



## Specification Document

For

**Development at: 1 Munster Ave, H91 V2XR**

Co Galway

**Ref No: 23635 Rev 0**

Completed by: BERcerts.ie

*David Coyle B.Eng Energy Engineering*

*Mobile: 087 1191759*

*Date: 28th Feb 2024*

### Disclaimer

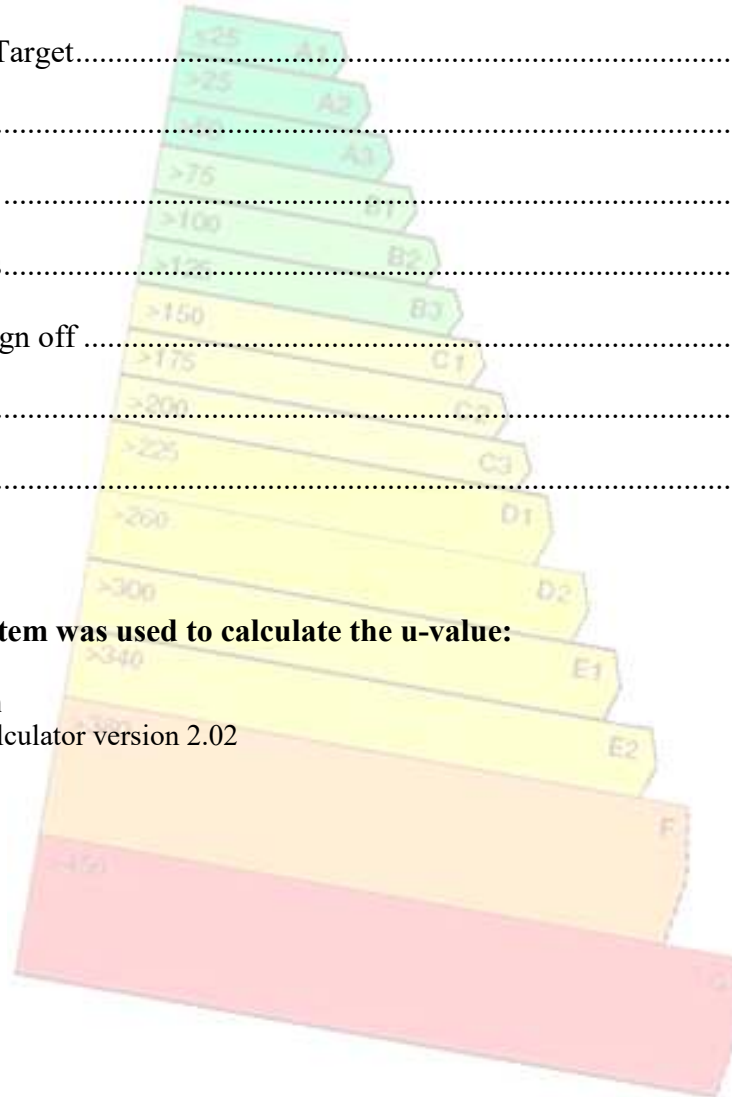
In my opinion and without prejudice the following advice may be taken. The information contained in the pages is for information purposes only. Whilst every care has been taken in its preparation Joseph Kearney or Advancement Consulting Ltd t/a BERcerts does not make any warranties or representations as to its accuracy or reliability. In no event do we accept liability of any description including liability for negligence for any damages whatsoever resulting from loss of use, data or profits arising out of or in connection with the viewing, use or performance of its contents. The pages contained herein may contain technical inaccuracies and typographical errors. We cannot accept any responsibility for none compliance if SEAI change the methodology or energy or CO2 factors.

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**The following system was used to calculate the u-value:**

