

## 1. HEAD OF POWER

This Policy has been adopted pursuant to *Planning and Development (Local Planning Schemes) Regulations 2015*, Schedule 2 (Deemed Provisions), Clause 4 and applies to development across the whole of the City.

#### 2. PURPOSE

The supply of basic raw materials is recognised by the City of Busselton as an important contributor to the economic development of the City as well as being a critical component of the land development process. A Planning Consent is required pursuant to the Local Planning Scheme (Scheme) prior to the commencement of an extractive industry.

Extractive industries have the potential for incompatibility with other land uses. This is of particular concern to sensitive land uses such as dwellings, tourist accommodation and tourist-oriented land uses located throughout the City, but particularly where these uses are concentrated in the western sector of the City, west of Bussell Highway.

The trucking of sands and gravel from extractive industry sites to their final destination can also affect the levels of service, efficiency and safety enjoyed by local road users as well as significantly impacting the infrastructure planning operations of the City.

Additionally, a number of rural based attractions are reliant upon drawing visitors to a quiet operating environment for food, wine and cultural enjoyment. Noise, dust, visual impact and road usage impacts from operational extractive industries have the potential to adversely affect the enjoyment of these facilities.

In managing the location of extractive industries, the broad intent of the City is to facilitate extractive industries in areas of the City where deposits of raw materials are close to markets; where transport infrastructure to adequately service the project either already exists or can be reasonably upgraded by the proponent in accordance with these provisions, and where land use conflicts can be avoided or minimised through careful site planning and operational land use control.

The purpose of this policy is to -

- a) To protect and maintain, wherever reasonable, the existing landscape character, productive agricultural landuse and general amenity of the City by the appropriate location and operation of extractive industries.
- b) To encourage the prudent use of basic raw materials, recognising that resources (gravel, sand, limestone and rock) are finite.
- c) To control and minimise the operational impacts of extractive industry including dust, noise, spread of dieback, vibration, drainage and land clearing on neighbouring land uses by the application of development standards, conditions of approval and operational requirements.
- d) To ensure that extractive industry does not have an unacceptable impact on the environmental attributes of an area and to the greatest extent possible, environmental attributes are improved or maintained during and at completion of the extractive industry operations.
- e) To assist industry to assess the road impacts of their development proposals through a clear and transparent methodology which determines the impact of an extractive industry proposal on the City's road system, including safety issues and road upgrading requirements.
- f) To encourage extractive industries in areas where the road infrastructure is compatible with the



expected road usage resulting from the land use, or the road network can be upgraded by the proponent to meet appropriate standards prior to the use commencing.

## 3. INTERPRETATION

Acid Sulphate Soils: (ASS) means any naturally occurring soils or sediment containing iron sulphides;

**Committed Area** means in relation to a City extractive industry or basic raw material resource, any extraction area which is being worked or has been periodically worked provided the removal of the resource does not increase the surface area of the pit currently under consideration;

General Access Vehicle (GAV): has the same meaning as in Schedule 1 of these provisions;

*Level of Service (LoS)* Level of service is a measure of the quality of service of transportation infrastructure as set out by Austroads. Level of service may be used as a tool to measure changes in condition, also relating to increase in vehicle use, or expected quality of the infrastructure and the system uses the letters A through F, with A being best and F being worst.

**Rehabilitation Plan:** means a plan which details the developer commitments to rehabilitate/reconstitute the site through landform and vegetation planting measures in order to protect the environment from potential adverse impacts and to improve or maintain ecological processes.

Restricted Access Vehicle (RAV): has the same meaning as in Schedule 1 of these provisions;

**School Bus Route:** means any public road utilised on a daily basis by a licensed school bus operator to transport children to and from an educational establishment registered by the Education Ministry of Western Australia.

Sensitive land Use has the same meaning as in the Environmental Protection Authority - Guidance Statement 3;

**Tourist Attraction:** means a building or group of buildings and associated facilities and including other nonbuilt facilities substantially used for the attraction, accommodation and servicing of tourists, and includes wineries, cellar door sales, food and rural produce tasting and experiential attractions available to the general public.

*Visual Impact*: has the same meaning as in the Western Australian Planning Commission manual - *Visual Landscape Planning in Western Australia (2007).* 

**Wetland Buffer:** means the required distance and/or rehabilitation area between the proposed development and a wetland to protect the wetland from potential adverse impacts and to maintain ecological processes and functions within the wetland system. Wetlands on the Swan Coastal Plain may be categorised as Multiple use, Resource Enhancement or Conservation Category under the *Water and Rivers Commission Position Statement (2001).* 



## 4. POLICY STATEMENT

These provisions comprise the Text, Schedules and Plans. They apply to all land situated within the "Agriculture" and "Industrial" Zones of the Scheme; and any Reserves as considered consistent with these provisions, including gravel reserves and state forest areas.

