



Assessment of the Proposed Property Size and Quality

at Bedlinog, Treharris for the Keogh Family.

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1.0 Purpose of this report

This report has been prepared to allow representatives of the local planning authority to review the proposals and understand the design reasoning for the proposals regarding overall size.

2.0 Persons to be accommodated

The property proposes to directly accommodate the extended Keogh family which includes:

- Grandmother – 1 person
- Son and his wife (the farmers) and their 2 children – 4 persons
- Total: 5 persons

It also includes sufficient space to occasionally accommodate the extended family who are also periodically involved with activity on the farm including another son and his wife and children.

It should be noted that the grandmother, who sadly was recently widowed, may wish, in the future, to have another partner.

3.0 Required living accommodation

The architectural brief for this project is to:

Provide essential accommodation for the family, who are the full-time workers of the farm, to support the efficient and seamless operation of the farm. By ensuring that the family has a comfortable and convenient living space on-site, we can facilitate their ability to manage day-to-day farm activities, care for the livestock, and maintain the overall well-being of the farm operations.

- Allow all the Keogh family to live together in the same property yet to recognise that the grandmother, and matriarch of the family, Daphne Trant, needs to have a discrete unit of accommodation similar to a self-contained flat.
- Provide occasional accommodation for the extended family.
- Provide a design that allows for the farming activity to take place yet provide sufficient separation of space to allow the Mrs Trant to live in a clean and unfettered environment.
- Provide sufficient separation to allow the Mrs Trant to have privacy.
- Provide accommodation in a format that allows the Keogh Family to construct the property using stone from the farm environment and oak harvested nearby. These construction types typically increase the external wall thickness, adding to the overall footprint.

4.0 Determining Reasonable Expectations

To assess what is dimensionally reasonable to accommodate the extended Keogh Family, we need to consider that there is full time occupation that would otherwise be equivalent to two families, the Mrs Trant and the Farmer, Jonathan Keogh's, family.



Mrs Trant's accommodation is a self-contained flat. Albeit without a kitchen area. The gross internal area of the proposed flat is 49m². This would be slightly below the description of a 1 bed, 2 person flat given in the 'Technical housing standards - nationally described space standard' as published by the Department for Local Government and Communities. It should be noted that the dining and kitchen facilities are provided outside this space on the ground floor as shared space. The space is to be comfortable and not confined or confining.

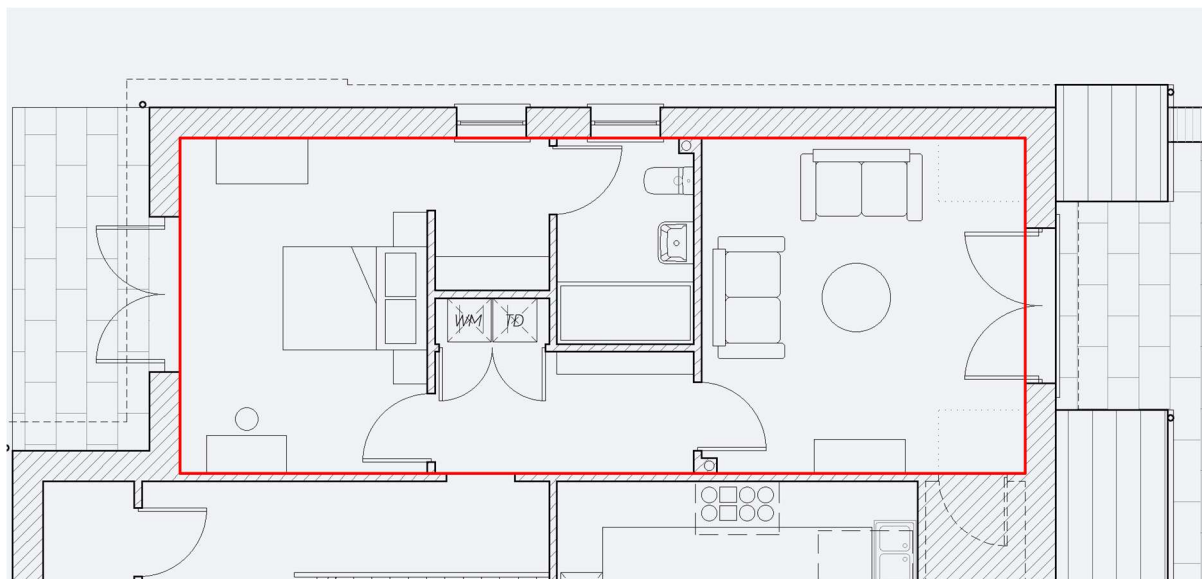


Figure 01 – The gross internal area enclosed in the red rectangle is 49m². Space includes bedroom facilities, an en-suite bathroom and a sitting room to enable separation and privacy from the wider family.