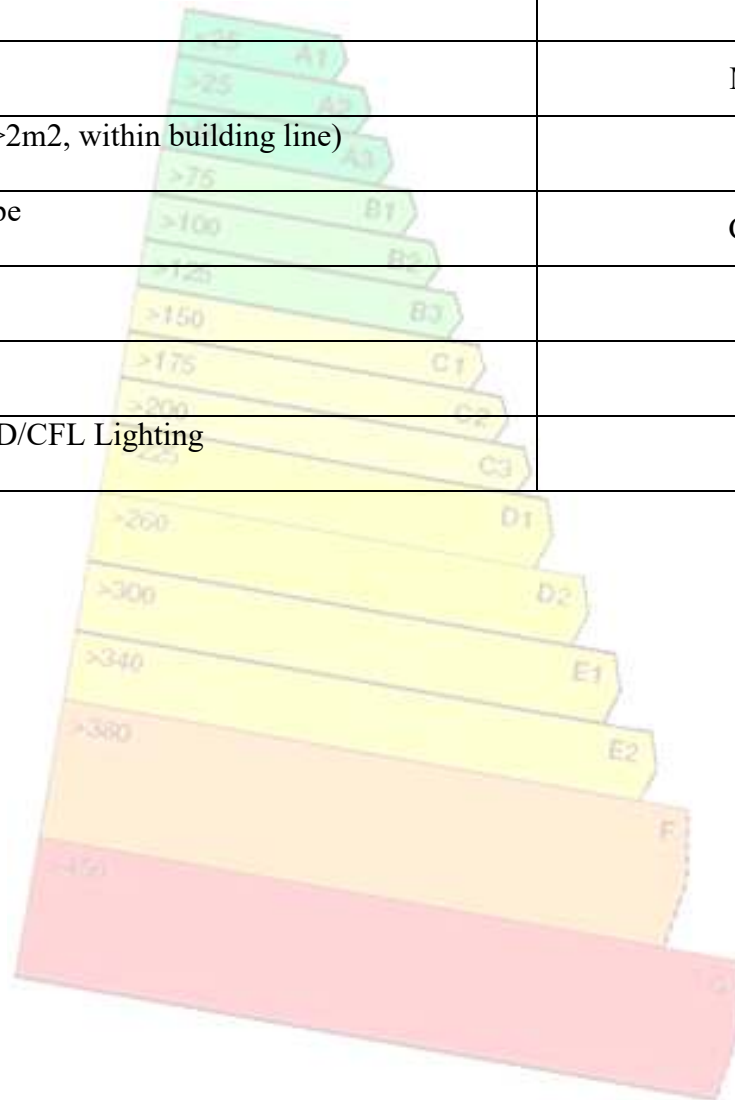
**U-value calculation**  
by BRE U-value Calculator version 2.02



# SPECIFICATION

## Property Details

Year of construction:	Unknown
Building Regulations	None
Structure Type:	Masonry
Draught Lobby (>2m <sup>2</sup> , within building line)	No
Ground Floor Type	Concrete
First Floor Type	Timber
No of Storeys	2
Percentage of LED/CFL Lighting	100%



# Heating & Controls

## Primary Space Heating System

Make and Model of Heat Pump	Kronotherm Adapt 0312-K3
Heat emitter type Ground Floor	Radiators throughout
Weather Compensation:	Yes

\*Heat pumps: Eco design directive 811/2013 must be referenced on each document including ERP labels, eco design data, Hot water test report etc.

\*\* Heat Pump supplier must produce certified data from an accredited test centre stating that the Heat pump can raise the Temperature of the Domestic Hot Water to 60 degrees or more without the assistance of an immersion (immersion either integrated into the heat pump unit or on an indirect HW Cylinder). The European Standard of testing must also be stated on the Document along with the testing body.

**SR50-** will need to be supplied when Heat Pump is installed, this is to be completed by the Heat pump supplier/installer

**NOTE:** If combined radiators and Underfloor is installed – Sr50 stating 45° flow must be provided

If rads only is used - 45° flow must be provided on the Sr50

Please speak to your Heat pump supplier/installer

## Primary Space Heating Controls

No of Space Heating Zones (Each Zone must include room stat & motorised valve / pump & programmer). Includes boiler interlock.	Min: 3 Zones over 300m <sup>2</sup> Min: 2 Zones (up to 300m <sup>2</sup> ): 1 zones for day time areas 1 zone for night time areas
Efficiency of system pumps	A-rated and less than 40w.
Quantity of pumps: If there are more than 2 pumps then the dwelling may not comply.	No more than 2

## Hot Water & Controls

<b>Hot Water heated by</b>	<b>Main heating system</b>
<b>Hot Water Cylinder Details</b>	
Cylinder Make and Model	Kronotherm Hydro C
Cylinder size (L)	TBC

\*Hot water cylinder: must be provided with an ERP label with eco design directive 811/2013 referenced on the document, to conform to SEAI requirements

<b>Hot Water Controls Details</b>	
Hot water zone: (must include cylinder stat & motorised valve / pump & programmer)	HW Zone: Yes
All pipework from boiler to hot water cylinder insulated with high performance pipe insulation. A material having a thermal conductivity at 40oC of 0.035 W/mK and a thickness equal to the outside diameter of the pipe, for pipes up to 40 mm diameter, and a thickness of 40 mm for larger pipes.	Primary pipework insulated Min 0.035 thermal conductivity  YES
All pipework from hot water cylinder to hot water taps insulated with high performance pipe insulation.	Min 0.035 thermal conductivity  YES

## Air Pressure Test Target

The test must achieve this figure or less

This value may not be achieved where down lighters are fitted.

If down lighters are to be fitted then an air tight box must be used e.g. Optime Airtight Downlight Housing.

