

WPF - Bills of Quantities

IMPORTANT NOTE

1.0 Bills of Quantities Soft / Hard Copy

For convenience and practicality, the Bills of Quantities are being published in hardcopy as well as in softcopy (Excel) format. The softcopy will make it easier for the tenderers to compute the price of their respective offer.

This dual publication is being made on the following conditions:

1.1 The Employer does not warrant the accuracy, correctness or completeness of any formulas in the softcopy. Tenders are responsible for verifying any formulas in the softcopy and notify any error or omission they may encounter.

1.2 Tenderers are required to submit with their offer both a priced hardcopy (with each page sigend) and a priced softcopy (in pdf) of the Bills of Quantities. If either one is missing the tender submission will be deemed incomplete.

1.3 In the event of any difference, discrepancy or ambiguity between the hardcopy and the softcopy, which is NOT attributable to arithmetical error, the former shall prevail always and under all circumstances without exception and the Employer will amend the softcopy to concur with the hardcopy and inform the tender accordingly.

2.0 The price of all zero rated items, or items where the price has been left blank or ticked off or filled in with any comments bar a numerical number, are deemed to be at no additional cost and deemed to be included in other items of these Bills. All unit prices and item amounts given in these Bills are inclusive of all levies, duties, charges, fees and similar costs, but exclusive of Value Added Tax (VAT); otherwise they are all-inclusive and include *inter alia* materials, contractor's equipment, waste, profit, working in different stages / phases and at different levels and heights, working around existing services, any labour wage increments and other cost escalation occurring during the 'Time for Completion' or the 'Defects Notification Period', and including any extension of either.

ITEM	DESCRIPTION	AMOUNT
SUMMARY		
1	PRELIMINARIES	
2	STEEL WORKS	
3	FLOOR FINISHES	
4	JOINERY & FURNITURE	
5	RESTORATION	
6	DEMOLITION, REMOVALS AND ALTERATIONS	
7	DAYWORK - STRUCTURES	
8	HVAC SYSTEMS	
9	FIRE FIGHTING SYSTEMS	
10	ELECTRICAL & ELV SYSTEMS	
11	LIGHTING	
12	DAYWORK - SERVICES	
TOTAL (ex VAT)		
VAT @ 18%		
TOTAL (in VAT)		

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	PRELIMINARIES				
	PROJECT PARTICULARS				
	<p>Project Name: Extension & Refurbishment of the St John's Co-Cathedral Museum - Restoration and Refurbishment of the Crypt of St John's Co Cathedral</p>				
	<p>Works Package: WPG</p>				
	<p>Location: St John's Co-Cathedral St John Street Valletta</p>				
	NAMES AND ADDRESSES OF EMPLOYER AND ENGINEER				
	<p>The Employer: The St John's Co-Cathedral Foundation St John's Co-Cathedral St John Street Valletta</p>				
	<p>The Supervisor: AP Valletta Ltd. 4 Sappers Street, Valletta VLT 1320</p>				
	PREAMBLES				
	<p>i The price of all zero rated items, or items where the price has been left blank or ticked off are deemed to be included in other items of these Bills. All unit prices and item amounts given in these Bills are inclusive of all levies, duties, charges, fees and similar costs, but exclusive of Value Added Tax (VAT); otherwise they are all-inclusive and include <i>inter alia</i> materials, contractor's equipment, waste, profit, working in different stages / phases and at different levels and heights, working around existing services, any labour wage increments and other cost escalation occurring during the 'Time for Completion' or the 'Defects Notification Period', and including any extension of either, unless any extension is due to the Contracting Authority, in which case the Contractor shall be reimbursed on a pro-rata basis</p>				
	<p>ii All prices and lump sums given in these Bills are exclusive of VAT. VAT is added only in the Summary sheet after final summing up of all Bill totals.</p>				
				carried forward	

				brought forward	
iii	All items in these Bills are provisional and may be omitted or quantities modified without in any way vitiating the Contract or affecting the prices given in the Bills. All quantities shall be re-measured on the actual permanent work executed and quantities calculated using the construction drawings. Method of Measurement shall be according to the section on 'Method of Measurement' within this contract document unless otherwise qualified in the Bills notes or descriptions.				
iv	When adjusting extras or variations or modifications on the contract, Works will be measured according to the method of measurement already established by similar Works described in the BOQ.				
v	Only where in the opinion of the Engineer that extra / modification works cannot be properly measured or valued according to contract rates, may the Engineer instruct to carry out the Works at the Daywork Rates indicated in the Schedules of Dayworks.				
vi	The item descriptions given in these Bills are to be read and priced in conjunction with the remaining contract documents and in particular the relevant Specifications , Drawings and General and Special Conditions.				
vii	All prices shall include all the Permanent Works and all the Temporary Works not specifically itemised, including their modification thereof, if applicable which are needed to perform the Permanent Works in full compliance with the Contract.				
				carried forward	

				brought forward	
ADMINISTRATIVE REQUIREMENTS					
	The Site				
.1	The site is located on the corner between Merchant Steet & St John's Square, at the heart of Valletta.				
	Compliance with the Conditions of Contract				
.2	Comply with the Contractor's general obligations as prescribed in the General Conditions and Special conditions .				Included
	Performance Security				
.3	Provide the Performance Guarantee prescribed in the General Conditions, and Special Conditions for the durations and amounts stated in the Tender. If the Time for Completion is extended the Performance Security shall be extended accordingly.				Included
	Insurances				
.4.1	To be Provided by the Client				To be provided by the Client
	The Contracting Authority is in the process of obtaining a Contractors' All Risk (CAR) Insurance Policy for the whole project, covering all works. The CAR will be issued in both the Contracting Authority and the Contractor's name as joint insured parties. This does not relieve the Contractor from ensuring that suitable insurance policies are in place to cover motor insurance, tool of trade policies for all plant, machinery, tools and equipment, an Employers Liability for employees and any additional suitable insurance the Contractor deems necessary. Moreover, the Contractor will be obliged to communicate (including meetings) and provide all necessary documentation and feedback to the Contracting Authority's insurer within a stipulated period of time. The Contractor will also remain responsible for reporting Work incidents and does not relieve the Contractor from the responsibilities which shall be set out in the respective CAR policy.				
.4.2	To be provided by the Contractor				Included
	Provide all the necessary insurances as prescribed by the Contract generally and, in particular, by the General Conditions and Speical Conditions of Contract and as required by the laws of the Country. The period of insurance shall include the 'Time for Completion', with an extension to cover also the 'Defects Notification Period'. If the 'Time for Completion' is extended these insurances shall be extended accordingly. Insurance to include: Motor insurance, tool of trade policies for all plant, machinery, tools and equipment, an Employers Liability for employees and any additional suitable insurance the Contractor deems necessary.				
				carried forward	

				brought forward	
Statutory Obligations					
.5	Comply with all statutory obligations; national and local law and regulations. Give the necessary notices to the relative Authorities and Utility Services Providers where necessary. Liaise and cooperate with them as necessary. Comply with the conditions of Planning Permission as attached. Make available on site at all reasonable times a copy of the Building Permit site, including approved Plans for inspection and use by Enforcement Officers as required by Schedule I, Regulation 7 of Legal Notice 295 of 2007.	1.00	L/S	included	included
Public Authorities Fees and Charges					
.6	The contractor will be responsible for obtaining and incurring all expenses related to any permits that might be required by all Government authorities including the local council and for any other fees that might become due to the Government Authorities including the local council or the competent authorities, bodies and /or agencies in relation to obstruction to traffic and pedestrians, necessary hoardings etc. Prior to submitting this tender document, the contractor is required to consult with the local council, Transport Malta in relation to all requirements to carry out the scope of works of this tender.	1.00	L/S	included	included
Working Hours					
.7	As allowed for L.N. 295 of 2007, and subject to the General Requirements permissible hours of work where noise generated from activity that can be heard from outside the site shall be Monday to Saturday (exc Public Holidays) between 07:00am & 8:00pm. Activities generating noise greater than 65dB measured immediately outside the site shall cease between 2:00pm and 4:00pm. The permissible hours may be altered by Authorities throughout the duration of the project. The Contractor is to factor in executing the Works at night (after 8:00 pm) and early morning (before 7:00 am)	1.00	L/S	included	included
				carried forward	

			brought forward	
Health & Safety				
.8	Allow for the assignment of a competent 'duty holder' on behalf of the Contractor to be employed on the Works to ensure compliance with the OHS Code of Practice for the Construction Industry, L.N.88 of 2018 and all relevant standards and regulations, who will ensure that all in accordance to the prelevant applicable legislation.	1.00	L/S	
.8.1	Comply with the provisions of the Occupational Health and Safety Authority Act (Chater 424 of the laws of Malta), together with LN 88 of 2018, and any regulations and relative Legal Notices made thereunder and shall be solely responsible for the safety of his own workmen, and the general public, including workmen of other contractors on site. the contractor is to also cater for the Health and Safety conditions stipulated within the Agreement.			included included
.8.2	In accordance with Legal Notice 88 of 2018, the Employer has appointed an independent Project Supervisor for the Construction Stage (PSCS) to ensure that the construction site and its activities are in conformity with good practice and the legal requirements. The Contractor is bound to fully cooperate with his requirements / instructions / directions when exercising his functions, including furnishing of any information as necessary. The Contractor is to allow for all conditons he is responsible to follow in accordance with LN 88 and any other Health and Safety Laws.			included included
.8.3	Include also for cooperation with other contractors / sub-contractors employed on the Works.			included included
.8.4	Health & Safety plan- Compile, present and upkeep (following approval) of the Health and Safety Plan. The Contractor shall allow for the regular monitoring, compilation of statistics and presentatation to the Project Manager at regular intervals in accordance with the Project Manager's Instrcution.			included included
.8.5	Allow for carrying out any necessary Risk Assessments and evaluation of any hazards which may affect employees or other persons, including a Safe Work Method Statement where necessary, highlighting subsequent measures to safeguard the health and safety of any person affected by the Works. Seek approval of the PSCS who will adjust, update and maintain the Health & Safety Plan / File accordingly.			included included
.8.6	Allow for subsequent supervision of the Works and enforce any required control measures as necessary.			included included
				carried forward

				brought forward	
	Nuisance & Disturbance				
.9	Allow for ensuring that disturbance and nuisance is kept to a minimum both to the occupants of the nearby buildings and the surrounding environment ensuring adherence to the provisions of Legal Notice LN295 of 2007 including applicable amendments.	1.00	L/S	included	included
	Environment				
.10	Allow for all the measures that may be required to safeguard the environment according to L.N. 295 of 2007, L.N. 72 of 2013, Civil Code Chapter 16 and any other relevant legislation.	1.00	L/S	included	included
	Construction Management				
.11	Allow for the drafting, preparation and submission for the due consideration and approval of the Contracting Authority, Supervisor, Project Manager and Authorities, a Construction Management Plan (CMP) which shall strategize the management and coordination of the construction logistic processes to ensure that the Works will be executed in a timely manner and meet the requirements set out in the Contract Documents and, in accordance with the relative legislation and authorities. Refer to the Special Conditions for additional details. The CMP is to also take into consideration the provided Method Statements included in the Tender Documents and, the detailed method statements prepared by the Tenderer/Contractor. Allow also for the provision for the Works to be executed during the night hours, or early hours of the morning, as to still be stipulated by the Authorities and, for amending the CMP/Method Statements as often as reasonably necessary to the detail required by the Supervisor and/or Project Manager.	1.00	L/S		
	Waste Management				
.12	In the absence of a waste management plan comply with the exigencies of L.N. 295 of 2007. Include for waste to be separated and to comply with the Waste Regulations and Guidelines issued by ERA, WastServMalta and respective Legislation including but not limited to L.N. 295 of 2007.	1.00	L/S	included	included
	Site Representative / Management				
.13	Allow for a competent authorised representative to be present on site during all working hours for the programming, supervision, coordination and execution of any Works, including that of the sub-contractors, for the full duration of the works including the drawing up of records and daily reports etc. as deemed necessary.	1.00	L/S		
				carried forward	

