

# **TENDER DOCUMENTS**

for

**Lest We Forget? Exhibition Build Contract**

at

**Imperial War Museum North**

**Contract Number IWM/Exh/1950**

March 2018

**greenway**associates

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# 1

# Form of Tender

# FORM OF TENDER

Tender For: Lest We Forget? Temporary Exhibition - IWM North  
Site Address: Trafford Wharf Road, Manchester, M17 1TZ

To: Imperial War Museums  
Address: c/o Greenway Associates  
Melrose House  
42 Dingwall Road  
Croydon  
CR0 2NE

## **Submission of Tenders**

Tenders shall be submitted by midday on the tender closing date of 16th March 2018, and submitted electronically to [sbourne@iwm.org.uk](mailto:sbourne@iwm.org.uk). Tenderers must label their tender "Tender Documents - Contract No: IWM/Exh/1950". Tenderers are required to contact Simon Bourne by email or on 020 7416 5257 if they do not received an acknowledgement to confirm his receipt of the email. It is the responsibility of the tenderer to ensure their tender is received by the deadline. No hard copies submissions will be accepted.

The tenderer must ensure he separates costs for preliminaries from the build costs for an accurate comparison. Similarly, installation and labour costs must appear in the main pricing document section rather than the preliminaries section.

The tenderer will have an opportunity to visit site on either the 2nd or 8th March 2018 by making an appointment with Claire Wilson (0161 836 4027 or [cwilson@iwm.org.uk](mailto:cwilson@iwm.org.uk))

Submissions made by the tenderer, based on the Tender Documents issued, shall be construed as the tenderer's unconditional undertaking to comply with all terms and conditions of the Tender and if selected, to comply with all terms and conditions set-out in the Tender Documents and to sign a formal Trade Contract before the commencement of the works.

The tenderer is not allowed to submit a tender for a part of the works.

Subject to the provisions of the above any tender for the supply of materials shall be in agreement with the accepted sample of materials to be supplied or in accord with the authorised specifications or drawings with which the tenderer is required to be acquainted.

Subject to the provisions of the above the submission of a tender shall be treated as an implied acknowledgement of the tenderer's awareness of the tender specification and drawings.

The tenderer shall be bound by his Tender from the time of submission up to the expiry date for the tender validity period. The tender will remain valid for the period stated in the Contract.

The form of tender shall be signed by the tenderer and all Tender Documents shall be officially stamped by the tenderer. If the tenderer is a company or corporation the tender shall be signed by an officially authorised person.

Any tender submitted after the Tender closing date shall not be evaluated.

If required by the Tender Documents, samples submitted by tenderers shall be submitted separately from the tender, shall be stamped by the tenderer and shall be signed or distinctly marked by the tenderer. The Client shall keep all submitted samples until examined and accepted for supply or rejected and returned to the tenderer. At least two units of the relevant sample shall be submitted if the sample is to be used for analysis or experimental purposes.

Any questions regarding the tender or tender return should be submitted in writing to the Quantity Surveyor by the close-of-business 9th March 2018. Any questions received after this date may not receive answers. Responses will be issued back to all tenderers by the close-of-business 13th March 2018.

Tenders should ensure the following sections are complete and returned in their tenders:

- a) Signed Form of Tender
- b) Confidentiality Agreement
- c) Signed Certificate of Bona Fide Tender
- d) Completed Company Questionnaire
- e) Completed Pricing document **(Must be returned in Excel)**

Tender interviews will be held at IWM North on 29th March 2018 and are by invitation only.

If appointed, the kick-off meeting date will be 11th April 2018 at IWM North

**Please acknowledge and sign below**

I/We having read the Conditions of Contract and the Specification and having examined the drawings and specification referred to therein do hereby offer to execute and complete the whole of the works for the fixed price sum of:

\_\_\_\_\_ (£ \_\_\_\_\_ )

I/We undertake in the event of your acceptance to execute the whole of the works within \_\_\_\_\_ weeks from the agreed date of commencement on site.

I/We undertake in the event of your acceptance to execute with you a Contract embodying all the conditions and terms contained in this offer.

I/We agree that this tender remain open for consideration for three months from the date of this tender.

I/We agree that this is a wholly bona fide tender and the tender price will not be divulged to any person or body before the time for the submission of tenders.

I/We understand that the Employer does not bind himself to accept the lowest or any tender.

Dated: \_\_\_\_\_

Signature: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

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**Confidentiality  
Agreement**



## Confidentiality Agreement

Contract No	IWM/Exh/1950
Contract Title:	Lest We Forget exhibition Build contract

- 1 In consideration of IWM supplying information relating to Lest We Forget exhibition Build contract (“**the Confidential Information**”) solely for the purpose of enabling us to develop a Contract (“**the Permitted Use**”), we hereby confirm to you that we will exercise all reasonable skill and care (without prejudice to any rights which we may have at law in connections with the Confidential Information) that we agree that:
  - (a) we will hold the Confidential Information at all times in strict confidence and under conditions of secrecy, and we will take all necessary steps to preserve confidentiality;
  - (b) we will disclose the Confidential Information only to our directors, officers and employees as is strictly necessary for evaluating the Confidential Information and we will procure that such persons are aware of and shall comply with the terms of this Confidentiality Agreement and we shall be responsible for any breaches by such persons;
  - (c) we will not use the Confidential Information for any purpose other than the Permitted Use;
  - (d) we may only disclose the Confidential Information, without prior consent, to any third party, to enable the facilitation of the scope of works of this Confidentiality Agreement (including for the purposes of consulting legal/insurance advisors);
  - (e) we shall not mix, add, merge, combine, store or amalgamate (including without limitation store on or add to hard or soft disk) any of the Confidential Information with any other information, material or intellectual property except for the Permitted Use. In the event of any mixture, merger, addition, combination, storage or amalgamation of the Confidential Information contrary to the terms of this Confidentiality Agreement, then the product of such process shall become your exclusive property;
  - (f) we will upon your oral or written request at any time return to you forthwith by such means as you may specify all Confidential Information supplied to us, all material prepared by us which uses or incorporates any of the Confidential Information, any material on which any such information is recorded or stored and all copies thereof and all such information on hard disk upon shall be irretrievably and permanently erased and any soft disk upon which such information is stored or recorded shall be delivered and become your property;
  - (g) we will not make any statement or announcement to any customers, representatives of the Press, competitors or any third parties about any arrangements contemplated between us without your prior written consent; and
  - (h) we confirm that the expression “Confidential Information” includes all such information (if any) relating to the idea described above as we may have disclosed to you already.
  - (i) in the case of any Personal Data supplied, we will additionally ensure that it is held in accordance with the terms of the Data Protection Act 1998.
- 2 Subject to paragraph 3 below, the above limitations on use and disclosures shall not apply to information which is known to us before receipt thereof from you (unless such information was then disclosed in confidence);
  - (a) is learned from a third party entitled to disclose it;

- (b) becomes known publicly other than through disclosures by us;
  - (c) is authorised in writing by you to be released.
- 3 Nothing in this Confidentiality Agreement shall be constructed as a grant of rights to us in the confidential information nor as placing you under any obligations to grant us future rights in the Confidential Information in any subsequent agreement.
  - 4 Our obligations under this Agreement shall survive any termination of any existing or future agreement between us whether or not that agreement relates in any way to the Confidential Information.
  - 5 Without prejudice to any other rights or remedies that you may have, we acknowledge and agree that damages alone would not be an adequate remedy for any breach by us of the provisions of this Confidentiality Agreement and , accordingly, you shall be entitled without proof of special damage to the remedies of injunction, specific performance and other equitable relief for any threatened or actual breach of the provisions hereof by us.
  - 6 Any notice or other communication under this Confidentiality Agreement shall (unless otherwise specified in this Confidentiality Agreement) be in writing and may be sent by post. A notice sent by post shall be deemed to have been delivered on the third day after posting and in proving service it shall be sufficient to prove that the envelope containing the notice was properly addressed, prepaid and posted.
  - 7 In the event that it is determined in any legal proceedings before a competent tribunal, that any paragraph, or part of any paragraph of this Confidentiality Agreement is invalid, illegal, or unenforceable, such paragraph or part thereof shall be deemed to be severed from this Confidentiality Agreement and the remainder of this Confidentiality Agreement shall continue in full force and effect.
  - 8 No failure or delay by either party in exercising any right, power or privilege available under this Confidentiality Agreement shall operate as a waiver thereof.
  - 9 This Confidentiality Agreement is personal only to the parties to it, and shall be governed in all respects by the laws of England and may only be amended with the written consent of both parties and each party submits to the non-exclusive jurisdiction of the English courts

**Signed on behalf of (insert company name):**

Signed by:	
Print Name (in Block Capitals)	
In capacity of:	
Date	

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**Certificate of Bona-  
fide Tender**

## CERTIFICATE OF BONA-FIDE TENDER

Tender for: Imperial War Museums – Lest We Forget?

The Trustees of the Imperial War Museums

I/We certify that this is a bona-fide tender and that I/we have not fixed or adjusted the amount thereof by or under in accordance with any agreement or arrangement with any other person.

I/We also certify that I/We have not done and I/We undertake that I/we will not do at any time any of the following acts:

- i. Communicate to a person other than the person calling for these tenders the amount or approximate amount of the proposed tender except where the disclosure, in confidence, of such amount(s) was necessary to obtain insurance premium quotations required for the preparation of the tender.
- ii. Enter into any agreement or arrangement with any other person that he shall refrain from tendering or as to the amount of any tender to be submitted.
- iii. Offer or pay or give or agree to pay or give any sum of money or valuable consideration directly or indirectly to any person for doing or having done or causing or have caused to be done in relation to any other tender or proposed tender for the said work any act or thing of the sort described above.

In this certificate the word “person” includes any person and any body, association, corporate or un-incorporated; and “any agreement” includes such transaction, formal or informal, and whether legally binding or not.

Signed:

\_\_\_\_\_

In the capacity of: \_\_\_\_\_

Duly authorised to sign the tender on behalf of:

Date:

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**Company  
Questionnaire**

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**Contract  
Preliminaries  
Specification**

**CONTRACT PRELIMINARIES & GENERAL CONDITIONS****A10 PROJECT PARTICULARS**

## 110 THE PROJECT:

**Lest We Forget?: Remembering the First World War**

This exhibition will show how rituals of remembrance of the First World War developed through human decisions, debates, and occasionally conflicts. It will ask WHY should we remember? WHAT is it that we are remembering? and HOW do we remember? Using personal stories and poignant objects, documents, art, film, sound and photographs we will explore the rituals we all know about to more unusual ways of remembrance. To bring stories alive and ensure a contemporary feel we will be using AV and digital interpretation and to Provoke thought and debate about what remembrance means today.

**NOTE: This project is currently at Scheme Design. IWM wish to bring a contractor on-board early to assist in the final design stages. Close collaboration between the Principal Contractor and the IWM Design Team will therefore be essential.**

**Imperial War Museums (IWM)**

Imperial War Museums is the world's leading authority on conflict and its impact, focusing on the United Kingdom, its former Empire and the Commonwealth, from the First World War to the present. Through the powerful stories and experiences in its unique collections, IWM's vision is to enrich people's understanding of the causes, course and consequences of war and conflict. IWM has five branches: IWM London, its flagship branch, the Churchill War Rooms in Whitehall, HMS *Belfast*, moored in the Pool of London, IWM Duxford, near Cambridge, and IWM North in Trafford.

**Imperial War Museums North (IWM North)**

Housed in a stunning building designed by Daniel Libeskind, IWM North opened in July 2002 on the south side of the Manchester Ship Canal opposite the Lowry Arts Centre. The new destination known as The Quays has been created on the site of the old Port of Manchester and is a key part of the tourism offer for Manchester city-region. Incorporating a mix of cultural venues, sports arenas, retail, offices and apartments: from January 2011, the £600m MediaCityUK development has been occupied by broadcasters and production companies led by the BBC, along with parts of Salford University, a major hotel and retail units, all centred on a complex of 7 commercial studios and post-production facilities run by Peel Media Ltd. ITV and Coronation Street also opened studios next door to IWM North in 2013. IWM North's building was designed by award-winning architect Daniel Libeskind to represent a world torn apart by war and the three fragments that form the building's 'shards' represent conflict on land, in the air and on water.

**Special Exhibitions Gallery (SEG)**

The Special Exhibitions Gallery is an extraordinary and compelling space, unrivalled in the UK. At 500sq metres it is one of the largest temporary exhibition galleries outside of London and its unique design provides a powerful setting for a diverse range of major national and international exhibitions. The unpredictability of the architecture – including two aluminium-clad walls that pierce the exhibition space, and a ceiling that plummets in one corner and swoops upwards in another – presents both a challenge and an opportunity in terms of exhibition design and production.

Location:

IWM North, Trafford Wharf Road, Manchester, M17 1TZ

Programme:

See Section 12

Works:

Supply and installation of fit out elements for the proposed Lest We Forget? temporary exhibition at IWM North.

Project Organisation:

The Lest We Forget? exhibition is being developed by IWM who require the services of a Fit-Out Contractor in order to complete the works (see A13/120). This document will form a basis for a contract between IWM and the successful fit out package tenderer.

The works will be procured through a traditional contract process.

The budget, including strip out of the existing galleries is between £130,000 and £150,000.

A professional team will assist the Client, details of which are provided below:

120

**CLIENT:**

Imperial War Museum  
IWM London  
Lambeth Road  
London  
SE1 6HZ

**Contacts:**

Claire Wilson (Exhibition and Interpretation Manager) – 0161 836 4027 –

[cwilson@iwm.org.uk](mailto:cwilson@iwm.org.uk)

Rick Locker (Exhibition Production Manager) – Fraser Randall – 020 7234 9546 –

[rick.locker@fraserrandall.co.uk](mailto:rick.locker@fraserrandall.co.uk)

Anna Montgomery (Senior 3D Designer) – 020 7091 3149 - [amontgomery@iwm.org.uk](mailto:amontgomery@iwm.org.uk)

Stephen Long (Senior Graphic Designer) – 020 7416 5422 – [slong@iwm.org.uk](mailto:slong@iwm.org.uk)

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**PRINCIPAL CONTRACTOR:**

TBC

- 145 SUB-CONTRACTOR  
References in this specification to sub-contractor(s) refer to any parties with whom the Contractor contracts to accomplish the works.
- 150 QUANTITY SURVEYOR:  
Greenway Associates  
Melrose House  
42 Dingwall Road  
Croydon  
CR0 2NE  
Tel: 020 8633 1500  
Contact: Jon Kirby  
E-mail: [jon@greenwayqs.com](mailto:jon@greenwayqs.com)
- 151 PRINCIPAL DESIGNER:  
Ridge and Partners LLP  
Horton House  
Exchange Street E  
Exchange Flags  
Liverpool  
L2 3YL  
Tel: 0151 243 3528  
Contact: Grant Davidson  
E-mail: [gdaavidson@ridge.co.uk](mailto:gdaavidson@ridge.co.uk)
- 152 LIGHTING DESIGNER:  
Luminance Lighting Design  
19 Heathmans Road  
London  
SW6 4TJ  
Tel: 020 8288 1564  
Contact: Andrew Grant  
E-mail: [andy@luminance.co.uk](mailto:andy@luminance.co.uk)

**A11 TENDER AND CONTRACT DOCUMENTS**

110 See "TENDER DRAWINGS"

120 The CONTRACT DRAWINGS will include the tender drawings subject to any post-tender amendments. The Principal Contractor will be appointed during Scheme Design and will be expected to collaborate with the IWM 3D designer to complete the design and produce the complete pack of drawings.

**A12 THE SITE/EXISTING BUILDINGS**

110 THE SITE:

The Site is the Special Exhibitions Gallery (SEG) at IWM North and has an approximate gross internal floor area of 500m<sup>2</sup>.

120 THE EXISTING BUILDINGS ON/ADJACENT TO THE SITE:

The Contractor is advised that the adjacent roads and buildings will be in use at all times with significant road closures expected. Close co-ordination with the Exhibition Production Manager will be required in the planning of deliveries.

140 EXISTING MAINS SERVICES

The Contractor shall allow for protecting existing live services that pass through/under/over the Site to ensure that no damage occurs. The Contractor shall fully indemnify IWM in this regard.

All damage shall immediately be made good at the Contractor's expense. No claim for delay to the works arising from the above damage, interruption, etc. to such services, mains or lines will be allowed.

200 ACCESS TO THE SITE:

See Pre-Construction Information

211 CAR PARKING:

See Pre-Construction Information

220 USE OF THE SITE

- The Contractor shall confine operations to the area of the Site, or such other areas as IWM may specifically direct. Any works to be carried out outside the area of the Site shall be carried out on the written instruction of IWM.
- Ensure that the Site is left clean and tidy at all times and on completion of the works. Reinstatement all items to their original position upon completion of the works (where applicable).
- IWM reserves the right to use the Site or the buildings or any portion thereof for the execution of any work or storage of materials not included in this Contract which they may desire to have carried out by other persons and the Contractor is to allow all reasonable works as aforesaid but is not required to provide any plant or materials except by special

arrangements. The provisions of this clause do not relieve the Contractor of any of his obligations under the Contract.

- The Contractor and Sub-Contractors shall not display or permit advertisements to be displayed on the Site, nor allow the project or works to be used in any form of marketing or advertisement without the express prior written consent of IWM.

240 RISKS TO HEALTH AND SAFETY:

The nature and condition of the Site/building cannot be fully and certainly ascertained before it is completed. The accuracy and sufficiency of this information is not guaranteed by IWM or the Contractor must ascertain for himself any information he may require to ensure the safety of all persons and the Works.

281 SITE VISIT:

The tenderer is required to satisfy himself as to the local conditions and accessibility of the Site, the nature and condition of the existing building and the full extent and nature of the Works, the supply of and conditions affecting labour, material and the execution of the Contract generally. The Contractor is to allow for such costs in his submitted tender.

**A13 DESCRIPTION OF THE WORK****110 PREPARATORY WORK BY OTHERS:**

The following preparatory work shall be undertaken by others:

- Museum object decanting of the existing gallery
- Museum object installation which will occur after completion of the construction phase

**115 WORKS NOT INCLUDED IN THIS TENDER (To be completed by IWM in house team):**

- Strip out of Lest We Forget? post completion
- AV Hardware and Software (including installation)

**120 THE WORK:**

The works generally comprises:

- Strip out of the existing “Syria” exhibition
- Fit Out works including :
  - o Partition walls
  - o graphic production and installation
  - o electrical, data and lighting installation
  - o Bespoke setworks
  - o Decoration of perimeter walls

**140 WORK BY OTHERS CONCURRENT WITH THE CONTRACT:**

The Fit out Contractor is to afford contractors of the museum all reasonable rights to access/egress to the Site to undertake any necessary works.

**A20 FORM OF CONTRACT**

- 110 The Form of Contract for this project is the JCT Intermediate Contract with Contractor's Design (See Section 5).
- 120 The Contract will be executed under hand.

**A30 TENDERING/SUBLETTING/SUPPLY****MAIN CONTRACT TENDERING**

110 SCOPE: These conditions are supplementary to those stated in the invitation to tender and on the Form of Tender.

160 EXCLUSIONS: If the Contractor cannot tender for any part(s) of the work as defined in the tender documents, he must inform the Quantity Surveyor as soon as possible, defining the relevant part(s) and stating the reason(s) for his inability to tender.

170 ACCEPTANCE OF TENDER: IWM and their representatives:

- Offer no guarantee that the lowest or any tender will be recommended for acceptance or accepted.
- Will not be responsible for any cost incurred in the preparation of any tender.

180 SITE VISIT: Before tendering the Contractor is required to visit the Site and satisfy himself as to its accessibility, facilities for storing materials and plant, the full extent and character of the work to be carried out and any other conditions affecting the works generally, as no claim on the grounds of want of knowledge in any such respects will be entertained. Arrangement to visit the Site should be made with **Claire Wilson Tel: 0161 836 4027 or cwilson@iwm.org.uk**. Site visits will be on the 2<sup>nd</sup> and 8<sup>th</sup> March 2018.

191 PERIOD OF VALIDITY: Tenders must remain open for consideration (unless previously withdrawn) for not less than **12 weeks** from the date fixed for the submission or lodgement of tenders. Information on the date for possession/commencement is given in programme

221 PRICING OF PRELIMINARIES: The Contractor is required to submit with the tender a Schedule giving a detailed breakdown of Preliminaries. The Contractor is required to complete the schedule of preliminaries attached to this document (See Pricing Document, Section 5.2). The Contractor can attach further details as he deems necessary.

250 PRICING SCHEDULE: Alterations and qualifications to the Pricing Schedule must not be made without the written consent of the Quantity Surveyor. Tenders containing unauthorised alterations or qualifications may be rejected. Costs relating to items which are not priced will be deemed to have been included elsewhere.

**PRICING/SUBMISSION OF DOCUMENTS**

241 PRICING OF DOCUMENTS:

- Tenders **must include** for all associated and ancillary work shown or clearly apparent as being necessary to meet the requirements for the works and its completion. Should the tenderer be unable to undertake any of the works specified, it is essential that this is made known in the tender submission.
- Tenderers must price on the work which they intend to provide and will be responsible for any errors therein.

310 ASSESSMENT OF TENDERS: The following criteria provide the basis for tender selection:

- a) Tender Price (including assessment of individual prices for each element of work) – 50%
- b) Quality of proposals (50%) comprising:
  - Methodology – 20%
  - Resources – 15%
  - Previous experiences & references – 15%

The contractor is directed to the Company Questionnaire in Section 3 which lists out the requirements for this assessment.

**A30 TENDERING/SUBLETTING/SUPPLY**

476 THE PRICING SCHEDULE contained with the tender documents must be completed and submitted with the contract proposals.

480 PROGRAMME: The Contractor's proposed programme as specified in Clauses A30/482 or a summary thereof showing the sequence and timing of the principal parts of the Works, periods for tendering sub-contract packages, planning and design, and itemising any work which is excluded must be submitted with their tender.

481 The Contractor is also requested to issue a method statement and labour histogram in support of his tender including flow chart indicating the management structure.

**482 CONTRACTOR'S PROGRAMME:**

At the pre-commencement meeting the Contractor shall provide a master programme chart in approved form, showing the whole of the Works, including the Works of all Sub-Contractors, provision of samples and other works concurrent with the Contract. The Master Programme shall be supported by a network analysis upon which the programme is based.

500 TENDER STAGE METHOD STATEMENTS must be submitted with the tender describing how and when the Contractor proposes and undertakes to carry out the work, including design and off Site fabrication.

510 PRICING/ SUBMISSION OF TENDER DOCUMENTATION: The Quantity Surveyor will, upon request, require verification of any or all tender details which the tenderer shall provide.

520 PRICING/ SUBMISSION OF VARIATIONS AND FINAL ACCOUNT DOCUMENTATION: The Quantity Surveyor will, upon request, require verification of any variations and of individual trade accounts prior to agreement and certification.

**548 FORMATION/DRAWING REVIEW:**

- The Contractor's Drawings/Information will be reviewed by IWM and returned in accordance with the Design Submission Procedure. Upon receipt of such drawings, the Contractor shall immediately take such action as requested by IWM in accordance with the Design Submission Procedure.
- Drawings returned to the Contractor for amendments must be resubmitted showing the nature of the amendment in a revision schedule on the drawing, together with the revision number or letter and the date of the revision. The areas amended on the drawing shall be highlighted by means of a 'balloon'.
- Where agreement in principle is given to the Contractor for the use of equal and approved products, plant and equipment for the Work as an alternative to that which has been declared as the basis of the Contract, such agreement shall not invalidate the Contract since the Specification and drawing shall be deemed to still illustrate the specified intent, requirements and scope of the Works. Having satisfied IWM as to the suitability of the alternative products, plant and equipment, the Contractor will not be entitled to recover any additional costs in respect of the alternative agreed, or in respect of any other elements associated with the alternative.