**5.0**  
**m<sup>3</sup>/m<sup>2</sup>/hr**  
**@ 50Pa**

See Air Test Report

## Ventilation

Natural Ventilation:

<b>Habitable Rooms:</b>	Closable / Controllable Wall Vents (Sized according to Part F Building Regulations)
<b>Kitchen/Toilets/Wet Rooms/Utility:</b>	Mechanical Extract Vents <b>Kitchen Extract</b>
<b>No of intermittent fan e.g. Kitchen / toilet extract fans</b>	3
<b>No of open fires</b>	None
<b>No of Open Flues (i.e. Stoves)</b>	None
<b>No of flue less gas fires</b>	None

**NOTE:** External ventilation ducting (unheated roof space) to be insulated to limit risk of condensation

# Building Elements

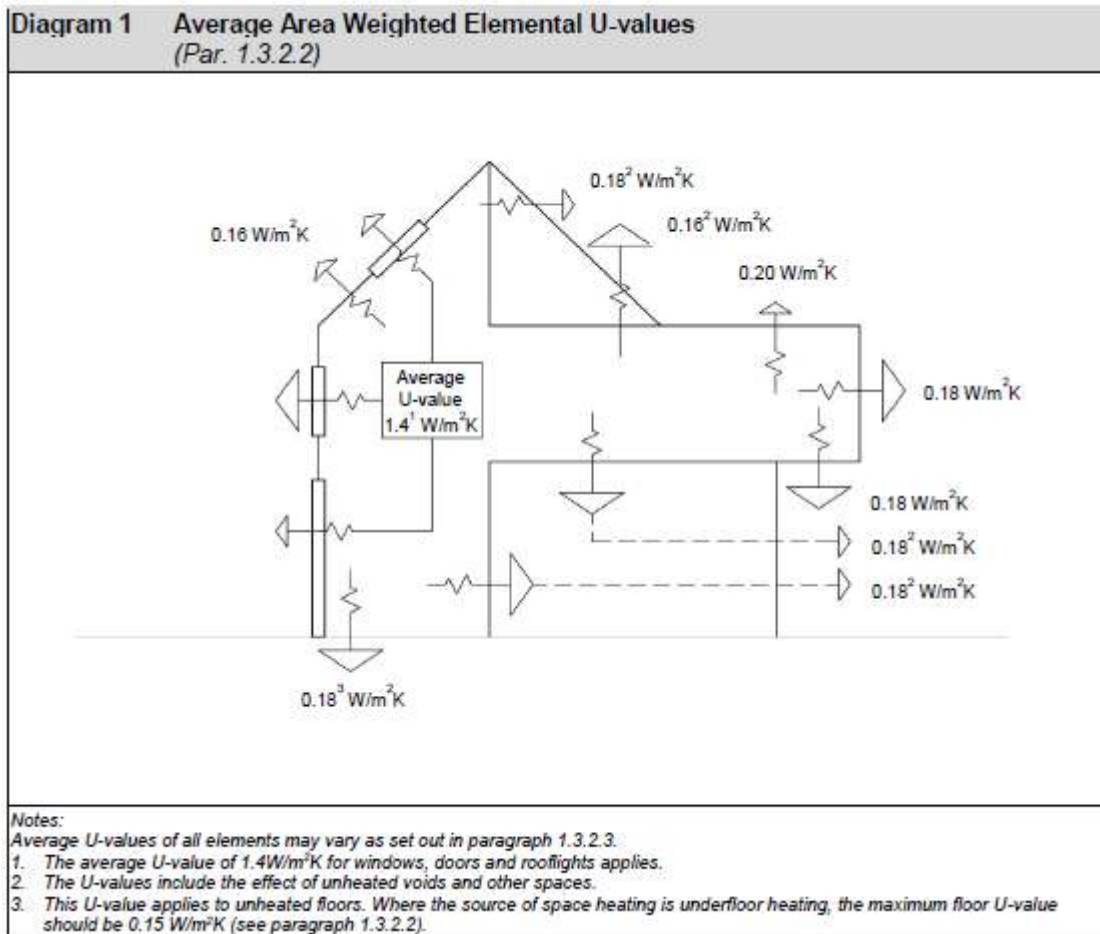
## Acceptable Construction Details

Acceptable Construction Details must be adhered to at all times. Please refer to the 2011 edition of the document “Limiting Thermal Bridging and Air Infiltration – Acceptable Construction Details”.

The guide is presented in 2 sections. Section 1 discusses the general theory of insulation continuity and airtightness in construction. Section 2, in seven separate parts, provides indicative detail drawings of thermal insulation and airtightness provisions for specific construction interfaces.

The relevant Accredited Construction Details (ACDs) will need to be signed off by the site foreman/builder, supervising engineer or architect prior to publication by the BER assessor.