				brought forward	
Quality Assurance Plan					
.14	Set up, implement and maintain a project Quality Assurance Plan to ensure that all work and materials are checked, verified, tested and recorded with the requisite frequency, ensuring that no work is covered up before it is inspected. Maintain a file with clear and complete records of all Works and their Quality Assurance Procedures. Make available for inspection at all times and furnish a soft copy of the File when directed by the Engineer.	1.00	L/S	included	included
Site Testing					
.15	Allow for any tests during the execution of the Works referred in the 'Testing Schedule', as directed by the Engineer including test on completion as part of the commissioning of the respective Works under this contract.	1.00	L/S	included	included
Measurement of Works					
.16	Measure the work monthly to ascertain the value of work properly executed; inform the Engineer before making any measurements and submit monthly, an interim application for verification and certification by the Engineer.	1.00	L/S	included	included
Measurement Fee					
.17	Allow for Engineer's fees at the rate of one percent (1%) of the Contract Price for verification and certification of the measured value of work. Measurement fees are to be settled by the Contractor to the Engineer upon issuance of each certificate.	1%		included	included
Information to be submitted by the Contractor					
.18	Allow for the preparation and submission on a timely basis submittals as necessary according to the 'Post Contract Submittals' list / as per items required by the contract documents and specifically by the Technical specifications.	1.00	L/S	included	included
Samples submitted by the Contractor					
.19	Allow for the manufacture, procurement, assembly or application of samples of materials, or workmanship, that are incidental to the Works, including any supporting data according in accordance with the 'Post Contract Submittals' list / as per items required by the contract documents and specifically by the Technical specifications.	1.00	L/S	included	included
				carried forward	

				brought forward	
Programme / Progress Reports / Log Book					
.20	Prepare, submit and maintain a Works Programme of Performance showing all relevant commencement and projected completion dates for all trades prior to the commencement of the works for approval. Allow for amending the Programme of Performance as often as reasonably necessary to the detail required by the Supervisor and/or Project Manager.	1.00	L/S		
.20.1	The Contractor is to also submit bi-weekly (or as deemed necessary by the Supervisor and/or Project Manager) detailed Programme and Progress Reports in line with the Programme of Performance for submission to the Supervisor and Project Manager.			included	included
.20.2	Set up and update daily a detailed Work Register / site diary logging all activities and events on the Site as prescribed in the Contract. Daily site diary to also include : number of operatives, progress of works, visitor log, instructions and other events influencing the progress of the works. Keep all data in an orderly manner in a Building File and make available to the Engineer on request.			included	included
Site Meetings					
.21	Allow for all attendances to weekly and extraordinary site meetings as deemed necessary by the Employer / Engineer.	1.00	L/S	included	included
Handover Documentation					
.22	Upon Completion, submit to the Employer an organised Operation & maintenance Manual, including any guarantees, warranties, Certifications, Test Results, Quality Assurance Plans etc. and all other information submitted during the execution of the Works. Include for an as-built survey of the completed structure, Finishes and the restoration. Include for all floor plans, floor & ceiling levels, datum etc. Submit a digital copy to the Employer for their records. All in accordance with the the 'Post Contract Submittals' list / as per items required by the contract documents and specifically by the Technical specifications.	1.00	L/S	included	included
				carried forward	

			brought forward		
THE PROJECT SITE REQUIREMENTS					
Site Enclosure & Security					
.23	Allow for all requisite measures to keep the Site secure from access to unauthorised persons, including a site hoarding made of suitable rigid material that is free-standing up to a height of 2.4m and can withstand wind loads of Force 8 and above, if and where required by law or shown on the site logisitc plan. It shall be constructed from a timber or metal frame, covered with a spray painted timber marine plywood boards that precludes any visual impact of the internal on-goings within the site, also acting as a barrier to dust or debris. If and where necesaary part of the hoarding shall be adjustable such that, on occasions, the distance offset between the facades of the Site and the edge of hoarding can be increased as required to execute the Works. Hoardings shall include adequate gate entry points, illumination, watching, etc. Rate to include for altering alignment of the fence as the works demand and maintaining it in a neat and tidy condition. Measured per linear metre of site enclosure. The hoarding along the public road is to be presentable with the allowance for it to feature durable printed imagery pertaining to the project, should the Employer require. All hoarding to be in accordance with Subsidiary Legislation 552.09 (LN 295 of 2007)	1.00	LS		
Sign Board					
.24	Provide a Signboard as approved in accordance with Schedule I, Regulation 7 of Legal Notice 295 of 2007. Sign board must be no less than 1.5m x 2.5m, indicating the Permit Number, Particulars of Owner, Development Title, Site Manager (PSCS), Perit, all Contractors and a 24hr contact Telephone Number. Also include Start Date and completion of principle stages of the project. Allow for the provision of all required safety signs in compliance with local regulations and any required traffic management plan.	1.00	L/S		
Site Office & Welfare Facilities					
.25	Set up a temporary site office, meeting room and welfare facilities and maintain on a daily basis in a hygienic condition. Provide necessary site storage containers and other site facilities as considered necessary.	1.00	L/S	included	included
			carried forward		

				brought forward	
Site Access					
.26	Provide and maintain physical safe access to all parts of the work for the Engineer, Employer and other interested parties. Allow for any restrictions for loading, unloading, parking and any other restrictions affecting access to the Site or work in the vicinity of the Site. Ensure that vehicular and pedestrian traffic near the site is not impeded. Allow for any temporary access ramps as approved, required for plant and personnel. Rate to also include for dismantling and re-forming ramp as per work esigencies and / or as requested by the Emplyer / Engineer.	1.00	L/S	included	included
Public Roads					
.27	Generally protect public roads and public property and remedy any damage caused by the Works or activities connected therewith. Where a hazard to vehicular traffic on a public way is created by the Works, provide appropriate control measures as approved by the local council, including necessary enforcement officers, warning signs, barriers, lane control devices, optical flashing warning lights etc.	1.00	L/S	included	included
.28	Protect existing public road and pavements within the temporary site enclosure from any damage or staining of the existing ground level porfido finish. Include for any temporary protection and removal of the same upon completion.	1.00	L/S	included	included
Electrical & Water Supplies for the Works					
.29	The Employer will provide a single phase 40 Amperes electrical supply point (as exisitng) on the site for use by the contractor to execute the Works. The contractor shall satisfy himself that this is adequate for his requirements. If necessary, the contractor shall make provisions for himself as required. The contractor shall make arrangements to distribute as necessary around the site for the works. Include also for a temporary network of artificial lighting if and where necessary. All Temporary installation to be certified by a licenced electrician. Allow for all costs. Consumption charges will not be levied.	1.00	L/S		The supply as described is provided by client. Costs for any additional requirements by the Contractor to be included in the rates.
.30	The Employer will provide a tap water supply (as exisitng) on the site for use by the contractor to execute the Works. The contractor shall satisfy himself that this is adequate for his requirements. The contractor shall make arrangements to distribute as necessary around the site for the Works. . Allow for all costs for the Management & Execution of the Works. Consumption charges will not be levied.	1.00	L/S		The supply as described is provided by client. Costs for any additional requirements by the Contractor to be included in the rates.
				carried forward	

				brought forward	
	Setting Out				
.31	Set out of the Works at all levels as necessary for the proper execution of the Works, to the satisfaction of the Engineer. Include for all necessary surveying exercises, instruments as necessary etc. to ensure compliance with the contract drawings.	1.00	L/S	included	included
	Contractors Plant & Equipment				
.32	Allow for all Contractor's plant, tools and equipment that may be necessary for the execution and completion of the Works. Maintain all plant, tools and equipment in a good state of repair and in accordance with the health & safety requirements of L.N.281 of 2004 and the requirements of Environmental Management Construction Site Regulations L.N.295 of 2007.	1.00	L/S	included	included
	Contractors Cranage				
.33	Provide, maintain and dismantle all forms of cranage whether temporary or permanently (for the duration of the Works) on the site as required to execute the Works. Include for restrictions as foreseen in the Construction Management Plan due to the Site constraints. Include for the readjustment's to site screening as required by the management plan, permits, co-ordination with authorities and supervision. Obtain all temporary way leaves for operating tower / mobile cranes over air space of third party property or for access there from.	1.00	L/S		
	Site Scaffolding				
.34	Ascertain & allow for any platforms, scaffolding and other temporary access structures including any structural supporting scaffolding installations necessary to complete the works (besides those allowed for in the other sections of the BOQ) which are deemed to be required by the Contractor (besides those allowed for in the other sections of the BOQ). Include for any modification of the same during the course of the Works. Provide, install and maintain edge protection devices, guardrails, toe boards, floor opening covers and all other requisite safety measures to keep the Site, the Works and site operatives safe. Where necessary, arrange for scaffolding to be designed by a competent engineer and to be checked, certified and scafftagged by competent persons before use.	1.00	L/S	included	included
				carried forward	

