



FACT SHEET – IMPROVING RESOURCE RECOVERY CENTRES

Concrete and rubble

Concrete and rubble is construction and demolition (C&D) waste that is produced domestically. Materials can include whole or loose concrete, bricks and tiles. Following suitable processing, concrete and rubble can potentially be reused as clean fill or landfill capping material, recycled into new products (e.g. road base aggregate) or sold to the public (e.g. whole concrete blocks, bricks or tiles). Where viable and approved, selected materials may be processed on-site to increase their value (e.g. concrete crushing) or sent to an off-site C&D recycler for processing.

Items classifying as concrete and rubble

Items that classify as concrete and rubble in this fact sheet include:

- › bricks and tiles, which are whole, broken, loose or rubble
- › loose concrete blocks or pieces.

- Recycling Construction and Demolition Material: Guidance On Complying with The Occupational Health and Safety (Asbestos) Regulations 2003 (WorkSafe Victoria)
- Compliance Code: Managing asbestos in workplaces (WorkSafe Victoria).

Regulatory requirements and standards (OH&S and environmental)

Various acts, regulations and guidelines apply to the storage, transfer, transport and recycling of concrete and rubble at resource recovery centres/transfer stations. These include:

- › Occupational health and safety (OH&S):
 - Occupational Health and Safety Act 2004 (Victorian Government)
 - Occupational Health and Safety Regulations 2007 (Victorian Government)
 - Guide to Best Practice at Resource Recovery Centres (Sustainability Victoria)
 - Code of Practice for Manual Handling 2000 (Work Safe Victoria).
- › Environmental:
 - Environment Protection Act 1970 (EPA Victoria)
 - Environment Protection (Industrial Waste Resource) Regulations 2009 (EPA Victoria)
 - State Environment Protection Policy (Control of Noise from Industry, Commerce and Trade) No. N-L (EPA Victoria).
- › Relevant Australian Standards:
 - HB 155-2002 Guide to the use of recycled concrete and masonry materials.
- › Asbestos management and considerations:
 - The Occupational Health and Safety (Asbestos) Regulations 2003 (EPA Victoria).
 - Industrial Waste Resource Guidelines Asbestos Transport and Disposal

Potential hazards and OH&S requirements

There are numerous potential hazards and OH&S requirements to be considered when receiving and handling concrete and rubble. These hazards include:

- › materials contaminated by or including asbestos
- › sharp edges and protruding pieces (e.g. nails, broken tiles, reinforcement mesh and glass)
- › dust inhalation
- › heavy and/or awkward to handle concrete, rubble and brick items.

When handling concrete and rubble, it is important that resource recovery centre/transfer station operators undertake the following OH&S procedures:

- › handle and cover all concrete and rubble materials in such a manner that dust is not generated (as a precaution to materials being contaminated with asbestos)
- › follow the correct safe manual handling and management procedures (refer to WorkSafe Victoria's Code of Practice for Manual Handling)
- › use equipment to aid handling (e.g. front-end loaders and forklifts)
- › wear personal protective equipment (PPE), especially appropriate respiratory protective equipment (e.g. dust mask).

Acceptance criteria

Criteria regarding the acceptance of concrete and rubble at resource recovery centres/transfer stations include:

- > Do not accept material that is contaminated or potentially contaminated with asbestos. Circumstances where concrete and rubble contaminated with asbestos is accepted may include:
 - Acceptance by Category 3 facilities, which are licenced by EPA to do so. For more information on compliance and requirements please see WorkSafe Victoria’s Compliance Code: Managing asbestos in workplaces 2008.
 - Inadvertent acceptance at unlicensed facilities. In this case, asbestos should be removed from the site as soon as practicable by a licensed transporter and disposed of at a site licensed by the EPA to accept asbestos.
- > Concrete and rubble materials should be sorted into different waste types (e.g. whole and loose materials), and be separate from general waste and other waste streams (e.g. garden organics and timber).
- > Only domestic sources and quantities should be accepted (i.e. trailer load). Commercial sources and quantities are generally handled by private waste contractors and transported directly to C&D processing facilities. In regional areas, resource recovery centres/transfer stations may be the only appropriate sites to receive the concrete and rubble, and may accept larger quantities if they have the appropriate infrastructure and approval to do so.