Schedule 3, 'Background to Key issues' provides discussion and rationale for the policy provisions. It may be used to inform and assist decision making.

These provisions supersede the Extractive Industry Policy (20091999) and the current City Policy 143/3 – Road Contributions (in relation to extractive industry proposals), on the date they become operative.

Three levels of opportunity for extractive industry have been identified resulting in three Policy Areas being established:

#### 4.1 POLICY AREAS

#### POLICY AREA 1 - EXTRACTIVE INDUSTRY PRECLUDED

Policy Area 1 represents all areas substantially constrained by provision of zoning/reservation or severely constrained by proximity to residential areas, and areas of visual landscape amenity sensitivity.

Extractive industry will be precluded in this Policy Area.

#### POLICY AREA 2 - EXTRACTIVE INDUSTRY CONSTRAINED

Policy Area 2 represents an area that is constrained due to its location predominantly on, or in proximity to, the Leeuwin-Naturaliste Ridge and Caves Road viticulture/tourism areas and the inherent landscape (natural and rural), environment, tourism and agricultural qualities that exist. It is also an area where significant priority gravel resources or mineralisation exist. Extractive Industry will only be supported within Policy Area 2 where such operations have due regard to the significant constraints of the area, the particular site and surrounding uses.

#### POLICY AREA 3 - EXTRACTIVE INDUSTRY LESS CONSTRAINED

Policy Area 3 represents a large area east of Bussell Highway and covers the majority of the central and eastern part of the City much of which is identified as Prime Agricultural Land. Policy Area 3 contains extensive deposits of sand and some gravel resources although many deposits will be constrained by mineralisation (titanium/zircon) or prime agricultural land.

Extractive industry proposals will need to comply with the same criteria, requirements and conditions as Policy Area 2. However, as Policy Area 3 is recognised as primarily an agricultural area, it is important to ensure the long-term protection of prime agricultural land. Extractive industry will be expected to be approved within Policy Area 3, where such operations can meet the requirements of these provisions and the Scheme.

#### 4.2 ASSESSMENT CRITERIA AND POLICY PROVISIONS

Applications for Planning Consent for an extractive industry shall be assessed in accordance with, and shall satisfy the provisions of this part.



All applications shall:

- a) be in the Form specified at Schedule 1 of the Scheme with accompanying fees;
- b) be accompanied by a Social Impact Statement and information requirements of Schedules 1 and 2 of these provisions;
- c) Include a Dust Management Plan and Noise Management Plan;
- d) Include a letter from the DEC to confirm that a Clearing Permit Application has been received or preferably approved by the DEC when clearing of native vegetation is required. Although the City may approve an application prior to the DEC's Clearing Permit approval, the applicant is to provide the City with a copy of the approved DEC Clearing Permit prior to any clearing commencing;
- e) Include a Traffic Impact Assessment (Refer Schedule 1).

## 4.2.1 General Policy Provisions

3.2.1.1 For the purpose of the applicant's long term planning, the City is prepared to consider the granting of a Planning Consent for a period of up to five years within Policy Area 2 and Policy Area 3. The Planning Consent may specify conditions which need to be met prior to commencement of operations as well as conditions which are to be met on an ongoing basis.

Notwithstanding this requirement, a Planning Consent for a period exceeding 5 years may be issued where the extraction material is basalt/hard rock and subject to the conditions of operation being reviewed on a 5 year interval to respond to changing circumstances.

3.2.1.2 City operations shall comply with these provisions given they may cause similar conflicts, issues and impacts as commercially operated extractive industry although they may be located on reserves within restricted areas. An application for Planning Consent is to be made and a decision issued consistent with these provisions and the Scheme for any extraction which is proposed by the City outside a committed area.

## 4.2.2 Land Use Compatibility

The potential impacts of an extractive industry will be assessed against the Scheme and the following criteria:

- a) Proximity/distance to sensitive land uses including the nearest residence(s) and other potentially incompatible land uses (i.e. tourist attractions, wineries, chalets, tourist accommodation, horticultural/viticultural enterprises) in respect to the suitability of the type of operation and noise amelioration measures required.
- b) Scale and nature of the operation and likely impact on the land use character of the surrounding area.
- c) Identification of, and proximity to, prime agricultural land.
- d) Suitability of the dust and noise management plans and the likelihood of these measures achieving a successful amelioration of any impacts on the surrounding locality.
- e) Issues raised during the advertising period.
- f) Assessment of Social Impact Statement for the proposal.
- g) EPA Guidance Statement No. 3 (2005) and the need to refer the application to the EPA if minimum separation distances cannot be met.
- h) The policy requirements pertaining to Travel Route Corridors and Landscape Character as outlined in State Planning Policy 6.1.



