

## House Type Approval Certificate

Certificate No: **STAS/16/005/DM61/06**

Date: **13 February 2018**

<b>A</b>	<b>Certificate Holder:</b>	
	Persimmon Homes, Unit 1, Wester Inch Business Park, Old Well Court, Bathgate, West Lothian, EH48 2TQ.	
	E-mail: <a href="mailto:peter.Hacking@persimmonhomes.com">peter.Hacking@persimmonhomes.com</a>	Tel: <b>0141 7662616</b>

<b>B</b>	<b>House Type Titles:</b>	
	Description:	<b>Brodick Terraced three storey house (including mid and end terraced types, optional en-suite and options to external fabric finishes)</b>

<b>C</b>	The domestic type approval has been assessed on the following drawings and specifications:	
	See attached annexe to this certificate	

<b>D</b>	<b>Climatic conditions:</b> The design may be built in areas where the climatic conditions are equal to or less than those detailed below:		
	<b>Wind:</b> (as defined in BS 6399-2)	<i>Standard</i> effective wind speed, $V_e =$ For maximum effective height = Has funnelling been considered?	24 m/s 5m NO
	<b>Wind:</b> (as defined in CP3: Chapter V)	<i>Design wind speed</i> , $V_s =$ (relevant to the building frame, at a height of 3m or less)	M/S
	<b>Snow:</b> (as defined in BS 6399-3)	<i>Site snow load</i> , $S_o =$ Influenced by adjacent buildings?	0.60 Kn/m2 NO
	<b>Resistance to moisture/durability of exposed elements:</b>	Max exposure (to wind driven rain) grading, as defined in BRE Report – Thermal Insulation: Avoiding Risks, Second Edition, 1994, to be exposure zone: Exposure to sea spray (i.e. coastal region) or de-icing salts? Other air contaminants or biological factors – please specify any enhanced resistance if applicable (refer to BS7543 for guidance)	Zone 1/ Zone 2/ Zone 3  NO
	<b>Design Life:</b> (per BS 7543 – Durability of buildings and building elements, products and components)	Category of building design life = Design life of primary building envelope	50 years  50 years

<b>E</b>	<b>Conditions of certification:</b>	
	<ol style="list-style-type: none"> <li>The design shown and the specifications and materials referred to have been assessed and approved in accordance with the Building (Scotland) Regulations 2004 and in accordance with the supporting guidance in the Domestic Technical Handbooks which came into force with effect from 1 July 2017.</li> <li>The certificate shall be valid until invalidated by formal notice by the Local Authority Building Standards Scotland.</li> <li>The layout at second floor level has been deemed as an acceptable alternative approach and is reflected in the Opinion by BSD dated 18 February 2015.</li> <li>The design shown and the materials specified shall not be changed without reference to the Local Authority Building Standards Scotland responsible for certifying the system.</li> <li>Where reference is made on a plan or specification document to any Code of Practice, British or European Standard or manufacturer's instruction it shall be construed as a reference to such publication in the form in which it is in force at the date of this certificate.</li> <li>This certificate should not be regarded as a formal approval under the building warrant process prescribed by the Building (Scotland) Act 2003 enacted from 1 May 2005</li> <li>The Indev Consult Ltd statement dated 1/11/2016 referenced here under Section G, confirm that a structural appraisal has been carried out. Further site-specific information MUST BE made available when a site-specific building warrant is sought. Such additional information should take cognisance of Procedural Guidance on Certification including information to be submitted with a Building Warrant Application dated April 2010 Version 2 (2017). Confirmation of a holistic approach to structural adequacy of the entire completed building shall be provided by a registered engineer to the local authority within whose area the site specific dwelling is to be built.</li> <li>This certificate confirms compliance with mandatory standard 6.1. However, this is based on a notional 'worst case' criteria with regards to orientation, shading, sheltering and resultant PV array efficiency. Site specific information will be required to confirm the actual DER for the STAS approved house type on each plot on a particular site.</li> </ol>	

