



Department of **Planning,**
Lands and Heritage



State Planning Policy 2.4 Planning for Basic Raw Materials Guidelines

July 2021

Acknowledgments

The Department of Planning, Lands and Heritage acknowledges the traditional owners and custodians of this land. We pay our respect to Elders past and present, their descendants who are with us today, and those who will follow in their footsteps. DPLH gratefully acknowledges the support and assistance of consultants Urbaqua Land and Urban Water Solutions in the development of this document.

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1 INTRODUCTION

These guidelines should be read in conjunction with *State Planning Policy 2.4 Planning for Basic Raw Materials* (SPP 2.4).

1.1 Purpose

These guidelines provide support for decision-making authorities, proponents and referral agencies to implement SPP 2.4. Specifically, they assist in:

1. guiding the appropriate land use planning practices and development approval requirements in relation to Basic Raw Materials (BRM) across Western Australia by specifying requirements to be met during planning and development processes; and
2. ensuring that necessary BRM management measures are incorporated into land development.

These guidelines outline a range of considerations relevant to the establishment, expansion or modification of BRM operations in Western Australia and are structured into two sections:

PART 1. Guidance for planning decision-makers when determining BRM proposals.

PART 2. Information for proponents to gain a general understanding of the requirements associated with BRM proposals.

The information provided in these guidelines may be used to inform extractive industry proposals, subject to other approvals processes.

2 BASIC RAW MATERIALS IN WESTERN AUSTRALIA

2.1 What are basic raw materials?

SPP 2.4 defines BRM as:

- sand (including silica sand¹)
- clay²
- hard rock (including dimension stone)
- limestone (including metallurgical limestone)
- agricultural lime
- gravel
- gypsum
- other construction and road building materials
- materials which may substitute BRM.

2.2 Extractive industries and basic raw materials categories

Planning and Development (Local Planning Schemes) Regulations 2015 – Schedule 1 Model provisions defines extractive industries as:

industry - extractive; means premises, other than premises used for mining operations, that are used for the extraction of basic raw materials including by means of ripping, blasting or dredging and may include facilities for any of the following purposes –

- (a) the processing of raw materials including crushing, screening, washing, blending or grading;
- (b) activities associated with the extraction of basic raw materials including wastewater treatment, storage, rehabilitation, loading, transportation, maintenance and administration.

Premises, associated with an approved BRM extraction, on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated may require additional approvals under environmental legislation.

BRM supplies have been grouped into Significant Geological Supply (SGS) areas and Extraction Sites (ES), defined below:

- (a) SGS areas - are identified as the highest-priority extraction areas for BRM. They represent strategic, long-term supplies of BRM materials requiring protection.
- (b) ES - comprise all commercial BRM ES and quarries. These may overlap SGS areas. ES may include future, proposed, approved and operating commercial (extractive) industries under the *Planning and Development (Local Planning Schemes) Regulations 2015*, the *Local Government Act 1995*, the *Mining Act 1978* or a combination of these.

2.3 Map of Significant Geological Supplies

In order to assist with planning for BRM extraction, the identification of BRM resources has been undertaken by the State Government for the regions of Western Australia where BRM is in high demand. SGS areas have been

¹ The *Mining Act 1978* covers silica, mineral and garnet sand on most land holdings – except certain pre-1899 land titles that hold Mineral to Owner rights.

² The *Mining Act 1978* covers kaolin, bentonite, attapulgite and montmorillonite clays on all land holdings



mapped based on the quality and quantity of BRM and are the highest priority for BRM extraction. Boundaries of SGS are often indicative.

Further mapping will occur as more information on BRM resource locations and demand become available.

Strategic BRM resource mapping in Perth and Peel has been developed to enable adequate supply of BRM for a population of 3.5 million, and is publicly viewable as spatial layers through *GeoVIEW.WA*. The mapping considers the quality and quantity of resources available and presents SGS areas, ES and BRM exclusion areas. Exclusion areas are locations that may contain BRM but have been excluded to protect existing environmental values, or for planning or infrastructure reasons.

Decision-makers should have due regard for BRM mapping. BRM *GeoVIEW.WA* mapping for Western Australia is on the Department of Mines, Industry Regulation and Safety (DMIRS) website. This data layer can also be viewed on the Department of Planning, Lands and Heritage PlanWA public mapping tool.

2.4 Development approvals for basic raw materials

The current legislative arrangements have varying requirements for different types of land tenure in respect of extractive industry operations. The approval process for the three most common types of land tenure are summarised in the table below.

SPP 2.4 and these guidelines apply to BRM proposals on freehold land determined under the *Planning and Development Act 2005*. They may also be used to help inform the assessment of proposals on Crown land by DMIRS, and the determination of extractive industry

Type	Process	Decision-making authority
Freehold land	BRM proposals on private land (freehold) generally require development approval under a local planning scheme for both the excavation of BRM and related buildings such as offices, fuel storage, hardstand areas and ablution facilities. Where BRM occur on private land, extraction may also be administered through an extractive industry licence. Local governments issue an extractive industry licence, through a local law, as provided under the <i>Local Government Act 1995</i> . Most local governments have created local laws specific to extractive industries. Local governments often require development approval together with an extractive industry licence before extraction can take place. Extractive industry licences are processed independent of the development approval determination, however the two can be assessed simultaneously. An application for an extractive industry licence should be applied for at the same time as the development application.	Local government and/or WAPC
Crown land	Where BRM occur on Crown land (unallocated, reserve or pastoral leases) extraction for commercial sale requires a mining lease. Mining tenements are issued under the <i>Mining Act 1978</i> .	DMIRS
Reserved land	Where BRM occur on reserved Crown land for national parks; water and nature reserves; conservation parks; state forests; commons, and the like, they require a mining lease. Mining tenements are issued under the <i>Mining Act 1978</i> .	DMIRS

license applications by local government. Planning or license applications for extractive industries may require an accompanying management plan which provides details of the proposed use, development and management of the site.

2.5 Submission procedures

Extractive industry applications on freehold land will be submitted directly to the relevant local government for assessment based on relevant local planning scheme provisions, policies or strategies (where applicable).

Region schemes in WA have different approaches to extractive industries. In areas with region schemes, on freehold land, the Western Australian Planning Commission (WAPC) may be consulted on proposals of regional significance.

