

THE BRITISH MUSEUM

**THE SOUTH STAIR,
CENTRAL SALOON &
GALLERIES 37 TO 40**

**SPECIFICATION:
DEMOLITION (DISMANTLING),
ALTERATION AND STRIPOUT**

Authorised:	JEC
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A01 GENERAL INFORMATION

110B CLAUSE SUFFIX LETTERS:

- This BDP Specification is based upon the National Building Specification (NBS). The Contractor's attention is drawn to the suffix letters 'A', 'B' and 'J' that occur after some of the clause numbers in the work sections. These suffix letters are used as follows:

'A' is used for an NBS clause which has been altered in the BDP Standard Specification.

'B' is used for a new clause, not found in NBS, in the BDP Standard Specification.

'J' is used for a new clause in this particular Job Specification or against an existing clause from the BDP Standard Specification amended for this project.

- No liability is accepted for the incorrect application of this convention in this Specification.

115B MAIN CONTRACT PRELIMINARIES

The Contractor's attention is drawn to the Main Contract Preliminaries which must be considered in addition to the contents of this specification. These include the terms of the Contractor's obligations under the Contractor Design Portions of the work where they pertain to individual work packages.

120B DESIGN RESPONSIBILITIES GENERALLY

The contractor shall be responsible for developing and completing the design in accordance with the Contract Documents

The Contractor shall provide sufficient drawn information to illustrate the design and construction solutions he proposes including details of any suggestions for amendments to the details or working methods in this specification. After award of Contract, the Contractor shall submit design development drawings and calculations to the CA and complete details of any agreed changes to the specification for review prior to the development of shop drawings and fabrication drawings.

The Contractor shall, with his Tender, bring to the CA's attention any discrepancies or contradictions in the Tender Documents

125B OTHER CONSULTANTS WORK

This specification refers to the scope of removal of architectural and structural elements, temporary setting aside of existing elements and general stripping out. It must ALSO be read in conjunction with the relevant Structural, Mechanical and Electrical Engineers specifications and drawings mentioned both in this specification and elsewhere in the main contract documents which will describe any further limitations, and constraints upon any work done to the related engineering works. Where there is any doubt about the extent of these works or with co-ordination issues this shall immediately be referred to the CA for clarification prior to pricing or construction of the works.

British Museum Main Specification

23 February 2007

This document includes:

Code	Section	Revision	Dated
C20	Demolition	REVISION B	23 Feb 2007

Section Revision History

No.	Purpose	
REVISION A	ISSUED FOR TENDER	12 Jan 2007
REVISION B	Issued for Tender	23 Feb 2007

Clauses amended in this revision

No.	Clause	
2!	To be read with Preliminaries/General conditions	Revised
89A	DESCRIPTION OF THE WORK	Revised
95A	DEMOLITION (DISMANTLING) AND STRIPOUT WORK	Revised
96A	STABILITY OF STRUCTURES	Revised
99!	GENERAL REQUIREMENTS	Revised
110	DESK STUDY/ SURVEY	Deleted
110A	DESK STUDY/ SURVEY	Revised
111A	INVESTIGATIONS/OPENING UP WORKS	Revised
120	EXTENT OF DEMOLITION	Deleted
120A	EXTENT OF DEMOLITION, DISMANTLING AND STRIPOUT	Revised
130	GROUNDWORKS	Deleted
140	BENCH MARKS	Revised
150	FEATURES TO BE RETAINED	Deleted
150A	FEATURES TO BE RETAINED	Revised
199!	SERVICES AFFECTED BY DEMOLITION	Revised
210	SERVICES REGULATIONS	Revised
220	LOCATION OF SERVICES	Revised
230	DISCONNECTION - ARRANGED BY CONTRACTOR	Revised
231	DISCONNECTION - ARRANGED BY EMPLOYER	Deleted
232	DISCONNECTION - ARRANGED BY EMPLOYER AND CONTRACTOR	Deleted
240	DISCONNECTION OF DRAINS	Revised
250	DRAINS IN USE	Revised
250A	EXISTING RAIN WATER GULLEYS, OUTLETS AND DOWNPIPES IN USE	Revised
260	BYPASS CONNECTIONS	Revised
270	SERVICES WHICH ARE TO REMAIN	Revised
299!	DEMOLITION WORK	Revised
310	WORKMANSHIP	Revised
320	GAS OR VAPOUR RISKS	Revised
330	DUST CONTROL	Deleted
330A	DUST CONTROL	Revised
340	HEALTH HAZARDS	Revised
350	ADJOINING PROPERTY	Deleted

