Kendall Kingscott

Client

The Royal Institution of Cornwall

Project Number 230794

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Roof Repair Works (MEND) at the Royal Cornwall Museum Pre Construction Information

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Document Control Record

Version	Date	Prepared by	Checked by
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- Appendix B Asbestos Survey
- Appendix C Ecological Surveys
- Appendix D Design Hazard Review
- Appendix E Site Logistics Plan
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- Appendix G Photo Schedule of Roof Void Above Main Gallery



1.0 Project Description

1.1 Introduction

This Pre-construction Information has been prepared in accordance with the Construction (Design and Management) Regulations (CDM 2015). It provides information about the project specific exceptional risks to health and safety and how they should be managed.

The Principal Contractor will be required to develop this information into a Construction Phase Health & Safety Plan, which must be site specific and proportionate to the site risks. Work cannot commence until the plan is adequately developed and written confirmation will be provided on behalf of the Client.

The Contractor must ensure their responsibilities are discharged as Designers for the Contractor Design Portion of the project.

The Project is expected to be greater than 500 person days or 30 working days and have more than 20 operatives on site at any one time and therefore will have to be notified to the HSE.

12 Project Description & Programme Details

1.2.1 Site Information

The site address is Royal Cornwall Museum, River Street, Truro, TR1 2SJ.

The Royal Cornwall Museum is a 2/3 storey historic Grade 2 listed building that has been adapted and extended throughout its life. The building comprises of the former Truro Saving Bank and the former Baptist Chapel and a contemporary link building joining the two. The building is of masonry construction with a mixture of flat and pitched roof coverings.

Truro Savings Bank was constructed in 1845 and the Baptist Chapel was constructed soon after in 1848. In 1919 the bank was converted into the Royal Cornwall Museum with a significant extension to the rear forming the main gallery and paired wings. In 1998 the Baptist Chapel was incorporated into the museum with the construction of the link building.

The site is bordered to the North by The Leats public highway with residential apartments and houses beyond. To the West the site is bordered by the Coodes Solicitor's building with a shared party wall and a small section of derelict land. To the South the site is bordered by River Street and mixed-use commercial premises beyond. To the East the site is boarded by mixed use commercial premises with shared party walls.

The Royal Cornwall Museum is centrally located within the city of Truro with limited external spaces and no onsite parking.





1.2.2 Scope of the Project

- Replacement of pitched roof coverings
- Replacement of flat roof coverings
- Thermal improvement works
- Installation of new rainwater goods
- External render repair
- Installation of new external staircase
- Replacement of louvered doors

1.2.3 Programme Details

Mobilisation Period for Contractor	8 Weeks
Proposed Commencement Date	02 nd September 2024
Proposed Completion Date	16 th May 2025
Contract Duration	37 Weeks

1.3 Project Directory

1.3.1 Client

The Royal Institution of Cornwall, Royal Cornwall Museum, River Street, Truro, Cornwall, TR1 2SJ, Tel 01872 723239, contact Jonathan Morton jonathan.morton@royalcornwallmuseum.org.uk

1.3.2 Principal Designer & Lead Consultant Architect

Kendall Kingscott Ltd, Windward House, Fitzroy Road, Exeter, Devon, EX1 3LJ. Tel 01392 266890, contact Tom Cooke, <u>tom.cooke@kendallkingscott.co.uk</u>

1.3.3 Principal Contractor

TBC

1.4 Workplace (Health Safety & Welfare) Regulations 1992

1.4.1 Relevant Requirements

The completed project will be used as a workplace; consequently the finished design will comply with the relevant requirements of the Workplace (Health, Safety and Welfare) Regulations 1992, and this has been considered with the design information produced.

1.5 Existing Information

1.5.1 Existing Drawings

Existing original architectural drawings are available to view at The Royal Cornwall Museum upon request. A set of existing digital drawings can be found within Appendix A.

1.5.2 Existing Plans & Records

An asbestos refurbishment and demolition survey is contained within Appendix B. An ecological bat and bird survey can be found within Appendix C.

2.0 Client's Considerations & Management



21 Planning & Communication Arrangements

2.1.1 Planning & Management of Construction

Careful consideration has been given to the planning and management of the project by the Client, Principal Designer. Timescales have been set based on experienced opinions which have been discussed and agreed within the Design Team. Design Hazard Reviews have been carried out during design development and a copy is contained in Appendix D

The Principal Contractor must submit a Method Statement that demonstrates the work is being adequately planned, co-ordinated, managed during the construction phase commensurate with the complexity of the project. Adequate resources must be apportioned to identifying hazards and assessing risks, and details provided of the safe management and supervision of the works.

The Principal Contractor will develop the information contained within this document and prepare the Construction Phase H&S Plan which must be suitably developed prior to commencing in accordance with Regulation 4(5)(a). The Principal Designer will review the document prior to commencement and will confirm whether works can commence based on sufficiency of the information. The Principal Contractor must therefore allow sufficient time for review and any necessary changes thereafter.

2.1.2 Communication & Liaison

All those in control of construction work are required to provide operatives (including self-employed) under their control with any information that they require to carry out the work safely and without risk to Health and Safety.

All operatives are to be site inducted to inform them of the site specific health, safety and welfare arrangements. This should incorporate relevant findings from risk assessments as well as information relating to nearby activities or risks. Site rules will need to be explained along with emergency procedures.

The Contractor must ensure suitable arrangements are in place to cover all operatives effectively. This includes operatives on site for a short period and those who are unable to read English or have literacy difficulties. The arrangements should be commensurate to the size and complexity of the work, scale of the hazards and size of the workforce.

Communication and liaison between the Client and all other parties will be in the form of general correspondence, Design Team meetings, Progress Meetings, and specially convened meetings to deal with Health and Safety matters if deemed necessary.

All duty holders will be required to co-ordinate their respective activities and cooperate with other duty holders in accordance with the Regulations.

Where the design changes, or unforeseen eventualities arise during the Construction Phase, the Principal Contractor is to liaise with the Principal Designer immediately so that consideration can be given to appropriate amendments to the Construction Phase H&S Plan.

The Principal Contractor undertakes to liaise with the Principal Designer to consider the Health and Safety implications of the Contractor Design Portions where relevant.

All Designers, the Principal Contractor and any other contractors will be required to provide relevant information to the Principal Designer for inclusion in the Health & Safety File.

2.1.3 Arrangements for Monitoring & Review

The Contractor will be required to provide details of Health & Safety performance at regular intervals throughout the duration of the works. It is expected that this will be performed by an independently accredited H&S Auditor, together with interim reviews by an appropriately trained Site Agent (SMSTS and CITB trained).

2.1.4 Welfare Provision

The Principal Contractor is to provide Welfare facilities in accordance with Regulation 4(2)(b), 13(4)(c) and 15(11) of the CDM Regulations 2015 and shall be commensurate to the site undertaking. Proposals for the siting of welfare facilities and temporary site accommodation facilities must be included within the



Contractor's Construction Phase Plan as a development of the Site Logistics requirements included in Appendix E. Welfare facilities MUST be on site at the commencement of the construction phase.

2.1.5 Ongoing Design Protocol

The Principal Contractor is to liaise with the Principal Designer regarding any on-going design work including temporary works, designed access equipment, individual specialist Contractor Design packages, or changes to the design. The Principal Contractor & Principal Designer will then consider the implications on the Construction Phase H&S Plan and site risks. Each element of design is to be co-ordinated for health and safety aspects by the Principal Designer.

22 Client Specific Considerations, Requirements & Arrangements

2.2.1 Health & Safety Goals

The main objective is to ensure that adequate actions and precautions are taken to prevent harm being caused to those carrying out construction work and others who may be affected.

- a. To undertake the work safely without injury to Contractor's operatives.
- b. To undertake the work safely without injury and minimum disruption to the visitors gaining access to the building.
- c. To undertake the works safely without injury to persons not visiting the building but immediately adjoining the works.
- d. Undertake careful site management to contain the works within agreed areas.
- e. To undertake the work without injury and disruption to the occupants of the property.
- f. Undertake the work safely without injury to, staff and visitors to the museum.
- g. Undertake the work with minimum disruption to the normal day-to-day operations of the museum.
- h. Undertake successful traffic management to avoid heavy construction traffic meeting day-to-day city traffic.
- i. To undertake the works safely without injury or disruption to other works on onsite.

2.2.2 Arrangement for Site Security and Vetting Arrangements

The Principal Contractor shall have sole responsibility to ensure that the site is secured throughout the duration of the works. In particular, but not limited to, the Principal Contractor must ensure that:

- a. Ensure all windows and doors are closed after use.
- b. Erect suitable fencing around the site compound and working area
- c. The Contractor shall provide their own signing-in book, which will register ALL operatives on site.
- d. The Contractor shall access the working area from the secure compound.
- e. The Contractor shall provide suitable fencing to prevent any unauthorised access to the scaffold surrounding the building.
- f. The Contractor shall employ suitable measured to prevent climbing of the scaffold and unauthorised access onto the roofs.
- g. The contractor shall provide monitored CCTV around the perimeter of the building and scaffold.

2.2.3 Client Permit to Work Systems of Induction Requirements

The Client does not operate a permit to work system.

2.2.4 Existing Fire & Emergency Procedures

On hearing the fire alarm, all persons are to evacuate the building by the nearest safe exit as indicated by the 'Fire Exit' signs, closing doors as they leave. All operatives on the roof are to evacuate down the scaffold using the designated routes. Operatives are to assemble at the designated muster point, and the appointed Fire Marshall must ensure all operatives are accounted for. In the event that a fire is discovered, the alarm should be raised, and adjoining occupancies affected notified as applicable by the agreed means of raising alarm which is to be detailed in the Construction Phase H&S Plan. The fire alarm system must be maintained throughout the construction phase and any impairment must be by prior agreement with



appropriate measures in place for means of raising alarm to adjoining occupancies as applicable.

The contractor must ensure all final exits are kept clear at all times, adequately lit with appropriate signage as applicable to be used in the event of an emergency.

2.2.5 Areas of Restricted Access & Authorisation Requirements

The Contractor is to be aware that for the duration of the works, the Principal Contractor and their employees are not allowed to access areas outside the works area unless previously agreed with the Contract Administrator.

The Contractor will not access the areas illustrated on the other works drawings in Appendix F

23 Site Area Interface Management Arrangements

2.3.1 Traffic & Pedestrian Management

Space on site is restricted and the Contractor will need to give careful consideration to the development of a Traffic Management plan which eliminates the risk of injury and disruption to persons using this site and/or the Contractor's employees.

A draft logistics plan has been developed and is contained within the tender documentation.

Furthermore, the Contractor is to be aware:

- a. Access to the site compound will be via The Leats further impeded by the need for the road to remain clear throughout the duration of the works. The road contains a number of bends and constrictions which will affect the size of vehicles which can be brought to site. Due care and attention will need to be taken when gaining such access to the Site, particularly given that members of the public will be present throughout the works.
- b. Pedestrian routes around the site must be maintained at all times, particularly fire escape routes.
- c. All vehicle and plant movement is to be aided by the use of banksmen when manoeuvring within the site or the entrance area.
- d. Ensure all roads and footpaths are protected and maintained in a condition suitable for foot and vehicular traffic.
- e. Ensure that all delivery and collection vehicles use the designated entrance/exit and comply with any restrictions.
- f. Ensure occupiers and members of the public are afforded safe access and egress, and that all means of escape in the event of fire, or other hazardous occurrences, are maintained at all times.

