



Government of **Western Australia**
Department of **Communities**
Housing

HOUSING

DEMOLITION SPECIFICATION

BCA Class 2 and 3 buildings

NATSPEC, December 2017

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0201 DEMOLITION**1 GENERAL****1.1 PERMITS, FEES AND CONTRIBUTIONS****Applications and approvals**

Contractor's responsibilities: Cover all authority application and approval requirements, including fees and contributions.

Demolition Permit: Submit a completed Demolition Permit Application (BA5) to the Housing Authority Permit Authority in conformance with the *Building Act 2011 (WA)*.

1.1 STANDARD**General**

Demolition: To AS 2601.

1.2 EXISTING SITE CONDITION**Services**

Redundant/disused septic tanks: Locate and allow for decommissioning and removal to **DEMOLITION, Existing septic tanks**.

Existing services: Disconnect, cap off and peg. If removal is required, remove to the junction.

Backfilling to excavations: If required, conform to *0222 Earthwork*.

Removal of existing vegetation

Approval: Do not remove any existing plants without approval.

1.3 ASBESTOS REMOVAL**Discovery of asbestos**

Identification: If suspected asbestos containing material has been identified, conform to the following:

- Isolate the contaminated area and prevent access.
- Do not disturb the material.
- Cease work on site until safe removal can be arranged.

Water supply: Maintain water supply to the contaminated area until all asbestos products have been removed.

Materials containing asbestos

Asbestos in the workplace: To Safe Work Australia's How to manage and control asbestos in the workplace: Code of Practice.

Transport and disposal cost: Pay for all costs of removing the asbestos waste.

Verification: Where asbestos products are found and removal required, submit written evidence of asbestos waste disposal at a waste facility licensed to accept asbestos.

Removal contractor: Carry out removal by a WorkSafe (WA) unrestricted asbestos licence holders listed at www.commerce.wa.gov.au/sites/unrestricted_asbestos_licence

Asbestos disposal facilities

Metropolitan areas: Use facilities listed by the Waste Authority at www.wasteauthority.wa.gov.au.

Non-metropolitan areas: For facilities outside the Perth metropolitan areas, use facilities recommended by the local government authority.

State regulations

Disposal: To the Environmental Protection (Controlled Waste) Regulations 2004 (WA).

Form submission: Provide copies of submitted WorkSafe (WA) *Asbestos removal forms* and evidence that all fees have been paid. Forms are available at:

www.commerce.wa.gov.au/worksafe/asbestos-removal

1.4 SUBMISSIONS**Authority approvals**

Evidence of compliance: Before commencing demolition, submit evidence of the following:

- Requirements of authorities relating to the work under the contract have been obtained.
- A permit to demolish has been obtained from the appropriate authority.
- A scaffold permit has been obtained from the appropriate authority (if scaffolding is proposed to be used).
- Certification that each person having access to the construction site has completed a WHS induction training procedure which is site-specific.
- Precautions necessary for protection of persons and property have been taken and suitable protective and safety devices have been provided to the approval of the relevant authority.
- Treatment for rodent infestation has been carried out and a certificate has been obtained from the appropriate authority.
- Fees and other costs have been paid.

Hazardous materials

Audit: Prepare and submit a hazardous substances management plan to AS 2601 clause 1.6.1. Include the following:

- Asbestos or material containing asbestos.
- Flammable or explosive liquids or gases.
- Toxic, infective or contaminated materials.
- Radiation or radioactive materials.
- Noxious or explosive chemicals.
- Tanks or other containers which have been used for storage of explosive, toxic, infective or contaminated substances.

Investigation and work plan

Demolition plan: Submit the work plan to the Principal to AS 2601 clause 2.3 before demolition or stripping work. Include **Execution details**, the check list items appropriate to the project from AS 2601 Appendix A, and the following information:

- The method of protection and support for adjacent property.
- Locations and details of necessary service deviations and terminations.

- Confirmation of the sequence of work.
- Investigation results to AS 2601 clause 2.2.
- If the demolition program results in components temporarily cantilevered, provide a certificate from a professional engineer.
- Proposals for the safe use of mobile plant on suspended structural members including provisions for the protection of lower floors in the event of structural failure.
- If implosion methods are proposed, provide a separate report of methods and safeguards.
- Wheel loads of tipping or loading vehicles.