The Designer's review and comment will not, in any way, invalidate the Contractor's responsibility for ensuring the accuracy and suitability of the information provided by the Contractor.

The Designer will review and comment upon the overall layout of the works shown on the coordinated installation drawings and their general location in addition to the type and size of such items, insofar as they conform to IWM Requirements.

- The exact position in the Works of items relative to grid lines, floors, beams, ceilings, walls and other structural items and any other services is the Contractor's responsibility and the Designer's review and comment does not absolve the Contractor from this responsibility.
- The Contractor shall review the drawings to satisfy himself that they are in accordance with the Contract. The drawing review and comment procedure shall not relieve the Contractor from responsibility for:
  - Any deficiency or inaccuracy or non-compliance with the Contract or of the Specifications
  - Any error in the proper fixing of the Works
  - The necessity of providing any work required by the Contract or the Specification not indicated on the drawings.
- Two copies of each of the Code A drawings and their revisions shall be issued by the Contractor to IWM.

571 A CONSTRUCTION PHASE PLAN must be developed and submitted within 2 weeks of request. Please refer to Appendix C of the Pre-Construction Information pack for details of what to include.

575 SUBLETTING OF THE WORKS:

The Contractor shall not sub-let any part of the Works without the written permission of IWM and all labour shall be in the direct employ of the Contractor or in the case of permission being given the sub-let Contractor so named.

The Contractor should take note of the Company Questionnaire in Section 3 and return this with his tender.

**A31 PROVISION, CONTENT AND USE OF DOCUMENTS**  
**DEFINITIONS AND INTERPRETATIONS**

130 IN WRITING: When required to notify, inform, instruct, agree, confirm, obtain information, obtain approval or obtain instructions do so in writing.

140 APPROVAL (and words derived thereof) means the approval in writing of IWM unless specified otherwise.

150 PRODUCTS means materials (including naturally occurring materials) and goods (including components, equipment and accessories) intended for permanent incorporation in the Works.

**180 CROSS-REFERENCES TO THE SPECIFICATION**

Where a numerical cross-reference to a specification section or clause is given on drawings or in any other document the Contractor must verify its accuracy by checking the remainder of the annotation or item description against the terminology used in the referred to section or clause.

Where a numerical cross-reference is not given the relevant section(s) and clause(s) of the specification will apply, cross-reference therefore being by means of related terminology.

Where a cross-reference for a particular type of work, feature, material or product is given relevant clause(s) elsewhere in the referred to specification section dealing with general matters, ancillary products and workmanship also apply.

The Contractor must, before proceeding, obtain clarification or instructions in relation to any discrepancy or ambiguity that may be discovered.

**202 EQUIVALENT PRODUCTS:**

- Where the specification permits substitution of a product of different manufacture to that specified and such substitution is desired, before ordering the product notify IWM and, when requested, submit for verification documentary and physical sample evidence that the alternative product is equivalent in respect of material, safety, reliability, function, compatibility with adjacent construction, availability of compatible accessories and, where relevant, appearance. Submit certified English translations of any foreign-language documents.
- Any proposal for use of an alternative product must also include proposals for substitution of compatible accessory products and variation of details as necessary, with evidence of equivalent durability, function and appearance of the construction as a whole. If such substitution is sanctioned, and before ordering products, provide revised drawings, specification and manufacturer's guarantees as required by IWM.
- In application of this Clause, the Contractor must take due consideration of the EC Construction Products Directive.

- 210 BRITISH STANDARD PRODUCTS: Where any product is specified to comply with a British Standard for which there is no equivalent European Standard it may be substituted by a product complying with a grade or category within a national standard of another Member State of the European Community or an international standard recognised in the UK specifying equivalent requirements and assurances in respect of material, safety, reliability, function, compatibility with adjacent construction, availability of compatible accessories and, where relevant, appearance. In advance of ordering notify IWM of all such substitutions and, when requested, submit for verification documentary evidence confirming that the products comply with the specified requirements. Any submitted foreign language documents must be accompanied by certified translations into English.
- 221 REFERENCES TO BSI DOCUMENTS are to the latest versions including any relevant amendments
- 230 MANUFACTURER AND REFERENCE: Where used in this combination:
- 'Manufacturer' means the firm under whose name the particular product is marketed.
  - 'Reference' means the proprietary brand name and/or reference by which the particular product is identified.
- 280 FIX ONLY means all labours in unloading, handling, storing and fixing in position, including use of all plant.
- 290 SUPPLY AND FIX: Unless stated otherwise all items given in the schedule of work and/or on the drawings are to be supplied and fixed complete.
- 321 KEEP FOR RE-USE means:
- During removal prevent damage to the stated components or materials, -and clean off bedding and jointing materials.
  - Stack neatly, adequately protect and store until required by IWM or for use in the Works as instructed.
- 331 REPLACE means:
- Remove the stated existing components, features and finishes.
  - Provide and fit in lieu new components, features or finishes which, unless specified otherwise, must match those which have been removed.
  - Make good as necessary.
- 341 REPAIR means:  
Carry out local remedial work to components features and finishes as found in the existing building.  
Re-secure or re-fix as necessary and leave in a sound and neat condition. It does not include:
- replacement of components or parts of components
- 351 MAKE GOOD means carry out local remedial work to components, features and finishes which have been disturbed by other, previous work under this Contract and leave in a sound and neat condition. It does not include:
- replacement of components or parts of components
- The meaning of this term shall not be limited by this definition where used in connection with the defects liability provisions of this contract.

- 371 TO MATCH EXISTING means use products, materials and methods to match closely all visual characteristics and features of the existing work, with joints between the new and existing work as inconspicuous as possible, all to approval of appearance.

**DOCUMENTS PROVIDED BY CONTRACTOR/SUB-CONTRACTORS/SUPPLIERS**

510 CONTRACTOR'S DESIGN: DESIGN AND PRODUCTION INFORMATION:

- When preparing the master programme make reasonable allowance for completing design/production information, including submission to IWM for comment, inspection by IWM, and any subsequent amendment(s), resubmission(s) and re-inspection(s).
- During the Contract submit to IWM the required number of copies of design/production information in this case 2 no. copies. IWM will note his comments on one copy, then return to the Contractor.
- Ensure that any necessary amendments are made without delay. Unless and until IWM confirms that resubmission is not required, submit copies of amended drawings etc. to IWM, and ensure incorporation of necessary amendments all as before.
- If submitted design/production information differs from the IWM Design, each such difference must be the subject of a request for substitution or Change, supported by all relevant information.
- Should any amendment required by IWM be considered to involve a change which has not already been acknowledged as a change by IWM, notify IWM without delay and in any case within 7 days, and do not proceed with ordering, fabrication, erection or installation until subsequently instructed. Claims for the extra cost of such work, if made after it has been carried out, may not be allowed.
- Complete final version of all design/production information and submit to IWM the number of copies required by him.

561 CONTRACTORS DRAWINGS/DESIGN/PRODUCTION INFORMATION: GENERALLY

For all hard copy issues of drawings by the Contractor, either for approval or construction, 2 copies are to be issued by the Contractor.

The inspection of the Contractor's drawings and other documentation or comments or approval by IWM shall not relieve the Contractor/Subcontractor of his obligations, under the contract:

- to meet statutory requirements;
- to meet requirements of the relevant British Standards and Codes of Practice;
- to meet the requirements of the specification and 'Essential Requirements' as articulated in this document (see Appendices);
- to meet requirements of any previous comments;
- to keep drawings updated with architectural and structural changes following receipt of formal instruction of said changes from IWM;
- to ensure the setting out, accuracy and correctness of dimensions based on the drawings and specification issued by IWM

Comments on Contractor's drawings or samples shall not be deemed to constitute variations unless accompanied by an IWM instruction. Where the contractor considers that comments made represent a variation to his subcontract, then he shall inform IWM within 2 days including submission of relevant costs or budgets.

Two copies of each construction issue drawing shall be supplied to IWM.

The flow of Contractor's drawings shall be through the Contractor who will be responsible for ensuring that the contractor's information is provided in sufficient time to avoid programme delays.

No work shall be carried out based on Contractor's drawings which have not been approved by IWM.

Where deemed appropriate by IWM, the Contractor shall be responsible for taking all particulars and dimensions from the Site and for the details of his drawings.

Where drawings are to be submitted for IWM's comment, the programme shall allow for a period of 7 working days from date of receipt by IWM until the date of receipt of IWM's co-ordinated comments by the Contractor.

IWM, if appropriate, will comment upon the overall layout of the Contract works, their conformity to the current drawings and the design integrity.

Any failure on IWM's part to detect inconsistencies or errors in the Contractor's drawings will not relieve the Contractor of full responsibility; IWM's comments shall be deemed to be restricted accordingly.

A status/approval system shall be instigated at the commencement of the construction phase for all Contractor's drawings to indicate the acceptance of any drawing received.

Each drawing or set of drawings shall be accompanied by a letter (e.g. a drawing register) or other document transmittal stating:

- name of project
- drawing number and revision
- brief description of the work shown on the drawing
- A list of materials to be used by the SWC or GC (including product name, manufacturer and where relevant, specific product code)
- purpose of issue
- any variations identified

Contractor's drawings shall not be permitted on Site for working to unless the contractor has stamped the drawings 'ISSUED FOR CONSTRUCTION' once the review procedure is complete.

Preliminary copies may be issued to the Contractor for Planning and advanced information purposes, subject to the IWM's prior approval. All preliminary copies shall be clearly identified as "Preliminary Copy – but not to be worked to" or similar wording.

Contractor's drawings shall be returned stamped 'A' 'B' or 'C' indicating the approved status of the drawings.

- |   |   |
|---|---|
| A | indicates that the drawing is approved in principle and is to be issued for construction. |
| B | indicates that the drawing is approved subject to the incorporation of comments made.     |
| C | indicates rejected, not to be worked to, drawing to be resubmitted for comments.          |

The Contractor shall be responsible for the timely issue of all installation drawings and information.

The Contractor shall provide all necessary templates and for setting out or marking out on Site to enable the Contractor to arrange for the execution of any necessary preparatory work.

- 562 ALTERATIONS TO DRAWINGS: on re-submittal all alterations made since initial submission have been clearly annotated on the drawing and listed separately down the right hand side of the drawing.
- 563 DOCUMENTS AND DRAWINGS ON SITE: The Contractor shall ensure that one copy of the current drawings prepared by sub-contractors are kept on Site at all times and that their staff and operatives are fully conversant with the same.
- The Contractor shall ensure that one set of the contractors construction drawings are marked up on a weekly basis by the Contractor, recording “as built” information. These drawings shall be kept for that sole purpose and shall be kept up to date at all times together with any amendments or variations to the works which shall be recorded upon them.
- The ‘marked up’ set of construction drawings shall form the basis of the record drawings required upon completion of the works.
- The drawings and documents on Site shall be available for inspection by IWM at all times.
- 630 SHOP DRAWINGS AND INFORMATION must be provided to IWM for comment and approval prior to manufacture.
- The Contractor shall be responsible for the timely issue of all installation drawings and information.
- The Contractor shall provide all necessary templates and for setting out or marking out on Site to enable IWM to arrange for the execution of any necessary preparatory work.
- 692 AS BUILT DRAWINGS AND INFORMATION must be provided to IWM not less than 2 weeks before the date for completion as follows:
- All drawn information provided by the Contractor
  - Format of information to be agreed prior to submission.
- 710 TECHNICAL LITERATURE: The Contractor is required to keep copies of the following on Site, readily accessible for reference by all supervisory personnel:
- Manufacturers' current literature relating to all products to be used in the Works.
  - BSI Handbook No. 3, with all current revision sheets included and superseded sheets removed.
  - Relevant BS Codes of Practice.
- 720 MAINTENANCE INSTRUCTIONS AND GUARANTEES:
- Retain copies delivered with components and equipment (failing which, obtain), register with manufacturer as necessary and hand over to IWM on or before Practical Completion.

## 730 GRAPHICS:

**Inspection and approval of graphics**

The Graphics Contractor shall allow for representatives of IWM Des/PM to visit their premises prior to installation for final checking of finished graphics.

**Graphic contractor team members and sub-contractors**

The Graphics Contractor shall state clearly in the Tender the names of the production and installation teams for IWM Des/PM to approve. The Graphics Contractor should state clearly in the Tender any works that may be subcontracted and submit the names of the proposed sub-contractors for approval by IWM Des/PM.

**Graphic Installation - Labelling and protection**

The Graphics Contractor shall code and label all substrates using the Graphics Reference Number from the Graphics Schedule (e.g. EXT.01, ENV.01). This should be maintained by the Graphics Contractor to ensure correct artwork is printed onto each substrate and to allow correct installation.

The Graphics Contractor is responsible for making sure that each graphic item they produce is adequately protected for transportation to site (i.e. using corner protector and bubble wrap). Every graphics item should be clearly labelled on the substrate and the wrapping with the Graphics Reference Number. The graphic items continue to be the responsibility of the Graphics Contractor until the Graphics Contractor's own installation has been completed to the satisfaction of IWM Des/PM.

The Graphics Contractor shall ensure that all installed panels are protected on site until such a time as the site is clear.

**Supply of final artwork files**

IWM Des shall supply high-resolution Adobe Illustrator EPS and Adobe Professional PDF files created from outlined Creative Cloud 2017. The Graphics Contractor shall notify IWM Des/PM at Stage F: Tender if they cannot work with CS6 files.

The Graphics Contractor shall allow IWM Des 48 hours console time at the Graphics Contractor's production facility to assemble and manipulate any high-resolution files using Adobe CS software, if required.

IWM Des/IWM PM shall indicate any image crops by For Print Only (FPO) visuals and graphic elevations.

**Graphics approval**

The Graphics Contractor shall supply IWM Des with a pdf proof of each graphic and a hard copy if requested. The Graphics Contractor should not proceed with the production of any graphic until IWM Des has signed off the supplied proof.

The Graphics Contractor shall make all graphics available to IWM for inspection before installing on site.

The Graphics Contractor shall submit any graphic requested by IWM Des for final production, installation checks and approval

### **Museum objects**

Some objects will require little or no co-ordination, however others will require consideration by the SWC to ensure the SWC have made suitable provision for objects in terms of size/weight and fixings.

**A32 MANAGEMENT OF THE WORKS  
GENERALLY**

- 110 SUPERVISION: Accept responsibility for co-ordination, supervision and administration of the Works. Arrange and monitor a programme with each interfacing Contractor, supplier, local authority and statutory undertaker, and obtain and supply information as necessary for co-ordination of the work to the satisfaction of IWM.
- 120 INSURANCE: Before appointment, submit documentary evidence and/or policies and receipts for the insurance required by the Conditions of Contract.
- 130 INSURANCE CLAIMS: If any event occurs which may give rise to any claim or proceeding in respect of loss or damage to the Works or injury or damage to persons or property arising out of the Works, forthwith give notice in writing to IWM and the Insurers. Indemnify IWM against any loss which may be caused by failure to give such notice.
- 140 CLIMATIC CONDITIONS: If climatic conditions affect work, the Contractor shall keep an accurate record of:
- Daily maximum and minimum air temperatures (including overnight).
  - Delays due to adverse weather, including description of the weather, type(s) of work affected and number of hours lost.
- 150 BUILDING CONTROL  
It is the Contractor's responsibility to ensure that the work complies with the Building Regulations and any amendments thereto. The Contractor should allow for the cost of complying therein.
- 151 Where the contractor has designed or developed the design of a portion of his work it is his sole responsibility to allow for the time and cost of complying therewith.
- 152 The Contractor is to notify IWM immediately of any divergence between the Drawings /Specification, Bill of Quantities.
- 155 POLICE REGULATIONS:  
The Contractor is to ascertain and comply with the regulations of the civil police affecting the execution of the Works.

**PROGRAMME/PROGRESS**

- 212 PROGRAMME:
- The master programme for the Works must include periods for all:
  - Tendering Design, production information and proposals provided by the Contractor/Subcontractors/Suppliers, including inspection and checking
  - Planning and mobilisation by the Contractor.

**A32 MANAGEMENT OF THE WORKS  
PROGRAMME/PROGRESS**

## 212 PROGRAMME (cont'd):

- Running in, adjustment, commissioning and testing of all engineering services and installations
- Work resulting from instructions issued in regard to the expenditure of provisional sums
- Work by or on behalf of IWM or other Contractor concurrent with the Contract

The nature and scope of which, the relationship with preceding and following work and any relevant limitations are suitably defined in the Contract Documents.

- Where and to the extent that the programme implications for work which is not so defined are impossible to assess the Contractor should exclude it from his programme and confirm this when submitting the programme.

220 THE PROGRAMME must show earliest and latest start and finish dates for each activity, and identify all critical activities. It must be of the critical path network type, unless agreed otherwise.

230 SUBMISSION of programmes will not relieve the Contractor of his responsibility to apply in writing for instructions, drawings, etc. in accordance with the Conditions of Contract.

240 COMMENCEMENT OF WORK: See Programme in tender pack.

250 MONITORING: Record progress on a copy of the programme kept on Site. If any circumstances arise which may affect the progress of the Works put forward proposals or take other action as appropriate to minimise any delay and to recover any lost time.

253 CONTRACTOR'S REPORTS: Upon commencement of Construction Works, the Contractor will be required to provide weekly written reports for submission to IWM, copied to the QS, two days prior to the weekly Site Progress Meetings. The content of these reports should be inclusive of the following information:

- The activities begun and completed since the previous report and upon what dates.
- The expected remaining duration of all activities begun but not completed.
- Additional activities with expected durations, methods, resource requirements and sequence assumptions.
- Forecast completion date for all works and slippage or advance upon the contract completion date and intermediate milestone dates.
- Programme comparison between actual and programmed for design, procurement and construction.
- Outstanding Information Schedule
- Resource levels
- Weather records
- Variation schedule
- Schedule of instructions
- Updated RFI

- The Contractor will be requested to submit a copy of the proposed format of these reports for approval by IWM at the Pre-Commencement Meeting.
- 254 REQUESTS FOR INFORMATION by the Contractor shall be made to IWM on 'Request for Information' Forms. The Contractor will establish and maintain a live log of requests for information from appointment, right throughout the construction period. Each request will have a set deadline for reply.
- 261 IWM'S SITE MEETINGS:
- IWM will hold regular Site meetings to review progress and other matters arising from the administration of the Contract.
  - These meetings will be held in the Site offices for the Site.
  - Attend all meetings and inform Contractors, sub-consultants and suppliers when their presence is required.
  - IWM will chair the meetings and take and distribute meeting notes.
- 271 CONTRACTOR'S SITE MEETINGS: Hold meetings with appropriate sub-contractors, and suppliers shortly before main Site meetings to facilitate accurate reporting of progress.
- 285 PARTIAL POSSESSION: IWM may wish to take possession of parts of the Works, as they are completed, provided all necessary access, services and other associated facilities are also complete. Reference is made to the strategic programme with particular reference to the office areas.
- 287 The Contractor's particular attention is referred to the overall strategic programme and the partial possession that may be required.
- 290 NOTICE OF COMPLETION: Give IWM at least 2 weeks notice of the anticipated dates of Practical Completion of the whole or parts of the Works.

**A32 MANAGEMENT OF THE WORKS  
CONTROL OF COST**

- 410 CASH FLOW FORECAST: As soon as possible and before starting construction work on Site, submit to IWM a forecast showing the gross valuation of the Works at the date of each Interim Certificate throughout the Contract period and based upon the programme for the Works.
- 411 CASH FLOW STATEMENTS: Provide all reasonable assistance to IWM in the preparation of cash flow statements of certificate payments required by IWM. Such statements shall be based on the programme for the execution of the Works and shall be updated at such intervals as the programme of work progress is required to be updated. The co-operation of the Contractor under this item shall in no way affect his entitlement to payment under the terms of the Contract.
- 412 REQUESTS FOR CHANGE by the Contractor shall be made to IWM on 'Request for Change' Forms. Allow a minimum of 7 working days for an instruction.

**MEASUREMENT OF VARIATIONS, CERTIFICATES, VALUATIONS ETC.**

- 420 Measurement of variations will normally be carried out by the Quantity Surveyor with the Contractor or his representative.
- 421 The Contractor will be provided with a copy of the Statement of Final Account together with all Summaries of variations, Contractor's Share calculation and other adjustments to the Contract Sum within the Period of Final Measurement and Valuation and, subject to the allowance of a reasonable period for checking, shall signify his acceptance of the balance due as shown in the Final Statement by preparing copies thereof on his notepaper and forwarding same under signature. Such signature shall imply the acceptance by the Contractor of the Final Account, and no subsequent claims will be entertained.
- 422 The valuation of work for the purpose of certificates will normally be carried out by the Quantity Surveyor who will require the Contractor, or his representative, to attend for this purpose. Once agreed, the Exhibition Manager will produce a payment certificate and an invoice can be raised. Fixed dates for applications and payment will be set upon appointment of the Contractor.
- 423 Upon request of the Quantity Surveyor the Contractor will furnish him with all invoices, receipts, accounts and other vouchers, that may be required in connection with the Contract, and prior to the issue of a certificate he will, if requested, produce for the Quantity Surveyor's inspection all receipted accounts relating to prime cost items, provisional sums and receipts for charges paid by the Contractor to Local or Statutory Authorities.
- 424 Sufficient notice must be given before covering up any work which is the subject of a provisional sum, provisional quantities or variation order and full facilities given at all other times to enable the Quantity Surveyor to carry out proper measurements as the work is executed. Should the Contractor fail to give such notice he is at his own expense to uncover the works as required for measuring purposes and reinstate and make good afterwards.

- 425 Accurate records, figured drawings and/or sketches of all work executed underground or which will, on completion be concealed from sight, shall be made by the Contractor and agreed with IWM for use by the Quantity Surveyor in settling the Final Account.
- 426 Similarly, sufficient notice must be given before breaking out and removing any underground obstructions encountered in the course of excavations of foundations, drainage and the like and accurate records, figured drawings and/or sketches made and agreed of such obstructions to enable the Quantity Surveyor to carry out proper measurement.
- 430 EXISTING WORK: The extent and location of renewal of existing work must be agreed with IWM before the work is started. Remove existing work in ways which will reasonably minimise the amount of removal and renewal.
- 450 DAYWORK VOUCHERS: Give reasonable notice to IWM of the commencement of any work for which daywork vouchers are to be submitted. Before being delivered, each voucher must be:
- Referenced to the instruction under which the work is authorised, and Signed by the person in charge as evidence that the workmen's names, the time spent by each, the plant and materials shown are correct.
- 451 Daywork will only be allowed in the case of work which by the Quantity Surveyor's decision are incapable of measurement, even though daywork sheets may be signed by IWM and agreed prior to the works being carried out.
- 452 The Daywork sheets must be submitted to IWM in accordance with the requirements of the Contract, and are to be fully priced, extended and totalled before submission. The rates contained within the Schedule of Daywork will be used for the purpose of calculating daywork charges under the Contract.
- 453 Give reasonable notice to IWM of the commencement of any work for which daywork vouchers are to be submitted. Before being delivered, each voucher must be referenced to the instruction under which the work is authorised, and signed by the person in charge as evidence that the workmen's names, the time spent by each, the plant and materials shown are correct.
- 462 INTERIM PAYMENTS: At least 3 days before the end of each established Stage or Period for interim payments submit to IWM a detailed application for amounts due under the Contract including the following supporting information:
- Information in support of variations.
  - Schedule of unfixed materials on/off Site.
- 471 UNFIXED MATERIALS: At the time of each valuation disclose to IWM which of the unfixed materials on Site are free from, and which are subject to any reservation of title inconsistent with passing of property to IWM, together with their respective values. When requested provide evidence of freedom from reservation of title.