## Building Fabric



**Thermal Mass of building**

**Ground Floor:** Concrete

**Upper floors:** Concrete

**External walls:** no insulation internally

**Separating walls:** none

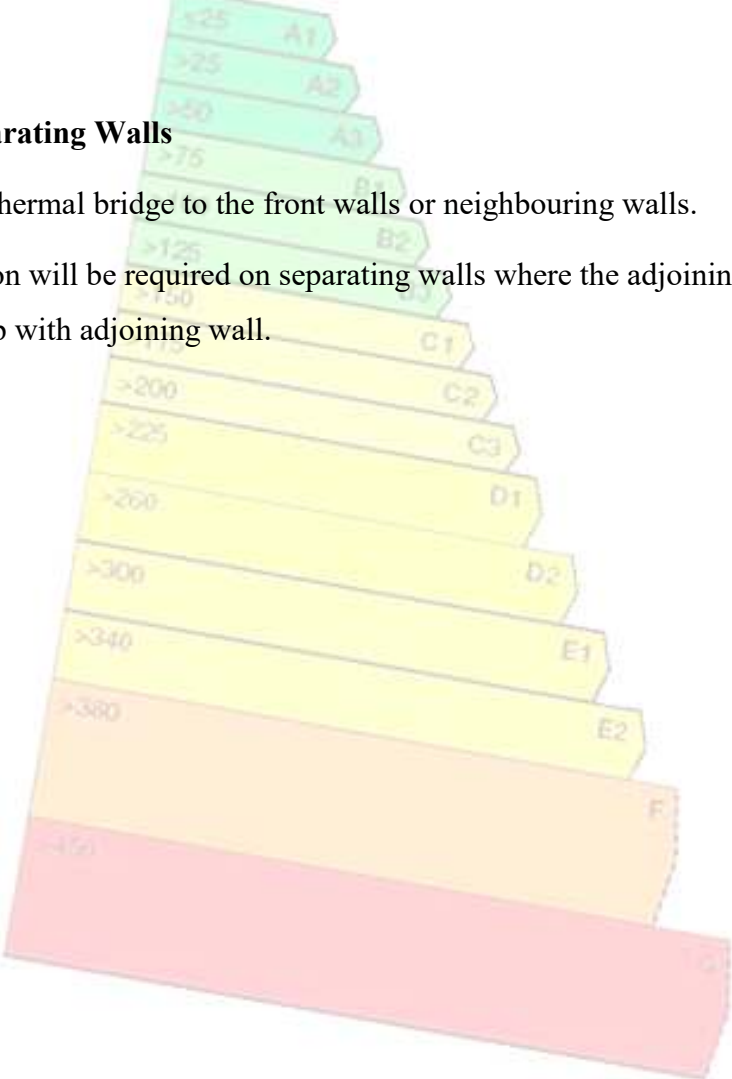
**Internal walls GF:** Internal walls are constructed of timber frame stud walls

**Internal walls FF:** Internal walls are constructed of timber frame stud walls

**Party Walls / Separating Walls**

Ensure there is no thermal bridge to the front walls or neighbouring walls.

Additional insulation will be required on separating walls where the adjoining house is off set and does not line up with adjoining wall.



**Floor** – Concrete floors

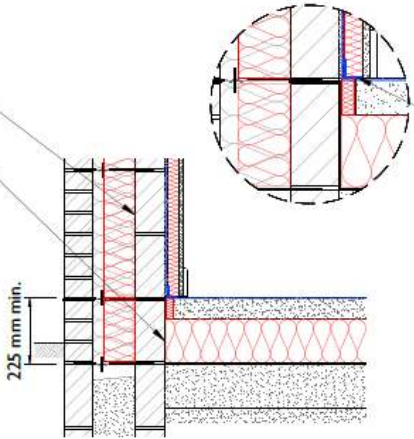
Calculated u-value 0.18 **W/m<sup>2</sup>K**

**100 mm** Unilin Thin-R insulation IAB Cert No. 03/0183 (Thermal Conductivity 0.022W/mk) has been placed in the floor.

A minimum of **60 mm** screed has been applied over the above. See Engineers spec for details.

**Edge insulation** - for ACD 1.02a

**25mm** Unilin Thin-R insulation IAB 03/0183 edging provided around the concrete floor throughout including separating walls and all internal rising walls.

(1) WALLS: INSULATION IN CAVITY	Ground Floor - Insulation Above Slab	DETAIL 1.01a, 2021
<p><b>THERMAL PERFORMANCE</b> CHECKLIST (TICK ALL)</p> <p>Ensure partial fill insulation is secured firmly against inner leaf of cavity wall <input type="checkbox"/></p> <p>Floor insulation to tightly abut blockwork wall <input type="checkbox"/></p> <p>Ensure wall insulation is installed at least 225 mm below top of floor <input type="checkbox"/></p>		<p><b>AIR BARRIER - CONTINUITY</b> CHECKLIST (TICK ALL)</p> <p><input type="checkbox"/> Seal between wall and floor air barriers with suitable air tightness tape or a flexible sealant</p> <p><input type="checkbox"/> Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant</p> <p><i>Complying with checklist will help achieve design air permeability</i></p>

Roof - Standard ceilings ACD 1.10, 1.12, 1.15

Calculated u-value 0.11 W/m<sup>2</sup>K

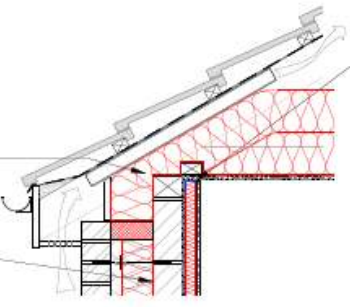
200 mm of Moy fibre glass insulation over joists.