Notice of Completion Certificate

Submission: Within 7 days of completing the demolition works, submit a Notice of Completion Certificate (BA7) to the Housing Authority Permit Authority with other required documentation.

Off-site disposal

Disposal location: Submit the locations and evidence of conformance with the relevant authorities for the disposal of material required to be removed from the site.

Records

Dilapidation record: Submit to the Principal a copy of the dilapidation record for inspection. Submit to each owner of each adjacent property a copy of the part of the record relating to that property and obtain their written agreement to the contents of the record, before commencement of demolition.

Recycling

Delivery location: Submit the name and address of the proposed recycling facility.

Certification: Provide evidence of delivery to the nominated recycling facility.

Stockpiles

Location: Submit the locations for on-site stockpiles for demolished materials for recycling in the works. Coordinate with the locations of storage for other waste streams and prevent mixing or pollution.

1.5 INSPECTION

Notice

Inspection: Give notice so that inspection may be made of the following:

- Adjacent structures before commencement of demolition.
- Services before disconnection or diversion.
- Trees as documented to be retained, before commencement of demolition.
- Contents of building before commencement of demolition.
- Structure after stripping and removal of roof coverings and external cladding.
- Underground structures after demolition above them.
- Excavations remaining after removal of underground work.
- Site after removal of demolished materials.
- Services after reconnection or diversion.

2 EXECUTION

2.1 PROCEDURAL

Work, health and safety

Requirement: To the *Occupational Safety and Health Act 1984 (WA)* and the *Occupational Safety and Health Regulations 1996 (WA)*.

Unexpected finds

Requirement: If encountered, give notice and close off affected site area with barrier tapes and warning signs to prevent access. Unexpected finds include hazardous or volatile contaminants, archaeological finds and items of heritage value.

Further action:

- Arrange for inspection by an environmental consultant to undertake sampling and analysis.
- Protocols for determining if a substance is considered acceptable or unacceptable to human health.
- Procedures for disposal or removal of find.
- Submission by an environmental consultant for assessment/validation/clearance.

2.2 PREDEMOLITION

Engineering survey

Structural assessment: Before starting demolition, carry out a survey by a professional engineer on the structural elements being removed and its effect on adjacent structures.

Scheduling and planning

Site access: Plan demolition activities so that interferences with roads, streets, walks, walkways and adjacent facilities are minimised.

Pest management

Survey of infestation: 6 weeks before starting demolition, survey the site and surrounding areas to identify for signs and extent of infestation.

Infestations: If identified, appropriately treat before starting demolition.

Baiting: Minimum 7 days before starting demolition, bait all rooms/sections in the buildings, including concealed spaces such as the roof space and subfloors. If required, continue baiting until all pests have been eradicated.

Redundant drains and sewers: Cap off to isolate redundant sewers and grub out if required.

Waste storage: Store waste in pest resistant, closable containers in suitable locations and remove regularly.

Fencing removal

Adjacent property owner: Before removing boundary fencing, notify adjoining property owners of commencement and anticipated completion date. Obtain consent before undertaking work.

Notice: Issue a Notice and Request for Consent Form (BA20A) to adjacent property owners and obtain consent for boundary fencing removal in conformance with the *Building Act 2011 (WA)*.

Removal of fences: Remove all wing fences and gates and any fence erected on the lot that will not

form, in part or whole, a boundary fence with an existing lot.

2.3 SUPPORT

Temporary support

General: If temporary support is required, certification for its design and installation is required from a professional engineer engaged by the contractor.

Existing buildings: Until permanent support is provided, provide temporary support for sections of existing buildings which are to be altered and which normally rely for support on work to be demolished.

Ground support: Support excavations for demolition of underground structures.

Adjacent structures: Provide supports to adjacent structures where necessary, sufficient to prevent damage resulting from the works.

- Lateral supports: Provide lateral support equal to that given by the structure to be demolished.
- Vertical supports: Provide vertical support equal to that given by the structure to be demolished.

Permanent supports

General: If permanent supports for adjacent structures are necessary and are not documented, give notice and obtain instructions.

2.4 PROTECTION

Encroachment

General: Prevent the encroachment of demolished materials onto adjoining property, including public places.

Weather protection

General: If walls or roofs are opened for alterations and additions or the surfaces of adjoining buildings are exposed, provide temporary covers to prevent water penetration. Provide covers to protect existing plant, equipment and materials intended for re-use.

Dust protection

General: Provide dustproof screens, bulkheads and covers to protect existing finishes and the immediate environment from dust and debris.