2.3.2 Arrangements for Site Compound, Separation & Control of Dust, Noise & Vibration

- a. The Principal Contractor shall erect hoarding, fencing and suitable barriers separate the working area from any public and prevent access being gained to the Site Compound, Scaffold, or Roofs.
- b. The Contractor shall ensure that all stored materials and tools are kept clear from any public accessible area and such storage does not block any fire escape routes or create a trip hazard.
- c. All hoarding, fencing or barriers shall be provided with suitable signage stating, 'Danger Construction Site' and providing contact details of the Contractor.
- d. The location and provision of such areas will be restricted due to the lack of available space and for health and safety reasons, delivery and storage of such materials must be organised to accommodate this restriction. All materials are to be contained within the working area of site compound.
- e. To be determined on site. Storage will be within the compound, which must be secured. Deliveries shall be carefully timed.
- f. The Contractor is to keep dust and noise disruption down to a minimum. The site is an occupied school for the duration of the scheme.
- g. The Contractor is to provide monitored CCTC around the perimeter of the scaffold and ensure it is suitably secure to prevent members of the public gaining access.

2.3.3 Site Area Fire Precautions



In addition to the wider existing site requirements of 2.2.4, a competent person must be appointed to act as a Fire Marshall and the proposed fire and emergency procedures included within the Construction Phase H&S Plan in the form of a Fire Plan. The Fire Plan must integrate with the Client's Fire Policy, as applicable, and must be prominently displayed at strategically identified points throughout the site. The Fire Plan should include, but not limited to the following:

- a. Name of Fire Marshall;
- b. Means of escape indicating escape routes, including scaffolding. (This should be amended to reflect the change in layout during the construction phase, as applicable);
- c. Means of raising fire alarm on site;
- d. Means of notification to any third-party in the event of fire;
- e. Location and type of fire extinguishers;
- f. Emergency and evacuation procedures;
- g. Hot Work permit procedures;
- h. Final exits and muster points;
- i. Method for maintaining fire alarm in active state outside working hours in site areas;
- j. Protection of existing fire exit routes;
- k. Temporary lighting and signage considerations.

2.3.4 Emergency Procedures & First Aid

An emergency First Aid Notice shall be displayed on site at all times. This should identify the nearest Accident & Emergency Centre to the site and also the registered First Aider(s) for the site. Trained First Aider(s) must be on site at all times. Procedures in respect of other emergencies should be described within the Construction Phase H&S Plan and communicated to all operatives and visitors. This should include, but not limited to:

- a. Location and telephone number of local Police Station;
- b. Location and telephone number of local A&E;
- c. Location and telephone number of local fire and rescue station;
- d. Emergency number for statutory services;
- e. Emergency number for the Environment Agency.

The Principal Contractor is to immediately report to the Principal Designer any accident resulting in major injury (as defined in RIDDOR). All accidents are to be recorded as an element within the Principal Contractor's report to be given at each site meeting.

2.3.5 Arrangements for Disruption to Services

The Principal Contractor will be expected to ensure that the museum's existing fire alarm system remains live for the duration of the works. Throughout the contract the museum will be accessed by visitors and staff and it's important that such persons can be notified in case of fire.

Site-wide shutdown of, electricity, gas, water or network will not be permitted. It is expected that it will be possible to undertake the works with localised isolation of services, the timings and extent of which will be agreed at the pre-contract meeting.

2.3.6 Waste Management

In accordance with the appropriate environmental legislation, all waste generated from site shall be segregated and disposed of to a licensed tip by suitably licensed contractors. Waste materials are to be stored in lockable skips within the contractor's compound with final location to be agreed.

Site deliveries and waste collection will only be permitted outside the restrictions stated previously.

Removal of hazardous waste must be undertaken in accordance with the requirements of the relevant local enforcing bodies and any overarching Regulations or legislation.



State waste management proposals i.e. location of skip if known and that it will need to be covered and lockable. State any particular issues with removal of waste from site i.e. restricted site, transfer difficulties due to site location.

Particular considerations:

- a. Site deliveries and waste collection will need to River Street and The Leats will need to remain open to the public and cannot be blocked.
- b. Waste materials are to be removed from site as soon as is practicable to minimise the loss of usable site space.
- c. Ensure all materials are stored in agreed designated areas and that materials stored are well maintained. Materials should not be stored on any public areas and materials stored shall be kept to the minimum commensurate with the construction activities under way at that time, or in the immediate future.
- d. Ensure that skips are located in agreed designated locations and that skips are promptly removed when full. Damp down and cover skips as necessary to prevent excessive dust, debris contaminating the area.

2.3.7 Parking Arrangements

The Contractor will not have access to any onsite parking throughout the works.

The Principle Contractor is to give consideration and make arrangement to secure private parking in proximity to the Museum throughout the works.

2.3.8 Smoking Restrictions

The Health Act 2006 requires that all enclosed premises and public areas are smoke free, and alternative arrangements are to be in put in place to ensure the compliance with the Act.

3.0 Environmental Restrictions & Existing Risks

3.1 Surrounding Operational Environment

3.1.1 Immediate Vicinity

The works are to be undertaken within an occupied museum. The methods used to undertake the works must be carefully considered to eliminate harm and to minimise disruption and nuisance. In some cases, works will occur above and in close proximity to visitors and staff.

The following are also significant considerations:

- a. The Royal Cornwall Museum is centrally located within the city of Truro . The museum is accessed via a narrow streets further impeded by on-street parking. The museum will be occupied throughout the contract period.
- b. The site has limited exterior space to the front and rear and shares a party wall with other premises to the left and right.
- c. The site is accessed via narrow streets through the city centre of Turro.
- d. There are overhead cables located on River Street and The Leats providing height restrictions.
- e. There is no provision for vehicular turning spaces.
- f. All visitors to the site must report to the Principal Contractor's site office or Site Manager where identification and protective clothing will be provided.
- g. Agreed access routes to the site must be observed at all times. No deliveries are to be made during the periods of peak pedestrian and vehicular traffic. The Contractor must ensure that formal instruction is given to all vehicle drivers and that this procedure is included in the Construction Phase Health and Safety Plan.
- h. All manual handling is to be carried out strictly in accordance with The Manual Handling Operation Regulations 1992.
- i. Ensure adequate notices indicating the areas of construction are displayed and provide sufficient



watching to prevent persons entering areas of construction.

- j. Ensure clear demarcation between areas the public may access and all areas where construction work is being undertaken.
- k. The building will remain in full occupation for the duration of the work. Include for all temporary barricading as required.
- I. The musem will be fully occupied throughout the Contract Period. Therefore, working operations must take account of and ensure the safety of the occupants both in the property and in the adjoining areas and properties. Such safety must extend to periods outside of normal working hours. The Contractor shall note the requirement to reinstate essential services prior to leaving site at the end of each working day.

3.1.2 Site Boundaries & Wider Area

The site shares a boundary to the North with The Leats public highway with residential apartments and houses beyond. To the West the site shares a boundary with the Coodes Solicitor's building with a shared party wall and a small section of derelict land. To the South the site shares a boundary with River Street and mixed-use commercial premises beyond. To the East the site shares a boundary with mixed use commercial premises with shared party walls.

The museum is located within the city centre of Truro.

3.1.3 Storage of Hazardous Materials on Site

No information has been made available about hazardous materials stored on site.

3.2 Historical, Current & Record Information

3.2.1 Known Previous Site Issues

The site was used as Truro Savings Bank and a Baptist Chapel from the 1840's. In 1919 the bank was converted into a museum and in 1998 the museum was extended, and the chapel was incorporated into the museum.

3.2.2 Building Condition & Information about Existing Structures

No information about the existing condition of the building and existing structures has been provided to the Principal Designer.

The original buildings are understood to have been constructed the 1840s. Multiple alterations to the original footprint have been carried out since original construction.

3.2.3 Previous Structural Modifications

No information about previous structural modifications has been provided to the Principal Designer.

3.2.4 Existing Services

The Principal Contractor will be required to undertake surveys of the below ground services prior to the commencement of works. The Principal Contractor will be responsible for verifying their location and implementing safe and effective work procedures and practices before commencing any excavation. Reference should be made to HSE Guidance Note HS(G) 47 'Avoiding Danger from Underground Services.

The location of buried services within the building fabric outside the areas surveyed are not known and the contractor must take all necessary steps to ensure that they are located before carrying out any work. It must be assumed that all services are live within the site unless there is strong and verified evidence to suggest otherwise.

If isolation of services is considered necessary, the Principal Contractor must refer to the procedures outlined in 2.3.5.

3.2.5 Ground Conditions, Underground Structures or Watercourses

No information regarding ground conditions has been provided to the Principal Designer. It is not expected that the works will be affected by ground conditions.

3.2.6 Information relating to Pre-Stressed or Post Tensioned Structures

No information regarding pre-stressed or post-tensioned structures has been provided to the Principal



Designer.

3.2.7 Asbestos

An R&D Asbestos Survey has been prepared and is contained in Appendix B. Reference should also be made to the limitations described within the report and the need to undertake further intrusive investigation prior to undertaking any construction work.

For any materials identified all work with asbestos is to be undertaken in accordance with the Control of Asbestos Regulations 2012. The Principal Contractor and their appointed specialist will be required to undertake an assessment in accordance with these Regulations to demonstrate that the work is either Non licensed, notifiable non licensed or licensed work.:

It is expected that all operatives on site will have received Asbestos Awareness training via a UKATA accredited company.

If during the course of the works any further suspect material is discovered, then work must be stopped immediately, area cordoned off and advice sought from both the Principal Designer or CA.

Waste disposal tickets for any asbestos materials removed must be retained and forwarded to the Principal Designer for inclusion in the Health and Safety File together with Four Stage Air Clearance Certificates for any notifiable materials removed. All notifiable materials must be removed by a HSE licensed asbestos removal contractor.

The Principal Contractor should be aware that the surveys are limited to the indicated site boundaries and should the scope and extent of works change then additional investigations will be required to these areas.

4.0 Significant Design & Construction Hazards

4.1 General

The Principal Contractor shall take note of information provided by all designers, including, any design assumptions noted, and develop a safe system of work to address the risk. A copy of the Design Hazard Review that forms the basis of the significant risks identified below is included in Appendix D. In addition, significant risks have also been identified on the drawings wherever possible.

The Principal Contractor will be required to develop appropriate site specific Risk Assessments and Method Statements prior to executing any high risk or hazardous activity. The Principle Contractor shall give specific consideration to the complex nature of the site and how the roof replacement works shall be undertaken.

4.2 Site Specific Design and Construction Hazards & Control Measures

The following significant hazards have been identified. These must be properly addressed by the Principal Contractor in the form of implementing a safe system of work before work commences on site:

CORONAVIRUS (COVID-19)
Working at Height
Working with Glass and Glazing
Working within the vicinity of live services
Working above an occupied space
Working within close proximity of the public
Availability of Cornish slates
Ecological protection
Vehicular movement. The Contractor is to ensure that banksmen are always in place whilst vehicles move around the site.



HAZ 10	Statutory consents
HAZ 11	Unauthorised/ unwary persons accessing the working areas. Site areas to be protected from unauthorised access at all times.
HAZ 12	Other works onsite.
HAZ 13	Removal of materials/safe transit. The Contractor is to ensure that suitable PPE and method statements are in place for the removal of materials and that any machinery used is undertaken through competent and qualified staff.
HAZ 14	Fire risk from torch applied felt roofing
HAZ 15	Concealed defects & deleterious materials
HAZ 16	Disruption to fire stopping/ compartmentation. Any proposed works that affect existing fire breaks are to be agreed with the design team, and undertaken and certified by a competent Contractor.
HAZ 17	Removing and installing insulation above the main gallery where glazing is present within the ceiling.
HAZ 18	Fragile slate roof coverings, risk of falling through. Contractor required to undertake works in a safe manner.

4.3 Materials Requiring Special Precautions

The Contractor is to abide by the manufacturer's recommendations in the use of the materials specified, in particular their COSHH hazard information. The Contractor's method of ensuring compliance with this information is deemed to be part of the general approach of a competent contractor.