				brought forward	
	Temporary Works				
.35	Allow for all other temporary works, not already itemised, (which are deemed to be required by the contractor) for the proper and safe execution of the Works, including their erection, maintenance, dismantling , modification and where required certification of the same throughout the entire course of the Works. Including for temporary works and measures deemed necessary to safeguard third-party property and for costs for protecting and / or supporting existng third party property adjacent to site.	1.00	L/S	included	included
	Material Storage				
.36	Protect the Works and Materials stored on the Site against weathering and all deleterious agents.	1.00	L/S	included	included
	Cleanliness				
.37	Daily clear all debris and waste materials, and weekly perform general cleaning of the site to maintain constant good housekeeping. Before demobilising clear the entire Site of all debris, rubbish and waste material; sweep clean all horizontal concrete surfaces, collect the dust and debris and dispose off in an legally approved manner. Remove all temporary works and clear all resulting material from the Site.	1.00	L/S	included	included
	OTHER ITEMS - MECHANICAL AND ELECTRICAL SERVICES				
.38	Allow for all necessary instruments, materials and testing, contained or implied by the specifications	1.00	L/S		Included
.39	Allow for all wall openingd and block outs of 200mm diameter or 175mm x 175mm square	1.00	L/S		Included
	BILL NO 1. PRELIMINARIES				
	Amount (Excluding VAT) carried to main summary page				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
2	STEEL WORKS				
	Note:				
	<i>i All structural steel work and associated works to include for all costs including all necessary materials, labour and equipment and preparation of workshop drawings.</i>				
	<i>ii All structural steel (Grade S275JR or better in accordance with EN10025) to be supplied/erected/manufactured in accordance with EN 1090 and all other relevant specifications.</i>				
	<i>iii All bolts including anchor bolts to be hot dipped galvanised (minimum Grade 8.8).</i>				
	<i>iv Rates to include for all plant required including any crange, and other erection costs such as fixed or mobile scaffolding.</i>				
2.1	Bartolott Crypt Raised Floor Structure				
	Survey				
.1	Carry out a survey of the existing basement structure to confirm existing dimensions for the steel manufacture and its installation. Prepare workshop drawings for approval prior to manufacturing.	1.00	LS		
	Structural Steel for Raised floor				
.2	Manufacture, supply and erect structural steel framed raised				
a)	HEAA 100	3,250.00	kg		
b)	Bespoke Tee Sections (refer to drawings)	1,675.00	kg		
c)	Bespoke Angle Sections (refer to drawings)	720.00	kg		
d)	Bespoke Channel For Higher raised floor area	1,800.00	kg		
e)	Bespoke Channel For Lower raised floor area	720.00	kg		
f)	IPE 200	505.00	kg		
	Corrosion Protection				
.3	Grit blast to Sa2½ with G24 chilled angular iron grit and apply 100µm hot dip galvanising in accordance with EN ISO1461. Include also of touching up with an approved cold galvanising of any damage to galvanising during and after erection. Rate to be all inclusive.				
a)	Raised Floor structure	375.00	sqm		
b)	Height Adjustable legs	175.00	no.		
	Painting				
.4	Prepare all surfaces for cold galvanising as per BS EN 12944-5 by removing any grease, oil and contaminants. Round off any rough welds, sharp edges and weld splatter. Apply a two coat system consisting of a Zinc Rich Primer with a minimum Zinc content of 80% (minimum dry film thickness 100µm) and a Polyurethane or Acrylic Top coat (minimum dry film thickness 160µm) to have a RAL colour as determined at a later Stage.				
a)	Railing	30.00	l.m.		
	Height Adjustable Legs supporting Raised floor				
.5	Manufacture, supply and erect height adjustable leg support detail as per detail shown in drawing no. C00410.00-F-B1-S101 Details 1 and 2. Rate to be net of wastage and inclusive of all plate connection materials and bolts, and nuts. Rate to be all inclusive of the provision of liquid membrane separation layer a 20mm levelling pad	175.00	No.		
				carried forward	

		brought forward		
Railing (Balustrade)				
.6	Manufacture, supply and erect railing (balustrade) as per Section A-A shown in drawing no. C00410.00-F-B1-S101. Rate to be net of wastage and inclusive of all plate connection materials, bolts, 30mmx30mm x 3mm Hollow sections and 3 mm steel plate on both sides of the hollow section. Rate to be all inclusive.	30.00	l.m	
.7	Extra over railing (balustrade) for cut out to house light fitting/LED strip	72.00	l.m	
.8	Manufacture, supply and erect 200mm high kerb, made of 30mmx30mm x 3mm Hollow sections and 3 mm steel plate cladding on both sides of the hollow section. To be carried out around the lower part of the raised floor. Rate to be net of wastage and inclusive of all plate connection materials, bolts.	24.00	l.m	
.9	Manufacture, supply and erect 1 no. hinged gate 675mm wide x 905mm high as per plan shown in drawing no. C00410.00-F-B1-S100. Rate to be net of wastage and inclusive of all plate connection materials, bolts, 30mmx30mm x 3mm Hollow sections and 3 mm plate anodised aluminium cladding on both sides of the hollow section. Rate to be all inclusive.	1.00	No.	
Bill No 2: STEEL WORKS				
Amount (Excluding VAT) carried to main summary page				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
3	FLOOR FINISHES				
	Note: i Bidder is to note that Section 3.1 does not describe the sub-base on which the finishes are to be laid. The bidder is to refer to the drawing C410_F_53_B0				
3.1	CONCRETE FLOOR TILING				
	GREY CONCRETE SLABS				
	Specification: M40				
.1	Precast RC grade C30 fair-faced reinforced concrete 70mm thick suspended tiles having varying sizes (refer to paving layout C410_F_53_B0). Rate is to include fabrication, supply, delivery and installation. Rate is to include for the A393 mesh reinforcement and reinforcing fibres. Slabs to be finished in a matte dark grey colour - the slabs are to achieve a variety of dark grey shades aligned to a RAL code, for which samples will be requested at a later stage, upon award of tender. The thickness of the slabs shall be designed in accordance with the relevant EU code requirements and to be accompanied by certification delivered by an independent laboratory, for Architect's approval prior to the commencement of manufacturing. Cost of samples to be all inclusive in the rate. It is also assumed that the slabs will be designed so as to conform to the tender drawings in terms of respecting the floor build-up to achieve the specified Finished Floor Levels. The slab panels, bespoke or proprietary shall be honed and have their edges rectified and free from damage. Include for the use of pigments (RAL TBC), surface hardeners, epoxy sealers and fibre reinforcement. Micro aggregates only which shall be of an adequate size and material to match pigmentation of binder and thickness of slab. Laid to perpendicular pattern joint layouts in various spaces. Rate to include for any special handling and co-ordination with showcases when required. Rate to include for samples. Which samples may need to be repeated to obtain the required finished properties of the slab panel and until approved by architect in charge. (Slabs inserted in showcases have been included in quantity below) For size of individual slabs varies, refer to slab layout drawing reference : F_53_B0_Flooring Layout – Basement Plan. Maximum slab size = 1.3m x 0.9m. (All dimensions to be checked on site and work shop drawings submitted for approval before manufacture). Rates to include for survey and preparation of work shop drawings. (Rate to be per square metre of overall area of floor covered with precast slabs.) Full area of the flooring	140.00	sq.m		
.2	Extra over to cut slabs to insert light fittings, approx dimensions : 150mm x 150mm	6.00	no		
.3	Extra over balustrade for cut out to house light fitting/LED strip	72.00	ml		
.4	Extra over for 200mm x 200mm x 30mm thick AC access panels to be formed in the concrete slabs	5.00	no		
.5	Extra over for the manufacturing of 200mm x 200mm x 30mm thick AC opening access panels to be formed in the concrete floor slabs	5.00	no.		
			carried forward		

		brought forward	
3.2	MISC CONCRETE SLAB RELATED ITEMS		
.1	Supporting Rubber Provide tile support rubber bearing pads prior to installation of the concrete tiles. Rate is to be inclusive of the supply and installation of the 100mm wide x 5mm thick rubber net of wastage. Rate to be per square metre of laid floor slabs.	140.00	sqm
.2	Joint sealant Provide proprietary tile joint sealant as per Section A-A drawing number C00410.00-F-B1-S101. Rate is to be all inclusive of the supply and installation. Rate to be per square metre of overall area of floor slabs.	140.00	sqm
.3	Precast Concrete Beams Supply, deliver and laying of Precast Concrete T-beams (Grd C30) dimensions 0.17m x 0.15m x 2.75m to cover existing exposed grave in the Bartolott crypt. Rate is to include for Sika Plastocrete N or approved equivalent Waterproofing agent and painting over sides and bottom surface with 2 coats of Buffa Coper Evolution Liquid membrane or approved equivalent. Steel reinforcement to be measured separately.	6.00	No.
.3b	Supply bend and fix including all necessary cover blocks and stools, high tensile (H=500 N/mm ²) steel rod reinforcement in foundations and ground beams		
	H10-100 (Stirrups-2 legs)	51.15	kg
	H12 Bars (T1)	32.31	kg
	H16 Bars (B1)	57.35	kg
	H10 U Bars (B1-T1)	16.37	kg
.4	Cast In situ Concrete with Pigmented Finish Supply and deliver concrete Grade C30 with a stone colour pigment to be approved by architects. Rate is to include for all necessary covering with plastic sheeting of existing Cangatura paving surrounding the area to be concreted over the exposed grave.	0.30	cum
.4b	Supply bend and fix including all necessary cover blocks, stools and laps, high tensile (H=500 N/mm ²) welded mesh steel reinforcement in foundations ground slab and suspended slabs. A 252 mesh(T1)	3.00	sqm
		carried forward	

		brought forward		
.5	<p>Power Float concrete finish</p> <p>Power float the cast in situ concrete covering to the existing grave. Rate to include for all necessary covering with plastic sheeting of existing Cangatura surrounding the area to be powerfloated over the exposed grave.</p>	3.00	sqm	
.6	<p>Brass Strip at joint surrounding cast insitu concrete</p> <p>Supply and install brass strip detail at the joint between the cast in situ concrete covering to the grave and the existing Cangatura. Brass strip to be 4mm thick by circa 50mm high and finished flush with the Cangatura finished floor level. Rate is to be all inclusive and net of wastage.</p>	8.00	l.m.	
.7	<p>Re-instating existing Cangutara</p> <p>To reinstate the existing Cangutara to its original position as per instructions. Rate is to be inclusive of all labour and the supply and laying of a fine compacted sand bedding under the reinstated Cangutara.</p>	6.50	sqm	
.8	<p>Geotextile and compacted sand covering over existing grave</p> <p>Carefully lay Geotextile and compacted fine sand (100mm average thickness) over the existing open grave. Rate is to be all inclusive net of wastage.</p>	3.00	sqm	
.9	<p>Glass window covering in raised floor</p> <p>Design, supply and lay glass window overlooking onto existing chamber steps. Glass window to be designed to sustain loads as per BS EN 1991-1-1:2002 Table 6.1 Category C3 loading (Areas in museums). All calculations and certifications as per Eurocode are to be passed on for approval by project architects. Glass to be safety laminated glass. Approx. dimensions 2m x 1,2m, dimensions to be checked on site. Hot dipped galvanised steel or aluminium frame - Frame finish : Spray painted - Dark grey color – RAL 7016 or RAL 7021, TBC at a later stage. Non slip treatment with invisible chemical coating. Allow for integrated concelead lighting.</p>	2.40	sqm	
<p>Bill No 3: FLOOR FINISHES Amount (Excluding VAT) carried to main summary page</p>				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
4 JOINERY & FURNITURE					
4.1 INTERNAL DOORS					
DOOR TYPE 01					
Specification: L40 U					
.1	<p>Inward-opening solid fire door with butt hinge, as specified in the drawings, rate is to include concealed jamba and butt hinges, lock and anodized aluminium stainless steel handles. Lever handles and roses will be in stainless steel . Arch to be formed above with fire rated wall lining. Allow for a small flat square timber section as an architrave to overlap the junction between jamb and wall. Please refer to Door Schedule fro dimensions (dimensions are to be confirmed on site by the contractor prior to execution of works).</p> <p>FD.B0.01 Structural opening width : 1630 mm Structural opening height : 2165 mm > 60 mins fire resistance > 90 mins fire resistance > 120 mins fire resistance</p> <p>FD.B0.03 Structural opening width : 1270 mm Structural opening height : 1915 mm > 60 mins fire resistance > 90 mins fire resistance > 120 mins fire resistance</p>	<p>1.00 1.00 1.00 1.00 1.00 1.00</p>	<p>L/S L/S L/S L/S L/S L/S</p>		
				carried forward	