200 mm of Moy fibre glass insulation between joists

NOTE: Plus air tight breathable membrane barrier to create an air tight seal under joists.

Plus plasterboard and plastered internally.

Please Note: All attic hatches or Stira Attic Stairs must be insulated & Draught Sealed.

(1) WALLS: INSULATION IN CAVITY	Eaves - Ventilated Attic	DETAIL 1.10, 2021
<p><b>THERMAL PERFORMANCE</b> CHECKLIST (TICK ALL)</p> <p>Ensure continuity of insulation throughout junction <input type="checkbox"/></p> <p>Ensure full depth of insulation between and over joists abuts eaves insulation <input type="checkbox"/></p> <p>Ensure gap between wall plate and proprietary eaves vent is completely filled with insulation having a minimum R-value across the insulation thickness of 3.00 m<sup>2</sup>K/W <input type="checkbox"/></p> <p>Ensure partial fill insulation is secured firmly against inner leaf of cavity wall. <input type="checkbox"/></p> <p>Note: Detail is indicative for thermal purposes. Where continuity of insulation is maintained throughout the junction, alternative structural design may be used.</p>		<p><b>AIR BARRIER - CONTINUITY</b> CHECKLIST (TICK ALL)</p> <p><input type="checkbox"/> Fix ceiling first and seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant</p> <p><input type="checkbox"/> Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant</p> <p><input type="checkbox"/> Bed wall plate on continuous mortar bed</p> <p><i>Complying with checklist will help achieve design air permeability</i></p>

## Walls

Calculated u-value 0.18 W/m<sup>2</sup>K

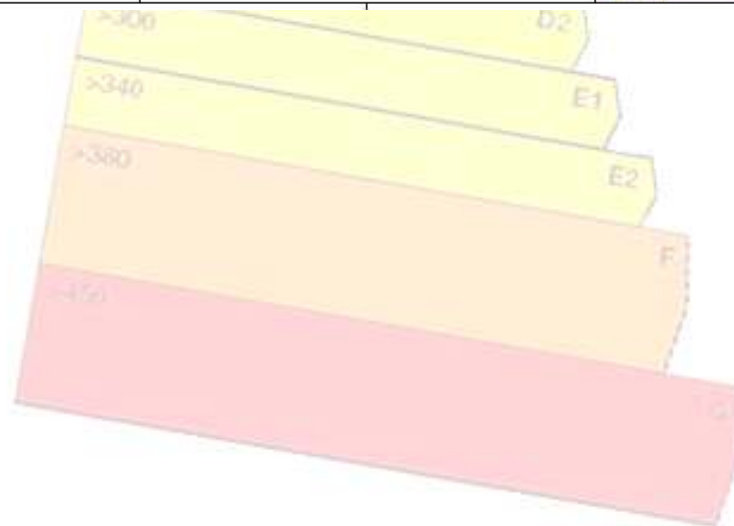
Solid Mass concrete **or** concrete hollow block wall with,

**90mm (102.5mm Overall)** Unilin insulation IAB 03/0183 has been placed internally.

Plus plasterboard and plastered internally.

**NOTE:** Sand and cement applied internally for air tightness.

(1) WALLS: INSULATION IN CAVITY		Ground Floor - Insulation Below Slab	DETAIL 1.02a, 2021
<p><b>THERMAL PERFORMANCE</b></p> <p>CHECKLIST (TICK ALL)</p> <p>Ensure partial fill insulation is secured firmly against inner leaf of cavity wall <input type="checkbox"/></p> <p>Install perimeter insulation with a minimum R-value of 1.0 m<sup>2</sup>K/W <input type="checkbox"/></p> <p>Floor insulation to tightly abut blockwork wall <input type="checkbox"/></p> <p>Ensure wall insulation is installed at least 225 mm below top of floor <input type="checkbox"/></p>		<p><b>AIR BARRIER - CONTINUITY</b></p> <p>CHECKLIST (TICK ALL)</p> <p><input type="checkbox"/> Seal between wall and floor air barriers with suitable air tightness tape or a flexible sealant</p> <p><input type="checkbox"/> Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant</p> <p><small>Complying with checklist will help achieve design air permeability</small></p>	



**Flat Roof – Cold Deck – Timber ACD 1.19 or 1.20**

Calculated u-value 0.19 W/m²K

0.16 for 200 fg

150 mm of Moy fibre glass insulation between joists

**NOTE:** Plus air tight breathable membrane barrier to create an air tight seal,  
 40 mm Xtratherm poly-iso insulation IAB 03/0183 has been placed under the joists,  
 plus plasterboard and plastered internally.

