



Building Independence



FLEXI HOME - THE ACORNS

THE ACORNS



Building Independence

Background

- Successful Joint Revenue and Capital Bid with FCHA / Wrexham CBC / Williams Homes (Bala) / Ainsley Gommon Architects – IHP (Innovative Housing funding) Welsh Government
- Pilot Scheme comprising one concept flexi home delivered to an existing FCHA property based on a self-contained Wheelchair compatible annex
- Range of further flexi homes (DQR Compliant) – 1 Bed 1 Person; 2bed 3 person; assisted Bed and bathroom, incorporating stacking provision for scalability
- ‘Welsh first’ approach - preference towards materials and labour sourced locally within Wales
- EPC A Standard using a Fabric First approach by 2021
- Facilitates PAG (Physical Grant opportunities)
- Scheme Specification adapted for wider Pod/Panelised scheme roll out
- Technologies adapted from Active Building Centre, Swansea
- Assistive technology - utilising Amazon Alexa following a recent FCHA pilot
- Post completion performance / post occupancy evaluation (POE)
- Thermal comfort, indoor air quality, occupant well-being monitoring



KEY AREAS OF INNOVATION

Improving resilience and flexibility of Homes New build Response and Retrofit Crossover Up-scaling to meet urgent needs across Wales

MUST commit to an 'open book' policy, including the following:

- regular progress reports to the IHP working group.
- monitoring during and post construction.
- data collection (particularly cost and performance).
- public dissemination of key lessons learnt.

SHOULD demonstrate how they will*:

- be carbon-conscious in terms of both construction and lifecycle.
eg. SAP calculation, materials specification
- compare capital costs against costs in use, be robust and consider maintenance.
eg. cost analysis, life-cycle costing
- Provide long term constructable solutions. Develop skills, resources, community benefit.
eg. local supply chain, apprenticeships.
- provide healthy comfortable homes that promote wellbeing and avoid health risks.
eg. materials specification, daylight factors
- be affordable to run and to heat, addressing household fuel poverty.
eg. SAP comparison with benchmark
- provide sufficient space to meet users' needs be flexible in use, future-proofed.
eg. delivered space standards
- integrate into their neighbourhood, create places that people will want to live in, applicant should undertake DCFW** review.

* The demonstration of compliance is not limited to the examples given in grey, which are for illustrative purposes only.

** See Design Commission for Wales website, <https://dcfw.org/>

CRITERIA 1

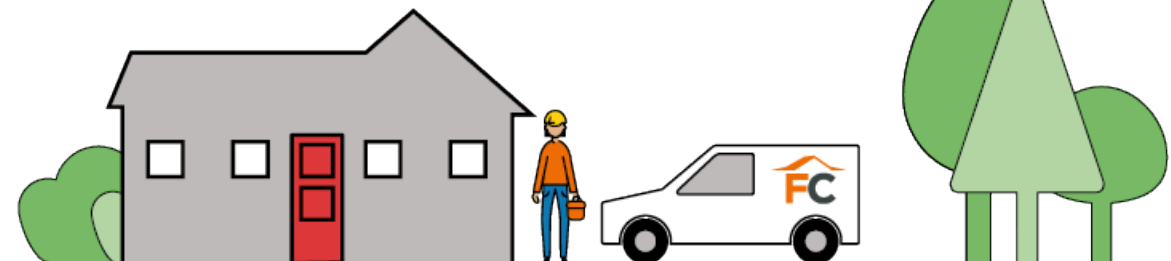
CRITERIA 2

WILL innovate in *at least one but not more than three* of the seven focus areas, for example:

- **CO₂**
 - decarbonising communities
 - meeting international targets
- **capital**
 - affordability
 - programme
 - delivering better value
 - supporting local economies
- **change**
 - buildability
 - adaptability
 - resilience
 - developing skills
- **health**
 - positive health benefits
 - reduced pressure on public services
- **energy**
 - affordable warmth
 - improvements in energy efficiency
- **space**
 - meeting specific housing need
 - flexibility and functionality
- **place**
 - supporting people and communities
 - delivering high quality design.