		brought forward	
4.2	INTERNAL WINDOWS		
	Internal hinged timber windows		
	Specification: L40 U		
.1	Located in the stairs going down to the crypt, supply and install timber hinged windows within existing openings, with safety lock (to allow opening of the window for maintenance purposes) and structural glass to suit loading requirements specified below, in specifications and drawings. Frame finish : Spray painted - Dark grey color – RAL 7016 or RAL 7021, TBC at a later stage. Refer to tender drawing C410_F_92_01. Windows to include 100mm squared timber profile with M12 grade 8,8 bolts in 14mm diameter holes at 200mm.500mm centers and tempered glass thickness to be confirmed by the contractor to ensure characteristic design load = 3KN/m2. Certification delivered by an independent body will be required, upon award of tender, for Architect's approval.		
>	W.B0.01 Structural opening width : 1555 mm Structural opening height : 1330 mm	1.00	L/S
>	W.B0.02 Structural opening width : 1536 mm Structural opening height : 2930 mm	1.00	L/S
>	W.B0.03 Structural opening width : 1562 mm Structural opening height : 1610 mm	1.00	L/S
>	W.B0.04 (location : Room R_B0_01 - high level window onto Merchant Street) Structural opening width : 1320 mm Structural opening height : 2000 mm	1.00	L/S
	Walk-on window		
.2	Supply and install walk-on glass floor window, approx. dimensions 2m x 1,2m. Toughened and laminated glass. Steel/aluminium frame – Frame finish : Spray painted – Dark grey color – RAL 7016 or RAL 7021, TBC at a later stage. Non-slip treatment with invisible chemical coating. Allow for integrated concealead lighting. Structural opening width : 1148 mm Structural opening length : 1828 mm	1.00	L/S
4.3	FURNITURE		
	Benches (room R_B0_01)		
.1	Built stand alone 2 No. of timber/steel joinery clad with Precast RC grade C30 pre cast fair-faced reinforced concrete 70mm Thick (to match floor slabs) , to form 0.45m high x 0.6m wide x 3.33m long bench. To be resting on the raised flooring, as indicated on drawings. Honed finish treated with a water repellent to achieve a wet effect, smooth and opaque for slabs.	2.00	L/S
>	<u>Item B0.02.22</u>		
		carried forward	

		brought forward	
4.4	CEILING FINISHES		
	GYPSUM SUSPENDED CEILING		
.1	Supply, deliver, hoist and assemble in place on site, seamless gypsum plasterboard suspended soffit ceilings. Plastered and painted with a minimum of three coats of emulsion paint, RAL colour to be confirmed at a later stage. Approximate dimensions: 1.7m length x 0.4m max. Dimensions to be determined once fire curtain is selected, and checked on site. Rate is also to include for any necessary fixtures, service holes and cutting / trimming. Data sheet to be submitted > <u>Bulkhead in R.B0.01</u>	5.00	sqm
4.5	MISCELLANEOUS		
	Blackout access panel		
.1	Supply and install timber framed, fixed, blackout access panel over the existing window. Size approx. RAL colour of panel: 9005 (black). Rate to include for any necessary fixtures, service holes, cutting and trimming. To allow for the fixing of an Escape Sign luminaire onto the panel, as indicated in drawings [C410_F_71_B0_01] and [C410_F_92_01] <u>W.B0.04</u>	1.00	L/S
	Museum barrier post removable with floor socket		
.2	Supply and install museum barrier posts, free-standing post that prevents access to visitors. It has to be removable, allowed by the installation of a floor socket to screw the post in, to allow access for staff - Powder Coated Black - 400mm high - to include all necessary components to fix onto the floor.	6.00	L/S
Bill No 4: JOINERY & FURNITURE Amount (Excluding VAT) carried to main summary page			

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
5 RESTORATION						
	<p>Note 1: It is being noted that the restoration of the crucifix is not included in the scope of works. <u>The crucifix must be protected by the Contractor at all times.</u></p> <p>Note 2: It is being noted that all archaeological works have been completed, documented and monitored by the Superintendence of Cultural Heritage. No further archaeological works are envisioned to take place in the Crypt. The Contractor will be required to seal off areas as indicated in the tender documents for which an archaeological monitor may be required to supervise the works. The Employer will engage its own archaeologist and the Contractor will not settle payments due to the archaeologist for these works.</p>					
	5.1 SCAFFOLDING					
5.1.1	Erect and dismantle on completion or works, or as directed by architect in charge, scaffolding required for the execution of works as detailed in this document. The scaffolding shall be used for the duration of works and until the architect in charge certifies that works have been completed. The external face of the scaffolding is to be lined with a suitable and approved white netting. Ideally the scaffolding should be erected once and cover the whole area to be restored, however, if this is impossible then a 3m overlap must be catered for. The scaffolding is to be certified by the contractor's architect and civil engineer.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	n/a	n/a		
		WALL	1.00	l.s.		
		CEILING	1.00	l.s.		
	BARTOLOTT'S ROOM	FLOOR	n/a	n/a		
		WALL	1.00	l.s.		
		CEILING	1.00	l.s.		
	BARTOLOTT CRYPT	FLOOR	n/a	n/a		
		WALL	1.00	l.s.		
		CEILING	1.00	l.s.		
	ALTAR		1.00	l.s.		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	n/a	n/a		
		WALL	1.00	l.s.		
		CEILING	1.00	l.s.		
					Balance c/f	€

