The Scottish Association of **BUILDING STANDARDS MANAGERS**
Incorporating the Scottish Association of Chief Building Control Officers and representing
Local Authority Building Standards in Scotland

Scottish Type Approval Scheme

System Type Approval Certificate

Certificate No: **STAS/11/035/ST21/02**

Date: **29 October 2011**

A **Certificate Holder:**

Name:	**Yorkshire Building Service (Whitwell) Ltd**		
Address:	**Unit 1 Crags Industrial Park, Morven Street, Creswell, Derbyshire, S80 4AJ**		
E-mail:	**robertq@ybsinsulation.com**	**Tel:**	**08449910044**

B **Type Approval Title:**

Super Quilt 19 for Roof Pitch more than 20° and less than 70°

SYSTEM:

An insulated timber pitched roof incorporating:-

- **Multi-Foil Insulation Blanket (Thermal conductivity value of 0.029W/Mk)**

for use in roofs in combination with complementary insulation materials to meet site specific requirements to limit energy use to the standards required under Section 6 of the Building (Scotland) Regulations 2004.

C **Conditions of certification:**

Validity and Scope

1. That 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 and Non-Domestic Technical Handbooks which came into force with effect from 1 October 2011.
2. That 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.
3. That the layout plan details and the materials specified shall not be changed without first gaining approval so to do from the Scottish Association of Building Standards Managers [SABSM]. Failure to do so will invalidate the certificate.
4. That the certificate shall be valid until invalidated by formal notice by the SABSM.
5. 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

Testing and Accreditation

6. That the Super Quilt 19 material shall be manufactured and installed strictly in accordance with the manufacturer's instructions, in accordance with the certificate holder's instructions and fully in accordance with the accredited certification and supporting test reports and analysis by BDA Keuringinstituut BV – Test Institute (see Section G on page 2) acknowledged by UKAS.
7. That this System Type Approval is issued in the knowledge that the materials specified shall contribute to compliance with Mandatory Standards 3.15, 6.1 and 6.2 of the Building (Scotland) Regulations 2004 when read with the accompanying BDA Agrément Certificates and associated test reports.

Site Specific Assessments

8. The construction of the roof elements including all complementary insulation materials, vapour control layers, breather membranes, roof void ventilation and internal and external finishes are not within the scope of this certificate. Such materials and constructions must be designed in accordance with all relevant Codes of Practice, British or European Standards and installed strictly on accordance with the manufacturer's instructions.

D **Limitations of use:**

1. That an assessment shall be provided to support each site specific building warrant application proposing the use of the Super Quilt 19 product in the roof element. Each assessment shall confirm full compliance with Mandatory Standards 3.15, 6.1 and 6.2.

E **Authority:**

This system type approval certificate consisting of 2 pages is authorised by:

Signature:
Date: 29 October 2011

Robert A Renton, Secretary to STAS
on behalf of the Scottish Association of Building Standards Managers.

F	**Design Life:** (per BS 7543 – Durability of buildings and building elements, products and components)	Category of building design life =	**Life of building**
		Design life of primary building envelope	**Life of building**

The system type has been assessed on the following drawings and specifications:

G

Specification: **YBS 360 V02 10/2011 Super Quilt Multi-Layer Insulation Blanket for Roofs**
Multi-layered roof insulation material made up of 19 layers of metallic foil, flexible wadding and closed cell foam. A thermal insulation for use above and/or below rafters in tiled or slated pitched roofs of dwellings and buildings with similar temperature and humidity conditions, designed and constructed in accordance with the relevant clauses of BS 5534: 2003: Code of practice for slating and tiling

LABC Approval: **LABC Registered Details Approval Reference RD 851210 Super Quilt for Roofs**

Certification: **YBS Super Quilt has been tested to EN 12667 Determination of thermal resistance by means of guarded hot plate and heat flow meter methods to BR 443:2006 , and assessed in accordance with BBA Information Bulletin No. 3: *Reflective foil insulation – Conventions for U-value calculations,* March 2010 measured by BDA Keuringsinstituut** comprising 3 separate documents each of 2 pages and 1st Version dated **15 December 2009** and 2nd Version dated **21 March 2011** as follows:-

BDA Agrément Nr BAR 11-346/2 – Data Sheet Roof - Design
BDA Agrément Nr BAR 11-347/2 – Data Sheet Roof - Installation
BDA Agrément Nr BAR 11-348/2 – Data Sheet Roof - Regulations

NOTE: All Accreditations are acknowledged by UKAS

Thermal Performance Test Reports: The thermal resistance of a combination of the Super Quilt 19, measured under an angle of 45^0 under different heat flow conditions and in combination with 25mm non-ventilated air cavities on both sides of the quilt layer(s) may be taken as:-