**A33 QUALITY STANDARDS/CONTROL  
MATERIALS AND WORK GENERALLY**

- 110 GOOD PRACTICE: Where and to the extent that materials, products and workmanship are not fully detailed or specified they are to be:
- Of a standard appropriate to the Works and suitable for the functions stated in or reasonably to be inferred from the project documents, and
  - In accordance with good building practice.
- 120 GENERAL QUALITY OF PRODUCTS:
- Products to be new unless otherwise specified.
  - For products specified to a British or European Standard obtain certificates of compliance from manufacturers when requested by IWM.
  - Where a choice of manufacturer or source of supply is allowed for any particular product, the whole quantity required to complete the work must be of the same type, manufacture and/or source unless otherwise approved. Produce written evidence of sources of supply when requested by IWM.
  - Ensure that the whole quantity of each product required to complete the work is of consistent kind, size, quality and overall appearance.
  - Where consistency of appearance is desirable ensure consistency of supply from the same source. Unless otherwise approved do not use different colour batches where they can be seen together.
  - If products are prone to deterioration or have a limited shelf life, order in suitable quantities to a programme and use in appropriate sequence. Do not use if there are any signs of deterioration, setting or other unsatisfactory condition.
- 125 SUSTAINABLE RESOURCES:
- All softwood timbers and all temperate hardwoods are to be from sustainable sources.  
If requested, the Contractor is to confirm in writing to IWM the composition and sources of plywood etc., to confirm that the foregoing is met.
- 130 PROPRIETARY PRODUCTS:
- Handle, store, prepare and use or fix each product in accordance with its manufacturer's current printed or written recommendations/instructions. Inform IWM if these conflict with any other specified requirement. Submit copies to IWM when requested.
  - The tender will be deemed to be based on the products specified and recommendations on their use as described in the manufacturer's literature current at time of fixing
  - Obtain confirmation from manufacturers that the products specified and recommendations on their use have not been changed since that time. Where such change has occurred, inform IWM and do not place orders for or use the affected products without further instructions.
  - Where British Board of Agreement certified products are used, comply with the limitations, recommendations and requirements of the relevant valid certificates.

140 CHECKING COMPLIANCE OF PRODUCTS: Check all delivery tickets, labels, identification marks and, where appropriate, the products themselves to ensure that all products comply with the project documents. Where different types of any product are specified, check to ensure that the correct type is being used in each location. In particular, check that:

- The sources, types, qualities, finishes and colours are correct, and match any approved samples.
- All accessories and fixings which should be supplied with the goods have been supplied.
- Sizes and dimensions are correct. Where tolerances of components are critical, measure a sufficient quantity to ensure compliance.
- The delivered quantities are correct, to ensure that shortages do not cause delays in the work.
- The products are clean, undamaged and otherwise in good condition.
- Products which have a limited shelf life are not out of date.

All materials selected must meet the specifications set out here in this document (including Graphics Specification). IWM reserves the right to reject any proposed materials if they are deemed to deleterious to collection items. A list of materials to be used by the SWC or GC (including product name, manufacturer and where relevant, specific product code) must be supplied with all construction drawings. Any bespoke materials may require additional testing by IWM Con which will require a minimum of 8 weeks)

150 PROTECTION OF PRODUCTS:

- Prevent over-stressing, distortion and any other type of physical damage.
- Keep clean and free from contamination. Prevent staining, chipping, scratching or other disfigurement, particularly of products exposed to view in the finished work.
- Keep dry and in a suitably low humidity atmosphere to prevent premature setting, moisture movement and similar defects. Where appropriate store off the ground and allow free air movement around and between stored products.
- Prevent excessively high or low temperatures and rapid changes of temperature in the products.
- Protect adequately from rain, damp, frost, sun and other elements as appropriate. Ensure that products are at a suitable temperature and moisture content at time of use.
- Ensure that sheds and covers are of ample size, in good weatherproof condition and well secured.
- Keep different types and grades of products separately and adequately identified.
- So far as possible keep products in their original wrappings, packings or containers, until immediately before they are used.
- Wherever possible retain protective wrappings after fixing and until shortly before Practical Completion.
- Ensure that protective measures are fully compatible with and not prejudicial to the products/materials.

160 SUITABILITY OF RELATED WORK AND CONDITIONS: Ensure that all trades are provided with necessary details of related types of work. Before starting each new type or section of work, ensure that:

- Previous, related work is appropriately complete, in accordance with the project documents, to a suitable standard and in a suitable condition to receive the new work.

- All necessary preparatory work has been carried out, including provision for services, openings, supports, fixings, damp proofing, priming and sealing.
- The environmental conditions are suitable, particularly that the building is suitably weather-tight when internal components, services and finishes are installed.

170 GENERAL QUALITY OF WORKMANSHIP:

- Operatives must be appropriately skilled and experienced for the type and quality of work.
- Take all necessary precautions to prevent damage to the work from frost, rain and other hazards.
- Inspect components and products carefully before fixing or using and reject any which are defective.
- Fix or lay securely, accurately and in alignment.
- Where not specified otherwise, select fixing and jointing methods and types, sizes and spacings of fastenings in compliance with section Z20. Fastenings must comply with relevant British Standards.
- Provide suitable, tight packings at screwed and bolted fixing points to take up tolerances and prevent distortion. Do not over-tighten fixings.
- Adjust location and fixing of components and products so that joints which are to be finished with mortar or sealant or otherwise left open to view are even and regular.
- Ensure that all moving parts operate properly and freely. Do not cut, grind or plane pre-finished components and products to remedy binding or poor fit without approval.

A high standard of workmanship and finish is required and all contractors must clearly understand that any work which is not, in the opinion of IWM (Des) and IWM (PM), up to such standards will have to be taken down and made good or replaced with new at the Contractor's expense.

- 210 APPROVAL OF PRODUCTS: Where approval of a product is specified the requirement for approval relates to a sample of the product and not to the product as used in the Works. Submit a sample or other evidence of suitability. Do not confirm orders or use the product until approval of the sample has been obtained. Retain approved sample in good, clean condition on Site. Ensure that the product used in the Works matches the approved sample.

**A33 QUALITY STANDARDS/CONTROL  
SAMPLES/APPROVALS**

220 **SAMPLES:** Where approval of products is specified submit samples or other evidence of suitability. Do not confirm orders or use products until approval of samples has been obtained. Retain approved samples in good, clean condition on Site for comparison with products used in the Works. Remove when no longer required. See designer's specification for list of samples required.

Where a sample of finished work is specified for approval, the requirement for approval relates to the sample itself (if approval of the finished work as a whole is required this is specified separately). Obtain approval of the stated characteristic(s) of the sample before proceeding with the Works. Retain approved sample in good, clean condition on Site. Ensure that the relevant characteristic(s) of the Works match the approved characteristic(s) of the sample. Remove samples which are not part of the finished Works when no longer required.

240 **APPROVALS:** Inspection or any other action by IWM must not be taken as approval of products or work unless IWM so confirms in writing in express terms referring to:

- Date of inspection
- Part of the work inspected
- Respects or characteristics which are approved
- Extent and purpose of the approval
- Any associated conditions.

**Fire regulations**

The materials used within the exhibition must comply with the latest issued Fire Regulations. Full compliance must be achieved for all items manufactured and supplied by the Contractor. Test certificates for all materials used must be provided by the Contractor at the outset of the contract for presentation to the Fire Officer.

Unless otherwise specified, the Euroclass B material fire-rating standard is to be met throughout for all large, static, wall-fixed items. However, the Contractor is required to identify instances where Euroclass C materials are to be used for these types of items, when Euroclass B materials are not practicable.

All movable networks / furniture items / components must comply with the Euroclass C material fire-rating standard as a minimum, but where possible these are required to achieve the Euroclass B standard.

**Pests**

Any hidden void spaces should either be completely sealed or access panels should be provided to allow IWM maintenance to check for the build-up of pests.

**Structural Stability:**

The main purpose of the design drawings is to show the profiles and finishes. The framework shown is notional and alternative methods of construction will be discussed with the successful tenderer. However, it will be deemed that the Contractor will not manufacture or fit any part of the contract unless he (the Contractor) is satisfied with the structural durability and practicability. All structures must satisfy the requirements of Construction (Design and Management) Regulations (2007).

**Thermal building movement**

All elements to be designed, fabricated and installed to withstand all building movements, thermal movement, deflection, creep and similar movement without permanent deformation or other damage.

Fixings shall be capable of providing adequate adjustment without the use of packing shims. Allow for moisture and thermal movement of surrounding construction.

**ACCURACY/SETTING OUT GENERALLY**

- 321 SETTING OUT: Check the levels and dimensions of the Site against those shown on the drawings, and record the results on a copy of the drawings. Notify IWM in writing of any discrepancies and obtain instructions before proceeding.
- 322 SETTING OUT: Inform IWM when overall setting out is complete and before commencing construction.
- 341 APPEARANCE AND FIT:
- Arrange the setting out, erection, juxtaposition of components and application of finishes (working within the practical limits of the design and the specification) to ensure that there is satisfactory fit at junctions, that there are no practically or visually unacceptable changes in plane, line or level and that the finished work has a true and regular appearance.
  - Wherever satisfactory accuracy, fit and/or appearance of the work are likely to be critical or difficult to achieve, obtain approval of proposals or of the appearance of the relevant aspects of the partially finished work as early as possible.
- 371 CRITICAL DIMENSIONS: The Contractor is required to liaise with all relevant parties and ensure all design tolerances are incorporated into his design prior to implementation, including those required for fittings supplied by third parties.
- 380 RECORD DRAWINGS: Record details of all grid lines, setting-out stations, bench marks and profiles on the Site setting-out drawing. Retain on Site throughout the contract and hand to IWM on Completion.

**RECTIFICATION OF DEFECTS**

- 390 As soon as possible after any part(s) of the work or any products are known to be not in accordance with the Contract or appear that they may not be in accordance submit

proposals to IWM for opening up, inspection, testing, making good, adjustment of the Contract Sum, or removal and re-execution. Such proposals may be unacceptable to IWM and he may issue contrary instructions.

- 395 Wherever inspection or testing shows that the work, materials or goods are not in accordance with the Contract and measures (e.g. testing, opening up, experimental making good) are taken to help in establishing whether or not the work is acceptable, such measures will be at the expense of the Contractor, and will not be considered as grounds for extension of time. The defects liability period will be 12 months from date of practical completion.

#### **SUPERVISION/INSPECTION/DEFECTIVE WORK**

- 510 **SUPERVISION:** In addition to the constant management and supervision of the works provided by the Contractor's person in charge, all significant types of work must be under the close control of competent trade supervisors to ensure maintenance of satisfactory quality and progress.
- 520 **PERSON-IN-CHARGE:** Give maximum possible notice to IWM before changing the person-in-charge.
- 540 **OUT OF NORMAL WORKING HOURS:** Whenever overtime is to be worked, give IWM not less than 2 week's notice, specifying times, types and locations of work to be done. Concealed work executed during overtime for which notice has not been given may be required to be opened up for inspection and reinstated at the Contractor's expense.
- 550 **DEFECTS IN EXISTING CONSTRUCTION** to be reported to IWM without delay. Obtain instructions before proceeding with work which may:
- Cover up or otherwise hinder access to the defective construction, or
  - Be rendered abortive by the carrying out of remedial work.
- 560 **TIMING OF TESTS AND INSPECTIONS:** Agree dates and times of tests and inspections with IWM several days in advance, to enable IWM and other affected parties to be present. On the previous working day to each such test or inspection confirm that the work or sample in question will be ready or, if not ready, agree a new date and time.
- 565 **TEST CERTIFICATES:** Submit a copy of each certificate to IWM as soon as practicable and keep copies of all certificates on Site.
- 580 **MEASURES TO ESTABLISH ACCEPTABILITY:** Wherever inspection or testing shows that the work, materials or goods are not in accordance with the Contract and measures (e.g. testing, opening up, experimental making good) are taken to help in establishing whether or not the work is acceptable, such measures:
- will be at the expense of the Contractor, and
  - will not be considered as grounds for extension of time.

- 590 **QUALITY CONTROL:** Establish and maintain procedures to ensure that the Works, including the work of all subcontractors, comply with specified requirements. Maintain full records, keep copies on Site for inspection by IWM, and submit copies of particular parts of the records on request. The records must include:
- Identification of the element, item, batch or lot including location in the Works.
  - The nature and dates of inspections by the Contractor or IWM, tests and approvals.
  - The nature and extent of any non-conforming work found.
  - Details of any corrective action.

#### **WORK AT OR AFTER COMPLETION**

- 610 **GENERALLY:**
- Make good all damage consequent upon the work.
  - Remove all temporary markings, coverings and protective wrappings unless otherwise instructed.
  - Clean the works thoroughly inside and out including all accessible ducts and voids, remove all splashes, deposits, efflorescence, rubbish and surplus materials consequent upon the execution of the work.
  - Cleaning materials and methods to be as recommended by manufacturers of products being cleaned, and to be such that there is no damage or disfigurement to other materials or construction.
  - Touch up minor faults in newly painted/repainted work, carefully matching colour, and brushing out edges. Repaint badly marked areas back to suitable breaks or junctions.
  - Adjust, ease and lubricate moving parts of new work as necessary to ensure easy and efficient operation, including doors, windows, drawers, ironmongery, appliances, valves and controls.
- 650 **MAKING GOOD DEFECTS:** Make arrangements with IWM and give reasonable notice of the precise dates for access to the various parts of the Works for purposes of making good defects. Inform IWM when remedial works to the various parts of the Works are completed.
- 652 **DEFECTIVE WORK FOUND DURING THE DEFECTS LIABILITY PERIOD** requiring immediate attention and not rectified by the Contractor within 5 working days of notification, or other agreed date for completion, will be completed by others. The cost of such work by others will be deducted in full, from any retention monies held or otherwise invoiced to the Contractor by IWM.
- 653 **ACCESS FOR ANY WORK AFTER PRACTICAL COMPLETION:** must be notified to IWM for approval, with a clear explanation of the nature of the work. No abortive costs resulting from the Contractor's failure to make these arrangements will be accepted.

**A34 SECURITY/SAFETY/PROTECTION  
GENERALLY**

- 110 The Health & Safety information will be issued under a separate cover.
- 115 CONSTRUCTION HAZARDS arising from the design of the project include those identified in the Pre Tender Health & Safety Plan. Commonplace hazards which should be controlled by good management and good Site practices are not listed.
- 120 THE CONSTRUCTION PHASE PLAN developed from the Outline Construction Phase Plan (see section A30) must be submitted to IWM not less than 4 weeks before the proposed date for start of construction work. Do not start construction work until IWM has confirmed in writing that in their view the Construction Phase Plan includes the procedures and arrangements required by CDM Regulation.
- 125 HSE APPROVED CODES OF PRACTICE: Comply with the following:
- Management of health and safety at work.
  - Managing construction for health and safety.
- 140 STABILITY: Accept responsibility for the stability and structural integrity of the Works during the Contract, and support as necessary. Prevent overloading: details of design loads may be obtained from IWM. Refer to design risk register.

**A34 SECURITY/SAFETY/PROTECTION****PROTECT AGAINST THE FOLLOWING:****221 NOISE:**

- Comply generally with the B.S. recommendations for minimising noise levels during the execution of the Works.
- Fit all compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles.
- Do not use or permit employees to use radios or other audio equipment in ways or at times which may cause nuisance.
- Advise all adjoining owners of activities likely to produce high levels of noise and make all reasonable adjustments to comply.
- The Contractor is to comply with the relevant parts of B.S. 'Code of Practice for Noise Control on Demolition and Construction Sites' and is to keep noise to as low a level as can be practically attained.
- Allow for carrying out the work in such a manner as to reduce noise to the minimum and cause the least inconvenience to the occupants of neighbouring premises and areas.
- The Contractor shall comply with all relevant Local Authority Requirements in this respect.
- Noisy operations are those which are audible at the boundary of the Site.
- Noisy trades will only be instructed to be carried out where works are required to meet police traffic regulations, in an emergency, or in the interests of public safety.

**230 POLLUTION:** Take all reasonable precautions to prevent pollution of the Site, the Works and the general environment including streams and waterways. If pollution occurs, inform the appropriate Authorities and IWM without delay and provide them with all relevant information.

**240 NUISANCE:** Take all necessary precautions to prevent nuisance from smoke, dust, rubbish, vermin and other causes.

**260 FIRE:** Take all necessary precautions to prevent personal injury, death, and damage to the Works or other property from fire. Comply with Joint Code of Practice 'Fire Prevention on Construction Sites' published by the Building Employers Confederation and the Loss Prevention Council and the National Contractors' Group.

**263 FIRE:** Smoking will not be permitted on the Site except in designated and approved welfare areas which must be carefully controlled, and inspected to guard against risk of fire.

**280 MOISTURE:** Prevent the work from becoming wet or damp where this may cause damage. Dry out the Works thoroughly. Control the drying out and humidity of the Works and the application of heat to prevent:

- Blistering and failure of adhesion.
  - Damage due to trapped moisture.
  - Excessive movement.
- 285 INFECTED TIMBER: Where instructed to remove timber affected by fungal/insect attack from the building, do so in a way which will minimise the risk of infecting other parts of the building.
- 290 WASTE:
- Remove rubbish, debris, surplus material and spoil regularly from Site to central disposal point and keep the Site and Works clean and tidy. All the above are subject to the requirements of the Construction Site Waste Management Plan.
  - Remove all rubbish, dirt and residues from voids and cavities in the construction before closing in.
  - Recycle all glass elements and sustainably dispose of other waste materials, recycling where possible.
  - Ensure that non-hazardous material is disposed of at a tip approved by a Waste Regulation Authority.
  - Remove all surplus hazardous materials and their containers regularly for disposal off Site in a safe and competent manner as approved by a Waste Regulation Authority and in accordance with relevant regulations.
- 410 WORK IN ALL SECTIONS: Adequately protect all types of work and all parts of the Works, including work carried out by others, throughout the Contract. Wherever work is of an especially vulnerable nature or is exposed to abnormal risks provide special protection to ensure that damage does not occur.
- 415 ESPECIALLY VULNERABLE WORK: Submit a method statement within 1 week of request describing the special protection to be provided to ensure that damage does not occur to the following:
- existing structures/work to be retained
  - interfaces of existing buildings
- 461 EXISTING WORK: Prevent damage to existing property including works undergoing completion alteration, adaptation or extension and make good to match existing any defects so caused. Remove existing work the minimum necessary and with care to reduce the amount of making good to a minimum.

**A34 SECURITY/SAFETY/PROTECTION**

**ALLOW FOR STATUTORY REQUIREMENTS:**

- 300 The Contractor shall allow for all costs and expenses incurred and comply with the latest statutory requirements.
- 305 IWM has strict vetting procedures. Please see Appendix 2 of the tender pack for details of security clearance required prior to commencing work on Site.

**A35 SPECIFIC LIMITATIONS ON METHOD/SEQUENCE/TIMING**

110 SCOPE: The limitations described in this section are supplementary to limitations described or implicit in information given in other sections or in the associated tender documentation.

120 DESIGN CONSTRAINTS:

The Contractor's specific attention is drawn to the requirement to fully consider design and co-ordinate all aspects regarding the installation of the Works through all types of construction and ground conditions. The following constraints are noteworthy:

- i) Specific reference is to be made to any ground investigation document(s) in recommending design proposals.
- ii) The Contractor is to give particular attention to the need to reduce noise and vibration to a minimum.

131 METHOD/SEQUENCE OF WORK:

The Contractor is to make allowances for carrying out the Works described hereunder in a particular sequence.

- To Be Defined

140 ACCESS TO THE SITE: See Pre-Construction Information.

155 SCAFFOLDING: Ensure that standing scaffolding is erected early enough and/or dismantled late enough to suit the programmes of all subcontractors.

190 WORKING HOURS:

Working hours will be restricted to the following times:

**Monday to Friday: 8am to 6pm**

Any work carried out outside this period shall require approval from IWM.

215 FURTHER WORKING CONSTRAINTS: Further working/logistical constraints are outlined below: The Contractor should take due regard to the Works concurrent with the Works as indicated within the construction programmes attached to the tender / contract documents.

310 All internal combustion engines used for the Works, whether to drive plant at the Site or in transport vehicles, shall be fitted with efficient suppressors in the ignition system in accordance with the latest B.S. recommendations so as to prevent electrical interference to radio or television receiving apparatus in the vicinity. All temporary electrical installations such as motors or the like shall be prevented from creating such interference and the Contractor will be responsible for fitting suppressor equipment in accordance with B.S. standards as directed by and to the satisfaction of IWM. Do not use explosives.

315 Prevent damage from storm and surface water.

- 320 Prevent the work from becoming wet or damp where this may cause damage. Dry out the Works thoroughly. Control the drying out and humidity of the Works and application of heat to prevent blistering and failure of adhesion, damage due to trapped moisture, and excessive movement.
- 325 Take all necessary precautions to avoid excessive electromagnetic disturbance of apparatus outside the Site.
- 330 Install, use and store construction laser equipment only in accordance with the latest B.S. recommendations.

**A36 FACILITIES/TEMPORARY WORK/SERVICES  
GENERALLY**

111 LOCATIONS: Inform IWM of the intended citing of all temporary facilities, including storage.

121 MAINTAIN, alter, adapt and move temporary works and services as necessary. Remove when no longer required and make good.

**ACCOMMODATION**

210 ROOM FOR MEETINGS: will be provided by IWM.

265 SANITARY ACCOMMODATION: will be provided by IWM.

290 The Contractor is required to provide, following their appointment, details of their reasonable on-site accommodation and storage requirements.

**TEMPORARY WORK**

340 TEMPORARY SCREEN(S):  
Provide temporary screens as necessary to protect new and existing work or structures from damage by the Works.

375 NAME BOARDS/ADVERTISEMENTS: Contractors and name boards will only be permitted in approved position(s) and form, and subject to any required consents; the express written consent of IWM will be required before erection of such name boards etc. Advertisements will not be permitted.

**SERVICES AND FACILITIES**

425 LIGHTING, POWER & WATER: Electricity supply from IWM's mains may be used for the Works as follows:

- Any electrical supply will be 110v temporary power with 10 metre tap in points.
- IWM will not be held responsible for the effects of any failure or restriction in supply.
- Point of supply: unknown. To be at the discretion of IWM.
- Conditions/Restrictions: temporary supply must not in any way disrupt the day to day operational requirements of the building and its occupiers.

445 TEMPORARY FACILITIES AND DUTIES TO BE UNDERTAKEN BY THE CONTRACTOR:  
The Contractor shall provide everything necessary to execute the Works, including but not to be limited to the following.

- Plant, Tools and Vehicles. All necessary plant, tools, tackles, vehicles, temporary work materials, screens etc.
- Scaffolding. All necessary scaffold and access equipment to carry out the Works, which shall comply with current regulations and legislation. In particular tenderers should note that The National Access and Scaffolding Confederation (NASC) have issued guidance on the use of

fall equipment during erection, altering and striking of scaffold. The document also contains other guidance and although not a statutory requirement all scaffold erection must comply with this guidance note.

611 REINSTATEMENT:

The Contractor should note that he will be held responsible on completion for reinstating any areas he has occupied. These areas must be adhered to; no further encroachments on space will be permitted without the written permission of IWM.

