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29th November 2024

Re: De Montfort University collaboration with the proposed Woolfox New Town

Introduction: The proposed Woolfox development coincides with the new Labour Government's vison for New Towns and the creation of the related advisory Taskforce which will explore the pathways to economic growth, jobs and economic investment through boosting the supply and delivery of new homes and strong sustainable communities. This holistic approach to sustainable development also coincides with the approach advocated by De Montfort University (DMU) and highlights a number of ways in which it can contribute to the successful planning, delivery, monitoring and evaluation of the Woolfox project. DMU are keen to use our expertise throughout the process and any rates for consultancy, training etc. relating to this will be discussed at an appropriate time.

The following short outline will focus specifically on how this contribution might be manifest in two broad, and interconnected, areas:

- Life Long Learning and
- environmentally sustainable socio-economic development.

It will also suggest a long term, synergistic relationship between the University and the Woolfox community as it grows. Key to this relationship will be the establishment of an on-site presence in the form of a Sustainable Living Lab (SuLab) which will provide a hub for research, learning and community activity.

Definitions of Life Long Learning include both a focus on informal learning and the alignment of that with the existing formal educational structures. For the Woolfox development it is suggested that a third component is taken into account which is to enhance the ability of the project to learn as it evolves. It is proposed that DMU will have a role to play in each of these.

> *Informal learning* could entail the identification of skills and knowledge within the Woolfox community which can be shared e.g. growing and / or cooking food.
>
> *Formal learning* could be directed at the running of community courses e.g. designed to address the digital divide with associated employability benefits.
>
> *Project learning* would emerge from the systematic and ongoing monitoring and evaluation of innovations within the development such as the energy efficiency of new homes; this could align with the training of householders who are engaging with renewables etc. for the first time.

The ambition of Woolfox to be a demographically diverse and economically viable New Town that is

environmentally sustainable will be supported by the DMU team through access to a range of expertise in e.g. sustainable buildings and transport and health and community engagement and through the construction of the Living Lab SuLab which will support the co-creation of solutions to challenges and concern, contributing to DMU's strategic commitment to sustainability.

Woolfox and the Sustainable Urban Living Laboratory (SuLab)

The European Network (https://enoll.org/) defines Sustainable Urban Living Labs (SuLab) as *user-centred, open innovation ecosystems based on a systematic user co-creation approach to integrating research and innovation processes in real life communities and settings*.

These labs offer local stakeholders the chance to develop and test new technologies and ways of living to address the challenges of climate change and urban sustainability. The proposed SuLab will be a community-based space where interactions between the stakeholders can test, develop and/or apply social practices and/or technology to buildings and infrastructure. This will create a unique opportunity for co-creation with the community while underpinning the university's commitment to the 17 UN Sustainable Development Goals (SDGs) and the Sustainability emphasis of the proposed Woolfox Development.

SuLab is a project proposal that has been developed as a collaboration between the Woolfox team, experts from each DMU faculty and the planning consultancy Studio Urban Design. It is designed around a community centre (see provisional design at the end of this document) with living accommodation for specialist research (PhD) students. DMU is particularly interested in the idea of working in tandem with PhD students once costs will be agreed for their funding.

The Lab will focus on the integration of concepts, delivery processes and technologies to help build confidence for community, HE and local authority integration in the design and delivery of successful solutions for integrated housing and socio-economic economic development that is environmentally sustainable.

The lab will contribute to three central activities – teaching and learning (formal and informal), research, monitoring and evaluation (DMU and developers) and community and business engagement. It will draw upon expertise from De Montfort to co-design a number of sustainability opportunities with stakeholders including:

- Plan development and community stakeholder engagement – (co-design)
- On-site skills development for local people, into work and learning by doing. Address key indicators of deprivation such as the digital divide and other issues influencing employability (e.g. Life Long Learning Entitlement, Get Britain Working White paper).
- Sustainable community transport
- Explore and support community business potential
- Energy management - potential of technological and community energy business model innovations.
- Householder guidance for living with new energy technology.
- Local food production for cash and consumption (e.g. link with Co-farm https://www.cofarm.co/)
- Water and energy nexus - Exploring the potential to combine water treatment and energy storage capability (technology monitoring and evaluation)

- Evaluating building efficiency - qualitative and quantitative monitoring of environmental performance and thermal comfort
    - Sustainable building design and materials – evaluation of different materials and construction approaches, such as off-site manufacturing.
    - Site performance monitoring and evaluation.

In conclusion, the holistic approach to sustainable development and carbon neutrality is fundamental to both the Woolfox proposal and DMU. The development will benefit from the knowledge generated through the University's world-wide cutting-edge sustainability related research and, importantly, will provide a 'state of the art' example that can be shared with that global network. The 'Life-Long', synergetic, relationship will also generate a wealth of 'real world' insight that will be incorporated into invaluable, multi-disciplinary, teaching and learning material. This relationship will follow two interconnected pathways, the first centred on the Living Lab (SuLab) community building and the second on innovations in the 'co-design' and delivery of services within the development. It is anticipated that both paths will be supported over the long term by Doctoral research students from DMU who will be based in the community building itself.

