



Garden Annexes by GX Modular
and their compliance with BS 3632

Evidence demonstrating that the specifications of *Garden Annexes by GX Modular* are in line with the requirements of the British Standard BS 3632

VAT registration Number : GB 340 9986 67

Introduction

This document is supplementary to the letter submitted the Non-Statutory Clearance Team by Ensors Chartered Accountants dated 15-2-21. This document provides additional information regarding the specification of the garden annexes and demonstrates they are line with BS 3632 and that consequently these should be zero rated.

References to BS3632:2005, BS3632:2015 and soon to be introduced BS3632:2024 are covered

There is no formal registration for compliance with BS3632, so this document demonstrates the compliance in the absence of formal registration or certification.

Terminology

Garden Annexe/Granny Annexe

A residential structure that is specifically designed and built as living accommodation; often located in a domestic garden but may be deployed in residential parks

Garden Annexe by GX Modular (GABGXM)

As above but specifically designed and developed and complying with all definitions of a residential park home, and by way of moveability and compliance with, demonstrated with BS 3632

Hybrid Garden Annexe:

A general term to describe an annexe whilst combined with demonstrable transportability

Residential Park Home:

As defined by BS 3632. The term *residential park home* may be interchangeable with *Garden Annexe by GX Modular* (GABGXM)

Specific Garden Annexes by GX Modular (GABGXM)

Ranges:

Ivyo
St George
XB
Annexxa

Sizes : i.e. **740** being 7.7m x 4.4m internally

Relevant Notes from the Current NSC submission (Feb 2021)

The annexes are marketed as being hybrid in nature, emphasising the fact that their build quality is equivalent to what would be expected from a permanent structure whilst remaining fully movable.

Owing to the manufacturing style, each unit is fully transportable in one piece; this is clarified on GX's website and explained in detail in the document provided to planning authorities (LDC Supporting Information & Statement – copy attached).

The units are, in almost all cases, fitted with kitchen and bathroom facilities and GXML has been treating the supply of the unit itself as reduced rated for VAT purposes as they meet the criteria for reduced rating as a 'caravan'. It standard rates the supplies of any removable contents in accordance with the legislation which specifically excludes removable contents from reduced or zero-rating.

GXML is uncertain whether it has been charging 5% VAT in error and should, in fact, have been zero-rating the supplies of the units to customers. The uncertainty has arisen around the requirement for zero-rating, contained in Schedule 8, Group 9, Item 1(a), VATA 1994, which state that caravans must be manufactured to standard BS 3632 in order for zero rating to apply.

VAT Information Sheet 04/13 indicated that the easiest way of demonstrating compliance with BS 3632 is a badge of approval provided by the National Caravan Council (NCC). However, the NCC website https://www.thencc.org.uk/Our_Schemes/cert_scheme.aspx states that its approval scheme does not include residential park homes and that these are approved by way of self-certification by the manufacturer.

There is historic case law revolving around the definition of a caravan (ie Scandinavian Log Cabins Direct UKFTT TC05312, University of Kent VATDR 372 VTD 18625 and Oak Tree Motor Homes Ltd 2017 UT 27).

GXML's manufacturing process and choice of materials complies with BS 3632 and this is clearly explained in its marketing materials. GXML purchased the current version of the BS standard details prior to making any of the supplies in question. Whilst it has not been subject to an independent accreditation that the manufacture of the units complies with BS 3632 it is in a position to demonstrate that this is in fact the case.

Refer to BS 3632:2015 by the British Standards Institute

Part 1 Scope

Part 2 Normative References

Part 3 Terms and Definitions

Part 4 Design

Part 5 Materials

Part 6 Internal Equipment

Part 7 Installation of Services

Part 8 Identification

Part 9 Notices

Part 10 User's Handbook

Detailed notes with the regard to the compliance of relevant GABGXM with BS3632

Part 1 Scope

The scope of the BS3632:2015 document specifies the nature of a residential park home for use as permanent place of residence. A GABGXM is so designed and manufactured as a permanent place of residence.

Part 2 Normative References

The documents referenced in BS3632:2015 are noted and agreed.