For the purpose of these provisions, the distance to/from an extractive industry is the shortest distance between the perimeter of the nearest operational area (not necessarily the property boundary or pit face) to the sensitive landuse.

Policy provisions:

- 4.2.2.1 **Policy Area 2**: No extractive industry operations to be located within 500m of any tourist accommodation/attraction, where the owners of such object to the proposal.
- 4.2.2.2 **Policy Areas 2 and 3**: No extractive industry is to be located within 500m of a residence where the owner or resident of such objects to the proposal.
- 4.2.2.3 **Policy Areas 2 and 3**: Notwithstanding 6.2.1 and 6.2.2 above, the extraction of sand and limestone may be located less than 500m but generally no closer than 300m from a sensitive land use dependent upon the nature and scale of the operation and the content of a Dust and Noise Management plan including consideration of the requirement for dust and noise measuring equipment to be installed within the site for the duration of the extraction process. However this will not apply to the extraction of basalt and other hard rock quarrying which requires greater setback distances (generally a minimum of 1000m) to a sensitive land use.
- 4.2.2.4 **Policy Areas 2 and 3**: The City may approve the removal of stockpiled resources from properties and locations that are deemed to be inconsistent with the distance requirements of these provisions where such stockpiles have been created as a result of agricultural practice and the operation will be for a short-term only and will not involve any blasting, crushing or sieving.
- 4.2.2.5 **Policy Areas 2 and 3**: Where an extractive industry is approved within 1km of a residence or tourist accommodation or attraction, additional conditions to reduce amenity impact from noise and dust may be imposed, including operating times.
- 4.2.2.6 **Policy Areas 2 and 3**: The City will have regard to the SPP 4.1 and EPA Guidance Statement 3 in considering applications for a sensitive land use within 500 m of an extractive industry.
- 4.2.2.7 **Policy Areas 2 and 3**: Advertising of all extractive industry proposals shall involve advising landowners within a 1.0 km of the site.
- 4.2.2.8 **Policy Areas 2 and 3**: The proponent shall be required to peg the propose perimeter of the extractive pit area prior to applying for planning consent for the purposes of identification on site during the assessment process (and remain on site for the duration of the approval).
- 4.2.2.9 **Policy Areas 2 and 3**: All applications for extractive industries shall be accompanied by a Dust Management Plan and a Noise Management Plan which analyses and addresses site and project specific measures/plans taking into

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account seasonal influences and distances to sensitive land uses and the following matters:

- a) Timing of earthworks (daily and seasonally) to coincide with periods of low wind velocity. Extraction activities are to avoid forecast periods when wind gusts are predicted to exceed 25 knots by the Bureau of Meteorology, unless ground conditions are sufficiently wet such that the likelihood of dust and sand being blown within or off the site is low.
- b) Achievable and verifiable targets for maximum atmospheric concentrations of dust particulate associated with the extraction process.
- c) Achievable and verifiable targets for maximum noise levels associated with the extraction process.
- d) Wind fencing, where necessary, to be up to 3.0 metres high of a suitable textile weave material. (permanent/temporary/coverage)
- e) Measures to minimise "fetch" distance of dust or other airborne particles downwind of the pit.
- f) Availability of an on site Water Cart and sprinkler bar for watering down internal haul roads.
- g) Measures to increase moisture in the soil in sensitive and highly trafficked areas including a water cart and application methods and regularity of hydro mulching and/or alternative top soil binding agents for the effective stabilisation immediately following earth works.
- h) The need for noise bunding, vehicle modifications and/or and operator/driver code of conduct.
- i) EPA Guidance statement 8 (Environmental Noise).
- j) Applicable DEC guidelines for the preparation of a dust management plan. Dust management plans are to include contingencies for when required levels are exceeded (Total Suspended Particles should be referenced to PM10 and PM2.5 of the DEC's guidelines)
- k) Cumulative impacts of other noise emitting land uses already in the vicinity (e.g. existing extractive Industries)
- Limit to the orientation and area of pit exposed to prevailing winds (working face/stockpiles to be accessed from the leeward side based on predicted winds direction)
- m) Clear lines of communication between the landowner/extraction operator and the City Compliance officer in the event of non compliant operations.
- n) The maximum height of overburden mounds and stockpiles are to be no higher than 3.0 metres, unless appropriately stabilised with a soil binding agent, while the maximum height of top soil mounds and stockpiles are to be no higher than 2.0 metres.
- o) The need for a professionally monitored dust and noise measuring devices to be stationed at the extractive operation and reported dust excess values to be forwarded to the City as/when required. A dust monitoring record for the period (pre development) may be required to be undertaken by a qualified professional person and supplied to the City, expressed as (TSP) Total Suspended Particulates from within the extraction site.