**OR**

**Flat Roof – Warm Deck – Timber ACD 1.19 or 1.20**

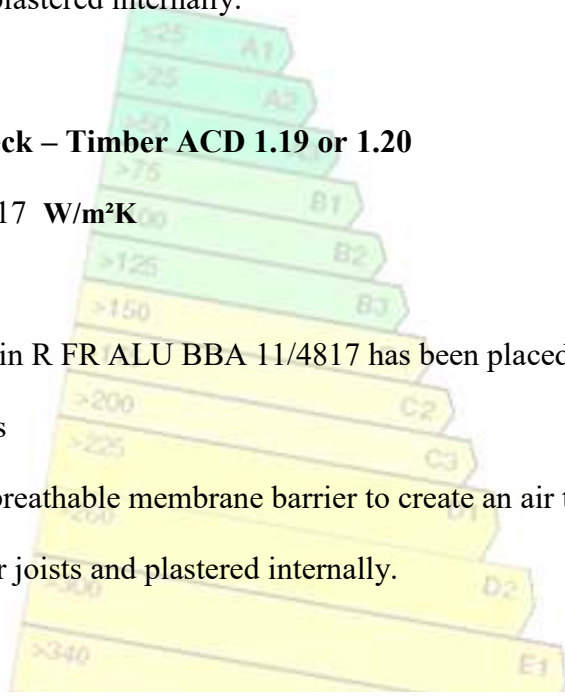
Calculated u-value 0.17 W/m²K

Roofing material over

120 mm Xtratherm Thin R FR ALU BBA 11/4817 has been placed over

18 mm OSB over joists

**NOTE:** Plus air tight breathable membrane barrier to create an air tight seal,  
 plus plasterboard under joists and plastered internally.



(1) WALLS: INSULATION IN CAVITY		Flat Roof - Eaves	DETAIL 1.19, 2021
<p><b>THERMAL PERFORMANCE</b> CHECKLIST (TICK ALL)</p> <p>Ensure full depth of over deck insulation extends to roof edge <input type="checkbox"/></p> <p>Fully fill void between top of wall and underside of roof deck with a minimum R-value across the thickness of 5.00 m²K/W <input type="checkbox"/></p> <p>Ensure wall top is level and that wall insulation is taken up level with wall top <input type="checkbox"/></p> <p>Ensure partial fill insulation is secured firmly against inner leaf of cavity wall <input type="checkbox"/></p>		<p><b>AIR BARRIER - CONTINUITY</b> CHECKLIST (TICK ALL)</p> <p>Fix ceiling first and seal between ceiling and masonry wall air barriers with plaster, suitable airtightness tape or flexible sealant <input type="checkbox"/></p> <p>Seal all penetrations through air barrier with suitable air tightness tape, grommets or flexible sealant <input type="checkbox"/></p>	<p>Complying with checklist will help achieve design air permeability</p>

