The Bull & Last

Discharge of remaining Planning Conditions
Reference: **2015/4094/P**

Dear Camden Planning,

Please see attached within this document information / evidence to discharge the remaining planning conditions for the above application.

Condition 6

The development hereby approved shall not commence until such time as a suitably qualified chartered engineer with membership of the appropriate professional body has been appointed to inspect, approve and monitor the critical elements of both permanent and temporary basement construction works throughout their duration to ensure compliance with the design which has been checked and approved by a building control body. Details of the appointment and the appointee's responsibilities shall be submitted to and approved in writing by the local planning authority prior to the commencement of development. Any subsequent change or reappointment

MichaelAlexander

Foundation House
4 Percy Road
London N12 8BU

tel +44 (0)20 8445 9115
email mail@maengineers.com
web www.maengineers.com

26 January 2017

David Ben-Grünberg
The D*Haus Company Limited
48 Rawstorne St
London
EC1V 7ND

by email

Our Ref: P3075/IH

Dear David

RE: THE BULL AND LAST PUBLIC HOUSE, 168 HIGHGATE ROAD NW5 1QS - STRUCTURAL FEE PROPOSAL

We are pleased to provide a fee proposal for post-planning Structural Engineering Services for the above project.

We have reviewed the planning drawings for the approved scheme and understand the works comprise: -

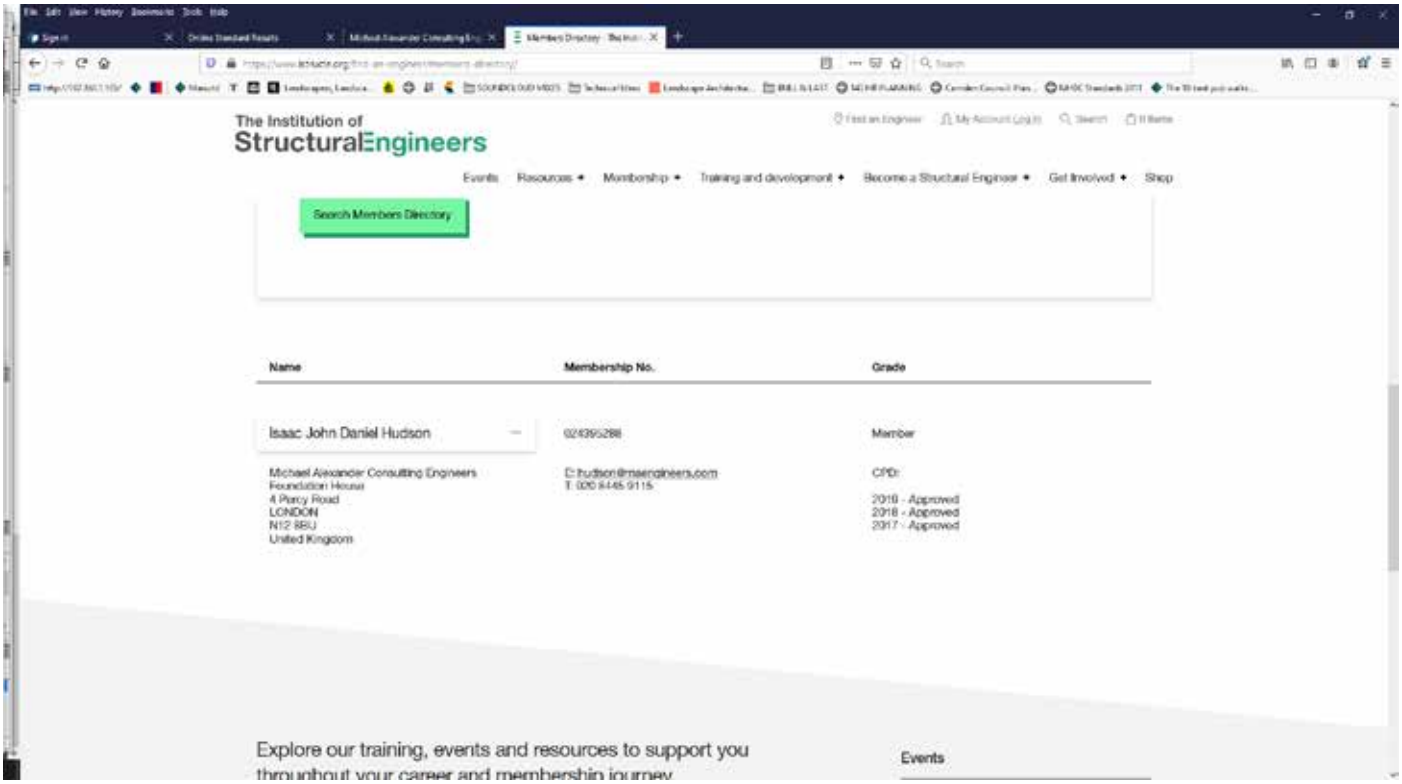
- Demolition of the ancillary buildings adjacent to 2 Woodsome Road
- Lowering the existing basement floor level under the pub and construction of a new basement adjacent (as described in the Michael Alexander Basement Impact Assessment.
- Refurbishment of the 2nd floor of the pub to provide bed and breakfast accommodation
- Reconstruction of the roof to include a new 3rd floor
- Construction of a 3 storey building over the new basement to provide two new flats.