350A	ADJOINING PROPERTY	Revised
360	STRUCTURES TO BE RETAINED	Deleted
360A	STRUCTURES TO BE RETAINED	Revised
370A	PARTLY DISMANTLED STRUCTURES	Added
370	PARTLY DEMOLISHED STRUCTURES	Deleted
380	DANGEROUS OPENINGS	Revised
390	ASBESTOS CONTAINING MATERIALS	Deleted
390A	ASBESTOS CONTAINING MATERIALS	Revised
391	ASBESTOS CONTAINING MATERIALS	Revised
410	UNFORESEEN HAZARDS	Revised
420	OPEN BASEMENTS, ETC	Deleted
430	FILLING OF BASEMENTS, ETC	Deleted
440	SITE CONDITION AT COMPLETION	Deleted
440A	SITE CONDITION AT COMPLETION	Revised
441	SITE LEVELS AT COMPLETION	Deleted
442	SITE SURFACE AT COMPLETION	Deleted
499I	MATERIALS ARISING	Revised
510	CONTRACTOR'S PROPERTY	Revised
511	EMPLOYER'S PROPERTY	Deleted
511A	EMPLOYER'S PROPERTY	Revised
520	RECYCLED MATERIALS	Added

DESCRIPTION OF THE WORK

95A DEMOLITION (DISMANTLING) AND STRIPOUT WORK

• Scope: As generally defined below and on drawings LN08732/GI200E-BDP-A2210, A2220, A2230, A2260, A2265, A2269, A2270, 2280, 2281, 2282 and 2283. This includes, but is not limited to, the following:

- Removal of any hazardous materials including identified asbestos.
- Removal of existing roofs and structures above Galleries 36 and 40.
- Removal of existing ceilings and supporting structures in Galleries 36, 40 and Botanical Staircase corridor.
- Removal of existing roof lanterns above Galleries 37, 38 and 39.
- Removal of existing copper roof coverings (including all gutters, hoppers and flashings) above Galleries 37, 38 and 39.
- Careful removal or lifting of the existing copper roof finish over part of the South Colonnade Roof along the central gutter on the south side of Galleries 37, 38 and 39.
- Careful lifting, setting aside and protection of existing historic timber boarding beneath copper roof finishes and gutters above Galleries 37, 38 and 39. Boarding to be reinstated following installation of new insulation, new services, new roof hatches and reinforcement/repairs to the existing structure.
- Removal of existing mastic asphalt roof finishes as defined on the drawings.
- Careful removal of old debris and dust from all roof voids.
- Careful removal of internal mezzanine structure and staircase within Gallery 40.
- Careful removal of internal plasterboard partitions, screens and wall linings as shown on drawings.
- Careful removal of internal plaster finishes as shown on drawings.
- Careful removal of internal joinery items including doors and skirtings as shown on drawings.
- Careful removal and/or protection of existing joinery elements (including doors and skirtings) as defined on the drawings
- Careful removal of existing floor finishes and substrates as shown on drawings.
- Careful lifting, setting aside and protection of existing historic timber floor beneath vinyl floor finishes following record & condition surveys. Boarding to be reinstated following installation of new services and any repairs to the existing structure.
- Careful lifting, setting aside and protection of existing stone floor slabs in Galleries 37, 38 and 39 to allow installation of building services following record & condition surveys. Stone to be reinstated in same location.
- Careful removal of old debris and dust from all floor voids.
- Removal of all internal fixtures and fittings unless otherwise identified.
- Removal of all redundant building services as identified within the M+E specification and drawings