The Principal Contractor should exercise caution when handling the various hazardous substances which are commonly used. Material Data Safety Sheets should be referred to and COSSH assessments undertaken, as applicable.

Particular activities involving materials which are hazardous to health need to be assessed. Method statements should be established prior to works commencing.

The following hazardous materials have been identified requiring particular precautions:

MAT O1	Asbestos
MAT O2	Use of lead
MAT 03	Molten bitumen
MAT 04	Adhesives with light VoCs
MAT 05	Intumescent materials (fire stopping etc.)
MAT 06	Cement and silica

5.0 The Health & Safety File

5.1 Contents & Information Required

The following information is to be provided for inclusion in the Health & Safety File. Reference should be made to the Contract Preliminaries for numbers of copies and format – i.e. paper/electronic. Draft copies should be made available for inspection at least two weeks prior to the proposed completion date and will be a condition of Practical Completion.

a. Services (to be provided by Principal Contractor and Designers)

Location and details of all new incoming mains services, water, electric, gas and drainage



- Existing Environment (to be provided by Designers)
 Original drawings
- c. Contract Details (to be provided by CA/PD) Contract commencement, date of PC, end of DLP, Certificate of Practical Completion
- d. Design Information (to be provided by Designers (including Contractor's Designers)
 Specification details, as built drawings, finishes and colour schedules, structural calculations, key structural principals and any relevant design criteria
- e. Project Participants (to be provided by Principal Contractor) List of all domestic and named sub-contractors, including all direct named contractors
- f. Mechanical (to be provided by Principal Contractor)
 As installed drawings, system description, schedule of equipment/suppliers, manufacturer's O&M information, H&S information, test commissioning and inspection certificates.
- g. Electrical (to be provided by Principal Contractor)
 As installed drawings, system description, schedule of equipment/suppliers, manufacturer's O&M information, H&S information, test commissioning and inspection certificates.
- h. Fire and Emergency (to be provided by Designers and Principal Contractor) Fire strategy drawings, fire retardancy certificates for fabrics.
- Product Information (to be provided by Principal Contractor)
 Product data sheets for materials requiring a COSHH assessment.
- Residual Hazards (to be provided by Designers and Principal Contractor) Residual hazards left on completion of the works, details of any demolition hazards left on completion of the works.
- k. Maintenance Instructions (to be provided by the Principal Contractor)

Maintenance instructions for equipment, fixtures and fittings and finishes; information regarding the removal of and dismantling of installed plant and equipment; health and safety information relating to cleaning or maintaining the structure.



Appendix A



WHERE CRITICAL DIMENSIONS ARE REQUIRED, <u>ALWAYS MEASURE ON SITE</u>.

WHEREVER POSSIBLE, THE LINES OF WALLS, DOORS, WINDOWS etc. HAVE BEEN TAKEN AT 1.5m AFFL TO INDUSTRY STANDARDS.

SMT ASSOCIATES RETAIN THE ORIGINAL COPY OF DRAWINGS AND ANY ALTERATIONS OR UPDATES SHOULD BE PASSED TO SMT ASSOCIATES ELECTRONICALLY FOR UPDATING.



DO NOT SCALE IF IN DOUBT ASK!

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Clie	ent: ROYAL IN	NSTITUTION OF CO	ORNWALL	
	RIVER STRI TRURO TR1 2SJ	EET		
_				
Draw	ring: FLOOR P LEVEL 3	PLANS - UPPER GALLERI	ES	
Draw Survey	/ed JAN_08	PLANS - UPPER GALLERI Drawn JD	ES Approved	SMT
Draw Survey Date	ring: FLOOR P LEVEL 3 - red JAN_08 <u>Scale</u> 15.02.08	PLANS - UPPER GALLERI Drawn JD 1:100	ES Approved Sheet 1	SMT
Draw Survey Date	^{/ed} JAN_08 15.02.08	PLANS - UPPER GALLERI Drawn JD 1:100 SMT652/	ES Approved Sheet 1 104	SMT



WHERE CRITICAL DIMENSIONS ARE REQUIRED, <u>ALWAYS MEASURE ON SITE</u>.

WHEREVER POSSIBLE, THE LINES OF WALLS, DOORS, WINDOWS etc. HAVE BEEN TAKEN AT 1.5m AFFL TO INDUSTRY STANDARDS.

SMT ASSOCIATES RETAIN THE ORIGINAL COPY OF DRAWINGS AND ANY ALTERATIONS OR UPDATES SHOULD BE PASSED TO SMT ASSOCIATES ELECTRONICALLY FOR UPDATING.



DO NOT SCALE IF IN DOUBT ASK!

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A 0	Additional informa Original			05/06/09 15/02/08	JD		
No.	Description	Date	Signed				
		Rev	isions				
Clie	ent: ROYAL IN	NSTITUTI	ON OF CO	RNWALL			
Little:	Title: ROYAL CORNWALL MUSEUM RIVER STREET TRURO TR1 2SJ						
Diam	LEVEL 4	'LANS					
Survey	/ed JAN_08	Drawn	JD	Approved	SMT		
Date	15.02.08		1:100	Sheet 1			
Dra	awing No.	SI	MT652/1	05			
	S ASS Chartered	SOC Building	A TE Surveyors	S	T		

Historic Building Consultants

Tel (01872) 260798









WHERE CRITICAL DIMENSIONS ARE REQUIRED, <u>ALWAYS MEASURE ON SITE</u>.

WHEREVER POSSIBLE, THE LINES OF WALLS, DOORS, WINDOWS etc. HAVE BEEN TAKEN AT 1.5m AFFL TO INDUSTRY STANDARDS.

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No.	Description	Date Signed				
		Revisions				
Clie Title:	Client: ROYAL INSTITUTION OF CORNWALL Title: ROYAL CORNWALL MUSEUM RIVER STREET TRURO TR1 2SJ					
Draw	ving: FLOOR P LEVEL 1	PLANS - ENTRANCE				
Survey	^{/ed} JAN_08	Drawn JD	Approved	SMT		
Survey Date	ved JAN_08 Scale 15.02.08	Drawn JD 1:100	Approved Sheet	SMT		
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Appendix B



Refurbishment Survey

Survey Reference Number: L-29909RV1

Survey Date: 06 November 2023 & 21 December 2023

Client Specified Areas

Royal Cornwall Museum 25 River Street Truro Cornwall TR1 2SJ







Report Authorised by

Name: Amy Bulpin

Signed

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Allium Environmental Ltd wish to advise our client(s) that no obligation (actual, assumed or otherwise) may be placed upon the client, for further work related to the recommendation from this report.

Please note Allium Environmental Ltd cannot be held responsible for the way in which the client may interpret or act upon the results of the report. This report must be read in its entirety including any appendices. Allium Environmental Ltd accepts no responsibility for sub-division of this report.

No responsibility can be taken for any misinterpretation of this report by third parties.





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Section 1.0: Executive Summary

This report has been revised to include the phase 2 works to the roof and rainwater goods at the request of the client.

An Asbestos Refurbishment Survey was carried out in accordance with in-house asbestos surveying procedures and HSE guidance documentation *HSG 264: Asbestos: The Survey Guide* to the client specified areas at Royal Cornwall Museum.

The Survey was carried out by Allium Environmental Ltd on behalf of Jackie George on 06 November 2023 & 21 December 2023.

The purpose of this survey was to locate as far as reasonably practicable the presence and extent of all suspected Asbestos Containing Materials (ACMs) in the building survey area which could be damaged or disturbed during planned refurbishment activities.

During the survey 7 samples were taken for analysis.

A Refurbishment Survey aims to locate all ACMs within the survey area. There is no requirement to assess the condition or 'Priority' information for management purposes. This is because it is presumed that all ACMs found will be removed as part of the planned refurbishment works. However, should any material remain in situ or if the related works are not undertaken then all ACMs identified should be re-assessed and managed in accordance with the recommended action set out in HSG 264 or CAR 2012. To manage the risk from ACMs, it is the Duty Holder's responsibility to keep and maintain an up-to-date record of the location, condition, maintenance and removal of all ACMs on the premises. If there is a risk of exposure due to the condition or location of the ACMs then they should be repaired, encapsulated and labelled, or removed. It is the responsibility of the Duty Holder to maintain ACMs in a good state of repair and regularly monitor the condition; the Duty Holder should inform anyone who is liable to disturb the ACMs about their location and condition.

ltem No.	Building Name	Room No. & Name	Asbestos Containing Product	Recommended Action	Risk
6	Royal Cornwall Museum	External	Cement Debris - Roof	Restrict Access & Remove	Low
9	Royal Cornwall Museum	External	Cement Roof Tiles - Roof	Remove if affected by proposed refurbishment works	Very Low

Inaccessible areas encountered during the time of the survey, for which no information was obtained, along with areas where access was limited:

ltem No.	Building Name	Room No. & Name	Restriction
2	Royal Cornwall Museum	Ground Floor, 001 - Mineral Gallery	Limited access behind timber boxing to wall due to stored items
4	Royal Cornwall Museum	External	No access gained to soffits external of office due to safety restrictions.
7	Royal Cornwall Museum	External	No access gained to South elevation of roof due to safety restrictions.

Address Allium Environmental Ltd, Baldhu House, Wheal Jane Earth Science Park, Baldhu, Truro, TR3 6EH Company Reg No. 09391161 Tel: 01872 276375 Email: enquiries@allium.uk.net





Survey Date: 06 November 2023 & 21 December 2023

ltem No.	Building Name	Room No. & Name	Restriction
11	Royal Cornwall	External	No access to ceiling soffit over main
	Nuseum		entrance due to safety restrictions.
12	Royal Cornwall	External	No access to soffits/fascias over cafe
	Museum	External	windows due to safety restrictions.
13	Royal Cornwall	External	No access to soffits/fascias at rear
	Museum		elevation due to safety restrictions.





Section 2.0: Introduction

Allium Environmental Ltd was instructed by Jonathan Morton of Jackie George to undertake an Asbestos Refurbishment Survey to ascertain the presence of any Asbestos Containing Materials (ACMs) within: Royal Cornwall Museum.

The site consists of:

• Mid 1800s stone built building with a pitched roof

The survey was carried out on 06 November 2023 by Bryan Read and on 21 December 2023 by Hadyn Veale of Allium Environmental Ltd.

Section 2.1: Survey Scope

The scope of the survey as defined by Jackie George is to carry out a Refurbishment Survey to the client specified areas within Royal Cornwall Museum:

- Areas included in the survey:
 - All areas affected by the proposed refurbishment works to the mineral gallery only within Royal Cornwall Museum were included in the survey.
- Agreed areas of exclusion from the survey scope:
 - All other areas of Royal Cornwall Museum were excluded from the survey.





Section 2.2: Limitations

During the course of the survey all reasonable efforts were made to identify the presence of Asbestos Containing Materials within the surveyed areas. However, Asbestos Containing Materials (ACMs) are sometimes concealed within the fabric of a building or sealed building voids, and so it is not always possible to regard the findings of a survey as being definitive. Therefore, it must always remain a possibility that further Asbestos Containing Materials may be found during any alterations, refurbishment or demolition works. Asbestos Containing Materials (ACMs) may be hidden within the fabric of a building and may not be visible until the building is dismantled; it is therefore recommended that a complete review of the Asbestos register is undertaken before commencement of any works. Where areas have been identified as inaccessible within the report, it indicates that the area specified was not accessible to the surveyor at the time of the inspection either because such areas were locked despite requests for access to be arranged, or to gain entry would require an unreasonable degree of dismantling to the structure of the building. The client is therefore advised to the possibility of there being Asbestos Containing Materials in such areas.