We have assumed that if successful, our appointment will be direct with the Etive Pubs Ltd and that the scope of our Services will generally be based on the Association for Consultancy Engineering (ACE) Agreement 1: Design "*For the appointment of a Consultant by a Client to undertake detailed design and/or specification of permanent works to be undertaken and installed by a Contractor*" 2009 Edition. We have included for normal Services in accordance with the ACE Schedule of Services – Part G(a): G2.

We propose our work to be split into the following stages: -

1) Scheme Stage

- Develop an outline structural scheme for the superstructure, for discussion with yourselves
- A site visit to the upper floors to review the existing structural configuration.
- Specification of opening up works (to be carried out by others) to confirm our assumptions.
- Allowance for one meeting to discuss the proposals.
- Preparation of a statement to assist in the discharge of Planning Condition 6 in respect of the appointment of a suitably qualified chartered engineer to monitor the works.


The Institution of
StructuralEngineers
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Membership No.
Grade
Isaac John Daniel Hudson
024395288
Member
Michael Alexander Consulting Engineers
Foundation House
4 Percy Road
LONDON
N12 8BU
United Kingdom
E: hudson@maengineers.com
T: 020 8446 9115
CPD:
2019 - Approved
2018 - Approved
2017 - Approved
Explore our training, events and resources to support you
throughout your career and membership journey
Events

Condition 9

The development hereby approved shall achieve a maximum internal water use of 105 litres/person/day, allowing 5 litres/person/day for external water use (110l,p,d). Prior to occupation, evidence demonstrating that this has been achieved shall be submitted to and approved by the Local Planning Authority.

FLAT 1 2B WOODSOME RD

The Water Calculator

http://www.thewatercalculator.org.uk/

Congratulations

Flats 1. 2BWoodsome Road

You are within your target maximum consumption of potable water (105 litres per person per day).

Total water consumption from your calculation **95.26** litres per person per day

This calculator is intended to inform design choices by demonstrating the likely impact of specification changes on total water consumption. Results can only be used to demonstrate compliance with the Code for Sustainable Homes when the calculations have been verified by a suitably qualified Code for Sustainable Homes assessor.

Calculation summary

Installation type	Unit of measure	Capacity / flow rate	Use factor	Fixed use	Litres / person / day
WCs (single flush)	Flush volume (litres)				
WCs (dual flush)	Average effective flushing volume (litres)	3.5	4.42	0	15.47
Taps (excl. kitchen/utility room)	Flow rate (litres / minute)	2	1.58	1.58	4.74
Bath (shower also present)	Capacity to overflow (litres)	139	0.11	0	15.29
Shower (bath also present)	Flow rate (litres / minute)	8	4.37	0	34.96
Kitchen/utility room sink taps	Flow rate (litres / minute)	5	0.44	10.36	12.56
Washing machine	Litres / kg dry load	8.17	2.1	0	17.16
Dishwasher	Litres / place setting	1.25	3.6	0	4.5
Waste disposal unit	Litres / use	☐	3.08	0	
Water softener	Litres / person / day	☐	1	0	
Contribution from Grey Water					undefined
Contribution from Rain Water					undefined
			Normalisation factor		∑ × 0.91