	Combinations	Winter conditions
1.	▪ High emissivity surface ▪ 25mm air cavity ▪ Super Quilt 19 ▪ 25mm air cavity ▪ High emissivity surface	**2.71**
2.	▪ Low emissivity surface ▪ 25mm air cavity ▪ Super Quilt 19 ▪ 25mm air cavity ▪ High emissivity surface	**2.76**
3.	▪ Low emissivity surface ▪ 25mm air cavity ▪ Super Quilt 19 ▪ 25mm air cavity ▪ Low emissivity surface	**2.98**
4.	▪ High emissivity surface ▪ 100mm Glasswool ▪ 25mm air cavity ▪ Super Quilt 19 ▪ 25mm air cavity ▪ High emissivity surface	**5.37**
5.	▪ Low emissivity surface ▪ 25mm air cavity ▪ Super Quilt 19 ▪ 50mm air cavity *) ▪ Super Quilt 19 ▪ 25mm air cavity ▪ Low emissivity surface	**5.07**

*) *As tested. In actual practice an air cavity of nominal 38 mm will be sufficient to achieve a minimal clear cavity of 13 mm. See also installation procedure point 3 in BAR 11-347/2 3).*

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Date: **29 October 2011**

A **Certificate Holder:**

Name: **Yorkshire Building Service (Whitwell) Ltd**
Address: **Unit 1 Crags Industrial Park, Morven Street, Creswell, Derbyshire, S80 4AJ**
E-mail: **robertq@ybsinsulation.com** **Tel:** **08449910044**

B **Type Approval Title:**

Super Quilt 19 for Masonry and Timber Framed Walls within Cavities or as an Inner Lining

SYSTEM

External cavity wall elements incorporating:-

- **Multi-Foil Insulation Blanket (Thermal conductivity value of 0.029W/Mk)**

for use in walls in combination with complementary insulation materials to meet site specific requirements to limit energy use to the standards required under Section 6 of the Building (Scotland) Regulations 2004.

C **Conditions of certification:**

Validity and Scope

1. That 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 and Non-Domestic Technical Handbooks which came into force with effect from 1 October 2011.
2. That 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.
3. That the layout plan details and the materials specified shall not be changed without first gaining approval so to do from the Scottish Association of Building Standards Managers [SABSM]. Failure to do so will invalidate the certificate.
4. That the certificate shall be valid until invalidated by formal notice by SABSM.
5. 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

Testing and Accreditation

6. That the Super Quilt 19 material shall be manufactured and installed strictly in accordance with the manufacturer's instructions, in accordance with the certificate holder's instructions and fully in accordance with the accredited certification and supporting test reports and analysis by BDA Keuringinstituut BV – Test Institute (see Section G on page 2) acknowledged by UKAS.
7. That this System Type Approval is issued in the knowledge that the materials specified shall contribute to compliance with Mandatory Standards 3.15, 6.1 and 6.2 of the Building (Scotland) Regulations 2004 when read with the accompanying BDA Agrément Certificates and associated test reports.

Site Specific Assessments

8. The construction of the external masonry leaf and finishes, the timber frame elements including complementary insulation materials, vapour control layers and internal finishes are not within the scope of this certificate and must be designed in accordance with all relevant Codes of Practice, British or European Standards and installed strictly on accordance with the manufacturer's instructions.

E **Authority:**

This system type approval certificate consisting of 1 pages is authorised by:

Signature:
Date: 29 October 2011

Robert A Renton, Secretary to STAS
on behalf of the Scottish Association of Building Standards Managers.

F	**Design Life:** (per BS 7543 – Durability of buildings and building elements, products and components)	Category of building design life = Design life of primary building envelope	**Life of building** **Life of building**

The system type has been assessed on the following drawings and specifications:

G

Specification: **YBS 361 V02 10/2011 Super Quilt Multi-Layer Insulation Blanket for Walls**
Multi-layered wall insulation material made up of 19 layers of metallic foil, flexible wadding and closed cell foam. A thermal insulation for use on the inside of exterior walls of dwellings and buildings with similar temperature and humidity conditions, designed and constructed in accordance with the relevant clauses of BS 5268: Structural use of timber and BS 5628: Code of Practice for use of masonry

LABC Approval: **LABC Registered Details Approval** — **Reference RD 850111 Super Quilt for Walls**

Certification: **YBS Super Quilt has been tested to EN 12667 Determination of thermal resistance by means of guarded hot plate and heat flow meter methods to BR 443:2006 , measured by BDA Keuringsinstituut** comprising 3 separate documents each of 2 pages and dated **15 December 2009** as follows:-
BDA Agrément Nr BAW 09-341 – Data Sheet Wall - Design
BDA Agrément Nr BAW 09-342 – Data Sheet Wall - Installation
BDA Agrément Nr BAW 09-343 – Data Sheet Wall - Regulations