Storage guidelines

The storage of concrete and rubble is an important consideration for resource recovery centres/transfer stations, particularly concerning dust and noise generated from any on-site processing. Storage should be undertaken in accordance with minimum requirements and, ideally, best practice.

Best practice is to store concrete rubble on sealed surfaces in distinctive bays with reinforced sides and wind breaks, to prevent particulates becoming airborne and conducting regular suction sweeping of surfaces. These practices should be done in addition to minimum requirements below.

As a minimum requirement, concrete and rubble:

- > should be stored outside on appropriate hardstand areas
- > should be treated with dust suppressants (e.g. light water spray) during loading, transport and processing
- > stockpiles should be regularly monitored to ensure they do not exceed approved storage limits (area allocated, volume and/or tonnes), impacting on the environment or causing a nuisance (e.g. through dust)
- > items suitable for resale (e.g. whole concrete blocks, bricks and tiles), should be stored on pallets for easy transport and sale
- > should be stored in a suitably signed area (refer to Sustainability Victoria’s signage library) and accompanied by applicable safety signs (e.g. no loads containing asbestos).

Transport and recycling guidelines

Where viable and with required planning approval been granted by council, concrete and rubble materials may be processed on-site to increase their value (e.g. concrete crushing).

Any processing activities are to be conducted away from site users and managed so that processing does not affect the amenity of the surrounding area, disrupt normal operations or create OH&S risks to operators or facility users.

Processing activities also are only to be undertaken during normal working hours so as not to disrupt any nearby community. If not processed on-site, concrete and rubble needs to be transported to a private construction and demolition contractor.

Best practice and minimum standards in the transport and recycling of concrete and rubble materials are not significantly differentiated and the following standards should be met at resource recovery centres/transfer stations:

- > concrete and rubble should be transported in vehicles equipped with dust suppression capabilities (e.g. tarp cover or water sprays)
- > concrete and rubble containing asbestos should only be undertaken by asbestos transport contractors who are licensed by EPA.

Record keeping guidelines

Keeping records of concrete and rubble received at and sent for recycling from resource recovery centres/transfer stations will enable tracking of resource recovery from the site and management of on-site storage.

The minimum requirements for record keeping includes the following:

- > recording the receipt of concrete and rubble at the gatehouse
- > conducting monthly stocktakes of concrete and rubble stored at the facility, to ensure the site does not exceed the recommended maximum storage volume of concrete and rubble
- > recording the volume of concrete and rubble collected from the site by the transport contractors.



Framework for continuous improvement

The priority for any decision regarding the acceptance and management of concrete and rubble should be to reprocess/ recycle to the greatest extent possible, while protecting the health and safety of all stakeholders (especially operators and customers) and the environment.

A continuous improvement framework for the recycling and resource recovery of concrete and rubble is to:

- › communicate and engage with other local municipalities, waste and resource recovery groups and Sustainability Victoria to investigate consolidated collection, processing or procurement activities
- › seek out and build relationships with local collection and recycling contractors who meet the relevant standards and regulations
- › develop partnerships with local organisations who can utilise reusable concrete blocks, bricks and tiles received at facilities, for projects that benefit the community.

Resources

WorkSafe Victoria
Phone (03) 9641 1444 or 1800 136 089 (toll free)
<http://www.worksafe.vic.gov.au>

EPA Victoria
Phone 1300 372 842 (1300 EPA VIC)
<http://www.epa.vic.gov.au/>

Further information

For further information and resources, please contact Sustainability Victoria on 03 8626 8700 or visit www.sustainability.vic.gov.au