water label bma waterwise

Bathroom Manufacturers Association

calculator & site development by Seedpod

anglianwater

Product Information

FLAT 2 2B WOODSOME RD

The Water Calculator

http://www.thewatercalculator.org.uk/

Congratulations

Flats 2. 2BWoodsome Road

You are within your target maximum consumption of potable water (105 litres per person per day).

Total water consumption from your calculation **93.49** litres per person per day

This calculator is intended to inform design choices by demonstrating the likely impact of specification changes on total water consumption. Results can only be used to demonstrate compliance with the Code for Sustainable Homes when the calculations have been verified by a suitably qualified Code for Sustainable Homes assessor.

Calculation summary

Installation type	Unit of measure	Capacity / flow rate	Use factor	Fixed use	Litres / person / day
WCs (single flush)	Flush volume (litres)				
WCs (dual flush)	Average effective flushing volume (litres)	3.06	4.42	0	13.53
Taps (excl. kitchen/utility room)	Flow rate (litres / minute)	2	1.58	1.58	4.74
Bath (shower also present)	Capacity to overflow (litres)	139	0.11	0	15.29
Shower (bath also present)	Flow rate (litres / minute)	8	4.37	0	34.96
Kitchen/utility room sink taps	Flow rate (litres / minute)	5	0.44	10.36	12.56
Washing machine	Litres / kg dry load	8.17	2.1	0	17.16
Dishwasher	Litres / place setting	1.25	3.6	0	4.5
Waste disposal unit	Litres / use	☐	3.08	0	
Water softener	Litres / person / day	☐	1	0	
Contribution from Grey Water					undefined
Contribution from Rain Water					undefined
				Normalisation factor	Σ × 0.91

water label bma waterwise

Bathroom Manufacturers Association

calculator & site development by Speedpress

anglianwater

Product Information

Condition 10

The development hereby approved shall incorporate sustainable design principles and climate change adaptation measures into the design and construction of the development in accordance with the approved sustainability statement prepared by Blue Sky Unlimited dated 1st June 2015. Prior to occupation, evidence demonstrating that the approved measures have been implemented shall be submitted to and approved in writing by the Local Planning Authority and shall be retained and maintained thereafter.