Extractive industry proposals on Crown land are submitted to DMIRS for assessment. DMIRS may also seek planning advice from the WAPC around extractive industries on Crown land.



PART 1 – GUIDANCE FOR PLANNING AUTHORITIES

3 BASIC RAW MATERIALS GUIDANCE FOR PLANNING PROPOSALS

BRM is a finite resource and its extraction and use need to be undertaken in an efficient manner. The following guidance outlines considerations to be addressed when preparing and determining proposals at all levels of the planning framework for extractive industries or where planning proposals may impact on, or be impacted by, existing extractive industry operations.

Implementation of SPP 2.4 will occur through planning and decision-making by:

- (a) ensuring extractive industries can be undertaken within confirmed SGS areas and approved ES while recognising associated separation distances and transitional land uses;
- (b) consideration of land for future development as 'sequential land use' until the BRM has been extracted or development is anticipated on the site;
- (c) having due regard to SPP 2.4 and provisions related to BRM when assessing extractive industry proposals, and other development applications within, adjacent to or in proximity to SGS areas and ES; and

- (d) having due regard to the EPA's *Guidance Statement No. 3: Separation Distances between Industrial and Sensitive Land Uses (2005)* and ensure recommended separation distances are provided for.

In the preparation of planning instruments, the location of BRM should be considered, as identified, by *GeoVIEW.WA* mapping.

3.1 Higher order strategic planning instruments

Higher order strategic planning documents include region schemes and their amendments, regional and subregional frameworks, sub-regional and district structure plans.

Higher order strategic planning instruments should identify SGS areas and minimise the potential for amenity and environmental impacts arising from an extractive industry. They should also identify areas for future growth which avoid and/or minimise encroachment on identified BRM resources and extractive industry operations.

In identifying areas for extraction of BRM, higher order planning instruments should plan for sequential urban or industrial development where appropriate. This may include a scenario where an exhausted BRM site is then used for industrial development. There may also be opportunities for the extraction of BRM prior to the development of land.

Strategic BRM planning has been undertaken in the Perth and Peel regions to provide industry, proponents and decision-makers information on the location of BRM resources and where extractive industries are best located and excluded. This has resulted in detailed BRM resource mapping in Perth and Peel.

In the Greater Bunbury region, the Greater Bunbury Region Scheme identifies areas of known minerals and basic raw materials, as well as areas constrained for extraction and others designated as strategic resource areas.

Higher order planning proposals should seek to locate new urban and industrial areas on land where the need for additional imported fill is minimised. In addition to the strategic location and overall suitability for development, land use planning should consider the quantity of imported fill in low-lying areas prior to zoning for development.

Advice from the relevant government agencies on geological supplies, environmental values and planning matters should be sought from the appropriate agencies.

3.2 Local planning instruments

Local planning instruments include local planning strategies, schemes and local structure plans and their amendments.

These documents should identify SGS areas, required separation distances, as well as establish transitional land uses to manage interfaces within the required separation distances (where appropriate). This will assist in the protection of known BRM SGS areas and ES from encroachment by incompatible land uses.

A separation distance may be applied as a special control area – BRM or Restricted Use, through local scheme provisions, where existing, approved or expanded SGS areas and ES are to operate for the long term (for example, more than five years) and may have amenity impacts for sensitive land uses or as otherwise determined by the



decision-maker. When a special control area is utilised for separation distances, they should accommodate the movement of excavation operations.

Scheme provisions should identify incompatible land uses within the separation distance based on potential impacts to adjacent land. The following land uses should not be considered within the separation distance:

- (a) sensitive land uses;
- (b) land uses with off-site impacts or other requirements that may constrain the operations of the existing BRM operations;
- (c) future planned development/expansion of the BRM operations within a SGS area;
- (d) other land uses considered incompatible with BRM extraction.

Local planning schemes may establish compatible land use zones and/or reserves within the separation distance. However, this should not affect a non-conforming use that was previously allowed under zoning regulations.

To inform local planning, local governments are encouraged to map approved extraction sites and identified BRM resources to help avoid future land use conflicts. This will also ensure the protection of SGS areas and protect regional and locally significant areas of biodiversity and environmental value.

3.2.1 Local planning instruments and imported fill

Local planning schemes should require proposals for subdivision to minimise imported BRM for new urban and industrial areas. Scheme provisions may require plans

for subdivision and development to demonstrate how imported fill will be minimised through alternative designs for drainage, earthwork and construction.

3.3 Subdivision and development

The preparation and assessment of subdivision and development proposals that may encroach upon or be impacted by existing extractive industries, should consider:

- (a) that land uses within, or adjacent to, SGS areas and/or ES should avoid conflict between the proposed use and BRM extractive use through adherence to the recommended separation distances as outlined in the EPA's *Guidance Statement No 3. Separation Distances between Industrial and Sensitive Land Uses (2005)*;
- (b) generally incompatible land uses should not be placed within the separation distance to ensure the protection of the existing extractive industry and the health and amenity of people in the proposed subdivision or development. An application within an extractive industry separation distance must demonstrate that it has considered transitional land use compatibility and the requirements of:
 - i. future settlement patterns as required by the local planning framework and/or other relevant planning instruments;
 - ii. any existing and planned future BRM operations in identified SGS areas or ES;
 - iii. the decision-making authority's stakeholder consultation requirements;
 - iv. relevant legislation, regulations and policies as outlined in these guidelines.

If proposed development or an activity deemed necessary is going to encroach upon an extractive industry site, the decision-maker may apply a notification on title advising of the proximity and location of existing or potential future extractive industry activity and potential adverse impacts resulting from the activity.

3.3.1 Subdivision and development minimising imported fill

Generally, subdivision proposals should consider how earthworks and drainage plans have demonstrated that they minimise imported fill requirements through appropriate design.

Subdivision proposals should demonstrate how they will minimise imported fill through a combination of the following approaches:

- (a) site responsive design techniques;
- (b) the engineering of bulk earthworks;
- (c) drainage planning and technologies; and
- (d) build form typologies and alternative construction methods.

An engineering and design professional may be needed to provide advice and develop supporting reports to address these matters.