The broader accommodation for the farmer's family is on the lower ground floor and this covers an area of 89m², this includes bedrooms, bathrooms and again excludes the dining, kitchen and sitting room space which is located on the ground floor over. It does include space to be used as a boot room, allowing access from the garden, and a place to remove muddy clothing. This, in part, is a component of farm work and is necessary to separate the cleanliness of the house from the farm operations. Having this area on the lower ground floor also allows the house to have a suitable entrance upstairs on the ground floor, which can be cleaner and visitor facing.

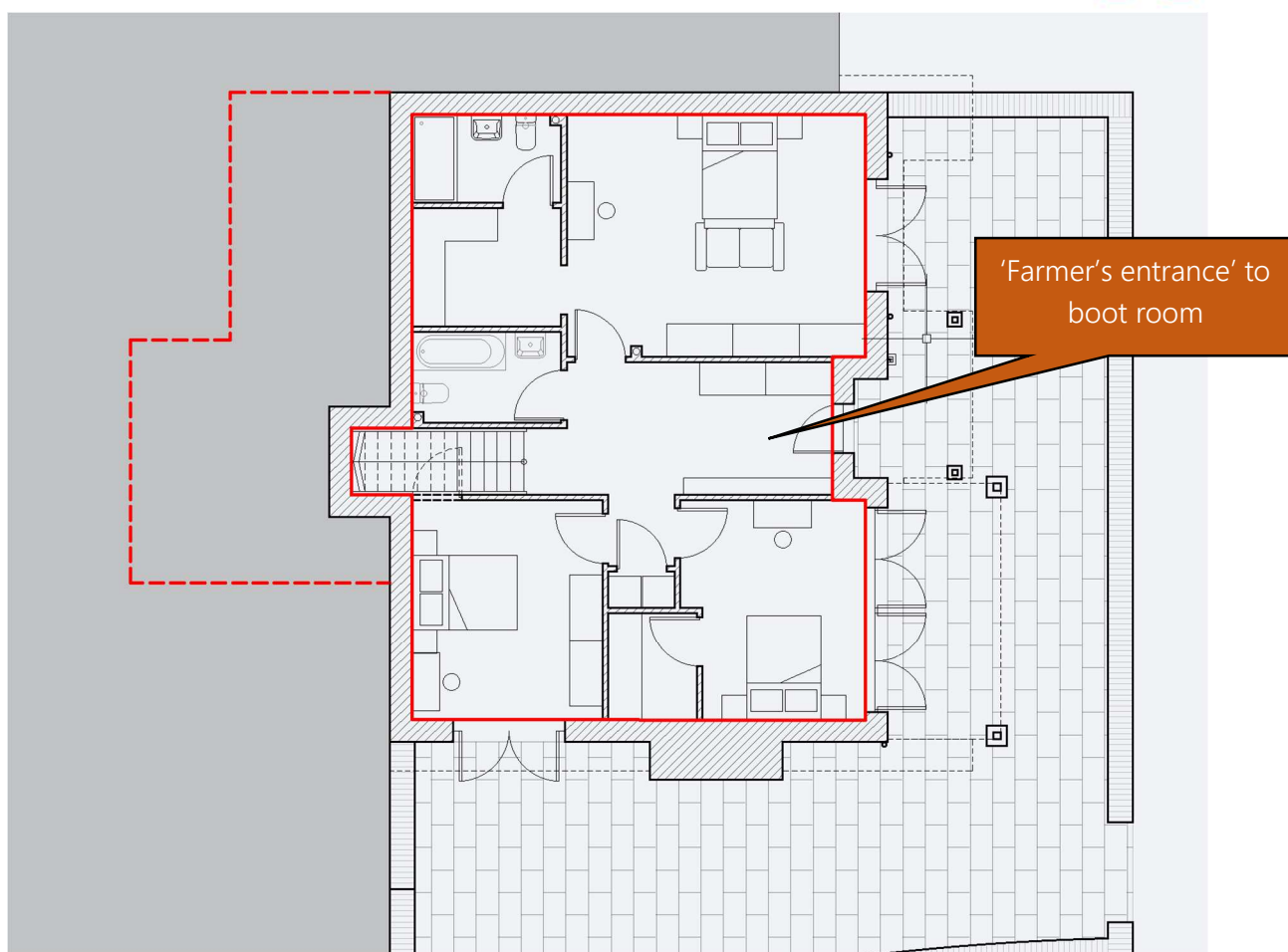


Figure 02 – The Farmer's accommodation on the ground floor.