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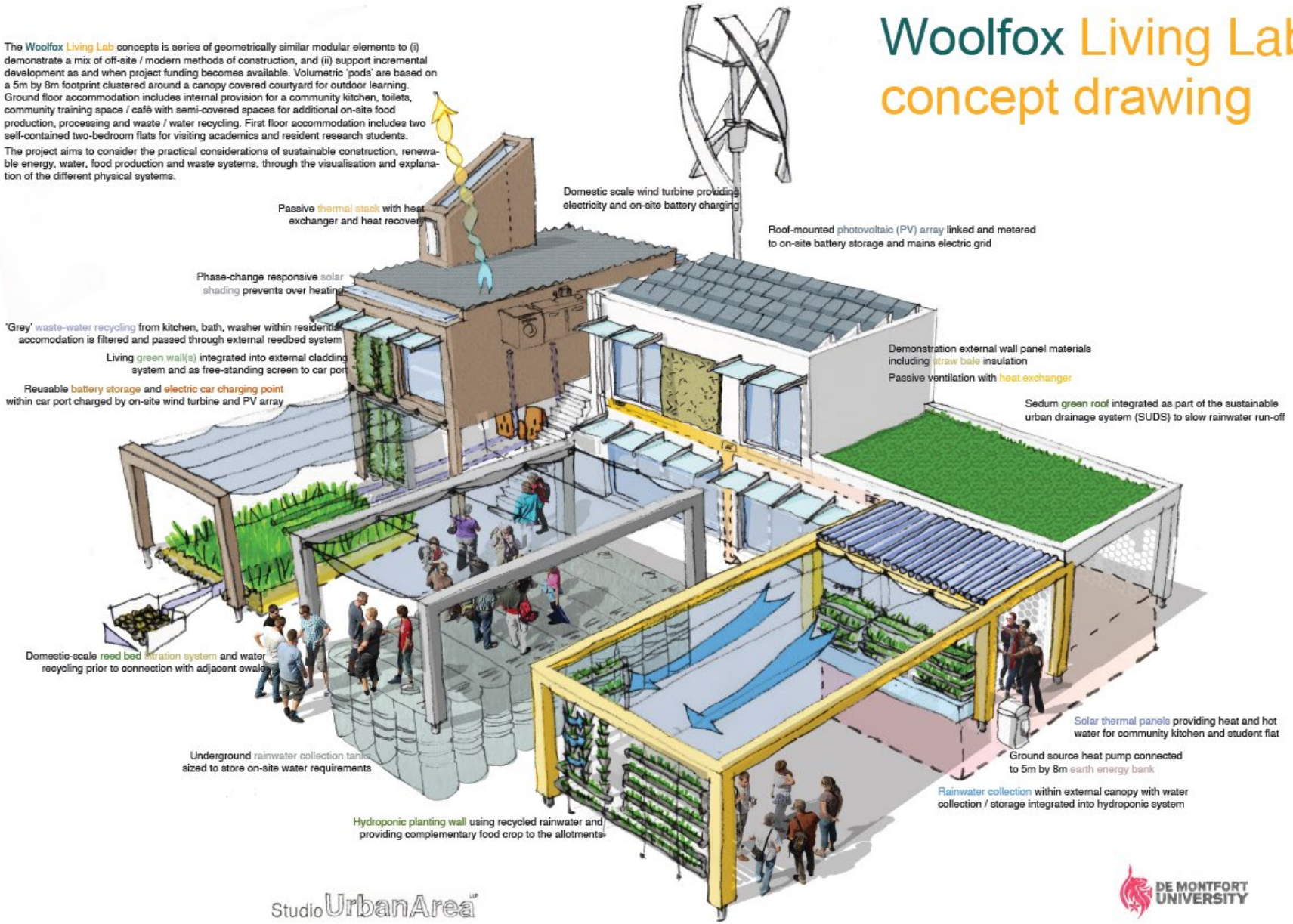
Woolfox Living Lab concept drawing

The Woolfox Living Lab concepts is series of geometrically similar modular elements to (i) demonstrate a mix of off-site / modern methods of construction, and (ii) support incremental development as and when project funding becomes available. Volumetric 'pods' are based on a 5m by 8m footprint clustered around a canopy covered courtyard for outdoor learning. Ground floor accommodation includes internal provision for a community kitchen, toilets, community training space / café with semi-covered spaces for additional on-site food production, processing and waste / water recycling. First floor accommodation includes two self-contained two-bedroom flats for visiting academics and resident research students.

The project aims to consider the practical considerations of sustainable construction, renewable energy, water, food production and waste systems, through the visualisation and explanation of the different physical systems.



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