Drawings and specification are to be read in conjunction with all other relevant tender/construction and archive information available including:

- All existing layouts, sections and elevation drawings 200E-BDP-A-2010 to 2083 inclusive.
- All Structural Engineer's drawings/documents showing existing structure and archive information.
- All other structural engineer's drawings including those relating to temporary works and construction sequencing (0699/250/02, 03, 04, 050 to 61)
- All Building Services Engineer's strip out drawings and specifications.
- Refer to Building services drawings for BWIC with services and Structural Engineer's drawings for associated details.
- All other existing site record information relating to architectural fabric, structure and building services.
- Records of any known existing hazardous materials including asbestos.

96A STABILITY OF STRUCTURES

- Maintain the stability of all existing buildings, structures and earthworks within and adjacent to the Works from the date of possession of the site until Practical Completion of the Works. Take all necessary precautions to prevent damage to the existing building's structures and retained fabric within and adjacent to the Works.

Design, install and maintain all necessary temporary support to comply with the above. Submit details of temporary support proposals to the CA prior to the commencement of the works. If requested submit supporting design calculations.

Ensure that the stability and structural integrity of the Works are maintained during the Contract. Design, install and maintain all temporary support where necessary. Do not overload any completed or partially completed elements of the works. If requested submit details of temporary support proposals together with the proposed sequence and method of construction.

The drawings of the existing building indicate the assumed structural arrangement. Carry out additional investigations where necessary to allow detailed design support.

GENERAL REQUIREMENTS**110A DESK STUDY/ SURVEY**

- Scope: Before starting demolition work, examine available information, carry out surveys of the structure and fabric, site and surrounding area including the following:
 - Dilapidations Survey/Schedule of Condition (including photographs) of all retained elements including historic features and materials
 - Schedule of Condition (including photographs) at all interfaces outside site boundary (eg Ceilings below works, Botanic Staircase, adjacent roof finishes, glazing to roof lanterns etc).
 - Type 3 Asbestos surveys in all areas including floor/ceiling/roof voids and risers.
 - Opening-up investigations at all interfaces with the retained structures, masonry and fabric as necessary to confirm safe removal and avoid damage. Refer to Clause 111A below and Structural Engineer's drawings and specifications.
- Reports and method statements: Submit, describing:
 - Form, condition and details of the structures and fabric
 - Form, location and removal methods of flammable, toxic or hazardous materials.
 - Type and location of adjoining or surrounding premises which may be adversely affected by noise, vibration, dust or removal of structure.
 - Identification and location of services above and below ground, including those required for the Contractor's own use. Arrangements for disconnection and removal of services.
 - Type and location of features of historical, archaeological or geological importance.
 - Arrangements for protection of all original historic features as defined in the 'Schedule of Protection to Historic Features'
 - Sequence and method of demolition/dismantling including details of specific pre-weakening.
 - Arrangements for protection of personnel and the public including exclusion of unauthorized persons.
 - Arrangements for establishing, maintaining and altering site hoardings as necessary to suit the works and the need to maintain public access. To include consideration of 60 minute fire separation (both sides) and all fire detection systems required.
 - Arrangements for control of site transport and traffic.:
 - Special requirements: Refer to Main Preliminaries/General Conditions/Appendices for specific Client requirements.

111A INVESTIGATIONS/OPENING UP WORKS

- **Requirements:** The contract drawings indicate the expected scope of works. These have been prepared without full access to all areas of the existing building. The proposed architectural, structural and building services details cannot all be finalised until further investigation is carried out following opening up works by the Contractor.

Allow for phased opening up works in sufficient time to allow the Design Team to assess the structure, fabric and available void space (where relevant to services routes) and prepare any associated details. The preliminary requirements for opening up are shown on the drawings.

Advise the CA in writing when the opening up works have been fully completed in any area. Provide safe access to allow inspection. The area will be inspected by a member of the design team who will confirm if additional opening up is required. After full opening up has been completed to the satisfaction of the CA, allow ten working days before issue of any associated details.