Part 3 Terms and Definitions

The terms and definitions referenced in BS3632:2015 are noted and agreed. Notably 3.3 Habitable area, 3.4 Definition of a residential park home as a caravan as a permanent place of residence and 3.5 Wet rooms (rooms used for domestic activities such as cooking, laundry and bathing which give rise to the production of airborne moisture, such as WCs, bathrooms and shower rooms etc)

Part 4 Design

4.1 Occupancy: whilst GX Modular do not promote the size of a GABGXM by the number of berths per se, the size and occupancy is demonstrated by the capability of the number of beds. This determines the ventilation.

4.2 Accommodation: all applicable GABGXM provide a minimum of living area; dining area; kitchen area; bathroom and/or shower room and WC

4.3 Dimensions: GX Modular determines and markets all dimensions in the terms of BS3632:2015 and all applicable GABGXM comply with the stated:

- a) floor area being no less than 23sqm
- b) minimum internal height (flat ceiling) is 2210mm, being excess of the recommended 2135mm
- c) minimum internal height (pitched ceiling) is 2210mm, being excess of the recommended 2135mm
- d) the overall height of the living accommodation, measured internally from the floor at the lowest level to the ceiling at the highest level, does not exceed 3050mm

4.4 External Doors and Windows: All GABGXM under 40sqm internal floor area have a minimum of one external door. GABGXM in excess of 40sqm have two external doors. All habitable areas in a GABGXM are provided with windows or glazed external doors (or both) of which the total glazed area is more than 10% of the room floor area. All habitable areas in each GABGXM have windows or external doors (or both) which have open-able areas more than 5% of the room floor area.

All hinged windows in GABGXM open more than 30°. Sliding windows open more than 5% of the room floor area. In rooms in GABGXM designated as sleeping areas, purge ventilation is provided in addition to simply a door, but the extent of that door opening ensures that the security of the GABGXM is maintained. All Windows are fitted with means to prevent inadvertent opening.

4.5 Means of Escape: All habitable areas in GABGXM are provided with a means of escape, either through an emergency door or emergency window giving direct access to the open air. In a kitchen area, if any part of an external door or window is within 1 m of any fixed hob, cooker or grill, an alternative means of escape is provided. The clear opening of an entrance door or a means of escape is not obstructed by any fixed part of furniture or equipment.

All doors are vertically hinged or slide horizontally and have a clear opening of more than 1.9 m in height and 0.7 m in width. Where hinged, doors open more than 85°. Emergency windows shall have a clear opening of not less than 0.45 m × 0.45 m, and not less than 0.33 m² in area. No casement stay or casement fastener shall project into the clear opening.

GABGXM Emergency windows are capable of being easily and quickly opened from the inside. The lower edge of the clear opening is not more than 0.9 m above floor level, except in kitchen areas and utility rooms, where the clear opening is not more than 1 m above floor level. Emergency windows in GABGXM are never horizontally hinged on their lower edge. When top hung they are capable of staying open to not less than 70° without needing to be held by the person escaping. Handles of top hung emergency windows on GABGXM are always located more than three quarters of the height of the window below the upper edge.

4.6 External Walls: See below in 4.9

4.7 Internal Walls: See below in 5.3

4.8 Glazing: The glass in external doors and windows conforms to BS 6262-4 and BS EN 12600. No other glass fittings are supplied

4.9 Construction Design Criteria: The external construction is designed to prevent penetration of weather and damp under normal conditions. The structure can transmit the dead and imposed loads to which it might be subjected to the ground. It is also capable of supporting the dead and imposed loads during normal use, including the period of assembly and any other subsequent times when the annexe may be moved by way of hoist or crane or dismantled.

The structure may use holding down points if such location requires. In terms of insulation (4.9.3) The GABGXM has U values no greater than .3W/m²K in the floor, the walls and 0.2W/m²K in the roof. Glass in the GABGXM exceeds the standards of BS 6262-4 and BS 6206 with the complete doors and windows (including frames) having a U value not greater than 1.6 W/m²K.