HSE guidance: HSG 264: Asbestos: the survey guide states it is now recognised that even with 'complete' access demolition surveys, all ACMs may not be identified and this only becomes apparent during demolition itself. Therefore in buildings that are occupied, due to be re-occupied or due to extenuating circumstances, following the completion of the survey it may be required to undertake additional inspections or sampling prior to/during proposed refurbishment works to account for all hidden Asbestos Containing Materials (ACMs). Where this is likely a provision may need to be made to allow for a possible revisit, this may include inaccessible areas that will be listed in this report.

- Inaccessible areas encountered during the survey:
 - 2 Ground Floor, 001 Mineral Gallery, Limited access behind timber boxing to wall due to stored items
 - 4 External, No access gained to soffits to external of office due to safety restrictions.
 - 7 External, No access gained to South elevation of roof due to safety restrictions.
 - 11 External, No access to ceiling soffit over main entrance due to safety restrictions.
 - 12 No access to soffits/fascias over cafe windows due to safety restrictions.
 - 13 No access to soffits/fascias at rear elevation due to safety restrictions.
- Agreed Variations or Deviations from the standard HSG 264 method:
 - Intrusions were kept to a minimum due to continued use of the premises.





Section 2.3: Details

Site Address:

• Royal Cornwall Museum, 25 River Street, Truro, Cornwall, TR1 2SJ

Client Name & Address:

• Jackie George

Client Contact:

• Jonathan Morton

Survey Start Date:

• 06 November 2023

Survey Completion Date:

• 21 December 2023

Survey Conducted by:

- Bryan Read
- Hadyn Veale

Assisted by:

• N/A

Report Produced:

• 21 December 2023

Section 2.4: Survey Type

The nature of the survey is a Refurbishment Asbestos Survey as detailed in HSE publication: *HSG 264 Asbestos: The Survey Guide.* HSE guidance publication *HSG 264: Asbestos: The Survey Guide* describes a Refurbishment survey as a fully intrusive survey. A full sampling programme is undertaken to identify possible ACMs and estimates of volume and surface area made. A Refurbishment survey is required for all work which disturbs the fabric of the building in areas where the management survey has not been intrusive.

This report presents the findings of the survey and analysis reports of any bulk samples taken.





Section 3.0: Survey Method

Allium Environmental Ltd conducts Refurbishment surveys in accordance with our in-house Asbestos Surveying procedures and HSE guidance publication *HSG 264: Asbestos: The Survey Guide.* While the survey is fully intrusive, disruptive and non-destructive, it may involve penetrating all parts of the building structure, using aggressive inspection techniques to lift carpets and tiles, break through walls, ceilings cladding and partitions, and open up floors.

A Refurbishment survey uses a combination of visual inspection and bulk sampling to confirm the presence of Asbestos. Any area(s) inaccessible at the time of the survey must be presumed to contain Asbestos, and any inaccessible area(s) must have access restricted, and should be inspected prior to access or the commencement of any works.

Any samples collected during the survey will be analysed in-house to ISO/IEC 17025 for the identification of Asbestos fibres in bulk samples, and in accordance with HSE guidance note: *HSG 248: The Analysts' guide for sampling analysis and clearance procedures and best practice* or subcontracted to an approved independent laboratory, which is also UKAS accredited to ISO/IEC 17025 for the identification of Asbestos fibres in bulk samples, and in accordance with HSE guidance note: *HSG 248: The Analysts' guide for sampling analysis and clearance procedures and best practice*. Where applicable and where samples are sub-contracted this will be clearly displayed on the bulk sample test report and within the survey report. Completed Fibre Identification Report for all samples taken can be found in Appendix 2. (Representative samples were also taken of any materials that may be mistaken for potential ACMs). Sampling location stickers, bearing the individual samples unique identification number, have been applied to all sample points where practicable, for future reference.

Products that are very unlikely to contain Asbestos were not sampled (e.g. wallpaper, plasterboard, chipboard, wood etc.).

An item record is completed for each suspect sample taken; for materials strongly presumed to contain Asbestos (i.e. materials visually similar to positively identified ACMs); for areas presumed to contain Asbestos (i.e. areas where no access could be gained at the time of the survey; and non-accessed items of (electrical) equipment and plant).

Each item record contains a colour photograph, individual material assessment scores (as prescribed under HSG 264), management recommendations and general observations / comments (where appropriate).

The item records are combined together to form a site-specific Asbestos Register.





Section 4.0: General Comments

This report relates to the situation on the day(s) of the inspection and cannot take into account subsequent changes in circumstances. Samples were taken of any materials historically known or presumed to contain Asbestos. This report contains findings based upon visual inspection and results of laboratory analysis

All figures and measurements quoted in the Asbestos Register detailing the extent of ACMs are estimates, based upon visual inspection on the day of the survey and should be used as a guide. It is the responsibility of contractors quoting for Asbestos Removal Works to take their own measurements to determine the exact extent of Asbestos to be removed. Unless otherwise stated pipework insulation and heating plant was not inspected in their entirety. Representative samples were taken at random intervals where suspect material was observed. The scope of the works did not permit complete exposure and assessment of all pipework and heating plant.

No responsibility can be taken for any misinterpretation of this report by third parties.

A limited inspection of pipework concealed by overlying non-Asbestos insulation has been conducted. Inspection of pipework has been restricted primarily to insulation visible. The presence of Asbestos debris to pipework, which is not readily visible or would require the full removal and replacement of overlying insulation, has therefore not been investigated.

No responsibility will be accepted for the presence of Asbestos in voids (under floor, or behind wall or ceiling) or pipework ducts other than those opened up during the survey.

The survey is limited to those areas accessed at the time of the survey.

We have not reported on concealed spaces, which may exist within the fabric of the building, and where the extent and presence of these is not evident, due to inaccessibility or insufficient knowledge of the structure at the time of the survey.

Due to the nature and variety of Asbestos used in building construction and the complex nature of some buildings, especially where modified over the years, it is possible that some ACMs may not have been identified in the survey. Where refurbishment is to follow a refurbishment Survey, it would be prudent in any contract to allow a contingency sum to provide for such possibility.




Section 4.0: General Comments (Continued)

Certain 'Artex' type textured coatings and decorative plasters may contain very small quantities of Asbestos. In situ, these coatings are often composed of different batches of product, or may have been repaired / patched at different times. It is therefore possible that any 'Artex' samples taken may not be representative of the entire coating. Recent research suggests that in some cases, the fibres may have diameters below 0.1 um. These may not be visible by the optical microscopy method described in HSE guidance publication HSG 248: Asbestos: The Analysts' Guide for Sampling, Analysis and Clearance Procedures.

At the time of the survey no access was gained to materials and/or void areas located above, behind or attached to suspect Asbestos Containing Materials sampled or presumed throughout the site. To do so would have required surveyors to break through suspect ACMs, such as textured coating and insulating board, potentially contaminating themselves and the work area with Asbestos. Therefore, it is recommended that site operatives are made aware of this survey limitation, and instructed to exercise caution when breaking through materials and/or areas located above, behind or attached to suspect ACMs that have been found to contain Asbestos following laboratory analysis.





Section 5.0: Terminology

Asbestos – A term used for the fibrous form of several naturally occurring silicate minerals, used primarily because of its low thermal conductivity, high tensile strength, resistance to chemical attack, flexibility and incombustibility. *The Control of Asbestos Regulations 2012* defines and regulates asbestos as the fibrous forms of the following minerals or any mixture containing them. "Asbestos" means the following fibrous silicates;

Chrysotile (White Asbestos) Crocidolite (Blue Asbestos) Fibrous Grunerite - commonly known as Amosite (Brown Asbestos) Fibrous Tremolite Fibrous Anthophyllite Fibrous Actinolite

ACM(s) - Asbestos Containing Material(s). Any material, substance or product that contains or has been made with Asbestos.

SPTCA - Strongly Presumed To Contain Asbestos.

- PTCA Presumed To Contain Asbestos.
- **NAD -** No Asbestos Detected.
- **AD** Asbestos Detected.



Section 5.1: Material Assessment Score Algorithm & Risk rating

Sample Variable	Score	Example of Scores
	1	Asbestos-Reinforce Composite (Plastic, Resin, Mastic, Roofing Felts, Vinyl Floor Tiles, Semi-Rigid Paints or Decorative Finishes, Asbestos Cement)
Product Type (including debris from product)	2	Asbestos Insulating Board (AIB), Millboards, Other Low-Density Insulating Boards, Asbestos Textile, Gasket, Ropes and Woven Textile, Asbestos Paper and Felt
	3	Thermal Insulation (e.g. Pipe and Boiler Lagging), Sprayed Asbestos, Loose Asbestos, Asbestos Mattresses and Packing.
	0	Good condition: no visible damage
Extent of damage/deterioration	1	Low damage: a few scratches or surface marks, broken edges on board, tiles etc.
	2	Medium damage: significant breakage of materials or several small areas where material has been damaged revealing loose fibres.
	3	High damage or delamination of materials, Sprays and Thermal Insulation. Visible Asbestos debris
	0	Composite materials containing Asbestos: Reinforced Plastic, Resins, Vinyl Tiles.
Surface treatment	1	Enclosed Sprays and Lagging, AIB (with exposed face painted or encapsulated), Asbestos Cement Sheets etc.
	2	Unsealed AIB, or encapsulated Lagging and Sprays.
	3	Unsealed Lagging and Sprays.
	1	Chrysotile
Asbestos type	2	Amphibole (Amosite) Asbestos excluding Crocidolite
	3	Crocidolite

Potential to release Asbestos Fibres

- Materials with an assessment score of 10 or more are deemed to have a high risk and potential to release fibres, if subject to minor disturbance, e.g. walking in the vicinity of the material.
- Materials with an assessment score between; 7-9 are deemed to have a medium risk and potential to release fibres.
- Materials with an assessment score between; 5-6 are deemed to have a low risk and potential to release fibres.
- Materials with an assessment score of 4 or less are deemed to have a very low risk and potential to release fibres.





Section 5.2: Recommended Actions Explained

Monitor Condition - This material can stay in situ and be managed accordingly. Monitor condition regularly and record condition.

Label - Label the ACM with approved warning signs

Encapsulate - Use suitable encapsulating material to seal surface. Work with this material to be carried out in accordance with HSE Publication: *The Control of Asbestos Regulations 2012.*

Repair - This material requires repair. Work with this material to be carried out in accordance with HSE Publication: *The Control of Asbestos Regulations 2012.*

Restrict Access - Restrict access to area and communicate with employees, contractors and others to keep area free from personnel. Work with this material to be carried out in accordance with HSE Publication: *The Control of Asbestos Regulations 2012.*

Protect/Enclose - Use suitable material to protect / enclose ACM to minimise risk of impact damage.

Remove if Affected - If this material is likely to be disturbed by/during the proposed refurbishment works then material will need to be removed prior to work commencing. Work with this material to be carried out in accordance with HSE Publication: *The Control of Asbestos Regulations 2012.*

Remove - This material requires removal. Work with this material to be carried out in accordance with HSE Publication: *The Control of Asbestos Regulations 2012.*

No Access/Exercise Caution - Surveyors were unable to obtain access to material, item, room, area or building to conduct inspection for potential ACMs. Therefore, the area is assumed to contain Asbestos and the Duty Holder should exercise caution.

Please Note:

- Allium Environmental Ltd cannot be held responsible for the way in which the client may interpret or act upon the results of this report.
- Please refer to HSE Publication: *The Control of Asbestos Regulation 2012* prior to undertaking any remedial works on ACMs.
- In some instances more than one recommendation may be used.





Section 6.0: Survey Findings & Room Construction

Please note

• Where areas were inspected and no ACMs were identified or presumed an entry has been placed into the report findings stating "No Asbestos Detected" within the respective area.