The use of BRM substitute materials that demonstrated the required structural qualities are encouraged. Any substitute material proposed must have the relevant approval under environmental and health legislation. Potential substitutes may include secondary mining residue or construction and demolition materials diverted from landfill.



3.4 Separation distances

Separation between extractive industries and sensitive land uses in accordance with the EPA's *Separation Distances between Industrial and Sensitive Land Uses (GS3)* should guide the establishment of separation distances to protect community health, safety and amenity. These are available at www.epa.wa.gov.au

Separation distances are influenced by the activity being undertaken, site characteristics, the proposed location of infrastructure, access routes, pits and stockpiles, and the extraction method. Separation distances are not required where there are no current or planned sensitive land uses.

A separation distance is measured from the shortest distance between the extraction area boundary and the sensitive land use and does not always relate to cadastral boundaries.

The extent of a separation distance depends on the following elements:

- (a) the type and scale of the proposal;
- (b) Government requirements for a separation distance;
- (c) existing or potential requirement for environmental licensing and/or works approval;
- (d) industry-specific guidelines;
- (e) technical studies;
- (f) potential cumulative impacts;
- (g) amenity, visual impact;
- (h) environmental and topographic features;
- (i) cadastre; and
- (j) the continuation and/or expansion of the land use in the context of surrounding land uses.

Where excavation work in hard rock quarries requires blasting, the blasting area is an important consideration in defining separation distances and managing the risk to sensitive land uses.

Screening, washing, crushing, grinding, milling, sieving and aeration are activities associated with BRM extraction that may require a different separation distance.

3.5 Transitional land uses

Within an established separation distance, a series of transitional land uses may be used to transition between the extractive industry and a sensitive land use. Common transitional land uses include rural and commercial.

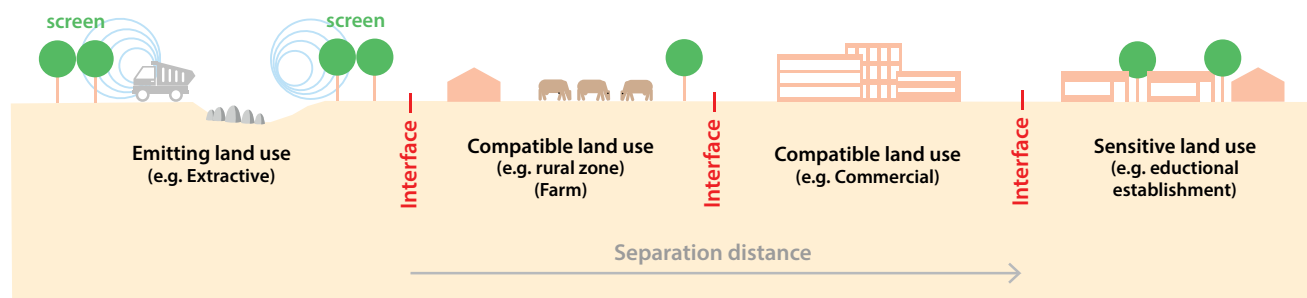
A separation distance is measured from the shortest distance between the extraction area boundary and the sensitive land use and does not always relate to cadastral boundaries. The nature of the extractive industry and the separation distance are an important consideration in determining the appropriateness of transitional land uses and permitted activities.

Transitional land uses should only be incorporated if they are compatible with both the extractive industry and sensitive land use that are being separated. For example, rural land uses may be appropriate within the separation distance as long as they are compatible with the extractive industry being undertaken and the residential land use it is being separated from. The types of transitional land uses that are suitable would depend on the individual site conditions, management and mitigation treatments plus the nature of the extractive industry being undertaken.

Due to the temporal and mobile nature of some extractive industries (e.g. sand extraction) the types of transitional land uses may depend on identified future sequential land uses and land staging as determined by local schemes and strategies. Appropriate activities within the separation distance may also be temporary or semi-permanent in nature depending on the circumstances.

BRM extraction is generally undertaken on land zoned for rural purposes but can occur as a sequential land use on land zoned for other purposes.

Figure 1: Transitional land uses should occur within the separation distance and be managed at the interface to avoid conflicts between activities





4 ASSESSMENT OF PROPOSALS FOR EXTRACTIVE INDUSTRIES

Assessment of proposals to establish, extend or expand an extractive industry, as well as managing the potential impacts of the operation, should consider the following:

- (a) the avoidance or mitigation of conflicts and detrimental effects on existing and future sensitive land uses and agricultural land in the surrounding areas (that is, noise, dust, vibration, blasting and vehicular traffic);
- (b) having an effective consultation process with appropriate stakeholder engagement, including advertising as required;
- (c) prioritisation of proposals within SGS areas aligned with DMIRS GeoVIEW.WA mapping in Perth and Peel;
- (d) if the resource is identified as a SGS area and/or local basic raw material demand;
- (e) the quantity and quality of resource and scale and duration of extraction;
- (f) management of finished ground levels for BRM extraction and site rehabilitation to:
 - i. maintain appropriate horizontal separation between extraction, water supply infrastructure and any other engineering requirements;
 - ii. avoid the exposure of groundwater and maintain the required vertical separation distances to groundwater for sequential land use;
 - iii. protect ground water and surface water quality.

- (g) the site's potential for sequential land use and the ability to rehabilitate the land in a manner compatible with its long-term use as defined by the local planning scheme (see note below);
- (h) the ability to stage the extraction operations to avoid conflicts with any adjacent sensitive land uses;
- (i) the effect of the proposed extractive industry on any adjacent agricultural land;
- (j) the availability and suitability of road access;
- (k) the effect of the proposed extractive industry on any native flora and fauna and general landscape values;
- (l) how all water resources will be protected during BRM extraction including a separation distance to the defined groundwater level plus other management measures to protect water resources during BRM extraction;
- (m) potential impacts on fragmentation and connectivity of remnant vegetation;
- (n) any requirements for an environmental offset;
- (o) sites of cultural and historic significance on and near the land, having regard to how they are likely to be integrated with subsequent land uses; and
- (p) location and stability of excavations, stock piles and overburden dumps.

