Specification of Works for MCA Liverpool (Crosby) - Building Adaption





**Prepared by:** Hartnell Taylor Cook

In respect of: MCA Liverpool (Crosby)-Building Adaption

For and on behalf of: The Maritime and Coastguard Agency

January 2019



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# Section 1

# General

# Executive Summary

This document comprises the Specification for the repairs and refurbishment works at MCA Liverpool (Crosby), Liverpool.

If the Contractor's submission is considered acceptable the Contractor will be required to proceed in accordance with the Specification and to enter into a fixed price lump sum contract to complete the works. The priced Specification will then comprise part of the contract documents.

This specification includes the contract documents put together by a Mechanical, Electrical and Public Health Performance Specification, as Appendix 2.

The Contract is being sought under a traditional single stage procurement process, with the design of the MEPH installation comprising a Contractors' Design Portion. The Contractor is therefore required to submit a fully compliant tender return for the project, in accordance with the tender procedures detailed within the Specification. Contractors may also be given an opportunity to support their bid at interview with the Employer and the Professional Team.

Upon appointment, the Contractor will be required to provide further detailed design proposals if necessary for review and comment by the Employer's Professional team.

### **Overview of Project and Further Works**

The purpose of the project is to undertake refurbishment works at MCA Liverpool (Crosby), Liverpool. The aim of the project is to reconfigure the existing accommodation to create an open plan office arrangement and release underutilised space to a third party tenant. The scope of works will comprise the strip out and installation of the existing MEPH installation, installation of new finishes and refurbishment of the existing welfare and kitchen facilities.

This project is to commence as quickly as possible and the Contractor's Programme will be of key consideration at tender review stage. As the site will be occupied by existing staff for the duration of the works, the project must be effectively phased and managed to cause minimal disruption and to allow the continuation of services to the offices in the south of the building.



# Section 2

**Preliminaries and Contract Particulars** 

# A10 PROJECT PARTICULARS

- 110 THE PROJECT
  - Name: MCA Liverpool (Crosby)- Office Refurbishment.
  - Nature: Refurbishment of existing office, welfare accommodation and external maintenance works .
  - Location: MCA Liverpool (Crosby), 32 Hall Road West, Liverpool, L23 9SY.
  - Length of contract: TBC.

# 120 EMPLOYER (CLIENT)

- Name: The Maritime and Coastguard Agency.
- Address: Spring Place, 105 Commercial Road, Southampton, Hampshire, SO15 1EG..
- Contact: Linda Eden.
- Telephone: 0203 8172362.
- E-mail: linda.eden@mcga.gov.uk.

# 130 PRINCIPAL CONTRACTOR (CDM)

- Name: TBC.
- Address: TBC.
- Contact: TBC.
- Telephone: TBC.
- E-mail: TBC.

# 140 PROJECT MANAGER (HEREIN REFERRED TO AS 'PM')

- Name: TBC.
- Address: TBC.
- Contact: TBC.
- Telephone: TBC.
- Email: TBC.

# 145 SUPERVISOR

- Name: TBC.
- Address: TBC.
- Contact: TBC.
- Telephone: TBC.
- E-mail: TBC.

# 150 PRINCIPAL DESIGNER

- Name: Hartnell Taylor Cook (Design only, post design TBC).
- Address: 7-10 Chandos Street, London, W1G 9DQ.
- Contact: Jack Bonnick.
- Telephone: 020 7491 7323.
- E-mail: jack.bonnick@htc.uk.com.

# 200 CONSULTANTS

- Description: Mechanical and Electrical and Structural .
- Name: M&E- Crookes Walker
- Structural- Connell Consulting .
- Address: Crookes Walker- The Plaza, Old Hall Street, Liverpool, L3 9QJ Connell Consulting- 315 Old Chester Road, Birkenhead, Wirral, CH42 3XD.
- Telephone: -.

# A11 TENDER AND CONTRACT DOCUMENTS

- 110 TENDER DOCUMENTS
  - The tender documents are:
  - The Specification, comprising preliminaries, reference specification, contract data and ac tivity schedule.
  - Drawings numbered: CROS-G01- Ground Floor Plan- Existing CROS-PR-01- Ground Floor Plan- Proposed Layout CROS-PR-02- Ground Floor Plan- Demolition CROS-PR-03- Ground Floor Plan- Proposed Finishes CROS-PR-04- Ground Floor Plan- Proposed Phasing.
     Additional documents: MEPH/Structural Specification and drawings .
- 120 CONTRACT DRAWINGS
  - The Contract Drawings: The same as the tender drawings.
- 160 PRECONSTRUCTION INFORMATION
  - Format: The Preconstruction information is described in these preliminaries in Section A34. It refers to information given elsewhere in the preliminaries and other tender documents.

# A12 THE SITE/ EXISTING BUILDINGS

- 110 THE SITE
  - Description: Predominantly single storey, standalone office building, including isolated section of mezzanine floor space. The property is located on the Crosby beach front and at the junction between Hall Road West and Burbo Bank Road North.
- 120 EXISTING BUILDINGS ON/ ADJACENT TO THE SITE
  - Description: Ancillary buildings located on the site including external storage, coastguard rescue station and drying room.
     Note- No works are being undertaken to the aforementioned areas.
- 200 ACCESS TO THE SITE
  - Description: Via Hall Road West .
  - Limitations: None, however access to be arranged prior to attendance.
- 210 PARKING
  - Restrictions on parking of the Contractor's and employees' vehicles: None, however access to be arranged prior to attendance.
- USE OF THE SITE
  - General: Do not use the site for any purpose other than carrying out the Works.
  - Limitations: None .
- 230 SURROUNDING LAND/ BUILDING USES
  - General: Adjacent or nearby uses or activities are as follows:
     MCA ownership: Coastguard rescue staton, external storage and drying room Other: Public beachfront, highways and residential dwellings.

# 240 HEALTH AND SAFETY HAZARDS

- General: The nature and condition of the site/ building cannot be fully and certainly
  ascertained before it is opened up. However the following hazards are or may be present:
   MCA staff from both the main building and coastguard rescue station. The site will be fully
  operational during the course of the works.
- Information: The accuracy and sufficiency of this information is not guaranteed by the Employer or the Employer's representative. Ascertain if any additional information is required to ensure the safety of all persons and the Works.
- Site staff: Draw to the attention of all personnel working on the site the nature of any possible contamination and the need to take appropriate precautionary measures.

### 250 SITE VISIT

- Assessment: Ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works.
- Arrangements for visit: via Hartnell Taylor Cook- jack.bonnick@htc.uk.com/020 7788 3812.

# A13 DESCRIPTION OF THE WORK

- 110 PREPARATORY WORK BY OTHERS
  - Works: Carried out under a separate contract and completed before the start of work on site for this Contract.
  - Description: N/A.
- 120 THE WORKS
  - Description: Refurbishment of office space and welfare facilities, to include; reconfiguration
    of existing accomodation, installation of new finishes, new MEPH systems and external
    maintenance items.
- 130 WORK BY OTHERS CONCURRENT WITH THE CONTRACTDescription: N/A.
- 140 COMPLETION WORK BY OTHERS
  - Description: N/A.

# A20 ENGINEERING AND CONSTRUCTION CONTRACT (ECC)

NEC3 ECC PRICED CONTRACT WITH ACTIVITY SCHEDULE

- The Conditions of Contract: The core clauses and the conditions for main option A, dispute resolution Option W1 and secondary Options indicated, for the NEC3 Engineering and Construction Contract (April 2013).
- Requirement: Allow for the obligations, liabilities and services described.

# SCHEDULE OF OPTIONS

- Core clauses:
  - 1. General;
  - 2. The Contractor's main responsibilities;
  - 3. Time;
  - 4. Testing and Defects;
  - 5. Payment;
  - 6. Compensation events;
  - 7. Title;
  - 8. Risks and insurance; and
  - 9. Termination.
- Main Option clauses: As listed.
- Secondary Option clauses: As listed.

# CONTRACT DATA

• Part 1 - Data provided by the Employer

CORE CLAUSES

1. GENERAL

THE WORKS

- Comprise: Refurbishment of office space and welfare facilities, to include; reconfiguration
  of existing accomodation, installation of new finishes, new MEPH systems and external
  maintenance items.
- Summarised in clause A13/120 and specified and described in the Works Information.

THE EMPLOYER

• See clause A10/120.

THE PROJECT MANAGER

• See clause A10/140.

# THE SUPERVISOR

• See clause A10/145.

# THE ADJUDICATOR

- Name: TBC.
- Address: TBC.
- Contact: TBC.
- Telephone: TBC.
- Email: TBC.
- Terms of appointment:
- TBC.

THE WORKS INFORMATION

• Contained in this specification and described in the associated documents.

THE SITE INFORMATION

• Contained in this specification and described in the associated documents.

THE BOUNDARIES OF THE SITE

• The site: Described in clause A12/110.

## THE LANGUAGE OF THE CONTRACT

- Language: English.
  - THE LAW OF THE CONTRACT
- The law of: England and Wales.
- Subject to the jurisdiction of the courts of: England and Wales.

# THE PERIOD FOR REPLY TO A COMMUNICATION

- Period: one week
- Exceptions: TBC.

3. TIME

STARTING DATE

• The starting date is: Provisional date- Monday 4 March 2019.

**REVISED PROGRAMME** 

• Revised programme: Submit at intervals no longer than: 2 weeks.

### 4. TESTING AND DEFECTS

DEFECTS DATE

• The defects date is: 52 weeks after completion of the whole of the Works.

### 5. PAYMENT

CURRENCY

• The currency of this contract is the pound sterling (£).

ASSESSMENT INTERVAL

• The assessment interval is: four weeks.

# 6. COMPENSATION EVENTS

WEATHER

• The place where the weather is to be recorded is: TBC.

## THE WEATHER MEASUREMENTS

- The weather measurements to be recorded each month are:
- -
  - The cumulative rainfall (mm);
  - The number of days with rainfall more than 5mm; and
  - The number of days with minimum air temperature less than 0 degrees celsius.
- The weather measurements are supplied by: TBC.

#### THE WEATHER DATA

- Data: There is no recorded data available.
- Assumed value: For ten years return weather data for each weather measurement is TBC.

# 8. RISKS AND INSURANCE

LOSS OR DAMAGE

• Minimum amount of cover for insurance in respect of loss of or damage to property (except the Works, plant and materials and equipment) and liability for bodily injury or death to a person (not an employee of the Contractor) due to an activity in connection with this contract for any one event of 10,000,000.

#### DEATH OR BODILY INJURY

• Minimum amount of cover for insurance in respect of death of or bodily injury to employees of the Contractor arising out of and in the course of their employment in connection with the Contract is 10,000,000.

# OPTIONAL STATEMENTS

COMPLETION DATE

- The completion date is: TBC\_\_\_\_.
- The Employer is willing to take over the Works before the completion date.

### PROGRAMME

• Submit within 3 weeks of the contract date.

PERIOD FOR PAYMENT

 Period: If the period in which payments are made is not three weeks and Y(UK)2 is not used. To be: -\_\_\_\_.

PLANT AND MATERIALS PROVIDED BY THE EMPLOYER

• The insurance against loss or damage to the Works, plant and materials is to cover for plant and materials provided by the Employer for an amount of 5,000,000.

## SECONDARY OPTION CLAUSES

#### SECTIONAL COMPLETION

- Option X5 is used.
- The completion date for each section of the Works is:
  - Section: MCA Area.
  - Description: Completion of MCA open plan office, meeting room and training room .
  - Completion date: 29th March 2019.

#### DELAY DAMAGES

- Option X7 is used. Option X5 is not used.
- Daily delay damages for the whole of the Works: TBC.

#### RETENTION

- Option X16 is used.
- The retention free amount is TBC\_.
- The retention percentage is 5%.

# HOUSING GRANTS, CONSTRUCTION AND REGENERATION ACT

• Option Y(UK)2 applies.

ADDITIONAL CONDITIONS OF CONTRACT

- Option Z is used.
- Collateral warranties: Enter into a collateral warranty, a copy of which, with the relevant parts completed, is included with the tender documents.
- Contractor's design: Undertake and accept full responsibility for the design of the following parts of the Works: Mechanical and Electrical Installations.
- Additional conditions of contract are: TBC.

# A30 TENDERING/ SUBLETTING/ SUPPLY

# MAIN CONTRACT TENDERING

- 110 SCOPE
  - General: These conditions are supplementary to those stated in the Invitation to Tender and on the form of tender.
- 145 TENDERING PROCEDURE
  - General: In accordance with the principles of: Industry Guidance.
  - Arithmetical errors: Overall price is dominant.
- 160 EXCLUSIONS
  - Inability to tender: Immediately inform if any parts of the work as defined in the tender documents cannot be tendered.
  - Relevant parts of the work: Define those parts, stating reasons for the inability to tender.
- 170 ACCEPTANCE OF TENDER
  - Acceptance: No guarantee is offered that any tender will be recommended for acceptance or be accepted, or that reasons for non acceptance will be given.
  - Costs: No liability is accepted for any cost incurred in the preparation of any tender.
- 190 PERIOD OF VALIDITY
  - Period: After submission or lodgement, keep tender open for consideration (unless previously withdrawn) for not less than 3 months.
  - Date for possession/ commencement: See section A20.

# **PRICING/ SUBMISSION OF DOCUMENTS**

- 210 PRELIMINARIES IN THE SPECIFICATION
  - The Preliminaries/ General conditions sections (A10-A56 inclusive) have been prepared in accordance with SMM7/ NRM2.
- 215 TENDER DOCUMENTS
  - Alterations and qualifications: Do not alter or qualify tender documents without written consent. Tenders containing unauthorised alterations or qualifications may be rejected.

#### 220 PRICING OF PRELIMINARIES

- Abbreviations: The following have been used:
  - F = Fixed charge item.
  - TR = Time related charge item.

# 240 PRICING OF PERFORMANCE SPECIFIED WORK

- Scope: Tenders must include for all associated and ancillary work shown or clearly apparent as being necessary to meet the requirements for the performance specified work and its completion and proper integration with the works generally.
- Quantities: Where provided, these are indicative only.
- Price: Deemed to include for all costs. Errors in measurement or calculation will be the Contractor's responsibility.

#### 250 PRICED DOCUMENTS

- Alterations: Do not alter or qualify the priced documents without written consent. Tenders containing unauthorised alterations or qualifications may be rejected.
- Measurements: Where not stated, ascertain from the drawings.
- Deemed included: Costs relating to items, which are not priced, will be deemed to have been included elsewhere in the tender.
- Submit: With tender.

### 310 TENDER

- General: Tenders must include for all work shown or described in the tender documents as a whole or clearly apparent as being necessary for the complete and proper execution of the Works.
- 360 PRICED ACTIVITY SCHEDULESubmit: With tender.