**Annexe of drawings, certificates and specification documents used in the assessment:**

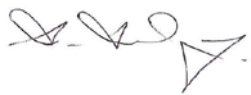
F	Drawing Number:	Description:
	V6-TF-0886t(10)001A Rev D	Schedules & Electrical Legend Mid Terrace Option A
	V6-TF-0886t(10)001B Rev D	Schedules & Electrical Legend Mid Terrace With En-suite Option B
	V6-TF-0886t(10)001C Rev D	Schedules & Electrical Legend End Terrace Option C
	V6-TF-0886t(10)001D Rev D	Schedules & Electrical Legend End Terrace With En-suite Option D
	V6-TF-0886t(15)101A Rev A	Foundation & Drainage Layout Mid Terrace Option A
	V6-TF-0886t(15)101B Rev A	Foundation & Drainage Layout Mid Terrace With En-suite Option B
	V6-TF-0886t(15)101C Rev A	Foundation & Drainage Layout End Terrace Option C
	V6-TF-0886t(15)101D Rev A	Foundation & Drainage Layout End Terrace With En-suite Option D
	V6-TF-0886t(15)102A Rev A	Drainage Isometric Mid Terrace Option A
	V6-TF-0886t(15)102B Rev A	Drainage Isometric Mid Terrace With En-suite Option B
	V6-TF-0886t(15)102C Rev A	Drainage Isometric End Terrace Option C
	V6-TF-0886t(15)102D Rev A	Drainage Isometric End Terrace With En-suite Option D
	V6-TF-0886t(15)201A Rev D	Ground Floor Plan Mid Terrace Option A
	V6-TF-0886t(15)201B Rev D	Ground Floor Plan Mid Terrace With En-suite Option B
	V6-TF-0886t(15)201C Rev D	Ground Floor Plan End Terrace Option C
	V6-TF-0886t(15)201D Rev D	Ground Floor Plan End Terrace With En-suite Option D
	V6-TF-0886t(15)202A Rev E	First Floor Plan Mid Terrace Arrangement Option A
	V6-TF-0886t(15)202B Rev E	First Floor Plan Mid Terrace With En-suite Option B
	V6-TF-0886t(15)202C Rev E	First Floor Plan End Terrace Option C
	V6-TF-0886t(15)202D Rev E	First Floor Plan End Terrace With En-suite Option D
	V6-TF-0886t(15)203A Rev B	Second Floor Plan Mid Terrace Option A
	V6-TF-0886t(15)203B Rev B	Second Floor Plan Mid Terrace With En-suite Option B
	V6-TF-0886t(15)203C Rev B	Second Floor Plan End Terrace Option C
	V6-TF-0886t(15)203D Rev B	Second Floor Plan End Terrace With En-suite Option D
	V6-TF-0886t(15)301A Rev E	Section A-A Mid Terrace Option A
	V6-TF-0886t(15)301B Rev E	Section A-A Mid Terrace With En-suite Option B
	V6-TF-0886t(15)301C Rev E	Section A-A End Terrace Option C
	V6-TF-0886t(15)301D Rev E	Section A-A End Terrace With En-suite Option D
	V6-TF-0886t(15)302A	Section B-B Mid Terrace Option A
	V6-TF-0886t(15)302B	Section B-B Mid Terrace With En-suite Option B
	V6-TF-0886t(15)302C	Section B-B End Terrace Option C
	V6-TF-0886t(15)302D	Section B-B End Terrace With En-suite Option D
	V6-TF-0886t(15)401A Rev C	Elevations - BF1 Mid Terrace Option A
	V6-TF-0886t(15)401B Rev C	Elevations - BF1 Mid Terrace With En-suite Option B
	V6-TF-0886t(15)401C Rev C	Elevations - BF1 End Terrace Option C
	V6-TF-0886t(15)401D Rev C	Elevations - BF1 End Terrace With En-suite Option D
	V6-TF-0886t(15)402A Rev C	Elevations - BF2 Mid Terrace Option A
	V6-TF-0886t(15)402B Rev C	Elevations - BF2 Mid Terrace With En-suite Option B
	V6-TF-0886t(15)402C Rev C	Elevations - BF2 End Terrace Option C
	V6-TF-0886t(15)402D Rev C	Elevations - BF2 End Terrace With En-suite Option D
	V6-TF-0886t(15)403A Rev C	Elevations - BF3 Mid Terrace Option A
	V6-TF-0886t(15)403B Rev C	Elevations - BF3 Mid Terrace With En-suite Option B
	V6-TF-0886t(15)403C Rev C	Elevations - BF3 End Terrace Option C
	V6-TF-0886t(15)403D Rev C	Elevations - BF3 End Terrace With En-suite Option D
	V6-TF-0886t(15)404A Rev C	Elevations - BF4 Mid Terrace Option A
	V6-TF-0886t(15)404B Rev C	Elevations - BF4 Mid Terrace With En-suite Option B
	V6-TF-0886t(15)404C Rev C	Elevations - BF4 End Terrace Option C
	V6-TF-0886t(15)404D Rev C	Elevations - BF4 End Terrace With En-suite Option D
	V6-TF-0886t(15)405A Rev C	Elevations - BF5 Mid Terrace Option A
	V6-TF-0886t(15)405B Rev C	Elevations - BF5 Mid Terrace With En-suite Option B
	V6-TF-0886t(15)405C Rev C	Elevations - BF5 End Terrace Option C
	V6-TF-0886t(15)405D Rev C	Elevations - BF5 End Terrace With En-suite Option D
	V6-TF-0886t(15)412A Rev C	Elevations - SF2 Mid Terrace Option A
	V6-TF-0886t(15)412B Rev C	Elevations - SF2 Mid Terrace With En-suite Option B
	V6-TF-0886t(15)412C Rev C	Elevations - SF2 End Terrace Option C
	V6-TF-0886t(15)412D Rev C	Elevations - SF2 End Terrace With En-suite Option D
	V6-TF-0886t(15)414A Rev C	Elevations - SF4 Mid Terrace Option A
	V6-TF-0886t(15)414B Rev C	Elevations - SF4 Mid Terrace With En-suite Option B
	V6-TF-0886t(15)414C Rev C	Elevations - SF4 End Terrace Option C