The GABGXM minimizes the transmission of airborne noise (4.9.4), with the external walls (excluding doors and windows) having a sound reduction index (R) of 35 dB over a frequency range of 125 Hz to 4 000 Hz

4.10 Ventilation (4.10.1) In the terms of BS3632:2015, the GABGXM provides a: a) supply of fresh air for occupants; b) supply of combustion air for all non-room sealed appliances; and c) means of purge venting products of combustion, moisture and noxious odours. (4.10.4.1) The ventilation system within the GABGXM conforms to 4.10.4.2, 4.10.4.3, 4.10.4.4 or 4.10.4.5. Likewise (4.10.4.2) the background ventilation with intermittent extractor fans is provided well within the terms of BS3632

(4.10.4.2.3) Bathrooms, shower rooms and WCs in each GABGXM has a minimum total free area of fixed background ventilation of 2 000 mm² apportioned equally between high- and low-level vents and (4.10.4.2.4) alternative background ventilation provisions are provided by adjustable trickle ventilators, installed not less than 1.75 m above finished floor level. Purge ventilation is used in separate WCs.

(4.10.6) The fixed ventilation provision for solid fuel fired appliances conform to BS 6762-2, or the appliance manufacturer's instructions. (4.10.7) The location of all ventilation openings is such that they cannot be easily obstructed by the occupants.

(4.12) Roof ventilation. GABGXM have roofs that are designed to resist the passage of water, wind-blown snow and dust into the residential park home. Roofs are designed to prevent the formation of condensation within the structure. (4.12.2) Unventilated roofs in GABGXMs, whether flat or pitched, warm or cold, incorporate a proprietary breathable underlay membrane inside the outer roof covering. The membrane meets the requirements of BS EN 13859-1. (4.12.3) Ventilated roofs have a vapour control layer installed where the roof pitch is less than 15°, and where the shape of the roof precludes conformity with 4.12.3.2, 4.12.3.3, 4.12.3.4 or 4.12.3.5. Where warm and cold roof ventilation is employed within the same roof structure, the roof is partitioned to ensure the two methods of ventilation are not mixed.

Part 5 Materials

5.1 Roof: GABGXM use materials for the cladding of the external roof have surfaces of a fire resistance not less than classification "AC" as defined in BS 476-3:2004 or classification B roof (t4) as defined in BS EN 13501-5:2004+A1:2009

5.2 External cladding of walls of GABGXM are equipped with MTX and a Tyvek Firecurb lining (Euroclass B)

5.3 Internal cladding of walls and ceiling are of GABGXM are finished with 15mm Fire Rated MDF boards providing Euroclass B/C protection, beyond the stipulated Euroclass D

5.4 Prevention of decay and corrosion. Timber (5.4.1) components of the GABGXM that are exposed to the ground are treated with a wood preservative in accordance with BS 8417. The level of natural resistance to biological attack or the type of preservative treatment is based on the degree of exposure to wetting under the precise service conditions of the timber component. (5.4.2) Metal components are not in contact with the ground in any GABGXM. (5.4.3) Floor – all components are installed and specified to materials suppliers guides and comply with 4.9.1 and 4.9.3

Part 6 Internal Equipment

6.1 General: Internal equipment is installed in accordance with the equipment manufacturer's installation instructions.

6.2 Heating Equipment: By fitting fully controllable ultra-flat panel thermostatically controlled electric radiators the GABGXM is equipped with a heating system capable of raising and maintaining the internal temperature (when the external temperature is -1°C) as follows:

- living room, dining room: 22°C ;
- bathroom, shower room: 22°C ;
- kitchen: 18°C ;
- bedroom: 18°C ; and
- hallway: 19°C

6.3 Cooking Equipment: Each GABGXM is equipped with cooking equipment to BS EN 60335-2-6. Where cooking equipment is not provided, the GABGXM provides floor space of not less than $0.6\text{ m} \times 0.6\text{ m}$ for a free-standing cooking appliance. Gas appliances are not supplied.

6.4 Refrigeration Equipment: Where a refrigerator is provided in a GABGXM, it conforms to BS EN 60335-2-24. Where a refrigerator is not provided, a floor space of not less than $0.6\text{ m} \times 0.6\text{ m}$ may be provided. Provision is also be made for the necessary electrical connections.

6.5 Safety Alarms

A smoke alarm conforming to BS EN 14604 is installed in each GABGXM in accordance with the alarm manufacturer's instructions.