# 480 PROGRAMME

- First programme of work: prepare a summary showing the sequence and timing of the principal parts of the works, periods for planning and design, and itemising any work which is excluded.
- Submit: with the tender.
- 490 INFORMATION RELEASE SCHEDULE
  - Compatibility with programme: At the same time as submitting the proposed programme or summary, confirm that it is compatible with the Information Release Schedule.
  - Alternative proposals: If any part of the programme is not compatible with the Schedule submit alternative proposals and reasons for varying the times for release of information.

#### 500 TENDER STAGE METHOD STATEMENTS

- Method statements: Prepare, describing how and when the following is to be carried out:
   Working in the vicinity of site staff and the public
  - High level works .
- Statements: Submit with the tender.

#### 510 ALTERNATIVE METHOD TENDERS

- General: In addition to and at the same time as tendering for the Works as defined in the tender documents, alternative methods of construction/ installation may be submitted for consideration. Alternatives, which would involve significant changes to other work, may not be considered.
- Alternative tenders: Such alternatives will be deemed to be alternative tenders and each must include a complete and precise statement of the effects on cost and programme.
- Safety method statement: Carry out a health and safety risk assessment for each alternative and where appropriate provide a safety method statement suitable for incorporation in the Health and Safety Plan.
- Full technical data: Submit for each alternative together with details of any consequential amendments to the design and/ or construction of other parts of the Works.
- Submit: With tender.

# 515 ALTERNATIVE TIME TENDERS

- General: In addition to and at the same time as tendering based upon the date or period specified in section A20, an alternative tender based upon a different date for completion or period may be submitted.
- Date for completion: If any such tender is accepted the date for completion inserted in the Contract will be the date stated in the alternative tender or determined from the period stated in the alternative tender.

# 520 DESIGN DOCUMENTS

- Scope: Include the following in the Contractor's Proposals:
  - Design drawings: As may be associated with contractor's proposals included within activity schedule.
  - Technical information: As may be associated with contractor's proposals included within activity schedule.
- Submit: With tender.

# 530 SUBSTITUTE PRODUCTS

- Details: If products of different manufacture to those specified are proposed, submit details with the tender giving reasons for each proposed substitution. Substitutions, which have not been notified at tender stage, may not be considered.
- Compliance: Substitutions accepted will be subject to the verification requirements of clause A31/200.

# 540 QUALITY CONTROL RESOURCES

- Statement: Describe the organisation and resources to control the quality of the Works, including the work of subcontractors.
- QA staff: Identify in the statement the number and type of staff responsible for quality control, with details of their qualifications and duties.
- Submit: With the Tender.

# 550 HEALTH AND SAFETY INFORMATION

- Content: Describe the organisation and resources to safeguard the health and safety of operatives, including those of subcontractors, and of any person whom the Works may affect.
- Include:
  - A copy of the contractor's health and safety policy document, including risk assessment procedures.
  - Accident and sickness records for the past five years.
  - Records of previous Health and Safety Executive enforcement action.
  - Records of training and training policy.
  - The number and type of staff responsible for health and safety on this project with details of their qualifications and duties.
- Submit: With the Tender.

# 570 OUTLINE CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

· Content: Submit the following information within one week of request:

- Method statements on how risks from hazards identified in the pre-construction information and other hazards identified by the contractor will be addressed.
- Details of the management structure and responsibilities.
- Arrangements for issuing health and safety directions.
- Procedures for informing other contractors and employees of health and safety hazards.
- Selection procedures for ensuring competency of other contractors, the self-employed and designers.
- Procedures for communications between the project team, other contractors and site operatives.
- Arrangements for cooperation and coordination between contractors.
- Procedures for carrying out risk assessment and for managing and controlling the risk.
- Emergency procedures including those for fire prevention and escape.
- Arrangements for ensuring that all accidents, illness and dangerous occurrences are recorded.
- Arrangements for welfare facilities.
- Procedures for ensuring that all persons on site have received relevant health and safety information and training.
- Arrangements for consulting with and taking the views of people on site.
- Arrangements for preparing site rules and drawing them to the attention of those affected and ensuring their compliance.
- Monitoring procedures to ensure compliance with site rules, selection and management procedures, health and safety standards and statutory requirements.
- Review procedures to obtain feedback.
- 599 FREEDOM OF INFORMATION
  - Records: Retain, make available for inspection and supply on request information reasonably required to allow response to requests made under the provisions of the Freedom of Information Act.
  - Determination: Submit requests received. Do not supply information to anyone other than the project participants without express written permission.
  - Confidentiality: Maintain at all times.

# SUBLETTING/ SUPPLY

- 630 DOMESTIC SUBCONTRACTS
  - General: Comply with the Construction Industry Board 'Code of Practice for the selection of subcontractors'.
  - List: Provide details of all subcontractors and the work for which they will be responsible.
  - Submit: with the tender.

# A31 PROVISION, CONTENT AND USE OF DOCUMENTS

# **DEFINITIONS AND INTERPRETATIONS**

- 110 DEFINITIONS
  - Meaning: Terms, derived terms and synonyms used in the preliminaries/ general conditions and specification are as stated therein or in the appropriate British Standard or British Standard glossary.

## 120 COMMUNICATION

- Definition: Includes advise, inform, submit, give notice, instruct, agree, confirm, seek or obtain information, consent or instructions, or make arrangements.
- Format: In writing to the person named in clause A10/140 unless specified otherwise.
- Response: Do not proceed until response has been received.

#### 130 PRODUCTS

- Definition: Materials, both manufactured and naturally occurring, and goods, including components, equipment and accessories, intended for the permanent incorporation in the Works.
- Includes: Goods, plant, materials, site materials and things for incorporation into the Works.

#### 135 SITE EQUIPMENT

- Definition: All appliances or things of whatsoever nature required in or about the construction for completion of the Works but not materials or other things intended to form or forming part of the Permanent Works.
- Includes: Construction appliances, vehicles, consumables, tools, temporary works, scaffolding, cabins and other site facilities.

### 140 DRAWINGS

- Definitions: To BSRIA BG 6 A design framework for building services. Design activities and drawing definitions.
- CAD data: In accordance with BS 1192.
- 145 CONTRACTOR'S CHOICE
  - Meaning: Selection delegated to the Contractor, but liability to remain with the specifier.
- 150 CONTRACTOR'S DESIGN
  - Meaning: Design to be carried out or completed by the Contractor and supported by appropriate contractual arrangements, to correspond with specified requirements.
- 155 SUBMIT PROPOSALS
  - Meaning: Submit information in response to specified requirements.

# 160 TERMS USED IN SPECIFICATION

- Remove: Disconnect, dismantle as necessary and take out the designated products or work and associated accessories, fixings, supports, linings and bedding materials. Dispose of unwanted materials. Excludes taking out and disposing of associated pipework, wiring, ductwork or other services.
- Fix: Receive, unload, handle, store, protect, place and fasten in position and disposal of waste and surplus packaging including all labour, materials and site equipment for that purpose.
- Supply and fix: As above, but including supply of products to be fixed. All products to be supplied and fixed unless stated otherwise.
- Keep for reuse: Do not damage designated products or work. Clean off bedding and jointing materials. Stack neatly, adequately protect and store until required by the Employer/ Purchaser or for use in the Works as instructed.
- Make good: Execute local remedial work to designated work. Make secure, sound and neat. Excludes redecoration and/ or replacement.
- Replace: Supply and fix new products matching those removed. Execute work to match original new state of that removed.
- Repair: Execute remedial work to designated products. Make secure, sound and neat. Excludes redecoration and/ or replacement.
- Refix: Fix removed products.
- Ease: Adjust moving parts of designated products or work to achieve free movement and good fit in open and closed positions.
- Match existing: Provide products and work of the same appearance and features as the original, excluding ageing and weathering. Make joints between existing and new work as inconspicuous as possible.
- System: Equipment, accessories, controls, supports and ancillary items, including installation, necessary for that section of the work to function.

# 170 MANUFACTURER AND PRODUCT REFERENCE

- Definition: When used in this combination:
  - Manufacturer: the person or legal entity under whose name or trademark the particular product, component or system is marketed
  - Product reference: the proprietary brand name and/ or identifier by which the particular product, component or system is described.
- Currency: References are to the particular product as specified in the manufacturer's technical literature current on the date of the invitation to tender.

## 200 SUBSTITUTION OF PRODUCTS

- Products: If an alternative product to that specified is proposed, obtain approval before ordering the product.
- Reasons: Submit reasons for the proposed substitution.
- Documentation: Submit relevant information, including:
  - manufacturer and product reference;
  - cost;
  - availability;
  - relevant standards;
  - performance;
  - function;
  - compatibility of accessories;
  - proposed revisions to drawings and specification;
  - compatibility with adjacent work;
  - appearance;
  - copy of warranty/ guarantee.
- Alterations to adjacent work: If needed, advise scope, nature and cost.
- Manufacturers' guarantees: If substitution is accepted, submit before ordering products.

### 210 CROSS REFERENCES

- Accuracy: Check remainder of the annotation or item description against the terminology used in the section or clause referred to.
- Related terminology: Where a numerical cross-reference is not given the relevant sections and clauses of the specification will apply.
- Relevant clauses: Clauses in the referred to specification section dealing with general matters, ancillary products and execution also apply.
- Discrepancy or ambiguity: Before proceeding, obtain clarification or instructions.

## 220 REFERENCED DOCUMENTS

• Conflicts: Specification prevails over referenced documents.

## 230 EQUIVALENT PRODUCTS

• Inadvertent omission: Wherever products are specified by proprietary name the phrase 'or equivalent' is to be deemed included.

### 240 SUBSTITUTION OF STANDARDS

- Specification to British Standard or European Standard: Substitution may be proposed 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.
- · Before ordering: Submit notification of all such substitutions.
- Documentary evidence: Submit for verification when requested as detailed in clause A31/200. Any submitted foreign language documents must be accompanied by certified translations into English.

# 250 CURRENCY OF DOCUMENTS AND INFORMATION

• Currency: References to published documents are to the editions, including amendments and revisions, current on the date of the Invitation to Tender.

#### 260 SIZES

- General dimensions: Products are specified by their co-ordinating sizes.
- Timber: Cross section dimensions shown on drawings are:
  - Target sizes as defined in BS EN 336 for structural softwood and hardwood sections.
  - Finished sizes for non-structural softwood or hardwood sawn and further processed sections.

# DOCUMENTS PROVIDED ON BEHALF OF EMPLOYER

- 410 ADDITIONAL COPIES OF DRAWINGS/ DOCUMENTS
  - Additional copies: Issued free of charge.

#### 440 DIMENSIONS

• Scaled dimensions: Do not rely on.

#### 460 THE SPECIFICATION

 Coordination: All sections must be read in conjunction with Main Contract Preliminaries/ General conditions.

# DOCUMENTS PROVIDED BY CONTRACTOR/ SUBCONTRACTORS/ SUPPLIERS

- 510 DESIGN AND PRODUCTION INFORMATION
  - Master programme: Make reasonable allowance for completing design/ production information, submission, (including information relevant to the CDM Regulations), comment, inspection, amendment, resubmission and reinspection.
  - Design/ production information: Submit two copies, one can be returned with comments. Ensure that any necessary amendments are made without delay
  - Contractor's changes to Employer's requirements: Support any request for substitution with relevant information.
  - Employer's amendments to Employer's requirements: If considered to involve a change which has not already been acknowledged, notify without delay (maximum period 7 days) and do not proceed until instructed. Claims for extra cost, if made after it has been carried out, may not be allowed.
  - Final version of design/ production information:
    - Format: Electronic.
    - Submit: with the tender.

# 600 CONTRACTOR'S DESIGN INFORMATION

- · General: Complete the design and detailing of parts of the Works as specified.
- Provide:
  - Production information based on the drawings, specification and other information.
  - Liaison to ensure coordination of the work with related building elements and services.
- Master programme: Make reasonable allowance for completing design/ production information, submission (including information relevant to the CDM Regulations), comment, inspection, amendment, resubmission and reinspection.
- Information required: As per the activity schedule.
  - Format: Electronic.
  - Number of copies: 1.
- Submit: Within one week of request.
- 620 AS BUILT DRAWINGS AND INFORMATION
  - Contractor designed work: Provide drawings/ information:
     For the works\_\_\_\_.
  - Submit: At least two weeks before date for completion.
- 630 TECHNICAL LITERATURE
  - Information: Keep on site for reference by all supervisory personnel:
    - Manufacturers' current literature relating to all products to be used in the Works.
    - Relevant British, EN or ISO Standards.

#### 640 MAINTENANCE INSTRUCTIONS AND GUARANTEES

- Components and equipment: Obtain or retain copies, register with manufacturer and hand over on or before completion of the Works.
- Information location: In Building Manual.
- Emergency call out services: Provide telephone numbers for use after completion. Extent of cover: twenty four hours seven days a week.

# A32 MANAGEMENT OF THE WORKS

## GENERALLY

- 110 SUPERVISION
  - General: Accept responsibility for coordination, supervision and administration of the Works, including subcontracts.
  - Coordination: Arrange and monitor a programme with each subcontractor, supplier, local authority and statutory undertaker, and obtain and supply information as necessary for coordination of the work.
- 115 CONSIDERATE CONSTRUCTORS SCHEME
  - Registration: Before starting work, register the site and pay the appropriate fee:
  - Contact:
    - Address: Considerate Constructors Scheme Office, PO Box 75, Great Amwell, Ware, Hertfordshire, SG12 0YX.
    - Tel. 01920 485959.
    - Fax. 01920 485958.
    - Free phone 0800 7831423
    - Web. www.ccscheme.org.uk
    - E mail. enquiries@ccscheme.org.uk
  - Standard: Comply with the Scheme's Code of Considerate Practice.
    - Minimum compliance level: Very good.
- 117 CONSTRUCTING BETTER HEALTH SCHEME
  - Membership: Register and submit evidence of registration.
  - Contact:

Constructing Better Health, B&CE Building, Manor Royal Crawley, West Sussex RH10 9QP

Tel: 0845 873 7726 Email: info@cbhscheme.co.uk Website:www.cbhscheme.co.uk

# 118 VEHICLE SAFETY REQUIREMENTS

- · Vehicle equipment: Ensure that all vehicles have the following:
  - Audible alert to other road users to the planned movement of the vehicle when the vehicle's indicators are in operation.
  - Prominent signage at the rear of the vehicle to warn cyclists of the dangers of passing the vehicle on the inside.
  - Properly adjusted class VI mirror/s or Fresnel lens to eliminate the near side blind spot.
  - Side under run guards.
- Driver training:
  - Drivers must be trained on vulnerable road user safety through an approved course and hold a current valid Certificate of Competence.
  - Drivers must have a valid driving licence and be legally able to drive the vehicle.
- Scheme membership: Submit evidence of registration with and accreditation to the Fleet Operator Recognition Scheme (FORS)
- Level of accreditation: Gold.
- Submittal date: Before commencement of operations on site.
- 120 INSURANCE
  - Documentary evidence: Before starting work on site submit details, and/ or policies and receipts for the insurances required by the Conditions of Contract.