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- p) The proximity of the proposal to a sensitive land use and measures to mitigate or remove any potential conflict associated with dust and noise drift.
- q) Dust and noise Suppression measures for loading operations e.g. wetting down, use of water curtains and/or water sprays during loading procedures, noise deflection walls.
- r) Tarpaulin measures to all loads prior to haulage leaving the site. (water is regarded as ineffective in managing dust once loaded onto a vehicle).
- s) The impact of haulage traffic noise on the amenity of surrounding areas including sensitive land uses.
- t) "neighbourly noise" agreements and codes of conduct, seeking to mitigate noise impacts from haulage and extraction processes.
- u) Other relevant mitigation measures.
- 4.2.2.10 **Policy Areas 2 and 3**: The Dust and Noise Management Plan(s) are to be approved by the City prior to the issue of a planning consent and are to be issued to the pit operator prior to a permit to use being issued.
- 4.2.2.11 **Policy Areas 2 and 3**: Limited hours of operation including operation Monday to Friday only shall be applied to all extractive industry. The City may consent to Saturday operations subject to the work being for rehabilitation purposes only, i.e. reshaping, top soil spreading, watering and reseeding or planting. The use of deep ripping with heavy machinery on a Saturday will generally be prohibited due to noise concerns and Saturday rehabilitation will only be permitted provided complaints are not received from nearby land owners, in which event the approval may be removed or varied.

## 4.2.3 Environmental Impacts:

The potential impacts of an extractive industry will be assessed against the Scheme and the following criteria:

- a) If approvals or advice has been issued by Department of Environment and Conservation and if not the extent of remnant vegetation to be cleared, including road verges resulting from road widening and upgrading; and proximity to areas of declared rare or endangered flora and fauna (DRF) or threatened ecologic communities (TEC).
- b) Proximity to and significance of watercourses, drains, wetlands, and on-site and adjoining dams and need for surface drainage and groundwater management plans.
- c) Evidence of Dieback disease and the suitability of a Dieback Hygiene Management Plan. (The Dieback Working Group-Best Practice Guidelines should be referenced in the formulation of a dieback management plan, including the matters that should be addressed in the plan and the responsibilities for the operator to comply with best practice management techniques.)
- d) Comments or recommendations from the Environmental Protection Authority, Department of Agriculture and Food WA, the Department of Water or any other relevant government agency.
- e) Proposed end use of site, particularly if intending to revert to agricultural land.
- f) The extent of bedrock, underlying clay soil strata and/or ground water levels to a depth of 0.5 m below the base of the excavation area.
- g) Any other ecological or environmental issues that may be relevant.
- h) Acid Sulphate Soil risks assessment.

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#### Policy provisions – Policy Areas 2 and 3:

- 4.2.3.1 Where relevant an extractive industry is to incorporate a wetland buffer and be setback a minimum of 100 m from all wetlands and at least 50m from dams and drains unless a greater or lesser setback is required in accordance with the Water and Rivers Commission Position Statement: Wetlands (2001).
- 4.2.3.2 Extractive industry is to be prohibited in areas of rare and endangered flora and fauna threatened or poorly represented ecological communities.
- 4.2.3.3 The City may consider granting approval to backfilling with quality topsoil, suitable spoils from residential lots and other materials that do not require licensing under the Environmental Protection Act and Regulations subject to management measures being implemented to remove biosecurity risks and to ensure that the long-term security of the eventual farming land use (where appropriate) is protected."
- 4.2.3.4 Soils with a risk of Acid Sulphate Soils shall be the subject of an Acid Sulphate Soils Management Plan in accordance with Planning Bulletin 64.
- 4.2.3.5 Rehabilitation is to be undertaken on an ongoing basis for worked areas. Any exhausted/worked areas in excess of 2 ha need to be reshaped, ripped, topsoil respread, dry seeded and a dust suppressant applied to hold the soils in place until the first rains occur prior to further extraction.
- 4.2.3.6 The area of pit to be open at any one time shall be no greater than 2.0 ha for the duration of the extraction operations, including rehabilitated areas unless otherwise determined.
- 4.2.3.7 Notwithstanding points 5 and 6 above the City may consent to an excess of the 2ha requirements outlined above if the material being extracted is material of a principally stone or laterite (gravel) composition and an approved rehabilitation plan is in place.
- 4.2.3.8 A dieback risk assessment and management plan for the proposal is to be undertaken to the satisfaction of the City and in accordance with Department of Environment and Conservation guidelines and submitted with the application for Planning Consent.