Extractive industry operations may impact on nearby surface water and groundwater resources. See the Department of Water and Environmental Regulation (DWER) *Water Quality Protection Note 15 Basic Raw Materials Extraction* (2019) for information on the management of operations near sensitive water resources. BRM extraction proposals with potential environmental impacts should be referred to DWER for advice.

4.0.1 Extractive Industries and sequential land use

Extractive industry proposals involving the sequential use of land should be informed by the local planning scheme and zoning.

Structure plans should guide BRM extraction and the subsequent staging of urban or industrial development together with finished levels for the final land use. This will require structure planning to incorporate engineering advice. Structure plans and the staging of development may also inform planning approvals and extractive industry licence duration.

Clay pits may be re-engineered to support sequential land use in line with a local planning scheme including recontouring excavation areas as a water features which should be addressed in a rehabilitation plan.

4.1 Planning for completion

After excavation of BRM, land will need to be stabilised to suppress sand and dust, which may include revegetation. All revegetation should be conditioned on the approval, and generally carried out in accordance with an approved revegetation plan.

On-site revegetation may be conducted when cleared land is no longer required for the purpose for which it was cleared. It is important for revegetation projects to be guided by a plan appropriate to the specific conditions and requirements of the site.

The revegetation plan should be prepared in consultation with an environmental specialist with appropriate expertise in revegetation techniques and experience specific to Western Australian conditions. See DWER's *A Guide to Preparing Revegetation Plans for Clearing Permits* (2018) for further guidance.



4.2 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 timeframe. Pit rehabilitation generally follows excavation however decision-makers need to be aware of the proposed arrangements.

Further guidance on site rehabilitation is available in *Guidelines for the Management and Rehabilitation of Basic Raw Material Pits* (Dec 2008).

4.3 Operating hours

Operating hours should be included as a condition of approval. Operating hours are generally between 5am and 5pm, Monday to Saturday, however a local government may set its own conditions, for instance to support major infrastructure projects.

4.4 Conservation values

BRM extraction proposals with potential environmental impacts should be referred to the Department of Biodiversity, Conservation and Attractions (DBCA) for advice.

4.4.1 Wetland buffers and waterway foreshore areas

Where extractive industries are proposed near water resources, buffers may be required to protect the water resource from the impacts of its operations. The determination of wetland buffers or waterway foreshore areas are addressed in the WAPC's *State Planning*

Policy 2.9 Water Resources. In relation to buffers associated with extractive industries, the width of the buffer will be influenced by the values of the water resource, design and layout of an extractive industry operation, the risk of water contamination, and the technology and management measures used to protect the waterway or wetland.

Refer to the *Operational policy: Identifying and establishing waterway foreshore areas* (DWER 2012) for further advice on waterway foreshore areas.

4.4.2 Groundwater separation

Extractive industry operations may also impact on nearby surface water and groundwater resources. DWER's *Water Quality Protection Note 15 Basic Raw Materials Extraction* (2019) contains information on the management of operations near sensitive water resources.

To protect water quality, BRM extraction activity is generally required to achieve certain vertical separation distances to the groundwater table. The separation distance will vary based on the value or classification of the groundwater resource. For example, within public drinking water source areas, the groundwater separation distances are greater to protect drinking water quality and public health. Separation distances are outlined in DWER's *Water Quality Protection Note 15 Basic Raw Materials Extraction* (2019).

If an extractive industry proposal is located in a Public Drinking Water Supply Area, DWER's *Water Quality Protection Note 15 Basic Raw Materials Extraction* (2019) should be followed.

A licence to de-water or to gain access to water may be required under the *Rights in Water and Irrigation Act 1914*.

4.4.3 Native flora and fauna

BRM operations have the potential to disturb native vegetation and fauna, spread weeds and dieback. Pit design should seek to minimise and mitigate detrimental impacts on any native flora and fauna including the fragmentation of remnant vegetation.

Proposals which potentially impact on biodiversity may need the following additional approvals:

- clearing permit under Part V Division 2 of the *Environmental Protection Act 1986* from DWER (freehold land) or DMIRS (Crown land);
- authority to impact to threatened flora, fauna and ecological communities under the Biodiversity Conservation Act 2016 from DBCA; and/or
- referral of impacts to Matters of National Environmental Significance under the *Environment Protection and Biodiversity Conservation Act 1999* to Department of Agriculture, Water and the Environment (DAWE).

4.5 Water supply and availability

Water is needed for a range of activities that support the processing of BRM, such as dust suppression and for cleaning machinery and trucks. As well, it may be required for any on-site building as a site office. Access to scheme water may be required for extractive industry operations.

4.6 Transport management

To reduce the impact on roads, road users, community amenity and safety, extractive industry operators should manage their activities in line with Main Roads WA approvals and liaise closely with the relevant local government.



The availability and suitability of road access is an important consideration and may require a Transport Impact Assessment (TIA) and management plan. Both proponents and local government can seek a TIA and/or general advice from Main Roads WA regarding trucks and transport routes. These studies are usually undertaken by, or on behalf of, a proponent and consider the following:

- (a) road suitability and the number of truck movements;
- (b) frequency and size of truck movements;
- (c) load considerations;
- (d) route selection and any road upgrading requirements;
- (e) impacts on sensitive land uses and other roads users;
- (f) likely noise impacts;
- (g) any extractive industry license or planning approval conditions limiting cartage activities;
- (h) safety and sight distance in both directions from the proposal's access to a road; and
- (i) safety and road crossing.

To assist with improving referral response times, proponents are encouraged to undertake pre-referral of a TIA to the relevant authorities, particularly where access and proposed haulage routes include major and/or regional roads. DPLH's *Transport Impact Assessment Guidelines* (2016) may assist both transport and land use planning professionals in undertaking transport impact assessments of land use development proposals.

A pre-assessed TIA can assist decision-makers in determining the need for future transport studies particularly where access and proposed haulage routes are frequent and include major and regional roads.

The Western Australian Local Government Association (WALGA) *Heavy Vehicle Cost Recovery Policy Guideline for Sealed Roads* (2017) assists decision-makers and proponents in understanding the principles of heavy vehicle cost recovery.

Through local law provisions, a local government may prescribe:

- (a) the routes to be taken for the transport of BRM from a site through the roads within the district, if the proposed routes are not suitable for the proposed haulage;
- (b) the tonnage limits to be transported along a particular route;
- (c) the times during which materials from the site may be transported through the roads within the district.