# 130 INSURANCE CLAIMS

- Notice: 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, immediately give notice to the Employer, the person named in clause A10/140 and the Insurers.
- Failure to notify: Indemnify the Employer against any loss, which may be caused by failure to give such notice.

## 140 CLIMATIC CONDITIONS

- Information: Record accurately and retain:
  - Daily maximum and minimum air temperatures (including overnight)
  - Delays due to adverse weather including description of the weather, types of work affected and number of hours lost.

#### 150 OWNERSHIP

• Alteration/ clearance work: Materials arising become the property of the Contractor except where otherwise stated. Remove from site as work proceeds.

# **PROGRAMME/ PROGRESS**

## 210 PROGRAMME

- Master programme: Immediately when requested and before starting work on site submit in an approved form a master programme for the Works, which must include details of:
  - Design, production information and proposals provided by the Contractor/ Subcontractors/ Suppliers, including inspection and checking (see section A31).
  - Planning and mobilisation by the Contractor.
  - Earliest and latest start and finish dates for each activity and identify all critical activities.
  - 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 (see section A54)
  - Work by or on behalf of the Employer and concurrent with the Contract (see section A50) the nature and scope of which, the relationship with preceding and following work and any relevant limitations are suitably defined in the Contract Documents.
- Exclusions: 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 and confirm this when submitting the programme.
- Further information: Submission of programme will not relieve the Contractor of
  responsibility to advise of the need for further drawings or details or instructions in
  accordance with the contract.
- Submit one copy.

#### 215 REVISED PROGRAMME

- Format and content: Compatible with master programme.
- Revised programme interval: Described in the contract data part one.
- Number of copies: one.
- Special requirements: N/A.

# 230 SUBMISSION OF PROGRAMME

• Further information: Submission of the programme will not relieve the Contractor of the responsibility to advise of the need for further drawings or details or instructions in accordance with the Contract.

240 COMMENCEMENT OF WORK

• Notice: Before the proposed date for commencement of work on site give minimum notice of two weeks.

### 255 NOTIFICATION OF COMPENSATION EVENT

- Content: Notwithstanding the Contractor's obligations under the Contract written notice must also be given of all other causes which apply concurrently.
- 260 SITE MEETINGS
  - General: Site meetings will be held to review progress and other matters arising from administration of the Contract.
    - Frequency: Every two weeks.
  - Location: Site.
  - Accommodation: Ensure availability at the time of such meetings.
  - Attendees: Attend meetings and inform subcontractors and suppliers when their presence is required.
  - Chairperson (who will also take and distribute minutes): Contract Administrator.

### 265 CONTRACTOR'S PROGRESS REPORT

- Content: Notwithstanding the Contractor's obligations under the Contract the report must include:
  - A progress statement by reference to the master programme for the Works.
  - Details of any matters materially affecting the regular progress of the Works.
  - Subcontractors' and suppliers' progress reports.
  - Any requirements for further drawings or details or instructions.

### 270 CONTRACTOR'S SITE MEETINGS

- General: Hold meetings with appropriate subcontractors and suppliers shortly before main site meetings to facilitate accurate reporting of progress.
- 280 PHOTOGRAPHS
  - Number of locations: Location of works\_\_\_\_.
  - Frequency of intervals: Weekly.
  - Image format: Electronic.
  - Number of images from each location: TBC.
  - Other requirements: N/A

#### 285 EARLY TAKE OVER

• Take over of parts of the works: As completed, provided all necessary access, services, and other associated facilities are also complete.

## 290 NOTICE OF COMPLETION

- Requirement: Give notice of the anticipated dates of completion of the whole or parts of the Works.
- Associated works: Ensure necessary access, services and facilities are complete.
- Period of notice (minimum): Two weeks.

# CONTROL OF COST

- 410 CASH FLOW FORECAST
  - Submission: Before starting work on site, submit a forecast showing the gross valuation of the Works at the date of each Interim Certificate throughout the Contract period. Base on the programme for the Works.

- 420 REMOVAL/ REPLACEMENT OF EXISTING WORK
  - Extent and location: Agree before commencement.
  - Execution: Carry out in ways that minimize the extent of work.
- 430 QUOTATIONS FOR PROPOSED INSTRUCTIONS OR COMPENSATION EVENTS
  - Include:
    - A detailed breakdown of the cost including any allowance for direct loss and expense.
    - Details of any additional resources required.
    - Details of any adjustments to be made to the programme for the Works.
    - Any other information as is reasonably necessary to fully assess the implications of issuing such an instruction.
  - Inability to comply: Inform immediately if it is not possible to comply with any of the above requirements.
- 440 MEASUREMENT
  - Covered work: Give notice before covering work required to be measured.
- 460 PAYMENT ASSESSMENTS
  - Application by Contractor: if made under clause 50 include details of amounts considered due, together with the following supporting information:
     Completed activity schedule\_.
- 470 PRODUCTS NOT INCORPORATED INTO THE WORKS
  - Ownership: At the time of each valuation, supply details of those products not incorporated into the Works which are subject to any reservation of title inconsistent with passing of property as required by the Conditions of Contract, together with their respective values.
  - Evidence: When requested, provide evidence of freedom of reservation of title.
- 480 LABOUR AND EQUIPMENT RETURNS
  - Records: Provide for verification at the beginning of each week in respect of each of the previous seven days.
  - Records must show:
    - The number and description of craftsmen, labourers and other persons directly or indirectly employed on or in connection with the Works or Services, including those employed by subcontractors.
    - The number, type and capacity of all mechanical, electrical and power-operated equipment employed in connection with the Works or Services

# A33 QUALITY STANDARDS/ CONTROL

# STANDARDS OF PRODUCTS AND EXECUTIONS

- 110 INCOMPLETE DOCUMENTATION
  - General: Where and to the extent that products or work are not fully documented, they are to be:
    - Of a kind and standard appropriate to the nature and character of that part of the Works where they will be used.
    - Suitable for the purposes stated or reasonably to be inferred from the project documents. Contract documents: Omissions or errors in description and/ or quantity shall not vitiate the Contract nor release the Contractor from any obligations or liabilities under the Contract.

- 120 WORKMANSHIP SKILLS
  - Operatives: Appropriately skilled and experienced for the type and quality of work.
  - Registration: With Construction Skills Certification Scheme.
  - Evidence: Operatives must produce evidence of skills/ qualifications when requested.

## 130 QUALITY OF PRODUCTS

- Generally: New. (Proposals for recycled products may be considered).
- Supply of each product: From the same source or manufacturer.
- Whole quantity of each product required to complete the Works: Consistent kind, size, quality and overall appearance.
- Tolerances: Where critical, measure a sufficient quantity to determine compliance.
- Deterioration: Prevent. Order in suitable quantities to a programme and use in appropriate sequence.

# 135 QUALITY OF EXECUTION

- Generally: Fix, apply, install or lay products securely, accurately, plumb, neatly and in alignment.
- Colour batching: Do not use different colour batches where they can be seen together.
- Dimensions: Check on-site dimensions.
- Finished work: Not defective, e.g. not damaged, disfigured, dirty, faulty, or out of tolerance.
- Location and fixing of products: Adjust joints open to view so they are even and regular.

### 140 COMPLIANCE

- Compliance with proprietary specifications: Retain on site evidence that the proprietary product specified has been supplied.
- Compliance with performance specifications: Submit evidence of compliance, including test reports indicating:
  - Properties tested.
  - Pass/ fail criteria.
  - Test methods and procedures.
  - Test results.
  - Identity of testing agency.
  - Test dates and times.
  - Identities of witnesses.
  - Analysis of results.

#### 150 INSPECTIONS

- Products and executions: Inspection or any other action must not be taken as approval unless confirmed in writing 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.

#### 160 RELATED WORK

- Details: Provide all trades with necessary details of related types of work. Before starting each new type or section of work ensure previous related work is:
  - Appropriately complete.
  - In accordance with the project documents.
  - To a suitable standard.
  - In a suitable condition to receive the new work.
- · Preparatory work: Ensure all necessary preparatory work has been carried out.

- 170 MANUFACTURER'S RECOMMENDATIONS/ INSTRUCTIONS
  - General: Comply with manufacturer's printed recommendations and instructions current on the date of the Invitation to tender.
  - Changes to recommendations or instructions: Submit details.
  - Ancillary products and accessories: Use those supplied or recommended by main product manufacturer.
  - Agrément certified products: Comply with limitations, recommendations and requirements of relevant valid certificates.
- 180 WATER FOR THE WORKS
  - Mains supply: Clean and uncontaminated.
  - Other: Do not use until:
    - Evidence of suitability is provided.
    - Tested to BS EN 1008 if instructed.

## SAMPLES/ APPROVALS

### 210 SAMPLES

- Products or executions: Comply with all other specification requirements and in respect of the stated or implied characteristics either:
  - To an express approval.
  - To match a sample expressly approved as a standard for the purpose.

## 220 APPROVAL OF PRODUCTS

- Submissions, samples, inspections and tests: Undertake or arrange to suit the Works programme.
- Approval: Relates to a sample of the product and not to the product as used in the Works. Do not confirm orders or use the product until approval of the sample has been obtained.
- Complying sample: Retain in good, clean condition on site. Remove when no longer required.

## 230 APPROVAL OF EXECUTION

- Submissions, samples, inspections and tests: Undertake or arrange to suit the Works programme.
- Approval: Relates to the stated characteristics of the sample. (If approval of the finished work as a whole is required this is specified separately). Do not conceal, or proceed with affected work until compliance with requirements is confirmed.
- Complying sample: Retain in good, clean condition on site. Remove when no longer required.

# ACCURACY/ SETTING OUT GENERALLY

- 320 SETTING OUT
  - General: Submit details of methods and equipment to be used in setting out the Works.
  - Levels and dimensions: Check and record the results on a copy of drawings. Notify discrepancies and obtain instructions before proceeding.
  - Inform: When complete and before commencing construction.

# 330 APPEARANCE AND FIT

- Tolerances and dimensions: If likely to be critical to execution or difficult to achieve, as early as possible either:
  - Submit proposals; or
  - Arrange for inspection of appearance of relevant aspects of partially finished work.
- General tolerances (maximum): To BS 5606, tables 1 and 2.

- 340 CRITICAL DIMENSIONS
  - Critical dimensions: Set out and construct the Works to ensure compliance with the tolerances stated.
  - Location: Detailed on drawings as necessary.
- 350 LEVELS OF STRUCTURAL FLOORS
  - Maximum tolerances for designed levels to be:
    - Floors to be self-finished, and floors to receive sheet or tile finishes directly bedded in adhesive: +/- 10 mm.
    - Floors to receive dry board/ panel construction with little or no tolerance on thickness: +/- 10 mm.
    - Floors to receive mastic asphalt flooring/ underlays directly: +/- 10 mm.
    - Floors to receive mastic asphalt flooring/ underlays laid on mastic asphalt levelling coat (s): +/- 15 mm.
    - Floors to receive fully bonded screeds/ toppings/ beds: +/- 15 mm.
    - Floors to receive unbonded or floating screeds/ beds: +/- 20 mm.
- 360 RECORD DRAWINGS
  - Site setting out drawing: Record details of all grid lines, setting-out stations, benchmarks and profiles. Retain on site throughout the Contract and hand over on completion.

# SERVICES GENERALLY

- 410 SERVICES REGULATIONS
  - New or existing services: Comply with the Byelaws or Regulations of the relevant Statutory Authority.

#### 420 WATER REGULATIONS/ BYELAWS NOTIFICATION

- Requirements: Notify Water Undertaker of any work carried out to or which affects new or existing services and submit any required plans, diagrams and details.
- Consent: Allow adequate time to receive Undertaker's consent before starting work. Inform immediately if consent is withheld or is granted subject to significant conditions.

#### 430 WATER REGULATIONS/ BYELAWS CONTRACTOR'S CERTIFICATE

- On completion of the work: Submit (copy where also required to the Water Undertaker) a certificate including:
  - The address of the premises.
  - A brief description of the new installation and/ or work carried out to an existing installation.
  - The Contractor's name and address.
  - A statement that the installation complies with the relevant Water Regulations or Byelaws.
  - The name and signature of the individual responsible for checking compliance.
  - The date on which the installation was checked.

# 435 ELECTRICAL INSTALLATION CERTIFICATE

- Submit: When relevant electrical work is completed.
- Original certificate: To be lodged in the Building Manual.

## 440 GAS, OIL AND SOLID FUEL APPLIANCE INSTALLATION CERTIFICATE

- Before the completion date stated in the Contract: Submit a certificate stating:
   The address of the premises.
  - A brief description of the new installation and/ or work carried out to an existing installation.
  - Any special recommendations or instructions for the safe use and operation of appliances and flues.
  - The Contractor's name and address.
  - A statement that the installation complies with the appropriate safety, installation and use regulations.
  - The name, qualification and signature of the competent person responsible for checking compliance.
  - The date on which the installation was checked.
- Certificate location: TBC.
- 445 SERVICE RUNS
  - General: Provide adequate space and support for services, including unobstructed routes and fixings.
  - Ducts, chases and holes: Form during construction rather than cut.
  - Coordination with other works: Submit details of locations, types/ methods of fixing of services to fabric and identification of runs and fittings.
- 450 MECHANICAL AND ELECTRICAL SERVICES
  - Final tests and commissioning: Carry out so that services are in full working order at completion of the Works.
  - Building Regulations notice: Copy to be lodged in the Building Manual.

### SUPERVISION/ INSPECTION/ DEFECTIVE WORK

- 510 SUPERVISION
  - General: 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.
  - Evidence: Submit, including details of the person proposed, their relevant skills training and knowledge; practical experience; qualifications; membership or registration with professional bodies; employment history, work related assessments and management structure.
  - Submittal date: One week before start on site.
  - Replacement: Give maximum possible notice before changing person in charge or site agent.

#### 520 COORDINATION OF ENGINEERING SERVICES

- Suitability: Site organisation staff must include one or more persons with appropriate knowledge and experience of mechanical and electrical engineering services to ensure compatibility between engineering and the Works generally.
- Evidence: Submit when requested CVs or other documentary evidence relating to the staff concerned.

# 530 OVERTIME WORKING

• Notice: Prior to overtime being worked, submit details of times, types and locations of work to be done.

- Minimum period of notice: One week.

• Concealed work: If executed during overtime for which notice has not been given, it may be required to be opened up for inspection and reinstated at the Contractor's expense.