NOTE: All Accreditations are acknowledged by UKAS

Test Reports: **Thermal Performance**
The thermal resistance of a combination of the Super Quilt 19, measured under an angle of 90^0 under different heat flow conditions and in combination with 25mm non-ventilated air cavities on both sides of the quilt layer(s) may be taken as:-

	Combinations	**Winter conditions**
1.	▪ High emissivity surface ▪ 25mm air cavity	
	▪ Super Quilt 19 ▪ 25mm air cavity ▪ High emissivity surface	**2.44**

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Date: **29 October 2011**

A **Certificate Holder:**

Name: **Yorkshire Building Service (Whitwell) Ltd**
Address: **Unit 1 Crags Industrial Park, Morven Street, Creswell, Derbyshire, S80 4AJ**
E-mail: **robertq@ybsinsulation.com** **Tel:** **08449910044**

B **Type Approval Titles:**

Super Quilt 19 for Solid Concrete or Suspended Timber Floors

SYSTEM:

An insulated ground floor element incorporating:-

- a **Multi-Foil Insulation Blanket (Thermal conductivity value of 0.029W/Mk)**

for use in solid and suspended floors in combination with complementary insulation materials to meet site specific requirements to limit energy use to the standards required under Section 6 of the Building (Scotland) Regulations 2004.

C **Conditions of certification:**

Validity and Scope

1. That 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 and Non-Domestic Technical Handbooks which came into force with effect from 1 October 2011.
2. That 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.
3. That the layout plan details and the materials specified shall not be changed without first gaining approval so to do from the Scottish Association of Building Standards Managers [SABSM]. Failure to do so will invalidate the certificate.
4. That the certificate shall be valid until invalidated by formal notice by the SABSM.
5. 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

Testing and Accreditation

6. That the Super Quilt 19 material shall be manufactured and installed strictly in accordance with the manufacturer's instructions, in accordance with the certificate holder's instructions and fully in accordance with the accredited certification and supporting test reports and analysis by BDA Keuringinstituut BV – Test Institute (see Section G on page 2) acknowledged by UKAS.
7. That this System Type Approval is issued in the knowledge that the materials specified shall contribute to compliance with Mandatory Standards 3.15, 6.1 and 6.2 of the Building (Scotland) Regulations 2004 when read with the accompanying BDA Agrément Certificates and associated test reports.

Site Specific Assessments

8. The construction of the ground floor elements and all complementary insulation materials are not within the scope of this certificate. Such materials and constructions must be designed in accordance with all relevant Codes of Practice, British or European Standards and installed strictly on accordance with the manufacturer's instructions.

D **Limitations of use:**

1. That an assessment shall be provided to support each site specific building warrant application proposing the use of the Super Quilt 19 product in the floor element. Each assessment shall confirm full compliance with Mandatory Standards 3.15, 6.1 and 6.2.

E **Authority:**

This system type approval certificate consisting of 2 pages is authorised by:

Signature:
Date: 29 October 2011

Robert A Renton, Secretary to STAS
on behalf of the Scottish Association of Building Standards Managers.

F	**Design Life:** (per BS 7543 – Durability of buildings and building elements, products and components)	Category of building design life = Design life of primary building envelope	**Life of building** **Life of building**

The system type has been assessed on the following drawings and specifications:

G

Specification: **YBS 359 V02 10/2011 Super Quilt Multi-Layer Insulation Blanket for Floors**
Multi-layered floor insulation material made up of 19 layers of metallic foil, flexible wadding and closed cell foam. A thermal insulation **for use in floors** of dwellings and buildings with similar temperature and humidity conditions, designed and constructed in accordance with the Agrément holders instructions for solid concrete ground floors and suspended timber ground floors

LABC Approval: **LABC Registered Details Approval Reference RD 851210 Super Quilt for Floors**

Certification: **YBS Super Quilt has been tested to EN 12667 Determination of thermal resistance by means of guarded hot plate and heat flow meter methods to BR 443:2006 , measured by BDA Keuringsinstituut** comprising 3 separate documents each of 2 pages and dated **15 January 2010** as follows:-
BDA Agrément Nr BAF 10-349 – Data Sheet Floor - Design
BDA Agrément Nr BAF 10-350 – Data Sheet Floor - Installation
BDA Agrément Nr BAF 10-351 – Data Sheet Floor - Regulations

NOTE: All Accreditations are acknowledged by UKAS

Test Reports: **Thermal Performance**

Calculated thermal resistances and U-values including the effects of thermal bridging