**A37 OPERATION/MAINTENANCE OF THE FINISHED BUILDING****102 THE HEALTH AND SAFETY FILE/THE BUILDING MANUAL:**

- The Building Manual (incorporating the Health and Safety File and subtitled accordingly) is to be a comprehensive information source and guide for IWM and end users providing a complete understanding of the building and its systems and enabling it to be operated and maintained efficiently and safely. The Contractor is required to obtain or prepare all the information to be included in the Manual, produce the required number of copies of the Manual and submit them to IWM.
- The Manual is to consist of the following three parts, sub-sectioned as appropriate:  
PART 1: GENERAL INFORMATION: Content as clause A37/125, the information being provided to the Contractor by IWM.  
PART 2: BUILDING FABRIC INFORMATION: Content as clause A37/135, plus certain as-built drawings and other information provided to the Contractor by IWM.  
PART 3: BUILDING SERVICES INFORMATION: Content as clause A37/145.
- The presentation of the Manual is to be as clause A37/151.
- A complete draft of the Manual must be submitted not less than 4 weeks before the date for submission of the final copies of the Manual. Amend the draft Manual in the light of any comments and resubmit to IWM. Do not proceed with production of the final copies of the Manual until authorised to do so by IWM.
- Final copies of the Manual: Provide the IWM with 4 hard copies not less than 2 weeks before Practical Completion.  
As-built drawings: Provide 4 hard on A3/A2 format.

**125 THE HEALTH AND SAFETY FILE/BUILDING MANUAL PART 1: GENERAL INFORMATION must include:**

- A description of the buildings.
- Details of ownership and all consultants and designers.
- Details of all Authorities plus copies of all consents and approvals obtained.
- Names, addresses, telephone and fax numbers of all contractors, subcontractors, suppliers and manufacturers.
- Any operational requirements and constraints of a general nature which are not relevant to other parts of the Building Manual.
- The fire safety strategy for the buildings(s) including drawings showing emergency escape routes, location of emergency and fire fighting systems, services shut-off valves, switches, etc.

**135 THE HEALTH AND SAFETY FILE/BUILDING MANUAL PART 2: BUILDING FABRIC INFORMATION: Provide such information as is reasonably required by IWM including:**

- Details of construction methods and materials which may present significant residual hazards with respect to cleaning, maintenance or demolition for all Contractor designed work and performance specified work.
- As-built drawings recording details of construction for all Contractor designed work and performance specified work.
- Copies of manufacturers current literature for all products for which the particular proprietary brand has been chosen by the Contractor, including COSHH dated data sheets and manufacturers recommendations for cleaning and maintenance.
- Copies of all guarantees, warranties and maintenance agreements offered by subcontractors and manufacturers.

- Copies of all test certificates and reports required in the specification.
  - Details of the facilities incorporated into the structure and the methods and procedures to be adopted for safe and efficient cleaning and maintenance of the buildings.
- 145 THE HEALTH AND SAFETY FILE/BUILDING MANUAL PART 3: BUILDING SERVICES INFORMATION must include:
- A full description of each of the systems installed, written to ensure that IWM's staff fully understand the scope and facilities provided.
  - A description of the mode of operation of all systems including services capacity and restrictions.
  - Diagrammatic drawings of each system indicating principal items of plant, equipment, valves etc.
  - A photo-reduction of all record drawings to A3 size together with an index.
  - Legend for all colour-coded services.
  - Schedules (system by system) of plant, equipment, valves, etc., stating their locations, duties and performance figures. Each item must have a unique number cross-referenced to the record and diagrammatic drawings and schedules.
  - The name, address and telephone number of the manufacturer of every item of plant and equipment together with catalogue list numbers.
  - Manufacturers technical literature for all items of plant and equipment, assembled specifically for the project, excluding irrelevant matter and including detailed drawings, electrical circuit details and operating and maintenance instructions.
  - A copy of all Test Certificates (including but not limited to electrical circuit tests, corrosion tests, type tests, works tests, start and commissioning tests) for the installations and plant, equipment, valves, etc., used in the installations.
  - A copy of all manufacturers' guarantees, warranties and maintenance agreements offered by subcontractors and manufacturers.
  - Starting up, operating and shutting down instructions for all equipment and systems installed.
  - Control sequences for all systems installed.
  - Schedules of all fixed and variable equipment settings established during commissioning.
  - Procedures for seasonal changeovers.
  - Recommendations as to the preventative maintenance frequency and procedures to be adopted to ensure the most efficient operation of the systems.
  - Lubrication schedules for all lubricated items.
  - A list of normal consumable items.
  - A list of recommended spares to be kept in stock by IWM, being those items subject to wear or deterioration and which may involve IWM in extended deliveries when replacements are required at some future date.
  - Procedures for fault finding.
  - Emergency procedures, including telephone numbers for emergency services.
- 151 PRESENTATION OF MANUAL: The Manual is to be contained in a series of A4 size, plastic covered, loose leaf, four ring binders with hard covers, each indexed, divided and appropriately cover titled. Selected drawings needed to illustrate or locate items mentioned in the Manual, where larger than A4, are to be folded and accommodated in the binders so that they may be unfolded without being detached from the rings. The main set(s) of as-built drawings may form annex (es) to the Manual.
- Provide 4 copies.

- 210 PROVISIONAL INFORMATION ON SERVICES:  
Provide IWM with relevant drawings and preliminary performance data at the commencement of commissioning to enable IWM staff to familiarise themselves with the installation.
- 220 TRAINING OF IWM'S STAFF: Before Practical Completion explain and demonstrate to IWM's maintenance staff the purpose, function and operation of the installations including all items and procedures listed in the Building Manual. Include for not less than 2 operating days for this purpose.
- 230 SPARE PARTS: At least 4 weeks before Practical Completion submit to IWM a schedule of spare parts that the Contractor recommends should be obtained and kept in stock by IWM for maintenance of the services installations. State against each item the manufacturer's current price, including packaging and delivery to Site.
- 240 SPARE PARTS: Within 2 weeks of request submit to IWM a quotation, priced in detail, for the initial supply of spare parts, and including for:
- Checking receipt, marking and numbering in accordance with the schedule of spare parts.
  - Referencing to the plant and equipment list in Part 3 of the Building Manual.
  - Painting, greasing, etc. and packing to prevent deterioration during storage.
- 250 TOOLS: At Practical Completion provide two complete sets of tools and portable indicating instruments for the operation and maintenance of all services plant and equipment (except any installed under Nominated Sub-contracts) together with suitable means of identifying, storing and securing same.

**A40 CONTRACTOR'S GENERAL COST ITEMS: MANAGEMENT AND STAFF**

The Contractor is to allow for all necessary management and staff to deliver the project defined in the contract documentation.

Any services or facilities required or provided by IWM are stated in Employer's Requirements above.

**A41 CONTRACTOR'S GENERAL COST ITEMS: SITE ACCOMMODATION**

The Contractor will be provided with access to the mess room and welfare facilities free of charge.

**A42 CONTRACTOR'S GENERAL COST ITEMS: SERVICES AND FACILITIES**

The Contractor is to allow for all necessary services and facilities to deliver the project defined in the tender documentation.

**A43 CONTRACTOR'S GENERAL COST ITEMS: MECHANICAL PLANT**

The Contractor is to allow for all necessary mechanical plant to deliver the project defined in the tender documentation.

**A44 CONTRACTOR'S GENERAL COST ITEMS: TEMPORARY WORKS**

The Contractor is to allow for all necessary temporary works to deliver the project defined in the tender documentation.

**A45 CONTRACTOR'S GENERAL COST ITEMS: HEALTH & SAFETY REQUIREMENTS**

The Contractor is to allow for all necessary items required to deliver the project in a safe manner.

**A50 WORK/PRODUCTS BY/ON BEHALF OF IWM**

The Contractor should afford Third Party access for those acting on behalf of IWM for any preparatory or Site investigation works to enable IWM and Third Parties to procure the items of equipment.

**A54 PROVISIONAL WORK/ITEMS**

See Pricing Document.

**A55 DAYWORKS**

See Pricing Document.

# 6

## Contract - to be JCT Intermediate with Contractor Design

# 7

# Pricing Document

**8**

**Tender Drawings**

# 9

# Conservation and Build Specification



**CONSERVATION AND BUILD  
SPECIFICATION  
FOR TEMPORARY GALLERIES**

**Lest We Forget? Remembering the First World War**  
Special Exhibition Gallery (SEG)  
IWMN

IWM North  
Trafford Wharf Rd  
Manchester M17 1TZ  
[www.iwm.org.uk](http://www.iwm.org.uk)

Prepared by: IWM

Issued: February 2018

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## 1.0 MATERIALS, FINISHES & FIXINGS

All materials selected must meet the specifications set out here in this document. IWM reserves the right to reject any proposed materials if they are deemed to deleterious to collection items.

A list of all materials proposed in the construction, their use, manufacturer's details and product codes should be supplied to IWM. The Care and Conservation Section of IWM will review these and determine if any are unsuitable and if required, request samples of other materials for testing.

Testing may involve a testing period of a minimum of eight weeks. In some cases, materials tested and approved by other reputable organisations, will be accepted. IWM also maintains a list of previously tested materials that have passed (and failed) the approval process, this list will be available on request.

Specification for some core build materials are listed below, bespoke build materials will be reviewed on case by case basis,

### 1.1 British Standards

- **All build materials and finishes used must meet the minimum requirement of National Class 0 or a European Class B-s3,d2. This should be confirmed in a finishes schedule, and specification sheets for all materials must be provided to IWM and Building Control.**

### 1.2 Timber Joinery and Setwork Walls

- All timber shall be seasoned (may be kiln dried) and properly prepared, it should be straight flat and free from torn grain or other blemishes. Except for rough-sawn timber of specified, timber faces which are exposed in the normal course of usage shall have all the machine marks removed and brought to a finely sanded finished surface. This standard of finish shall be applied to all veneered and solid hardwood/softwood finishes.
- All timber should be sourced from sustainably-managed forests.
- All wood products such as MDF and plywood to be Zero formaldehyde or external quality grades to reduce emissions harmful to health
- All timber must be Fire Rated. It may be permissible to treat the timber using an impregnated approved fire retardant. Contractor must provide details for the Fire Officer's approval.
- Sections should be accurate in profile and length, and free from twist and bowing. Machined surfaces are to be smooth and free from tearing, wooliness, chip bruising and any other machining. Joints should be tight and close-fitting.
- Assembled components will be rigid and free from distortion. Provide pilot holes for screws; sink heads of countersink screws at least 2 mm below timber surfaces visible in completed work. Maintain the moisture content of timber and wood based products within the range specified for the component during manufacture and storage. Finishing to joinery surfaces should be smooth, even and suitable to receive finishes. Arrises should be eased unless shown otherwise on drawings. Seal end grain in external components with primer or sealer and allow to dry before assembly.
- **Plywood:** Where visible, to be best quality birch ply (defect-free, without knots, clean faces). To be selected with no damage to end-grain as possible from cutting. To be sanded smooth and small permitted blemishes filled with proprietary filler, coloured to match wood colour.  
Where not visible, plywood to be of prime structurally sound quality, free from warping, twisting or movement.
- **Medium Density Fibreboard:** All faces and edges of MDF shall be sealed with paint unless otherwise specified. No surplus, un-used MDF shall be stored on site. The thickness of MDF to suit each application must be confirmed for approval.

### 1.3 Painting and Coatings

- Use only premium quality paints (Dulux Trade or other approved brands) exactly as specified from approved manufacturers. Do not mix paints from different manufacturers. Deliver all paints to site in the manufacturer's labelled and unopened containers. All spare paint must be carefully labelled according to the area used and paint reference number to allow for future touching up, etc.
- Fabrication should be complete, and fixing holes drilled before applying coatings. All paint, grease, flux, rust, burrs and sharp arises are to be removed.
- Preparation materials should be types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared. Substrates will be sufficiently dry in depth to suit the coating.
- Abrade surface irregularities to a smooth finish. Fill joints with approved filler and sand down all timber and MDF surfaces
- Lightly rub down where directed priming and undercoats with abrasive paper to remove surface nibs. Dust off before applying next coat. Maintain suitable temperature, humidity and air quality during application and drying.
- Surfaces to be clean and dry at time of application. Thinning and intermixing of coatings should only be done as recommended by manufacturer. Priming coats should be of a thickness to suit the surface porosity. The finish should be smooth and of uniform colour, free from sags, runs and other defects. Cut in neatly.
- Painted woodwork: apply 1 no. primer, 1 no. undercoat and 2 no. topcoats when using oil based paints, eggshell.
- **Spray painting:** Unless specified otherwise all spray painting should must be undertaken at the setwork contractors workshop, and must not occur on site. Hard spray finish 2 pack acid catalyst lacquer where specified.
- **Fine roller painting:** apply 1 no. seal coat, 3 no. topcoats when using water based paints. SWC to highlight any areas which will need further coats and cost appropriately. Unless otherwise specified use Vinyl Matt finish. Where paints are used under graphic wallpaper and vinyl the specification must be checked with the graphics contactor to prevent non-adhesion. Use foamed plastic or short pile sheepskin rollers. Use brushes for cutting in only.
- All materials, seals and finishes proposed which have direct contact with an IWM or loan object on open display should be approved by the Care and Conservation Section of IWM.

### 1.4 Fixings

- Anchors, plugs, screws, rivets and the like, shall be of an approved type, appropriate to the work, capable of transmitting the loads and stresses imposed, and sufficient to ensure the rigidity. All bolts, screws, nuts and anchors shall be of adequate strength for their design purpose and installed in accordance with manufacturers recommendations.
- All visible screws shall be snake eye security countersunk screws, painted where applicable to match paint finish. All bolt fixings shall use washers and double nuts for locking.
- Fixings should not be visible unless identified as such. Where visible fixings are deemed unavoidable these should be identified by the setworks contractor. Fixings should not compromise air exchange requirements in showcases.

### 1.5 Fabric

- Wool, wool blends or silk should be avoided for any fabrics, furniture or other parts of any the construction including any insulation, unless otherwise permitted by IWM

## **2.0 BUILDING CONTROL**

Final design and build must comply with current building regulations and must be signed off by IWM and the relevant Building Control Authority.

This includes provisions for fire safety, including but not limited to; fire escape routes, fire exit signage, smoke sensors and emergency lighting within the gallery spaces. The design must accommodate existing fire safety services but also highlight where adjustments/additions may be required.

The relevant Building Control Authority will inspect site during build and sign off final build to ensure it complies with current building regulations and meets the approved design

Building Control will also be responsible for setting the final capacity for the gallery

### 3.0 GUIDELINES TO MEET THE GOVERNMENT INDEMNITY SCHEME (GIS) FOR THE DISPLAY OF LOAN ITEMS

Exhibitions in IWM galleries should be planned so they meet the minimum requirements set out in Annexe 'D' [of \*Government Indemnity Scheme: Guidelines for national institutions \(Arts Council England – January 2016\)\*](#).

The minimum requirements set out here cover the display of loan objects within temporary exhibition galleries, and should be adhered to in the exhibition design. Please be aware that this confirms just the minimum requirements, it is not conclusive and should be reviewed with IWM as the exhibition design and object list evolves.

Where possible these same requirements should be applied to the display of IWM collection items, although these may be reviewed by IWM on a cases by case basis.

#### Location of loan material within a gallery layout

- Smaller loan items (less than A3 size) must not be displayed within 2 metres of any external opening e.g. windows, doors (including fire escapes) (D.10, D.11)
- Visitors should be kept at least 1 metre away from loans (this includes glazed paintings, but not items in display cases), for a combination of conservation and security considerations. This distance can be marked by a variety of ways – usually rope or other barriers (D.11). Only in very exceptional circumstances will less than a metre be acceptable.
- Loan items should be located so there is the greatest possible line of sight to them from nearby warding staff (D.13). Therefore avoid inserting new internal walls as far as possible (be aware these can also affect detection beam arcs of cover and air-handling for environmental control).

#### Plinths

- Loans should be located at least 1 metre from the floor level, using a plinth if necessary to achieve this (D.11). This applies both within cases and without.

#### Display cases

- Please refer to section 6; Design Criteria for Display Cases in Temporary Exhibitions

#### Wall mounting

- Flat wall-mounted loans (e.g. paintings, drawings) must be secured to walls by mirror plates and security screws, or discussed with the National Security Advisor (D.9). The lowest point of a wall mounted item must be 1 metre off the floor.

#### Monitoring equipment/sensors

- Assume there is little scope to move fixed monitors for fire, intruder, CCTV and environment – as a rule, work around them, and do not unwittingly cut across any 'zoning' in their positioning. They must not be shielded or otherwise prevented from doing their job when the display is built. Do not assume that portable devices can replace them – there may not be the budget or technical ability to add them to systems.

#### Loan items on open display

- Warder presence must be able to see *or be alerted* to any signs of people getting too close to works. A clear line of sight must be maintained.
- A 1 metre barrier must be placed around the works – with items valued over £50,000 the barrier should also be alarmed. Use '*Do not cross*' notices, as well as the warders, to enforce it.
- Items on open display should not be positioned within close proximity to air-vents or radiators.

**There can be different ways to achieve GIS requirements, and it is the overall effect that matters, not the means. Galleries may have inherent issues preventing good sight-lines or installation of high plinths, or limited space to allow for a one metre zone etc. The IWM**

**Registry team are able to discuss such issues with the National Security Adviser (NSA) on behalf of IWM.**

## **4.0 DESIGN CRITERIA FOR DISPLAY CASES IN TEMPORARY EXHIBITIONS:**

### **Primary areas covered in this specification**

- Security
- Protection and Safety
- Presentation and access
- Environmental control

Display cases are intended to 'showcase' objects which, for security, fragility, safety or insurance cannot be exhibited on 'open' display. Exhibition Designers are required to produce designs with sufficient detail that they can be shown to meet the functional criteria at both 'Concept' and 'Developed' design stages for sign off by IWM. Once approved a 'Technical' design response for approval by the Exhibition Designer and the Museum is required prior to the production of fabrication drawings. It is the responsibility of the Exhibition Designer to ensure that the form, location and size of the display case should not compromise the functional criteria listed below, unless agreed and signed off by IWM.

### **4.1 Security**

- All display cases should be able to meet the minimum Government Indemnity Scheme (GIS) specification and be able to be fitted with alarms as required during installation or at a later date.
- Glazing will be water white low iron glass and meet BS EN 356:2000 P3A. This will normally mean at least 11.3 mm 5 layer anti-bandit laminated glass, 11.5mm 3 layer laminated glass or 12mm acrylic and any other non-glazed panels to be at least the same level of security. Glass to glass joints must withstand cutting by tools and all joints should withstand a levering attack.
- All display cases must have locking systems that prevent access to the mechanism for securing the case closed and ideally the locks should not be used to achieve air tightness.
- Locks should be normally be protected from direct attack by location or behind specific concealment.
- Any means of access into the display compartment must be locked by a minimum of two approved locks. The museum will specify appropriate locks.
- In exceptional circumstances approved in advance by IWM e.g. for very small display cases or some temporary exhibition cases where simple glass or acrylic hoods are used, specified security screws may be used to secure a display case. They should be centred at least 23 mm up from the bottom edge of any acrylic hood and a similar distance down into the base or plinth. The screws must be hidden behind a removable cover strip.
- Display cases containing firearms covered by Section 5 of the Firearms Act (including pistols, handheld semi- automatic and automatic firearms) should not normally be sited near entrances and exits from the building and the display cases will need to meet a higher standard of security and normally be completely framed with steel.
- All firearms on display must be secured with approved security fixings to a structural component within the case.  
Any Display case supplier should advise the Museum as to whether it is necessary to fix the case to the wall or floor, for reasons of stability or to meet security standards.

### **4.2 Protection and Safety**

- Display cases should be designed to protect the contents, be robust and able to be securely fixed to structural elements of the display as appropriate to their contents, overall weight and position.
- All display cases and any associated light boxes to be detailed so as to limit any water ingress falling from above. The 'roof' of the sealed display compartment, if not glass to be a water proof material. This is to limit water penetration in an emergency situation.

- All dress panels, shelving and object support systems should be designed to protect the object and to take appropriate loads. It is the responsibility of the designers to ensure the correct loading requirements are communicated to the display case manufacturer.
- All shelving and support systems for objects and any other fittings within the case such as graphic panels should fail safe.
- All dress panels including backboards and base panels should be capable of being removed without compromising the structural stability of the case.
- All materials used in the construction, finishing, fittings, furnishing, mounts, graphics and other interpretation materials that will be housed within the sealed display case 'volume' should not 'outgas' any chemicals that can cause the accelerated decay of collection items.
- Therefore, all materials proposed by the designer for inclusion within the sealed display case 'vitrine' should be approved by the Care and Conservation Section of IWM. This normally involves a testing period of a minimum of eight weeks. It is preferable that materials tested and approved by IWM or other reputable organisations are selected wherever possible. IWM maintains a list of previously tested materials that have passed (and failed) the approval process.
- Certain display cases may contain hazardous materials which require particular design features to meet licencing or safety requirements. These include providing a suitable separation distance for any radioactive materials. IWM will supply the designers with details of any such hazards and it is the responsibility of the designer to ensure that any conditions required can be met within the design of the display case and location.

#### **4.3 Presentation and Access**

- The design of display cases and any interior fittings must not endanger the safety of people or the collections during object installation, regular access and normal use.
- Opening mechanisms should normally be designed and positioned to be opened safely by one person. Only in exceptional circumstances, to be agreed in advance, will designs requiring 2 or more people be accepted.
- The designer should ensure that opening cases involves the minimum of disruption to associated displays. The removal of fascia, skirting or other small access panels to access locking mechanisms is acceptable, but the removal of objects, plinths, floor sections or other large components to allow doors to open is not, except in exceptional circumstances approved in advance.
- Case openings are to be provided that allow complete access to the case interior from outside of the case i.e. it should not normally be necessary to enter the display case to install or remove objects. However, case construction, including dress panels should be adequate to take all imposed loads when positioning heavy or awkward objects including personnel if necessary.
- The designer is responsible for ensuring that the dimensions and position of the opening portion of the display case is sufficient to allow the contents to be safely installed and the surrounding displays do not compromise this access.
- It is the responsibility of the designer to ensure that display cases are large enough to accommodate the objects and associated display materials including captions.
- Case construction must be adequate to take all the imposed loads when positioning heavy or awkward objects within the display case system, including personnel.

#### **4.4 Environmental Control**

- To provide the stable environment the IWM and many lenders specify, display cases must be very well sealed and have a low air exchange rate. This air exchange rate specified depends on the sensitivity of the object and the space available for buffering materials but would normally be in the range of 0.4 to 1 air changes per day.
- To achieve these low levels of air exchange requires that there are no gaps between any components that form the 'sealed display volume'. Therefore joints between all components that form the 'sealed display volume' must be sealed with an approved non-corrosive mastic and/or taped with aluminium moisture barrier tape. This includes panel-to-panel, timber-to-timber, screw or bolt fixing holes and any other joints between components. The

opening access panels must be sealed with a suitable extruded silicone gasket. This detailing must be indicated on the 'technical' drawings. If the display case components are fabricated off-site for on-site assembly provision it must be possible to undertake the required sealing in-situ.

- Display cases should be able to accommodate a buffering material such as silica gel in a facility tray that is normally housed below the baseboard but if space allows can also be accommodated within the 'sealed display case volume' e.g. within a large plinth. For temporary exhibitions of a duration of less than 1 year, external access to this facility will not normally be required and this will be confirmed by IWM on a case by case basis. The volume of the space required for the buffer will be specified by IWM, but on average will be 0.013m<sup>3</sup> per m<sup>3</sup> and the surface area should always be as large as practical. There must be air circulation between this facility volume and the display case – this normally requires a 17mm slots around the perimeter of the base board or a perforated baseboard with 8mm holes covered with fabric or open back plinths.
- Active (mechanical) environmental control systems will only be required if specified by the Museum for objects with very specific environmental requirements that cannot be satisfied by the museums preferred option of passive buffering using silica gel.
- To ensure that display cases meet the specified air exchange rate prior to handover, during installation the Display case supplier will provide IWM with access for testing for leaks and the air exchange rate as cases are made 'air tight' prior to handover.