- 540 DEFECTS IN EXISTING WORK
  - Undocumented defects: When discovered, immediately give notice. Do not proceed with affected related work until response has been received.
  - Documented remedial work: Do not execute work which may:
    - Hinder access to defective products or work; or
    - Be rendered abortive by remedial work.
- 550 ACCESS FOR INSPECTION
  - Removal: Before removing scaffolding or other facilities for access, give notice of not less than one week.
- 560 TESTS AND INSPECTIONS
  - Timing: Agree and record dates and times of tests and inspections to enable all affected parties to be represented.
  - Confirmation: One working day prior to each such test or inspection. If sample or test is not ready, agree a new date and time.
  - Records: Submit a copy of test certificates and retain copies on site.
- 570 AIR PERMEABILITY
  - Testing organization: UKAS accredited and registered with the Air Tightness Testing and Measurement Association (ATTMA).
  - Method:
    - Pressure test in accordance with the ATTMA publication: TS 2: Measuring Air Permeability of Building Envelopes (Non-dwellings).
  - Standard:
    - Design Air tightness value (maximum): 50.m<sup>3</sup>/(h.m<sup>2</sup>).
  - Results:
    - Content: Include test results and all supporting data.
    - Copies: Required for building control inspection and inclusion in Building Manual.
    - Electronic deposit: Through the ATTMA lodgement database
    - Additional copies: Provide on request.

# 580 CONTINUITY OF THERMAL INSULATION

- Record and report: Confirm that work to new, renovated or upgraded thermal elements has been carried out to conform to specification. Include:
  - The address of the premises.
  - The Contractor's name and address.
  - The name, qualification and signature of the competent person responsible for checking compliance.
  - The date on which the installation was checked.
- Submit: Before completion of the Works.
- Copy: To be lodged in the Building Manual.

# 590 RESISTANCE TO PASSAGE OF SOUND

- Method: Precompletion testing.
- Compliance: Submit results of testing,
  - Copies: Incorporate in the Building Manual.

# 610 PROPOSALS FOR RECTIFICATION OF DEFECTIVE PRODUCTS/ EXECUTIONS

- Proposals: Immediately any execution or product is known, or appears, to be not in accordance with the Contract, submit proposals for opening up, inspection, testing, making good, adjustment of the Contract Sum, or removal and re-execution.
- Acceptability: Such proposals may be unacceptable and contrary instructions may be issued.

# 620 MEASURES TO ESTABLISH ACCEPTABILITY

- General: 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.
  - Will not be considered as grounds for revision of the completion date.

## 630 QUALITY CONTROL

- Procedures: Establish and maintain to ensure that the Works, including the work of subcontractors, comply with specified requirements.
- Records: Maintain full records, keep copies on site for inspection, and submit copies on request.
- Content of records:
  - Identification of the element, item, batch or lot including location in the Works.
  - Nature and dates of inspections, tests and approvals.
  - Nature and extent of nonconforming work found.
  - Details of corrective action.

# WORK AT OR AFTER COMPLETION

- 710 WORK BEFORE COMPLETION
  - General: Make good all damage consequent upon the Works. Temporary markings, coverings and protective wrappings: Remove unless otherwise instructed.
  - Cleaning: Clean the Works thoroughly inside and out, including all accessible ducts and voids. Remove all splashes, deposits, efflorescence, rubbish and surplus materials.
  - Cleaning materials and methods: As recommended by manufacturers of products being cleaned, and must not damage or disfigure other materials or construction.
  - COSHH dated data sheets: Obtain for all materials used for cleaning and ensure they are used only as recommended by their manufacturers.
  - Minor faults: Touch up in newly painted work, carefully matching colour and brushing out edges. Repaint badly marked areas back to suitable breaks or junctions.
  - Moving parts of new work: Adjust, ease and lubricate as necessary to ensure easy and efficient operation, including doors, windows, drawers, ironmongery, appliances, valves and controls.

# 720 SECURITY AT COMPLETION

- General: Leave the Works secure with, where appropriate, all accesses closed and locked.
- Keys: Account for and adequately label all keys and hand over to Employer with itemized schedule, retaining duplicate schedule signed by Employer as a receipt.

#### 730 MAKING GOOD DEFECTS

- Remedial work: Arrange access with Project Manager.
- Rectification: Give reasonable notice for access to the various parts of the Works.
- Completion: Notify when remedial works have been completed.

# A34 SECURITY/ SAFETY/ PROTECTION

# SECURITY, HEALTH AND SAFETY

## 110 PRECONSTRUCTION INFORMATION

- Location: Integral with the project Preliminaries, including but not restricted to the following sections:
  - Description of project: Sections A10 and A11.
  - Client's consideration and management requirements: Sections A12, A13 and A36.
  - Environmental restrictions and on-site risks: Section A12, A35 and A34.
  - Significant design and construction hazards: Section A34.
  - The Health and Safety File: Section A37.

### 120 EXECUTION HAZARDS

- Common hazards: Not listed. Control by good management and site practice.
- Significant hazards: The design of the project includes the following:
  - Hazard: TBC.
  - Precautions assumed: TBC.
  - Specification reference: TBC.
  - Drawing reference: TBC.

### 130 PRODUCT HAZARDS

- Hazardous substances: Site personnel levels must not exceed occupational exposure standards and maximum exposure limits stated in the current version of HSE document EH40: Workplace Exposure Limits.
- Common hazards: Not listed. Control by good management and site practice.
- Significant hazards: Specified construction materials include the following:
  - Hazard: TBC.
  - Material: TBC.
  - Specification reference: TBC.

# 140 CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

- Submission: Present to the Employer/ Client no later than 1 week before commencement of works.
- Confirmation: Do not start construction work until the Employer has confirmed in writing that the Construction Phase Health and Safety Plan includes the procedures and arrangements required by the CDM Regulations.
- Content: Develop the plan from and draw on the Outline Construction Phase Health and Safety Plan, clause A30/570, and the Pre-tender Health and Safety Plan/ Preconstruction information.

#### 150 SECURITY

- Protection: Safeguard the site, the Works, products, materials, and any existing buildings affected by the Works from damage and theft.
- Access: Take all reasonable precautions to prevent unauthorized access to the site, the Works and adjoining property.
- Special requirements: N/A.
- 160 STABILITY
  - Responsibility: Maintain the stability and structural integrity of the Works and adjacent structures during the Contract.
  - Design loads: Obtain details, support as necessary and prevent overloading.

### 170 OCCUPIED PREMISES

- Extent: Existing buildings will be occupied and/ or used during the Contract as follows: The existing MCA offices and welfare facilities.
- Works: Carry out without undue inconvenience and nuisance and without danger to occupants and users.
- Overtime: If compliance with this clause requires certain operations to be carried out during overtime, and such overtime is not required for any other reason, the extra cost will be allowed, provided that such overtime is authorized in advance.
- 180 ACCESS CONTROL
  - Controlled areas: All areas, arrangements to be confirmed at pre-start meeting.
  - Control type: Pass card.
  - Authorised persons: Submit a list of the names of all persons requiring access together with any other related information reasonably required.
  - Return of credentials: When requested or on completion of the work to which the controlled area relates.

### 190 OCCUPIER'S RULES AND REGULATIONS

- Compliance: Conform to the occupier's rules and regulations affecting the site.
- Copies:
  - Location: TBC.
  - Arrangements for inspection: TBC.

### 200 MOBILE TELEPHONES AND PORTABLE ELECTRONIC EQUIPMENT

- Restrictions on use:
  - In designated contractor welfare and breakout areas only .

### 210 EMPLOYER'S REPRESENTATIVES SITE VISITS

- Safety: Submit details in advance, to the Employer or the person identified in clause A10/140, of safety provisions and procedures (including those relating to materials, which may be deleterious), which will require their compliance when visiting the site.
- Protective clothing and/ or equipment: Provide and maintain on site for the Employer and the person stated in clause A10/140 and other visitors to the site.

# PROTECT AGAINST THE FOLLOWING

- 310 EXPLOSIVES
  - Use: Not permitted

#### 330 NOISE AND VIBRATION

- Standard: Comply with the recommendations of BS 5228-1, in particular clause 7.3, to minimize noise levels during the execution of the Works.
- Noise levels from the Works: Maximum level: dB(A) when measured from -.
- Equipment: Fit compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles.
- Restrictions: Do not use:
  - Percussion tools and other noisy appliances without consent during the hours of 8am-5pm.
  - Radios or other audio equipment or permit employees to use in ways or at times that may cause nuisance.

#### 340 POLLUTION

- Prevention: Protect the site, the Works and the general environment including the atmosphere, land, streams and waterways against pollution.
- Contamination: If pollution occurs inform immediately, including to the appropriate Authorities and provide relevant information.

#### 350 PESTICIDES

• Use: Not permitted.

## 360 NUISANCE

- Duty: Prevent nuisance from smoke, dust, rubbish, vermin and other causes.
- Surface water: Prevent hazardous build-up on site, in excavations and to surrounding areas and roads.

### 370 ASBESTOS CONTAINING MATERIALS

- Duty: Report immediately any suspected materials discovered during execution of the Works.
  - Do not disturb.
  - Agree methods for safe removal or encapsulation.

### 371 DANGEROUS OR HAZARDOUS SUBSTANCES

- Duty: Report immediately suspected materials discovered during execution of the Works.
   Do not disturb.
  - Agree methods for safe removal or remediation.
- 380 FIRE PREVENTION
  - Duty: Prevent personal injury or death, and damage to the Works or other property from fire.
  - Standard: Comply with Joint Code of Practice 'Fire Prevention on Construction Sites', published by Construction Industry Publications and The Fire Protection Association (The 'Joint Fire Code').

# 390 SMOKING ON SITE

- Smoking on site: Not permitted.
- 400 BURNING ON SITE
  - Burning on site: Not permitted.

# 410 MOISTURE

- Wetness or dampness: Prevent, where this may cause damage to the Works.
- Drying out: Control humidity and the application of heat to prevent:
  - Blistering and failure of adhesion.
  - Damage due to trapped moisture.
  - Excessive movement.

#### 420 INFECTED TIMBER/ CONTAMINATED MATERIALS

- Removal: Where instructed to remove material affected by fungal/ insect attack from the building, minimize the risk of infecting other parts of the building.
- Testing: carry out and keep records of appropriate tests to demonstrate that hazards presented by concentrations of airborne particles, toxins and other micro organisms are within acceptable levels.

- 430 WASTE
  - Includes: Rubbish, debris, spoil, surplus material, containers and packaging.
  - General: Minimize production. Prevent accumulations. Keep the site and Works clean and tidy.
  - Handling: Collect and store in suitable containers. Remove frequently and dispose off site in a safe and competent manner:
    - Non-hazardous material: In a manner approved by the Waste Regulation Authority.
    - Hazardous material: As directed by the Waste Regulation Authority and in accordance with relevant regulations.
  - Recyclable material: Sort and dispose at a Materials Recycling Facility approved by the Waste Regulation Authority.
  - Voids and cavities in the construction: Remove rubbish, dirt and residues before closing in.
  - Waste transfer documentation: Retain on site.

# 440 ELECTROMAGNETIC INTERFERENCE

- Duty: Prevent excessive electromagnetic disturbance to apparatus outside the site.
- 450 LASER EQUIPMENT
  - Construction laser equipment: Install, use and store in accordance with BS EN 60825-1 and the manufacturer's instructions.
  - Class 1 or Class 2 laser equipment: Ensure laser beam is not set at eye level and is terminated at the end of its useful path.
  - Class 3A and Class 3B laser equipment: Do not use without approval and subject to submission of a method statement on its safe use.
- 460 POWDER ACTUATED FIXING SYSTEMS
  - Use: Not permitted.

#### 470 INVASIVE SPECIES

- General: Prevent the spread of species (e.g. plants or animals) that may adversely affect the site or Works economically, environmentally or ecologically.
- Special precautions: TBC.
- Duty: Report immediately any suspected invasive species discovered during execution of the Works.
  - Do not disturb.
  - Agree methods for safe eradication or removal.

# PROTECT THE FOLLOWING

### 510 EXISTING SERVICES

- Confirmation: Notify all service authorities, statutory undertakers and/ or adjacent owners of proposed works not less than one week before commencing site operations.
- Identification: Before starting work, check and mark positions of utilities/ services. Where
  positions are not shown on drawings obtain relevant details from service authorities,
  statutory undertakers or other owners.
- Work adjacent to services:
  - Comply with service authority's/ statutory undertaker's recommendations.
  - Adequately protect, and prevent damage to services: Do not interfere with their operation without consent of service authorities/ statutory undertakers or other owners.
- Identifying services:
  - Below ground: Use signboards, giving type and depth;
  - Overhead: Use headroom markers.
- Damage to services: If any results from execution of the Works:
  - Immediately give notice and notify appropriate service authority/ statutory undertaker.
  - Make arrangements for the work to be made good without delay to the satisfaction of service authority/ statutory undertaker or other owner as appropriate.
  - Any measures taken to deal with an emergency will not affect the extent of the Contractor's liability.
- Marker tapes or protective covers: Replace, if disturbed during site operations, to service authority's/ statutory undertakers recommendations.

#### 520 ROADS AND FOOTPATHS

- Duty: Maintain roads and footpaths within and adjacent to the site and keep clear of mud and debris.
- Damage caused by site traffic or otherwise consequent upon the Works: Make good to the satisfaction of the Employer, Local Authority or other owner.
- 530 EXISTING TOPSOIL/ SUBSOIL
  - Duty: Prevent over compaction of existing topsoil and subsoil in those areas which may be damaged by construction traffic, parking of vehicles, temporary site accommodation or storage of materials and which will require reinstatement prior to completion of the Works.
  - Protection: Before starting work submit proposals for protective measures.

## 540 RETAINED TREES/ SHRUBS/ GRASSED AREAS

- Protection: Preserve and prevent damage, except those not required.
- Replacement: Mature trees and shrubs if uprooted, destroyed, or damaged beyond reasonable chance of survival in their original shape, as a consequence of the Contractor's negligence, must be replaced with those of a similar type and age at the Contractor's expense.
- 550 RETAINED TREES
  - Protected area: Unless agreed otherwise do not:
    - Dump spoil or rubbish, excavate or disturb topsoil, park vehicles or plant, store materials or place temporary accommodation within an area which is the larger of the branch spread of the tree or an area with a radius of half the tree's height, measured from the trunk.
    - Sever roots exceeding 25 mm in diameter. If unintentionally severed give notice and seek advice.
    - Change level of ground within an area 3 m beyond branch spread.