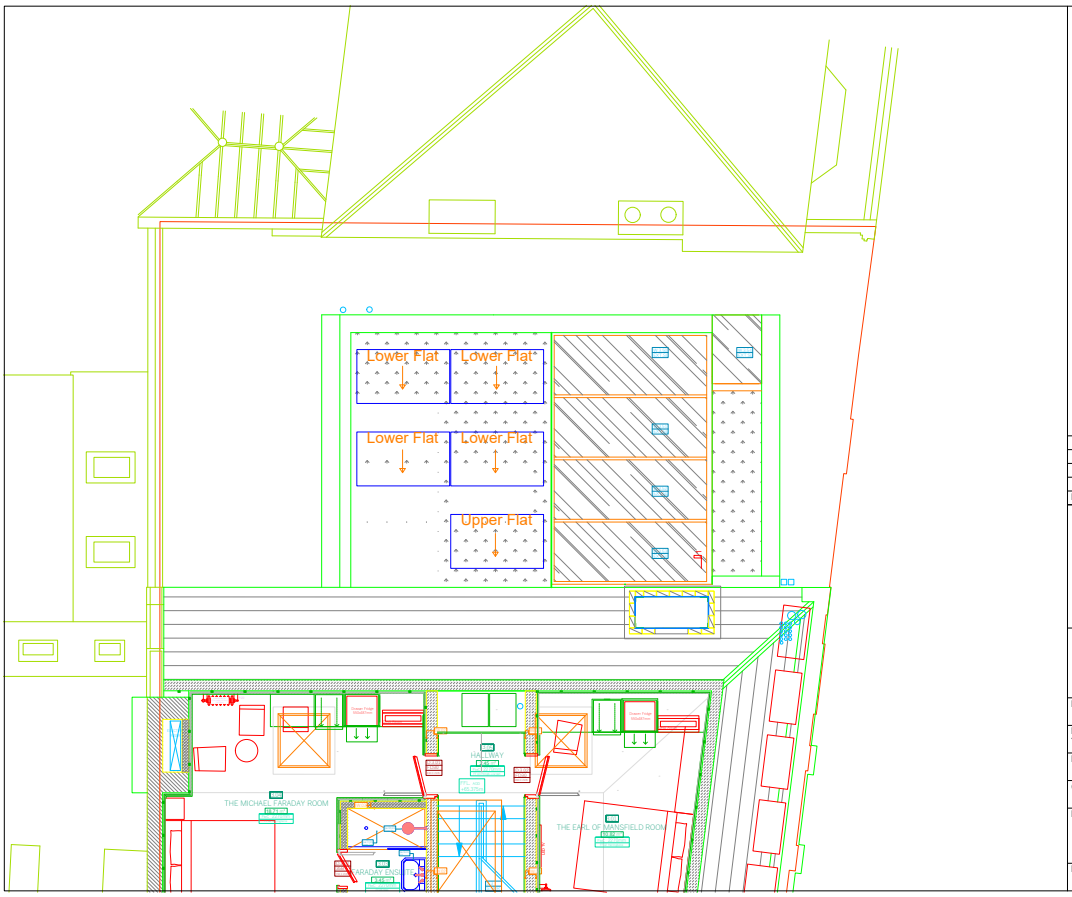
Details of Solar Panels Installed

Extract from Blue Sky Unlimited Report June 2015:

It is proposed to install a total of 1.5 kW of PV, which will be dispersed as 1.2 kW for the lower apartment and 0.3 kW for the upper apartment. This will be provided through an installation of five, 300W panels. These will be installed, inclined on racks at an angle of circa 20 degrees on the flat roof over the upper apartment.

Installation Photos

Solar Panel Roof Plan Layout



Lower Flat
4No. 310Wp Modules
1.24kWp total

Upper Flat
1No. 310Wp Module
0.31kWp total

PV Module

JA Solar 310Wp
996 x 1689mm
18.7kg

Roof Edge

Roof Border
1m from Edge

N

Rev	Description	Dwn	Chck	Date

JOJUSOLAR

© Joju Solar
39-41 North Road
London
N7 9DP

Tel +44 (0)20 7697 1000
info@joju.co.uk
www.jojusolar.co.uk

Project Number:

Project Name:
The Bull And Last

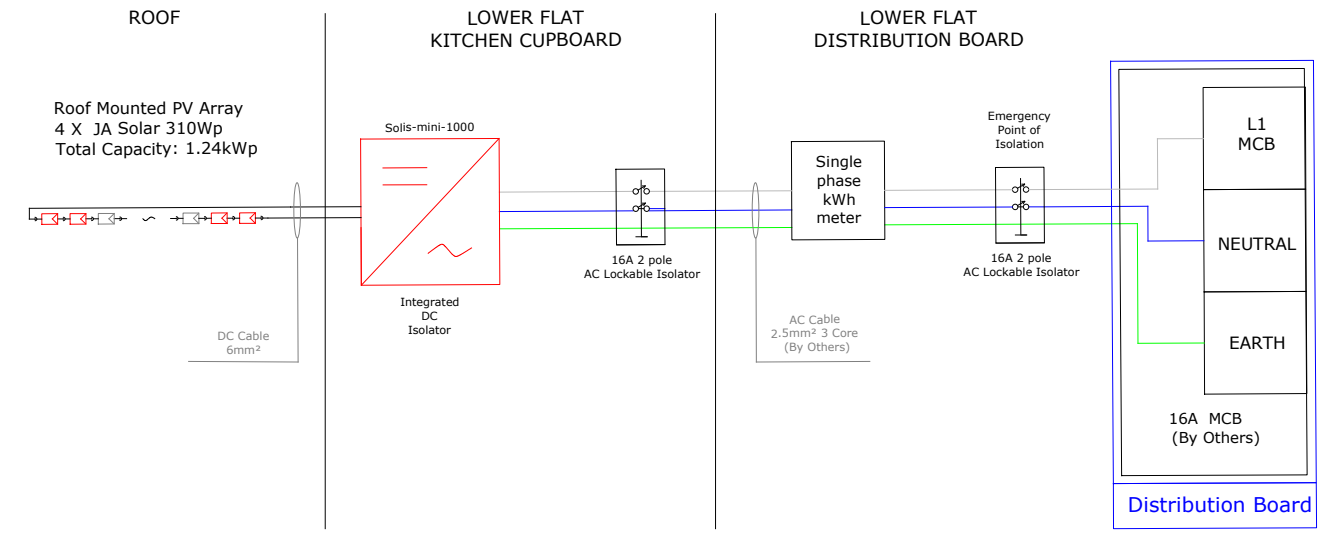
Drawing By:	Scale:
RB	NTS
Checked By:	Date:
	18/06/2020