- **Procedures:**
 - Remove all finishes carefully by hand.
 - Do not cut floor boards, panels skirtings etc unless agreed in writing by the CA.
 - Set aside all materials and protect for future reinstatement.
 - Do not open up any areas not instructed by the CA
 - Do not use machine tools for opening up work without prior written permission of the CA
 - Protect/provide guarding to all openings at all times.

120A EXTENT OF DEMOLITION, DISMANTLING AND STRIPOUT

- **General:** Subject to retention requirements specified elsewhere, carefully demolish, dismantle, stripout and remove all building elements as identified in the contract drawings. Special attention is required at the interface of all existing retained elements to avoid undermining adjacent structures and causing unnecessary damage or removal of any adjacent fabric or historic features.
- Repair and make good all existing construction and finishes (to match existing adjacent) at all interfaces with construction identified for removal

140 BENCH MARKS

- **Unrecorded bench marks and other survey information:** Give notice when found.
 - Do not remove or destroy.

150A FEATURES TO BE RETAINED

- **General:** Keep in place and protect the following: All existing retained features, materials (timber doors, architraves, cornices, stonework etc) and finishes (plaster etc) as indicated on the contract drawings. Particular attention is required to those items identified in 'Schedule of Protection to Historic Features'. Protection is also required in all areas adjacent to the Works but outside the scope of work that could be potentially damaged. For example: Great Court glazed roof and other fragile glazed structures (roof lanterns/lights), stone landings etc.

SERVICES AFFECTED BY DEMOLITION**210 SERVICES REGULATIONS**

- **Work carried out to or which affects new or existing services:** Carry out in accordance with the Byelaws or Regulations of the relevant Statutory Authority.

- 220 LOCATION OF SERVICES**
- Services affected by the Works: Locate and mark positions.
 - Mains services: Arrange with the appropriate authorities for location and marking of positions.
 - Standard: In accordance with National Joint Utilities Group (NJUG) 'Guidelines on the positioning and colour coding of utilities' apparatus'.
- 230 DISCONNECTION - ARRANGED BY CONTRACTOR**
- General: Arrange with the appropriate authorities for disconnection of services and removal of fittings and equipment prior to starting demolition.
- 240 DISCONNECTION OF DRAINS**
- General: Locate disconnect and seal disused drain connections.
 - Sealing: Within the site and permanent.
- 250 DRAINS IN USE**
- General: Protect drains, manholes, inspection chambers, gullies, vent pipes and fittings still in use and ensure that they are kept free of debris.
 - Damage: Make good damage arising from demolition work. Leave clean and in working order at completion.
- 250A EXISTING RAIN WATER GULLEYS, OUTLETS AND DOWNPIPES IN USE**
- General: Protect all existing rainwater gulleys/gutters, outlets and internal downpipes still in use and ensure that existing or temporary hoppers used for diverted temporary roof drainage are kept free of debris.
 - Damage: Make good and repair damage arising from demolition work. Leave clean and in working order at completion.
- 260 BYPASS CONNECTIONS**
- General: Provide as necessary to maintain continuity of services to occupied areas of the same and adjoining properties.
 - Minimum notice to occupiers: 72 hours if shutdown is necessary during changeover.
- 270 SERVICES WHICH ARE TO REMAIN**
- Damage: Give notice and notify service authority or owner of damage arising from the execution of the works.
 - Repairs: Complete as directed, and to the satisfaction of the service authority or owner.
- DEMOLITION WORK**
- 310 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 demolition to be used.
- 320 GAS OR VAPOUR RISKS**
- Precautions: Prevent fire or explosion caused by gas or vapour.
- 330A DUST CONTROL**
- Method: Reduce by periodically spraying demolition works with water. Do not proceed without notifying and agreeing precise location with the CA in advance and with due consideration of potentially sensitive areas of fabric either adjacent to or below (eg. lathe and plaster ceilings)