#### **4.5 Showcase Lighting and Electrical Components**

- To avoid heat build-up and maintenance issues we prefer not to include AV or other electronic equipment within the 'sealed display volume'.
- Any integral light sources should be capable of being set at levels between 30 and 300 lux using dimmers.
- All light sources must not exceed 10 $\mu$ W per lumen of ultraviolet radiation.
- Any integral display case lighting, with the exception of IWM approved LED sources, should be placed externally to the 'sealed display volume' in a readily accessed, separate compartment so that they can be maintained without entering the 'sealed display volume' and with the minimum of disruption (see 3.3).
- Unless prior approval is given and suitable insulation provided, heat generating equipment such as lighting projectors, LED drivers, transformers, AV equipment etc. should not be mounted under any display case. These can be mounted in a suitably vented compartment on top or in adjacent to set-works.
- Special consideration is required for any electrical equipment such as AV screens as these will normally generate heat and the requirements of 3.8 above should be followed.

#### **4.6 Material approval and testing**

- All materials used in the construction, finishing, fittings, furnishing, mounts, graphics and other interpretation materials that will be housed within the sealed display case volume should not 'outgas' any chemicals that can cause the accelerated decay of collection items.
- Therefore, all materials, seals and finishes proposed by the designer or display case supplier for inclusion within the sealed display case volume should be approved by the Care and Conservation Section of IWM.
- A list of all materials proposed in the construction of the display case, their location, manufacturer's details and product codes should be supplied to IWM. The Care and Conservation Section of IWM will review these and determine if any are definitely unsuitable and if required request samples of other materials for testing.
- Samples to be provided of all materials to the Museum for approval must be submitted a minimum of 8 weeks before any approval is required to allow for this testing and the sourcing of alternative materials if required.
- Full details of the tests undertaken and the form and quantity of materials required for approval testing will be provided by the museum.

- Where possible the display case supplier is encouraged to utilize materials they have already had tested and approved by either the IWM or other reputable organisations where they have successfully used these materials in the past. However, the museum will accept no liability for the supplier using a previously tested and approved material that is not fit for purpose.
- Materials suitable for the construction, lining or inclusion within the sealed display void include:
  - Metals
  - Appropriately cured powder coated metals
  - Acrylic plastics e.g. Perspex®
  - Certain rigid foam PVC boards e.g. Forex®
  - Tested and approved glass adhesives, silicone mastics and extruded silicone seals
  - Materials normally unsuited for inclusion include:
    - All timbers and wood and other cellulose derivatives such as fibre board (MDF, hardboard) unless these have been covered with materials that block the emissions.
    - Wool and Silk fabrics
    - Any rubber based product
    - Oil or Alkyd based paints

## **5.0 GALLERY LIGHTING**

A large proportion of objects will be light sensitive, light levels will need be assessed in the design for the display of objects, either inside or outside of a showcase.

Any light sources should be capable of being set at levels between 30 and 300 lux preferable using appropriate dimmers or fittings that can take a range of different lamps to provide the range of illuminance required.

All light sources (including any house, security or cleaning lights) must not exceed 10 $\mu$ W per lumen of ultraviolet radiation.

All light sources should have a colour rendering index (CRI) of 90 or better. IWM Conservation and Care team will be able to advise the required light levels that must be achieved for object display area.

All dimmers or switches must be capable of being adjusted without having to use ladder access.

All lighting should be connected to either the museums lighting control system or be switched by timers to ensure that any illuminance of any objects is restricted to museum opening hours or as specified by the IWM.

## **6.0 PESTS**

Any hidden void spaces should either be completely sealed to prevent ingress of dust and debris. Access panels should be provided to allow IWML maintenance to check for the build-up of pests.

Wherever possible, wool, wool blends or silk should be avoided for any fabrics, furniture or other parts of any the construction including any insulation.

**10**

# Graphic Schedule - for information

Lest We Forget? Temporary Exhibition - IWM			Graphics Schedule					
Ref	Type	Description	Dimensions		Qty	Unit	Rate	Total
			L (m)	H (m)				
1	Entrance Graphic	Assume vinyl - direct to wall - allowance	13	3	1	item		£0
2	Exhibition Title	Assume 3D timber lettering, paint finish	2	0.5	1	item		£0
3	Section Panel	Direct to media	0.6	1.2	7	no		£0
4	Sub-section Panel	Direct to media	0.6	0.6	11	no		£0
5	Sub-section Text Panel	Direct to media	0.6	0.6	11	no		£0
6	Super Quotes	Stencil application direct to walls	2.4	0.5	5	no		£0
7	Backlit Graphics	Digital print to acrylic	2.5	2.5	2	no		£0
8	Environmental Graphics	Graphic wallpaper to south wall	6	4	1	item		£0
9	Environmental Graphics	Graphic wallpaper to inside of corridor, % allowance for engraving effect to substrate	7.8	2.5	2	no		£0
10	Audio Visual Caption	Direct to media to acrylic - A4 size	0.3	0.2	11	no		£0
11	Repro Graphics	High quality digital print to acrylic - allowance per showcase			12	no		£0
12	Repro Graphics	High quality digital print to dibond - posters	0.75	0.75	4	no		£0
13	Repro Graphics	High quality digital print to acrylic - A1 size	0.6	0.85	2	no		£0
14	Showcase Quotes	Direct to media acrylic panel, low reflection			12	no		£0
15	Showcase Captions	Allowance per showcase - Direct to media acrylic, low reflection	0.2	0.3	12	no		£0
16	Single Object Caption	Allowance per showcase - Direct to media acrylic, low reflection	0.2	0.3	10	no		£0
17	Credits	Assume direct to media on 18mm MDF	1	1	1	item		£0
18	Stencil for Cenotaph	Assume Vinyl stencil - direct to wall and easy peel with no damage to wall, VGL 'Just stick it up' or similar agreed.	3.2	9.5	1	item		£0
19	Demarcation tape	Assume 15m demarcation tape to floor	15		1	item		£0
20	Graphics to Lobby - Entrance	Allowance for Lobby graphics			1	item		£0
21	Reflection Cards	Allowance for A6 sized cards, 1 colour printed text only; assume 50,000 no.			1	item		£0
22	Samples	2D graphic samples for agreement, for example, but not exclusive to: large scale wallpaper, etching and engraving (into substrate), Lithography/ digital print/ screenprint direct to media.			1	item		£0
							<b>TOTAL</b>	<b>£0</b>

# **11**

## **Lighting Schedule - for information**

**Lest We Forget Lighting Schedule**  
605 Lest We Forget Lighting Schedule RevA



**RevA - Date 6 February 2018**

Count	Ref	Description	Fixture Position	Wattage	Tot W	Manufacturer	Supplier	Part Number	Finish
<b>Ceiling Halo Glow</b>									
8	A	10m Nano Tech LED Strip 3014 120LED/m WW 10w perm Waterproof 24V	Ceiling recess	100w	800w	Epistar	LED Lighthouse	SL10-24V Warm white	N/A
4		Mains to 24V LED Strip Dimmable Driver IP66 200W	Ceiling recess			Unknown	LED Lighthouse	ELED-200-24T	N/A
4		LED Strip Dimmer Switch 1 Gang	Hidden on ceiling			Varilight	LED Lighthouse	ECODIM-TRIAC	N/A
<b>Art/Graphic lighting</b>									
40	B	Twistlock MR16 35W IP44 Outdoor Die-Cast Gimbal	Recessed in ceiling			Ansell	Any	ATLVOG/IP44/B	Black
40		Integral Dichroic Glass 4.7 Watt Warm White GU10 LED Bulb	Recessed in ceiling	5w	188w	Integral	LED Lighthouse	GU10-INT-GLASS-4.7W 2700 kelvin	N/A
10		LED Strip Dimmer Switch 1 Gang	Hidden on ceiling			Varilight	LED Lighthouse	ECODIM-TRIAC	N/A
<b>Lookthrough object lighting</b>									
22	C	Birdies c/w 12v LED lamps	Mounted on rear of setworks			Unknown	IWM Stores	Free Issue	Black
22		GU10 Lamps	Mounted on rear of setworks			Unknown	IWM Stores	Free Issue	N/A
3		Dimmer switches	Mounted on rear of setworks			Unknown	IWM Stores	Free Issue	N/A
<b>Lookthrough Wallpaper lighting</b>									
1	A	10m Nano Tech LED Strip 3014 120LED/m WW 10w perm Waterproof 24V	On floor	100w	100w	Epistar	LED Lighthouse	SL10-24V Warm white	N/A
5		2 Metre Shallow Aluminium Channel For LED Strip Lights	On floor			Unknown	LED Lighthouse	EXTRUSION-02-P2	N/A
1		Mains to 24V LED Strip Dimmable Driver IP66 200W	On floor			Unknown	LED Lighthouse	ELED-200-24T	N/A
1		LED Strip Dimmer Switch 1 Gang	On floor			Varilight	LED Lighthouse	ECODIM-TRIAC	N/A
<b>Escape lighting</b>									
5	D	TYKE 2w LED recessed emergency light	Recessed in ceiling	2w	10w	Philip Payne	Philip Payne	TYKE860 Black	Black

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t:+44 (0)20 8288 1564  
e: andy@luminance.co.uk  
www.luminance.co.uk



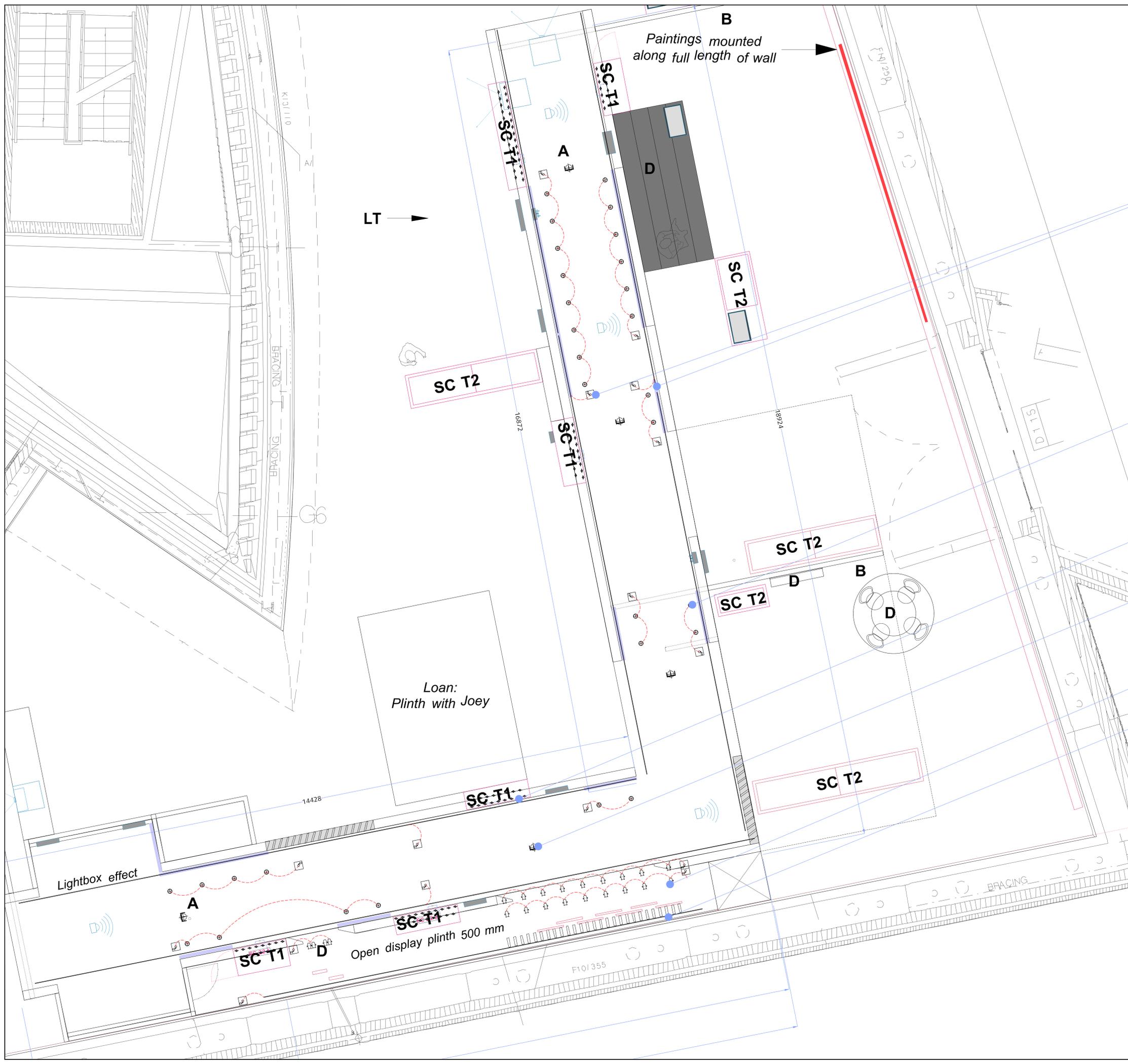
## Lighting scope of works

Client - Imperial War Museum  
Project - Lest We Forget

Dated - 6<sup>th</sup> February 2018

Scope of electrical works for lighting.  
See drawing 605-01-10 for GA

- 1) Supply and install approximately 30 black, recessed adjustable spotlights with dimmable GU10 LED lamps at various places in the exhibition "spine" ceiling. The spots to be grouped into 8 to 10 LED dimmer switches.
- 2) Supply and install 10m of 24v Warm White LED tape, dimmable driver and dimmer switch on base of "Look Through" plinth. See "Look Through Sketch"
- 3) Install approximately 22 free-issued PAR16 Birdies on rear of setworks grouped to three LED dimmers supplied by contractor. See "Look Through Sketch"
- 4) Supply and install 70m of warm white LED tape, drivers and dimmer switches at high level to halo light ceiling. Fixing detail TBA
- 5) Supply and install 5 recessed non-maintained emergency escape lights at various places in the exhibition "spine" ceiling.
- 6) Install free issue fibre optic lighting into six various sized showcases. Largest showcases have approximately 29 heads with one projector, smallest showcases have 13 heads with one projector. See "Showcase Sketch" and "Fibre Head Detail" drawings.



- Key
- Birdie MR16 PAR can
  - Black adjustable recessed downlight
  - Recessed Emergency light
  - Dimmer switch

Warm white LED tape in ceiling recess both sides of corridor throughout with dedicated dimmer switches.

Recessed GU10 adjustable spot grouped to dimmer

Fibre optic lighting in showcases

Recessed Non-maintained emergency light

Surface mount birdies grouped to dimmer

10m length of LED tape

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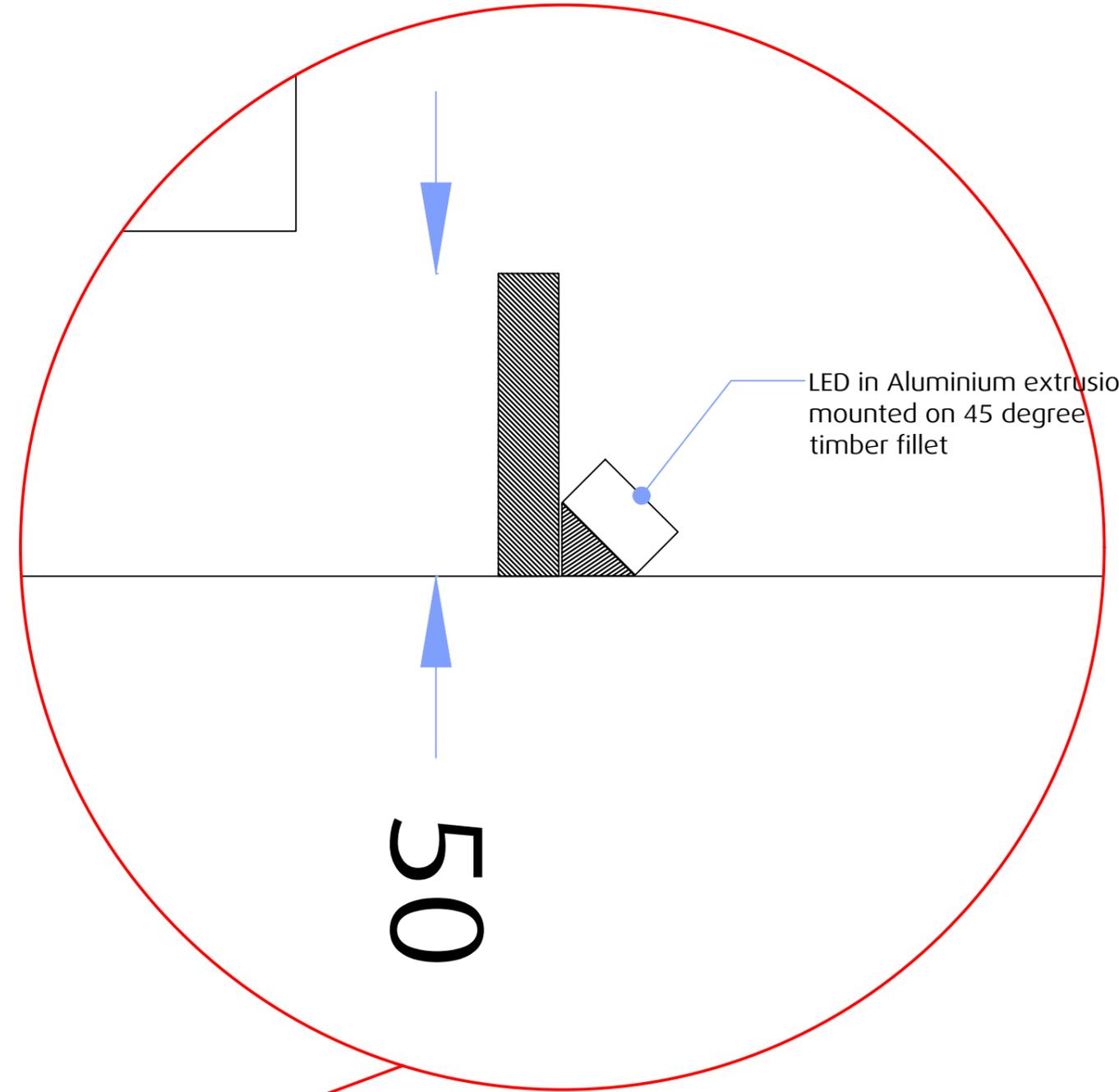
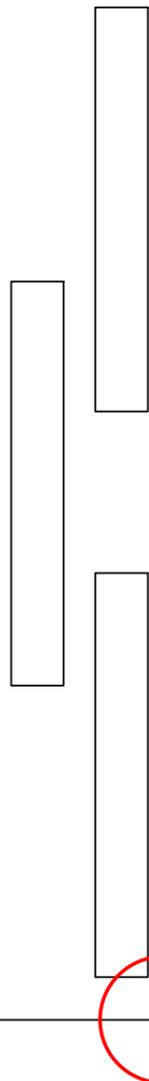
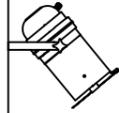
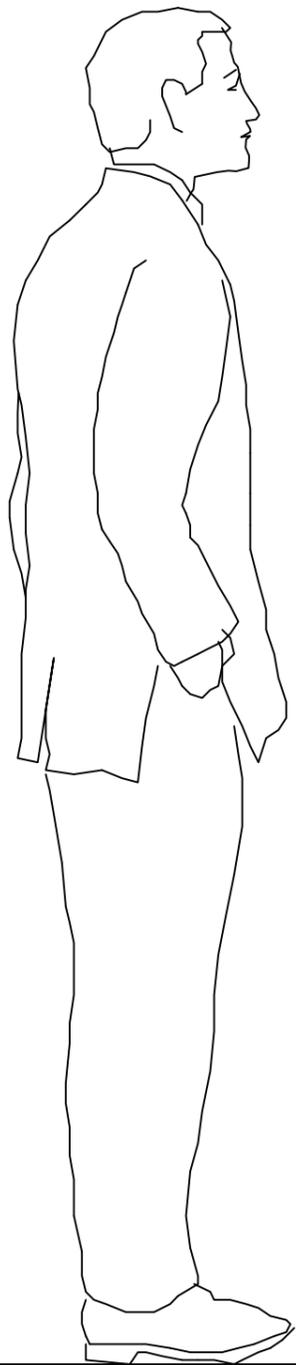
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e: mail@luminance.co.uk  
w: www.luminance.co.uk

Client: IWM  
Project: Lest We Forget  
Drawing Title: Lighting GA  
SEG  
Imperial War Museum North

Scale: NTS Date: 6 February 2018  
Dwg no: 605-01-10 Rev: /

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LED in Aluminium extrusion mounted on 45 degree timber fillet

50

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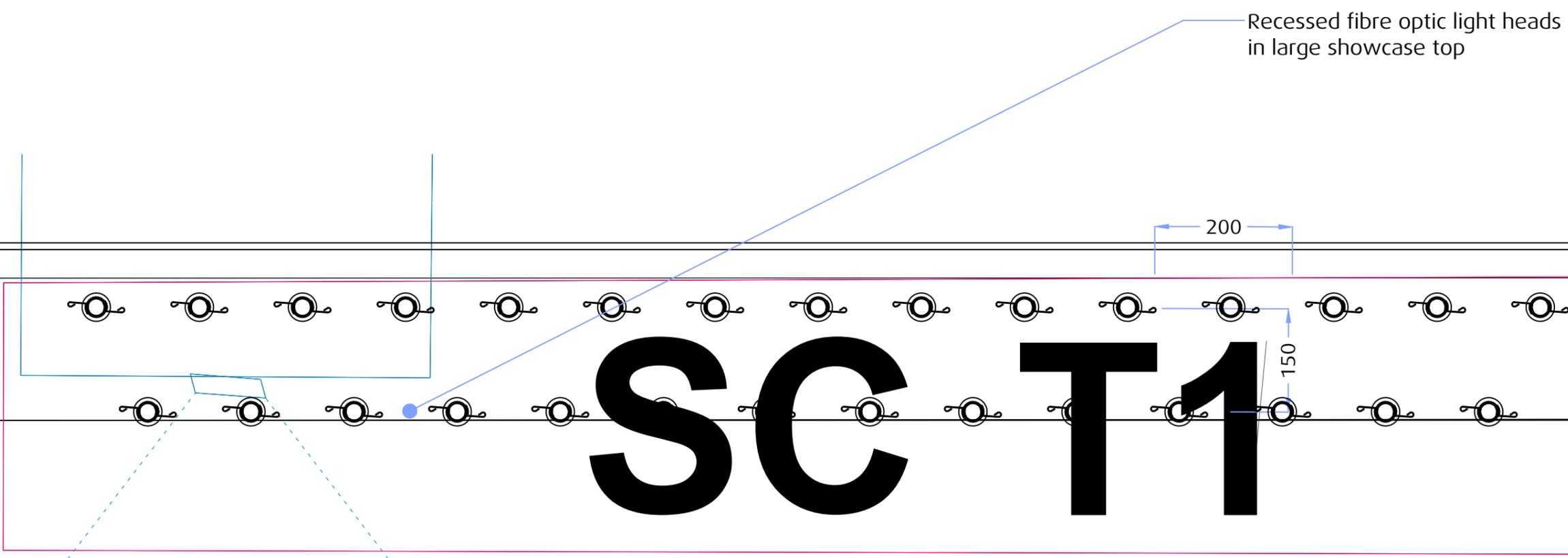
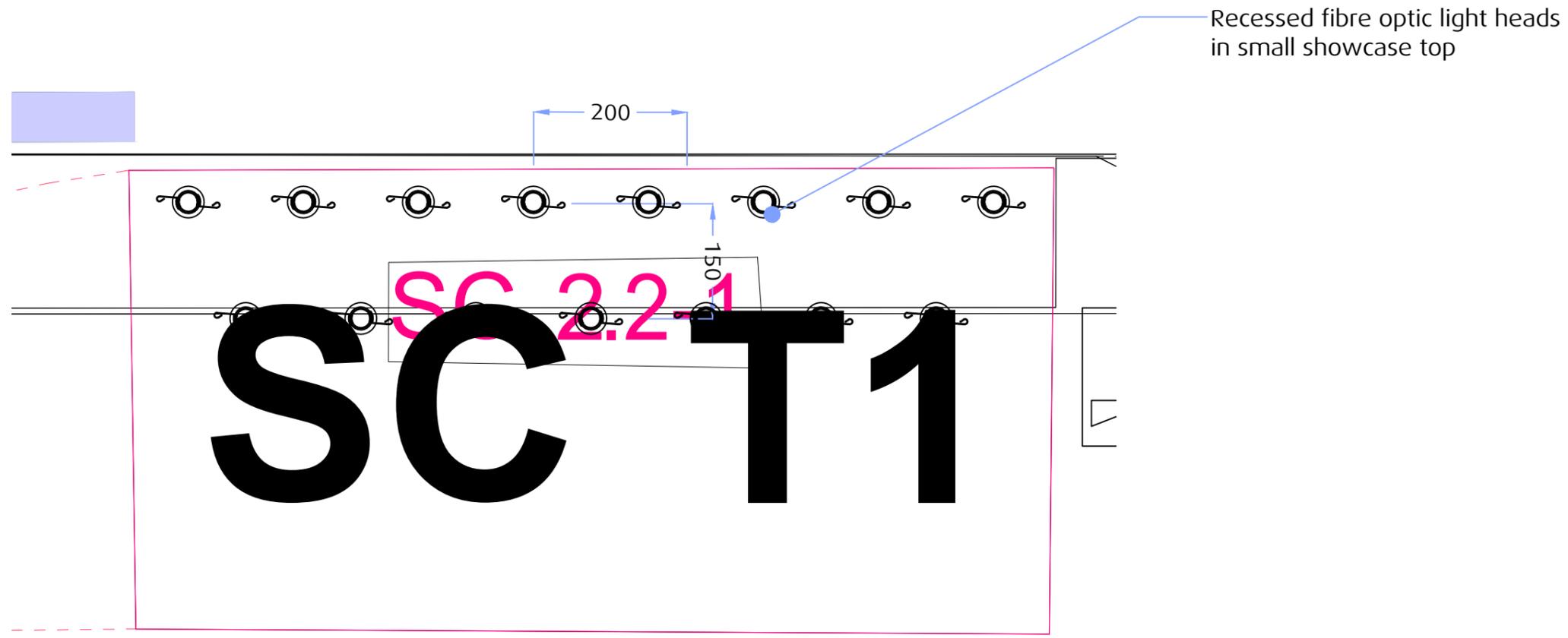
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Client: IWM  
Project: Lest We Forget  
Drawing Title: Wallpaper lighting  
SEG  
Imperial War Museum North