# Windows & Doors

## Windows:

Munster Joinery PVC-u Casement window

Munster joinery ref: Passiv Aluclad CU16021-12 2g 0.73

Windows with u-value of 1.2 W/m<sup>2</sup>K or less

Window Solar Factor G perpendicular (glass only) 0.73

See spec for full details. \*

**BFRC or WEP Certs to be supplied and approved prior to purchase.**

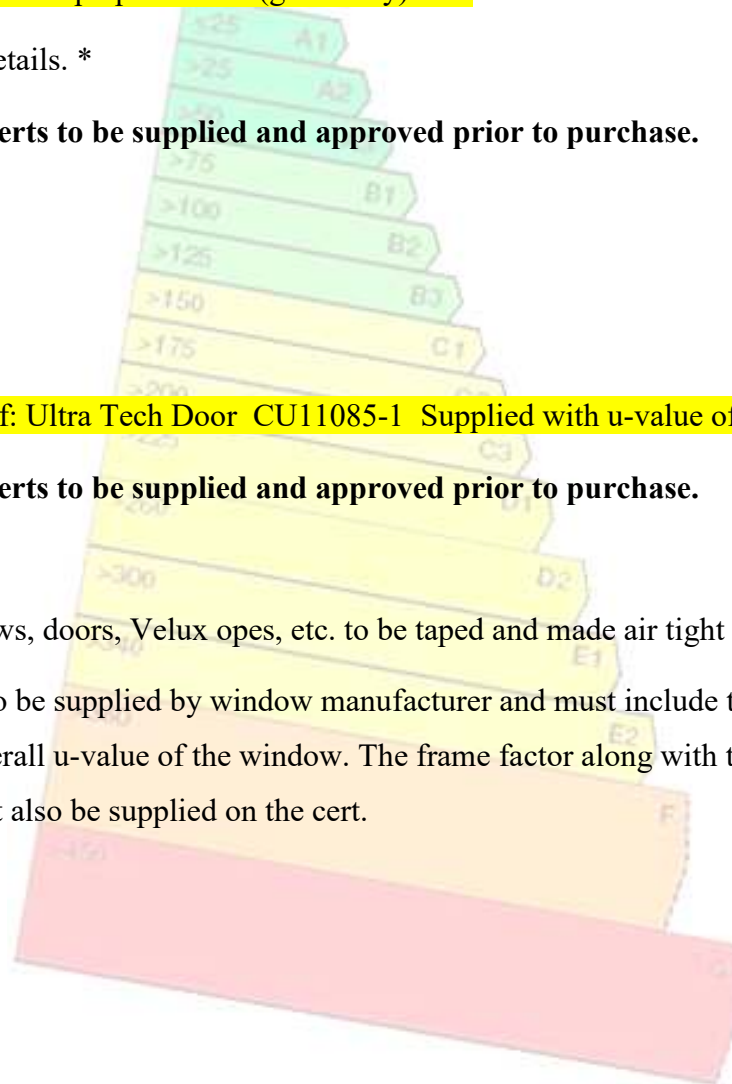
## Doors:

Munster joinery ref: Ultra Tech Door CU11085-1 Supplied with u-value of 1.4 W/m<sup>2</sup>K or less.

**BFRC or WEP Certs to be supplied and approved prior to purchase.**

NOTE: All windows, doors, Velux opes, etc. to be taped and made air tight using air tight tapes.

\*Specification is to be supplied by window manufacturer and must include the independent test cert stating the overall u-value of the window. The frame factor along with the solar transmittance must also be supplied on the cert.



# Compliance and sign off

I confirm that the specification as laid out in this document has been followed and the building elements have been constructed as stated.

House address: **1 Munster Ave, Galway, H91 V2XR**

Signed:

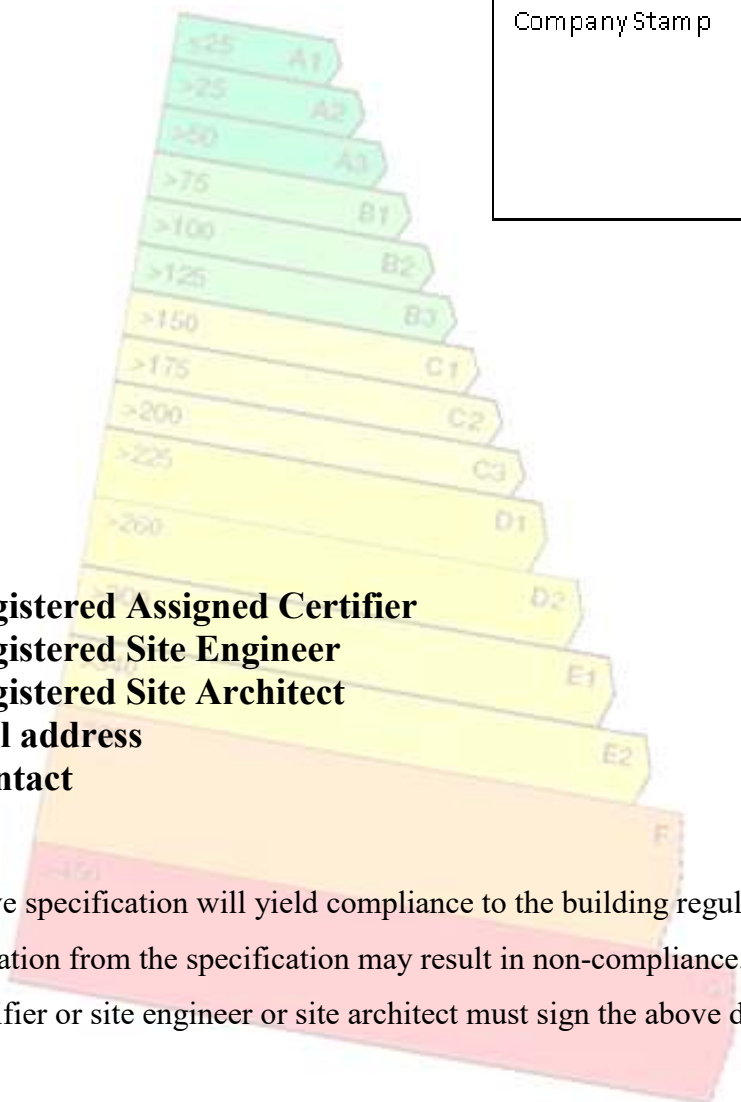
Company:

Date:

Position

**Registered Assigned Certifier**  
**Registered Site Engineer**  
**Registered Site Architect**  
**Full address**  
**Contact**

**Company Stamp**



## Note:

Following the above specification will yield compliance to the building regulations.