Room/Area Name & No: 001 - Mineral Gallery Floor: Ground Floor Building: Royal Cornwall Museum

	Room Construction / Description				
Ceiling	Lath and Plaster	Riser/Boxing	Limited Access Gained, Timber		
Firebreak	N/A	Voids	N/A		
Walls	Block, Plasterboard, Lath & Plaster	Pipework	Metal		
Doors	Timber & Metal	Plant/Equipment	N/A		
Windows/Sills	Metal, Putty	Staircases	N/A		
Floor	Concrete, Felt, Timber	Other	N/A		
Under Floor Ducts	N/A	Comments			

Positive Survey Findings - None Identified

No Access Areas

Reference	2	Product Type (A)	N/A	
Sample No	No Sample Taken	Condition (B)	N/A	
Description	Limited Access Gained - Boxing	Surface Treatment (C)	N/A	
Accessibility	Low	Asbestos Type (D)	N/A	VING MACH
Risk Rating	Low	Material Score (A+B+C+D)	N/A	
Extent	4no.	Identification	PTCA	
Recommendation	Exercise Caution – See section 5.2			
Comments	Presumed to contain asbestos until prove	en otherwise. Limited access b	pehind timber	boxing to wall due to stored items

Negative Survey Findings

Reference	1	Product Type (A)	N/A	
Sample No	29909/BR/001	Condition (B)	N/A	
Description	Felt - Floor	Surface Treatment (C)	N/A	
Accessibility	Low	Asbestos Type (D)	N/A	
Risk Rating	N/A	Material Score (A+B+C+D)	N/A	
Extent	160m²	Identification	NAD	
Recommendation	No Action			
Comments	Felt covering below timber flooring.			

Reference	3	Product Type (A)	N/A	
Sample No	29909/BR/002	Condition (B)	N/A	
Description	Putty - Windows/Sills/Skylights	Surface Treatment (C)	N/A	The second secon
Accessibility	Medium	Asbestos Type (D)	N/A	
Risk Rating	N/A	Material Score (A+B+C+D)	N/A	
Extent	2no.	Identification	NAD	
Recommendation	No Action			
Comments	Putty to metal window frames.			



Room/Area Name & No: Main Building Floor: External Building: Royal Cornwall Museum

	Room Construction / Description				
Walls	Block	Ducts/Pipe Runs	Plastic		
Cladding	Natural Slate, Metal	Ground	N/A		
Roof	Cement Debris, No Access Gained, Cement Roof Tiles, Modern Felt, Natural Slate Tiles	Windows/Sills	UPVC & Timber		
Rainwater Goods	Metal & Plastic	Soffit Fascia's	Insulating Board Panel, No Access Gained, Timber		
Soil Stacks	Plastic	Staircases	N/A		
Flues/Cowls	Metal & Plastic	Other	N/A		
Plant/Equipment	N/A	Commonts	Natural clato dobric procent		
Doors	Timber	comments	Natural slate debris present.		

Positive Survey Findings

Reference	6	Product Type (A)	1	
Sample No	29909/HV/004	Condition (B)	3	
Description	Cement Debris - Roof	Surface Treatment (C)	1	
Accessibility	Low	Asbestos Type (D)	1	
Risk Rating	Low	Material Score (A+B+C+D)	6	
Extent	0.25m ²	Identification	AD	
Recommendation	Restrict Access & Remove – See section 5	5.2		elle.
Comments	Small piece on flat roof.			

Reference	9	Product Type (A)	1	
Sample No	29909/HV/006	Condition (B)	1	
Description	Cement Roof Tiles - Roof	Surface Treatment (C)	1	
Accessibility	Low	Asbestos Type (D)	1	
Risk Rating	Very Low	Material Score (A+B+C+D)	4	
Extent	300m ²	Identification	AD	
Recommendation	Remove if affected by proposed refurbish	nment works – See section 5.2		
Comments	Quantity is an approximation.			

No Access Areas

Reference	4	Product Type (A)	N/A	A STATE
Sample No	No Sample Taken	Condition (B)	N/A	
Description	No Access Gained - Soffit	Surface Treatment (C)	N/A	
Accessibility	Low	Asbestos Type (D)	N/A	
Risk Rating	Low	Material Score (A+B+C+D)	N/A	
Extent	12lm	Identification	PTCA	
Recommendation	Exercise Caution – See section 5.2			
Comments	Presumed to contain asbestos until prove	en otherwise. No access gaine	d to soffits e	xternal of office due to safety
	restrictions.			





Reference	7	Product Type (A)	N/A	
Sample No	No Sample Taken	Condition (B)	N/A	
Description	No Access Gained - Roof	Surface Treatment (C)	N/A	
Accessibility	Low	Asbestos Type (D)	N/A	
Risk Rating	Low	Material Score (A+B+C+D)	N/A	
Extent	500m²	Identification	PTCA	
Recommendation	Exercise Caution – See section 5.2			
Comments	Presumed to contain asbestos until prove	en otherwise. No access gaine	d to South el	evation of roof due to safety
	restrictions. No safe access point.			

Reference	11	Product Type (A)	N/A	
Sample No	No Sample Taken	Condition (B)	N/A	
Description	No Access Gained - Soffit	Surface Treatment (C)	N/A	- Harrison
Accessibility	Low	Asbestos Type (D)	N/A	
Risk Rating	Low	Material Score (A+B+C+D)	N/A	
Extent	2m ²	Identification	PTCA	A Company of the second
Recommendation	Exercise Caution – See section 5.2			X
Comments	Presumed to contain asbestos until prov	en otherwise. No access to cei	ling soffit ov	er main entrance due to safety
	restrictions. To be sampled out of visiting	g hours.		

Reference	12	Product Type (A)	N/A	
Sample No	No Sample Taken	Condition (B)	N/A	The part of the second
Description	No Access Gained - Soffit	Surface Treatment (C)	N/A	
Accessibility	Low	Asbestos Type (D)	N/A	1
Risk Rating	Low	Material Score (A+B+C+D)	N/A	
Extent	8lm	Identification	PTCA	
Recommendation	Exercise Caution – See section 5.2			
Comments	Presumed to contain asbestos until prove	en otherwise. No access to sof	fits/fascias c	over cafe windows due to
	restrictions. To be sampled out of visiting	hours. High level may not be	accessible.	

		, ,						
Reference	13	Product Type (A)	N/A					
Sample No	No Sample Taken	Condition (B)	N/A					
Description	No Access Gained - Soffit	Surface Treatment (C)	N/A					
Accessibility	Low	Asbestos Type (D) N/A						
Risk Rating	Low	Material Score (A+B+C+D) N/A						
Extent	20lm	Identification	ΡΤϹΑ					
Recommendation	Exercise Caution – See section 5.2							
Comments	Presumed to contain asbestos until prove	en otherwise. No access to so	ffits/fascias a	at rear elevation due to safety				
	restrictions. High level area would require road closure and use of MEWPS.							

Negative Survey Findings

Reference	5	Product Type (A)	N/A	
Sample No	29909/HV/003	Condition (B)	N/A	
Description	Insulating Board Panel - Soffit	Surface Treatment (C)	N/A	
Accessibility	Low	Asbestos Type (D)	N/A	
Risk Rating	N/A	N/A Material Score (A+B+C+D)		
Extent	3m²	Identification	NAD	
Recommendation	No Action			
Comments	Above external door access.			

Address Allium Environmental Ltd, Baldhu House, Wheal Jane Earth Science Park, Baldhu, Truro, TR3 6EH Company Reg No. 09391161 Tel: 01872 276375 Email: enquiries@allium.uk.net



CREATING SAFER SPACES L-29909RV1 Survey Date: 06 November 2023 & 21 December 2023

Reference	8	Product Type (A)	N/A	A A A A A A A A A A A A A A A A A A A
Sample No	29909/HV/005	Condition (B)	N/A	
Description	Insulating Board Panel - Soffit	Surface Treatment (C)	N/A	
Accessibility	Low	Asbestos Type (D)	N/A	
Risk Rating	N/A	Material Score (A+B+C+D)	N/A	
Extent	12lm	Identification	NAD	
Recommendation	No Action			
Comments	To both gable ends of raised roof on flat	roof section.		

Reference	10	Product Type (A)	N/A	44				
Sample No	29909/HV/007)/HV/007 Condition (B)		147				
Description	Cement Roof Tiles - Roof	Cement Roof Tiles - Roof Surface Treatment (C)						
Accessibility	Low	N/A	TTA-					
Risk Rating	N/A	N/A						
Extent	25m²	NAD						
Recommendation	No Action							
Comments	Replacement roof tiles in various locations. Quantity is an approximation.							







• THIS PLAN SHOULD BE READ IN CONJUNCTION WITH THE MAIN BODY OF THE REPORT AND INDIVIDUAL ITEM RECORDS





• THIS PLAN SHOULD BE READ IN CONJUNCTION WITH THE MAIN BODY OF THE REPORT AND INDIVIDUAL ITEM RECORDS Page 21 of 23







Appendix 2: Certificate of Bulk Sample Analysis

Allium Environmental Ltd.
Baldhu House, Wheal Jane Earth
Science Park, Baldhu, Truro TR3 6EH
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BULK ANALYSIS TEST REPORT

Report Number:	L-2990	09RV1	Issue No:	2	Date Re	ported:	21/12/23	Page 1 of	2
Comments:									
Client: Jackie George									
Client Address:	s: Royal Cornwall Museum, 25 River Street, Truro, Cornwall, TR1 2SJ								
Site Address/Loca	tion:	Royal Cornv	vall Museum,	, 25 River St	reet, Tru	ro, Corn	wall, TR1 2SJ		
Date Sampled:		06/11/23 &	21/12/23	Sampled B	y:	Bryan Read & Hadyn Veale			
Date Samples Rec	eived:	08/11/23 &	21/12/23	Client Orde	er No.:	Invoice Prior No. of Samples: 7			
Date Analysed:		21/11/23 to	21/12/23	Analysed b	y:	Victoria Berry & Gary Lowe			

Analysis of samples was carried out in accordance with the documented `in-house' procedures and methods based upon HSE Guidance Document HSG 248 Appendix 2. Comments, opinions and interpretations herein are outside the scope of UKAS accreditation. This report may not be reproduced except in full, without written approval of the laboratory.

ANALYSIS RESULTS									
Lab Sample Ref. No.	Client Ref.	Sample Type	Sample Details/location/description	Asbestos Type (s)					
001		Felt	Ground Floor, 001 Mineral Gallery , Internal/Floor - Felt	No Asbestos Detected					
002		Putty	Ground Floor, 001 Mineral Gallery , Internal/Windows/Sills/Skylights - Putty	No Asbestos Detected					
003		Insulating Board	External, External/Soffit - Loose Insulation	No Asbestos Detected					
004		Cement	External, External/Roof - Loose Insulation	Chrysotile					
005		Insulating Board	External, External/Soffit - Insulating Board Panel	No Asbestos Detected					
006		Cement	External, External/Roof - Cement Roof Tiles	Chrysotile					
007		Cement	External, External/Roof - Cement Roof Tiles	No Asbestos Detected					

: en for any consequences arising from the Wh

•

is have been referred to as Aubestos insulating Board or Adbestos Cement based upon their abbestos content and visual appearance alone. Eamples have not been taken by Allium Environmental Ltd threaska paphy of the surple as monked, it can only report analysis results. No responsibility can be take sampling strategy or procedures, for the acts or omissions of others, or the use of these results in subsequent reports. Is anaked \$ in this report have been subcontracted to a UKAS accredited laboratory. Cation of the amount of abbestos is not permitted, if 1 or 2 fibres are observed and identified as asbestos, the term 'trace asbestos identified' will be report (s) were examined for the presence of 6 types of asbestos fibres: Crocidolite (blue), Annosite (brown), Chrysotlie (white), Anthophylite, Actinolite and Tremo samples have been taken by Allium Environmental (Ltd this has been to the in-house surveying/sampling procedure AL003, a copy of which is available on res are retained for 6 months and records/reports are retained for 6 years

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BA007-V5-05/06/23

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Additional Comments:	Analyst:	Gary Lowe
	Analysts Signature:	le love
	Approved by:	Gary Lowe
	Authorised Signature:	le love
ENDOF	REPORT	

BA007-V5-05/06/23

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Appendix C



Royal Cornwall Museum Truro, Cornwall

Bat and Nesting Bird Visual Survey and Detailed Bat Surveys

Ref: BE751.1

Date: 25th March 2024

Prepared by: Dr Janine Bright CMIEEM CEnv

> For: Royal Cornwall Museum





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1. INTRODUCTION

It is proposed to re-roof the Royal Cornwall Museum, 25 River Street, Truro, Cornwall, TR1 2SJ. The OS Grid reference of the site is SW8237544887.

