incorporated into duplicated section in chapter 2.
2021	JAN2021	1.4	Pedagogical Design Section moved from this Chapter 1 to Chapter 2 Design where it better sits.
2021	JAN2021	1.5	Added in sustainability section in the table:” How has the design contributed to the 2030 net zero carbon emissions target? If the design has not contributed to this what are the risks for achieving the target?”
2021	JAN2021	1.5	Added new line to table for “2030 Climate Action and Sustainability targets”

2021	JAN2021	1.5.1	Added: "Future maintenance and access to equipment for monitoring, maintenance and repair." "Potential to link to any district heating system on site"
2021	JAN2021	1.6	District Heating Description in the box updated by Energy Team.

1.2 Introduction to UWE

The University of the West of England (UWE) is a modern and thriving University. It is one of Britain's most popular universities with over 30,000 students and 3,000 staff and is the largest provider of Higher Education in the South West of England. Students come to UWE from all parts of the UK, as well as a significant number of international students.

UWE is committed to providing high quality, stimulating spaces that attract and retain students, staff and investors and reflects UWE's vision. To do this, it requires a flexible and sustainable estate that is fit for purpose; a University that can meet changing needs of higher education and assist the University in retaining its competitive edge within the HE sector.

As well as investing in building stock, UWE also builds its visual identity with clear branding and wayfinding.

1.3 Introduction to the Design Guide

The design guide explains the overarching principles, functional requirements and technical standards for our buildings and infrastructure which ultimately allow UWE to deliver its core function: To educate and prepare students for life after their course. This chapter explains:

- What the design guide is and when it is to be used
- UWE's overarching strategy, Strategy 2030, and how it influences design principles

This design guide applies to all design relating to a structure (buildings, roads, landscaping etc. or services fixed to or within them).

This design guide ensures that any future construction project for UWE, whether new build or refurbishment, is designed utilising the same parameters and principles. It will ensure that all new builds as well as refurbishments are developed to a consistently high standard.

This design guide is applicable to any designer working on the UWE built environment, including Consultants and Contractors with design responsibilities.

This design guide is to be applied from the very earliest phases of every project, no matter how big or small it might be. The design guide applies to the whole design process, including changes made during RIBA Stage 5 (the Construction Phase).

This Design Guide is based on past UWE experiences and the University's future goals and ambitions. It does not absolve external design consultants of their legal or contractual responsibilities under health and safety legislation, statutory requirements or design/professional duties and liabilities. Designers must consult the Lessons Learnt folders from previous projects.

UWE complies with the Construction (Design and Maintenance) Regulations (CDM), where this definition is included:

The designer's duties apply as soon as designs...are started. This includes concept design, competitions, bids for grants, modification of existing designs and relevant work carried out as part of feasibility studies. It does not matter whether planning permission or funds have been secured.

1.3.1 Design Guide Ownership & Updating

UWE Estates and Facilities will review and update this design guide routinely to consider changes in statute, industry best practice, University policy etc. and to capture lessons learned. UWE will undertake ad hoc reviews and amendments in light of significant changes between formal reviews.

1.3.2 Structure of the Design Guide

The Design Guide is divided into 12 Chapters, each dealing with a separate aspect of design.

1 Introduction (this document)

2 Design governance

UWE's expectations of how the design process will be managed, including drawing standards, UWE's approach to BIM, technical assurance, management of derogations etc.

3 UWE Strategies and General design

Core UWE strategies relating to equality and diversity, sustainability etc. and their impact on design.

4 Space Standards and space planning design

An overview of space requirements for different functional areas within the University.

5 Fabric and structural design

Detailed requirements relating to the structure and fabric of buildings. There is also a section on catering design.

6 Mechanical engineering design

Detailed requirements informing the selection and design of mechanical plant and installations.

7 Electrical engineering design

Detailed requirements informing the selection and design of electrical systems.

8 IT Infrastructure

Cabling design and requirements

9 Landscaping, biodiversity and infrastructure

This covers the external areas, including landscaping, roads, parking and other aspects civil engineering, planting schemes etc.

10 Audio Visual Infrastructure

This covers all aspects relating to AV design, specification, and installation.

11 Acoustic Standards

This covers all aspects relating to acoustic design and control of noise, noise transference reduction.

12 BMS Standards

This covers all aspects relating to BMS and controls design, specification, and installation.

1.4 Strategy 2030

'Strategy 2030: Transforming Futures' sets out the UWE focus for the next 10 years. It will evolve and develop as UWE continually reviews performance and adapts to a rapidly changing environment.

The outstanding learning experience we provide at UWE Bristol supports the development of innovative, creative and courageous graduates who are passionate about their subjects and curious to learn more. But equipping our students to play their part in a changing, fast-moving global economy requires that we keep developing, keep enhancing and keep investing in what we do.