However, any deviation from the specification may result in non-compliance.

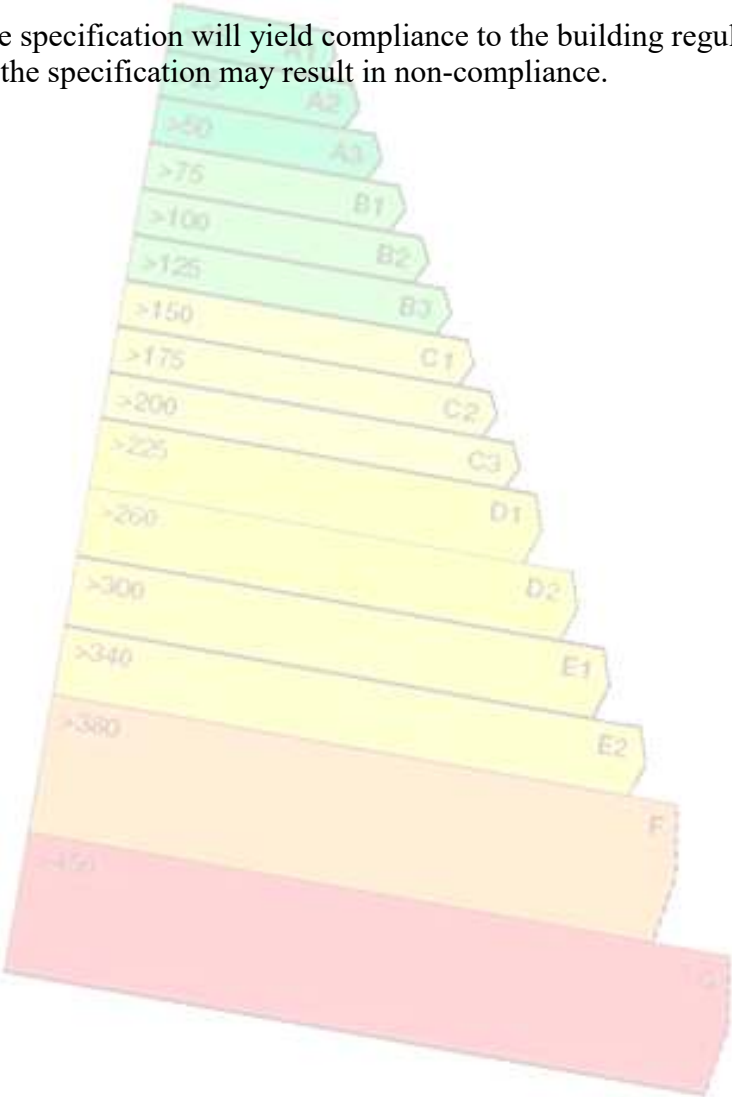
The Assigned Certifier or site engineer or site architect must sign the above document and return via email or post.

# Result: A3

Building Energy Rating: **A3**  
Energy Value: **< 75 kWh/m2/year**  
Co2 Emissions Indicator: **< 15 kgCo2/m2/year**

Building Complies based on the above information.

Following the above specification will yield compliance to the building regulations. However, any deviation from the specification may result in non-compliance.



# Appendix

## Sign off List

<b>MPRN:</b>	
<b>Eircode:</b>	
<b>Specification Document</b> to be signed and dated with full company name and address.	
<b>ACDs</b> - Acceptable Construction Detail each sheet to be ticked and signed and dated	
<b>Drawings</b> to be labelled showing ACDs junctions with legend - signed and dated by the site engineer or architect	
<b>Heat pump Designer-Installer-Sign-Off-Form</b> filled out in full and signed, including heating design page ie SR50	
Eco design data and labels for heat pump installed.	
Heat Pump commissioning Certs	
<b>Ventilation system</b> - MVHR / DCV / MCEV commissioning cert	
Ventilation system - Letter on headed paper from the company stating make and model of ventilation unit fitted specifying the address where fitted and dated	
Ventilation system - Letter on headed paper from the company stating rigid ducting was installed throughout and all external ducting has been insulated specifying the address where fitted and dated	
<b>Flow restrictor</b> – provide sign off stating it has been installed and also data sheet and cert	

## Sign off List Continued

<b>Windows and doors</b> - Letter on headed paper from the window company stating make and model of windows and doors fitted specifying the address where fitted and date	
Windows –BFRC or WEP Certificates	
Doors - BFRC or WEP Certificates	
<b>Photovoltaic, PV panels</b> – provide sign off stating it has been installed specifying the address where fitted and date and also data sheet and commissioning cert	

**NOTE: All aspects of the above list to be signed off and provided to the BER assessor prior to publication of the final BER certificate.**