V6-TF-0886t(15)414D Rev C	Elevations – SF4 End Terrace With En-suite Option D
16-098-TIMBERKITBASE-404 Rev F	Brodick Structural Layouts
16-098-432	Brodick Structural Layouts
TF1857A/001 Rev A	Brodick Layout Mid Terrace Option A
TF1857A/002 Rev A	Brodick GF, FF, SF & Panel Elevations Mid Terrace Option A
TF1857B/001 Rev A	Brodick Layout Mid Terrace With En-suite Option B
TF1857B/002 Rev A	Brodick GF, FF, SF & Panel Elevations Mid Terrace With En-suite Option B
TF1857C/001	Brodick Layout End Terrace Option C
TF1857C/002 Rev A	Brodick GF, FF, SF & Panel Elevations End Terrace Option C
TF1857D/001	Brodick Layout End Terrace With En-suite Option D
TF1857D/002 Rev A	Brodick GF, FF, SF & Panel Elevations End Terrace With En-suite Option D
JJI-BROD-MT-OPT A	JJI Layout Mid Terrace Option A
JJI-BROD-MT-OPT B	JJI Layout Mid Terrace With En-suite Option B
JJI-BROD-ET-OPT C	JJI Layout End Terrace Option C
JJI-BROD-ET-OPT D	JJI Layout End Terrace With En-suite Option D
F-DETAILS-001	JJI Joist Details and Notching Parameters
TF-D(1)01	Ground Bearing Slab Detail
TF-D(1)02	Suspended Slab Detail
TF-D(1)05 Rev A	Level Access Threshold Detail
TF-D(1)06	Stepped Access Threshold Detail
TF-D(1)09 Rev B	GB & Suspended. Slab Separating Wall Detail
TF-D(1)10 Rev B	Stepped Party Wall Detail
TF-D(1)11	Dwarf Wall Detail
TF-D(2)01	External Wall Make Up
TF-D(2)02 Rev C	Stepped Brick Soldier Course Cill Detail
TF-D(2)03 Rev C	Brick Jamb Detail
TF-D(2)04 Rev C	Brick Head Detail
TF-D(2)05 Rev C	Precast Cill Detail
TF-D(2)06 Rev C	Precast Jamb Detail
TF-D(2)07 Rev C	Precast Head Detail
TF-D(2)08 Rev A	Separating Wall Detail
TF-D(2)09 Rev A	Staggered Separating Wall Detail
TF-D(2)10	Expansion Joint Detail
TF-D(2)11 Rev D	Steel Goalpost Arrangements – check once engineers updated details received
TF-D(2)12 Rev A	Steel Lintol/beam fire protection
TF-D(2)16 Rev A	Steel post and beam connection
TF-D(2)21 Rev A	Separating Wall Junction - no service zone
TF-D(2)23	Steel Lintol/beam - External and WC
TF-D(3)01	Standard Internal Wall Make Ups (Section)
TF-D(3)02	Standard Internal Wall Make Ups (Plan)
TF-D(3)03	Acoustic Internal Wall Make Ups (Section)
TF-D(3)04	Accessible Sanitary Accommodation Grab Rails
TF-D(4)01 Rev A	Standard Mid Floor Make-Up
TF-D(4)02 Rev A	Perpendicular Joist Mid Floor Junction at External Wall
TF-D(4)03 Rev A	Parallel Joist Mid Floor Junction at External Wall
TF-D(4)04 Rev B	Parallel & Perpendicular Joist Mid Floor at Sep. Wall
TF-D(4)06 Rev B	Stair Trimmer Detail
TF-D(5)01 Rev B	Standard Eaves Detail
TF-D(5)02 Rev B	Standard Eaves at Window Head Detail
TF-D(5)03 Rev B	Standard Verge Detail
TF-D(5)04 Rev A	Standard Ridge Detail
TF-D(5)05 Rev A	Standard Valley Detail
TF-D(5)06 Rev A	Standard Abutment Detail
TF-D(5)07 Rev B	Separating Wall Detail
TF-D(5)08 Rev B	Stepped Separating Wall Detail
TF-D(5)09 Rev A	Condensation trap to Eaves Detail
TF-D(5)13	Door Head Canopy
TF-D(5)14 Rev A	Stepped Separating Wall Detail (FB Finish)
TF-D(5)15	Flexible Ducting Installation
TF-D(6)01	SVP Box-In Detail
TF-D(6)03	Wet Floor Formation Detail