Scale: NTS Date: 6 February 2018  
Dwg no: Look through sketch Rev: /

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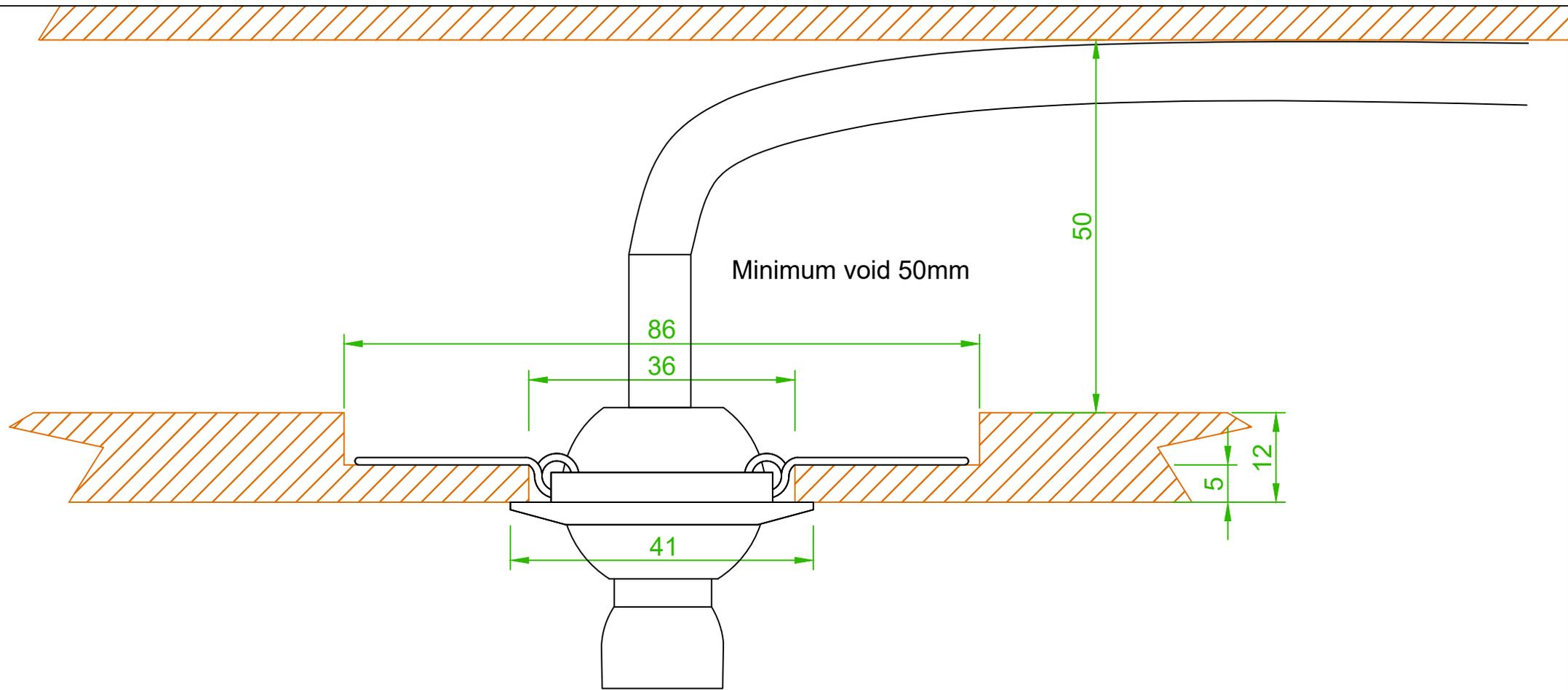
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w: www.luminance.co.uk

Client: IWM  
Project: Lest We Forget  
Drawing Title: Showcase lighting intent  
SEG  
Imperial War Museum North

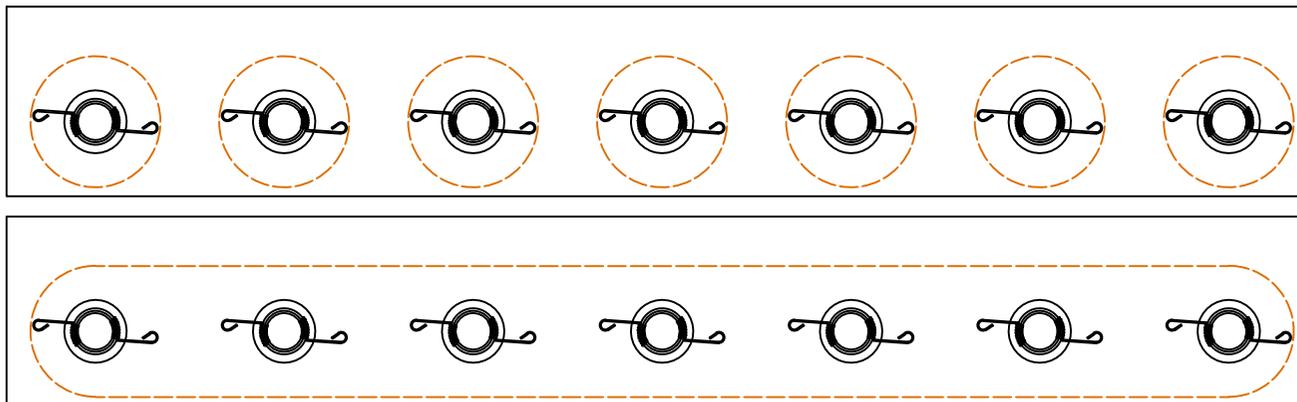
Scale: NTS Date: 6 February 2018  
Dwg no: Showcase Fibre Optic sket /

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Fibre optic light spring clips can only grip thicknesses up to 5mm. Case top to be routed to this thickness either individually or grouped together as below



**Lest We Forget Lighting Schedule**  
605 Lest We Forget Lighting Schedule RevA

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**RevA - Date 6 February 2018**

Count	Ref	Description	Fixture Position	Wattage	Tot W	Manufacturer	Supplier	Part Number	Finish
<b>Ceiling Halo Glow</b>									
8	A	10m Nano Tech LED Strip 3014 120LED/m WW 10w perm Waterproof 24V	Ceiling recess	100w	800w	Epistar	LED Lighthouse	SL10-24V Warm white	N/A
4		Mains to 24V LED Strip Dimmable Driver IP66 200W	Ceiling recess			Unknown	LED Lighthouse	ELED-200-24T	N/A
4		LED Strip Dimmer Switch 1 Gang	Hidden on ceiling			Varilight	LED Lighthouse	ECODIM-TRIAC	N/A
<b>Art/Graphic lighting</b>									
40	B	Twistlock MR16 35W IP44 Outdoor Die-Cast Gimbal	Recessed in ceiling			Ansell	Any	ATLVOG/IP44/B	Black
40		Integral Dichroic Glass 4.7 Watt Warm White GU10 LED Bulb	Recessed in ceiling	5w	188w	Integral	LED Lighthouse	GU10-INT-GLASS-4.7W 2700 kelvin	N/A
10		LED Strip Dimmer Switch 1 Gang	Hidden on ceiling			Varilight	LED Lighthouse	ECODIM-TRIAC	N/A
<b>Lookthrough object lighting</b>									
22	C	Birdies c/w 12v LED lamps	Mounted on rear of setworks			Unknown	IWM Stores	Free Issue	Black
22		GU10 Lamps	Mounted on rear of setworks			Unknown	IWM Stores	Free Issue	N/A
3		Dimmer switches	Mounted on rear of setworks			Unknown	IWM Stores	Free Issue	N/A
<b>Lookthrough Wallpaper lighting</b>									
1	A	10m Nano Tech LED Strip 3014 120LED/m WW 10w perm Waterproof 24V	On floor	100w	100w	Epistar	LED Lighthouse	SL10-24V Warm white	N/A
5		2 Metre Shallow Aluminium Channel For LED Strip Lights	On floor			Unknown	LED Lighthouse	EXTRUSION-02-P2	N/A
1		Mains to 24V LED Strip Dimmable Driver IP66 200W	On floor			Unknown	LED Lighthouse	ELED-200-24T	N/A
1		LED Strip Dimmer Switch 1 Gang	On floor			Varilight	LED Lighthouse	ECODIM-TRIAC	N/A
<b>Escape lighting</b>									
5	D	TYKE 2w LED recessed emergency light	Recessed in ceiling	2w	10w	Philip Payne	Philip Payne	TYKE860 Black	Black
<b>Company</b>			<b>Telephone</b>			<b>Contact</b>			
LED Lighthouse			01422 359563			Sales			
Philip Payne			01217 052 384			Sales			

**12**

# Indicative Programme

## Lest We Forget? Schedule IWMN

@23.02.18

### 2017

Research content development	June 2017 – Feb 2018
Brief developed	Beginning Oct – 13 Oct
Brief signed off	16-20 October
Draft design brief	30 Oct-1 Nov (Claire away w/c 23 Oct)
Design brief signed off	6 – 7 Nov
Appoint Production Manager	November
Content long list	End Nov
Sample text and hierarchy	End Nov
Appoint QS and PD	End Nov
*Loan requests out	*Dec 2017 – Jan 2018 (7.5 weeks)
Concept design	6 Nov-8 Dec (5 weeks)
Concept presentation and sign off	11-15 December (1 week)
Scheme design	18 Dec 2017 - 23 March 2018 (14 weeks inc Xmas break, prob only 13 weeks)

### 2018

Construction tender prep	12 Feb – 23 Feb (2 weeks)
Mainline and section text drafted	14 Feb – 21 March
IWM object conservation and photography begins	26 Feb
*Pre loan assessments begin	*26 Feb
Construction tender out	26 Feb – 16 March (3 weeks)
Content shortlist issued	1 March
Final details from lenders	16 March
Construction tender review	19 March – 23 March (2 weeks)
Captions text drafted	22 March – 2 May (28 days)
Mainline and section text edited	22 March – 5 April
Scheme design presentation & sign off	27 March
Interview and appoint Contractor	by 30 March

First build mtg	11 April
Mainline and section text s/o	6 April
Detailed design	4 April – 4 May (23 days)
Loan paperwork completed	1 May – Maria to confirm
Caption text edited	3 May – 16 May (9 days)
Captions s/o	15 May
Detailed design presentation and s/o	8 May – 11 May (4 days)
Off-site build/preps	17 May- 8 June (3.5 weeks)
Final GIS application submitted	17 May
Graphic production – mainline, section & large graphics	21 May – 1 June
Syria exhibition last day	28 May
Syria decant	29 – 30 May (2 days)
Light fittings remove and relamp	30 May
Syria demo and R&R build	31 May – 27 June (20 days including floor painting and not weekends)
IWM object conservation complete	6 June
Loan object conservation and photography begins	14 June
IWM object photography complete	21 June
Graphic production – captions	25 June – 2 July
Build sign off	27 June
*Loan object conservation and photography complete	*29 June
AV install	28 June – 6 July (7 days)
*All IWM objects and loan items delivered to IWM North	*4 July
AV sign off	6 July
Dressing	5 July – 18 July (10 days)
Dressing sign off	19 July
Light focus track, emergency and cases	21 - 23 July (three days)
FM and lighting sign off	23 July – end of day
Final gallery sign off	24 July
Press & PV	26 July

Open to public

27 July

**2019**

Exhibition closes

24 February 2019

\* dates tbc

<b>Mainline and section text &amp; large graphics</b>	<b>Start</b>	<b>Finish</b>	<b>Duration</b>	<b>Who</b>
Drafting	14-Feb	21-Mar	26 days	LC
Editing	22-Mar	05-Apr	9 days	LC & CW
S/O final text	06-Apr	06-Apr	1 day	LC & CW
Artworking (for review)	09-Apr	20-Apr	10 days	SL
Review and S/O	23-Apr	04-May	10 days	CW
Artworking (print ready files)	08-May	17-May	8 days	SL
Production	21-May	01-Jun	9 days	Contractor
Delivery to site and checked	07-Jun	07-Jun		Contractor & SL
Installed	w/c 18 June			Contractor & SL
<b>Captions</b>	<b>Start</b>	<b>Finish</b>	<b>Duration</b>	<b>Who</b>
Drafting	22-Mar	02-May	28 days	LC
Editing	03-May	16-May	9 days	LC & CW
S/O final text	17-May	17-May	1 day	LC & CW
Artworking (for review)	18-May	30-May	8 days	SL
Review and S/O	31-May	13-Jun	10 days	CW
Artworking (print ready files)	14-Jun	22-Jun	7 days	SL
Production	25-Jun	02-Jul	6 days	Contractor
Delivery to site and checked	03-Jul	03-Jul		Contractor & SL
Installed	05-Jul	19-Jul	11 days	Install team

## Appendices

### Appendix 1

# Pre-Construction Information

# RIDGE

PROPERTY & CONSTRUCTION CONSULTANTS



## Imperial War Museum North

**PRE-CONSTRUCTION INFORMATION**

**LEST WE FORGET? EXHIBITION**

February 2018

Prepared for

**Imperial War Museums North**

Trafford Wharf Road

Stretford

Manchester

M17 1TZ

Prepared by

**Ridge and Partners LLP**

8<sup>th</sup> Floor

Horton House

Liverpool

Tel: 0151 243 3528

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## Introduction

In compliance with the Construction (Design and Management Regulations) 2015, Ridge & Partners LLP have been appointed by Imperial War Museums North as the Principal Designer for a new Lest We Forget? exhibition.

In accordance with the above regulations, the Client wishes to minimise risk to all parties involved in the contract, use and maintenance of the buildings. Following the completion of the project, a Health and Safety File will be handed to the Client to keep for inspection by anybody who needs to make use of the information gained during the development of the project.

The Health and Safety Plan and File are provided for the purpose of conveying information provided by others to those who have a duty to ensure the health and safety of any person at work, any person who is carrying out work or will carry out construction work, maintenance or cleaning work in or on the structure, or any person who may be affected by such work.

Ridge and Partners LLP does not accept any responsibility for the accuracy and currency of the documentation provided by others.

*Note:* For construction purposes the latest issue of documentation from the designers should always be used.

ISSUE RECORD				
Version	Description	Date issued	Prepared by	Checked by
1.0	PCI first issue	21/02/2018	Grant Davidson	GD
2.0	Revision to contact details	23/02/2018	GD	GD
3.0	Revision to contact details	23/02/2018	GD	GD

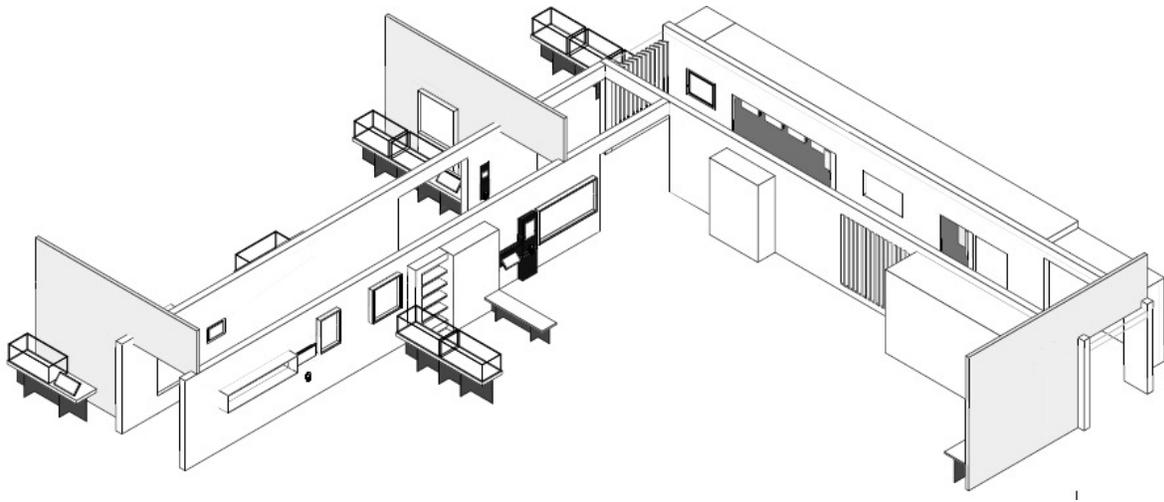
## 1. PROJECT INFORMATION

### 1.1 Project Description

Works comprise erection of a corridor structure as the main feature and free-standing exhibition features for the Lest We Forget? Exhibition at Imperial War Museum North.

A summary of the Schedule of Works follows, the full schedule is detailed in the Tender Document.

- Making good works from demolition including associated repairs and painting (minimal expected as the existing displays for the Syria exhibition are not fixed to the floor)
- Construction of new walls and set-works
- Electrical and data installation
- Installation of set works, graphics and lighting



#### Specification Objectives

The object of this project is to remove the existing installation (Syria) and replace with a new design.

The following is a summary of the issues, defects and vulnerable areas our inspection detected;

- There is a roller shutter door and access to the adjacent space, providing a route for deliveries and removal of waste.
- Segregation of the working space can be achieved, and access controlled.

Ridge have been appointed by Imperial War Museum North to undertake the role of Principal Designer, therefore if any design work continues into the construction phase the Principal Contractor must share any relevant information for Health and Safety with the Principal Designer and other members of the project team.

## 1.2 Project Particulars

### CDM Duty holders

#### CLIENT

**Name:** Imperial War Museum North

**Contact:** Claire Wilson

**Address:** The Quays Trafford Wharf Road Manchester M17 1TZ

**Telephone:** 0161 836 4027

**Email:** cwilson@iwm.org.uk

#### DESIGNER

**Name:** Imperial War Museum Design

**Contact:** Anna Montgomery

**Address:** Lambert Road London

**Telephone:** 020 7091 3149

**Email:** amontgomery@iwm.org.uk

#### PRINCIPAL DESIGNER

**Name:** Ridge and Partners LLP

**Contact:** Grant Davidson

**Address:** 8<sup>th</sup> Floor Horton House, Exchange Flags, Liverpool L2 3YL

**Telephone:** 0151 243 3528 / 07825 247 366

**Email:** gdavidson@ridge.co.uk

#### PRINCIPAL CONTRACTOR

**Name:** TBC

**Contact:**

**Address:**

**Telephone:**

**Email:**

**The Principal Contractor must provide the Principal Designer with full details of any additional designers associated with the construction phase.**

### Other Key Parties

#### EXHIBITION PRODUCTION MANAGERS

**Name:** Fraser Randall

**Contact:** Rick Locker

**Address:** The Ship 228 Long Lane London SE1 4QB **Telephone:** (DD) 0207 234 9546

**Email:** Rick.Locker@fraserrandall.co.uk

#### QUANTITY SURVEYOR/CONTRACT ADMINISTRATOR

**Name:** Greenway Associates

**Contact:** Jon Kirby

**Address:** Melrose House, 42 Dingwall Road, Croydon CR9 2DX

**Telephone:** 0208 633 1500

**Email:** jon@greenwayqs.com

### 1.3 Site Location

The site is located on Trafford Wharf Road, within Trafford and adjacent to Salford Quays. The new tram line is currently being installed along Trafford Wharf Road, which includes traffic management. There is on-site contractor parking facility by prior agreement with IWMN.



### 1.4 Project Programme

The key dates for the Principal Contractor to consider are as follows:-

- Anticipated project start: 31<sup>st</sup> May 2018 Demolition and fit out
- Anticipated completion of fit out: 27 June 2018
- Anticipated exhibition completion date: 25<sup>th</sup> July 2018

Working hours to be Monday to Friday – 08:00 – 18:00. Weekend working will only be allowed with the prior agreement of the Imperial War Museum North. Also the contractor may only extend working hours on weekdays again subject to the Imperial War Museum North.

### 1.5 Extent and location of existing records and plans

The Principal Contractor must ensure that they are in possession of adequate information prior to the commencement of works on site.

Save for the temporary access, it is not envisaged that any works that will disturb the building fabric will take place during these works. Should any additional works be required that may disturb the fabric of the building then prior to works progressing approval should be sought.

No other existing records and plans have been received by the Principal Designer at the time of issue.

### 1.6 Regulatory Requirements

The Construction (Design and Management) Regulations 2015 and the Workplace (Health, Safety & Welfare) Regulations 1992 will apply to the proposed works.

The Works must be undertaken in compliance with Statutory Regulations, Building Regulations, Gas Safety Regulations, Water By Laws and IEE Regulations.

NB - any subsequent Principal Contractor design works must also be carried out in accordance with the requirements of the Building Regulations, Fire Regulatory Reform Safety Order and current legislation requirements.

## 2. CLIENT'S MANAGEMENT REQUIREMENTS

### 2.1 Management of the Construction Work

The Principal Contractor must ensure compliance with all relevant legislation, approved codes of practice and best practice. The construction phase plan should be developed in consultation with the contractors who will be affected by it, and the Principal Contractor should request any additional information required from the Client's team for the plan through the Principal Designer.