The shared space includes a common hallway, accessible toilet provided to comply with building regulations approved document part M, stairs to the lower ground floor and a communal living, dining and kitchen space. This area is reasonably sized at 67m² in total.

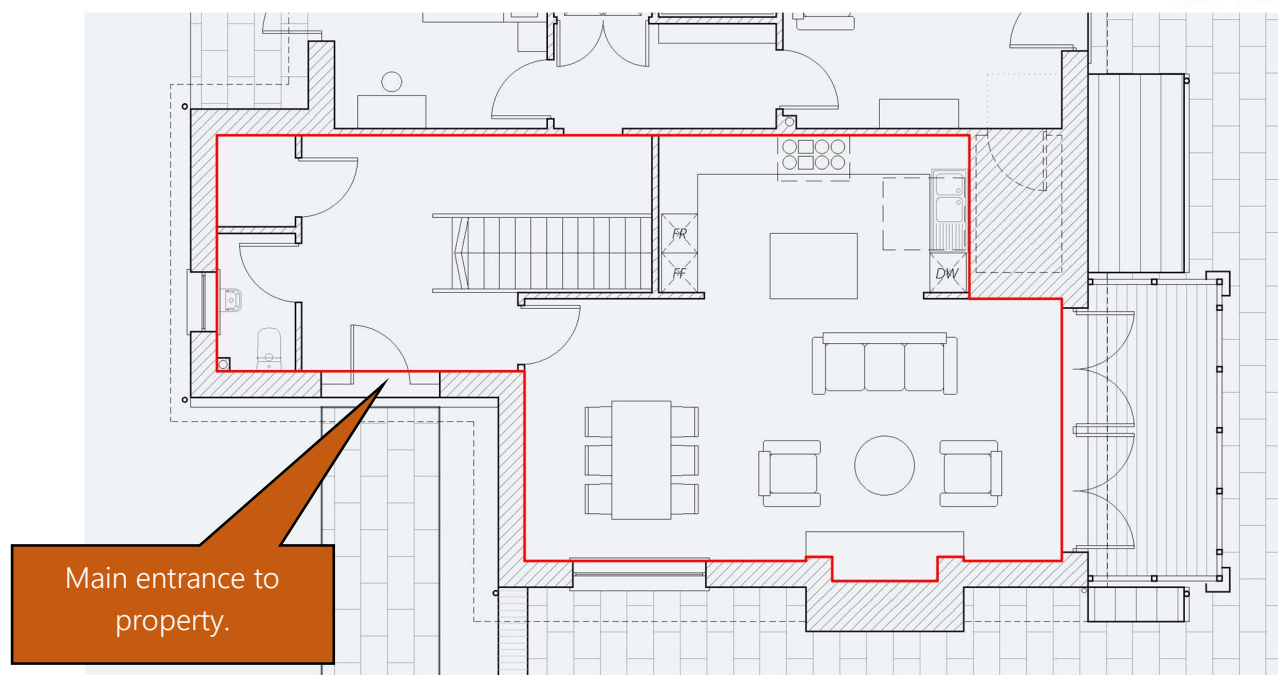


Figure 03 – Shared facilities are designed to bring the wider family together and allow sufficient space to accommodate visits from the second son and his family.

Looking at the technical housing standards, which represent a minimum spatial allowance a starting point of comparison might be:

<i>Description</i>	<i>Area (m²)</i>
1no x 1bed, 2 person dwelling on a single storey	50m ²
1no x 3bed, 4 person dwelling on 2 storeys	93m ²
Some space allowance for accommodating the fact it is a working farm and there is a special requirement to have an area for transitioning to a clean environment	c.10m ²
Some space to accommodate a combined entrance area, accessible WC etc. to the two areas of accommodation	c.25m ²
TOTAL	178m²

Figure 04 – Analysis of the proposals in reference to the technical housing standards

A total of 178m² for the dwelling and represents a minimum acceptable provision. There is no formal obligation to limit the dwelling to this minimum size. Given the surrounding space available around the dwelling, and the occasional need to accommodate the farmer's brother and his family, the proposed dwelling size of approximately 210m² is both appropriate and proportionate. This additional space would not only allow for a more comfortable living arrangement for the farmer's family but also provide the necessary flexibility to accommodate extended family members when required. Also, the slightly larger dwelling ensures that the long-term operational needs of the farm are met, enabling a functional and efficient living space for the farm's key workers, while maintaining a balanced and sustainable approach to land use and development.