TF-D(6)04	Drainage Pipe Backfill Detail
TF-D(6)05	Wall Mounted Combi Boiler Detail
TF-D(6)06 Rev B	Service Zone for Low Level/Below Cills
TF-D(6)08	In Building Infrastructure Detail
TF-D(7)01	Internal Door Jamb Detail
TF-D(7)02	External & Internal Pass Door Clearances
TF-D(7)03	Canopy Post Detail
TF-D(7)06	Door at Stair Detail - Full Height Door Detail
TF-D(7)07	Shower Tray at Base detail
TF-D(7)08	Downlight at shower upgrade detail
TF-D(7)09	Pigs Ear Handrail Detail
TF-D(7)14	Bedroom Furniture Activity Spaces

<b>G</b>	<b>Certification:</b>	
	Statement of structural adequacy	From Indev Consult LTD dated 01/11/2016
	Osma Soil and vent Systems BBA Certificate No. 86/1643	For AAV's
	Easy Trim Breather Membranes BBA Certificate No. 10/4753	For Roof Membrane
	Charlie Fleming Associates – Acoustical Consultants Report	For Fully Insulated Separating Wall Cavity

<b>H</b>	<b>Specification:</b>	
	STR-TF C SPEC V6 Rev J	V6 Technical Specification Timber Frame – All House Types
	STR-TF-DHDSPEC-V6	Heating Design Specification
	JJI-Joist Technical Bulletin 38 Acoustic Performance	For Intermediate Floors
	SRL Technical Report	Sound Testing Results for Intermediate Floor
	Acoustic Consultant Report	Sound Insulation of Separating Wall with Steel Post Detail
	SAP ratings	For all house types
U value calculations	For all elements	

<b>I</b>	<b>Authority:</b>		
	This system type approval certificate consisting of 4 pages is authorised by:	Signature:	
		Lead Authority Building standards Manager on behalf of the Local Authority Building Standards Scotland (LABSS)	