CRITERIA 3

- ✓ **Low carbon Health and Wellbeing Flexi Homes** in the heart of Communities where they are most needed, targeting individuals and families with high level support needs.
- ✓ **Faster Response** to allow those with physical disabilities to remain in their homes or local communities and live side by side with their siblings or family members, close to familiar local facilities and amenities.
- ✓ **MMC Panelised and SIP Technologies** are best suited to deliver desired aims & Client Brief while using local available skills and supply chain.

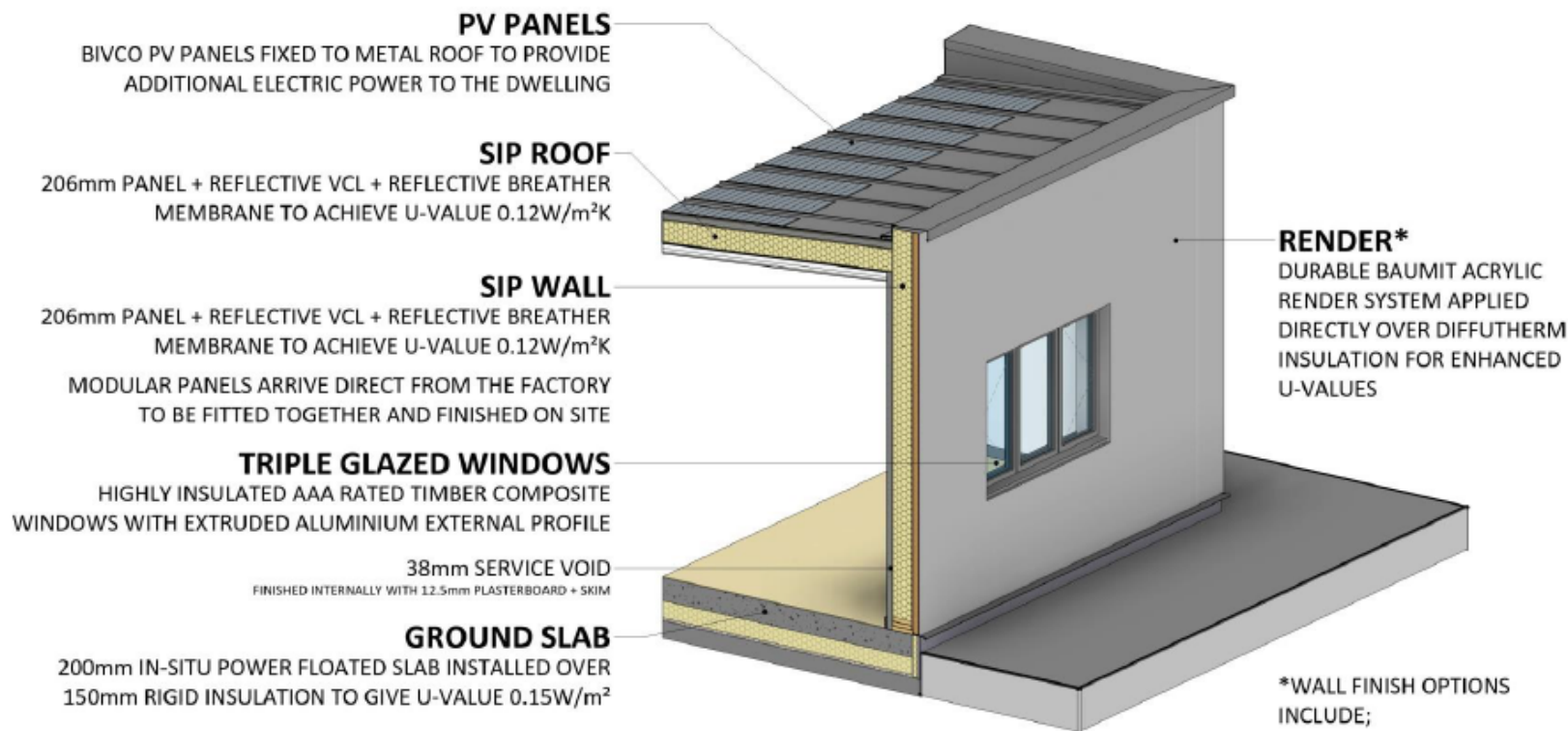


THE ACORNS

TECHNICAL DESIGN



Building Independence



NOTE:
LIMITING FABRIC PERFORMANCE VALUES FROM APPROVED DOCUMENT
PART L1A (NEW DWELLINGS)
EXTERNAL WALLS = 0.21 W/m²K
FLOOR = 0.18W/m²K
ROOF = 0.15W/m²K
WINDOWS & DOORS = 1.6W/m²K
AIR PERMEABILITY = 10m³/h.m²@50 Pa