#### 4.2.4 Visual Amenity

The potential impacts of an extractive industry will be assessed against the Scheme and the following criteria:

- a) Proximity, elevation and visual exposure to public roads, particularly tourist or scenic routes.
- b) Proximity elevation and visual exposure to tourist and other land uses
- c) Scope and extent of operation (i.e. particularly stockpiling and pit size)
- d) Topography of the land, which may affect intermediate and back ground views.
- e) Impact on the view shed as identified in the Caves Road Visual Management Provisions, if

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applicable.

Elements which contribute to visual impact may include

- Height of development.
- Landscaping/vegetation and the extent to which these will obscure the development.
- The expected visual contrast of the proposal including batters, stockpiled earth and clearing against the setting of the landscape. Distance/proximity from public roads.
- Elevation within the landscape.
- The size, scale and staging of the development, particularly the form of extraction and methods of raw materials removal.
- Importance of the Visual characteristics of the landscape.
- Proximity to important/major carriageways or areas of public view.

Policy provisions:

- 4.2.4.1 **Policy Area 2**: Extractive industry to be effectively screened from all public roads.
- 4.2.4.2 **Policy Area 2**: Extractive industry to be set back a minimum of 100m from all public roads or less than 100m where it cannot be viewed from such road. Where a landscaped earth bund is to be constructed such that the pit cannot be viewed from roads, a minimum setback of between 20 metres and 40 metres shall apply.
- 4.2.4.3 **Policy Area 3**: Extractive industry to be effectively screened from all major tourist routes where the impact warrants screening.
- 4.2.4.4 **Policy Area 3**: Notwithstanding 6.4.3 Policy Areas 2 & 3: Applications to comply with all other relevant Council policy, including the Caves Road Visual Management Policy, LNRSPP Land Use Policies P.S. 3.4 and 3.6 and the Rural Strategy, where not inconsistent with these provisions.
- 4.2.4.5 **Policy Areas 2 & 3**: Extractive industry to be set back a minimum of 20m from side and rear boundaries.

#### 4.2.5 Route Assessment and Transportation:

The potential impacts of an extractive industry will be assessed against the Scheme and the following criteria:

- a) The outcomes of the Schedule 1 Traffic Impact Assessment and Road Upgrading Guidelines.
- b) Any comments or recommendations from Main Roads WA.
- c) The impacts of haulage traffic noise, vibration and amenity loss on surrounding areas.

#### Policy provisions - Policy Areas 2 and 3:

4.2.5.1 All applications for extractive industries will be accompanied by a Traffic Impact Assessment as outlined in Schedule 1 – Traffic Impact Assessment and Road Upgrading Guidelines. A determination of the impact of the proposal on the current road infrastructure and need for a road upgrading condition, will be made in accordance with the requirements of Schedule 1 prior to or in conjunction with a decision being made on the merit of planning application.

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- 4.2.5.2 Where it is proposed to operate haulage operations on roads that are designated school bus routes, operating times shall not be during, nor within 15 minutes of scheduled school bus times, and the applicant shall have determined, for affected roads, the accurate school bus times and shall also have achieved agreement to the arrangement from the School Bus Coordinator.
- 4.2.5.3 Prior to making a determination on the application, details of the proposal are to be forwarded to the MRWA by the City for comment on the likely level of service impacts on MRWA/City intersections. Intersection upgrading requirements (including line marking, stop or give way signs, deceleration lanes, widening and/ or channelization) resulting from the transportation of material will be considered following this advice and if necessary conditioned appropriately.
- 4.2.5.4 Internal haul roads shall be constructed, drained and maintained (including the need for bitumen seal where applicable), to ensure dust is suitably suppressed and spoils are not deposited onto the adjoining roads by haulage traffic.
- 4.2.5.5 Where it is intended to utilise road networks which cross over the City boundary into another City the application shall be referred to the neighbouring City for comment.
- 4.2.5.6 The City will not accept responsibility for the physical construction of road works required as a condition of Planning Consent; i.e. through a contribution to works payment, unless the proposal can be accommodated within a current works budget as outlined in Schedule 1.
- 4.2.5.7 Crossovers shall be constructed in accordance with the City's standard specifications for extractive industry crossovers to provide for a distance of 10 metres plus the expected length of any vehicle expected to use the access with at least 20m of seal from the sealed edge of the road, appropriately sealed access/egress which allows two way flow at all times and any other measures to ensure road safety.