The Principal Contractor shall submit the construction phase plan and details of the welfare arrangements to the Principal Designer for review at least two weeks before the intended commencement date. A copy of the vetting sheet to be used by the Principal Designer in this respect is included in the appendix. The Principal Contractor shall not commence any work on site (including site set up) until he has received written confirmation from the client that his construction phase plan and welfare arrangements are satisfactory.

Detailed proposals for the following shall be included in the plan submitted:

- Site access plan
- Site set up method statement and risk assessments
- Design risk reduction where appropriate
- Compound arrangements
- Storage & transportation of redundant materials
- Site supervision

The Principal Contractor is expected to review and revise his construction phase plan as necessary throughout the construction period. He should note, however, the Regulations do not require such revisions to be approved by either the Client or Principal Designer; however this will be an agenda item during site visits and audits. The Principal Contractor is to ensure that the following provisions are in place:

- Produce and the **Construction Phase Health and Safety Plan** which clearly highlights the procedures for securing safety in planning, consultation with the project teams in accordance with the CDM 2015 Regulations and other relevant statutory regulations.
- **Method of Construction** – with due consideration for dust suppression, extraction, suitable plant and equipment which secures safety and take into account the site constraints. Ensure that there is adequate lighting in all working areas.
- **Lifting arrangements:** all procedures are to be in accordance with LOLER and HSE guidance / best practice. Manual handling arrangements are to take into account (TILE) and Hierarchy of control adopted to ensure that lifts are mechanised where applicable.
- **Waste management** procedures are to be highlighted with the Construction Phase Health and Safety Plan which are to include licensed removals information and Hazardous Waste Consignments.
- **Site set-up**, method statements and risk assessments.
- **Design risk reduction** – in accordance with the general Principles of Prevention (where this may be applicable). All temporary works if required are to be subject to consultation with the structural engineer and subject to a temporary works coordinator.
- **Site segregation** – Principal Contractor is to clearly detail the hoarding specification, access and egress routes as well as the overall site logistics.
- **Welfare provisions** – Compliant with Schedule 2 of the CDM Regulations 2015.
- **Storage & transportation** - Traffic Management Plan / storage to be highlighted in the Construction Phase Health and Safety Plan.
- **Safety precautions** to be taken whilst fragile materials are removed from site.
- **Safe working procedures and controls** to be put in place for all high risk operations in accordance with Schedule 3 of the CDM Regulations 2015.
- **Site supervision** - Suitably qualified and experienced person(s) are to be employed to ensure that health and safety is secured throughout the works.
- **Occupied building:** Protocols for working within close proximity to the client's staff and students.
- **Ongoing liaison** with the client to ascertain if any other contractors will be working on the buildings so that this can be coordinated.
- **Signing in system** – All operatives are to sign in prior to accessing the site areas and to undertake an agreed Site Induction.

## 2.2 Progress Safety Report

The Principal Contractor shall include detailed reports on site health and safety management as part of his progress reports, which shall include:

- Accident and incident rate;
- Summary of all accidents/incidents including minor and near misses that have occurred during the reporting period and actions taken to prevent a recurrence of similar incidents;
- Copies of all formal site inspection reports for the period, details of any particular actions taken in consequence of the reports, and a summary of the main findings;
- Report on any significant high risk activities planned to take place over the next reporting period and how the risks will be managed;
- Report on any significant high risk activities that took place over the last period and how the risks were controlled;
- Report on any amendments made to the construction phase plan during the period (Review schedule of risk assessments and method statements);
- Confirmation of the number of people inducted during the period;



- Confirmation of toolbox talks and other onsite training undertaken during the period;
- Details of the welfare facilities on site and associated cleaning regime;
- Confirmation of health and safety coordination meetings held in the period e.g. Meetings with the Client's Site Representative, contractors safety coordination meetings;
- Confirmation of site security arrangements and details of any breaches of site security during the period.

### 2.3 Health and Safety Goals

The following health and safety goals have been set for this project. Achievement in relation to these goals will be measured as indicated and reported to the client at progress meetings.

TARGET	MEASUREMENT PROCEDURE	TIMESCALE
No lost-time accidents	Accidents/near misses to be recorded	Ongoing
All personnel to receive site induction prior to commencement of work	Principal Contractor to keep induction records available for inspection	Prior to commencement & ongoing
Weekly formal site health and safety inspections	Principal Contractor to keep records of inspections available on site and include copies with his progress reports	Weekly
Appropriate PPE to be worn at all times	Principal Contractors regular site safety inspections  Observation by Client and consultants visiting site.	Ongoing
Positive feedback from Client	Client feedback to be on agenda for progress and project review meetings	Ongoing
Noise	Fit all compressors, percussion tools and vehicles with effective silencers of a type recommended by manufactures of the compressors, tools or vehicles	Ongoing

### 2.4 Site Rules

- Display Statutory Notices, PI Insurance, Health & Safety at Work Act Law
- Poster, emergency procedures, key contact information for site manager and first aider.
- Contractor parking to be agreed and restricted to designated areas in agreement with the Client/ Contract Administrator.
- Expected standards of professional behaviour to be maintained at all times by all site operatives
- Use of radios / music prohibited on site
- No smoking within the site compound areas or within any areas on site
- No dropping/bombing of materials will be tolerated
- No accumulation of debris/waste materials /off cuts etc.

- Stringent housekeeping measures to be adhered to by all site operatives
- PPE to be worn at all times when within site working areas and Hard Hats are to be enforced where there is the potential risk of any head injuries.

IWMN operate specific rules for 'Safe Working Conditions and Protection of its Staff, Visitors and Collection', referred to as Contractor Induction Guidelines 2013 as included with the tender pack.

## 2.5 Communications

Good communication is vital to ensure that the project will be well managed and minimise risks to health and safety. It is the responsibility of all Designers, Contractors and the Principal Contractor to liaise with the Principal Designer through the duration of the pre-construction phase, i.e. *any phase in which design is undertaken*. To ensure work is co-ordinated properly all duty holders must attend design and progress meetings as required in order to ensure that details of health and safety risks are shared amongst the project team.

The Principal Contractor should highlight any risk information which has not previously been recorded as soon as it becomes available / known to him. The Principal Contractor will be required to speak to the Principal Designer on a regular basis and keep him apprised of forthcoming works that may affect:

- The operations of the Client;
- Any third parties;
- The safe construction of the building;
- The safe management (i.e. cleaning and maintenance) of the final project.

In accordance with **Regulation 14** of the **CDM 2015 Regulations** the Principal Contractor must consult and engage with the workforce to ensure that measures for their health, safety and welfare are developed, promoted and checked for effectiveness. Consultation must be carried out in a timely manner.

Health and safety will be on the agenda for all progress meetings. This should include a discussion of any key up and coming health or safety risks / issues, as well as a report on achievement with respect to project health and safety targets.

### Site Meetings

Hold weekly site meetings as necessary for the proper management and co-ordination of the Contract and as required by the CA. Meetings will normally be held every four weeks. Attend all meetings and inform subcontractors and suppliers when their presence is required. Notify all consultants. The CA will take the Chair and minutes will be taken and distributed by the CA.

## 2.6 Welfare Provision / First Aid

### Welfare

It is understood that the Principal Contractor will be able to use existing on site facilities for welfare purposes. The toilet facilities are cleaned and serviced by the client and it is noted they are shared.

If this is not the case the Principal Contractor should contact the Principal Designer immediately.

### First Aid

Provisions for first aid must include an adequate number of first aiders/appointed persons and first aid kits, as well as other facilities appropriate to the risks faced by those on site. First aid boxes should be strategically sited in relation to the work area and be conspicuously marked.

The person in charge of the box should ensure that it is kept properly stocked and in a clean, serviceable condition. Details of first aid provisions are to be included in the Principal Contractor's Construction Phase Plan and displayed on the site notice board.

### 2.7 Hoarding Requirements and any additional Security Measures

The Principal Contractor will be responsible for security of the designated work area. The Principal Contractor shall provide and maintain all necessary signage, plus any necessary additional barriers, to segregate his working area(s) from third parties. Signs 'construction works in progress' will need to be displayed.

At the end of each day the Principal Contractor shall ensure that the area of works or contractor's areas are secured as appropriate and that no building materials etc. are left in a position that would cause injury or obstructions. Any ladders used for scaffold access are either removed or rendered inaccessible to third parties. The continual maintenance of site security and the building users safety is vital throughout the Contract period.

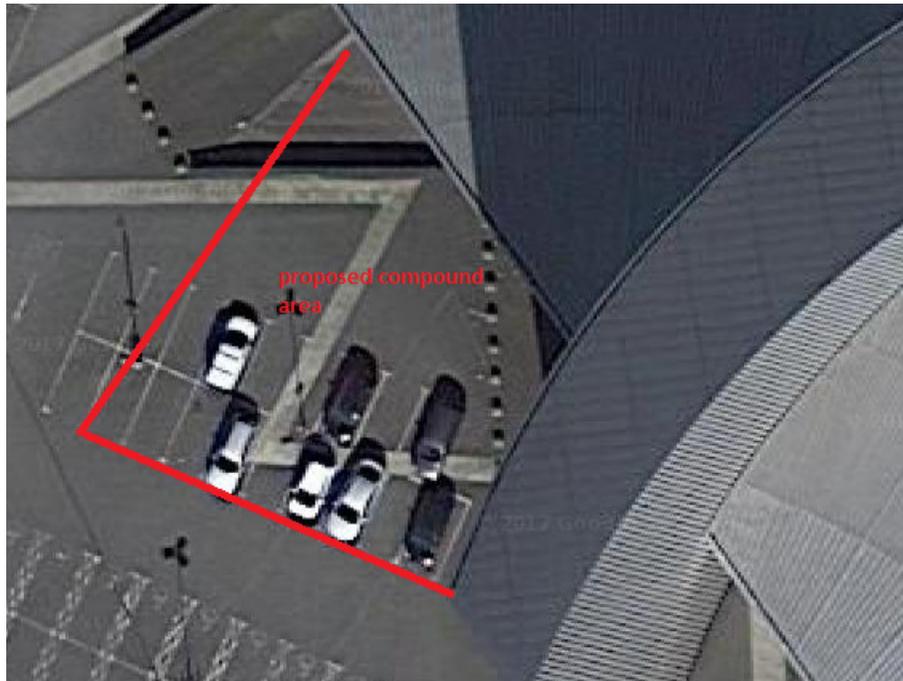
Provide temporary fencing, hoardings, screens, vans, planked footways, guard rails, gantries and the like as may be necessary for protecting the public and others, for the proper execution of the Works and for meeting the requirements of the Local or other Authority.

### 2.8 Site Compound and Parking Restrictions

The Principal Contractor should detail the site logistics for the compound areas / storage areas on the sites.

The site logistics should include marked up details of the extent of fencing around the sites, the proposed parking locations for contractor's vehicles, traffic management and the unobstructed routes to be maintained for Emergency Services vehicles and refuse collection.

Provide any deemed necessary temporary office, mess room and sanitary accommodation required. This is proposed as a fenced area adjacent to the main entrance.



## 2.9 Fire and Emergency Procedures and Means of Escape

The Principal Contractor shall liaise directly with the client with respect to their fire and emergency procedure during the course of the project

The Principal Contractor shall ensure that sufficient qualified first aiders and/or appointed persons are available at all times. All contractors, sub-contractors and visitors shall be made aware of the identity of these people. Suitable means of ensuring that first aiders and appointed persons can be readily identified include displaying their names on the site notice board and requiring them to wear suitable labels on their hard hats.

The Principal Contractor shall keep records of all accidents and near misses that occur on site, including copies of any forms sent by contractors to the HSE under RIDDOR. All major occurrences shall be notified to the Principal Designer as soon as possible, and a copy of all accidents / near miss records shall be included in the Principal Contractor's regular progress reports.

Whilst certain areas of the sites will have moment restrictions in terms of works area segregation, this will in no way affect or interfere with fire exits / emergency routes to the fire assembly points.

## 2.10 Permits to Work / Authorisation Requirements

The Principal Contractor shall ensure that a permit to work system is employed at the site where necessary, and particularly in relation to:

- Hot works;
- Roof work;
- High and low voltage electrical work;
- Confined spaces;

### 2.11 Smoking Restrictions

No smoking will be permitted in any site accommodation or in any area of work.

### 2.12 Noise Restrictions

The playing of radios will not be permitted on site at any time.

## 3. MANAGEMENT OF HEALTH AND SAFETY HAZARDS OF THE SITE

### 3.1 Site Boundaries, Access, and Restrictions on Deliveries and Storage

The Principal Contractor shall ensure that access for emergency vehicles is maintained at all times during the construction period and that during the taking of deliveries all local roads are kept clear. The Principal Contractor must ensure that all appropriate measures are taken to segregate the works from all staff and users of the building in situ that will remain in occupation throughout the duration of the works.

The Principal Contractor will be required to take into account all existing traffic restrictions or hazards inherent to the site area and develop a safe system of works to control this. Preventative measures must be taken to ensure that working areas are segregated, well signed and barriered to ensure that accidental access into working areas are eliminated.

The Principal Contractor will be required to assess the risks inherent with the area so that any risks can be avoided which should include but not limited to: weight / size restrictions (plant), access restrictions e.g. any road closures or works being carried out within close proximity to the site.

Restrictions on parking of the Contractor's and employees' vehicles: On site car park, limitations may apply to Contractor parking, although sufficient parking should be available.

### 3.2 Transport Arrangements and Vehicle Movement Restrictions

The Principal Contractor shall submit a traffic management plan for review, which shall include details on control of delivery vehicles. The Principal Contractor shall adopt good practice in planning the site layout and consider the following:

- Reversing should be minimised wherever possible;
- Parking should be made available away from lay-down areas;
- Pedestrians and vehicles should be segregated;
- A one way system should be implemented if possible.

#### Key Points

There is an entrance to the public car park, with pay to park spaces available

There is a roller shutter door providing access to the loading bay.

### 3.3 Adjacent Land Uses

Prevent damage to existing buildings, fences, gates, walls, roads, paved areas, other of the site features, which are to remain in position during the execution of the Works.

Works adjacent to or in public areas shall be executed using HS(G) 151 – ‘Protecting the public, your next move’ as a guideline throughout.

### 3.4 Existing Service Locations

The Principal Contractor is to ensure that all live services are disconnected / isolated prior to any intrusive works e.g. If any cables have to be moved or relocated then this must be done by a suitably skilled person. Any disconnections must be subject to an isolations certificate being retained by the competent person(s) responsible for the isolation.

### 3.5 Existing Structures

There are no known issues with the existing structures.

### 3.6 Existing Plant & Equipment

The Principal Contractor’s site manager is to ensure that good communication is maintained with the Client, Clients in-house facilities team and Principal Designer throughout the duration of the works.

The appointed Principal Contractor will be required to undertake suitable and sufficient site investigations to assess the access requirements as well as the location of existing plant and equipment.

### 3.7 Fire Precautions

The Principal Contractor shall take all necessary precautions to prevent fires from occurring and to minimise effects should there be a fire. He shall work in accordance with the HSE publication “HSG 168 Fire Safety in Construction”, available via pdf download at HSE books:

<http://books.hse.gov.uk/hse>

### 3.8 Fire and Emergency Procedures and Means of Escape

The Principal Contractor liaise with the Client with regards to the emergency procedures for the site, which should be explained to everyone during induction and posted on the site notice board.

The Principal Contractor shall ensure that sufficient qualified first aiders and/or appointed persons are available at all times. All contractors, sub-contractors and visitors shall be made aware of the identity of these people. Suitable means of ensuring that first aiders and appointed persons can be readily identified include displaying their names on the site notice board and requiring them to wear suitable labels on their hard hats.

The Principal Contractor shall keep records of all accidents and near misses that occur on site, including copies of any forms sent by contractors to the HSE under RIDDOR. All major occurrences shall be notified to the Principal Designer as soon as possible, and a copy of all accidents / near miss records shall be included in the Principal Contractor’s regular progress reports.

## 4. HEALTH HAZARDS AND RESTRICTIONS

### 4.1 Asbestos

The building was completed in 2002 and was designed and constructed **without** the use Asbestos.

Where any concerns are raised with materials, the CA is to be notified and works suspended.

### 4.2 Existing Storage of Hazardous Materials

No existing storage of hazardous materials has been advised by the client. The Principal Contractor will be required to visit site and review all of the tender information including the health and safety file to ascertain if the above is applicable.

The Principal Contractor should ensure safe storage for any hazardous materials including methods for ensuring that any hazardous/flammable materials are stored in accordance with the manufacturer's safety data sheets and segregated to prevent unauthorised access or exposure to combustible items. Suitable and sufficient measures are to be put in place to protect against vandalism/arson.

### 4.3 Health Risks Arising From Client Activities

The Principal Designer has not been advised of any health risks that may arise from Client activities.

Any unforeseen eventualities during the construction phase must be brought to the attention of the Client / Principal Designer as soon as possible.

## 5. DESIGN AND CONSTRUCTION HAZARDS

### 5.1 Significant Risks Identified During Design

#### Scaffold Location

It is not anticipated that scaffold is to be erected within the working area of the Imperial War Museum North, however MEWPs are likely to be required. It is understood that at this time no structural advice or investigations have been undertaken to establish the loading capacity of this floor to suitably take the weight associated with the scaffold or access equipment. The Principal Contractor should make suitable enquiries and investigations to ascertain the suitability of his proposals and scaffold design with respect to this entrance area.

Contractors must take all necessary precautions to deal with normal construction risks, such as:

- Occupied adjacent buildings with restricted areas, entrances and fire exits that are to be kept clear at all times
- Site Security
- Lifting operations if applicable
- Traffic Management, deliveries to site (in accordance with IWM's existing traffic management system)
- Removal of waste/debris materials
- Working at Height (edge protection or lack of)
- Manual handling
- Slips and trips
- Waste disposal;
- Noise, dust, vibration etc.
- High & low voltage electrical works
- Fumes/vapours
- Hazardous materials
- Asbestos containing materials

Note the above list is not exhaustive.

### 5.2 Ongoing Design Work and Design Changes

The principles of prevention must be applied to any ongoing design work, particularly considering:

- Construction/maintenance workers engaged directly in the hazardous activity;
- Other construction/maintenance workers who may be affected, e.g. those working below high level working;
- Other contractors and building users occupying the building whilst construction works are carried out;
- General public, including visitors.

Full details of any design risk management steps taken by the Principal Contractor should be provided to the Principal Designer. Any design changes which have an impact on health and safety, particularly those which are made on site, must be assessed by the design team, and provided to the Principal Designer for comment prior to construction work being undertaken on the change.

### 5.3 Preventing falls / Fragile Surfaces

The Principal Contractor is to ensure that the hierarchy of control is employed when planning and carrying out any work at height operations and that all works at height are strictly in accordance with the Work at Height Regulations 2005.

#### Ladders

Ladder work should only be permitted for low risk, short duration works. Only aluminium, Class I, heavy duty stepladders may be used, with the exception of when electrical works are being carried out, in which case wooden or fiberglass, (minimum EN131) industrial stepladders should be used. Further information about the correct use of ladders and stepladders can be found in guidance issued by the HSE <http://www.hse.gov.uk/pubns/indg455.pdf>

#### Scaffolding

The Principal Contractor must ensure that all scaffolding is erected, altered, maintained and dismantled by competent persons in accordance with The Work at Height Regulations 2005 and TG20:13 and SG4. The Principal Contractor must ensure that risk assessments and method statements are developed and forwarded by the scaffolding contractor. A handover certificate will need to be provided to the Principal Contractor and retained on site prior to the use of the scaffold.

All scaffolding must be inspected by a competent person and the results recorded on a “scaffold inspection report form / scaff tag”. Inspections are to be carried out every seven days and thereafter:

- Any substantial addition, dismantling or other alteration.
- After any event likely to have effect the strength or stability of the scaffold e.g. inclement weather.
- A record of inspections is to be kept on site by either a scaff tag or scaffolding inspection register. The Principal Contractor is to assess the advised requirement for the following:
  - Protective fans / netting.
  - Protective sheath on vertical standards (Ground level access / egress paths).
  - Lighting in access / egress areas (if applicable).
  - Exclusion zones (if applicable).
  - Safety open shut gates.
  - Chute leading into a covered / segregated skip (or if the site does not permit this the Principal Contractor will be required to include their provisions within their Construction Phase Health and Safety Plan).
  - Lifting hoist (to be considered or an alternative method of transporting materials to the top lift / roof level forwarded).

#### Mobile Tower

The Principal Contractor is to ensure that where a mobile platform is required, a PASMA or equivalent trained person erects the platform. Platforms must be inspected by a competent person in accordance with the requirements of The Work at Height Regulations 2005 and the results recorded. Access to mobile towers must be internally via access traps only. Towers must not be used unless brakes are applied and the outriggers are in position, if required.

#### Podiums

The Principal Contractor is to ensure that podiums are not used unless assembled by a competent person in accordance with the manufacturer's instructions. When in use all wheels must be locked with barriers / gates in place and operable. Operatives must dismount any podium before moving it to a new position. Hop ups are for low level access only as determined by risk assessment.

#### Mobile Elevated Work Platforms (MEWPs)

Though unlikely to be used during these works, if required, the Principal Contractor must ensure that MEWP operators have undergone a recognised operator training course (such as IPAF) for the specific type of MEWP they are using and that the expiry date for their renewal / refresher training has been checked. A suitable & sufficient risk assessment must be undertaken, hazards identified and control measures / safe system of work put in place before use.

The Principal Contractor is to ensure that all operations are undertaken in accordance with the Working at Height Regulations 2005 and that a programme of daily visual checks, regular inspections and servicing schedules is maintained as per the requirements of LOLER.

#### 5.4 Cranes / mechanised lifting of heavy items

The Principal Contractor is to ensure that any cranes used are to comply with the requirements of the LOLER. All lifting appliances and gear must have certificates of test and thorough examination available on site.

#### 5.5 Noise

The Principal Contractor is to ensure that appropriate control measures are implemented to ensure that noisy works are controlled to prevent disturbance to the building users, contractors and others within the vicinity of the works.

Short & long term hearing loss can be caused by frequent or infrequent exposure to loud noise within the workplace. The requirements of the Control of Noise at Work Regulations 2005 must be met at all times. The Principal Contractor shall ensure that all operations are risk assessed and measures identified to eliminate or reduce risks from exposure to noise to protect the hearing of operatives. Hearing protection must be available / provided and the mandatory use of enforced (as determined by the exposure limit / exposure action values calculated).

The HSE have produced guidance material for employers on controlling the risks of noise at work - <http://www.hse.gov.uk/pubns/indg362.pdf>

#### 5.6 Vibration (hand-arm)

Hand-held power tools transmit vibration to the user. Regular and frequent exposure to hand-arm vibration can cause operatives to develop permanent health effects, such as hand-arm vibration syndrome (HAVS – a collective term for a range of conditions) and carpal tunnel syndrome.

The Principal Contractor is to ensure that the requirements of the Control of Vibration at Work Regulations 2005 are adhered to. Basic control measures to reduce vibration from power tools must be applied and information, training and health surveillance must be sufficiently provided.