Type of Construction	R_{total}	R_{ground}	R_{floor}	U_{floor}
Solid concrete floor	**2.123**	**0.250**	**1.873**	**0.49**
Suspended timber floor	**3.292**	**0.250**	**3.042**	**0.31**

Calculated thermal resistances and U-values excluding the effects of thermal bridging

Type of Construction	R_{total}	R_{ground}	R_{floor}	U_{floor}
Solid concrete floor	**2.522**	**0.250**	**2.272**	**0.41**
Suspended timber floor	**5.572**	**0.250**	**5.322**	**0.18**

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Date: **29 October 2011**

A **Certificate Holder:**

Name: **Yorkshire Building Service (Whitwell) Ltd**
Address: **Unit 1 Crags Industrial Park, Morven Street, Creswell, Derbyshire, S80 4AJ**
E-mail: **robertq@ybsinsulation.com** **Tel:** **08449910044**

B Type Approval Titles:

SYSTEM

Breather-Foil FR for timber frame walls

A timber frame external cavity wall element **incorporating:-**

- **an impermeable, reflective insulation membrane rain barrier Breather-Foil FR**

in combination with complementary insulation materials to meet site specific requirements to limit energy use to the standards required under Section 6 of the Building (Scotland) Regulations 2004. The system also incorporates site specific measures to combat the effects of interstitial condensation to the standards required under Section 3 of the Building (Scotland) Regulations 2004.

C **Conditions of certification:**

Validity and Scope

1. That 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 and Non-Domestic Technical Handbooks which came into force with effect from 1 October 2011.
2. That 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.
3. That the layout plan details and the materials specified shall not be changed without first gaining approval so to do from the Scottish Association of Building Standards Managers [SABSM]. Failure to do so will invalidate the certificate.
4. That the certificate shall be valid until invalidated by formal notice by SABSM.
5. 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

Testing and Accreditation

6. That the Breather-Foil FR material shall be manufactured and installed strictly in accordance with the manufacturer's instructions, in accordance with the certificate holder's instructions and fully in accordance with the accredited certification and supporting test reports and analysis by BDA Keuringinstituut BV – Test Institute (see Section G on page 2) acknowledged by UKAS.
7. That this System Type Approval is issued in the knowledge that the materials specified shall contribute to compliance with Mandatory Standards 3.15, 6.1 and 6.2 of the Building (Scotland) Regulations 2004 when read with the accompanying BDA Agrément Certificates and associated test reports.

Site Specific Assessments

8. The construction of the external wall element and all complementary insulation materials are not within the scope of this certificate. Such materials and constructions must be designed in accordance with all relevant Codes of Practice, British or European Standards and installed strictly on accordance with the manufacturer's instructions.

D **Limitations of use:**

1. That an assessment shall be provided to support each site specific building warrant application proposing the use of the Breather-Foil product in the external wall element, each assessment to confirm full compliance with Mandatory Standards 3.10, 3.15, 6.1 and 6.2.

E **Authority:**

This system type approval certificate consisting of 2 pages is authorised by:

Signature:
Date: 29 October 2011

Robert A Renton, Secretary to STAS
on behalf of the Scottish Association of Building Standards Managers.

F	**Design Life:** (per BS 7543 – Durability of buildings and building elements, products and components)	Category of building design life =	**Life of building**
		Design life of primary building envelope	**Life of building**

The system type has been assessed on the following drawings and specifications:

G

Specification:

V2 10/2011 Breather-Foil FR for timber frame walls.
Reflective insulation and vapour - open cavity - rain barrier made of aluminium foil faced polyethylene bubble film laminate incorporating, when installed, **open laps** to allow moisture to escape from the inner leaf and reflective insulation layer to improve insulation to external cavity walls of timber frame construction, installed against inner leaf sheathing within cavity with the foil face on the clear cavity side to maintain a minimum cavity width of 50mm in masonry external leaf

Certification:

BDA Agrément Nr BAKQW 10-01 plus
KQ Certificate 58386/01 comprising pages 1-7

NOTE: Both Accreditations are acknowledged by UKAS

Breather-Foil FR certified by the Irish Agrément Board under Certificate Number 08/0315 comprising 7 pages

Test Reports

Thermal Performance

Breather-Foil FR has been tested to EN 12667 Determination of thermal resistance by means of guarded hot plate and heat flow meter methods to BR 443:2006 , measured by BDA Keuringsinstituut comprising 3 separate documents each of 2 pages and dated **15 January 2010** as follows:-

Type of Construction	Breather-Foil FR Bubble	Breather-Foil FR Cavity	Total Thermal Resistance
R_{value} m^2K/W	**0.121**	**0.649**	**0.770**