See Appendix 1 for further guidance on Restricted Access Vehicle (RAV) route assessment guidelines.

4.7 Visual impacts

Preserving or replanting vegetation can assist in minimising visual impacts from roads, adjoining properties and other key viewing locations. Depending on the size and life of a quarry, a vegetative screen of at least 50 meters width is recommended to assist with visual impacts and help mitigate dust impacts.

The WAPC's *Visual Landscape Planning in WA* (2007) contains detailed guidance on addressing visual impacts, including ways to minimise the visibility of operations.

4.8 Noise, dust and risk management

Noise, dust and blasting are the main risks that require management to avoid adverse health and amenity impacts to sensitive land uses and the community in general.

Noise from BRM extraction is subject to the *Environmental Protection Act 1986* and the prescribed standards under the *Environmental Protection (Noise) Regulations 1997*.

Noise impacts can be reduced through choice of quieter equipment, enclosing fixed plant, construction of barriers such as bunds, 'best practice' site management practices, and appropriate separation distances.

Dust can be generated in several ways including:

- (a) blasting and extraction;
- (b) stockpiling of material;
- (c) processing of material;
- (d) transport movements; and
- (e) soil erosion.

Noise and dust require a management plan to ensure there are no off-site impacts, identify mechanisms to manage risks and suppress dust generation. Guidance on managing dust can be accessed via the *DWER's A guideline for managing the impacts of dust and associated contaminants from land developments sites, contaminated sites remediation and other related activities* (2011).

Extractive industry proposals that are likely to generate dust and could affect human health may be subject to the provisions of the *Environmental Protection Act 1986* and subsidiary regulation and policies.



Proposals for hard rock or materials which require blasting should be accompanied by a blasting management plan detailing the blasting method, including directed blasts, frequency and the expected fly rock range and subsequent exclusion zones for blasting.

DMIRS manage the requirements for blasting in hard rock quarries.



PART 2 – GUIDANCE FOR PROPONENTS

5 GENERAL REQUIREMENTS

The following section outlines a range of additional considerations to be addressed when preparing a new extractive industry proposal or an extension of existing operations.

Proponents should also familiarise themselves with the content in Part 1 of this manual.

Proponents may require an extractive industry license and/or a development approval on freehold land, both issued by the relevant Local Government. Development approvals may be subject to different conditions prior to, during and after the operation of an extractive industry.

Extractive industry proposals or other development proposals that may affect extractive industries must demonstrate effective and appropriate community consultation. This includes consultation with neighbouring and affected properties plus relevant local governments leading up to the submission of a proposal. Proponents should also demonstrate ongoing stakeholder engagement via their Environmental Management System. Further advice can be found on the DMIRS website.

A list of other key responsibilities for proponents proposing an extractive industry on either freehold or Crown land is outlined below.

5.1 Legislation, regulation and policies

Proponents should consider the legislation, policy and guidelines relevant to an application and the issues needing to be addressed by proposals. This will help avoid potential delays (see Appendix 2).

5.2 Site selection considerations

SGS areas have been identified by DMIRS as the highest priority areas for BRM extraction. BRM extraction within SGS areas is therefore preferred, however extraction can also occur outside SGS areas, subject to approvals and licensing.

In the Perth and Peel regions, BRM exclusion areas have been identified – for either environmental, resource conflict or land use planning reasons – and must be avoided.

Section 7.0 checklist 1 highlights issues that a proponent should consider when selecting a site for extractive industries.

5.3 Consult relevant authorities issuing required approvals

Before submitting an application, proponents should consult with the relevant local government to help clarify what is expected from them in terms of approvals required, information to be submitted and stakeholder consultation. Having a draft proposal will enable feedback to be more specific to the proponent's application. Requirements for establishing an extractive industry application (for example, policies, development approval, extractive industry licences and the like) may vary between local governments.

Prior to submitting a proposal, proponents should demonstrate to relevant decision-maker – local government for freehold land, DMIRS for Crown land – that they have an effective stakeholder and community engagement plan that covers all phases of the project from planning through to operations, closure and rehabilitation.

It should be demonstrated that stakeholders have received sufficient information on the possible consequences or impacts of a proposal and a reasonable period must be provided for the consultation process. Proponents should engage with the relevant decision-maker (local government or DMIRS) for further advice on their requirements.

5.4 Environmental and natural resource considerations

DWER and DBCA are the primary contacts for environmental advice in relation to site selection, protection of environmental assets (wetlands, waterways, native vegetation, threatened ecological communities and DBCA-managed lands) plus the management of water quality impacts including groundwater vertical separation.

It is important to establish what approvals will be required in terms of clearing vegetation, impacts on threatened flora, fauna or ecological communities, industry license or works approval; licence to take water and water resource management issues, including groundwater separation requirements.

Proponents establishing a BRM operation in an area with existing vegetation may require a vegetation clearing permit under the *Environmental Protection Act 1986* issued by DMIRS (Crown land) or DWER (freehold land).



Any proposal involving BRM extraction from waterways requires careful risk assessment of the location's suitability, its management and rehabilitation.

Under the *Environmental Protection Act 1986* it is an offence to cause an emission or discharge from activities carried out on a prescribed premise (an industrial premise with potential to cause emissions and discharges to air, land or water) unless a works approval or licence is held for the premises. Prescribed premises are listed in Schedule 1 of the *Environmental Protection Regulations 1987* and may include activities undertaken by extractive industries.

DWER's Guideline Industry Regulation Guide to Licensing (2019) provides guidance on strategic and statutory land use planning processes, with reference to roles and responsibilities under Part IV and V of the *Environmental Protection Act 1986*.

5.5 Allocate sufficient time for assessment processes

Allow time to address issues that may arise after the application has been lodged. Assessments and studies require time to complete and sometimes can only be undertaken under certain conditions and at specific time of year (for example, flora surveys being undertaken in spring).

5.6 Appeal rights

Should a proponent disagree with a decision, they can seek a review by the State Administrative Tribunal (SAT) for all or part or of a decision made, under the *Planning and Development Act 2005*, or *Local Government Act 1995*.