Drawing Name:

Panel Layout

Drawing No:	Rev:
-	v3

Wiring Diagrams showing 3.1KW Panels as installed



Notes:
1) The PV array is outside the equipotential zone of the building and is not earthed
2) The PV system is connected to the distribution network under G99
3) Solis inverters are G99 approved for connection to UK grid with the following protection settings:
   a) over voltage protection, Stage 1: setting 262.2V (1.0s) - Stage 2: setting 273.7 (0.5s)
   b) under voltage protection, Stage 1: setting 184 V (2.5s) -
   c) over frequency protection, Stage 1: setting 52 Hz (0.5s)
   d) under frequency protection, Stage 1: setting 47.5 Hz (20s) - Stage 2: setting 47 Hz (0.5s)
   e) loss of mains protection (by means of frequency shift)
   f) 180s delay from return of mains after fault to start of self initialise procedure.
4) Start-up / shut down procedure - it is recommended that the main rotary isolator is used to shut down the system, and is the last switch closed when the system is restarted. Any of the switches can be used at any time to isolate the relevant part of the system, but it is not recommended that the DC isolator is operated under load.

Rev	Description	Dwn	Chck	Date

JOJUSOLAR

39-41 North Road
London
N7 9DP
Tel +44 (0)20 7697 1000
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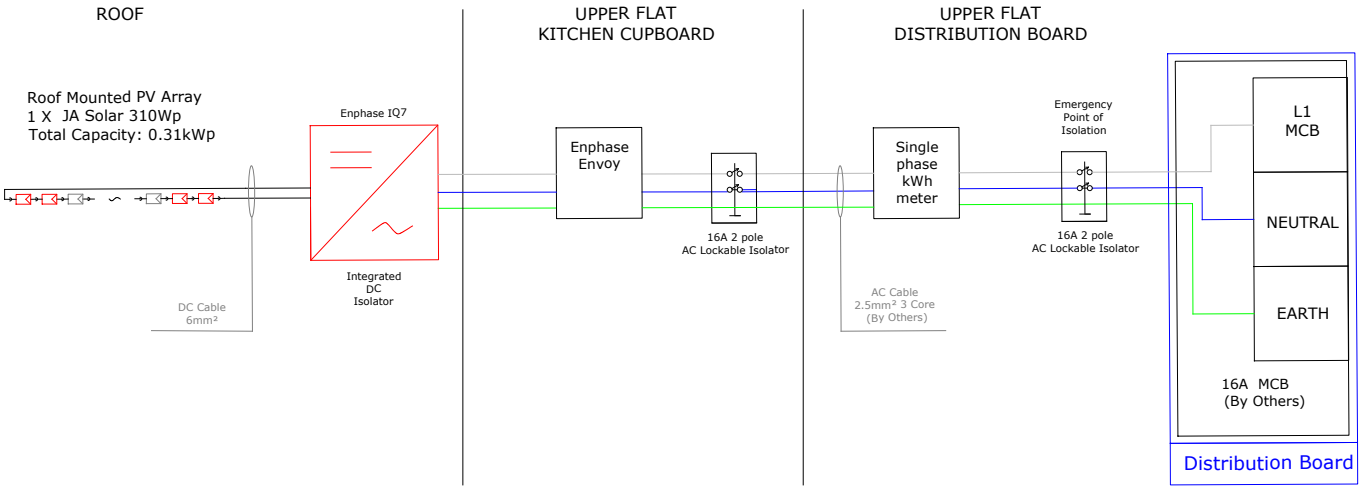
www.jojusolar.co.uk