Part 7 Installation of Services

7.1 Electrical Services: The electrical installation of each GABGXM conforms to BS 7671. Electrical socket outlets are provided in all habitable areas and electric lighting is provided in all rooms.

7.5 Water and Waste Disposal: Particular attention is applied to on each GABGXM installation including the Water Supply (Water Fittings) Regulations 1999, as amended [4] and the Water Supply (Water Fittings) (Scotland) Byelaws 2014 [5]

7.5.1 Sanitary Provisions

Each GABGXM is provided with a minimum of:

- a) a flushing WC, which conforms to BS EN 33 and BS EN 997, and is capable of being connected to an external drainage system, which might require venting;
- b) a bath or shower (or both), a fixed sink in the kitchen and a wash basin (where ceramic, conforming to BS 1188) in a bathroom, shower room or WC
- c) a water heating system
- d) a means of connecting a mains supply to the kitchen sink and the water heating system
- e) a hot and cold water supply; and
- f) a stop cock for the incoming water supply, close to the point of entry of the pipe supplying water to the residential park home.

GABGXM fittings are trapped and drained in accordance with BS EN 12056-2. Water pipes shall be positioned so that, where possible, all joints are accessible. Where they might be exposed to sub-zero conditions, water pipes are insulated. Where pre-formed rigid foam insulation is used, it conforms to BS 5608.

7.5.2 Drainage

The roof of every GABGXM is designed to discharge rainwater into rainwater outlets by way of guttering or roof troughs. Rainwater outlets are positioned clear of doors, windows and ventilators. The rainwater drainage system are installed in accordance with the manufacturer's instructions. Foul drainage connections are positioned as to avoid structural members of the chassis and to minimize risk of damage during transportation and siting.

7.5.3 Prevention of scalding

The hot water supply to baths and showers is limited to 48 °C by a TMV 2 rated thermostatic mixing valve conforming to BS EN 1111 and BS EN 1287, to prevent scalding. Alternatively, a TMV 3 rated thermostatic mixing valve is used to serve a whole room or the whole home.

7.6 Alternative or renewable energy systems and technologies

When applicable, alternative or renewable energy systems in a GABGXM are installed in accordance with the system manufacturers' instructions.

7.7 Lighting

Fixed internal light fittings are provided with low energy lamps with a luminous efficacy greater than 45 lamp lumens per circuit watt.

7.8 Protection of systems during transportation and siting

When a GABGXM is dispatched from the factory, the open ends of all services are blanked and protected to prevent damage during transportation and siting.

Part 8 Identification

Each GABGXM has an identification number permanently marked throughout the structure, on the chassis, on the same side as the main entrance door, in a position that is readily visible. The identification number identifies the manufacturer, year of manufacture, and the individual home.

Part 9 Notices

Fire warning notice: A fire warning notice not less than 0.2 m × 0.13 m is permanently fixed inside the GABGXM in a position that is readily visible, and gives simple fire prevention advice and set out the action to be taken in the event of fire.

Part 10 Users Handbook

As part of the GABGXM Handover Pack, the user's handbook is provided along with introductions and training. This pack contains:

- a) the full specification of the GABGXM;
- b) the following warning instructions regarding fire and asphyxiation risks:
 - 1) do not block ventilators;

2) use only portable fire extinguishers of the dry powder type, except on liquid fires, where only fire blankets shall be used

3) use a fire blanket on a liquid fire. If a fire occurs in the oven, turn off the oven and leave the oven door closed to smother the fire

4) do not use portable gas or liquid fuel heating equipment, it is a source of danger and could cause fumes, asphyxiation and condensation;

c) safety instructions relating to all fixed installations provided

d) the location of ventilation openings and the method of checking and cleaning any protective screens

e) the position of chassis holding down points

f) operating and maintenance: instructions for all fitted appliances, unvented mains pressure water cylinders, heating systems and alternative and renewable energy systems (such as MVHR);

g) maintenance and testing instructions for smoke and CO alarms;

h) a description or floor plan giving the location of all designated means of escape; and

i) guidance for skirting the GABGXM, e.g. ventilation openings and access panels. The user's handbook also carries the following statement: WARNING - do not carry out any modifications without first consulting the manufacturer or a suitably qualified person.

Ends -----