## 4.3 COMMUNITY CONSULTATION/REFERRAL OF APPLICATION

After initial assessment by City officers to ensure the required information has been submitted and the application can be considered, the application will be advertised by the City in a local newspaper and public submissions invited, to be received by City, within 21 days of advertising. As part of the advertising process, all landowners within 1000 metres of the proposed operational area of the extractive industry site will be notified, as will other interested parties, as deemed appropriate.

As deemed appropriate, the proposal may be referred to the following authorities for comment and recommendations:

Department of Environment and Conservation (DEC)

Department of Water

Main Roads WA

Department of Agriculture and Food WA

Department of Mines and Petroleum

Department of Indigenous Affairs

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WA Tourism Commission Worksafe WA Other Citys.

The proponent may be required under separate legislation to refer the proposal to the Department of the Environment, Water, Heritage and the Arts (DEWHA) if there is a risk of significant impact on a matter(s) of National Environmental Significance protected under the Environmental Protection and Biodiversity Conservation Act 1999.

Applications which are captured by the Environmental Protection Notice (Environmentally Sensitive Areas) 2005, require referral to the EPA for consideration under Part V of the Environmental Protection Act 1986.

#### 4.4 **ENFORCEMENT**

Following the introduction of the Extractive Industries Policy, in January 1999 many issues of noncompliance were brought to the attention of the City.

The City will be seeking to introduce a Local Law (Extractive Industries) which embodies modified penalties. It is expected that this mechanism will provide powers to the City such as the ability to grant, modify, or revoke an extractive licence as well as the ability to enforce licence conditions on the operator of the pit through immediate financial penalties.

In the interim the City will continue to review operations in accordance with the Planning Consent as a means to enforce the operational requirements of an extractive industry approval. The City will be taking a "no tolerance" approach to breaches of Planning Consents with the appointment of specialised staff to monitor, collect evidence and prosecute operators found offending. The City emphasises strongly that all conditions need to be complied with during the planning consent period or operators will risk prosecution and/or revoking of the relevant Consent.

The following types of non-compliances could lead to prosecution and/or cancellation of a planning consent or extractive industry license:

- a) Exceeding the approved total pit volume;
- b) Exceeding the approved License Period (continuing the extractive industry after license expiry);
- c) Using unapproved routes to access State Roads and RAV Permit Network 2 Roads, in lieu of the nominated and approved routes;
- d) Non compliance with Consent Conditions;
- e) Non compliance with management plans.

Breaches of the Scheme or a valid Planning Consent may also be pursued in a court of competent jurisdiction.

## 5. REVIEW DETAILS

| Review Frequency |           | 2 yearly |              |  |
|------------------|-----------|----------|--------------|--|
| Council Adoption | 10/3/2010 |          | C1003/069    |  |
| Previous         | DATE      |          | Resolution # |  |
| Adoption         |           |          |              |  |

\* Policy number changed from LPP 5A to LPP 2.3 on the 11th May 2020. The change is administrative only, no resolution by Council required.

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### ATTACHMENT 1 - TRAFFIC IMPACT ASSESSMENT AND ROAD UPGRADING REQUIREMENT

#### INTRODUCTION

These Guidelines have been prepared as a guide to applicants and the City in assessing the suitability of existing traffic infrastructure to accommodate the traffic impacts of a proposed extractive industry.

The Guidelines will assist the City personnel to assess proposals against road safety, levels of service, suitability of trucking routes and to identify any road upgrading that may be required for the safe operation of an extractive industry.

#### **APPLICATION OF THIS DOCUMENT**

These guidelines should be read in conjunction with the City of Busselton Extractive Industry (EI) provisions.

The City encourages the industry to complete its own preliminary Traffic Impact Assessments for the purposes of determining the likely suitability of a range of particular sites for an extractive industry.

The Guidelines also specifically consider the implications of *General Access Vehicles (GAVs)* operating on *local roads* that are *Non-RAV Permit Network 2 Roads* and that provide route connection between the extractive industry site and the *RAV Permit 2 Roads*.

(Note - definitions of all italicized terms are provided in the section below).

#### DEFINITIONS

Annual Average Daily Traffic (AADT) – means the total volume of traffic passing a roadside observation point over the period of a calendar year, divided by the number of days in that year (365 or 366)

**General Access Vehicle (GAV)** – is a vehicle that is not a Restricted Access Vehicle (RAV) given that it complies with relevant mass and dimension limits prescribed by:

- Road Traffic (Vehicle Standards) Regulations 2002; and
- Road Traffic (Vehicle Standards) Rules 2002.

General Access Vehicles are often described as "As of Right" vehicles which, unlike RAVs, may operate state-wide without the need for a specific MRWA Period Permit on the basis that they are:

- not a road train or b-double
- within regulation axle mass limits
- 19.0m or less in length (or a maximum 12.5m for rigid vehicles)
- of total mass less than 42.5t
- of width less than 2.5m (excluding mirrors and lights)
- Of height less than 4.3m.