- 555 WILDLIFE SPECIES AND HABITATS
  - General: Safeguard the following: TBC.
  - Protected habitats and species: Upon discovery immediately advise. Do not proceed until instruction is received.
  - Education: Ensure employees and visitors to the site receive suitable instruction and awareness training.
- 560 EXISTING FEATURES
  - Protection: Prevent damage to existing buildings, fences, gates, walls, roads, paved areas and other site features, which are to remain in position during execution of the Works.
    Special requirements: TBC.
  - . .
- 570 EXISTING WORK
  - Protection: Prevent damage to existing work, structures or other property during the course of the work.
  - Removal: Minimum amount necessary.
  - Replacement work: To match existing.
- 580 BUILDING INTERIORS
  - Protection: Prevent damage from exposure to the environment, including weather, flora, fauna, and other causes of material degradation during the course of the work.
- 600 EXISTING FURNITURE, FITTINGS AND EQUIPMENT
  - Protection: Prevent damage or move as necessary to enable the Works to be executed. Reinstate in original positions.
  - Extent: Before work in each room starts the Employer will remove the following: - TBC.
- 610 ESPECIALLY VALUABLE/ VULNERABLE ITEMS
  - Protection: Ensure provision and maintenance of special protective measures to prevent damage to the following:
     TBC.
  - Method statement: Submit within one week of request describing special protection to be provided.
- 630 EXISTING STRUCTURES
  - Duty: Check proposed methods of work for effects on adjacent structures inside and outside the site boundary.
  - Supports: During execution of the Works:
    - Provide and maintain all incidental shoring, strutting, needling and other supports as may be necessary to preserve stability of existing structures on the site or adjoining, that may be endangered or affected by the Works.
    - Do not remove until new work is strong enough to support existing structure.
    - Prevent overstressing of completed work when removing supports.
  - Adjacent structures: Monitor and immediately report excessive movement.
  - Standard: Comply with BS 5975 and BS EN 12812.
- 640 MATERIALS FOR RECYCLING/ REUSE
  - Duty: Sort and prevent damage to stated products or materials, clean off bedding and jointing materials and other contaminants.
  - Storage: Stack neatly and protect until required by the Employer or for use in the Works as instructed.

# A35 SPECIFIC LIMITATIONS ON METHOD/ SEQUENCE/ TIMING

- 110 SCOPE
  - General: The limitations described in this section are supplementary to limitations described or implicit in information given in other sections or on the drawings.
- 120 DESIGN CONSTRAINTS
  - Details: N/A.
- 130 METHOD/ SEQUENCE OF WORK

Specific Limitations: Include the following in the programme:
 Contractor to refer to indicative phasing plan in Appendix 1 and issue proposal to CA/PM.

- 170 WORKING HOURS
  - Specific limitations: 8am-6pm.
- 180 COMPLETION IN SECTIONS OR IN PARTS
  - General: Where the Employer is to take over any Section or part of the Works and such Section or part will, after its Completion, depend for its adequate functioning on work located elsewhere on the site: Complete such other work in time to permit such take over to occur.
  - Remainder of the Works: During execution, ensure that completed Sections or parts of the Works have continuous and adequate provision of services, fire precautions, means of escape and safe access.

# A36 FACILITIES/ TEMPORARY WORK/ SERVICES

## ACCOMMODATION

- 210 ROOM FOR MEETINGS
  - Facilities: Provide suitable temporary accommodation for site meetings, adequately heated and lit. The room may be part of the Contractor's own site offices.
  - Furniture and Equipment: Provide table and chairs for 5 people.

# SERVICES AND FACILITIES

- 410 LIGHTING
  - Finishing work and inspection: Provide temporary lighting, the intensity and direction of which closely resembles that delivered by the permanent installation.

#### 420 LIGHTING AND POWER

- Supply: Electricity from the Employer's mains may be used for the Works as follows:
  - Metering: Free of charge.
  - Point of supply: TBC.
  - Available capacity: TBC.
  - Frequency: 50 Hz.
  - Phase: TBC.
  - Current: Alternating.
- Continuity: The Employer will not be responsible for the consequences of failure or restriction in supply.

### 430 WATER

- Supply: The Employer's mains may be used for the Works as follows:
  - Metering: Free of charge.
  - Source: TBC.
  - Location of supply point: TBC.
  - Conditions/ Restrictions: TBC.
- Continuity: The Employer will not be responsible for the consequences of failure or restriction in supply.

### 570 PERSONAL PROTECTIVE EQUIPMENT

- General: Provide for the sole use of those acting on behalf of the Employer, in sizes to be specified:
  - Safety helmets to BS EN 397, neither damaged nor time expired. Number required: 3\_\_\_\_
  - High visibility waistcoats to BS EN ISO 20471 Class 2. Number required: 3.
  - Safety boots with steel insole and toecap to BS EN ISO 20345. Pairs required: 3.
  - Disposable respirators to BS EN 149.FFP1S.
  - Eye protection to BS EN 166.
  - Ear protection muffs to BS EN 352-1, plugs to BS EN 352-2
  - Hand protection to BS EN 388, 407, 420 or 511 as appropriate.

# A37 OPERATION/ MAINTENANCE OF THE FINISHED WORKS

# GENERALLY

- 110 THE BUILDING MANUAL
  - Purpose: The Manual is to be a comprehensive information source and guide for owners and users of the completed Works. It should provide an overview of the main design principles and describe key components and systems to enable proper understanding, efficient and safe operation and maintenance.
  - Scope:
    - Part 1: General: Content as clause 120.
    - Part 2: Fabric: Content as clause 130.
    - Part 3: Services: Content as clause 140.
    - Part 4: The Health and Safety File: Content as clause 150.
    - Part 5: Building User Guide: Content as clause 151.
  - Responsibility: The Building Manual is to be produced by the contractor and must be complete no later than 1 week before completion.
  - Information provided by others: Details: N/A.
  - Compilation:
    - Prepare all information for Contractor designed or performance specified work including as-built drawings.
    - Obtain or prepare all other information to be included in the Manual.
  - Reviewing the Manual: Submit a complete draft. Amend in the light of any comments and resubmit. Do not proceed with production of the final copies until authorized.
  - · Final copies of the Manual:
    - Number of copies: 2.
    - Format: Electronic.
    - Latest date for submission: 1 weeks before the date for completion stated in the contract.
  - As-built drawings and schedules:
    - Number of copies: 2.
    - Format: Electronic.
- 115 THE HEALTH AND SAFETY FILE
  - Responsibility: the contractor.
  - Content: Obtain and provide the following information: -.
  - Format: Electronic
  - Delivery to: site By (date): 1 week before the date for completion .
- 120 CONTENT OF THE BUILDING MANUAL PART 1: GENERAL
  - Content: Obtain and Provide the following, including all relevant details not included in other parts of the manual:
  - Index: list the constituent parts of the manual, together with their location in the document.
    The Works:
  - The works:
    - Description of the buildings and facilities.
    - Ownership and tenancy, where relevant
    - Health and Safety information other than that specifically required by the Construction (Design and Management) Regulations.
  - The Contract:
    - Names and addresses and contact details of all significant consultants, contractors, subcontractors, suppliers and manufacturers.
    - Overall design criteria.
    - Environmental performance requirements
    - Relevant authorities, consents and approvals.
    - Third party certification, such as those made by competent persons in accordance with the Building Regulations
  - Operational requirements and constraints of a general nature:
    - Maintenance contracts and contractors.
    - Fire safety strategy for the buildings and the site. Include drawings showing emergency escape and fire appliance routes, fire resisting doors location of emergency alarm and fire fighting systems, services, shut off valves switches, etc.
    - Emergency procedures and contact details in case of emergency.
    - Other specific requirements: TBC\_\_
  - Description and location of other key documents.
  - Timescale for completion: 1 week before the date for completion.

- 130 CONTENT OF THE BUILDING MANUAL PART 2: BUILDING FABRIC
  - Content: Obtain and Provide the following, including all relevant details not included in other parts of the manual:
  - Detailed design criteria, including:
    - Floor and roof loadings.
    - Durability of individual components and elements.
    - Loading restrictions.
    - Insulation values.
    - Fire ratings.
    - Other relevant performance requirements.
  - Construction of the building:
    - A detailed description of methods and materials used.
    - As-built drawings recording the construction, together with an index.
    - Information and guidance concerning repair, renovation or demolition/ deconstruction.
  - Periodic building maintenance guide chart.
  - Inspection reports.
  - Manufacturer's instructions index, including relevant COSHH data sheets and recommendations for cleaning, repair and maintenance of components.
  - Fixtures, fittings and components schedule and index.
  - Guarantees, warranties and maintenance agreements obtain from manufacturers, suppliers and subcontractors.
  - Test certificates and reports required in the specification or in accordance with legislation, including:
    - Air permeability.
    - Resistance to passage of sound.
    - Continuity of insulation.
    - Electricity and Gas safety.
  - Other specific requirements: TBC.
  - Timescale for completion: 1 week before the date for completion.

- 140 CONTENT OF THE BUILDING MANUAL PART 3: BUILDING SERVICES
  - Content: Obtain and Provide the following, including all relevant details not included in other parts of the manual:
  - Detailed design criteria and description of the systems, including:
    - Services capacity, loadings and restrictions
    - Services instructions.
    - Services log sheets.
    - Manufacturers' instruction manuals and leaflets index.
    - Fixtures, fittings and component schedule index.
  - Detailed description of methods and materials used.
  - As-built drawings for each system recording the construction, together with an index, including:
    - Diagrammatic drawings indicating principal items of plant, equipment and fittings
    - Record drawings showing overall installation
    - Schedules of plant, equipment, valves, etc. describing location, design performance and unique identification cross referenced to the record drawings.
    - Identification of services a legend for colour coded services.
  - Product details, including for each item of plant and equipment:
    - Name, address and contact details of the manufacturer.
    - Catalogue number or reference
    - Manufacturer's technical literature, including detailed operating and maintenance instructions.
    - Information and guidance concerning dismantling, repair, renovation or decommissioning.
  - Operation: A description of the operation of each system, including:
    - Starting up, operation and shutting down
    - Control sequences
    - Procedures for seasonal changeover
    - Procedures for diagnostics, troubleshooting and faultfinding.
  - Guarantees, warranties and maintenance agreements obtain from manufacturers, suppliers and subcontractors.
  - Commissioning records and test certificates list for each item of plant, equipment, valves, etc. used in the installations including:
    - Electrical circuit tests.
    - Corrosion tests.
    - Type tests.
    - Work tests.
    - Start and commissioning tests.
  - Equipment settings: Schedules of fixed and variable equipment settings established during commissioning.
  - Preventative maintenance: Recommendations for frequency and procedures to be adopted to ensure efficient operation of the systems
  - · Lubrication: Schedules of all lubricated items
  - Consumables: A list of all consumable items and their source.
  - Spares: A list of recommended spares to be kept in stock, being those items subject to wear and tear or deterioration and which may involve an extended delivery time when replacements are required.
  - · Emergency procedures for all systems, significant items of plant and equipment.
  - Annual maintenance summary chart.
  - Other specific requirements: TBC.
  - Timescale for completion: 1 week before the date for completion

- 150 CONTENT OF THE BUILDING MANUAL PART 4: THE HEALTH AND SAFETY FILE
  - Content: obtain and provide the following, including all relevant details not included in other parts of the manual, including:
    - residual hazards and how they have been dealt with
    - hazardous materials used
    - information regarding the removal or dismantling of installed plant and equipment
    - health and safety information about equipment provided for cleaning or maintaining the structure;
    - the nature, location and markings of significant services,
    - information and as-built drawings of the structure, its plant and equipment
  - Information prepared by others: Details: -.
  - Timescale for completion: 1 week before the date for completion.
  - Submit to: CA/PM.
- 151 CONTENT OF THE BUILDING MANUAL PART 5: THE BUILDING USER GUIDE
  - Content: Obtain and provide the following:
    - Building services information.
      - -Emergency information.
      - -Energy & environmental strategy.
      - -Water use.
      - -Transport facilities.
      - -Materials & waste policy.
      - -Re-fit/ re-arrangement considerations.
      - -Reporting provision.
      - -Training.
      - -Links & references.
  - Other specific requirements: -\_
    - Timescale for completion: 1 week before the date for completion .

#### 160 PRESENTATION OF BUILDING MANUAL

- Format: A4 size, plastics 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, to be folded and accommodated in the binders so that they may be unfolded without being detached from the rings.
- As-built drawings: The main sets may form annexes to the Manual.

## 210 INFORMATION FOR COMMISSIONING OF SERVICES

- General: Submit relevant drawings and preliminary performance data to enable the building user's staff to familiarise themselves with the installation.
- Time of submission: At commencement of commissioning.
- 220 TRAINING
  - Objective: Before Completion, explain and demonstrate to designated maintenance staff the purpose, function and operation of the installations including items and procedures listed in the Building Manual.
  - Level of training CA/PM.
  - Time allowance: Include a minimum of five days.

- 230 SPARE PARTS
  - General: Before Completion submit a priced schedule of spare parts that the Contractor recommends should be obtained and kept in stock for maintenance of the services installations.
  - Content: Include in the priced schedule for:
    - Manufacturers' current prices, including packaging and delivery to site.
    - Checking receipts, 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.
  - Latest date for submission: Two weeks before completion.
- 250 TOOLS
  - General: Provide tools and portable indicating instruments for the operation and maintenance of all services plant and equipment (except any installed under Named Subcontracts) together with suitable means of identifying, storing and securing.
  - Quantity: Two complete sets.
  - Time of submission: At completion.

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

- 110 MANAGEMENT AND STAFF
  - Cost significant items: Contractor to allow for minimum of 1No full time site foreman, for the duration of the works.

# A41 CONTRACTOR'S GENERAL COST ITEMS: SITE ACCOMMODATION

- 110 SITE ACCOMMODATION
  - Details: Site accommodation required or made/ not made available by the Employer: See section A36.
  - Cost significant items: Contractor to allow to provide their own welfare facilities and site
    accommodation within car park, exact location to be confirmed. MCA staff and visitors to
    the property to use the existing WCs for the duration of the works, works to be phased
    accordingly.



# Section 3

**General Materials and Workmanship Clauses** 

# C20 Demolition

- 5 SURVEY
  - Scope: Before starting deconstruction/ demolition work, examine available information, and carry out a survey of:
    - the structure or structures to be deconstructed/ demolished,
    - the site on which the structure or structures stand, and
    - the surrounding area.
    - Report and method statements: Submit, describing:
    - Form, condition and details of the structure or structures, the site and the surrounding area.
      - Extent: As drawing CROS-PR-02 .
    - Type, location and condition of features of historical, archaeological, geological or ecological importance.
    - Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures or by noise, vibration and/ or dust generated during deconstruction/ demolition.
    - Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal.
    - Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their removal and disposal.
    - Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage.
    - Proposed programme of work, including sequence and methods of deconstruction/ demolition.
    - Details of specific pre-weakening required.
    - Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.
    - Arrangements for control of site transport and traffic.
    - Special requirements: Results of tests to determine the precise nature of hazardous materials .
- 10 EXTENT OF DECONSTRUCTION/ DEMOLITION
  - General: Subject to retention requirements specified elsewhere, deconstruct/ demolish structures down to Concrete slab, refer to drawing CROS-PR-02 for exact to .
- 15 BENCH MARKS
  - Unrecorded bench marks and other survey information: Give notice when found. Do not remove marks or destroy the fabric on which they are found.
- 20 FEATURES TO BE RETAINED
  - General: Keep in place and protect the following: As per drawing CROS-PR-02.
- 25 LOCATION OF SERVICES
  - Services affected by the Works: Locate and mark positions.
  - Mains services marking: Arrange with the appropriate authorities for services to be located and marked.