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
			Balance b/f		€	
5.2	REMOVAL OF ACCRETIONS, INCLUDING DEAD CABLES, METAL OBJECTS AND OTHER INSERTS ATTACHED TO THE FAÇADE					
	PREAMBLES					
5.2.1	Due to the friable nature of the deteriorated stone in particular areas, it is important that works be carried out sensitively such as not to dislodge any of the delaminated / deteriorated stonework. If so considered necessary by the architect in charge, such areas shall be pre-consolidated (measured separately), as per specifications and bill of quantities in this document. (All surface shall be measured flat). Using methods approved by the architect in charge, and as outlined in this document, remove all metal inserts, dead cables, metal copings and all other accretions, fixed to or embedded / chased into the masonry of the façade.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	n/a	n/a		
		WALL	1.00	l.s.		
		CEILING	1.00	l.s.		
	BARTOLOTT'S ROOM	FLOOR	n/a	n/a		
		WALL	1.00	l.s.		
		CEILING	1.00	l.s.		
	BARTOLOTT CRYPT	FLOOR	n/a	n/a		
		WALL	1.00	l.s.		
		CEILING	1.00	l.s.		
	ALTAR		1.00	l.s.		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	n/a	n/a		
		WALL	1.00	l.s.		
		CEILING	1.00	l.s.		
			Balance c/f		€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
		Balance b/f			€	
5.3	RAKE OUT <u>FLAKING JOINTS ONLY</u> AND REMOVE RENDERS					
	PREAMBLES					
	All care shall be exercised to ensure no damage is caused to the masonry fabric in the process. The use of power tools will not be permitted.					
	Due to the friable nature of the deteriorated stone in particular areas, it is important that works be carried out sensitively such as not to dislodge any of the delaminated / deteriorated stonework. If so considered necessary by the architect in charge, such areas shall be pre-consolidated (measured separately), as per specifications and bill of quantities in this document. (All surface shall be measured flat).					
5.3.1	Using methods approved by architect in charge, and in accordance to this document, carefully open joints to remove all loose and unsound pointing and pointing deemed to contain high levels of cement. Care must be taken not to damage the surrounding stone and the areas of sound pointing.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	1.00	sq.m		
		WALL	160.00	sq.m		
		CEILING	65.00	sq.m		
	BARTOLOTT'S ROOM	FLOOR	1.00	sq.m		
		WALL	50.00	sq.m		
		CEILING	11.00	sq.m		
	BARTOLOTT CRYPT	FLOOR	1.00	sq.m		
		WALL	351.00	sq.m		
		CEILING	310.00	sq.m		
	ALTAR		26.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	1.00	sq.m		
		WALL	205.00	sq.m		
		CEILING	62.00	sq.m		
		Balance c/f			€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
		Balance b/f			€	
5.3.2	Using methods approved by architect in charge, and in accordance to this document, carefully remove superficial layers of lime-based and oil-based renders from any area of the walls and ceilings, including any ornamental stone features, moulded bands, corbels and string moulded courses. Care must be taken not to damage the surrounding stone and the areas of sound pointing.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	n/a	n/a		
		WALL	160.00	sq.m		
		CEILING	65.00	sq.m		
	BARTOLOTT'S ROOM	FLOOR	n/a	sq.m		
		WALL	50.00	sq.m		
		CEILING	11.00	sq.m		
	BARTOLOTT CRYPT	FLOOR	n/a	n/a		
		WALL	351.00	sq.m		
		CEILING	310.00	sq.m		
	ALTAR		26.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	n/a	n/a		
		WALL	205.00	sq.m		
		CEILING	62.00	sq.m		
5.3.3	Using methods approved by architect in charge, and in accordance to this document, carefully remove cement renders from the walls and ceilings, including any ornamental stone features, moulded bands, corbels and string moulded courses. Care must be taken not to damage the surrounding stone and the areas of sound pointing.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	n/a	n/a		
		WALL	0.10	sq.m		
		CEILING	1.00	sq.m		
	BARTOLOTT'S ROOM	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	1.00	sq.m		
	BARTOLOTT CRYPT	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	1.00	sq.m		
	ALTAR		n/a	n/a		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	1.00	sq.m		
		Balance c/f			€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
			Balance b/f		€	
5.4	BRUSHING OF FLAKY STONE AND CLEANING					
	PREAMBLES					
	<p>All care shall be exercised to ensure that no damage is procured to the masonry fabric in the process. The use of power tools will not be permitted.</p> <p>Due to the friable nature of the deteriorated stone in particular areas, it is important that works be carried out sensitively such as not to dislodge any of the delaminated / deteriorated stonework. If so considered necessary by the architect in charge, such areas shall be pre-consolidated (measured separately), as per specifications and bill of quantities in this document. (All surface shall be measured flat).</p> <p>The poulticing procedure shall be repeated for as many times as so deemed necessary until a satisfactory level of cleaning is obtained. For payment reasons this exercise shall be considered to form an intrinsic part of the poulticing exercise and in no case will the contractor be allowed to make claims for extra costs in relation to workmanship and / or material. (All surfaces shall be measured flat).</p>					
5.4.1	Using a stiff bristle or nylon brush, as approved and directed by architect in charge, and as specified in this document, brush by hand, one section at a time, to remove flaky stone, dirt, soot etc. from the walls, ceilings and floors.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	57.00	sq.m		
		WALL	160.00	sq.m		
		CEILING	65.00	sq.m		
	BARTOLOTT'S ROOM	FLOOR	9.00	sq.m		
		WALL	50.00	sq.m		
		CEILING	11.00	sq.m		
	BARTOLOTT CRYPT	FLOOR	183.00	sq.m		
		WALL	351.00	sq.m		
		CEILING	310.00	sq.m		
	ALTAR		26.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	50.00	sq.m		
		WALL	205.00	sq.m		
		CEILING	62.00	sq.m		
			Balance c/f		€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
		Balance b/f			€	
5.4.2	Use a stiff bristle or nylon brush and clean soft water, free from salts, having conductivity inferior to 60µS, wet brush, one section at a time, dirt from any area on the walls, ceilings and floors.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	57.00	sq.m		
		WALL	160.00	sq.m		
		CEILING	65.00	sq.m		
	BARTOLOTT'S ROOM	FLOOR	9.00	sq.m		
		WALL	50.00	sq.m		
		CEILING	11.00	sq.m		
	BARTOLOTT CRYPT	FLOOR	183.00	sq.m		
		WALL	351.00	sq.m		
		CEILING	310.00	sq.m		
	ALTAR		26.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	50.00	sq.m		
		WALL	205.00	sq.m		
		CEILING	62.00	sq.m		
5.4.3	Carefully and using only delicate manual methods and appropriate hand tools, primarily micro scalpels, and an approved poulticing method, as specified in this document, remove rust stains from the walls, ceilings and floors, including ornamental stone features moulded bands, corbels and string moulded courses.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	n/a	n/a		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
	BARTOLOTT'S ROOM	FLOOR	n/a	n/a		
		WALL	0.10	sq.m		
		CEILING	n/a	n/a		
	BARTOLOTT CRYPT	FLOOR	n/a	n/a		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
	ALTAR		1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	n/a	n/a		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
		Balance c/f			€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
			Balance b/f		€	
5.4.4	Carefully and using only delicate manual methods and appropriate hand tools, primarily micro scalpels, and an approved poulticing method, as specified in this document, remove water stains from the walls, ceilings and floors, including ornamental stone features moulded bands, corbels and string moulded courses.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	n/a	n/a		
		WALL	5.00	sq.m		
		CEILING	n/a	n/a		
	BARTOLOTT'S ROOM	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	n/a	n/a		
	BARTOLOTT CRYPT	FLOOR	n/a	n/a		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
	ALTAR		1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	n/a	n/a		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
5.4.5	Carefully, using clean, potable, de-ionized water, having a conductivity inferior to 60µS (the use of tap water will NOT be permitted), as specified in this document, or as directed and approved by the architect in charge, or where such method is deemed as ineffective, by using a suitable micro-blasting technique approved by the architect in charge, remove superficial deposits from the walls, ceilings and floors, including ornamental stone					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	n/a	n/a		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
	BARTOLOTT'S ROOM	FLOOR	n/a	n/a		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
	BARTOLOTT CRYPT	FLOOR	n/a	n/a		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
	ALTAR		n/a	n/a		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	n/a	n/a		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
			Balance c/f		€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
		Balance b/f			€	
5.5	APPLICATION OF BIOCIDES					
5.5.1	<p>Carefully, apply biocides as specified in this document and in concentrations suggested by the manufacturer but approved by the architect in charge, to any area of the walls, ceilings and floors, including ornamental stone features, moulded bands, corbels and string moulded courses.</p> <p>The procedure shall be repeated until the biological growth has been removed to the satisfaction of the architect in charge. For payment reasons the reapplication of the biocide shall be considered to form an intrinsic part of the exercise and in no case will the contractor be allowed to make claims for extra costs in relation to workmanship and/or material.</p> <p>Where so deemed necessary, thick layers of biological growth shall be removed carefully using delicate manual methods and hand tools, primarily micro scalpels prior to the application of the biocide. (All surfaces shall be measured flat).</p>					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	1.00	sq.m		
		WALL	n/a	sq.m		
		CEILING	n/a	sq.m		
	BARTOLOTT'S ROOM	FLOOR	1.00	sq.m		
		WALL	1.00	sq.m		
		CEILING	n/a	n/a		
	BARTOLOTT CRYPT	FLOOR	1.00	sq.m		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
	ALTAR		1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	n/a	n/a		
		WALL	n/a	n/a		
		CEILING	n/a	n/a		
		Balance c/f			€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
			Balance b/f		€	
5.6	DESALINATION AND CONSOLIDATION					
	PREAMBLES					
	Rate shall include for repeating the process for as many times as so deemed necessary until the salt content has been reduced to the satisfaction of the architect in charge.					
	For payment reasons this exercise shall be considered to form an intrinsic part of the poulticing exercise and in no case will the contractor be allowed to make claims for extra costs in relation to workmanship and / or material. (All surfaces shall be measured flat).					
5.6.1	Using methods and materials specified in this document, and approved by the architect in charge, carry out poulticing, based on paper pulp, to any area of the walls, ceilings and floors, including ornamental stone features, moulded bands, corbels and string moulded courses. The scope of this exercise shall be to lower the salt context in the masonry, as detailed in this document.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR WALL CEILING	n/a 1.00 n/a	n/a sq.m n/a		
	BARTOLOTT'S ROOM	FLOOR WALL CEILING	n/a 1.00 n/a	n/a sq.m n/a		
	BARTOLOTT CRYPT	FLOOR WALL CEILING	n/a n/a n/a	n/a n/a n/a		
	ALTAR		1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR WALL CEILING	n/a n/a n/a	n/a n/a n/a		
			Balance c/f		€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
		Balance b/f			€	
5.6.2	Adopting methods and materials as specified in this document, and as directed by the architect in charge, consolidate using approved ammonium oxalate consolidants, on any area of the walls, ceilings and floors, including ornamental stone features, moulded bands, corbels and string moulded courses. Care should be taken to ensure that the stone being consolidated is adequately dry and free from salts. Consolidants shall be applied using methods recommended by the manufacturer and approved by the architect in charge.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	n/a	n/a		
	BARTOLOTT'S ROOM	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	1.00	sq.m		
	BARTOLOTT CRYPT	FLOOR	n/a	n/a		
		WALL	70.00	sq.m		
		CEILING	1.00	sq.m		
	ALTAR		1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	1.50	sq.m		
5.7	POINT ALL OPEN JOINTS					
5.7.1	Using a hydraulic lime and fine sand mix, as specified in this document, and as determined in pointing test trials, and as directed by architect in charge, point, as neat as possible, keeping the width of the pointing to a minimum as far as technically possible. (All surfaces shall be measured flat). Rate is to include for any damaged areas, cracks which result from other works carried out in this document.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	1.00	sq.m		
		WALL	160.00	sq.m		
		CEILING	65.00	sq.m		
	BARTOLOTT'S ROOM	FLOOR	1.00	sq.m		
		WALL	50.00	sq.m		
		CEILING	11.00	sq.m		
	BARTOLOTT CRYPT	FLOOR	1.00	sq.m		
		WALL	351.00	sq.m		
		CEILING	310.00	sq.m		
	ALTAR		26.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	1.00	sq.m		
		WALL	205.00	sq.m		
		CEILING	62.00	sq.m		
		Balance c/f			€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
		Balance b/f			€	
5.8	REPAIRS TO DAMAGED SECTIONS OF MASONRY					
	PREAMBLES					
	Works shall include the careful cutting out of existing masonry and the necessary preparation to make an adequate seating for new masonry section to be reinstated. Work shall be carried out such as to remove the least possible of the original material, and joints of new stone with the old stone shall be such as to ensure the minimum thickness of joint possible, and in no case exceeding 10mm (millimeter). Fixing of new stone with old stonework shall be carried out using approved epoxy resins and carbon fibre rods. When carving mouldings, contractor shall respect dimensions and proportions of existing works. Carvings shall be carried out to match the original and where applicable, to templates provided by the architect in charge.					
	Rate is to include for any propping, the insertion of any stainless steel, and / or carbon fibre ties, epoxy resin required to glue the new insert with the original fabric and all works and materials necessary to carry out the works to the approval by the architect in charge. Length of new insert measured along face shall not be less than 450mm, unless otherwise directed by the architect in charge. (Measured linear on exposed surfaces).					
5.8.1	Adopting methods as described in this document, and as directed and approved by the architect in charge, chisel away deteriorated masonry, to a maximum of 250mm, unless otherwise requested, from any area of the walls, including ornamental stone features, moulded bands, corbels and string moulded courses.					
	BARTOLOTT STAIRCASE (ABOVE)	WALL	4.00	sq.m		
	BARTOLOTT'S ROOM	WALL	1.00	sq.m		
	BARTOLOTT CRYPT	WALL	30.00	sq.m		
	ALTAR	WALL	1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	WALL	2.00	sq.m		
5.8.2	Using methods and materials, as directed and approved by architect in charge, reinstate dismantled / chiselled areas of building fabric using special sized stone blocks to match existing, having varying thickness, but not exceeding 250mm in thickness, and using bond stone as indicated by architect in charge. Works shall be carried out on any plain masonry on any area of the walls. (All surfaces shall be measured flat).					
	BARTOLOTT STAIRCASE (ABOVE)	WALL	4.00	sq.m		
	BARTOLOTT'S ROOM	WALL	1.00	sq.m		
	BARTOLOTT CRYPT	WALL	30.00	sq.m		
	ALTAR		1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	WALL	2.00	sq.m		
		Balance c/f			€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
			Balance b/f		€	
5.8.3	Grout, under pressure, a hydraulic lime-based mortar, as specified in this document, and approved by the architect in charge, to fill spaces resulting between new masonry elements and original fabric. Rate shall apply for any thickness not exceeding 150mm.					
	BARTOLOTT STAIRCASE (ABOVE)	WALL	4.00	sq.m		
	BARTOLOTT'S ROOM	WALL	1.00	sq.m		
	BARTOLOTT CRYPT	WALL	30.00	sq.m		
	ALTAR		1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	WALL	2.00	sq.m		
5.8.4	Using methods and materials, as directed and approved by architect in charge, for the dismantling of soft stone pavers (<i>ciangatura</i>) and relaying of same <i>ciangatura</i> to the following areas: 1. In the Crypt, to consolidate the collapse of the flooring, 2. At the top of the staircase leading down to the Crypt, to reinstate the first few historical steps of said staircase. Prior to their removal, any flagstone or paver will be numbered and documented graphically to allow for their eventual reinstatement. Removals will be done with care, and using hand tools only. Care shall be taken not to chip edges. Supervision will be constant when the first flagstone or paver is removed to ensure it is not broken nor damaged in the removal process. After their removal, flagstones are to be carted away and stored on-site on an elevated platform to prevent rising damp and damage. The pavers are to be reinstated on a layer of torba, built up to the level required for the reinstated paver to be in-line with the existing floor level.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	3.10	sq.m		
	BARTOLOTT'S ROOM	FLOOR	1.00	sq.m		
	BARTOLOTT CRYPT	FLOOR	8.00	sq.m		
	ALTAR	FLOOR	1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	1.00	sq.m		
			Balance c/f		€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
			Balance b/f		€	
5.8.5	<p>Using methods and materials, as directed and approved by architect in charge, for the replacement of soft stone pavers (<i>ciangatura</i>) to the following areas:</p> <ol style="list-style-type: none"> 1. In the Crypt, to consolidate the collapse of the flooring, 2. At the top of the staircase leading down to the Crypt, to reinstate the first few historical steps of said staircase. <p>The replacement of the <i>ciangatura</i> is to be carried out in the same size and material as the existing, with thickness varying from 70mm - 100mm. Removal of the <i>ciangatura</i> to be replaced will be done with care, and using hand tools only. Care shall be taken not to damage the surrounding <i>ciangatura</i>.</p> <p>The replaced pavers are to be laid on a layer of <i>torba</i>, built up to the level required for the replaced paver to be in-line with the existing floor level.</p> <p>BARTOLOTT STAIRCASE (ABOVE) BARTOLOTT'S ROOM BARTOLOTT CRYPT ALTAR BARTOLOTT STAIRCASE (BELOW)</p>	FLOOR FLOOR FLOOR FLOOR FLOOR	3.10 1.00 8.00 1.00 1.00	sq.m sq.m sq.m sq.m sq.m		
5.8.6	<p>Removal / Reinstatement of suspended floors constructed from 'xorok' supported by timber beams; The methodology proposed for the replacement of broken 'xorok' shall be executed manually and includes the following:</p> <ol style="list-style-type: none"> 1) Floor finishes shall be carefully removed overlying the area where the 'xorok' requires replacing. Unnecessary damage to the existing finish shall be avoided by opening-up the tile joints where they exist, avoiding damage to the surrounding finish and by only removing the floor finish in the area affected by the intervention. The floor finishes removed shall be cleaned and prepared for its eventual reinstatement; 2) The sub-base shall be removed and set to one side, discarding any large mortar residue in the process; 3) With the 'xorok' supported from its underside it will be removed using hand held tools. All dry redundant mortar residue shall be removed in preparation of relaying the new 'xorok'. The end bearings shall be likewise cleaned and prepared to receive the new 'xorok'; 4) The new 'xorok' having the same profile and dimensions, shall be fully bedded along its extremities using a lime based mortar; 5) 'Inkulmaturi' shall be wedged at the extremities of the <i>xorok</i> and ensure that the 'xorok' is firmly secured in place with mortar; 6) The joints between the existing and new 'xorok' shall be filled with a lime based mortar; 7) The sub-base aggregate shall be re-laid & levelled, moistening to ensure compaction; 8) The existing floor finish previously removed shall be re-laid flush on a fresh bed of sand / cement mortar, 					
			Balance c/f		€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
			Balance b/f		€	
	BARTOLOTT STAIRCASE (ABOVE)	CEILING	7.00	No		
5.8.7	Making good of broken stone slabs (xorok) from below by using carbon fibre rods and Sika anchor-fix.					
	BARTOLOTT'S ROOM	CEILING	1.00	No.		
	BARTOLOTT CRYPT	CEILING	1.00	No.		
	BARTOLOTT STAIRCASE (BELOW)	CEILING	1.00	No.		
5.9	PLASTIC REPAIR					
	PREAMBLE					
	All plastic repairs shall be formed such as to match adjoining stonework in colour, texture and final profile. Rate is to include for anchoring with stainless steel and / or carbon fibre rods and the addition of any mixture additive or fibre strands, etc. specified in this document and / or recommended by the architect in charge. Density of anchoring pins shall be specified in this document.					
5.9.1	Adopting methods, as described in this document and as directed by architect in charge, re-instate using plastic repair techniques, deteriorated stone, corbels and fully moulded courses using the fibre rod insert method. Rate is to include anchoring with stainless steel / carbon fibre rods and the addition of any admixture / additive etc. specified in this document and / or recommended by the architect in charge.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	n/a	n/a		
	BARTOLOTT'S ROOM	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	n/a	n/a		
	BARTOLOTT CRYPT	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	n/a	n/a		
	ALTAR		1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR	n/a	n/a		
		WALL	1.00	sq.m		
		CEILING	n/a	n/a		
			Balance c/f		€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
			Balance b/f		€	
5.9.2	Using methods and materials, as specified in this document, carry out plastic repair to fill any alveoli formed on any part of the masonry fabric, including ornamental stone features, moulded bands, corbels and string moulded courses. The material used for the plastic repair shall be as specified in this document and care shall be taken to ensure that each alveolus is filled in individually taking care to keep the surface of the masonry clean and free from any mortar. The extent of filing of the alveoli shall be determined on site by the architect in charge and shall vary to reflect the physiognomy of the deteriorated masonry fabric.					
	BARTOLOTT STAIRCASE (ABOVE)	FLOOR WALL CEILING	n/a 1.00 n/a	n/a sq.m n/a		
	BARTOLOTT'S ROOM	FLOOR WALL CEILING	n/a 1.00 n/a	n/a sq.m n/a		
	BARTOLOTT CRYPT	FLOOR WALL CEILING	n/a 1.00 n/a	n/a sq.m n/a		
	ALTAR		1.00	sq.m		
	BARTOLOTT STAIRCASE (BELOW)	FLOOR WALL CEILING	n/a 1.00 n/a	n/a sq.m n/a		
5.10	FINISHING					
5.10.1	Apply a lime-based plaster system, finished with a lime-paint, to the restored fabric on predetermined areas of the façade, as specified in this document. The RAL colour is to be confirmed by the architect in charge (All surfaces shall be measured flat).					
	BARTOLOTT STAIRCASE (ABOVE)	WALL CEILING	160.00 65.00	sq.m sq.m		
	BARTOLOTT CRYPT	WALL CEILING	1.00 310.00	sq.m sq.m		
			Balance c/f		€	