Project Number:
Project Name: The Bull and Last
Drawing By: Rikki Baker
Scale: NTS
Checked By:
Date: 19/06/2020
Drawing Name: Lower Flat Electrical Schematic
Drawing No: -
Rev: -



Notes:
1) The PV array is outside the equipotential zone of the building and is not earthed
2) The PV system is connected to the distribution network under G99
3) Enphase inverters are G99 approved for connection to UK grid with the following protection settings:
   a) over voltage protection, Stage 1: setting 262.2V (1.0s) - Stage 2: setting 273.7 (0.5s)
   b) under voltage protection, Stage 1: setting 184 V (2.5s) -
   c) over frequency protection, Stage 1: setting 52 Hz (0.5s)
   d) under frequency protection, Stage 1: setting 47.5 Hz (20s) - Stage 2: setting 47 Hz (0.5s)
   e) loss of mains protection (by means of frequency shift)
   f) 180s delay from return of mains after fault to start of self initialise procedure.
4) Start-up / shut down procedure - it is recommended that the main rotary isolator is used to shut down the system, and is the last switch closed when the system is restarted. Any of the switches can be used at any time to isolate the relevant part of the system, but it is not recommended that the DC isolator is operated under load.

Rev	Description	Dwn	Chck	Date

JOJUSOLAR

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info@joju.co.uk
www.jojusolar.co.uk

Project Number:
Project Name: The Bull and Last
Drawing By: Rikki Baker
Scale: NTS
Checked By:
Date: 19/06/2020
Drawing Name: Upper Flat Electrical Schematic
Drawing No: -
Rev: -

Condition 10

The development hereby approved shall incorporate sustainable design principles and climate change adaptation measures into the design and construction of the development in accordance with the approved sustainability statement prepared by Blue Sky Unlimited dated 1st June 2015. Prior to occupation, evidence demonstrating that the approved measures have been implemented shall be submitted to and approved in writing by the Local Planning Authority and shall be retained and maintained thereafter.

Details of Thermal Elements Installed:

Extract from Blue Sky Unlimited Report June 2015:

The new elements within the two new apartments will be insulated to best practice standards. The follow table sets out the elemental U-values target for the refurbished and new construction:

Element	*Part L Limiting U-values*	*Proposed U-values Refurbished Elements*	*Proposed U-values New Elements*
	W/m2K	*W/m2K*	*W/m2K*
External Walls	*0.30*	*0.25*	0.17
Flat Roof	0.20	-	0.12
Sloping Roof	0.20	0.16	-
Floor	0.25	0.11	0.11

BBA
CERTIFICATE CS/1004-2
U Value Competency Scheme

Kingspan

Project ID : Online
Structure element : Wall
Description : Brick and block cavity wall, partial fill, 2.5 ties per m², cavity less than or equal to 125mm
File reference : 1E13244EB0.FCF

Calculated 'U' value = 0.17W/m²K (Calculated in accordance with BS EN ISO 6946:2007)

Condensation risk has been assessed up to and including Level 4 Humidity Class (dwellings with high occupancy) within UK worst case environmental conditions.