**Table 1 - Minimum gross internal floor areas and storage (m²)**

Number of bedrooms(b)	Number of bed spaces (persons)	1 storey dwellings	2 storey dwellings	3 storey dwellings	Built-in storage
1b	1p	39 (37) *			1.0
	2p	50	58		1.5
2b	3p	61	70		2.0
	4p	70	79		
3b	4p	74	84	90	2.5
	5p	86	93	99	
	6p	95	102	108	
4b	5p	90	97	103	3.0
	6p	99	106	112	
	7p	108	115	121	
	8p	117	124	130	
5b	6p	103	110	116	3.5
	7p	112	119	125	
	8p	121	128	134	
6b	7p	116	123	129	4.0
	8p	125	132	138	

Figure 05 – Table 1 from the National Spatial Standards

5.0 Comments from the Agricultural Consultant.

We have been provided with the comments from the agricultural consultee, Reading Agricultural Consultants:

The proposed dwelling provides an open plan kitchen/dining/living room, W.C, three bedrooms, family bathroom and en-suite bathroom which will be occupied by Jonathan Keogh and his family, with a [sic] annexe which will be occupied by Daphne Trant, providing a lounge and bedroom with en-suite bathroom. From the plans provided it appears the annexe will share the use of the single kitchen within the main house. RAC considers that a four bedroom property is appropriate for a rural worker dwelling to allow for rural workers to reside on site with their family; however it is noted that the dwelling proposed has a total floor area (GEA) of approximately 261m² (including the balcony area on first floor). RAC considers that the size of the dwelling is larger than those typically approved for a rural worker dwelling and would not be commensurate with the agricultural business. RAC would note that in a previous survey carried out on behalf of local authorities it found that the total habitable floor area for rural workers dwellings was in the range of 140m² to 200m².

We would ask whether the figures mentioned in the final sentence 140m² to 200m² are gross internal areas rather than gross external area. We would also reject that it is appropriate to consider balconies as being within the measured area in this way.

Given this, we believe that the proposed dwelling's size is reasonable when considering both the unique requirements of the rural business and the practicalities of accommodating both the family and the annex. Therefore, we respectfully suggest that the proposed size of the dwelling should not be considered excessive or disproportionate to the needs of the agricultural business.



6.0 Design Quality Requirements

The following assessment of the proposals is made in reference to the 'Welsh Development Quality Requirements 2021 Creating Beautiful Homes and Places (WDQR 2021)' Document published by the Welsh Government Education and Public Services Group. This document is primarily aimed at large house builder schemes and register social landlord's producing affordable housing, but it provides a strong suite of questions to consider in the construction of the Keogh Family home.

Homes should be of high quality, innovative and sustainable	
Requirements	Response
<i>Homes should demonstrate that they represent value for money and "whole life cost" analysis should be a material consideration when assessing future maintenance costs against initial capital cost.</i>	This home will be built by the homeowner with the objective of providing a family home for generations. The materials selected are locally available on the farm allowing for ongoing sustainable maintenance using traditional and readily available materials and construction techniques.
<i>Modern Methods of Construction (MMC) is a preferred delivery solution.</i>	Owing to the remote location and difficult position of the proposed building MMC is not easily implemented. It is not impossible that the external walls could be constructed using a SIPs system however and this will be considered at RIBA Stage 4.
<i>Assessing and reducing upfront and embodied carbon during the design and construction phases, and when undertaking refurbishment.</i>	This is unduly onerous for a private self-builder, but it is worth noting that the proposals use materials already on site to form the external fabric of the building.
<i>Evaluating the potential for reuse of existing buildings, specifying reused and recycled materials and ensuring that buildings can be adapted, reused or deconstructed and recovered materials re-used or recycled at end of life.</i>	It is likely that the building will have an extremely long life span and that the material incorporated into the construction will be extremely durable. The stone proposed for the facades will be recoverable in the far future should the building be replaced.
<i>Maximising the efficient use of timber in construction to increase carbon storage in harvested wood products in Wales.</i>	It is proposed that the timber products will be sourced primarily from the farm environment as a large amount of oak is available to the Keogh family.
<i>Minimising operational carbon by reducing operational energy demand and where appropriate, using on site renewables.</i>	To minimise operational carbon, the proposal focuses on reducing energy demand through energy-efficient design, systems and smart management. In addition, the materials selected are locally available on



