

HND: Quantity Surveying and Commercial Management

ACBA 4000 – Estimating & Measurement of Work

University of Wales Trinity Saint David



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Take off & Bill of Quantities

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08/05/2023

Word Count: 351

This study has been completed as part of the HND in Quantity Surveying at the University of Wales Trinity Saint David. This work is my own and where the work of others has been used or drawn upon to gain knowledge in this field of research it is referenced accordingly.

Abstract

In this report, shall detail the items requested by the client when I was appointed as an assistant quantity surveyor for a local housing developer. I'll provide a copy of my take off for the Masonry elements of the extension along with the measure for the existing house for roofing tiles. Based on this, I'll produce a bill of quantities for the external envelope of the extension and the existing roofing tiles following my take off. Finally, based upon the Gross Internal Floor Area for the existing property and the new build extension I'll provide an estimated cost of the property.

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Report of Assumptions/Clarifications

Whilst carrying out the exercise for the client that I've been appointed to do there are numerous assumptions/clarifications that I've had to make due to the lack of information I've had to my disposal such as drawings and specification.

When taking off the external envelope for the new build extension, I've had to assume that the cavity wall conduction consists of the following materials:

- Inner Skin Masonry Wall – 200mm Blockwork
- Cavity Wall Insulation – 75mm
- Cavity – 30mm
- Outer Skin Masonry Wall – 200mm Blockwork

In addition, whilst calculating the Gross Internal Floor area I've assumed that the Ground Floor & First Floor space covers the full length and breadth of the existing building. As I haven't received floor plans for the existing building I have had to assume this.

Finally, the Bill of Quantities has been produced assuming the suppliers/material types that are going to be used for each item. This could change once consultations have been held with the design team but all materials have been specified with well-known reputable suppliers.

Gross Internal Floor Area – GIFA

Existing Building – $7.5 \times 6.2 \times (2 \text{ Floors}) = 93 \text{ m}^2$

Proposed Extension – 23.38 m^2

Total = $116.38 \text{ m}^2 \times £1950.00 \text{ per m}^2 = \textbf{£226,941.00}$

The Total cost for the whole of this building has been produced based on a mid-range cost per m² which appears to keep in well with the surrounding area. This could fluctuate between the actual materials used and the standard of workmanship it is completed to.

Take-off

Assignment 2 - Take-off - Jordan Jones.

2	3.41 8.01	54.63	Roof Coverings: Concrete plain tiles: BS EN 490 group A; on 25mm x 38mm battens and type 1F reinforced underlay; Tiles 267 x 165mm to 64mm laps:
	1.52 4.67 2.86 3.04 6.12 1.75 <u>19.95</u>		Calculation of inner girth
5/2 1/2	6.2525 ~~0.525~~ 10.2625 19.95 <u>21.21</u>	1.2625	Calculation of centreline
	3.00		Calculation of height of external wall.
2/3	21.21	63.64 <u>127.28</u>	Concrete blockwork: dense: B.S. 6073: minimum compressive strength 7N/mm ² : minimum density: 1400kg/m ³ : in cement mortar (1:3): 200mm thick.

3	21.21		Partial filling cavities with insulation: Kingspan Insulation Ltd: Kingspan Protherm H8 as partial cavity fill; including cutting and filling around wall ties and retaining discs: 25mm thick
		63.64	
3	21.21		Forming cavities between walls and other work: width of cavity 30mm: stainless steel butterfly wall ties; three per m ²
		63.64.	

Bill of Quantities

Main Contractor: Andrew Scott Ltd		 Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David 200 1822 - 2022			
Project: 33 Ashwood Drive, Gellinudd					
Package: Brickwork & Roofing					
Quantity Surveyor: Jordan Jones					
Reference: ACBA 4000 - Assignment BoQ - UWTSD					
B/P/I	DESCRIPTION	QUANTITY	UNITS	RATE	VALUE
	MASONRY				
	BRICK/BLOCK WALLING				
	Concrete blockwork: dense: B.S.6073: minimum compressive strength 7N/mm2: minimum density 1400kg/m3: in cement mortar (1:3)				
	Walls				
1/1/A	200mm thick:	127.28	m2	46.57	5927.43
	INSULATION				
	Partial filling cavities with insulation				
2/1/A	Kingspan Insulation Ltd: Kingspan Kooltherm K8 as partial cavity fill; including cutting and filling around wall ties and retaining discs; 75mm thick	63.64	m2	18.52	1178.61
	FORMING CAVITIES				
	Forming cavities between walls and other work				
3/1/A	width of cavity 30mm; stainless steel butterfly wall ties; three wall ties per m2	63.64	m2	1.67	106.28
	ROOF STRUCTURE				
2/1/A	Pitched/Monopitched roof: design loads (kN/m2), Spans (m) and angle of pitch (°) To be confirmed by Structural Engineer	54.63	m2		
	ROOF COVERINGS				
	Concrete plain tiles; BS EN 490 group A; on 25mm x 38mm battens and type 1F reinforced underlay:				
3/1/A	Tiles 267 x 165mm to 64mm laps:	54.63	m2	40.06	2188.48
	Quoted Value				9400.80