## 30 SERVICES DISCONNECTION ARRANGED BY CONTRACTOR

 Responsibility: Before starting deconstruction/ demolition arrange with the appropriate authorities for disconnection of services owned by those authorities and removal of associated fittings and equipment.

- 32 DISCONNECTION OF DRAINS
  - General: Locate, disconnect and seal disused foul and surface water drains.
  - Sealing: Permanent, and within the site.

#### 35 LIVE FOUL AND SURFACE WATER DRAINS

- General: Protect drains and fittings still in use. Keep free of debris and ensure normal flow during deconstruction/ demolition work.
- Damage: Make good damage arising from deconstruction/ demolition work. Leave clean and in working order at completion of deconstruction/ demolition work.

#### 40 SERVICE BYPASS CONNECTIONS

- General: Provide as necessary to maintain continuity of services to occupied areas of the site on which the deconstruction/ demolition is taking place and to adjoining sites/ properties.
- Notice: Give adequate notice to adjoining owners and all affected occupiers if shutdown is necessary.
- 45 SERVICES TO BE RETAINED
  - Damage to services: Give notice, and notify relevant service authorities and/ or owner/ occupier regarding damage arising from deconstruction/ demolition.
  - Repairs to services: Complete as directed, and to the satisfaction of the service authority or owner.

#### 50 WORKMANSHIP

- Standard: Demolish structures in accordance with BS 6187.
- Operatives: Appropriately skilled and experienced for the type of work. Holding, or in training to obtain, relevant CITB Certificates of Competence.
- Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.
- 55 SITE HAZARDS
  - Precautions: Prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.
  - Dust: Reduce by periodically spraying with an appropriate wetting agent, or contain.
     Lead dust: Submit method statement for control, containment and clean-up regimes.
  - Site operatives and general public: Protect from vibration, dangerous fumes and dust arising during the course of the Works.

#### 65 STRUCTURES TO BE RETAINED

- Extent: As drawing CROS-PR-02.
- Parts which are to be kept in place: Protect.
- Interface between retained structures and deconstruction/ demolition: Cut away and strip out with care to minimize making good.

#### 70 PARTLY DECONSTRUCTED/ DEMOLISHED STRUCTURES

- General: Leave partly in a stable condition, with adequate temporary support at each stage to prevent risk of uncontrolled collapse. Make secure outside working hours.
- Temporary works: Prevent overloading due to debris.
- Access: Prevent access by unauthorized persons.
- 71 DANGEROUS OPENINGS
  - General: Provide guarding at all times, including outside of working hours. Illuminate during hours of darkness.
  - Access: Prevent access by unauthorized persons.

- 76 ASBESTOS-CONTAINING MATERIALS UNKNOWN OCCURENCES
  - Discovery: Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction/ demolition work. Avoid disturbing such materials.
  - Removal: Submit statutory risk assessments and details of proposed methods for safe removal.
- 78 UNFORESEEN HAZARDS
  - Discovery: Give notice immediately when hazards, such as unrecorded voids, tanks, chemicals, are discovered during deconstruction/ demolition.
  - Removal: Submit details of proposed methods for filling, removal, etc.

#### 85 SITE CONDITION AT COMPLETION

- Debris: Clear away and leave the site tidy on completion.
- Special requirements: N/A.

#### 90 CONTRACTOR'S PROPERTY

- Components and materials arising from the deconstruction/ demolition work: Property of the Contractor except where otherwise provided.
- Action: Remove from site as work proceeds where not to be reused or recycled for site use.

#### 95 RECYCLED MATERIALS

• Materials arising from deconstruction/ demolition work: Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with any site waste management plan.

# G20 Carpentry/ timber framing/ first fixing

#### 2 TIMBER PROCUREMENT

- Timber (including timber for wood based products): Obtained from well managed forests/ plantations in accordance with:
  - The laws governing forest management in the producer country or countries.
  - International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
  - Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied, or
  - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.
- 30 SELECTION AND USE OF TIMBER
  - Timber members damaged, crushed or split beyond the limits permitted by their grading: Do not use.

#### NOTCHES, HOLES AND JOINTS IN TIMBER 32

- · Notches and holes: Position in relation to knots or other defects such that the strength of members will not be reduced.
- Scarf joints, finger joints and splice plates: Do not use without approval.

#### 35 PROCESSING TREATED TIMBER

- · Cutting and machining: Carry out as much as possible before treatment.
- Extensively processed timber: Retreat timber sawn lengthways, thicknessed, planed, ploughed, etc.
- Surfaces exposed by minor cutting/ drilling: Treat with two flood coats of a solution recommended by main treatment solution manufacturer.

#### 40 MOISTURE CONTENT

Moisture content of wood and wood based products at time of installation: Not more than: 24%.

20%.

- Covered in generally unheated spaces:
- Covered in generally heated spaces:
- Internal in continuously heated spaces: 20%.

# K10 Gypsum board dry linings/ partitions/ ceilings

- 15 LINING ON TIMBER STUD PARTITIONS
  - Substrate: Studs at centres to match existing.
  - Linings: Refer to activity schedule.
    - Recycled content: Submit proposals.
  - Fixing: Contractor's Choice.
  - Finishing: Seamless jointing.
    - Primer/ Sealer: As recommended by board manufacturer for a paint finish.
    - Accessories: Metal beads/ stops recommended by board manufacturer.

### 25 LINING ON TIMBER FRAMED CEILINGS

- Substrate: TBC.
- Linings: 12.5 mm plasterboard.
  - Recycled content: Not applicable.
- Fixing: Contractor's choice.
- Finishing: Seamless jointing.
  - Primer/ Sealer: As recommended by board manufacturer for a paint finish.
  - Accessories: Metal beads/ stops recommended by the board manufacturer.
- 65 DRY LINING GENERALLY
  - General: Use fixing, jointing, sealing and finishing materials, components and installation methods recommended by board manufacturer.
  - Standard:
    - Gypsum plasterboard to BS EN 520.
    - Gypsum fibre board to BS EN 15283-2.
    - Evidence of compliance: All sheets to be CE marked. Submit Declaration of Performance (DoP).
  - Cutting gypsum boards: Neatly and accurately without damaging core or tearing paper facing. Minimize cut edges.
  - Two layer boarding: Stagger joints between layers.
  - Finishing: Neatly to give flush, smooth, flat surfaces free from bowing and abrupt changes of level.
- 67 SKIM COAT PLASTER FINISH
  - Plaster type: As recommended by board manufacturer.
     Thickness: 2-3 mm.
  - Joints: Fill and tape except where coincident with metal beads.
  - Finish: Tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.
- 69 INSTALLING BEADS/ STOPS
  - Cutting: Neatly using mitres at return angles.
  - Fixing: Securely using longest possible lengths, plumb, square and true to line and level, ensuring full contact of wings with substrate.
  - Finishing: After joint compounds/ plasters have been applied, remove surplus material while still wet from surfaces of beads exposed to view.

#### 70 ADDITIONAL SUPPORTS

- Framing: Accurately position and securely fix to give full support to:
  - Partition heads running parallel with, but offset from main structural supports.
  - Fixtures, fittings and services.
  - Board edges and lining perimeters.

- 85 MINERAL WOOL INSULATION
  - Fitting insulation: Closely butted joints and no gaps. Prevent slumping.
  - Electrical cables overlaid by insulation: Size accordingly.
- 87 SEALING GAPS AND AIR PATHS
  - Sealing: Apply sealant to perimeter abutments and around openings as a continuous bead with no gaps.
    - Gaps between floor and underside of gypsum board: After sealing, fill with joint compound.
- 90 SEAMLESS JOINTING
  - Filling and taping: Fill joints, gaps and internal angles with jointing compound and cover with continuous lengths of tape, fully bedded.
  - Finishing: Feather out jointing compound to give a flush, smooth, seamless surface.
  - Nail/ screw depressions and minor indents: Fill to give a flush surface.

# K32 Panel cubicles/ duct and wall linings/ screens

- 20 INSTALLATION
  - Programming: Do not install cubicles or duct panels before building is weathertight, wet trades have finished their work, wall and floor finishes are complete, and the building is well dried out.
  - Accuracy: Set out to ensure frames and/ or panels and doors are plumb, level and accurately aligned.
  - Modifications: Do not cut, plane or sand prefinished components except where shown on drawings.
  - Fixing: Secure components using methods and fasteners recommended by the cubicle manufacturer.

# K40 Demountable suspended ceilings

- 10 SUSPENDED CEILINGS Refer to activity schedule
  - Standard: To BS EN 13964.
  - Evidence of compliance: All ceilings kits to be CE marked. Submit Declaration of Performance (DoP).
  - Manufacturer: Contractor's choice.
    - Product reference: Contractor's choice.
  - Structural soffits: TBC.
  - Suspension system: Install all hangers, fixings, primary supports, main runners, cross members, perimeter trims, splines, noggings, clips bracing, bridging etc. necessary to complete the installation.
    - Type: Exposed T grid with rigid hangers.
    - Perimeter trims: Shadow line with mitred corners, white.
    - Ceiling materials: Fissured mineral wool tiles with rebated edge. Colour: Ethereal blue. - Sizes: 600 x 600 mm.
      - Recycled content: Not applicable.
  - Other requirements: None.
- 40 WORKMANSHIP GENERALLY
  - Fixing: Secure. In accordance with manufacturers' recommendations and BS 8290-3. Provide additional bracing and stiffening to give a stable ceiling system.
  - Setting out: Accurate. Provide level soffits free from undulations and lipping.
  - Lines and joints: Straight and parallel to walls, unless specified otherwise.
  - Edge infill units size (minimum): Half standard width or length.
  - Corner infill units size (minimum): Half standard width and length.
  - Grid: Position to suit infill unit sizes. Allow for permitted deviations from nominal sizes of infill units.
- 50 WIRE HANGERS
  - General: Straighten before use.
  - Installation: Install vertical without bends or kinks. Do not allow hangers to press against fittings.
  - Fixing: Tie securely at top and bottom with tight bends to loops to prevent vertical movement.
- 55 INSULATION
  - Material: Mineral wool pads 50 mm thick.
     Recycled content: Contractor's choice.
  - Fitting: Fit accurately and firmly with no gaps.
  - Insulation within individual infill units: Secure to prevent displacement when infill units are installed or subsequently lifted. Reseal cut dustproof sleeving.
  - Services: Do not cover electrical cables not sized accordingly. Cut around electrical fittings.
- 60 CAVITY FIRE BARRIERS
  - Material Wire reinforced mineral wool .
    - Thickness: To give same resistance as ceiling.
  - Fixing: Accurate. Secure with no gaps. Provide a complete barrier to smoke and flame.
  - Do not impair fire resisting performance of ceiling system.

# K45 Suspended ceiling system alterations

#### 62 EXECUTION GENERALLY

- Designated ceiling system components: Remove carefully without affecting surrounding areas.
- Disposal of removed components: Set aside for inspection.
- Retained components: Do not distort or damage.
- Reuse of ceiling system components:
  - Condition: Undamaged, free from distortion, clean.
  - Units and boards: Match adjacent areas where appropriate.
- Cutting units, boards and components: Cut neatly and accurately. Maintain edge profiles. - Openings: Suit sizes and edge details of fittings.

#### 65 SETTING OUT

- General: Maintain ceiling system accurately, continuous, even, and jointed at regular intervals. Provide level soffits free from undulations, lipping and distortions in grid members.
- Infill units, access units, integrated services: Fit and align correctly.
- Minimum size for edge and perimeter infill units: Half standard width or length where practicable.
- Grid: Position to suit infill unit sizes. Allow for permitted deviations from nominal sizes.
- Infill joints and exposed suspension members: Straight, aligned and parallel to walls or setting out lines.

#### 67 INSTALLING SUSPENSION

- Fixing:
  - Angle or strap hangers: Do not rivet for top fixing.
  - Wire hangers: Tie securely at top with tight bends to loops to prevent vertical movement.
- Installation:
  - Alignment: Vertical or near vertical without bends or kinks.
  - Maintain straight, with suitable tension and without bends or kinks.
  - Do not allow hangers to press against fittings, services and insulation covering ducts and pipes.
- Obstructions: Where obstructions prevent vertical installation, either:
  - brace diagonal hangers against lateral movement; or
  - hang ceiling system on an appropriate rigid sub-grid bridging across obstructions and supported to prevent lateral movement.
- Extra hangers: Provide as required to carry additional loads.

#### 71 INTEGRATED SERVICES

- General: Position services accurately, support adequately. Align and level in relation to the ceiling. Alterations must not diminish performance of ceiling system.
- Reaction to fire rating of additional supporting material: Match ceiling material.
- Services outlets:
  - Supported by ceiling system: Provide additional hangers.
  - Independently supported: Provide flanges to support altered ceiling system.

#### 73 INSTALLING INSULATION

- Fitting: Fit accurately and firmly with closely butted joints and no gaps.
- Insulation within individual infill units: Fit closely. Secure to prevent displacement when infill units are installed or subsequently lifted. Reseal cut dustproof sleeving.
- Width: Lay insulation in the widest practical widths to suit grid member spacings.
- Services: Do not cover electrical cables not sized accordingly. Cut insulation carefully around electrical fittings, etc. Do not lay insulation over luminaires.

### 74 INSTALLING CAVITY FIRE BARRIERS

- Fixing:
  - General: Fix firmly to channels or angles at abutments to building structure.
  - At perimeters and joints: Secure. Provide permanent stability and continuity with no gaps. Provide a complete barrier to smoke and flame.
- Joints: Form to preserve integrity in fire.
- Service penetrations: Cut and pack to maintain barrier integrity. Sleeve flexible materials. Adequately support services passing through the barrier.
  - Ceiling systems intended for fire protection: Do not impair fire resisting performance of ceiling system.
  - Ceiling systems not intended for fire protection: Do not mechanically interlink barriers with ceiling system.