- 340 HEALTH HAZARDS**
- Precautions: Protect site operatives and general public from hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.
- 350A ADJOINING PROPERTY**
- When dismantling structure(s) along the perimeter of the site boundary (eg Great Court Roof) leave adequate temporary support and protection at each stage. Maintain and alter temporary supports and protection as necessary as the works progress.
 - Carefully dismantle/remove structure and fabric to avoid causing any damage to areas outside the site boundary and leave no unnecessary or unstable projections.
 - Support to adjoining structure and fabric: Do not disturb.
 - Report to the CA any defects exposed or becoming apparent in adjoining foundations, structure or fabric
 - Promptly repair any damage caused by the dismantling, alteration or stripout work. Make good, as before, to ensure safety, stability, weather protection and security.
- 360A STRUCTURES TO BE RETAINED**
- Adequately protect existing structure(s) which are to be kept in place.
 - Extent of work: Cut away and strip out with care to reduce the amount of making good to a minimum.
 - Prevent debris or waste from overloading any part of the structure which is to be retained. See Structural Engineers' and archive drawings and specification for details of the existing structure.
 - All temporary roofs, weather protection, working platforms to be designed in accordance with the Structural Engineer's drawings and performance specification and Architect's outline drawings (for general scope with Town Planning and Listed Building consent). All construction stage loadings and fixing back to the existing structure and fabric to be agreed with the CA in advance.
- 370A PARTLY DISMANTLED STRUCTURES**
- General: Leave in a stable condition, with adequate temporary support at each stage to prevent risk of uncontrolled collapse. Keep safe outside working hours.
 - Temporary works: Prevent debris from overloading.
 - Unauthorised persons: Prevent access.
- 380 DANGEROUS OPENINGS**
- General: Illuminate and protect. Keep safe outside working hours.
- 390A ASBESTOS CONTAINING MATERIALS**
- General: These are known to be present in the structures to be demolished in the following locations:
 - Roof lanterns above Galleries 37, 38, and 39
 - Roof Voids above Galleries 36 and 40.
 - Removal: By a Contractor licensed by the Health and Safety Executive and prior to other works starting in these locations.
 - Further Surveys: Type 3 Intrusive surveys in all areas prior to commencing demolition work.
- 391 ASBESTOS CONTAINING MATERIALS**
- Discovery: Give notice immediately of suspected asbestos containing materials discovered during demolition work. Avoid disturbing such materials.
 - Methods for safe removal. Submit details.
- 410 UNFORESEEN HAZARDS**
- Unrecorded voids, tanks, chemicals, etc. discovered during demolition: Give notice.
 - Methods for safe removal, filling, etc: Submit details.

440A SITE CONDITION AT COMPLETION

- Debris: Clear away and remove all debris from site. Clean off all surfaces and leave the site in a tidy condition.
- Other requirements: -.

MATERIALS ARISING**510 CONTRACTOR'S PROPERTY**

- Components and materials arising from the demolition work: Property of the Contractor except where otherwise provided.
 - Remove from site as work proceeds.

511A EMPLOYER'S PROPERTY

- Components and materials to remain the property of the Employer:
All items identified for setting aside, protection and reinstatement including:
 - Roof boarding above Galleries 37, 38 & 39
 - Existing floor boarding in Gallery 39 only
 - Existing cast iron floor duct gratings/black marble duct covers in Galleries 37, 38 & 39
 - All stone work lifted for access to install services
 - Stone Bronze Plaque in Gallery 68
 - All joinery items temporarily removed to allow overhauling or repair
 - All M+E fixtures and fittings within the Botanical staircase and corridor.
- Protection:
 - Maintain until these items are removed by the Employer, reused in the Works or the end of the Contract.
- Special requirements: Prior to removal, label and record precise locations of all items and submit record document to the CA.

520 RECYCLED MATERIALS

- Materials arising from demolition work: May be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification.
- Evidence of compliance: Submit full details and supporting documentation.
- Verification: Allow adequate time in programme for verification of compliance 10 working days.