Bright Environment was commissioned by the Royal Cornwall Museum in October 2021 to carry out a visual bat and nesting bird survey to inform the works. Bats and nesting birds are legally protected (see Appendix 1).

The survey area is defined in Figure 1 over leaf. The roofs are referenced R1-5 and S1-6 on Figure 1 and throughout the report. The presence or absence of bats in the following roofs could not be determined via the visual survey alone - R1, R3, R4 and R5. These roofs were assessed as having low potential for bats so one emergence survey between May and August was required to prove absence (in accordance with Bat Survey Guidelines produced by BCT). Remote monitoring of R1 was also required. These detailed bat surveys were carried out in July 2022.

In March 2024 Bright Environment Ltd was commissioned by The Royal Cornwall Museum to carry out an updated survey and to update the report.

The results of all surveys are included in this report.

2. METHODOLOGY

The survey methodology adopted follows the guidance given in 'Bat Surveys for Professional Ecologists – Good Practice Guidelines' (Collins, 2016) and 'Barn owl survey methodology and techniques for use in ecological assessment' (Shawyer, 2011). Impact assessment and mitigation follows the guidance provided by CIEEM (2018) and the 'Bat Mitigation Guidelines' (Mitchell-Jones, 2004). The survey area is defined in Figure 1 over leaf. The roofs are referenced R1-5 and S1-6 on Figure 1 and throughout the report.

2.1 Visual survey methodology

A visual survey of the building was carried out on 19th October 2021. During this the suitability of the building and surrounding habitats to support bats and nesting birds was made.

A detailed search of the interior of the building was carried out using a high powered torch to illuminate all areas thought suitable for bats and nesting birds. Any accessible cracks and crevices were investigated with the use of a torch and endoscope. The exterior of the building was viewd from ground level and many elevations of the roofs were also viewed from flat roof sections. This allowed the identification of potential bat access points.

The survey involved looking for bats and nesting birds and for evidence of their use, including droppings, pellets, staining, liming, feathers and feeding remains. Survey details are shown in Table 1.

Potential bat roosts identified during the visual inspection of the building were categorised as to their suitability in accordance with the Bat Conservation Trust's (BCT) Good Practice Guidelines (Collins, 2016) as described below:

Negligible: negligible features with potential to support roosting bats.

Low: one or more features with potential to support individual bats on an occasional basis. Unlikely to support large numbers of bats.

Moderate: one or more features with potential to support roosting bats but unlikely to be of high conservation status.

High: one or more features with potential to support large numbers of bats on a regular basis



2.2 Bat emergence surveys methodology

During the visual survey it was concluded that the following roofs have no potential as bat roosts and do not require further survey - R2, S1, S2, S4, S5, S6 and S7.

The presence or absence of bats in the following roofs could not be determined via a visual survey alone - R1, R3, R4 and R5. These roofs were assessed as having low potential for bats so one survey between May and August was required to prove absence (in accordance with Bat Survey Guidelines produced by BCT). One emergence survey was carried out, on 4th July 2022, to record any bats emerging from the building. The surveys commenced 15 minutes before sunset and continued until one hour after sunset. Six surveyors were employed to provide coverage of the elevations/roofs requiring further survey. All surveyors used Echometer Touch bat detectors, employing heterodyne and real time expansion methods of detection. The location of surveyors is shown Figure 1.

See section 2.4 for justification in not repeating this survey in 2024.

2.3 Remote monitoring methodology

Due to the presence of a hanging ceiling, it was not possible to carry out a visual search of R1. Remote monitoring (at least five consecutive nights between May and August) of R1 was recommended. This was carried out from 4th - 12th July 2022 (8 consecutive nights). A SongMeter (SM2+) detector was placed in the roof void and set to record bats from one hour before sunset to one hour after sunrise (see Figure 1 for location).



Figure 2. Roof plan showing proposed location of surveyors () and remote monitoring () for phase 2 ecology surveys.



2.4 Update report survey methodology

CIEEM produce guidance on the lifespan of ecological reports (CIEEM, 2019). In following this guidance, a repeat visual survey was carried out on 25th March 2025 to;

Identify any evidence of roosting bats, and

Identify whether there had been any significant changes to the habitats present.

If either of the above had occurred, then the site would have been subject to an updated bat emergence survey to prove absence. But sufficient survey effort in 2022 was carried out to prove the absence or bats and, as there had been no change in the habitat or new evidence, it was concluded in March 2024 that an updated emergence survey was not required. Conversely had bats emerged in 2022 it would have been necessary to update both the visual and emergence survey in 2024. The methodology employed follows the guidance produced by CIEEM (2019).

Date	Type of survey	Personnel - bat licence number	Weather conditions
19.10.21	Visual survey	Dr Janine Bright 2020-49235-CLS-CLS	Light Rain, light breeze, overcast. Temp 16C
4.7.22	Emergence survey	Dr Janine Bright 2020-49235-CLS-CLS Emma Pethick CL17-2021-53399-CLS- CLS Jason Trewinnard Leanne Rogers Oscar Bright Charlotte Martin-Taylor	Dry, calm, patchy cloud. Temp 13-15C Time of sunset 21.32hrs
4.7.22 to 12.7.22	Remote monitoring	Dr Janine Bright 2020-49235-CLS-CLS	Dry and warm for duration. The temperature range recorded by the detector inside the building was 19- 25C
25.3.24	Visual survey	Dr Janine Bright 2020-49235-CLS-CLS	Light Rain, calm, overcast. Temp 10C

Table 1 Survey details.

3. SURVEY RESULTS

3.1 Habitat description

The Royal Cornwall Museum is located in the centre of Truro. It is an urban setting with the nearest 'green space' being a park 130m to the west. Foraging opportunities for bats are limited at the site.

The building is Grade II listed and was built in 1845 originally as a bank. Part of the museum was a chapel. The building is fronted with cut granite. Other stone elevations are rendered. There is a flat roof link section connecting the main museum with the chapel. The roof sections are described in detail in section 3.2.





Photograph 1. South (front) elevation.



Photograph 2. North (rear) elevation.

3.2 Visual bat survey results and recommendations

3.2.1 Roof No R1

Roof No R1 is above the library and is a pitched gable roof. It has a granite front façade (Photograph 1) and granite gable (Photograph 3). There are granite cornices at the eaves (Photograph 4). These features do not allow any potential bat access points. The roof covering is natural slate with clay ridge tiles. The front roof slope was not visible from the ground. No obvious potential bat access points were observed in the rear roof slope. It was not possible to gain entry to the roof void as there was a non-weight bearing hanging ceiling. A single ceiling tile was removed so that the void could be seen. The underside of the roof covering has a fibrous insulation. This insulation is above the rafters but below the slates and is likely to block bat entry into the roof void. It is possible that bats could roost unseen beneath ridge tiles or behind slates in the void created by the battens (should potential bat access points be present). The presence or absence of bats in R1 could not be determined via a visual survey alone. R1 has been assessed as having low potential as a bat roost. Therefore, one emergence survey at dusk using two surveyors and 5 consecutive nights of remote monitoring in the roof void was recommended to prove absence of bats.





Photograph 3. Granite gable of Roof No R1 and southern parts of R4.



Photograph 4. Granite cornices of Roof No R1.

3.2.2 Roof No R2

Roof No R2 is pitched gable roof. It has flat roof sections at the eaves (Roof No S2). It is therefore possible to walk entirely around Roof No R2 at the flat roof height. The roof covering is natural slate with clay ridge tiles. There is a foil type membrane present. No potential bat access points were observed to allow bats to the voids between the membrane and slates nor under the ridge tiles. At each gable is a louvred metal door which could potentially allow bat access to the walk-in void within. However, a thorough search of this void was achieved and no evidence of roosting bats was found. The hanging slates on the gables do not have any potential bat access points. A through search or all areas accessible to roosting bats was carried out an no evidence was found. Roof No R2 has been assessed as having negligible potential as a bat roost and no further surveys of this roof were required.





Photograph 5. Roof No R2 North and east elevations. Photograph 6. Roof No R2 internal.

3.2.3 Roof No R3

Roof No R3 is above the main gallery of the museum. This part of the museum has an arched vaulted vaulting. There is a large walk-in roof void above this ceiling. The access is via a wooden louvred door on the north gable. The large pitched gable roof has a covering of natural slate with clay ridge tiles. There are wooden sarking boards beneath the slates. There are two roof vents (see photographs 7 and 8) that have gaps that could potentially allow bats to enter the roof void. Bats may also potentially enter the void via the louvered door. However, no evidence of bats was found within the void.

The soffits are tightly fitted to the render at the gables (Photograph 11), however there are gaps between the slates and the soffit that would allow bats to potentially gain access to the void between the slates and the sarking boards. There are also some lifted slates across the main part of the roof.

The presence or absence of bats in R3 could not be determined via a visual survey alone. R3 was assessed as having low potential as a bat roost. Therefore, one emergence survey at dusk using two surveyors was recommended to prove absence of bats. Remote monitoring of the void was not required. R3 was surveyed at dusk from the flat roof sections.



Photograph 7. Roof No R3 North and west elevations. Photograph 8. Roof vent in No R3.



Photograph 9. Roof No R3 louvred door.







Photograph 11. Tightly fitted soffit of R3. Photograph 12.

Photograph 12. Gaps between soffit and slates on R3.

3.2.4 Roof No R4

Roof No R4 is a complex design roof it is pitched with a gable at the north elevation, a hip at the south elevation and an intersecting roof section (see Photograph 3 and Figure 1). It has a roof covering of natural slate and clay ridges. Internally the ceiling is vaulted and there is no accessible roof void. Large gaps were observed between the rafters at the eaves (see Photograph 13). This would potentially allow bats to gain entry into the void between the roof and the vaulted ceiling.

The presence or absence of bats in R4 could not be determined via a visual survey alone. R4 was assessed as having low potential as a bat roost. Therefore, one emergence survey at dusk using two surveyors (a third surveyor covering R3 also covered the west roof slope of R4) was recommended to prove absence of bats. Remote monitoring was not required. R4 was surveyed at dusk from the flat roof sections.



Photograph 13. Gaps between the rafters at the eaves of R4.

3.2.5 Roof No R5

Roof No R5 is above the former chapel. There is a large walk-in roof void that houses the air circulation system for the museum. The roof covering is natural slate with bitumen felt. No evidence of bats was found within the void. The chapel roof has a stone gable at the south elevation. The soffit is tightly fitted to the render at the north gable, however there are gaps beneath the ridge tiles that may allow bats to gain entry to the ridge void.