ITEM	DESCRIPTION	AREA	QTY	UNIT	RATE	AMOUNT
			Balance b/f		€	
5.10.2	Apply a micro-porous plaster system, finished with a lime-paint, to the restored fabric on predetermined areas of the façade, as specified in this document. The RAL colour is to be confirmed by the architect in charge (All surfaces shall be measured flat).					
	BARTOLOTT STAIRCASE (ABOVE)	WALL	160.00	sq.m		
		CEILING	1.00	sq.m		
	BARTOLOTT CRYPT	WALL	55.00	sq.m		
		CEILING	1.00	sq.m		
5.11 TIMBER WORKS						
5.11.1	Carefully remove the existing timber door, together with all its respective joinery, taking care not to damage the existing surrounding fabric, including any temporary scaffolding, propping etc. The surrounding stone fabric is to be made good prior to the installation of the new door.					
	The door is to be restored / reconstructed in parts as required, safeguarding as much as is possible of the original material. The timber door is to be finished with a varnish, as per existing finish.					
	a) Large Door leading to Bartolott Crypt (D-B-02) (photos in Annex)	CRYPT	1.00	L.S.		
	b) Door at the bottom of Bartolott Staircase (photos in Annex)	RELICS	1.00	L.S.		
5.11.2	Replacement of timber beams, with beams of the same size (photos in Annex). Rate to include for treatment of beams with cuprinol and stock, and painting. Rate to include for propping of surrounding structures. Rate to include for carting away of existing beams.	BARTOLOTT STAIRCASE	7.00	no.		
5.12 GENERAL SAMPLES						
5.12.1	Using a lime rich mortar, mixed, applied and cured as outlined in this document, and as directed and approved by the architect in charge. Carry out pointing on test areas, approximately 1 sq.m, on a hidden part of the façade to be restored, as outlined in this document. Tests are to be approved by the architect in charge.		1	L/S		
5.12.2	Carry out cleaning on test areas, approximately 0.25 sq.m, on a hidden part of the façade to be restored, as outlined in this document. Tests are to be approved by the architect in charge.		1	L/S		
5.12.3	Carry out <i>velatura</i> / lime-wash on test areas, approximately 0.25 sq.m, on a hidden part of the façade to be restored, as outlined in this document. Tests are to be approved by the architect in charge.		1	L/S		
Bill No 5: RESTORATION						
Sub-total Carried to Summary						

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
6 DEMOLITION, REMOVALS AND ALTERATIONS					
6.1 DEMOLITION / ALTERATION WORKS					
<p>Note:</p> <ul style="list-style-type: none"> i Demolition rates to include for all costs for transporting, dumping and any necessary permits. Identification of appropriate dumping sites shall be to the approval of PA and the Engineer. ii Demolition rates to include for the removal of any redundant exposed, or buried services. iii Rates to include for all temporary works / measures as necessary to keep the existing and demolished structures in a stable and safe state at all times during any demolition / removal process. iv Rates is to allow for checking for any buried services or foundations of neighbouring buildings and working around the same. 					
.1 Investigation					
	a) Erect a temporary platform under the stair between the 2 arches to give access for inspection and to prop stair if and when required during inspection and / or demolition. Scaffold to be certified as required by Health and Safety laws and regulations.	1.00	LS		
	b) Cut a section of the existng concrete stairs approximately 200mm x 200mm x 250mm to expose possible historical stone stair under the concrete. Cutting of concrete to be carried out carefully and to safe guard andy reinforcement present in the concrete.	2.00	No		
Demolition of Existing Steps					
	.2 At ground floor level, going down into the main staircase leading down to the Bartolott Crypt there are some steps which were later additions. They must be removed and be reconstructed to make good to levels together with the removal of a column. Following the investigation in item 6.1.1 and confirmation by the Architect / Engineer the concrete is to be removed and replaced with stone matching existng. Please refer to the tender drawings, specifically, C410_F_01_F0 and C410_F_03_EW04. After the investigation and on instruction by the Engineer remove existing concrete steps over the original. Repair and reinstate existing hardstone steps to match existing. Demolish using hand held tools and cart away, including its floor finish and underlying sub-base.	1.00	L/S		
				carried forward	

		brought forward		
	<p>New stone steps to match Existing Steps provisional</p> <p>.3 Supply and install five stone steps at the top of the staircase, to match existing steps. Approx total length of steps : 3,3m. Steps made of several blocks, approx, length of blocks : 1,2m. Include for repairs in case of damages. Include for methodically cutting an "ingall" into the stonework for the insertion of the steps. Steps resting on existing beams below.</p>	5.00	no.	
	<p>Demolition of Columns in staircase</p> <p>.4 Demolish using small mechanical means and/or using hand held mechanical tools and cart away existing masonry columns including all parts, to the extent as indicated on the architectural drawings. To include for making good of the area of the existing ceiling where the the columns have been removed.</p>	1.00	L/S	
<p>Bill No 6: DEMOLITION WORKS</p> <p>Amount (Excluding VAT) carried to main summary page</p>				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
7 DAYWORK - STRUCTURES					
	<p>Note:</p> <ul style="list-style-type: none"> i All quantities in this bill are PROVISIONAL ii The rates in this bill will be used to price labour for any variations based on day-works, which may be instructed after the signing of the contract. iii All Rates include overheads and profits and exclude VAT iv Hourly rates shall apply in respect of time spent by operatives directly engaged on daywork and shall exclude breaks, time for travelling, etc. v Overtime hourly rates shall be chargeable where specifically instructed in writing. Normal hourly rates shall apply at all other times. vi The Contractor shall not employ workmen of a higher grade than approved by the Employer and in case of default the applicable rate shall be that relative to the grade approved by the Employer. vii The price of any other material shall be accepted on presentation of fiscal invoice viii Plant rates are inclusive of fuel, travelling time , maintenance and operator 				
	.1 LABOUR				
.1.1	Metal worker	10	hr		
.1.2	Skilled Labourer	40	hr		
.1.3	Semi-Skilled Labourer	40	hr		
.1.4	Unskilled Labourer	80	hr		
.1.5	Percentage increase on the rates above for overtime hours (Normal working hours shall apply - Monday - Frid 7:00 to 16:00				
	a) Monday to Friday 16:00 to 23:00		%		
	b) Saturdays		%		
	c) Sundays		%		
	d) Any day 23:00 to 7:00		%		
	Carried Forward				