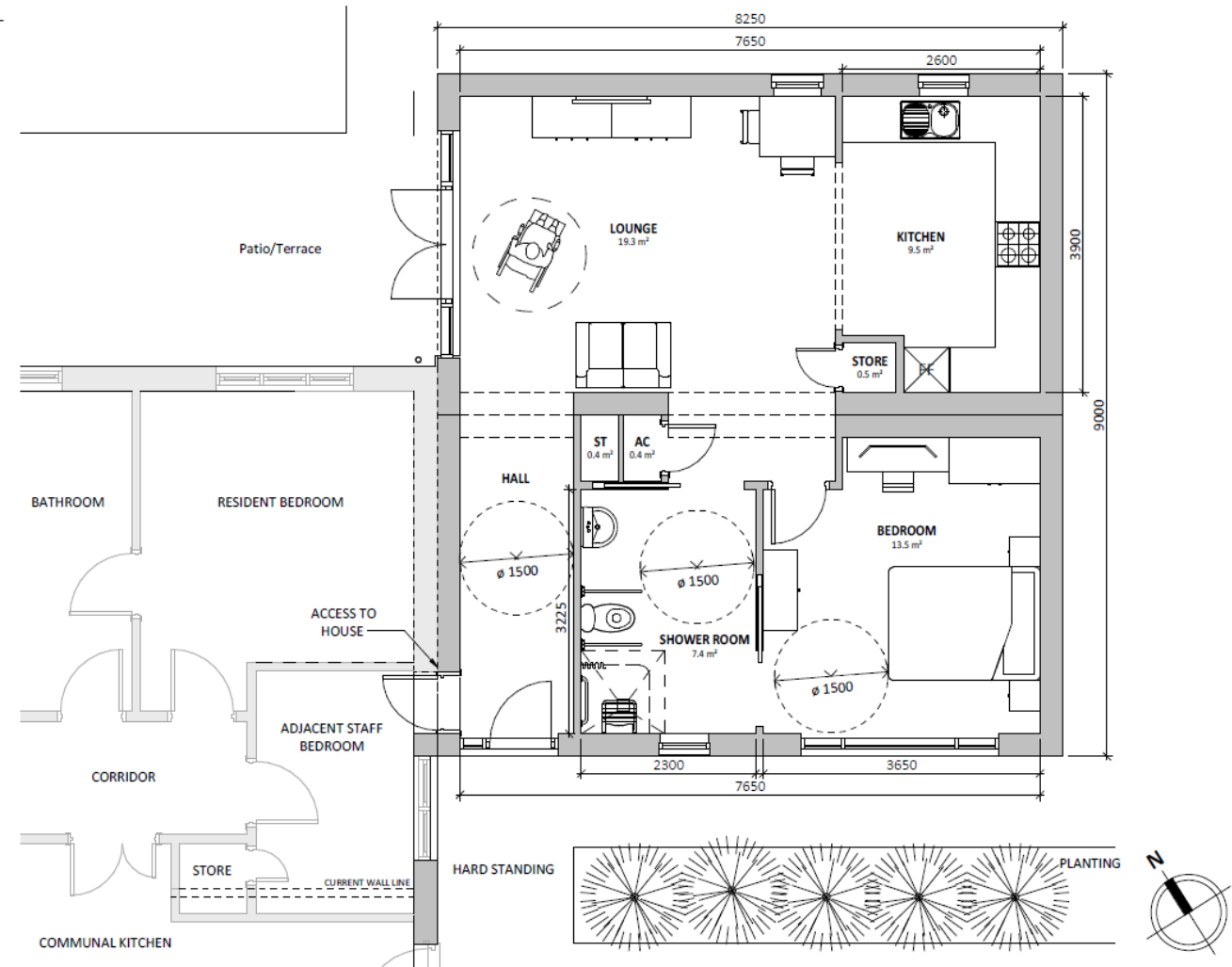


THE ACORNS

PROPOSED PLAN

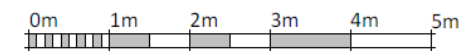


Building Independence



PROPOSED GROUND FLOOR PLAN

SCALE: 1 : 50



VISUAL SCALE 1:50 @ A3



ASSISTIVE TECHNOLOGY PRODUCTS

Property Components

- Dimmer switches
- Double sockets
- Thermostat
- Boiler switch
- TVR radiator valves
- Door sensors
- Moisture sensors
- Gas / water Valves
- PIR sensor
- Aico smart link detection

Tech Components

- Hub
- IoT hub
- Smart button
- Echo spot
- Echo show 5
- IR blaster for TV
- Gesture TV control



Innovate Trust Role

- Pre design / on-site development
(in partnership with Williams Homes, Support provider, Wrexham CBC)
- Post completion consultation: Education visits / training





Building Independence

IN ACTION!

**VIEW THIS VIDEO ON THE NORTH
WALES TOGETHER WEBSITE:**

<https://northwalestogether.org/active-support>



AIMS OF ASSISTIVE TECHNOLOGY

We aim to enable people to...

- Live independently in their own home. Devices can provide reassurance, information and an intercom connection to our support hub.
- Retain their independence for as long as possible. Devices can provide reminders for medication, alarms and have the ability to control their connected devices via voice command.
- Gain new skills such as language development, technology and independent living skills (e.g. cooking, following instructions from Alexa).