Appeals for decisions made under the *Environmental Protection Act 1986* are determined by the Minister for Environment.

6 GUIDANCE ON PLANNING MATTERS

6.1 Western Australian planning system

The WAPC's *Introduction to the Western Australian Planning System* (2014) provides an overview of the planning system in Western Australia. This document clarifies the various roles, responsibilities and functions of the key players involved in the planning system. It also describes the various legislation relevant to land use planning in Western Australia and it outlines the key features of the statutory and strategic planning instruments that together make up the State's planning framework.

The decision-maker is required to give due regard to relevant planning policy when making decisions on BRM proposals, particularly the impacts on sensitive land uses.

6.2 Management plans and procedures

Planning applications for extractive industries may require an accompanying management plan which provides details of the proposed use, development and management of the site. Management plans need to be submitted before the application is determined. Issues of relevance may include, but are not restricted to:

- (a) operational areas including:
 - i. extraction and stock piles areas;
 - ii. crushing/screening process areas; and
 - iii. machinery maintenance areas, plant and fuel storage.



- (b) separation distances;
- (c) environmental management requirements;
- (d) surface water and groundwater management;
- (e) secure water supplies to meet domestic and operational demands;
- (f) measures to mitigate impacts on surrounding land from dust, noise and flying rock;
- (g) landscaping to screen activity on the site;
- (h) on-site access roads, parking for cars and other vehicles used on the site; and
- (i) rehabilitation, closure for future land use of a BRM extraction area.

For more information on the matters to be addressed by a management plan, refer to Appendix 3 - Management Plans.

It is helpful for proponents to submit all required applications simultaneously. This saves time and assists the relevant agencies assessing the proposal by ensuring a more coordinated approach. A covering letter referencing any other approvals being sought from other authorities should be attached to the planning proposal to avoid communication overlaps or misunderstanding among different approval authorities.

7 SITE SELECTION CHECKLIST

Proponents should consider the following two checklists when preparing an extractive industry proposal.

Checklist 1: 'Site selection considerations' includes issues that should be considered when selecting a site for extractive industries.

Checklist 2: 'Application submission checklist - local government' includes standard requirements for local government development applications, which also apply to applications referred to the WAPC for determination.

These checklists highlight the issues most local governments consider when assessing proposals for extractive industries and may help to ensure submissions are complete. However they do not replace documentation used in assessing an application. Local governments may also have specific requirements not included in these checklists, so proponents should contact the relevant local government to find out if there are any additional requirements. Local governments may wish to adapt Checklist 2 to address any specific variations within their municipality.



Checklist 1

Site selection considerations	
Environmental attributes	Tick
• The site is not listed for conservation purposes.	
• The site provides recommended setback to existing wetlands, water courses and drainage lines.	
• The proposal will not involve the clearing of native vegetation. That is, the site is bare of vegetation from previous uses and does not contain bushland of significant quantity or quality. (Declared Rare Flora and Fauna, Threatened Ecological Communities, for example.) Where a BRM resource is located with native flora and fauna and clearing is required a separate approval is required from DWER.	
• The proposal will not involve the disturbance of acid sulfate soils.	
• The site is not considered priority agricultural land.	
• The site is not in the flood plain and does not have a high groundwater table.	
Planning considerations	Tick
• The site has not been denoted as unacceptable or mapped as an exclusion Area for BRM extraction and the proposal aligns with defined Significant Geological Supply areas or Extraction Sites.	
• The nature of the proposed activity is consistent with the current and proposed zoning or represents a sequential land use opportunity for future development, considering future timeframes.	
• The timeframe of the proposed activity considers the long-term impacts on local communities and future land uses proposed within the vicinity or separation distances to sensitive land uses.	
• Appropriate separation distance to existing infrastructure such as public drinking water supply bores and water mains are maintained.	
• Bushfire planning where an extractive industry proposal is situated in a bushfire prone area.	
• The outcome of advertising undertaken, and submissions received.	
• Assessment considerations should also be made on the location and provision of ancillary facilities, such as lunch room, ablutions etc.	
Site location considerations	Tick
• The proposed activity is compatible with surrounding land uses.	
• The site does not contain any heritage significance, Aboriginal or otherwise.	
• The proposed activity will not cause disturbance to the amenity of the area.	
• The site has safe access to major roads, and existing roads are in good condition. The access roads proposed are suitable for the volume of traffic and type of heavy vehicles.	
• The site is not in a visually significant location, such as on a ridge, or visible from major roads and will not have a negative visual impact on major roads, scenic areas or adjoining properties.	
• The site provides an adequate separation distance to sensitive land uses such as (but not limited to) residential or special rural area, existing dwellings in a rural area, schools or hospitals. Depending on the nature of the BRM operation, separation distances should be anywhere between 300 and 1000 metres.	
• The site requires scheme water availability and/or may require a ground or surface water license under the <i>Rights in Water and Irrigation Act 1914</i> .	
• The site is located on karst risk areas and require specific geotechnical investigation.	
• Operational issues such as hours of operation, noise and dust monitoring and site access are addressed with the view to minimising any potential noise or dust issues for surrounding sites.	
• Other relevant State and local planning policies and strategies, including but not limited to the following have been addressed: – relevant State planning policies – extractive industry local laws – local planning scheme provisions – region scheme planning provisions.	