	the farm allowing for ongoing sustainable maintenance using traditional and readily available materials and construction techniques.
<i>Ensuring there is sufficient provision for the collection of key recyclables and storage of food waste in homes.</i>	There is ample space on this extensive site for storage of recyclables and food waste.
<i>Undertaking as-built assessment of whole life carbon and post occupancy evaluation of the building's performance in relation to the design intent.</i>	This is unduly onerous for a private self-builder
<i>Once upfront, embodied and operational carbon are minimised, using robust offsetting schemes to move to net-zero whole life carbon.</i>	This is unduly onerous for a private self-builder
<i>Achieving EPC A (SAP92 or greater) through the minimum fabric standard set out in "Appendix E" – Elemental specification for the DER/TER, within the Building Regulations Approved Document Part L Wales 2020 and by not using fossil fuel fired boilers to provide domestic hot water and space heating. Alternative proposals will be acceptable where it can be demonstrated by independent certification that the building's energy demand is reduced in accordance with the Energy Hierarchy for Planning in Welsh Government's Planning Policy Wales</i>	The applicant is open to this being conditioned
<i>An assessment of overheating risk based on the CIBSE TM59 methodology (for 'Category 1 buildings'), which demonstrates compliance with the CIBSE TM59 compliance criteria, for the following dwelling types: o Apartments/Flats. o Houses which do not have two or more parallel aspects to facilitate cross-ventilation.</i>	This property has an open aspect to all four sides on the first floor and three on the lower ground floor allow plenty of opportunities for cross ventilation.
Homes should be flexible, responsive to the changing needs of the occupants, meet the changing needs of a variety of households who will occupy the building over its life and be of sufficient size.	
<i>Rooms are large enough to take all the furniture occupants can reasonably be expected to need.</i>	This capacity is incorporated into the design.
<i>The approach to each home, including the point of access, stairs, lifts and circulation is</i>	This capacity is incorporated into the design.



<i>designed to enable easy movement of furniture and belongings to rooms within the home.</i>	
<i>Homes have adequate and convenient internal and external storage. This should include dedicated space for the storage of bicycles to encourage sustainable travel.</i>	This capacity is incorporated into the design.
<i>Homes meet the space standards in Appendix A and Appendix B.</i>	This capacity is incorporated into the design.
<i>All houses have a shower (in addition to a bath) and are provided with adequate space on the ground floor with plumbing, electrical and mechanical ventilation connections to allow for the future installation of a barrier free shower facility suitable for use by a person in a wheelchair. Homes with occupancy of 6 or more have the barrier free shower facility installed.</i>	This capacity is incorporated into the design.
<i>Considering how technology (such as mechanical ventilation with heat recovery and hybrid heating systems) might impact on space requirements.</i>	This will be addressed at RIBA stage 4
<i>Homes should be designed to maintain the dignity of occupants and visitors by ensuring bathrooms and shower rooms (excluding en-suite) do not open directly off habitable rooms or kitchens.</i>	This capacity is incorporated into the design.
<i>Providing sufficient space for occupants to set up a home office in a suitable room to allow home working.</i>	This capacity is incorporated into the design.
<i>Where practicable make internal walls non load bearing to enable future flexibility / adaptability.</i>	This capacity is incorporated into the design.
<i>Consider providing space particularly in "one bedroom" homes in order for overnight stay</i>	This capacity is incorporated into the design.
<i>Consideration should be given to MMC techniques and innovation that can maximise flexibility for adaptations and allow homes to respond to occupants' needs over a building / occupant's lifetime.</i>	It is more probable that traditional materials will be appropriate for this property and will allow greater flexibility in the future although SIPS panels may be an appropriate solution.
<i>Gigabit ready broadband connectivity, for example fibre to the premises (FTTP) or gigabit wireless technologies, shall be provided to every home.</i>	The availability of this is beyond the applicant's control.
Homes should be safe and secure.	