# L10 Windows/ Rooflights/ Screens/ Louvres

- 25 ALUMINIUM WINDOWS
  - Manufacturer: To match existing.
     Product reference: To match existing.
  - Finish as delivered: To match existing.
  - Thermal performance (U-value maximum): To match existing.
  - Glazing details: To match existing.
    Beading: To match existing.
  - Ironmongery/ Accessories: To match existing.
  - Fixing: To match existing.
    - Fastener spacing: When not predrilled or specified otherwise, position fasteners not more than 250 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 600 mm centres.
- 80 IRONMONGERY
  - Fixing: In accordance with any third party certification conditions applicable. Assemble and fix carefully and accurately using fasteners with matching finish supplied by ironmongery manufacturer. Do not damage ironmongery and adjacent surfaces.
  - Checking/ adjusting/ lubricating: Carry out at completion and ensure correct functioning.
- 90 REPLACEMENT WINDOW INSTALLATION
  - Standard: To BS 8213-4.

# L20 Doors/ shutters/ hatches

#### 10 TIMBER PROCUREMENT

- Timber (including timber for wood-based products): Obtained from well-managed forests and/ or plantations in accordance with:
  - The laws governing forest management in the producer country or countries.
  - International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
  - Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied.
  - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood-based products.
- Certification scheme: Contractor's choice, submit proposals.
- Other evidence: None.
- 20 WOOD FLUSH DOORS INTERNAL DOUBLE and FD30S FIRE RESISTING AND SMOKE CONTROL
  - Manufacturer: Contractor's choice.
    - Product reference: Contractor's choice.
  - Facings: Refer to activity schedule.
  - Lippings: Unlipped.
  - Preservative treatment: Required.
  - Finish as delivered: Refer to activity schedule.
  - Glazing/ Infill details: Clear fire-resisting glazing.
    - Manifestation: Not required.
    - Beading: To match existing.
  - Thermal performance (U-value maximum): Manufacturer's standard.
  - Other requirements: None.

#### 45 DOORS ALUMINIUM

- Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
- Finish as delivered: Polyester powder coated, colour TBC.
- Glazing/ Infill details: Clear single glazing.
  - Manifestation: Not required.
  - Beading: Not required.
- Ironmongery: As ironmongery schedule.
- Thermal performance (U-value maximum): Manufacturer's standard.
- Other requirements: None.
- 70 FIRE AND SMOKE RESISTANCE
  - Requirement: Specified performance to be the minimum period attained when tested for integrity in accordance with BS 476-22, BS EN 1634-1 or BS EN 1634-3.
  - Components and assemblies will be marked to the relevant product standard and/ or third party certification rating.

### 75 FIRE RESISTING/ SMOKE CONTROL DOORS/ DOORSETS

• Gaps between frames and supporting construction: Filled as necessary in accordance with door/ doorset manufacturer's instructions.

#### 80 SEALANT JOINTS

- Sealant:
  - Manufacturer: Contractor's choice . Product reference: Contractor's choice .

  - Colour: To match existing .
    Application: As section Z22 to prepared joints. Triangular fillets finished to a flat or slightly convex profile.
- FIXING IRONMONGERY GENERALLY 85
  - Fasteners: Supplied by ironmongery manufacturer. - Finish/ Corrosion resistance: To match ironmongery.
  - Holes for components: No larger than required for satisfactory fit/ operation.
  - Adjacent surfaces: Undamaged.
  - Moving parts: Adjusted, lubricated and functioning correctly at completion.

# L40 General glazing

- 10 WORKMANSHIP AND POSITIONING GENERALLY
  - Glazing:
    - Generally: In accordance with BS 6262 series.
    - Integrity: Wind and watertight under all conditions. Make full allowance for deflections and other movements.
  - Glass:
    - Standards: Generally to BS 952 and to the relevant parts of:
    - BS EN 572 for basic soda lime silicate glass.
    - BS EN 1096 for coated glass.
    - BS EN 12150 for thermally toughened soda lime silicate glass.
    - BS EN ISO 12543 for laminated glass.
    - Quality: Free from scratches, bubbles and other defects.
    - Dimensional tolerances: Panes/ sheets to be accurately sized.
  - Material compatibility: Glass/ plastics, surround materials, sealers primers and paints/ clear finishes to be compatible. Comply with glazing/ sealant manufacturers' recommendations.
- 30 PREPARATION
  - Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing; ensure compliance with any certified installation requirements.

# M12 Resin flooring

- 15 TESTING MOISTURE CONTENT OF SUBSTRATES
  - Drying aids: Remove minimum four days prior to test.
  - Test: To BS 8203, Annex A using an accurately calibrated hygrometer.
  - Acceptability: Do not lay resin flooring until readings show 75% relative humidity or less.
- 20 SUBSTRATES GENERALLY
  - General: Substrates must restrain stresses that occur during setting and hardening of resin.
  - Chases/ Saw cuts: Cut/ break out for termination of resin flooring.
  - Blow holes, cavities, cracks, etc: Fill with repair product recommended by resin flooring manufacturer.
  - Cleanliness: Remove surface contaminants, debris, dirt and dust.
  - Surface texture: Suitable to accept resin flooring and achieve a full bond over the complete area.
- 25 EXISTING SUBSTRATES
  - Preparation: Remove surface imperfections, ingrained contaminants, coverings/ coatings and residues.
- 30 WORKMANSHIP
  - Fillers and incorporated aggregates: Thoroughly mix to ensure wetting. Avoid excessive air entrainment.
  - Curing: Allow appropriate periods between coats and before surface treatments and trafficking/ use.

# M20 Plastered/ Rendered/ Roughcast coatings

- 10 CEMENT:LIME:SAND 1:1:6
  - Substrate: Stainless steel lathing.
    - Preparation: Apply bonding coat.
  - Mortar: Contractor's choice.
  - Sand: To BS EN 13139.
    - Grading: 0/2 or 0/4 (CP or MP); category 2 fines.
    - Lime: Nonhydraulic to BS EN 459-1, type CL 90S.
  - Undercoats:
    - Mix (cement:lime:sand): 1:1:6 using sulfate resisting cement.
    - Thickness (excluding dubbing out and keys): First coat 8–12 mm and second coat 6–10 mm.
  - Final coat:
    - Mix (cement:lime:sand): 1:1:5-6.
    - Thickness: 5-8 mm.
  - Finish: To match existing.

## 60 CEMENTS FOR MORTARS

- Cement: To BS EN 197-1.
  - Types: Portland cement, CEM I. Portland slag cement, CEM II.
    - Portland fly ash cement, CEM II.
  - Strength class: 32.5, 42.5 or 52.5.
- Sulfate resisting cement: To BS EN 197-1.
  Strength class: 42.5.
- Masonry cement: To BS EN 998-1 and Kitemarked
- Class: MC 12.5 (with air entraining agent).

#### 62 ADMIXTURES FOR CEMENT GAUGED MORTARS

- Air entraining (plasticizing) admixtures: To BS EN 934-2 and compatible with other mortar constituents.
- Other admixtures: Submit proposals.
- Prohibited admixtures: Calcium chloride and admixtures containing calcium chloride.

#### 65 MIXING

- Render mortars (site-made):
  - Batching: By volume using gauge boxes or buckets.
- Mix proportions: Based on damp sand. Adjust for dry sand.
- Mixes: Of uniform consistence and free from lumps.
- 67 COLD WEATHER
  - Internal work: Take precautions to prevent damage to internal coatings when air temperature is below 3°C.
  - External work: Avoid when air temperature is at or below 5°C and falling or below 3°C and rising.

#### 71 SUITABILITY OF SUBSTRATES

• General: Suitable to receive coatings. Sound, free from contamination and loose areas.

#### 74 EXISTING DAMP AFFECTED PLASTER/ RENDER

- Plaster affected by rising damp: Remove to a height of 300 mm above highest point reached by damp or 1 m above dpc, whichever is higher.
- Perished and salt contaminated masonry:
  - Mortar joints: Rake out.
  - Masonry units: Submit proposals.
- Drying out substrates: Establish drying conditions.

#### 78 REMOVING DEFECTIVE EXISTING RENDER

- Render for removal: Detached, hollow, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
- Removing defective render: Cut out to regular rectangular areas with straight, square cut or slightly undercut edges.
  - Render with imitation joints: Cut back to joint lines.
- Cracks (other than hairline cracks): Cut out to a width of 75 mm (minimum).
- 82 BEADS/ STOPS
  - Location: External angles and stop ends.
  - Materials:
    - External render: Stainless steel.
    - Internal plaster/ render: Stainless steel.
  - Fixing: Secure and true to line and level.
    - Beads/ stops to external render: Fix mechanically.
- 87 APPLICATION OF COATINGS
  - General: Apply coatings firmly and achieve good adhesion.
  - Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
    - Accuracy: Finish to a true plane with walls and reveals plumb and square.
  - Drying out: Prevent excessively rapid or localized drying out.
  - Keying undercoats: Cross scratch (plaster coatings) and comb (render coatings). Do not penetrate undercoat.

#### 93 CURING AND DRYING OF RENDER COATINGS

- Curing: Keep each coat damp by covering with polyethylene sheet and/ or spraying with water
  - Curing period (minimum): 48 hours.
- Drying: Allow each coat to dry thoroughly, with shrinkage substantially complete before applying next coat.

#### 97 RENDER FINAL COAT - SCRAPED FINISH

• Finish: Scraped to expose aggregate and achieve an even texture.

#### 99 RENDER FINAL COAT - PLAIN FLOATED FINISH

• Finish: Even, open texture free from laitance.

# M50 Rubber/ plastics/ cork/ lino/ carpet tiling/ sheeting

- 15 CARPET TILING Refer to activity schedule
  - · Base: Existing .
    - Preparation: Remove existing tiles.
  - Fabricated underlay: TBC.
  - Carpet tiles to BS EN 1307: Contractor's choice.
    - Manufacturer: Refer to activity schedule.
    - Product reference: Refer to activity schedul.
    - Recycled content: None permitted.
    - Size: Manufacturer's guidance.
    - Colour/ pattern: Refer to activity schedule .
  - Method of laying: Fully adhere all tiles with release adhesive recommended by tile manufacturer..

### 20 SHEETING - PLASTICS

- · Base: Existing .
  - Preparation: Remove existing sheeting.
- Fabricated underlay: TBC.
- Flooring roll: Refer to Activity Schedule.
  - Manufacturer: Refer to Activity Schedule.
  - Product reference: Refer to Activity Schedule.
  - Recycled content: None permitted.
  - Width: Refer to Activity Schedule.
  - Thickness: Not applicable.
  - Colour/ pattern: Refer to Activity Schedule.
- Adhesive (and primer if recommended by manufacturer): Refer to Activity Schedule .
- Seam welding: Refer to Activity Schedule.
- 45 EXISTING FLOOR COVERING REMOVED
  - Substrate: Clear of covering and as much adhesive as possible. Skim with smoothing compound to give smooth, even surface.
- 60 SETTING OUT TILES
  - Method: Set out from centre of area/ room so that wherever possible:
    - Tiles along opposite edges are of equal size.
    - Edge tiles are more than 50% of full tile width.

#### 65 LAYING COVERINGS

- Base/ substrate condition: Rigid, dry, smooth, free from grease, dirt and other contaminants.
- Use a primer where recommended by adhesive manufacturer. Allow to dry thoroughly.
- Adhesive: As specified, as recommended by covering manufacturer or, as approved.
- Conditioning of materials prior to laying: As recommended by manufacturer.
- Environment: Before, during and after laying, provide adequate ventilation and maintain temperature and humidity approximately at levels which will prevail after building is occupied.
- Finished coverings: Accurately fitted, tightly jointed, securely bonded, smooth and free from air bubbles, rippling, adhesive marks, stains, trowel ridges and high spots.

### 80 SKIRTINGS

- Types: PVC .
- Manufacturer: Contractor's choice .
  - Product reference: Contractor's choice .
- Fixing: Securely bond with mitred corners.

#### 85 WASTE

• Spare covering material: Retain suitable material for patching. On completion submit pieces for selection. Hand over selected pieces to Employer.

# M60 Painting/ clear finishing

- 10 EMULSION PAINT TO INTERNAL PLASTERED SURFACES
  - Manufacturer: Contractor's choice.
  - Product reference: Contractor's choice.
  - Surfaces: Refer to activity schedule.
    Preparation: Wash down all surfaces.
  - Initial coats: As recommended by manufacturer.
    Number of coats: 1.
  - Undercoats: As recommended by manufacturer.
     Number of coats: 1.
  - Finishing coats: Vinyl silk.
    - Number of coats: 2.
- 12 GLOSS PAINT TO INTERNAL EXPOSED SOFTWOOD
  - Manufacturer: Contractor's choice.
    - Product reference: Contractor's choice.
  - Surfaces: Previously decorated.
    Preparation: Remove existing gloss paint.
  - Initial coats: As recommended by manufacturer.
     Number of coats: 1.
  - Undercoats: As recommended by manufacturer.
    Number of coats: 1.
  - Finishing coats: Full gloss.
    - Number of coats: 2.

### 30 PREPARATION GENERALLY

- Standard: In accordance with BS 6150.
- Refer to any pre-existing CDM Health and Safety File and CDM Construction Phase Plan where applicable.
- Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
- · Substrates: Sufficiently dry in depth to suit coating.
- Efflorescence salts, dirt, grease and oil: Remove.
- Surface irregularities: Provide smooth finish.
- Organic growths and infected coatings:
  - Remove with assistance of biocidal solution.
  - Apply residual effect biocidal solution to inhibit regrowth.
- Joints, cracks, holes and other depressions: Fill with stoppers/ fillers. Provide smooth finish.
- Dust, particles and residues from preparation: Remove and dispose of safely.
  - Doors, opening windows and other moving parts:
  - Ease, if necessary, before coating.
  - Prime resulting bare areas.

#### 32 PREVIOUSLY COATED SURFACES GENERALLY

- Preparation: In accordance with BS 6150, clause 11.5.
- Contaminated or hazardous surfaces: Give notice of:
  - Coatings suspected of containing lead.
  - Substrates suspected of containing asbestos or other hazardous materials.
  - Significant rot, corrosion or other degradation of substrates.
- Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Removing coatings: Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
- Loose, flaking or otherwise defective areas: Carefully remove to a firm edge.
- Alkali affected coatings: Completely remove.
- Retained coatings:
  - Thoroughly clean.
  - Gloss coated surfaces: Provide key.
- Partly removed coatings: Apply additional preparatory coats.
- Completely stripped surfaces: Prepare as for uncoated surfaces.
- 35 FIXTURES AND FITTINGS
  - Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
  - Removal: Before commencing work: Ironmongery, coverplates, grilles, wall clocks, and other surface mounted fixtures.
  - Replacement: Refurbish as necessary, refit when coating is dry.
- 37 WOOD PREPARATION
  - General: Provide smooth, even finish with lightly rounded arrises.
  - Degraded or weathered surface wood: Take back surface to provide suitable substrate.
  - · Degraded substrate wood: Repair with sound material of same species.
  - · Heads of fasteners: Countersink sufficient to hold stoppers/ fillers.
  - Resinous areas and knots: Apply two coats of knotting.
  - Defective primer: Take back to bare wood and reprime.
- 41 MASONRY AND RENDERING PREPARATION
  - Loose and flaking material: Remove.