Information about the vibration magnitude transmitted by power tools is available from the manufacturer / hiring company. Employers should use this information to calculate exposure levels, the HSE provide guidance and a calculator tool to assist with this:

<http://www.hse.gov.uk/VIBRATION/hav/vibrationcalc.htm> - Hand-vibration calculator to calculate precise vibration exposure, and;

<http://www.hse.gov.uk/VIBRATION/hav/readyreckoner.htm> - Basic guidance table for quick reference

## 5.7 Dust

The Principal Contractor is to ensure that where dust is generated, the requirements of the Control of Substances Hazardous to Health (COSHH) Regulations 2002 are met. An Air Quality (Dust) Risk Assessment (AQDRA) must be undertaken to cover all of the physical activities that will occur on site during these works, and where required an Air Quality (Dust) Management Plan (AQDMP) implemented. Specific control measures shall be identified during the undertaking of task specific risk assessments, but the Principal Contractor shall maintain the following general control measures where appropriate:

- Area / material to be dampened down
- Equipment to be fitted with on-tool extraction
- Local exhaust ventilation to be installed
- Provide information, training & guidance to operatives on the hazards & risks of substances and equipment used
- Provide suitable PPE & RPE

## 5.8 Lone working / Confined spaces

A confined space is not just determined by its size but by the nature of the risk it could pose such as intoxication, suffocation or explosion.

The Principal Contractor shall refer to the Confined Spaces Regulations 1997 to determine if an area of work can be considered a confined space. Where this is the case they will impose a Permit to Work System supported by risk assessments and method statements.

Although lone working is not envisaged on this project, the Principal Contractor must carry out a suitable Lone Working Risk Assessment if any lone working takes place.

## 5.9 Structural Stability / Temporary works

The Principal Contractor shall ensure that all scaffolds are inspected regularly by a competent person as required by the Works at Height Regulations and these inspections are recorded and are available to view on site in the event of inspection.

## 5.10 Electrical Safety

Where possible battery operated portable equipment and hand tools shall be used. All other portable equipment and hand held tools must be 110V rated. The supply for this equipment is obtained from an isolating transformer having its centre tapped and earthed. All socket outlets, plugs and connectors must

comply with BS 4343. Note – this requirement is applicable even if an RCD is installed at the origin of the supply.

- Only operatives certified and capable of working to the 17 Edition IEE Regulations can undertake electrical works.
- Persons will not be permitted to work on services except for testing and commissioning under strictly controlled conditions, under a permit to work system after a detailed risk assessment and method statement has been produced.
- Any works on live services shall be undertaken in accordance with the Electricity at Work Regulations 1989.
- Electrical contractors are to provide test certificates for all new installations and provide copies of manuals and maintenance procedures.

### 5.11 Sun exposure (UV radiation)

During this project operatives will be required to work outside, exposing them to ultraviolet (UV) rays from sunlight. The Principal Contractor is to ensure that operatives are sufficiently protected from the hazards associated with exposure to the sun, such as sunburn, heatstroke and dehydration. General control measures include:

- Wearing a long-sleeve top that covers the arms
- Wearing a hat with a brim or flap that covers the back of the neck and ears
- Applying sunscreen/sunblock to exposed skin
- Drinking plenty of water
- Job rotation and staying in the shade whenever possible

## 6. THE HEALTH AND SAFETY FILE

The Health & Safety File provides information needed to allow future construction work, which includes cleaning, maintenance, alterations, refurbishment and demolition, to be carried out safely. The information in the file should alert those doing the work to the risks involved and help them to decide how to work safely. The file is a separate document to any other documents required under the contract, such as the building manual and / or operating and maintenance manuals.

The Principal Designer is responsible for preparing the Health and Safety File and handing it to the Principal Contractor for completion at the end of the project. All designers and contractors have duties under the CDM Regulations to promptly provide information for the file.

A list of information required to be included in the file is included in the appendix to this document. A detailed schedule and programme of information to be provided by individual contractors and designers shall be drawn up by the Principal Designer in consultation with those organisations/ persons. This schedule will be reviewed at regular intervals during the construction period to ensure that all necessary information will be compiled into the file prior to completion. **The health and safety file must be provided a minimum of two weeks prior to practical completion.**

**APPENDIX A – DESIGN RISK MANAGMENT**

## **APPENDIX B – FORM F10 NOTIFICATION**

It is not anticipated that more the 500-person days will be involved in the works or 20 persons on site at any one time. If these are exceeded, please advise as soon as possible.

If applicable, a copy will be provided to the Principal Contractor for display on site upon the Principal Designer's approval of the construction phase plan.

## APPENDIX C – CONTENTS OF THE H&S FILE

Section	Required on this Project	Provided by
<b>Section 1.0 – Introduction</b>	<b>Yes</b>	<b>Ridge</b>
<b>Section 2.0 – Document Control</b>	<b>Yes</b>	<b>Ridge</b>
<b>Section 3.0 – Project Particulars</b>		
3.1 Project Description	<b>Yes</b>	<b>Ridge</b>
3.2 Project Location	<b>Yes</b>	<b>Ridge</b>
3.3 Copy of F10 Notification	<b>NA</b>	
<b>Section 4.0 – Project Directory</b>		
4.1 Design Team	<b>Yes</b>	<b>Ridge</b>
4.2 Trade Contractors	<b>Yes</b>	<b>Principal Contractor (PC)</b>
4.3 Suppliers	<b>Yes</b>	<b>PC</b>
<b>Section 5.0 – Specifications/Building Certificates/ Handover</b>		
5.1 Specifications	Yes	<b>PC</b>
5.2 Compliance with Building Regulations	NA	
5.3 Copy of Completion Certificate	NA	
5.4 Schedule of Warranty & Maintenance Periods	NA	
5.5 Copies of Guarantees & Warranties	NA	
5.6 Snagging List	NA	
5.7 Schedule for the Provision of Outstanding Information	Yes	<b>PC</b>
<b>Section 6.0 – Design Criteria</b>		
6.1 Architect	Yes	<b>PC</b>
6.2 Structural	NA	
6.3 Electrical	Yes	PC
6.4 Mechanical	NA	
6.5 Internal Design	NA	
6.6 Landscape Design	NA	
<b>Section 7.0 Residual Risk Register</b>		
7.1 Architectural	Yes	<b>PC</b>
7.2 Structural	NA	
7.3 Mechanical	NA	
7.4 Electrical	NA	
7.5 Internal Design	NA	
7.6 Landscape Design	NA	
<b>Section 8.0 Building Strategies</b>		
8.1 Cleaning & Maintenance Strategy	Yes	PC
8.2 Internal	Yes	
8.3 External	NA	

<b>Section 9.0 – Certificates / Warranties – Where necessary.</b>		
9.1 Electrical Installation Certificates	Yes	PC
9.2 Fibre Optic Cable Test Certificates	NA	
9.3 Gas Installation test Certificates	NA	
9.4 Cranes, hoists, lifting beams test certificates	NA	
9.5 Lift passenger and goods test certificates	NA	
9.6 Boilers pressure vessels and pipe work test certificates	NA	
9.7 Mechanical Ventilation and Plant and installation air test certificates	NA	
9.8 Heating Plant Commissioning Records	NA	
9.9 Mechanical Ventilation/Air Conditioning Commissioning Records	NA	
9.10 PHE Installation Certificates	NA	
9.11 Details of Sterilisation & Chlorination	NA	
9.12 Water Sampling Test Results	NA	
9.13 Other Plant Installation – BMS	NA	
<b>Section 10.0 Fire Precautions</b>		
10.1 Copies of As Built Plans sufficiently detailed to satisfy regulation 16b, as referred to in approved document B of volume 2.	Yes	PC
10.2 Schedule of Fire Appliances, Detectors, Alarms & Signs	NA	
10.3 Copies of Test Certificates	NA	
10.3.1 AFD	NA	
10.3.2 MCPs	NA	
10.3.2 VAS	NA	
10.4 Copies of Test Certificates for Emergency Lighting	NA	
<b>Section 11.0 – Asbestos Management</b>		
11.1 Schedule of Areas Covered	NA	
11.2 Copies of Drawings Showing Areas Cleared	NA	
11.1 Clearance Certificates	NA	
11.2 Consignment Notes	NA	
11.3 Asbestos left in situ Register	NA	
<b>Section 12.0 – Security</b>		
12.1 Schedule of Security Devices	NA	
12.2 Test & Commissioning Data	NA	



**APPENDIX D – CONSTRUCTION PHASE PLAN CHECK LIST**

DOES THE PRINCIPAL CONTRACTOR’S CONSTRUCTION STAGE SAFETY PLAN INCLUDE: -	INFORMATION AVAILABLE	COMMENTS
<b>1.0 DESCRIPTION OF PROJECT</b>		
(a)	Project description and programme details including any key dates.	
(b)	Details of client, Principal Designer, designers, Principal Contractor and other consultants.	
(c)	Extent and location of existing records and plans that are relevant to health and safety on site, including information about existing structures when appropriate	
<b>2.0 MANAGEMENT OF THE WORKS</b>		
(a)	Management structure and responsibilities.	
(b)	Health and safety goals for the project and arrangements for monitoring and review of health and safety performance.	
(c) (i)	Arrangements for regular liaison between parties on site,	
(c) (ii)	Arrangements for consultation with the workforce,	
(c) (iii)	Arrangements for the exchange of design information between the client, designers, Principal Designer and contractors on site.	
(c) (iv)	Arrangements for handling design changes during the project.	
(c) (v)	Arrangements for the selection and control of contractors,	
(c) (vi)	Arrangements for the exchange of health and safety information between contractors,	
(c) (vii)	Arrangements for site security,	
(c) (viii)	Arrangements for site induction,	
(c) (ix)	Arrangements for onsite training,	
(c) (x)	Arrangements for welfare facilities and first aid,	
(c) (xi)	Arrangements for the reporting and investigation of accidents and incidents including near misses,	
(c) (xii)	Arrangements for the production and approval of risk assessments and written systems of work	
(d)	Site rules (including drug and alcohol policy)	
(e)	Fire and emergency procedures	

3.0	ARRANGEMENTS FOR CONTROLLING SIGNIFICANT SITE RISKS	INFORMATION AVAILABLE	COMMENTS
(a)	Safety risks, including:		
(a)(i)	Delivery and removal of materials (including waste*) and work equipment taking account of any risks to the public, for example during access to or egress from the site,		
(a)(ii)	Dealing with services - water, electricity and gas, including overhead power lines and temporary electrical installations.		
(a)(iii)	Accommodating adjacent land use.		
(a)(iv)	Stability of structures whilst carrying out construction work, including temporary structures and existing unstable structures.		
(a)(v)	Preventing falls.		
(a)(vi)	Work with or near fragile materials.		
(a)(vii)	Control of lifting operations,		
(a)(viii)	The maintenance of plant and equipment.		
(a)(ix)	Work on excavations and work where there are poor ground conditions.		
(a)(x)	Work on wells, underground earthworks and tunnels.		
(a)(xi)	Work on or near water where there is a risk of drowning.		
(a)(xii)	Work involving diving.		
(a)(xiii)	Work in a caisson or compressed air working.		
(a)(xiv)	Work involving explosives.		
(a)(xv)	Traffic routes and segregation of vehicles and pedestrians.		
(a)(xvi)	Storage of materials (particularly hazardous materials) and work Equipment.		
(a)(xvii)	Any other significant safety risks.		
(b)	<b>Health risks, including:</b>		
(b)(i)	The removal of asbestos,		
(b)(ii)	Dealing with contaminated land,		
(b)(iii)	Manual handling,		



3.0	ARRANGEMENTS FOR CONTROLLING SIGNIFICANT SITE RISKS	INFORMATION AVAILABLE	COMMENTS
(b)(iv)	Use of hazardous substances, particularly where there is a need for health monitoring.		
(b)(v)	Reducing noise and vibration.		
(b)(vi)	Work with ionising radiation.		
(b)(vii)	Exposure to UV radiation (from the sun).		
(b)(viii)	Any other significant health risks.		
4.0	THE HEALTH AND SAFETY FILE		
4.(a)	Layout and format.		
4.(b)	Arrangements for the collection and gathering of information.		
4.(c)	Storage of information.		

## APPENDIX E – CLIENT PERMIT TO WORK PROCEDURES



### PERMIT TO WORK PROCEDURE

#### PURPOSE

The purpose of this Permit Procedure is to set out a step by step approach for Contractors /Suppliers to follow when completing the Permits Form. This is to ensure that works carried out within IWM premises are done so safely and achieve legal and best practice compliance. The permit to work system herein has been developed in line with HSE Guidance on Permit-to-Work Systems HSG250. This procedure links with the Authorisation to Work Procedure. No works shall commence without prior authorisation by an agreed Approver.

#### INTRODUCTION AND DEFINITION

The Procedure will define roles and responsibilities and provide a step by step guide, in the form of a flow chart, for Permits to Work to be authorised.

A permit to work system is a formal written document used to control certain types of work that are potentially hazardous. It is a document which specifies the work to be done and the precautions to be taken. They allow work to start only after safe procedures have been defined and they provide a clear record that all foreseeable hazards have been considered. The permit to work is time bound and must be signed off by an agreed Approver. [Refer to flow chart]

Permit to Work Forms appended hereto included:

Hot Work Permit to Work Procedure IWM2  
Work At Height / Roof Access Permit to Work Procedure IWM3  
Confined Space Access Permit to Work Procedure IWM4  
Electrical Work Permit to Work Procedure IWM5  
Excavation Permit to Work Procedure, IWM6

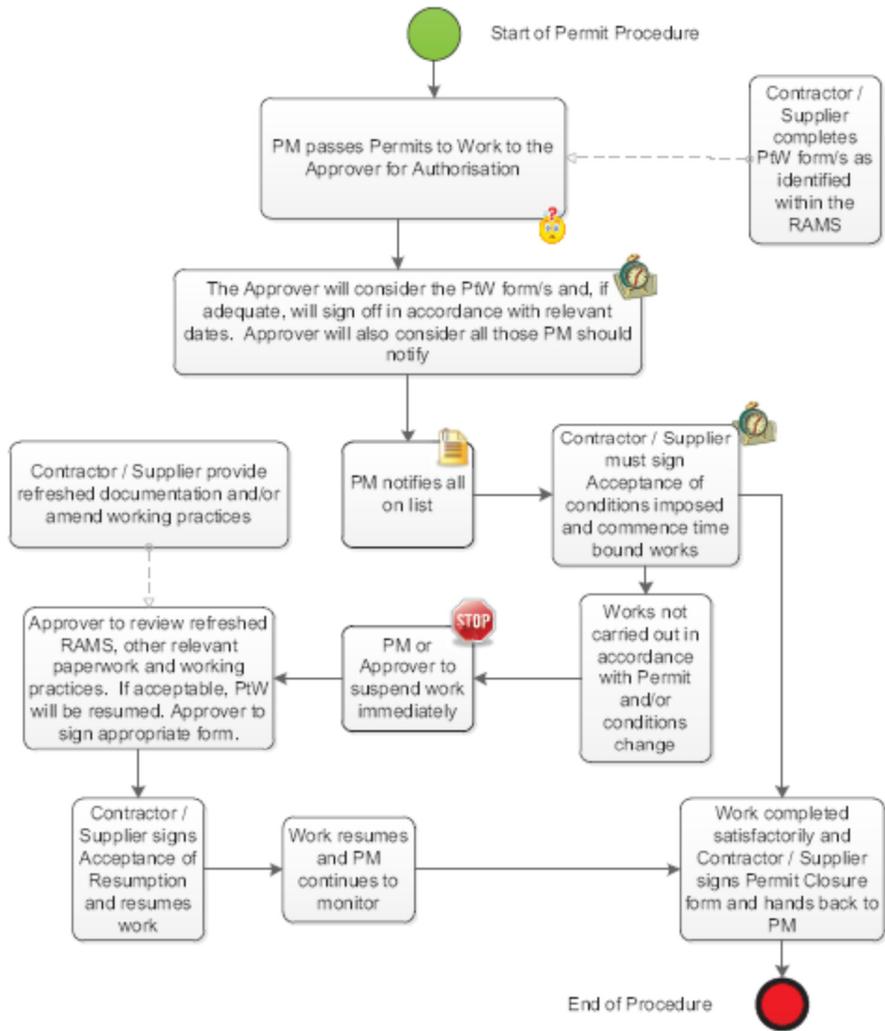
#### Flow Chart:

The flow chart to follow for all Permits to Work is the same but the hazards will differ.

Roles and responsibilities can be found at Appendix 1.  
Relevant documentation Appendix 2



**Permit to Work Flow Chart**  
Relates to IWM 2,3,4,5,6



**Timebound =** The PtW is Authorised for works to be carried out within a specific timeframe and is not open-ended

**Notifications to:** Approver  
Control Room  
Cofely  
Security (Entry Point)  
ICT Manager  
Others as required

**Key**  
PM = Project Manager  
PtW = Permit to Work

**Relevant PtW Form**

- IWM2 = Hot Work Permit
- IWM3 = Work at Height/Roof Access
- IWM4 = Confined space access
- IWM5 = Electrical work
- IWM7 = Excavation work



[WWW.RIDGE.CO.UK](http://WWW.RIDGE.CO.UK)

## Appendices

### Appendix 2

# Security Vetting Procedure

## .0 **Security Vetting**

.1 The Contractor is responsible for ensuring that all their employees and any sub-contractors, agents etc. who are due to work at the Premises, for longer than four weeks in duration in the delivery of the Contract, whether in a continuous period, or over the duration of the Contract, have been security vetted to Basic level, as defined by Disclosure & Barring Service ("**DBS**")<sup>1</sup>.

<sup>1</sup> Please note that DBS is the agency that all security vetting providers will approach to undertake the security vetting.

.2 For Contractor's with a small employee base, IWM will be prepared to undertake the security clearance on behalf of the Contractor, provided that this is made known at the time of the appointment, and that this is agreed by IWM, and that the Contractor agrees to pay the administration charge of £41 per clearance, that IWM is charged for this service.

.3 This requirement will apply to an employee who has not worked at an IWM branch, within the previous 12 months.

.4 A minimum of 48 hours before any individual commences work on the Premises, the Contractor is required to complete and submit the Security Notification Form (see Appendix X) to the Technical Security Manager at IWM London.

.5 Upon arrival at the Premises, each new employee must report individually to the Control Room with a copy of their certificate of proof of vetting, and some form of ID. IWM will note the details of the certificate of proof of vetting, but will not retain any documents.

.6 IWM will accept a certificate of proof of vetting which is dated within 12 months of the date of their site commencement at IWM, although IWM reserves the right to request they are security vetted, at its discretion, which IWM agrees not to action unreasonably.

.7 Failure to comply with this requirement could result in the employee not being granted access to IWM.



## Appendices

### Appendix 3

# Design Risk Register

Drawing Number	Drawing Name					Designer - Identified Risk	Designer - Proposed Action	Principal Designer Suggested Mitigations	Principal Contractor Response and Actions
		Design	Construction	Maintenance	Visiting				
Refer to GA 2500 series		Acoustics of Gallery space, particularly in relation to the Introduction Projection.				Risk associated with acoustic challenges of existing space	Testing on site with audio specialists required.		
		Ceiling structure of corridor to take weight of services and equipment, e.g. projectors, speakers, fire safety services and lighting.				Structural detail of ceiling to corridor.	Principal Contractor to liaise with IWM designer to ensure structure is suitable and safe and to feed back to designer with any need for adjustment. Liaise with FM on CCTV and Emergency Lighting		
		Shell introduced at height to take weight of Projector and related equipment - Intro Area. Cabling required to trace to P&D infrastructure and				Structural detail mounted to wall with appropriate conduit. Height to be co-ordinated with graphics and projection screen format	Principal Contractor to liaise with IWM designer to ensure structure is suitable and safe. Liaise with FM on CCTV and Emergency Lighting		
		Consider access to services contained within corridor ceiling structure.				Risks when working at height.	Principal Contractor to provide suitable RAMS for and ensuring workers are trained for these tasks. Liaise with FM and AV on access solutions.		
		Gallery Floor rake to be considered in relation to install on site, e.g. scribing details that will be required to architecture and furniture, install of graphics.				Rake of floor of existing gallery space. All structural elements, joinery and graphics to be level on opening of exhibition.	Principal Contractor to liaise with IWM designer to ensure necessary details are engineered in to design to accommodate floor at rake and efficient install. PC to also ensure that all graphics installations, especially text, is level and correctly aligned.		
		No fixing to gallery floor, ensure vertical element, e.g. Intersecting Flats are braced back to architecture and furniture where applicable.				Stability of walls both during construction phase and once exhibition is open.	Principal Contractor to ensure structure and bracing case carcass and glass support is suitable to enable required stability and safety and to feed back to designer any need for adjustment.		
		Power and Data infrastructure and feed length within corridor.				Ensure adequate power and feed length to corridor structure and elements with out structure.	Principal Contractor to notify IWM designer and client of any potential problems with proposed design and adapt construction details where necessary.		
Refer to 2502, 3510, 3513		Heavy objects on open display				Suitable structure to accommodate concentration of heavy objects within plinth ( SE 2.2-1, 2.2-2 ) & set within wall ( SE 4.1-1), Paintings on East wall.	Opportunity for weight to be distributed by fixing to plinth base, wall and roof of Corridor structure. Principal Contractor to liaise with IWM and designer on construction details to meet conservation and security requirements		
Refer to 1800, 3201		Heavy objects on open display - Paintings on East wall.				Suitable structure to accommodate concentration of paintings mounted double height.	Principle Contractor to propose suitable fixings to be agreed with Collections and Display Management. Fixing for artwork to be advised by Conservations/ Install team.		
Refer to 2502, 3510, 3513		Open display objects touching distances				Heavy objects within plinth ( SE 2.2-1, 2.2-2 ) & set within wall ( SE 4.1-1).	Layouts of objects on open display to be approved by Collections and Display Management.		
		Open display of Joey on Loan from V&A				Install and orientation in relation to aluminium wall and corridor structure, visitor circulation.	Principal Contractor to liaise with IWM designer and client to identify any potential problems with proposed design and adapt design where necessary.		
Refer to 2502, 3510, 3511		Fins cut into wall of corridor				Gaps to be set to avoiding trapping.	Principal Contractor to liaise with IWM designer to ensure structure is safe and mitigate risk.		
Refer to 2502, 3515		Stairs set in to side of corridor structure				Consider trip hazard or risk of falling from steps.	Principal Contractor to liaise with IWM designer to ensure structure is safe, slip resistant finish to steps. agree suitable riser height, orientation of set elements to mitigate risk.		
Refer to 2520		Graphic install				Install at suitable time to ensure all relevant surfaces are smooth, dry and dust free.	Principal Contractor to liaise with IWM and designer on construction details to meet conservation and security requirements		
Refer to 2520		Working at height				Graphic install working at height, painting walls. Lighting install.	Principal Contractor to provide suitable RAMS for and ensuring workers are trained for these tasks. Production and Delivery to be consulted.		
Refer to 2501		Integrated Showcases: Large pieces of glass to be adequately supported, especially when case is open				Suitable framing and central support needed. Suitable draw hardware needed.	Principal Contractor to ensure structure and bracing case carcass and glass support is suitable to enable required stability and safety and to feed back to designer any need for adjustment.		

		New case designed to suite in with existing showcases				Size and weight of glass could present handling risks	Principal Contractor to provide suitable RAMS for task and ensuring workers are trained for these tasks.		
		Security and air exchange considerations				Risk of cases not performing to required standards	Principal Contractor to liaise with IWM and designer on construction details to meet conservation and security requirements		
		Lighting installation and adjustment on-site				Working at height to adjust existing track, falling equipment.	Principal Contractor to ensure operatives including FM and Lighting have undergone specialist training as required.		
		Reused Click Netherfield showcases raised on structure and set behind opening in walls				Handling and installation risk both to the operatives and the cases themselves, especially raising up onto supporting frame.	Principal Contractor to provide suitable RAMS for task and ensuring workers are trained for these tasks.		
		AV Hardware to be integrated in to central structure and freestanding showcases				Ensure these are secure, suitable access for maintenance and have adequate ventilation.	Principal Contractor to notify designer and client of any potential problems with proposed design and adapt construction details where necessary		

The DRS has been produced by IWM in accordance with the Principals of Prevention and a proportionate level of risk in mind.

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