Security

General: If a wall or roof is opened for alterations and additions, provide security against unauthorised entry to the building.

Temporary screens

General: Fill the whole of designated temporary openings or other spaces using dustproof and weatherproof temporary screens, fixed securely to the existing structure, and installed to shed water to avoid damage to retained existing elements or adjacent structures and contents.

Type: Timber framed screens sheeted with 12 mm plywood and painted. Seal the junctions between the screens and the openings.

Temporary access

General: If required, provide a substantial temporary doorset fitted with a rim deadlock, and remove on completion of demolition.

Exposed surfaces

General: Where necessary, protect and weatherproof the surfaces of adjacent structures exposed by demolition.

Existing services

Location: Before commencing demolition, locate and mark existing underground services in the areas which will be affected by the demolition operations.

Utility services: Contact DIAL BEFORE YOU DIG to identify location of underground utility services pipes and cables.

Excavation: Do not excavate by machine within 1 m of existing underground services.

2.5 DEMOLITION – BUILDING WORKS

Dilapidation record

Purpose: Use the dilapidation record to assess the damage and rectification work arising from the demolition work.

Availability: Keep the records of the investigations on site and available for inspection until the date of practical completion of the contract.

Encroachment

General: If encroachments from adjacent structures are encountered and are not documented, give notice and obtain instructions.

Concrete slabs

General: Using a diamond saw, neatly cut back or trim to new alignment with a clean true face existing concrete slabs to be partially demolished or penetrated. Do not overcut at corners.

Recycling: If concrete crushing is proposed on site, submit details of plant and environmental controls.

Material below grade

Remaining voids: Stabilise and provide barriers.

Explosives

General: Do not use explosives.

2.6 DEMOLITION – BUILDING SERVICES

General

Requirement: Decommission, isolate, demolish and remove from the site all existing redundant equipment including associated components that become redundant as a result of the demolition.

Breaking down: Disassemble or cut up equipment where necessary to allow removal.

Recovered materials: Recover all components associated with the listed items. Minimise damage during removal and deliver to the required locations.

Refrigeration systems

General: Undertake demolition work on refrigeration systems in conformance with AS/NZS 5149.4.

Components for re-use

General: Clean components to be re-used and test for compliance with current Australian Standards before returning to service. Provide results of compliance tests.

Existing septic tanks

Redundant/disused tanks: Decommission tank as follows:

- Completely empty tanks to the *Environmental Protection (Liquid Waste) Regulations*, leach drains and soak wells using a licensed liquid waste contractor.
- After emptying septic tanks, leach drains and soak wells, and fully remove from the project site.
- Hose down and disinfect tank, drains and wells as required.
- Fill up excavations, tank, drains and soak wells with clean fill such as yellow sand and compact.

2.7 HAZARDOUS MATERIALS

Identified hazardous material

Register: Hazardous materials have been identified as present on site and a Hazardous materials register has been prepared.

Hazardous materials removal

Standard: To AS 2601 clause 1.6.2.

Asbestos removal: To AS 2601 clause 3.3.2.

Materials other than asbestos: To AS 2601 clause 3.3.3.

2.8 COMPLETION

Notice of completion

General: Give at least 7 working days' notice of completion of demolition so that adjacent structures may be inspected following completion of demolition.

Rectification of damage: Repair any damage arising out of demolition work, including damage to adjacent properties, footpaths, kerbs, drains, trees and verges before leaving the site.

Rectification of damage to adjoining properties: Obtain written acceptance from the owner of each adjoining property of the completeness and standard of the rectification work.

Temporary support

General: Clear away at completion of demolition.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS 2601	2001	The demolition of structures
AS/NZS 5149		Refrigerating systems and heat pumps – Safety and environmental requirements.
AS/NZS 5149.4	2016	Operations, maintenance, repair and recovery (ISO 5149-4:2014, MOD)
Safe Work Australia	2016	How to manage and control asbestos in the workplace: Code of Practice.
WA Gov Act No. 024	2011	Building Act
WA Gov Act No. 101	1984	Occupational Safety and Health Act (WA)
WA Gov S.R. Liquid waste	1996	Environmental Protection (Liquid Waste) Regulations
WA Gov S.R Safety	1996	Occupational Safety and Health Regulations (WA)
WA Gov S.R. Waste	2004	Environmental Protection (Controlled Waste) Regulations



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