The Strategy document is available on the UWE website and outlines the UWE values in more detail.

1.4.1 Core Values

It is crucial that project teams understand the core values of UWE. It is perhaps useful to think of these values as UWE's statement of identity: They are the qualities that are most important to UWE. The values will underpin the strategic decisions of the University.

- **Ambitious.** We are not afraid to shape, challenge and tackle the big issues, to take the initiative and pave the way.
- **Innovative.** We create new opportunities for the people who work and study with us. We embrace different ideas and pioneer new and sustainable ways of doing things.
- **Collaborative.** We have strong connections locally and globally. We help people and organisations be the best they can, building trust throughout your university community and beyond.
- **Enterprising.** We instil a thirst for new knowledge, its creation and application, empowering our students and staff to demonstrate a creative questioning approach, a 'can-do' confidence, and ability to navigate uncertainty.
- **Inclusive.** We make UWE Bristol a supportive and inspiring place to learn and work – somewhere where diversity of experience and perspective is encouraged, and learning and research is shared and accessible.

1.4.2 Core Focus

UWE has three areas of focus, which might be thought of as strategic objectives.

- 1 Our Purpose: Solving future challenges through outstanding learning, research and a culture of enterprise.
- 2 Our People: Creating opportunities to thrive and flourish.
- 3 Our Place: Creating an inspiring local and global gateway to the future.

The main area of focus for this Design Guide is Our Place:

“As we continue to invest, we will be ambitious in the design and use of our spaces and services. We will be a leading healthy and sustainable University, focusing on the development of healthy, safe, sustainable and inclusive campuses and spaces that showcase our personality, values and success and engage local communities.

The development of our environment will include the guarantee of accommodation on campus for all students in their first year, with supporting facilities that strengthen their engagement with the University community and all it has to offer.

We will create a fun and vibrant environment by locating sports activity and green spaces across all our campuses, and use agile pop-up spaces to support the enterprise of our students, staff and communities.

We will continue to work in partnership with cultural and community organisations to enhance our localities.

We will explore the use of smart sensor technologies and AI across our estates, to improve our environment and support our staff and students to succeed.

We will secure meaningful reductions in our carbon footprint, support clean and efficient mobility and physical infrastructure, and promote species diversity across the University estate.”

1.5 General Design Principles

To meet the ambitions of Strategy 2030, the designs must meet a range of objectives. Many of these objectives are supported by specific strategies, as detailed in Chapters 2 and 3 of this Design Guide.

Projects will be audited and benchmarked by UWE to ensure the work commissioned will meet our expected standards and achieves these objectives. All construction projects will be subject to a Post Occupancy Evaluation. Given the stated priorities of UWE, functionality and quality are likely to be assessed primarily by evaluating the extent to which a design enhances the learning, living and research experience of students.

Design objective	Designers will be challenged to explain/demonstrate...
Learning Experience	How does this design enhance the learning experience, the quality of research, and the capability of students to progress after their studies? How does the project/design fit the business plan or strategy for the department or faculty?
Partnerships	Have we involved the right stakeholders within UWE? To what extent does this design (or the way the project is managed) promote partnerships with businesses and communities? How does the project impact on our community and business partners?
Inclusive	To what extent does this design create an accessible and inclusive environment? Does it meet the different religious and faith needs of staff and students? What barriers will it present to people who want to access or use this space?
Flexibility and future-proofing	To what extent can the space be altered to account for changes in technology, educational practices, market changes, government policy and the environment? To what extent can plant/technical spaces be reconfigured to allow for changing patterns of energy use, availability and cost?
Value for money	How does the design support the University in achieving a “strong and confident financial position”? To what extent does the design represent good value for money? In practice, this will be achieved through a number of measures: <ol style="list-style-type: none"> 1 Ensuring that projects align with faculty/UWE strategies which will help to prevent later changes to the project scope. 2 Do not confuse low cost with ‘value for money’ or expensive with good quality. 3 Achieving cost certainty and deliver projects within budget. This requires effective governance and project management arrangements. 4 Rationalising stock or cleaning and maintenance regimes through greater standardisation.