#### 43 PLASTER PREPARATION

- Nibs, trowel marks and plaster splashes: Scrape off.
- Overtrowelled 'polished' areas: Provide suitable key.

#### 61 COATING GENERALLY

- Application standard: In accordance with BS 6150, clause 9.
- Conditions: Maintain suitable temperature, humidity and air quality.
- Surfaces: Clean and dry at time of application.
- Thinning and intermixing: Not permitted unless recommended by manufacturer.
- Priming coats: Apply as soon as possible on same day as preparation is completed.
- Finish:
  - Even, smooth and of uniform colour.
  - Free from brush marks, sags, runs and other defects.
  - Cut in neatly.
- Doors, opening windows and other moving parts: Ease before coating and between coats.

# Q10 Kerbs/ edgings/ channels/ paving accessories

- 65 ROAD MARKING
  - Manufacturer: Contractor's choice.
    - Product reference: Contractor's choice.

  - Colour: To match existing.
    Surface to receive markings: Clean and dry, loose material removed.
    Application: Uniform, with no streaks or ragged edges.

# Q22 Asphalt roads/ pavings

- 30 LAYING GENERALLY
  - Preparation: Remove all loose material, rubbish and standing water.
  - Adjacent work: Form neat junctions. Do not damage.
  - Channels, kerbs, inspection covers etc: Keep clean.
  - Permissible deviation from the required levels, falls and cambers (maximum): In accordance with BS 594987, Table 7.
  - New paving:
    - Keep traffic free until it has cooled to prevailing atmospheric temperature.
    - Do not allow rollers to stand at any time.
    - Prevent damage.
    - Lines and levels: With regular falls to prevent ponding.
    - Overall texture: Smooth, even and free from dragging, tearing or segregation.
    - Condition on completion: Clean.

# Q25 Slab/ brick/ sett/ cobble pavings

- 11 LAYING PAVINGS
  - Cutting: Cleanly and accurately, without spalling, to give neat junctions with edgings and adjoining finishes.
  - Lines and levels of finished surface: Smooth and even with falls to prevent ponding.
  - Bedding of units: Firm so that rocking or subsidence does not occur or develop.
  - Appearance: Even and regular with even joint widths and free of mortar and sand stains.

#### 16 LEVELS OF PAVING

- Permissible deviation from specified levels (generally): ± 6 mm.
- Regularity of paved surfaces
  - Maximum undulations in the surface of pavings (except tactile paving surfaces) under a 1 m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface): 3 mm.
  - Joints between paving units or utility access covers:
     Joints flush with the surface: difference in level between adjacent units to be no more than twice the joint width (with a 5 mm max difference in level).
     Recessed, filled joints: difference in level between adjacent units to be no greater than 2 mm; the recess to be no deeper than 5 mm.
  - Unfilled joints: difference in level between adjacent units to be no greater than 2 mm.
- Sudden irregularities: Not permitted.

### 21 PROTECTION FROM TRAFFIC

- Mortar bedded pavings: Keep free from pedestrian traffic for 4 days and vehicular traffic for 10 days after laying.
- Access: Restrict access to paved areas to prevent damage from site traffic and plant.

# Q40 Fencing

#### FENCING

- 10 WOODEN POST AND RAIL FENCING
  - Standard: To BS 1722-7.
  - Joints: To match existing.
  - Height: To match existing.
  - Wood: To match existing.
    - Treatment: To provide a 30 year service life.
    - Finish: To match existing.
  - Maximum centres of posts: To match existing.
  - Post setting: Concrete.
  - Accessories: None.
  - Conformity: Submit manufacturer's and installer's certificates, to BS 1722-7.
- 60 INSTALLATION GENERALLY
  - Expertise: By an experienced fencing contractor.
  - · Alignment: Straight lines or smoothly flowing curves.
  - Tops of posts: Following profile of the ground.
  - Setting posts: Rigid, plumb and to specified depth, or greater where necessary to ensure adequate support.
  - Fixings: All components securely fixed.
- 70 SETTING POSTS IN CONCRETE
  - Standard: To BS 8500-2.
  - Mix: Designated concrete not less than GEN1 or Standard prescribed concrete not less than ST2.
  - Alternative mix for small quantities: 50 kg Portland cement to 150 kg fine aggregate to 250 kg 20 mm nominal maximum size coarse aggregate, medium workability.
  - Admixtures: Do not use.
  - Holes: Excavate neatly and with vertical sides.
  - Filling: Unless specified otherwise position post/ strut and fill hole with concrete to not less than half the depth, well rammed as filling proceeds and consolidated.
  - Backfilling of holes not completely filled with concrete: Excavated material, well rammed and consolidated.

#### 72 SETTING POSTS IN EARTH

- Holes: Excavated neatly, with vertical sides and as small as practicable to allow refilling.
- Filling: Position posts/ struts and replace excavated material, well rammed as filling proceeds.

#### 75 DRIVEN POSTS

- Damage to heads: Minimize.
  - Repair: Neatly finish post tops after installation.
- 80 WOOD RAILS
  - Length (minimum): Two bays, with joints in adjacent rails staggered.
  - Fixing: Nail each length of rail to each post with two 100 mm galvanized nails.
  - Rails with split ends: Replace.

- 85 SITE CUTTING OF WOOD
  - General: Kept to a minimum.

  - Below or near ground level: Cutting prohibited.
    Treatment of surfaces exposed by minor cutting and drilling: Two flood coats of solution recommended for the purpose by main treatment solution manufacturer.

# Z10 Purpose made joinery

- 10 FABRICATION
  - Standard: To BS 1186-2.
  - Sections: Accurate in profile and length, and free from twist and bowing. Formed out of solid unless shown otherwise.
    - Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
  - Joints: Tight and close fitting.
  - Assembled components: Rigid. Free from distortion.
  - Screws: Provide pilot holes. Heads of countersunk screws sunk at least 2 mm below surfaces visible in completed work.
  - Adhesives: Compatible with wood preservatives applied and end uses of timber.
- 20 CROSS SECTION DIMENSIONS OF TIMBER
  - General: Dimensions on drawings are finished sizes.
  - Maximum permitted deviations from finished sizes:
    - Softwood sections: To BS EN 1313-1.
    - Hardwood sections: To BS EN 1313-2.
- 30 PRESERVATIVE TREATED WOOD
  - Cutting and machining: Completed as far as possible before treatment.
  - Extensively processed timber: Retreat timber sawn lengthways, thicknessed, planed, ploughed, etc.
  - Surfaces exposed by minor cutting and/ or drilling: Treat as recommended by main treatment solution manufacturer.
- 40 MOISTURE CONTENT
  - Wood and wood based products: Maintained within range specified for the component during manufacture and storage.
- 50 FINISHING
  - Surfaces: Smooth, even and suitable to receive finishes.
     Arrises: Eased unless shown otherwise on drawings.
  - End grain in external components: Sealed with primer or sealer as section M60 and allowed to dry before assembly.

# Z11 Purpose made metalwork

- 31 METAL PRODUCTS
  - Grades of metals, section dimensions and properties: To the appropriate British Standards and suitable for the purpose.
  - Fasteners: Generally, same metal as component, with matching coating and finish.

#### 50 PREPARATION FOR APPLICATION OF COATINGS

- General: Fabrication complete, and fixing holes drilled before applying coatings.
- Paint, grease, flux, rust, burrs and sharp arrises: Removed.

#### 51 FABRICATION GENERALLY

- Contact between dissimilar metals in components: Avoid.
- Finished components: Rigid and free from distortion, cracks, burrs and sharp arrises.
   Moving parts: Free moving without binding.
- Corner junctions of identical sections: Mitre.
- Prefinished metals: Do not damage or alter appearance of finish.
- 52 COLD FORMED WORK
  - Profiles: Accurate, with straight arrises.
- 53 WELDING AND BRAZING GENERALLY
  - Surfaces to be joined: Clean thoroughly.
  - Tack welds: Use only for temporary attachment.
  - Joints: Fully bond parent and filler metal throughout with no inclusions, holes, porosity or cracks.
  - Surfaces of materials that will be self-finished and visible in completed work: Protect from weld spatter.
  - Flux residue, slag and weld spatter: Remove.
- 54 WELDING OF STEEL
  - Method: Metal arc welding to BS EN 1011-1 and -2.
- 56 FINISHING WELDED AND BRAZED JOINTS VISIBLE IN COMPLETE WORK
  - Butt joints: Smooth, and flush with adjacent surfaces.
  - Fillet joints: Neat.
  - Grinding: Grind smooth where indicated on drawings.

## Z20 Fixings and adhesives

#### 10 FIXINGS AND FASTENERS GENERALLY

- Integrity of supported components: Select types, sizes, quantities and spacings of fixings, fasteners and packings to retain supported components without distortion or loss of support.
- Components, substrates, fixings and fasteners of dissimilar metals: Isolate with washers or sleeves to avoid bimetallic corrosion.
- General usage: To recommendations of fastener manufacturers and/ or manufacturers of components, products or materials fixed and fixed to.
- Fixings: To be in straight lines, at regular centres.

#### 25 FASTENER DURABILITY

- Materials: To have:
  - Bimetallic corrosion resistance appropriate to items being fixed.
  - Atmospheric corrosion resistance appropriate to fixing location.
- Appearance: Submit samples on request.

#### 30 FIXINGS THROUGH FINISHES

• Penetration of fasteners and plugs into substrate: To achieve a secure fixing.

#### 35 PACKINGS

- Materials: Noncompressible, corrosion proof.
- Area of packings: Sufficient to transfer loads.
- 40 CRAMP FIXINGS
  - Fasteners: Fix cramps to frames with screws of same material as cramps.
  - Fixings in masonry work: Fully bed in mortar.

#### 50 PELLETED COUNTERSUNK SCREW FIXINGS

- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
- Pellets: Cut from matching timber, grain matched, glued in to full depth of hole.
- Finished level of pellets: Flush with surface.

#### 55 PLUGGED COUNTERSUNK SCREW FIXING

- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
- Plugs: Glue in to full depth of hole.
- Finished level of plugs: Projecting above surface.

#### 60 APPLYING ADHESIVES

- Surfaces: Clean. Regularity and texture to suit bonding and gap filling characteristics of adhesive.
- Support and clamping during setting: Provide as necessary. Do not mark surfaces of or distort components being fixed.
- Finished adhesive joints: Fully bonded. Free of surplus adhesive.

# Z21 Mortars

- 10 MORTAR MIXES
  - Specification: Proportions and additional requirements for mortar materials are specified elsewhere.
- 20 SAND FOR SITE MADE CEMENT GAUGED MASONRY MORTARS
  - Standard: To BS EN 13139.
  - Grading: 0/2 (FP or MP).
    - Fines content where the proportion of sand is specified as a range (e.g. 1:1: 5-6):
       Lower proportion of sand: Use category 3 fines.
       Higher proportion of sand: Use category 2 fines.
  - Sand for facework mortar: Maintain consistent colour and texture. Obtain from one source.
- 25 SAND FOR LIME:SAND MASONRY MORTARS
  - Type: Sharp, well graded.
    - Quality, sampling and testing: To BS EN 13139.
    - Grading/ Source: As specified elsewhere.
- 30 READY-MIXED LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS
  - Standard: To BS EN 998-2.
  - Lime: Nonhydraulic to BS EN 459-1.
    Type: CL 90S.
  - Pigments for coloured mortars: To BS EN 12878.
- 40 CEMENTS FOR MORTARS
  - Cement: To BS EN 197-1 and CE marked.
    - Types: Portland cement, CEM I.
      - Portland limestone cement, CEM II/A-LL. Portland slag cement, CEM II/B-S.
        - Portland fly ash cement, CEM II/B-V.
    - Strength class: 32.5, 42.5 or 52.5.
  - White cement: To BS EN 197-1 and CE marked.
    - Type: Portland cement, CEM I.
    - Strength class: 52.5.
  - Sulfate resisting Portland cement:
    - Types: To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
      - To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.
    - Strength class: 32.5, 42.5 or 52.5.
  - Masonry cement: To BS EN 413-1 and CE marked.
    - Class: MC 12.5.

#### 50 ADMIXTURES FOR SITE MADE MORTARS

- Air entraining (plasticizing) admixtures: To BS EN 934-3 and compatible with other mortar constituents.
- Other admixtures: Submit proposals.
- Prohibited admixtures: Calcium chloride, ethylene glycol and any admixture containing calcium chloride.
- 60 MAKING MORTARS GENERALLY
  - Batching: By volume. Use clean and accurate gauge boxes or buckets.
  - Mix proportions: Based on dry sand. Allow for bulking of damp sand.
  - Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
  - Mortars containing air entraining admixtures: Mix mechanically. Do not overmix.
  - Contamination: Prevent intermixing with other materials.
- 70 MAKING HYDRAULIC LIME:SAND MORTARS
  - Mixing hydrated hydraulic lime:sand: Follow the lime manufacturer's recommendations for each stage of the mix.
    - Water quantity: Only sufficient to produce a workable mix.

### **Z22 Sealants**

### EXECUTION

- 61 SUITABILITY OF JOINTS
  - Presealing checks:
    - Joint dimensions: Within limits specified for the sealant.
    - Substrate quality: Surfaces regular, undamaged and stable.
  - Joints not fit to receive sealant: Submit proposals for rectification.

### 62 PREPARING JOINTS

- Surfaces to which sealant must adhere:
  - Remove temporary coatings, tapes, loosely adhering material, dust, oil, grease, surface water and contaminants that may affect bond.
  - Clean using materials and methods recommended by sealant manufacturer.
- Vulnerable surfaces adjacent to joints: Mask to prevent staining or smearing with primer or sealant.
- Backing strip and/ or bond breaker installation: Insert into joint to correct depth, without stretching or twisting, leaving no gaps.
- Protection: Keep joints clean and protect from damage until sealant is applied.

### 63 APPLYING SEALANTS

- Substrate: Dry (unless recommended otherwise) and unaffected by frost, ice or snow.
- Environmental conditions: Do not dry or raise temperature of joints by heating.
- Sealant application: Fill joints completely and neatly, ensuring firm adhesion to substrates.
- Sealant profiles:
  - Butt and lap joints: Slightly concave.
  - Fillet joints: Flat or slightly convex.
- Protection: Protect finished joints from contamination or damage until sealant has cured.



### Section 4

Activity Schedule – Building Works



## Appendix 1

## **Existing and Proposed Floor Plans**





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## Appendix 2

## **MEPH Performance Specification and Drawings**



# Appendix 3

## **Structural Drawings**







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