Element Description	Element Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)	Mean T (K)	Delta T (K)
Outside surface resistance	-	-	0.040	-	-	78.26	0.10
POLYMER RENDER	10.0	0.115	0.087	100.00	1.00	78.41	0.21
BLOCKWORK 2000 kg/m³ (k-value = 1.13 W/mK)	100.0	1.130	0.088	45.00	4.50	78.63	0.22
UNV. A/SPACE;	10.0	-	0.150	-	0.05	78.92	0.37
KOOLTHERM K106	80.0	0.018	4.444	-	100.00	84.53	0.87
AERATED BLOCK (k-value = 0.11 W/mK) 6.6% Mortar (100.0mm)	100.0	0.110	0.909	45.00	4.50	91.08	2.22
PLASTER DABS CAVITY. 20.0% Plaster dabs (15.0mm)	15.0	-	0.180	-	0.05	92.41	0.44
PLASTERBOARD	12.5	0.190	0.066	50.00	0.63	92.71	0.16
PLASTER SKIM	3.0	0.180	0.017	60.00	0.18	92.81	0.04
Inside surface resistance	-	-	0.130	-	-	92.99	0.32

Detailed U-value Calculation Results

Construction includes 3 bridged layers.

Non-bridged layers	
Outside surface resistance	0.040 m²K/W
POLYMER RENDER	0.087 m²K/W
BLOCKWORK 2000 kg/m³ (k-value = 1.13 W/mK)	0.088 m²K/W
UNV. A/SPACE;	0.150 m²K/W
KOOLTHERM K106	4.444 m²K/W
PLASTERBOARD	0.066 m²K/W
PLASTER SKIM	0.017 m²K/W
Inside surface resistance	0.130 m²K/W
Resistance of non-bridged layers, R_{NB}=	5.022 m²K/W

Not all insulation thicknesses shown may currently be stocked, so please check with Kingspan Insulation Customer Service Department on 01544 388601.

CERTIFICATE CS/1004-2
U Value Competency Scheme

Project ID : Online
Structure element : Wall
Description : Brick and block cavity wall, partial fill, 2.5 ties per m², cavity less than or equal to 125mm
File reference : 1E13255180.FCF

Calculated 'U' value = 0.17W/m²K (Calculated in accordance with BS EN ISO 6946:2007)

Condensation risk has been assessed up to and including Level 4 Humidity Class (dwellings with high occupancy) within UK worst case environmental conditions.

Element Description	Element Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)	Mean T (K)	Delta T (K)
Outside surface resistance	-	-	0.040	-	-	78.26	0.10
BRICKWORK FACING	102.5	0.770	0.133	42.00	4.31	78.47	0.33
UNV. A/SPACE;	10.0	-	0.150	-	0.05	78.82	0.37
KOOLTHERM K106	80.0	0.018	4.444	-	100.00	84.47	0.94
AERATED BLOCK (k-value = 0.11 W/mK) 6.6% Mortar (100.0mm)	100.0	0.110	0.909	45.00	4.50	91.06	2.24
PLASTER DABS CAVITY. 20.0% Plaster dabs (15.0mm)	15.0	-	0.180	-	0.05	92.40	0.44
PLASTERBOARD	12.5	0.190	0.066	50.00	0.63	92.71	0.16
PLASTER SKIM	3.0	0.180	0.017	60.00	0.18	92.81	0.04
Inside surface resistance	-	-	0.130	-	-	92.99	0.32

Detailed U-value Calculation Results

Construction includes 3 bridged layers.

Non-bridged layers

Outside surface resistance	0.040 m²K/W
BRICKWORK FACING	0.133 m²K/W
UNV. A/SPACE;	0.150 m²K/W
KOOLTHERM K106	4.444 m²K/W
PLASTERBOARD	0.066 m²K/W
PLASTER SKIM	0.017 m²K/W
Inside surface resistance	0.130 m²K/W
Resistance of non-bridged layers, R_{NB} =	4.980 m²K/W

Not all insulation thicknesses shown may currently be stocked, so please check with Kingspan Insulation Customer Service Department on 01544 388601.