	<p>5 Paying close attention to the whole life cost of our assets. Our ambition is to achieve an efficient and reliable estate, with high utilization and low maintenance/downtime.</p> <p>6 Designing for efficient maintenance and management of our Estate. This includes providing sufficient access and information.</p>
Student recruitment & retention	How does the design create an environment which encourages students to select and remain at UWE? This helps us achieve a “strong and confident financial position”.
Sustainability	How has the design contributed to the 2030 net zero carbon emissions target? If the design has not contributed to this then what are the risks for achieving the 2030 target?
Sustainability	<p>How has the design contributed to the 2030 Climate Action and Sustainability targets?</p> <ul style="list-style-type: none"> • Being carbon neutral as an organisation, with net-zero emissions of greenhouse gases by 2030. • Working through the ISO 14001 standard to set clear targets and plans to reduce water and energy use, cut waste generation including food-waste, and support biodiversity. • As signatories to the UK Plastic Pact, eliminating all but essential single-use plastic and meet the 2025 targets for recycling and reuse. • Establishing all our campuses as clean air and smoke-free zones. • Investing in and securing year-on-year improvement in travel sustainability for staff, students and visitors. • Working with our students to explicitly address climate change and environmental challenges through our teaching, learning and curriculum. • Supporting research that addresses issues relating to climate change, environmental challenges and biodiversity. <p>If the design has not contributed to this then what are the risks for achieving the 2030 target?</p>
Healthy and safe	<p>What residual risks will the design leave for the people constructing, maintaining and using the new structure?</p> <p>Has the UWE Health and Safety Team been consulted regarding the fire strategy?</p> <p>How will the design cope with the large number of person movements at core times (at the start and end of the day, at the end of lectures?)</p> <p>To what extent has the design accommodated the demands posed by the end-users in a higher education establishment?</p>

We recognise that there may be times when different design objectives may appear to be in competition. The project team will need to openly discuss this as and when it arises, but always using UWE’s values and priorities as touchstones to inform those conversations.

1.5.1 Considering ‘adjacencies’

Designers already appreciate that their designs are located within and must be designed for a specific context. Specifically we encourage design/project teams to think holistically and consider:

1. The proximity of a new building to existing structures. Regardless of whether or not UWE owns both buildings it is essential that there is an adequate separation distance so that fire in one building is unable to spread to another.
2. The impact on infrastructure beyond your site boundaries. For example, the entire wayfinding strategy for a site may need to be revised in light of a new building and should be an integral part of the design rather than an afterthought. More generally, how will the project influence the flow of people through the rest of the campus? Do not just consider the immediate users.
3. Whether the project is aligned with the masterplan strategy. Will there be a clash in the future, either visually or in terms of access to/from a future construction site or in relation to services/utilities? Would we need to adapt or even demolish your brand new or newly refurbished structure to accommodate a future project?
4. The potential to link into any district heating system.
5. Assure future maintenance and access to equipment for monitoring, maintenance and repair. Changing the maintenance strategy so that vehicles, such as mobile elevated work platforms or cranes, will be required to travel over or operate on unsuitable surfaces.
6. Dealing with historical damage/defects within or immediately outside project boundaries which would impact on the finished building if they are not dealt with (e.g. repairing damaged flagstones along the main route to the new building).
7. The impact of the project while it is being built. University life will need to continue and it is crucial that designers play their part. To give some examples:
 - a. Consider how the design or location of site hoarding/protection could be used to reduce or enhance the visual or operational impact of a project.
 - b. The use of pre-fabricated elements may reduce the duration of the construction phase
 - c. The project can be a learning opportunity for relevant courses.

1.5.2 Physical, mental and spiritual wellbeing

The UWE Sustainability Plan aims to provide a positive and enjoyable student, staff and visitor experience. It aims to enhance everyone's health and wellbeing by creating and promoting healthier working, learning and social environments. Design teams should think broadly about wellbeing.

For example, they could consider providing facilities that:

- Promote healthier forms of travel (refer to the UWE transport strategy in Chapter 3)
- Create a sense of community by providing communal and social spaces/experiences
- Give access to spaces that allow private reflection and solitude. Multi-function wellbeing spaces can help to meet this ambition and are discussed in Chapter 3.
- Offer space for artwork that can promote discussion and reflection
- Promote inclusion and do not create barriers to access, as discussed in Chapter 3.
- Access to fitness and sports facilities, as discussed in Chapter 3.
- Meet religious beliefs, as discussed in Chapter 3.

It is only through consultation that you will be able to determine what facilities are needed in a particular building/space (which will be influenced by the proximity of facilities in adjacent areas).

1.6 Masterplan

UWE Board of Governors agree a Master Plan Strategy which sets out the background for the development of the University over the next 25 years or so.

Recent projects include Bristol Business School (completed in 2017), the new Engineering Building (completed in 2020), student accommodation, the renovation of the Arnolfini and investment in our City Campus, and the acquisition of further buildings at the Frenchay Enterprise Park.

It is crucial that design teams understand the 'adjacencies' and overall ambitions and designs for the area surrounding their project and how their own designs and specifications impact on and must align with the masterplan.

Case study: District Heating

When the Frenchay district heating scheme was envisaged as part of the Frenchay masterplan (to support UWE's sustainability ambitions), individual structures were identified for connection to the Central Heating Plant and District Heating Network. The project teams for those structures installed pipework as part of their own projects. The installation of the CHP and the final legs and connections of the District Heating Network were then installed with limited disruption.