- Utilise associated smart home technology, including entertainment (e.g. music, television, games).
- Have greater control over their living environment, e.g. heating, lighting and security.
- Gain confidence with the use of technology.



We aim to...

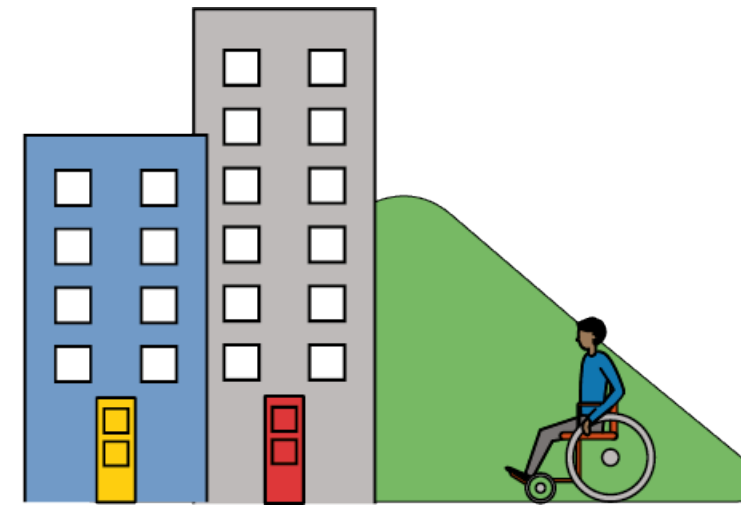
Make a significant contribution to 'smart' housing models of the future that will influence the social care sector for the better. These outcomes have most recently been demonstrated within the evaluation report on the smart home pilot between FCHA and support provider (Innovate Trust) in Cardiff.

AIMS OF ASSISTIVE TECHNOLOGY

Overall a positive change in emotional wellbeing

- 100% of individuals reported that they felt better able to do things for themselves
- 75% of individuals said the house was more fun to live in (with 25% saying it was the same)
- 100% of individuals like their smart home
- 50% of individuals reported feeling safer at home

All individuals were independently assessed as feeling better able to do things for themselves due to the introduction of technology.



FLEXI HOMES

Next Steps...

- Further Assistive Technology Projects in Wrexham (The Chapel) semi independent / independent living and Powys complex health provision
- Embed new technologies within FCHA standard specification
- Embed Flexi home technology for future scalable developments
- Further exploration of scaling up and integrating into Social Care commissioning

