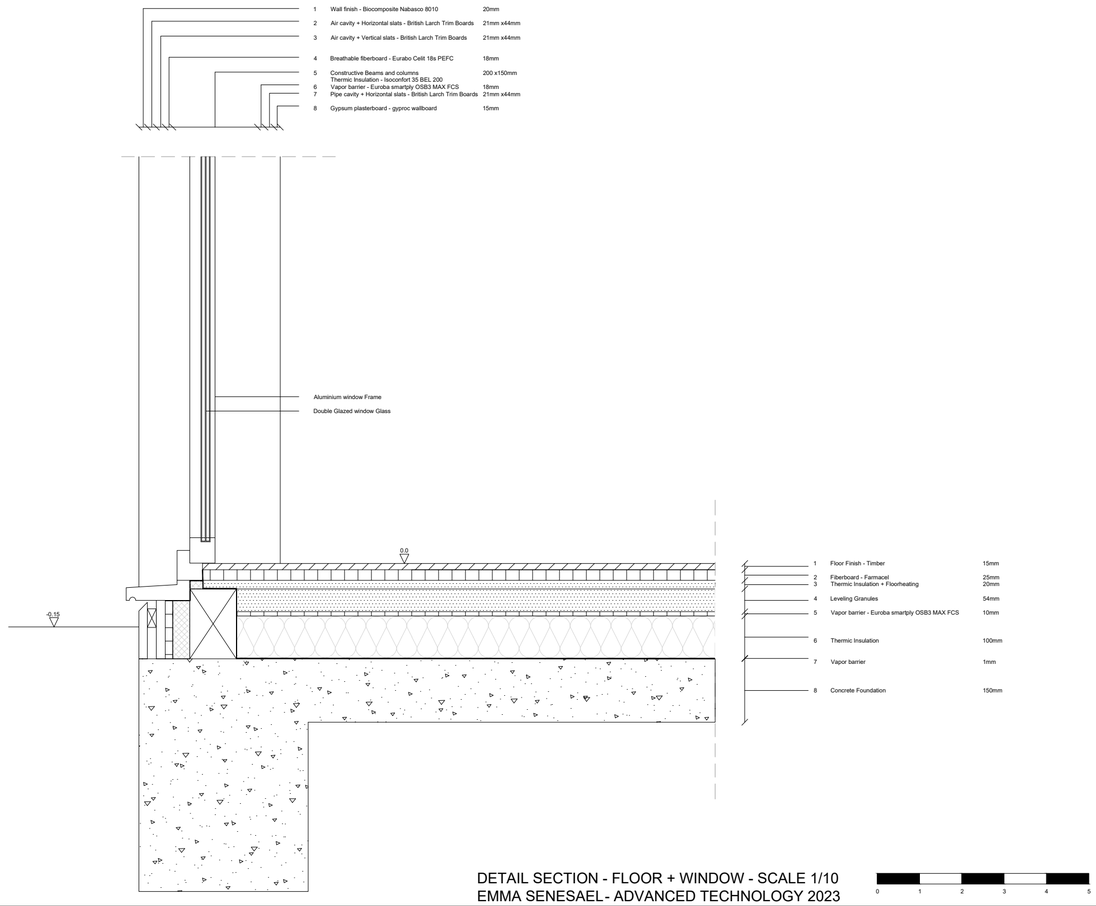
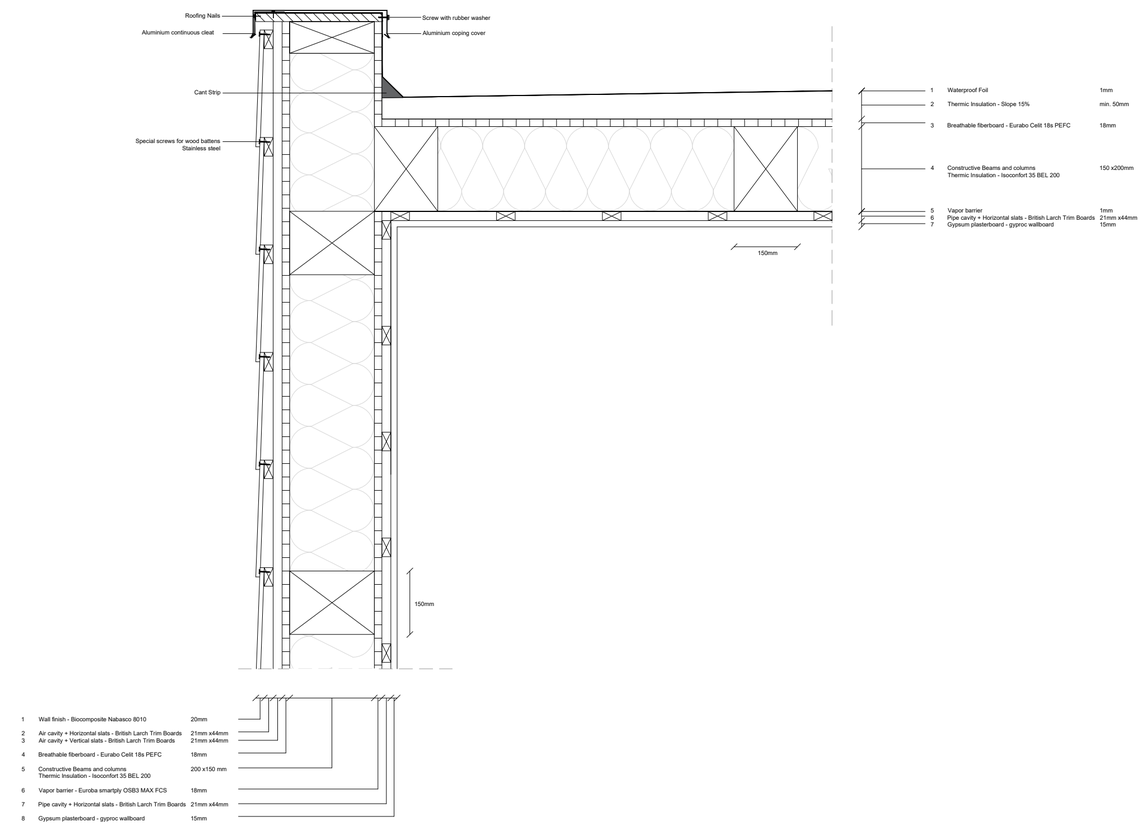
U-VALUE CALCULATION