Checklist 2

Application submission checklist – local government	
<i>Note: refer to the relevant local government's local law and local planning schemes for more specific application requirements. Proponents will need to provide the following information to expedite consideration of your application. If the information is not provided, approval is likely to be delayed while further enquiries are made</i>	
Legal considerations	Tick
• Written consent from owners of site.	
• Relevant environmental approvals (for example, EP Act Part IV, Part V Division 2 Clearing permit, Part V works approval or license, water and irrigation licensing, EPBC Act decision).	
• Extractive industry license.	
• Local government submission form and fees.	
• WAPC submission form and fees (where applicable).	
• Certificate of title.	
• WAPC – have due regard for State planning policies.	
Site details	Tick
• Existing and proposed land contours.	
• Description of land – roads, boundaries, fences, existing buildings, water resources including groundwater levels, ridge lines, existing vegetation and the like.	
Proposed extractive industry details and staging plan	Tick
• Location, total area and depth of proposed excavation including appropriate vertical separation between the highest groundwater table, during and post BRM extraction.	
• Location and proposed maximum height of stockpiles.	
• How much material is proposed to be extracted (on an annual and total basis).	
• Method and route(s) of proposed vehicle access to and from the site.	
• Location of proposed buildings, treatment plants, tanks and the like.	
Details of management of operation	Tick
• Management of impacts on water quality, particularly if within a Public Drinking Water Supply Area. In the case of extraction over public drinking water sources, a plan should be provided as part of a development approval to enable orderly decision-making.	
• Noise and vibration attenuation – hours of operation, types of activities such as drilling or blasting, type of vehicles to be used, maximum number of truck movements per day, earth bund.	
• Screening – location of screening and species to be planted, staging of operations.	
• Dust management plan – dust suppression methods, location of stockpile areas relative to prevailing winds.	
• Environmental management – measures to protect existing vegetation, manage acid sulfate soil, control dieback, manage fire and flood risk, manage storm water run-off and water quality, drainage details, and treatment of wastes.	
• Staged site rehabilitation plan. Extraction site rehabilitation should not include waste disposal.	



8 EXTRACTIVE INDUSTRIES LOCAL LAW

Local government is empowered to make an extractive industry local law under the *Local Government Act 1995* which establishes license conditions. Elements of these guidelines may be relevant in relation to a proponent's submission and State and local government license requirements for:

- (a) an excavation site plan;
- (b) a works and excavation program;
- (c) a rehabilitation and decommissioning program; and
- (d) the transportation of BRM.

Limitations on excavation may be restricted to:

- (a) 20 metres from the boundary of any land on which the excavation site is located;
- (b) 20 metres from any land affected by a registered grant of easement;
- (c) 50 metres from any road or thoroughfare;
- (d) 50 metres of any bore, watercourse, wetland, swamp or other water reserve; or
- (e) two metres to the DWER-determined maximum groundwater level and three meters in water resource protection areas or otherwise as adopted by the local government.

9 OTHER GOVERNMENT ADVICE

State and local government should assist the implementation of SPP 2.4 by:

- (a) giving advice, support and information to the public in relation to development and land uses within, adjacent or in proximity to SGS areas, ES and associated separation distances and transitional land uses;
- (b) ensuring streamlined exchange of information on the location of extractive industries approved by local government through the establishment of data sharing; and
- (c) monitoring and assessing the application of SPP 2.4.



APPENDIX 1

RESTRICTED ACCESS VEHICLE (RAV) ROUTE ASSESSMENT

Summary - Extracted from *Main Roads WA Heavy Vehicle Services Standard Restricted Access Vehicle (RAV) Route Assessment guidelines* (2018).

Community considerations

Decision-makers need to consider potential community impacts as part of assessing route suitability. The following factors are considered in determining potential community impacts:

Noise

In determining noise impacts in relation to RAVs, the following issues are considered:

- (a) areas sensitive to road traffic noise, including residences, schools and hospitals;
- (b) the likely number of RAVs in comparison to existing number of large trucks (three or more axles);
- (c) factors contributing to noise generated by RAVs such as gradients, acceleration/deceleration areas, and road pavement irregularities; and
- (d) factors mitigating RAV noise impact (distance, topography, bunds, cuttings or walls).

The main criterion for noise impact assessment is the change in the numbers of large trucks. Where noise impacts are expected to be significant, mitigating measures such as the following will be considered:

- (a) approved noise reduction request signs;
- (b) a curfew for RAVs during night time hours;
- (c) consideration of alternative routes;
- (d) noise certification of RAVs as a condition of access; and
- (e) speed restrictions.

Where noise impacts are expected to remain significant despite mitigation actions, Main Roads WA will consult with the relevant local government and consider a route noise impact study.

Dust and dirt

Where the RAV route passes close to abutting development there may be adverse impacts upon people and property due to dust, especially where a route is unsealed. The decision-maker shall consider whether the introduction of the RAVs onto the route has potential to cause significant dust impact by considering:

- (a) distance to buildings and their use;
- (b) likely numbers of RAVs using the route;
- (c) likelihood and amount of dust being produced by RAVs; and
- (d) spreading dust impacts from RAVs entering onto a sealed road from a dirt road.

Where dust and dirt impacts are expected to be significant, the decision-maker will consider options such as alternative routes, speed restrictions and possibly sealing road sections. For short-term projects, when sealing the road is not practical, the proponent shall consider dust suppression (water or chemical stabilisation) and wheel washing at site exit.

Community consultation

In line with government policy, Main Roads WA may require a route that has been given a favourable assessment to undergo community consultation. Main Roads WA and local government will determine the need for community consultation.

Alternative transport modes

Alternative transport modes need to be considered to ensure RAV road transport is the most effective form of transport available for the operation.

Further assistance

Additional information and guidance is available from Main Roads WA Heavy Vehicle Services.



APPENDIX 2

RELEVANT LEGISLATION, REGULATION AND POLICIES

Various regulations and guidelines complement and overlap with the planning system, and some BRM proposals may require approvals by other decision-makers. This attachment describes additional legislation and regulation for extractive industry proposals that may require consideration during planning decision-making. Requirements may change from time to time and the onus is on the proponent to ensure they have all the necessary approvals. The following information is provided to assist. Compliance with other legislation should not be interpreted as approval by the WAPC under the *Planning and Development Act 2005*.

State environmental legislation

- (a) The EPA considers the environmental impacts of planning schemes and scheme amendments under Part IV, section 48A of the *Environmental Protection Act 1986*. Schemes and scheme amendments must be referred to the EPA prior to being advertised for public comment to determine if the scheme should be assessed or not, or is incapable of being made environmentally acceptable. Individual development proposals that are likely to have a significant effect on the environment are also required to be referred to the EPA under Part IV, section 38 of the *Environmental Protection Act 1986*.
- (b) The EPA's *Guidance Statement No.3 Separation Distances Between Industrial and Sensitive Land Uses* (2005) provides advice on which land uses require separation, and recommends the appropriate

separation distances. The guidance outlines the EPA's expectations on the application of separation distances for schemes and scheme amendments in the environmental impacts assessment process. The guidance also supports strategic and statutory land use planning and development decisions by planning authorities where proposed land uses have the potential to adversely impact on human health and amenity.