General Access Vehicles that are of particular relevance to this Guideline include common articulated semi-trailer tip trucks (semi-tippers) to the prescribed maximum 19.0m length and rigid tip trucks to the prescribed maximum 12.5m length.

"Local Road" – means a road under the care, control and management of a Local Government under the provisions of Section 55(2) of the Land Administration Act (1997) and also Section 3.53 of the Local Government Act (1995),

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which applies to all public roads in the district of a local government that are not otherwise designated as a "State Road" as defined elsewhere herein.

"Local Non-Permit Network 2 Road" – means a Local Road that is NOT on MRWA's RAV Period Permit Network 2. Further clarification is provided in Section 1.5.

"Passenger Car Units" - means a unit measure involving the conversion of different types of vehicles into their equivalent passenger cars in terms of operating characteristics.

"**Restricted Access Vehicle**" (RAV) – means the opposite of a "General Access Vehicle" in that it exceeds one or more of a number of mass or dimension limits prescribed by:

- Road Traffic (Vehicle Standards) Regulations 2002; or
- Road Traffic (Vehicle Standards) Rules 2002.

When a vehicle is operated as a RAV, it must only operate under a notice or permit issued by the Commissioner of Main Roads or under an exemption issued by the Director General - Department of Planning and Infrastructure. Further clarification is provided in Section 1.5.

"**RAV Permit Network 2 Road**" means a Road that is included on MRWA's RAV Period Permit Network 2 as described in section 1.5 of this guideline. RAV Permit Network 2 roads in the City of Busselton include most, if not all, State roads such as Bussell Highway and Local Roads such as Rendezvous Road.

"**State Road**" – means a road that is under the care, control and management of the Commissioner of Main Roads due to its proclamation as a "highway" or a "main road" under the provisions of the *Main Roads Act 1930 (section 13)*.

## FURTHER BACKGROUND

## The MRWA Permit System for Regulating Restricted Access Vehicles (RAVs)

MRWA has divided the Western Australian road network into ten (10) RAV networks ("RAV Network 1" to "RAV Network 10") for notice and Period Permit purposes. RAV Network numbers correspond to RAV "vehicle category numbers that identify the vehicle types that may operate under a period permit on that network, subject to compliance with any permit conditions imposed by MRWA. For example, Category 2 vehicles may operate on RAV Network 2 subject to a Period Permit being obtained from MRWA. Period Permits normally issue for a 1-year or 3-year period.

RAV Network 1 is the most extensive, covering all roads in the state other than some exceptions that occur in the Perth Metropolitan area only. Consequently all roads in the City of Busselton are automatically included on RAV Network 1.

RAV Network 1 period permits issued by MRWA allow certain truck and trailer combinations up to 20m long to operate on the RAV Network 1 roads (i.e. any City of Busselton local road) subject to period permit conditions imposed by MRWA.

RAV Networks 2 to 10 become progressively more restricted across the whole state as bigger vehicle category numbers correspond to longer and heavier vehicles.

![](_page_13_Picture_1.jpeg)

Busselton local roads do not appear on RAV Networks 4 to 10 so those RAV Networks are not further discussed here.

RAV Networks 2 & 3 Period Permits issued by MRWA allow the haulage industry to achieve economies of scale by operating larger Category 2 & 3 truck-trailer combinations to a length of 27.5m on the RAV Network 2 & 3 roads subject to adherence to permit conditions, rather than being limited to:

- "GAV" or "As of right" semi-trailers of 19.0m length; or
- Category 1 truck and trailer combinations to 20.0m long operating under a RAV Network 1 Period Permit.

## Relationship between the MRWA Guidelines and these Guidelines

The MRWA RAV Route Assessment Guidelines are used by MRWA to assess routes within the City of Busselton and elsewhere in the State for inclusion on RAV Networks 2 & 3, such that corresponding RAV Category 2 & 3 truck trailer combinations may operate on those routes subject to obtaining the appropriate Period Permit from MRWA and complying with the permit conditions.

These Local Government guidelines adopt similar assessment procedures and principles to assess the road safety and level of service implications in relation to GAV or "As of right" trucks operating on other parts of the road network defined herein as "Local Non-Permit Network 2 Roads". These guidelines focus on implications for the truck route from the proposed extractive industry sites to the point of connection to other State Roads or other Local Roads that are already on the MRWA's Permit Network 2.