EMMA SENESAEL
Advanced technology - 5CTA1140-0906-2023



DETAIL SECTION - FLOOR + WINDOW - SCALE 1/10
EMMA SENESAEL- ADVANCED TECHNOLOGY 2023



DETAIL SECTION - WALL + ROOF - SCALE 1/10
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DETAIL SECTIONS SCALE 1/10

#	Type Layers		Type Material	Width (m)		Thermal Resistance (m²K/W)
1	Layer		Biocomposite Nabasco 8010 Thermal conductivity **REED** 0,20W/mK	0,020		**0,100**
2	Combiened Layer	15%	UK Timber - Britisch Larch Trim Boards - ELTB1.24421 Thermal conductivity **LARCH WOOD** 0,13W/mK	0,021	0,162	**0,129**
		85%	Air cavity Thermal conductivity **AIR** 0,17W/mK		0,124	
3	Combiened Layer	15%	UK Timber - Britisch Larch Trim Boards - ELTB1.24421 Thermal conductivity **LARCH WOOD** 0,13W/mK	0,021	0,162	**0,129**
		85%	Air cavity Thermal conductivity **AIR** 0,17W/mK		0,124	
4	Layer		Breathable fiberboard - Eurabo Celit 18s PEFC Thermal conductivity 0,048W/mK	0,018		**0,375**
5	Combiened Layer	15%	UK Timber - Structural Green Oak Beams - GOB200150 Thermal conductivity **OAK WOOD** 0,16W/mK	0,200	1,250	**5,04**
		85%	ISOVER - Isoconfort 35 BEL 200 Thermal conductivity 0,035W/mK		5,714	
6	Layer		Vapor barrier - Eurabo smartply OSB3 MAX FCS Thermal conductivity 0,13W/mK	0,018		**0,138**
7	Combiened Layer	15%	UK Timber - Britisch Larch Trim Boards - ELTB1.24421 Thermal conductivity **LARCH WOOD** 0,13W/mK	0,021	0,162	**0,129**
		85%	Air cavity		0,124	
8	Layer		Gypsum plasterboard - gyproc wallboard 15mm Thermal conductivity 0,19W/mK	0,015		**0,08**
				U value =		**0,163**

U-VALUE CALCULATION WALL

Goverment UK Publications

Home < Housing, local and community < Planning and building < Building regulation

Conservation of Fuel and Power: Approved Document L

Building regulations in England setting standards for the energy performance of new and existing buildings.

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From: Department of Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local goverment
Published: 1 March 2014
Last updated: 2 Februari 2023

Limiting U-values for new fabric elements and air permeability in new dwellings

Element type	Maximum U-value (W/m²K)
All roof types	0,16
Wall	**0,26**
Floor	0,18
Party wall	0,20
Window	1,60
Rooflight	2,20
Doors (including glazed door)	1,60

The U-value for the wall is 0,163 W/m²K
This is good accourding to the building regualtions in the UK

RELEVANT EXTRACHT FROM BUILDING REGULATIONS PART L

The unit price of a single material/ component, including its installation.

2 Combiened Layer 15% UK Timber - Britisch Larch Trim Boards - ELTB1.24421 Width (m) 0,021
Thermal conductivity **LARCH WOOD** 0,13W/mK
85% Air cavity
Thermal conductivity **AIR** 0,17W/mK

Available following lenghts and section sizes (mm):

	Unit prices:	
1200 x44 x21	£ 3,49 + VAT (0,70)	**£4,19**
2400 x44 x21	£ 7,25 + VAT (1,45)	**£8,70**
3600 x44 x21	£ 14,25 + VAT (2,85)	**£17,10**

Installation
Timber titan stainless steel decking/cladding screws 50mm

Qty: Box of 500 **Unit Prices: 69,99 + VAT** **£83,99**

Qty: Two screws needed for installation **£0,34**

TOTAL PRICING: (2400x44x21mm) £8,70 + £93,99 + £ 39,59

Maintenance
No maintence needed - Natural Ventilation

Protects against insects and fungal attack even in humid environments
Use +/- 30m²
Qty: 1L **Unit Prices: 32,99 + VAT** **£39,59**

EXTRA:
OWATROL PCD 91 protection for pressure treated wood

Qty: Unit Order
142,28 £

Qty: Unit Price
£8,70 + £0,34 + £4,40 **13,44 £**

THE UNIT PRICE OF A SINGLE COMPONENT