The presence or absence of bats in R5 could not be determined via a visual survey alone. R5 was assessed as having low potential as a bat roost. Therefore, one emergence survey at dusk using two surveyors was recommended to prove absence of bats. Remote monitoring of the void was not required. R5 was surveyed at dusk with one surveyor on the flat roof and one on the road on the north elevation.

There is a small eaves void in the north east corner of R5. This has a concrete base. No evidence of bats was found within.





Photograph 14. West roof slope of R5.



Photograph 15. Roof void of R5.

3.2.6 Roof No S5

There is a small hipped roof within the flat roof (S4) to the north of R3 (see Photograph 16). It is possible that this was a former light-well that has been slated. It does not have any potential for roosting bats and no further surveys of S5 were required.



Photograph 16. Roof No S5.

3.2.7 Roof No S1

Roof S1 is a flat roof with stone cornices. It has no potential for roosting bats and did not require further survey.



3.2.8 Roof No S2

Roof S2 is a flat roof with stone cornices (see Photograph 4). It has no potential for roosting bats and did not require further survey.

3.2.9 Roof No S3

Roof S3 is a flat roof with a sloped roof section on the north elevation. The flat roof has no potential for roosting bats. The facias on the north elevation at the eaves of the sloping roof have gaps behind that could harbour roosting bats. These could not be visually searched. The presence or absence of bats in S3 could not be determined via a visual survey alone. S3 was assessed as having low potential as a bat roost. Therefore, one emergence survey at dusk using one surveyor stood at ground level on the north elevation was recommended to prove absence of bats.

3.2.10 Roof No S4

Roof S4 is a flat roof with no fascia or soffit features. It has no potential for roosting bats and did not require further survey.

3.2.11 Roof No S6

Roof S6 is a zinc roof with no potential for roosting bats and did not require further survey.

3.2.12 Roof No S7

Roof S7 is a flat roof with no potential for roosting bats and did not require further survey.

3.3 Emergence survey results

No bats emerged from the museum at dusk.

Bat activity around the museum was very low. Three bat passes from Natterers bat, two from common pipistrelle and one from Noctule were recorded. These bats were not associated with the museum building.

3.4 Remote monitoring bat survey results

No bats were recorded in R1 during the remote monitoring event.

3.5 Updated visual survey results

No evidence of bats was found within any of the roof voids during the update survey carried out on 25th March 2024 and no habitat changes were identified.

3.6 Interpretation and evaluation of bat survey results

In accordance with the 'Bat Surveys for Professional Ecologists – Good Practice Guidelines' (Collins, 2016) and guidelines produced by CIEEM (2019); **sufficient survey effort has been employed to demonstrate the absence of roosting bats at Royal Cornwall Museum.** No mitigation for bats is required.

In the unlikely event that bats are discovered during the works, they must not be handled and works must stop immediately and advice sought from Bright Environment (Tel 07974 204078) or Natural (Tel 0300 060 3900).

3.7 Nesting bird survey results and recommendations

During the October 2021 and March 2025 surveys, feathers were found within R1 and R2 but no evidence of nesting birds was seen. It is possible that feathers may have blown in via the vents. Seagulls and pigeons were observed with active nests on the flat roof sections of the museum during the July 2022 survey at dusk. No new evidence was found in March 2024.

It is possible that bird nests could be concealed from view on wall tops or soffit boxes.

The nests and eggs of all wild birds are protected against taking, damage or destruction under the Wildlife and Countryside Act 1981. It is recommended that the works are carried out between



October and February inclusive to avoid disturbing nesting birds. If the works are to be carried out within the bird breeding season (March to September) the building should be searched for nesting birds. If nesting birds are present, works should not commence until dependant young have fledged. Further advice can be sought from Bright Environment (Tel 07974 204078) or Natural England (Tel 0300 0602544).

As ecological features can change over time it is recommended that this report is valid until April 2025.



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Appendix 1 Summary of relevant legislation, policies and case law

Bats

All British bat are European protected species and are afforded full protection under UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010. Together, this legislation makes it illegal to:

Intentionally kill, injure or capture a bat;

Intentionally or recklessly disturb a bat;

Intentionally or recklessly damage, destroy or obstruct access to a place of shelter or breeding (for example, bat roosts), and this applies regardless of whether the species is actually present at the time (for example, a bat roost used in the winter for hibernation is protected throughout the year, even during the summer when it is not occupied).

Possess or transport a bat or any part of a bat, unless acquired legally;

Sell, barter or exchange bats, or parts of a bat.

Intentionally handle a wild bat or disturb an bat whilst using a place of shelter/ breeding unless licensed to do so by the statutory conservation agency (Natural England).

Barbastelle, Bechstein's, noctule, soprano pipistrelle, brown long-eared, greater horseshoe and lesser horseshoe bats are priority species for conservation on the UK BAP and protected under the NERC Act 2006. Barbastelle, pipistrelle, greater and lesser horseshoe bats are county priority BAP species (CBI, 2004).

Case Law

There are several case laws in Britain relating to the duty of developers and planning authorities with respect to wildlife, resulting in several key principles summarised in the table below:

Case / Appeal	Providing support for
Morge v Hampshire County Council (2011)	'Disturbance' under the Conservation Regulations 2010 applies to an activity likely to impact negatively on the local population of a European Protected Species.
R v Cheshire East Council `The Woolley Case' (2009)	Regarding European Protected Species, Local Authorities must apply the 'three tests' under the Conservation Regulations 2010 when deciding on planning applications: that there is no satisfactory alternative, there is an appropriate reason for the development, and that the development will not affect the favourable conservation status of protected species present.
APP/P9502/A/08/2070105 (Appeal decision, Brecon, 2008)	Para 18: Local Planning Authorities cannot condition provision of a mitigation scheme; detailed mitigation must be provided prior to determination.
APP/C0820/A/07/2046271 (Appeal decision, Padstow, 2007)	Para 18: Full survey information must be provided prior to determination; not just for protected species, but also for BAP species (in this case corn buntings).
R v London Borough Council Bromley (2006)	Para 30: Environmental Impact Assessment required at outline planning stage.
R v Cornwall County Council 'The Cornwall Case' (2001)	Surveys for protected species cannot be conditioned; must be undertaken prior to determination.



Barn owls and other nesting birds

The nests and eggs of all wild birds are protected against taking, damage and destruction under the Wildlife and Countryside Act 1981. Barn owls are given greater protection against disturbance while breeding under Schedule 1 of the Act.

National Planning Policy Framework 2023

The National Planning Policy Framework (NPPF) sets out national planning policy that is committed to minimising impacts on biodiversity and providing net gains in biodiversity. Under NPPF, local planning authorities have an obligation to promote the preservation, restoration and recreation of Priority habitats, ecological networks and the protection and recovery of Priority species.





Appendix D

Design Hazard Review

Roof Repair Works (MEND) The Royal Institute of Cornwall

Version	Date	Prepared by	Checked by								
T01	11.04.24	Nick Harman	Tom Cooke					Scale	1 to	4	Low
								Scale	5 to	8	Medium / Low
								Scale	9 to	16	Medium / High
								Scale	17 to	25	High
	1	1	1	Risk	Assessn	nent	1	Action Pla	n - Residua	l Risk	
Element	Hazard	Potential Impact	Mitigation	Probability	Impact	Risk Score / Category	Action Plan	Action Owner	Next Action Target Date	Date Achievec	Comments
Site Implications											
Vehicles / Plant Movements & Site Deliveries	Moving vehicles/deliveries to and from site.	Injury to members of public and operatives. Damage to buildings, other vehicles, equipment.	Restrictions to be put in place to manage the timing of arrival and departures from site to avoid peak times of pedestrian traffic. Due to restrictive site and the inability to provide segregated transit routes, in addition to limiting the times access can be made, a banksman shall be required to supervise vehicle movements at all times.	5	4	20	The Principal Contractor (PC) is to implement a traffic/pedestrian management system. Use signage and designated areas for traffic/pedestrian access. Provide adequate training and banksmen where required. Movement of plant to be supervised at all times.	Principal Contractor	Site Phase		Maintain throughout construction phase.
Working at height	Falls / Objects falling from heights when working at roof level externally and internally within roof voids. Unsafe access /egress.	Injury to members of public and operatives. Damage to buildings, other vehicles, equipment.	External full perimeter scaffold to areas requiring access with appropriate guard rails /toe boards /netting shall be required to prevent falls from height / falling debris. Perimeter fencing to prevent access to beneath scaffold. Installation Oxford Safety Trellis to provide safe access as required within roof voids. i.e. Oxford Safety Trellis and timber boarding and handrails and guarding.	3	4	12	The Principal Contractor is to allow for providing safe working access via scaffolding and employ the proposed collective fall prevents measures. The Contractor shall review and may propose alternative safe working method with means to prevent falls and objects falling from height. The Principal Contractor to install the safe access guardrail and self closing gate to perimeter of existing access hatch prior to removal and installation within roof space.	Principal Contractor	Site Phase		



				Risk Assessment				Action Plan - Residual Risk					
Element	Hazard	Potential Impact	Mitigation	Probability	Impact	Risk Score / Category	Action Plan	Action Owner	Next Action Target Date	Date Achieved	Comments		
Working within restricted and/or confined Spaces	Risks from noxious fumes, risk of fire, becoming trapped.	Injury to operatives. Operatives become trapped in a fire.	Ensure ventilation and clear egress from area if hazards arise.	2	4	8	The Principal Contractor (PC) is to provide suitable method statements/risk assessments for working within any void and any other restricted areas and/or confined spaces. KKL to review and confirm Principal Contractors RAMS prior to works commencing on site.	Principal Contractor /KK	Site Phase				
Site deliveries	Collision with materials or operatives.	Injury or ill health to workers, site occupants and members of public.	Traffic management system to be implimented.	2	3	6	The Principal Contractor (PC) is to provide adequate signage for the works.	Principal Contractor /KK	Site Phase				
Covid-19	Spread of Infection/Ability to secure labour and materials.	Disruption to site operations III health to contractors and visitors.	Principal Contractor to follow government rules in relation to working practices and methods, at time of construction.	1	5	5	All parties and duty holders must comply with Government control measures.	Principal Contractor /KK	Site Phase				
Demolitions / Removals													
Structure removal	Premature collapse. Debris falling onto site and public areas.	Health risk to members of public and operatives. Damage to buildings, other vehicles, equipment.	Demarcation zones, pathway diversions, dust suppression, progressive de-construction by hand.	5	5	25	The Principal Contractor (PC) shall ensure works are undertaken in a safe manner in by suitably trained operatives. Update method statements if/where required to reflect	Principal Contractor	Site Phase				
Working Above Occupied Spaces	Falls from height. Risk of falling objects to public and staff.	Injury or ill heal to members of the public and operatives. Damage to ceilings in a listed building.	Use of safe working systems and methodes while working in roof voids e.g. Oxford Safety Trellis. All works in the roof void below R3 (Main Gallery) should be done by a specialist working at height contractors with a sfe system of work in place. Specific care should be taken to the britle glazing present in the in the arched ceiling over the main gallery.	4	5	20	The Principal Contractor is to allow for providing safe working access via scaffolding and employ the proposed collective fall prevents measures. The Contractor shall review and may propose alternative safe working method with means to prevent falls and objects falling from height. The Principle Contractor shall allow to employe a specialist	Principal Contractor	Site Phase				
Asbestos	Discovery of previously unknown ACMs.	Health risk to members of public and operatives. Risk of disturbing ACMs and release of fibres. Removal requires 2 week notification to HSE (licensed).	ACM testing to be carried out immediately on discovery of suspected asbestos in order to confirm properties of material found and removal procedure required. All operatives to have undertaken asbestos awareness training.	3	5	15	working at hight contractor If the Contractor identifies any suspicious materials, they are to stop works and notify the Contract Administrator as soon as possible. The Principal Contractor shall plan the works and implement site inductions, toolbox talks and robust site management procedures to ensure that operatives are aware of any known ACM and procedures for dealing with previously unknown ACMs.	Principal Contractor	Site Phase				

