

Structural Demolition Specification C20

for

**Wrenbridge
Shinfield Park Reading**

Ref: 40237-BGL-XX-XX-SP-S-0001

Version 01
17.01.2025

DOCUMENT CONTROL SHEET

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Project: Shinfield Park, Reading

Document No: 40237-BGL-XX-XX-SP-S-0001

Title: Structural Demolition Specification C20

Status: Preliminary

Date: 17.01.2025

Document Production Record

Version Number:	01	Name	Signature
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Document Revision Record

Version Number	Date	Revision Details
01	17/01/2025	Draft Issue

C20 DEMOLITION

To be read with Preliminaries/ General conditions.

01 SITE LOCATION

- Shinfield Park, Reading RG2 9FW

05 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.
 - 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.

10 EXTENT OF DECONSTRUCTION/ DEMOLITION

- General: Subject to any retention requirements specified elsewhere, deconstruct/demolish:
 - Existing main building structure down to basement level, including basement walls.
 - 2 No bungalows down to ground level
 - Ancillary buildings on site down to ground level
 - All demolition material to be crushed and laid at base of the basement to form a level platform for future development works
 - Temporary support and/or stone berms to be provide around the former basement perimeter to support surrounding ground levels
 - Temporary Land drainage to be provided at base of basement to collect ponding water
 - All redundant drainage and services located below the former building structures to be made safe and disconnected/removed back to the perimeter of the demolition works.
 - Provide tree protection around trees in close proximity to the works

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.
- 31 SERVICES DISCONNECTION ARRANGED BY EMPLOYER
 - Responsibility: The Employer will arrange disconnection of services and removal of fittings and equipment owned by those authorities prior to deconstruction/ demolition.
 - Timing: Do not start deconstruction/ demolition until disconnections are completed.
- 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.
- 60 ADJOINING PROPERTY
 - Temporary support and protection: Provide. Maintain and alter, as necessary, as work proceeds. Do not leave unnecessary or unstable projections.
 - Defects: Report immediately on discovery.
 - Damage: Minimize. Repair promptly to ensure safety, stability, weather protection and security.
 - Support to foundations: Do not disturb.

- 65 STRUCTURES TO BE RETAINED
- Extent: All areas around existing basement to be retained, including redundant services and drainage which are capped at the site boundary
 - Parts which are to be kept in place: Existing structure around existing substation to be temporarily retained until HV disconnection, and substructure to ancillary buildings and bungalows.
 - 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 OCCURRENCES
- 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, piles 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.
- 86 SITE LEVELS AT COMPLETION
- Levels: Grade the site to follow the levels of adjacent areas
 - Survey: Carry out a topographical level survey and provide an AutoCAD 3D format file showing site levels at completion
- 90 CONTRACTOR'S PROPERTY
- Components and materials arising from the deconstruction/ demolition work: Property of the Contractor except where otherwise stated.
 - 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.
 - Concrete, brick, stone and asphalt arisings shall be processed to remove all unsuitable material, crushed, and stockpiled on site for future use as 6F1, 6F2 or 6F3 capping. Materials shall be tested to demonstrate compliance with limits stated in table below. Testing frequency shall be 1 per 500 cu m of material unless otherwise agreed. Chemical and frost testing of the samples shall also be undertaken.

Material Class	Permitted Constituents (All Subject to Requirements of Clause 601 and Appendix 6/1)	Material Properties Required for Acceptability			
		Property (See Exceptions in Previous Column)	Defined and Tested in Accordance with:	Acceptable limits Within:	
				Lower	Upper
6F1	Selected granular material (fine grading) Typical Use - Capping Any material, or combination of materials – including recycled aggregates with not more than 50% by mass of recycled bituminous planings and granulated asphalt, but excluding materials contaminated with tar and tar-bitumen binders, unburnt colliery spoil, argillaceous rock and chalk. Property (vi) in the next column shall not apply if the Class Ra (asphalt) content of any recycled aggregate is 20% or less.	(i) grading	BS 1377-2	SHW Table 6/2	SHW Table 6/2
		(ii) OMC	BS 1377-4 (vibrating hammer method)	-	-
		(iii) mc	BS 1377-2	OMC - 2%	OMC
		(iv) Los Angeles coefficient	SHW Clause 635	-	60
		(v) Class Ra (asphalt) content	Clause 710	-	50%
		(vi) Bitumen Content	BS EN 12697-1 or BS EN 12697-39	-	2.0%
6F2	Selected granular material (coarse grading) Typical Use – Capping Any material, or combination of materials - including recycled aggregates with not more than 50% by mass of recycled bituminous planings and granulated asphalt, but excluding materials contaminated with tar and tar-bitumen binders, unburnt colliery spoil and argillaceous rock. Property (i) in the next column shall not apply to chalk. Property (vi) in the next column shall not apply if the Class Ra (asphalt) content of any recycled aggregate is 20% or less.	(i) grading	BS 1377-2	SHW Table 6/2	SHW Table 6/2
		(ii) OMC	BS 1377-4: (vibrating hammer method)	-	-
		(iii) mc	BS 1377-2	OMC - 2%	OMC
		(iv) Los Angeles coefficient	SHW Clause 635	-	50
		(v) Class Ra (asphalt) content	Clause 710	-	50%
		(vi) Bitumen Content	BS EN 12697-1 or BS EN 12697-39	-	2.0%
6F3	Selected granular material (>50% asphalt) Typical Use - Capping Any material, or combination of materials with not less than 50% by mass of recycled bituminous planings and granulated asphalt, but excluding materials contaminated with tar and tar-bitumen binders, unburnt colliery spoil and argillaceous rock.	(i) grading	BS 1377-2	SHW Table 6/2	SHW Table 6/2
		(ii) OMC	SHW Clause 613	-	-
		(iii) mc	SHW Clause 613	OMC - 2%	OMC
		(v) Class Ra (asphalt) content	Clause 710	50%	-
		(iv) bitumen content	BS EN 12697-1 or BS EN 12697-39	-	10%