

This fact sheet outlines a range of land use planning considerations relevant to the establishment, expansion or modification of basic raw material operations in Western Australia.

This fact sheet has been prepared to assist planners implement [State Planning Policy 2.5: Rural Planning](#).

What are basic raw materials?

Basic raw materials (BRM) include sand (including silica sand), clay, hard rock, limestone (including metallurgical limestone), gravel and other construction and road building materials. It also includes material such as limesand and gypsum, used to ameliorate agricultural land.

BRM proposals fall under the provisions of the [Planning and Development Act 2005](#) when extraction occurs on private (freehold) land.

The Western Australian Planning Commission (WAPC)'s [State Planning Policy 2.4: Basic Raw Materials](#) (SPP 2.4) and [BRM Applicants' Manual](#) are available to assist applicants and planning officers.

Design and operation

BRM operations include, but are not limited to:

- clearing and stockpiling vegetation, top soil and overburden;
- pit creation and dewatering;
- staged excavation of BRM;
- processing of BRM including crushing, screening, washing, blending or grading;
- wastewater treatment;
- an average of 2-6 truck movements per hour, depending on the scale of the operation;
- refuelling, cleaning and servicing of vehicles and machinery;
- warehousing and/or stockpiling of BRM; and
- rehabilitation of closed pits.

Lifespan of a project: All BRM operations have an estimated lifespan based on the amount of BRM available and the proposed rate of extraction. Decision-makers need to be aware of the life of the operation, and the proposed extraction rate per year.

Operating hours: Operating hours of a BRM site will vary, but operations generally occur between 5am and 5pm, 6 days a week. Major infrastructure projects may result in operations on Sunday and/or increased truck movements. Operating hours may be a condition of approval.

Pit design: BRM proposals may include plans for several pits staged over the lifespan of the operation. Smaller pits may achieve better environmental outcomes as the removed top soil is returned within a shorter time period. Pit rehabilitation generally follows excavation, however decision-makers need to be aware of the proposed arrangements.

The Department of Parks and Wildlife (DPaW) has produced [Guidelines for the Management and Rehabilitation of Basic Raw Material Pits 2008](#).

Planning context

In determining proposals for an extractive industry, consider:

- management of air, water, noise and visual impacts;
- location and stability of excavations, stock piles and overburden dumps;
- amenity of adjacent land uses in the local community; and
- rehabilitation of the land consistent with its long-term future use.

Conservation values: BRM operations have the potential to disturb native vegetation, including Declared Rare Flora (DRF) and priority flora, as well as threatened and priority fauna species. Clause 51C of the [Environmental Protection Act 1986](#) outlines circumstances when the clearing of native vegetation is permitted.

Water and availability: Water is needed for cleaning machinery and trucks, domestic uses and in processing. Access to scheme water is usually required. BRM operations may impact on nearby surface water and groundwater resources.

[Water Quality Protection Note 15](#), produced by the Department of Water (DoW), contains information on operations near sensitive water resources.

Dewatering may be included in the proposal. DoW's [Water Quality Protection Note 13](#) provides best management practices for the dewatering of soils. A licence to dewater or to gain access to water may be required under the [Rights in Water and Irrigation Act 1914](#).

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Buffers: Buffer distances are influenced by: site characteristics; the proposed location of infrastructure, access routes, pits and stockpiles; and the extraction method.

Guidance Statement: Separation Distances (2015), produced by the Department of Environmental Regulation (DER), and the Environmental Protection Authority's **Guidance for the Assessment of Environmental Factors: Separation Distances between Industrial and Sensitive Land Uses (2005)** include recommendations for separation distances from sensitive land uses.

Buffers are also required to protect water quality in nearby waterways and wetlands. The buffer will depend on the design and layout of the premises, the risk of water contamination, and the technology and management measures used to protect the waterway or wetland.

Further information on how to determine a buffer can be found in [State Planning Policy 2.5: Rural Planning](#).

Transport management: Extractive industries have the potential to impact on the road network and its users. Consider the following:

- Is the road suitable to support the number of truck movements?
- Is the proposal's access located on a straight section of a road with sufficient sight distance either side?
- Will trucks be able to cross the road safely?
- Does the road require upgrading?

Visual impacts: Preserving existing vegetation can assist in minimising impacts on views from roads, adjoining properties and other key viewing locations. DPaW recommends a vegetative screen of at least 150m between adjoining roads and pits. The WAPC's

[Visual Landscape Planning in WA \(2007\)](#) contains detailed guidance on addressing visual impacts, including ways to minimise the visibility of operations.

Noise and vibration: Noise from BRM extraction is subject to the [Environmental Protection Act 1986](#) and the [Environmental Protection \(Noise\) Regulations 1997](#). As excavation work may require blasting, the consideration of blasting areas will assist in defining appropriate buffers to reduce disturbance to any neighbouring sensitive land uses.

Dust: Dust can be generated in a number of ways including:

- blasting and extraction
- stockpiling of material
- transport movements
- soil erosion

Impacts to sensitive land uses can be reduced through vegetation screens, 'best practice' site management practices, and appropriate buffers.

Management plans: A management plan may accompany a BRM proposal and would typically address:

- site description and analysis;
- consideration of statutory and strategic planning;
- management and operations of the proposal;
- consideration and management of impacts on amenity;
- biosecurity measures to prevent the spread of weeds and diseases; and
- environmental impact assessment and management.

Critical elements of management plans may also be addressed as conditions of approval.

Environmental licensing and works approval: Under sections 52 and 53 of the [Environmental Protection Act 1986](#) a works approval is required for the construction of prescribed premises or to carry out certain work on existing prescribed premises.

BRM extraction is not listed in [Schedule 1](#) of the [Environmental Protection Regulations 1987](#). However some associated operations (e.g. screening, washing, crushing grinding, sizing or separation of material) may be prescribed and require authorisation under Part 3 Division 2 of the [Environmental Protection Act 1986](#).

In [Guidance Statement: Land Use Planning \(2015\)](#), DER outlines its policy of assessing applications under Part V Division 3 of the [Environmental Protection Act 1986](#) concurrently with applications for planning approval and making a determination once relevant planning decisions have been made.