<i>Developments are designed to comply fully with the "Secured by Design" (SBD) Gold standard</i>	This will be addressed at RIBA stage 4
<i>Kitchens and bathrooms are functional and help reduce the risk of accidents.</i>	This capacity is incorporated into the design.
<i>Stairs are designed to minimise accidents and not create unnecessary inconvenience by allowing sufficient space for a future stair lift and to facilitate the movement of furniture between floors.</i>	This capacity is incorporated into the design.
<i>Homes are provided with sufficient, well located and convenient electrical socket outlets.</i>	This will be addressed at RIBA stage 4
<i>All family homes should have a private garden which is safe for small children to play in, convenient to use, of sufficient size and is easy to maintain. Consideration should also be given to the provision of private or communal amenity space to flats</i>	This capacity is incorporated into the design. Note there are two gardens one for the children to the South-East and a more discrete garden for Mrs Trant to the North-West.
<i>Car parking provision is conveniently situated and reflects the location and anticipated levels of car ownership.</i>	This capacity is incorporated into the design.
<i>Homes should be fitted with hard wired carbon monoxide detectors with battery back-up.</i>	This will be addressed at RIBA stage 4
<i>In addition to mandatory fire safety requirements, all Homes should have a heat detector and alarm in the kitchen as part of the fire detection system. All detectors and alarms must have an integral stand-by supply which is tamperproof and designed to last the lifetime of the fitting.</i>	This will be addressed at RIBA stage 4
Appendix A: Homes should be of sufficient size to meet the needs of occupants, have a convenient layout for everyday living and have adequate circulation space.	
<i>The dwelling provides the Gross Internal (floor) Area (GIA) and built-in storage area set out in Appendix B.</i>	This capacity is incorporated into the design.
<i>Accessibility requirements will be satisfied by designing dwellings to meet the Lifetime Homes Standards as published by the Joseph Rowntree Foundation.</i>	The design is suitably compliant.
<i>Homes are provided with adequate facilities for clothes washing, drying and a dedicated airing cupboard containing an appropriate source of heat.</i>	This capacity is incorporated into the design.



<i>A dwelling with two or more bed spaces has at least one double (or twin) bedroom.</i>	This capacity is incorporated into the design.
<i>Critical room dimensions meet intended purposes, in particular;</i> • <i>A single bedroom must have a floor area of at least 6.5m² and must be at least 2.1m wide.</i> • <i>A double or twin bedroom must have a floor area of at least 11.5m².</i> • <i>One double (or twin bedroom) must be at least 2.75m wide and every other double (or twin) bedroom must be at least 2.55m wide.</i>	This capacity is incorporated into the design.
<i>The minimum floor to ceiling height is 2.3m for at least 75% of the GIA.</i>	This capacity is incorporated into the design.

7.0 Conclusion

The proposals are demonstrably compliant with the design quality requirements, meet or exceed all spatial standards and are a wholly suitable property for the extended Keogh family. The property is sized proportionally for the intended use without being excessive or representing overdevelopment.

The Keogh family have not requested a luxurious house, just a practical and functional arrangement that suits their needs. Reduction in size would likely reduce the overall quality of the proposals both to the Keogh family and in generally, result in a house less able to provide suitable accommodation to the extended family and prohibit any future growth in the family size such as additional children or partners.

Given these points, we argue that the proposed dwelling's size is entirely appropriate, not excessive, and necessary to support the agricultural need. We would therefore recommend that the scheme is consented subject to suitable conditions regarding the technical performance of the constructed fabric as mentioned in the design quality requirement assessment.



Appendix B

Floor Areas

Home Designation	Home Type	Gross Internal (floor) Area (GIA) m2	General Storage m2 (included in GIA)
7P4B	2 Storey House	114	3
6P4B	2 Storey House	110	3
5P3B	2 Storey House	93	2.5
4P3B	2 Storey House	88	2.5
4P2B	2 Storey House	83	2.5
3P2B	2 Storey House	74	2
3P2B	Bungalow	58	2
3P2B	Flat – Walk up	65	2
3P2B	Flat – Common access	58	2
2P1B	Flat – Walk up	53	1.5
2P1B	Flat – Common access	50	1.5

Provided that designs do not compromise the quality of homes intended to be delivered by this standard, a reduction of up to 5% of the above GIA may be applied.