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“Finding the Grain” – Supporting new models of affordable housing through the linking of digital pre-fabrication and craft elements.

One of the crucial tasks of our times is to help young people to “make” affordable and sustainable houses. They have become “generation rent”, stuck in expensive private rented accommodation, and many are attracted to the potential of building their own homes. Yet anyone seeking to act in this space is confronted by almost insurmountable obstacles, e.g. the price of land, obtaining planning permission, finding finance. Most self-build developments are small and rely on bespoke designs not openly available to new people seeking to make housing. Environmentally benign materials are still expensive. What can be done?

Wessex Community Assets (WCA) is a social enterprise operating in the South West of England which supports community-led housing projects. Currently, 12 community land trust projects have been completed (123 houses) and a further 24 are in the pipeline. One of the completed developments is a Passivhaus scheme on Dartmoor. WCA is currently expanding its support programme to include limited equity cooperatives, co-housing and self-build.

WCA is working with partners, including Schumacher College’s Masters’ programmes in Economics for Transition and Ecological Design, on an action research project exploring new ways forward for self-build. The proposition is that self-build could become a viable option for a wider cross-section of low income people if their focus on “making” was shifted from the super-structure to the internal elements and openings of the building – doors, windows, floors, stairs, kitchen, furniture etc. The building super-structure could be assembled in a short period using open source digital design and local pre-fabrication in timber makerspaces or “flying factories”. This would allow the self-builders to focus on crafting the other elements of the building. The making of the super-structure however would also involve a range of crafts persons and makers, working as part of a “flexible manufacturing network” when developments emerge.

The project is in the early stages but links to WCA’s established and successful community-led housing programme. Links are being developed with architects, arts agencies, makers (including builders and carpenters) and also with prospective groups of self-builders. A report on the feasibility of using local materials in construction has been completed, as part of a national programme on community economic development. A detailed business plan for a timber fabrication workspace is now being prepared and discussions held with land owners and funders. Wessex is also in discussion with prospective self-build groups.

The timber fabrication hub would offer space to carpenters and joiners and also contain the machinery required to create SIPs panels using local timber and local straw. The aim would be to offer self-build developments a source of affordable and sustainable pre-fabricated panels and other components which would simplify and accelerate the process of “making” a house. One of the key challenges will be to link these pre-fabricated components with a creative design process and a significant element of “craft” in the making of the houses. Hence the timber fabrication hub would also provide bench space for the self-builders to support them in making the remaining elements of their houses.