				Risk Assessment							
Element	Hazard	Potential Impact	Mitigation	Probability	Impact	Risk Score / Category	Action Plan	Action Owner	Next Action Target Date	Date Achieved	Comments
Fire Routes	Works taking place within the existing building obscuring fire routes.	Hampering means of escape or areas required for fire fighting access	Programme works to ensure fire escape routes are maintained. Ensure Fire Engine access is not obscured by construction traffic.	2	5	10	Contractor is to ensure fire exits and fire engine access routes are kept clear during the works.	Principal Contractor	Site Phase		
Dust	Dust Migration/Dust inhalation.	Injury/ill health to members of public and operatives.	Implement dust control measures to the works areas, including dust suppression, wet cutting/drilling, damping down, shadow vacuuming for drilling/cutting operations and adhere to the Client's permit to work system requirements.	3	3	9	The Principal Contractors shall employ collective safety measures such as damping down, shadow vacuuming when drilling or cutting. With individual PPE. Contractor shall provide dust control method statements/risk assessments in accordance with the hospital's requirements and those set out in KK's design packages.	Principal Contractor	Site Phase		Maintain throughout site phase.
Concealed voids	Opening up / inspection of concealed voids has not occurred and within such voids and other concealed areas, there remains a risk that previously undiscovered asbestos containing materials could be	Adverse health effects from encountering asbestos fibres Prosecution Fines / compensation	It should be noted that a refurbishment and demolition asbestos survey has occurred and that any contractors undertaking demolition / removal work should be asbestos awareness trained.	3	3	9	The Principal Contractor shall ensure that all Contractors are aware of their duties for employees to be asbestos awareness trained.	Principal Contractor /KK	Site Phase		Maintain throughout site phase.
Working at height	Falls from height.	Injury or ill health.	Allow for suitable safety equipment, safe access equipment and appropriate guardrailing, barriers and platforms	2	4	8	The Principal Contractor (PC) is to allow for providing safe working platforms, working areas and harnessing as required.	Principal Contractor	Site Phase		Maintain throughout site phase.
Working at height (greater than 2m from ground level)	Objects falling from heights.	Injury or ill health to pesons below.	Reduce the amount of work required at height with prefabrication.	2	3	6	The Principal Contractor (PC) is to allow for providing safe working platforms, working areas and harnessing as required.	Principal Contractor	Site Phase		Maintain throughout site phase.
Noise/Vibration	Noise/Vibration causing disturbance.	Injury/ill health to members of public and operatives.	Implement noise control measures to the works areas including limitation on working hours/duration of noisy/vibration operations, adhere to the Client's permit to work system requirements.	2	3	6	The Principal Contractors shall employ collective safety measures, plan and co-ordinate works and allow adequate resources and supplement with individual PPE.	Principal Contractor	Site Phase		Maintain throughout site phase.
Removal of materials	Cuts, abrasions, dust inhalation etc.	Injury/ill health to members of public and operatives.	Provide appropriate PPE for the task in hand.	2	3	6	The Principal Contractor (PC) is to ensure workforce is provided and use relevant PPE during the course of the works. Update method statements if/where required to reflect works.	Principal Contractor	Site Phase		Maintain throughout site phase.

				Risk Assessment				Action Plan - Residual Risk				
Element	Hazard	Potential Impact	Mitigation	Probability	Impact	Risk Score / Category	Action Plan	Action Owner	Next Action Target Date	Date Achieved	Comments	
Roof Structures												
Pitched roofs	The design for the new pitched roof coverings requires the installation of thermal insulation between and under rafters; whilst consideration has been given to alternative designs, this is the only feasible arrangement and represents a hazard in that employees undertaken installation works will be exposed to a falling hazard whereby the spaces between existing rafters / trusses is wide enough for persons to fall through into the room below	Falling between rafters / trusses leading to: Death / injury Prosecution Fines / compensation	The feasibility of alternative designs have been considered but due to the existing arrangement of the building, the final design put forward is the only practicable option. It will therefore be necessary for the contractor to employ the use of safety measures to mitigate the falling risk.	4	5	20	Include a requirement within the specification for the contractor to design and install safety systems to mitigate the risk of falling from height. It is expected that this will include: Design and installation of netting below the rafters Harness lanyard system in place above rafter level.	Principal Contractor /KK	Tender Return		Maintain throughout site phase.	
Roof deck	Opening up of the building has not occurred and the construction and condition of the flat roof decks is unknown.	Falling, leading to injury / death Prosecution Fines / compensation	When the contractor has possession of areas below, undertake opening up of ceiling voids etc. in order that the condition and construction of the deck can be inspected from below.	2	5	10	Ensure that contractors are aware of their obligation to inspect roof deck.	Principal Contractor /KK	Site Phase		Maintain throughout site phase.	
M&E Services												
Live Services /Buried services	Cutting into or otherwise affecting live services.	Risk of Explosion/electrocution and direct harm to members of public and operatives. Disruption to adjacent buildings and facilities.	Disconnect/isolate services where possible prior to works commencement, in accordance with buried services survey. Complete safe verification of services prior to commencing works. Operate permit to work systems.	4	5	20	Principal Contractor (PC) to ensure that sub-contractors are aware of hazards. Specify work to be undertaken by competent and suitably qualified operatives.	Principal Contractor	Site Phase			
Electrical installations (working with electricity)	Disruption of essential services to the existing buildings on site.	Injury or ill health to Principal Contractor's staff and/or sub- contractors.	Provide PPE and undertake works in a safe manner in accordance with the IEE Regulations. Use competent and suitably qualified operatives.	2	5	10	Principal Contractor (PC) to ensure that sub-contractors are aware of hazards. Specify work to be undertaken by competent and suitably qualified operatives.	Principal Contractor	Site Phase			
Electrical installations (working with electricity)	Electrocution during the use of electrical tools for fabrication purposes.	Injury or ill health to Principal Contractor's staff and/or sub- contractors.	Use of battery powered tools. Provide PPE and undertake works in a safe manner in accordance with the IEE Regulations. Use of competent and suitably qualified operatives	2	5	10	Principal Contractor (PC) to ensure the use of battery powered tools wherever possible and due care and attention and provision of residual circuit breakers at all times.	Principal Contractor	Site Phase			

General

	Risk Asses							Action	
Element	Hazard	Potential Impact	Mitigation	Probability	Impact	Risk Score / Category	Action Plan	Action Owner	
Site security	Risk of theft, trespassing from the public if site not fully secured.	Risk of arson, risk of injury to public.	Full scaffolding and fencing erected around site, fully secured at night. All materials locked away. Security guard option if issues arise.	4	4	16	Contractor to fully board and fence scaffolding.	Principal Contracto	
Decoration products	Working with paints, stains, silicones and other hazordous materials.	Injury or ill health to Principal Contractor's staff and/or sub- contractors.	Specify and use of non toxic materials where possible.	2	5	10	The Principal Contractor (PC) shall ensure the correct PPE has been provided and works are undertaken in well ventilated areas.	Principal Contracto	
General injury from site working	Muscle damage through manhandling heavy construction materials and components etc.	Injury or ill health to Principal Contractor's staff and/or sub- contractors.	Specification of appropriate materials. Recommend the provision of lifting gear/assistance for materials exceeding 20kg in weight. Avoid solo handling of large objects.	3	3	9	The Principal Contractor (PC) shall ensure works are undertaken in a safe manner in by suitably trained operatives. Update method statements if/where required to reflect works.	Principal Contracto	
Hazardous materials	Skin/eye irritations, noxious fumes, inhaling risks from cement dust, fibrous materials, corrosive materials, paint/solder etc fumes	Injury or ill health to Principal Contractor's staff and/or sub- contractors. Adhere to manufacturers product data sheets.	Limitation of the quantity of hazardous materials to be used and stored on-site.	2	3	6	The Principal Contractor (PC) shall ensure the correct PPE has been provided and works are undertaken in well ventilated areas and awareness of the COSHH information for the material/ product. Update method statements if/where required to reflect works.	Principal Contracto	
Heavy materials	Manual handling injuries.	Injury or ill health to Principal Contractor's staff and/or sub- contractors.	Specification of lightweight materials and notification to the Principal Contractor of items of risk.	2	3	6	The Principal Contractor (PC) shall ensure works are undertaken in a safe manner in accordance with HSE guidance on lifting heavy equipment/materials. Use lifting apparatus to assist. Update method statements if/where required to reflect works.	Principal Contracto	
General materials	Dust inhalation from cutting board materials.	Injury or ill health to Principal Contractor's staff and/or sub- contractors.	Specify off-site fabrication as far as practicable and on-site cutting to be undertaken in designated areas.	2	2	4	The Principal Contractor (PC) shall ensure the correct PPE has been provided and works are undertaken by suitably trained operatives.	Principal Contracto	
General injury from site working	Muscle damage through manhandling heavy construction materials and components etc.	Injury or ill health to Principal Contractor's staff and/or sub- contractors.	Speficiation of appropriate materials. Recommend the provision of lifting gear/assistance for materials exceeding 20kg in weight. Avoid solo handling of large objects.	2	2	4	The Principal Contractor (PC) shall ensure works are undertaken in a safe manner in by suitably trained operatives.	Principal Contracto	

Action Plan - Residual Risk											
Action Owner	Next Action Target Date	Date Achieved	Comments								
Principal Contractor	Site Phase		Maintain throughout site								
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Principal Contractor	Site Phase										
				Risk Assessment				Action Plan - Residual Risk			
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Element	Hazard	Potential Impact	Mitigation	Probability	Impact	Risk Score / Category	Action Plan	Action Owner	Next Action Target Date	Date Achieved	Comments
Hot working	Fire hazard, burns, injury from fire and smoke.	Injury or ill health to Principal Contractor's staff and/or sub- contractors.	Specify off-site fabrication as far as practicable and specification of safe working and alternative materials where possible. Where unavoidable, implement permit to work procedure to include post working fire checks.	1	3	3	The Principal Contractor (PC) shall ensure the correct PPE has been provided, extinguishers are within the working area, works are undertaken in well ventilated areas and comply to the requirements of Hot Work Permits. Update method statements if/where required to reflect works.	Principal Contractor	Site Phase		



Appendix E



SITE LOGISTICS PLAN



Roof Repair Works The Royal Institution of Cornwall

12/04/24 NTS

Mandatory action sign

Prohibition action sign

Hazard action sign

Contractor's permitted site movement

Contractor's permitted site delivery movement

General public movement

Main Contractor's site compound, offices and welfare

Contractor's working area

Heras fencing

NOTE

Castle Street has double yellow lines throughout. This area is designated as a 'blue badge' parking area and the Contractor will need to take responsibility for obtaining all permits as required to enable scaffold erection.

The Museum and related areas will remain open to the public and staff for the duration of the project.





Appendix F





The Royal Institution of Cornwall

Project Number/Drawing Number 230794-RIC-KK-XX-XX-DR-AT-2002 Check all dimensions and levels on site

Revision

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The Royal Institution of Cornwall





Other works on site March 2024 - December 2024 Fit out expected November/December 2024





Appendix G

Kendall Kingscott

Prepared by Jowan James

Checked by Tom Cooke

Project Number 230794

Date 22.04.2024

Photographic Schedule of Roof Void Above Main Gallery (Roof R3)

Windward House, Fitzroy Road, Exeter, EX1 3LJ +44 (0)117 931 2062 • kendallkingscott.co.uk







Photo 1

Photo 2



Photo 3



Photo 4







Photo 5

Photo 6



Photo 7



Photo 8







Photo 9

Photo 10



Photo 11



Photo 12





Photo 13







