SDG Accord case study – Goal 12 Responsible consumption and production – the Interdisciplinary Biomedical Research Building

Integration of SDGs in

☐ Institutional governance/strategic level
☐ SDGs in research
☒ SDGs in campus operations
☐ SDGs in curriculum development
☐ SDGs in student engagement activities
☐ SDGs into community activities
☐ SDGs at a whole-institution level

Focus on

☐ Goal 1 - No poverty
☐ Goal 2 - Zero hunger
☐ Goal 3 - Good health and wellbeing
☐ Goal 4 - Quality education
☐ Goal 5 - Gender equality
☐ Goal 6 - Clean water and sanitation
☐ Goal 7 - Affordable and clean energy
☐ Goal 8 - Decent work and economic growth
☐ Goal 9 - Industry, innovation and infrastructure
☐ Goal 10 - Reduced inequalities
☐ Goal 11 - Sustainable cities and communities
☒ Goal 12 - Responsible consumption and production
☐ Goal 13 - Climate action
☐ Goal 14 - Life below water
☐ Goal 15 - Life on land
☐ Goal 16 - Peace, justice and strong institutions
☐ Goal 17 - Partnerships for the goals

The Interdisciplinary Biomedical Research Building (IBRB) is part of the University's Campus Masterplan through to 2030, which is a critical enabler to the University's Strategy 'Excellence with Purpose.' The building and opening of IBRB addresses two of the priorities for campus development:

1. To develop a sustainable and green campus to enhance the environmental sustainability of our University; and
2. To embed sustainable development principles across our strategies and delivery plans.

In addition, the building also clearly addresses SDG 12, 13 and 17. The project emphasises sustainable consumption and production patterns in partnership with the main contractor towards effective climate action. It addresses issues such as energy efficiency, waste generation and reduced embodied footprint, and involved working with external companies to encourage them to adopt sustainable practices.

The University worked closely with our construction and development partners to improve our sustainability credentials, both in the process of construction and in the building's legacy. The IBRB is the University's most environmentally sustainable building on campus to date and demonstrates our continued commitment to addressing the climate emergency as well as our impact on the United Nations Sustainable Development Goals.

"This fantastic building has been delivered during exceptional times and is testament to the tenacity and commitment shown by all those involved in designing and building it from the construction industry. The strategy taken in using modern methods of construction and a strong focus on sustainability and safety has paid off. The building is an excellent

addition to the campus at Gibbet Hill, with the architecture and public realm massively enhancing the environment for our students and staff." James Breckon, Director of Estates

BENEFITS

- Targeting EPC A and BREEAM Excellent.
- 50% of the development comprises offsite manufactured components, such as a pre-cast frame, mega-riser, timber frame and cladding. This approach simplified the project's logistics and improved its sustainability credentials by reducing the carbon footprint.
- Installation of over 390 vertical PV solar panels, which offsets approximately 46,000kg CO2 emissions. In addition to generating renewable energy, these vertical panels also reduced the amount of material needed for the construction.
- Willmott Dixon's Energy SynergyTM process is also being applied to the building to bridge the performance gap and drive down energy costs.
- The project's embodied carbon lifecycle was studied throughout the project, which is supporting the University's plans to achieve net-zero carbon from indirect emissions by 2050.
- LED lighting is fitted throughout.
- A Building User Guide and training schedule were developed prior to handover for the distribution to the building occupiers and managers.

BARRIERS

The University worked closely with the contractor and supply chain to ensure alternative practices were considered to help with project logistics on a spatially tight site. As such, 50% of the development comprised offsite manufactured components, which improved sustainability credentials as well as reducing project length and impact on the local community.

The positive partnership attitude established between the university team and the contractor allowed to identify and deliver innovative solutions such as using vertical solar PV to form the top floor plant room cladding resulting in increased renewable energy generation (less scope 2 carbon emissions) and less construction materials mobilised (less scope 3 carbon emissions).

Renewable energy generation and vertical integrated PV on the Interdisciplinary Biomedical Research Building at The University of Warwick

CONCLUSIONS

As multiple organisations align with climate urgency, much remains to be done to mobilise sufficient resources and processes to achieve the target in time.

The Interdisciplinary Biomedical Research Building at The University of Warwick is evidence that ambitious clients and supply chains can collaborate to accelerate adoption of new and better solutions, challenging established practices. Determination and partnerships at all levels are required to work across silos and bring new skills within existing business constraints.

At the University of Warwick, we are aware of the difficulty of building a sustainable society aligned with the 17 SDGs. We want to embrace the challenge and aspire to collaborate with like-minded partners. We are launching our campaign 'The Way to Sustainable' to express our determination and ambition play our part in maintaining climate change on a 1.5 degrees trajectory.