BBA
CERTIFICATE CS/1004-2
U Value Competency Scheme

Kingspan

Project ID : Online
Structure element : Wall
Description : Insulated dry lining - mechanically fastened
File reference : 1Q136A6721.FCF

Calculated 'U' value = 0.17W/m²K (Calculated in accordance with BS EN ISO 6946:2007)

Condensation risk has been assessed up to and including Level 4 Humidity Class (dwellings with high occupancy) within UK worst case environmental conditions.

Element Description	Element Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)	Mean T (K)	Delta T (K)
Outside surface resistance	-	-	0.040	-	-	78.25	0.09
BRICKWORK FACING	215.0	0.770	0.279	42.00	9.03	78.61	0.62
METAL STUD/FRAME CAVITY; U/V. 0.3% wall - 1.2mm steel @ 600mm ctrs + 1.2mm @ 1200mm ctrs (25.0mm)	25.0	-	0.644	-	0.05	79.63	1.43
KOOLTHERM K118 (12.5mm plasterboard internal finish	112.5	-	5.621	-	100.00	86.59	2.48
PLASTER SKIM	3.0	0.180	0.017	60.00	0.18	92.84	0.04
Inside surface resistance	-	-	0.130	-	-	93.01	0.29

Detailed U-value Calculation Results

Construction includes 2 bridged layers.

Non-bridged layers

Outside surface resistance	0.040 m²K/W
BRICKWORK FACING	0.279 m²K/W
KOOLTHERM K118 (12.5mm plasterboard internal finish	5.621 m²K/W
PLASTER SKIM	0.017 m²K/W
Inside surface resistance	0.130 m²K/W
Resistance of non-bridged layers, R_{NB}=	6.087 m²K/W

Not all insulation thicknesses shown may currently be stocked, so please check with Kingspan Insulation Customer Service Department on 01544 388601.

BBA
CERTIFICATE CS/1004-1
U Value Competency Scheme

Kingspan
Insulation

Project ID : Online
Structure element : Flat roof
Description : Flat roof - bonded
File reference : 1E11BB50EB.FCF

Calculated 'U' value = 0.12W/m²K (Calculated in accordance with BS EN ISO 6946:2007)

Condensation risk has been assessed up to and including Level 4 Humidity Class (dwellings with high occupancy) within UK worst case environmental conditions.

Element Description	Element Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m²K/W)	Vapour Resistivity (MNs/gm)	Vapour Resistance (MNs/g)	Mean T (K)	Delta T (K)
Outside surface resistance	-	-	0.040	-	-	78.24	0.07
GREEN ROOF SYSTEM	80.0	-	0.000	-	0.00	78.28	0.00
MASTIC ASPHALT 2 LAYERS 20mm	20.0	0.700	0.029	0.00	2000.00	78.31	0.05
KINGSPAN THERMAROOF TR27 LPC / FM	100.0	0.025	4.000	300.00	30.00	81.99	7.30
KINGSPAN THERMAROOF TR27 LPC / FM	100.0	0.025	4.000	300.00	30.00	89.29	7.30
VAPOUR CHECK BITUMINOUS	3.0	0.230	0.013	0.00	300.00	92.96	0.02
PROFILED METAL DECK	50.0	-	0.000	-	10.00	92.97	0.00
Inside surface resistance	-	-	0.100	-	-	93.06	0.18

Detailed U-value Calculation Results

Total resistance of roof
$R_T = (R_{upper} + R_{lower}) / 2 = (8.182 + 8.182) / 2 = 8.182$ m²K/W

(Correction for mechanical fasteners, Delta Uf = 0.0000W/m²K | Correction for air gaps, Delta Ug = 0.0000W/m²K)
(Alpha 0.0 m^{-1} | Fasteners per square metre 0.0000)
(Fasteners cross-sectional area 0.000 mm² | Thermal conductivity of fastener 0.00 W/mK)

(Delta Uf + Delta Ug) is less than 3% of (1 / Rt) so U = (1 / Rt) = 0.12W/m²K

For further information on the specified products, e.g. literature or specification clauses, please follows the links below:-

Thermaroof TR27 LPC / FM

Not all insulation thicknesses shown may currently be stocked, so please check with Kingspan Insulation Customer Service Department on 01544 388601.