	Brought Forward				
.2 PLANT					
Rates to include for operators					
.2.1	Mobile crane				
a	up to 10 tonnes	8	hr		
b	10 to 20 tonnes	4	hr		
c	20 to 40 tonnes	4	hr		
.2.2	Air compressor	8	hr		
.2.3	Small hand held power tools	32	hr		
.2.4	Welding equipment	8	hr		
.2.5	Percentage increase on the rates above for overtime hours		%		
.3 MATERIAL					
(Excludes labour)					
.3.1	Structural steel - Hot rolled sections such as IPE, IPN, UPN, HE, L	100	kg		
.3.2	Structural steel - Hot rolled hollow sections SHS, RHS	50	kg		
Bill No 7 : Dayworks - Structures					
Amount (Excluding VAT) carried to main summary page					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
8	HVAC SYSTEMS				
	To supply, install, connect, test and commission the following, complete as specified				
	AIR-CONDITIONING SYSTEMS				
	VRF system 4				
.1	Outdoor unit, ref VRF/CU4 complete with anti-vibration mountings, and hot dipped galvanised support structure to wall.	No	1		
.2	Indoor units, complete as specified including canvas flexible connection to supply ducts				
.2.1	AC/41	No	1		
.2.2	AC/42	No	1		
.2.3	AC/43	No	1		
.2.4	AC/44	No	1		
.2.5	AC/45	No	1		
.3	Accessories with indoor units :				
	AC/41 :				
.3.1	Supply grille, SG/600*100	No	2		
.3.2	Duct spigot to main duct, approx 0.2m long, 600*100	No	2		
	AC/42 :				
.3.3	Supply grille, SG/600*100	No	2		
.3.4	Duct spigot to main duct, approx 0.8m long, 600*100	No	2		
	AC/43 :				
.3.5	Supply grille, SG/600*100	No	2		
.3.6	Duct spigot to main duct, approx 1.5m long, 600*100	No	2		
	AC/44 :				
.3.7	Supply grille, SG/600*100	No	2		
.3.8	Duct spigot to main duct, approx 2.0m long, 600*100	No	2		
	AC/45 :				
.3.9	Supply grille, SG/600*100	No	2		
.3.10	Duct spigot to main duct, approx 1.1m long, 600*100	No	2		
.4	Main ducting in pre-insulated sandwich panel, c/w transformations as required :				
	AC/41 :				
.4.1	500*200	m	9		
	AC/42 :				
.4.2	500*200	m	16		
	AC/43 :				
.4.3	500*200	m	18		
	AC/44 :				
.4.4	500*200	m	18		
	AC/45 :				
.4.5	500*200	m	17		
				carried forward	

Item	Description	Qty	Unit	Rate	AMOUNT
				brought forward	
.5	Refrigerant piping system complete with branches, insulation etc, between the indoor units and outdoor unit, including pipe support brackets and polysolene as specified				
.5.1	External refrigerant piping at roof level complete as above	m	36		
.5.2	Internal refrigerant piping to individual ac units	m	30		
.6	Wall mounted controllers with indoor units	No	3		
.7	Power and control cabling as required between the electrical supply points, the outdoor unit, indoor units, controllers etc	No	9		
.8	Insulated condensate drain piping :				
.8.1	Dia 25mm	m	8		
.8.2	Dia 63mm	m	30		
.8.3	Hepworth type dry seal traps, Dia 40mm	No	1		
.9	Dehumidifier system :				
.9.1	Dehumidifier ref DH	No	1		
.9.2	TG/550*1000	No	1		
	Supply ducting :				
.9.3	600*600	m	5		
.9.4	750*200	m	33		
.9.5	Supply grilles, SG/600*100	No	3		
.9.6	Duct spigot to main duct, approx 0.3m long, 600*100	No	3		
.9.7	Fire smoke dampers	No	2		
.9.8	Insulated condensate drain piping, Dia 50mm	m	10		
.10	Preparation of coordinated installation drawings for all HVAC systems	No	LS		
.11	As fitted drawings (soft copy) for all HVAC systems	Sets	3		
.12	As fitted drawings (hard copy) for all HVAC systems	Sets	3		
.13	Test and commission all HVAC system	No	LS		
.14	O&M manuals for all HVAC systems	Sets	3		
	BILL NO 8: HVAC SYSTEMS Amount (Excluding VAT) carried to main summary page				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
9	FIRE FIGHTING SYSTEMS				
	<p>To supply, install, connect, test and commission the following, complete as specified</p> <p>FIRE FIGHTING SYSTEMS</p> <p>.1 Double compartment hose reel cabinet including hose</p> <p>.2 Portable fire extinguishers :</p> <p>.2.1 5 kgs carbon dioxide</p> <p>.2.2 9 kgs foam</p> <p>.3 Dia 1" galvanised steel piping</p> <p>.4 Fire curtain</p>	<p>No</p> <p>No</p> <p>No</p> <p>m</p> <p>No</p>	<p>1</p> <p>1</p> <p>1</p> <p>20</p> <p>1</p>		
	<p>BILL NO 9: FIRE FIGHTING SYSTEMS Amount (Excluding VAT) carried to main summary page</p>				

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
10 ELECTRICAL & ELV SYSTEMS					
.1 MAIN SWITCHGEAR & DISTRIBUTION BOARDS					
.1.1	Supply only the following electrical switchgear as specified and detailed in the distribution board schedules				
a	DB-EB0/1	1	No		
b	32A, TPN, IP65 isolators	2	No		
.1.2	Install and connect the following switchgear:				
a	DB-EB0/1	1	No		
b	32A, TPN, IP65 isolators	2	No		
.1.3	Temporary site power				
a	<p>Provide a safe and suitably rated temporary power supply system for use by all on site contractors. As a minimum the system shall consist of two fixed plug in boards with 4 x 16A SPN supplies and 1 x 32A TPN supply.</p> <p>All supplies shall be in line with the requirements of BS7671 and shall include RCD protection. Complete installation shall be regularly tested and certified by an authorised competent person. Cost to include main cable to the existing main electrical room, estimated at 30m</p>	1	L/s		
				carried forward	

Item	Description	Qty	Unit	Rate	AMOUNT
				brought forward	
.2	MAIN CONTAINMENT SYSTEMS				
.2.1	CABLE TRAYS & WIRE BASKETS				
	Supply and install the following cable tray systems:				
.2.1.1	Level - Basement				
a	100mm heavy-gauge galvanised cable tray with mounting brackets	50	m		
b	100x50mm galvanised cable basket with mounting brackets	30	m		
.2.2	TRUNKING				
	Supply and install the following cable trunking systems:				
.2.2.1	Level - Basement				
a	100x100mm HG galvanised trunking with mounting brackets	30	m		
	All cable tray / basket systems are to be of the HG type and hot-dipped galvanised. Cost is to include for all proprietary accessories and a suitable galvanised support system.				
	All cable tray and trunking lids are to be secured in place using appropriate proprietary clips - TIE BELTS WILL NOT BE ACCEPTED				
.3	MAIN ARMoured CABLES				
	Supply and install the following cable trunking systems:				
a	Existing main switchboard to DB-B0/1 (temporary) 5cx16mm ² Cu/XLPE/SWA/LSZH	25	m		
b	DB-EB0/1 to VRF 5cx6mm ² Cu/XLPE/SWA/LSZH	30	m		
c	DB-EB0/1 to DH1 5cx2.5mm ² Cu/XLPE/SWA/LSZH	10	m		
.4	Equipotential bonding				
.4.1	Equipotential bonding to MET using 1x16sqmm PE G/Y conductor Raised floor including handrails	1	L/s		
.4.2	MET 500x50x5mm HDHC copper with 10mm pre drilled holes	1	No		
				carried forward	

Item	Description	Qty	Unit	Rate	AMOUNT
				brought forward	
.5	LIGHTING Supply, install and connect the following lighting points including the specified, surface installed or chased conduits and back boxes, cables and the metal-clad electrical accessory faceplates, all for a fully functional installation.				
.5.1	Basement - Ceiling mounted				
.5.1.1	DALI circuits				
a	1 DALI light point in group PS1 / C.9	1	No		
b	3 DALI light points in group PC1 / C.1	1	No		
c	2 DALI light points in group PM2 / PM3 / C.2	1	No		
d	1 DALI light point in group PM1 / C.3	1	No		
.5.2	Basement - Floor mounted				
.5.2.1	DALI circuits				
a	3 DALI light points in group L3 / C.13	1	No		
b	1 DALI light points in group L2 / C.12	1	No		
c	3 DALI light points in group L1 / C.9 C.10 C.11	1	No		
d	2 DALI light points in group PF4 / C.4	1	No		
e	2 DALI light points in group PF4 / C.5	1	No		
f	2 DALI light points in group PF1 / C.7	1	No		
g	1 DALI light points in group PF2 / C.6	1	No		
h	1 DALI light points in group PF3 / C.8	1	No		
	ALL EXPOSED LIGHTING CABLE TO BE 5x1.5sqmm SHEATHED STONE COLOUR DALI circuits shall also include the required DALI bus cable suitably sized for the lengths involved. All DALI luminaires to be individually controlled.				
.5.3	DALI lighting control panel including all necessary DALI devices for a complete and functional installation as per the lighting designer's requirements and the DALI circuits given above	1	No		
.5.4	DALI 6-scene wall mount controller (CP)	1	No		
.5.5	Conventional lighting				
a	1 light points controlled by one switch	1	No		
b	3 light points controlled by one switch	1	No		
c	Non-maintained emergency exit / direction sign with pictogram	7	No		
d	Ceiling mounted signs to include illuminated drop down flag fitting 8 lights points controlled by 2 x 2-way switches	1	No		
				carried forward	

Item	Description	Qty	Unit	Rate	AMOUNT
				brought forward	
.6	LIGHT FITTINGS				
.6.1	install and connect the following light fittings inclusive of all necessary cable tails and connections as well as all fixing hardware and including the necessary suspension stainless steel wire ropes to lower the light fittings to the required height where necessary. This cost is to include all for a full and functional installation. Supply of the light fittings is to be included under Bill 11 unless otherwise stated below.				
.6.1.1	Basement - Upper level				
a	PS1	1	No		
b	PC1	3	No		
c	PM1	1	No		
d	PM2 & PM3 (each)	2	No		
e	CASA/F1 - Supply and install	4	No		
f	CASA/Ex - supply and install	7	No		
g	Light - Staircase B0	8	No		
.6.1.2	Basement - Lower level				
a	Surface mount LED strip - L1	36	m		
b	Surface mount LED strip - L2	1.7	m		
c	Surface mount LED strip - L3	15	m		
d	PF1	2	No		
e	PF2	1	No		
f	PF3	1	No		
g	PF4	4	No		
	The supply of the above light fittings (unless otherwise stated) as well as the test and commissioning of the network and all DALI field devices and DMX controllers will form part of the specialised lighting package to which you are directed to refer to under Bill 11.				
				carried forward	