- (c) In considering a clearing matter under Part V Division 2 of the *Environmental Protection Act 1986*, the CEO shall have regard to any planning instrument, or other matter, that the CEO considers relevant.
- (d) Part V Division 3 of the *Environmental Protection Act 1986* makes it an offence to cause an emission or discharge from activities carried out on a prescribed premise unless a works approval or licence is held for the premises. Prescribed premises are listed in Schedule 1 of the *Environmental Protection Regulations 1987* and may include activities undertaken by extractive industries. See the DWER's *Guideline Industry Regulation Guide to Licensing* (2019) to assess applications under Part V Division 3 of the *Environmental Protection Act 1986* concurrently with applications for planning approval and to make a determination once relevant planning decisions have been made.

Licences and works approvals may be granted subject to conditions to prevent, control, abate or mitigate pollution or environmental harm. Licences may be

granted for up to 20 years, depending on the risk to public health and the environment posed by the premises as well as the duration of other statutory approvals, including planning approvals. Any changes to operating prescribed premises that may alter emissions must seek a licence amendment.

- (e) The *Biodiversity Conservation Act 2016* and *Biodiversity Conservation Regulations 2018* replace the *Wildlife Conservation Act 1950* and the *Sandalwood Act 1929* and their associated regulations. These enforce a licensing regime which requires licences for taking, disturbing, supplying, possessing, processing, dealing, importing and exporting activities in relation to specific flora and fauna and ecological communities and in specific circumstances may be applicable to extractive industry operations.

Commonwealth environmental approvals

- (f) Under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* approval is needed from the Commonwealth Minister for any proposal or action that has, will have or is likely to have a significant impact on any of the matters of national environmental significance.

Water resources

- (g) The DWER seeks to conserve, protect, manage and assess water resources and provide for the sustainable use and development of water resources under



the *Water Agencies (Powers) Act 1984*, *Rights in Water and Irrigation Act 1914* and *Waterways Conservation Act 1976*. Water resource availability is informed by allocation plans and limits under the *Rights in Water and Irrigation Act 1914*. Clearing within gazetted Controlled Catchment Areas under the *Country Areas Water Supply Act 1947 Part IIA* is regulated by the DWER for salinity management purposes.

- (h) If abstraction or de-watering is required to enable the extraction to occur, this could result in significant environmental effects (such as impacts on native vegetation, wetlands or waterways), the DWER may need to refer the proposal to the EPA under s38 of the *Environmental Protection Act 1986*.
- (i) Public drinking water source areas are defined by the DWER and proclaimed as water reserves, catchment areas or underground water pollution control areas under the *Metropolitan Water Supply, Sewerage and Drainage Act 1909*, or water reserves or catchment areas under the *Country Areas Water Supply Act 1947*. Land use and development in public drinking water source areas is guided by the following documents:
 - i. WAPC's *State Planning Policies 2.2 Gnamangara groundwater protection (2005)*, *2.3 Jandakot groundwater protection (2017)*, *2.7 Public drinking water source policy (2003)*, *2.9 Water resources (2006)*.
 - ii. DWER's *Water Quality Protection Note 15 Basic Raw Materials Extraction (2019)*, *Water Quality Protection Note 25: Land use compatibility tables for public drinking water source areas (2016)*.
 - iii. Sub-regional planning frameworks, region and local planning schemes.

State mining legislation

- (j) Where a planning proposal may be negatively impacted by a BRM mining operation undertaken through the *Mining Act 1978*, the planning decision-maker should seek advice from DMIRS regarding the risk and acceptability of potential offsite impacts.

While the Minister for Mines and Petroleum, the Warden or the Mining Registrar will consider planning instruments when considering an application for a mining tenement, a planning instrument cannot operate to prohibit or affect the grant of such tenement.

- (k) Industries involving explosives and other dangerous goods, including extractive industries with potential off-site risks are regulated by the DMIRS under the *Dangerous Goods Safety Act 2004* and the *Mines Safety and Inspection Act 1994*. Information on the types of goods and the critical qualities which require licensing are listed in the DMIRS's Safety Guidance Minimum separation distances between explosive facilities and various categories of incompatible land uses are provided in Australian Standard AS2187.1(1998) and the DMIRS's *Dangerous Goods Safety Guidance Note – Storage of Explosives (2018)*.
- (l) The *Mining Act 1978* (the Mining Act) refers to "guidelines" as the mechanism for mandating the form and information required in mining proposals and mine closure plans. Statutory Guidelines are referred to in the definition of a mining proposal and mine closure plan in the legislation and the following DMIRS documents are mandatory requirements: *Statutory Guideline for mining proposals in Western Australia (2020)* and *Statutory Guideline for mine closure plans in Western Australia (2020)*.



APPENDIX 3 MANAGEMENT PLANS

An application for the establishment, extension or expansion of an extractive industry should be accompanied by a management plan and should typically address:

- (a) site description and analysis;
- (b) consideration of statutory and strategic planning;
- (c) management and operations of the proposal;
- (d) consideration and management of impacts on amenity;
- (e) biosecurity measures to prevent the spread of weeds and diseases; and
- (f) environmental impact assessment and management.

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

Other important elements that may need to be considered depending on the site location and circumstances include:

- (g) demonstration that the existing sensitive land uses within the guidance separation distance of the extractive industry will not be unduly affected by the extractive industry operations;
- (h) identification and justification of appropriate transitional land uses;
- (i) identification of any environmental values requiring protection under Commonwealth and State legislation and appropriate strategies to protect the values;
- (j) in the Perth and Peel regions, proposals aligned with the BRM resource mapping will help address (c) above;
- (k) details of the proposed use, development and management of the site including the environmental and water resource management standards, extractive area, stock piles, machinery maintenance areas, processing plants, fuel storage and on-site access roads, parking for cars and other vehicles used on the site, and proposals for landscaping to screen activity on the site;
- (l) details of arrangements for access to the site, including the roads which it proposes will provide the main vehicular access and likely traffic flows; and
- (m) consideration of sequential land use by establishing a plan for the progressive and ultimate rehabilitation of the site for its intended long-term use. Site rehabilitation should not include waste disposal.