Item	Description	Qty	Unit	Rate	AMOUNT
				brought forward	
.7	POWER Supply, install and connect the following power points including the specified surface installed metal conduit, back boxes, metal-clad faceplates and electrical accessories, the cables, all for a complete and functional installation. Chased conduits shall be HG PVC Conduits in the raised floor shall be of the galvanised type Conduits installed surafce on the existing crypt walls shall be AISI304 stainless steel mounted with appropriat wall-mounted clamps.				
.7.1	Basement				
a	13A, dual switched metal-clad socket outlets	16	No		
b	13A, switched fused metal-clad fused connection units for AC units	5	No		
c	13A, unswitched fused metal-clad fused connection units All fused connection units to be with integrated cord outlets.	5	No		
.8	OTHERS				
a	To label all socket outlet, FCU and switch faceplates with circuit reference number, using self-adhesive DYMO tape or equivalent, black lettering on white background with minimum 8mm letter height.	1	L/s		
b	To label all switch panels with area description being switched.	1	L/s		
c	To label all switchgear including any existing and retained switchgear with its identification reference and identification reference and location of the upstream isolating device. Label format is to be submitted for approval prior to installing.	1	L/s		
d	Supply and install distribution schedule in all distribution boards.	1	L/s		
e	Cut over works to connect new cable to DB-EB0/1 to existing essential MDB.	1	L/s		
				carried forward	

Item	Description	Qty	Unit	Rate	AMOUNT
				brought forward	
.9	VOICE / DATA				
.9.1	Supply, install and connect the following voice / data / CCTV points including surface metal conduit, the specified CAT6 data cable and the single or dual RJ45 outlet. All for a complete and functional installation. Chased conduits shall be HG PVC Conduits in the raised floor shall be of the galvanised type Conduits installed surafce on the existing crypt walls shall be AISI304 stainless steel mounted with appropriat wall-mounted clamps.				
.9.1.1	Basement				
a	Dual RJ 45 outlets for voice / data wired to data rack including cable	5	No		
b	Single RJ45 outlets for CCTV wired to data rack including cable	7	No		
	All data cables are to be terminated at both ends in suitable RJ45 type plugs Conduits with 3 cables shall be of 25mm diameter.				
.9.2	Standard transmission / attenuation / distance Fluke-type test for all cables and terminations	1	L/s		
.9.3	ELV Rack				
a	Lockable 12U wall mounted 19" rack including cable management accessories and 2x 13A 4-way power distribution units	1	No		
b	16-port Cat6 patch panel, terminated	1	No		
c	Set of 8 patch leads 1.5m length colour red voice / data	1	No		
d	Set of 8 patch leads 1.5m length colour yellow for CCTV	1	No		
e	1kVA rack mounted on-line, dual conversion UPS with 10-minute battery autonomy	1	No		
	The CCTV NVR and the PA amplifier are to be mounted in this rack				
				carried forward	

Item	Description	Qty	Unit	Rate	AMOUNT
				brought forward	
.10	CCTV Supply, install and connect the following CCTV hardware:				
.10.1	Basement				
a	Indoor camera LO.08	1	No		
b	Indoor camera LO.09	1	No		
c	Indoor camera LO.10	1	No		
d	Indoor camera LO.11	1	No		
e	Indoor camera LO.12	1	No		
f	Indoor camera LO.13	1	No		
g	Indoor camera LO.14	1	No		
.10.2	8-channel NVR with minimum 1-week storage autonomy with POE	1	No		
.10.3	Set-up and configure, test and commission all cameras and the entire CCTV system to the specific requirements of the client.	1	L/s		
				carried forward	

Item	Description	Qty	Unit	Rate	AMOUNT
				brought forward	
.11	FIRE DETECTION SYSTEM and IAS SYSTEM				
.11.1	Supply, install and connect the following fire detection equipment and accessories as specified.				
a	1-loop addressable fire alarm panel as specified	1	No		
b	To accept an alarm input from the IAS	1	L/s		
c	To transmit a fire alarm event to TP FAP in Museum	1	L/s		
.11.1.1					
1	Basement				
a	Optical smoke detector	5	No		
b	Optical smoke detector in raised floor c/w remote LED indicator	2	No		
c	Break glass units	3	No		
d	Audible / visual sounders	3	No		
e	Loop powered beacons	1	No		
f	Line interface relay of 2 door releases	1	No		
g	Line interface relay for beam detector	1	No		
h	Line intereface relay for fire damper control	1	No		
i	Line intereface relay for fire curtain	1	No		
j	Beam detector including Tx and Rx module and PSU	1	No		
k	Autodialler unit	1	No		
l	External beacon and bell sounder	1	No		
m	Fire proof cable	1	L/s		
	Chased conduits shall be HG PVC Conduits in the raised floor shall be of the galvanised type Conduits installed surafce on the existing crypt walls shall be AISI304 stainless steel mounted with appropriat wall-mounted clamps.				
.11.2	Integrated intruder alarm system				
a	1-zone conventional intruder alarm system with output relay unit	1	No		
b	Keypad unit	1	No		
c	Wall mounted PIR units	2	No		
d	Wall mounted internal siren	1	No		
e	Cable	1	L/s		
				carried forward	

Item	Description	Qty	Unit	Rate	AMOUNT
				brought forward	
.12	DIGITAL PUBLIC ADDRESS SYSTEM				
.12.1	Supply, install, connect, set up, test and commission the following active voice / data equipment. Cost is to include for a complete and functional system including the programming and setting up of the entire PA network and systems.				
a	Microphone unit	1	No		
b	1-zone 80Wrms nominal amplifier	1	No		
.12.1.1					
1	Basement (B0)				
a	Wall mounted projection type speakers	4	No		
b	Speaker cable	1	L/s		
	Chased conduits shall be HG PVC Conduits in the raised floor shall be of the galvanised type Conduits installed surface on the existing crypt walls shall be AISI304 stainless steel mounted with appropriate wall-mounted clamps.				
				carried forward	

Item	Description	Qty	Unit	Rate	AMOUNT
				brought forward	
.13	TESTING AND COMMISSIONING				
.13.1	Supply all coordinated construction drawings for the engineer's approval prior to two weeks prior to the start of works on site. Coordination exercise shall be carried out between all services as well with any architectural constraints and shall be sent to the architects for their approval.	1	L/s		
.13.2	To carry out the testing and commissioning sequence of all electrical and ELV systems and installations as outlined in the particular technical specification attached to this document and supply copies of all tests carried out in particular those	1	L/s		
.13.3	To supply all "as fitted" drawings including two paper copies and one unlocked electronic copy in ACAD2010 format	1	L/s		
.13.4	To supply O&M manuals as described in the particular technical specification attached to this document including two paper copies and one electronic copy	1	L/s		
.13.5	Supply suitable and sufficient training to two client nominated representatives in the operation of the various ELV systems including voice / data, PABX, CCTV and PA.	1	L/s		
BILL NO 10: ELECTRICAL & ELV SYSTEMS Amount (Excluding VAT) carried to main summary page					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
11	LIGHTING				
	BASEMENT LIGHTING				
	Light fittings to be supplied with all accessories				
	Length and quantity to be verified by the contractor				
.1	TYPE L1 Linear LED strip 3000K CRI93 120leds/m 120°beam 24V remote DALI driver (for 10m length each) Aluminium IP65 profile with diffuser Fixing clips				
a)	Length : 3.45m	1	No.		
b)	Length : 15m	2	No.		
c)	Length : 0.75m	1	No.		
d)	Length : 1.1m	1	No.		
.2	TYPE L2 Linear LED strip 2400K CRI93 120leds/m 120°beam 24V remote DALI driver (for 10m length each) Aluminium IP65 profile with diffuser Fixing clips				
a)	Length : 1.7m	1	No.		
.3	TYPE L3 Linear LED strip 2400K CRI93 120leds/m 120°beam 24V remote DALI driver (for 10m length each) Aluminium IP65 corner profile with diffuser Fixing clips				
a)	Aluminium specific cover + fixings - black colour finish Length : 2.5m	3	No.		
.4	TYPE PF1 Adjustable LED linear luminaire IP40 3000K CRI90 Length 360mm - 10° beam angle 24V remote DALI driver IP65 Fixing and adjustable brackets Black colour finish (body and brackets)	2	No.		
.5	TYPE PF2 Adjustable LED linear luminaire IP40 3000K CRI90 Length 1030mm - 28° beam angle 24V remote DALI driver IP65 Fixing and adjustable brackets Black colour finish (body and brackets)	1	No.		
.6	TYPE PF3 Adjustable LED linear luminaire IP40 3000K CRI90 Length 1030mm - 40° beam angle 24V remote DALI driver IP65 Fixing and adjustable brackets Black colour finish (body and brackets)	1	No.		
.7	TYPE PM2 Adjustable spotlight LED 3000K CRI90 10W 40°beam angle On-track 24V 1m length DALI remote driver Black colour finish (spotlight and tracklight)	1	No.		
				carried forward	

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
				brought forward	
.8	<p>TYPE PM3 Adjustable spotlight LED 3000K CRI90 10W 28°beam angle</p> <p>On-track 24V 1m lenght DALI remote driver Black colour finish (spotlight and tracklight)</p>	1	No.		
.9	<p>TYPE PM1 Adjustable spotlight LED 3000K CRI90 4,5W 6°beam angle</p> <p>Base plate + lockable orientation DALI remote driver 24V Black colour finish (spotlight and base)</p>	1	No.		
.10	<p>TYPE PF4 Adjustable spotlight LED 3000K CRI90 8W 18°beam angle</p> <p>Base plate + lockable orientation DALI remote driver 24V Black colour finish (spotlight and base)</p>	4	No.		
.11	<p>TYPE PS1 Adjustable spotlight LED 3000K CRI90 8W 18°beam angle</p> <p>Base plate for installation in tube DALI remote driver 24V Black colour finish (spotlight and base) Suspended adjsutable tubes lenght 600mm dia.60mm + support Black colour finish</p>	1	No.		
.12	<p>TYPE PC1 Ceiling mounted IP20 LED 3000K 20W CRI90 45° beam</p> <p>Diameter 100mm lenght 162mm DALI integral driver</p>	3	No.		
.13	<p>TYPE LIGHT - STAIRCASE (B0)</p> <p>Wall mounted IP20 LED 3000K 24W Dimensions : maximum 1200mm lenght On/Off</p>	8	No.		
Bill No 11 : Lighting					
Amount (Excluding VAT) carried to main summary page					

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
12 DAYWORK - SERVICES					
	<p>Note:</p> <ul style="list-style-type: none"> i All quantities in this bill are PROVISIONAL ii The rates in this bill will be used to price labour for any variations based on day-works, which may be instructed after the signing of the contract. iii All Rates include overheads and profits and exclude VAT iv Hourly rates shall apply in respect of time spent by operatives directly engaged on daywork and shall exclude breaks, time for travelling, etc. v Overtime hourly rates shall be chargeable where specifically instructed in writing. Normal hourly rates shall apply at all other times. vi The Contractor shall not employ workmen of a higher grade than approved by the Employer and in case of default the applicable rate shall be that relative to the grade approved by the Employer. vii The price of any other material shall be accepted on presentation of fiscal invoice viii Plant rates are inclusive of fuel, travelling time , maintenance and operator 				
.1 LABOUR					
.1.1	Engineer	20	hr		
.1.2	Technician/Electrician	35	hr		
.1.3	Technician/Plumber	35	hr		
.1.4	Skilled tradesman	35	hr		
	Non-skilled labour	35	hr		
.1.5	Percentage increase on the rates above for overtime hours (Normal working hours shall apply - Monday - Frid 7:00 to 16:00				
	a) Monday to Friday 16:00 to 23:00		%		
	b) Saturdays		%		
	c) Sundays		%		
	d) Any day 23:00 to 7:00		%		
Bill No 12: Dayworks - Services					
Amount (Excluding VAT) carried to main summary page					