A conditional assumption in this guideline is an upgrade will not generally be required to existing RAV Permit Network 2 Roads (or State Roads) as a result of new extractive industry applications given that existing inclusion of such roads on MRWA's RAV Permit Network 2 indicates that those road are suitable for operation of Category 2 RAVs, and should therefore already be suitable for smaller GAVs generated from a new extractive industry. However at the time of application the proposal will be referred to MRWA and the suitability of the route and the need for any upgrading of carriageways/intersections as a consequence of proposed development will be considered in detail.

Note, Refer to the MRWA website "Road Map Sheet 11" http://ims.mainroads.wa.gov.au/rav/ for the RAV Network 2 Map covering the City of Busselton, while "Townsite Sheet 5" provides enlarged detail for RAV Network 2 within Busselton Townsite.

#### Limitations to Engineering Design Parameters

Where quantitative limits are recommended, they are intended as a guide only and are no substitute for common sense and judgment based on experience. In certain circumstances routes which do not meet the full requirements outlined in this document can be accepted for extractive industry where by imposing additional conditions, such as speed restrictions, curfews the required level of service can be achieved.

## **Application Parameters & Approval Conditions**

Applicants shall nominate the following relevant parameters as part of an Extractive Industry application at the time the application for Planning Consent is made:

- a) Total Volume of Material to be extracted from the pit (in bank cubic metres (BCM), which represents the size of the pit excavation that can be validated by survey of the pit)
- b) Duration of the pit operation and the license approval (generally a maximum 5 years);
- c) Point/s of access onto the local road network;

![](_page_14_Picture_1.jpeg)

- d) Proposed Trucking Route or Routes to connect to RAV Permit Network 2 roads; and
- e) The peak and seasonal daily truck trips to occur along each selected route/s

#### **Traffic Impact Assessment Procedure**

The assessment procedure is provided in the following steps. It includes a worked example to demonstrate the applicable procedure. The assessment requires sequential completion of the following steps:

Step 1: Route Identification
Step 2: Number of Truck Trips Generated by the Extractive Industry.
Step 3: Point of access onto the local road network
Step 4: Rural Road Widths
Step 5: Other matters to be addressed.

### Step 1: Route Identification

Applicants shall identify the trucking route or routes proposed to be used along local roads to connect the extractive industry site to MRWA Permit Network 2 roads.

Applicants should develop and submit a plan that clearly identifies:

- the extractive industry (pit) location;
- the proposed point or points of access from the pit onto the public road (crossover location);
- the selected routes; and
- the Peak Daily and seasonal Truck Trips proposed on each route (refer to Step 3)
- Current traffic counts and an estimate of the existing and proposed development in the area and/or cumulative background through-traffic to be considered. Through-road traffic predictions may be based on existing counts if available and current. These can be projected forward at appropriate growth rates (generally assumed to be 5% per annum). If traffic counts have to be undertaken, full details of the count (such as location, time of day, date, type of count, percentage heavy or commercial vehicles) are to be included.

#### Step 2: Number of Truck Trips Generated by the Extractive Industry

This step requires an estimate of the number of trips for the routes identified in Step 1 for each year which the operations will be conducted.

To assist in the calculation of this value a guideline example for calculating and validating the number of peak daily truck trips generated by an extractive industry along each route selected, is provided as follows:

Note that a single truck load of material generates two truck trips, an exit trip and a return trip to the pit.

#### Example Application:

- Pit volume = 300,000 cubic metres (sand pit);
- Pit License Period = 5 years
- Route Selection: Two routes are nominated consisting:
  - o Route A from the pit (100% of all truck trips), that divides into,
  - o Route B A western route (anticipate 20% of all deliveries) and
  - o Route C An eastern route (anticipate 80% of all deliveries)

![](_page_15_Picture_1.jpeg)

• The applicant advises that the extractive industry will generate no more than 200 truck trips per day (on any one day) on each of three routes A, B & C.

Note - The maximum number of truck trips (on each route) is a significant variable that needs to be accurately determined from actual expected movements. This is to be nominated by the applicant and should represent a number that is verifiable from the City's assessment perspective.

## Example Calculation Number of Truck Trips Generated:

- BCM means bank cubic metres which is a cubic metre of compacted raw material.
- LCM means loose cubic metres which is a cubic metre of loose earth that has been loaded from an excavator.
  - Average annual extraction rate:
     = 300,000BCM / 5 years
     = 60,000 BCM per year
  - Average daily extraction rate (annual operation):
     = 60,000BCM / 52 weeks / 5 working days per week
     = 231 BCM per day

Non-working public holidays can be ignored for simplicity in this calculation.

However, if the pit operation is seasonal, the calculation should aim to determine the average daily extraction rate in the main working season. For example if 90% of the annual pit volume is expected to be extracted in a 6 month dry season working window then the calculation is:

Average daily extraction rate (main season):
 = 60,000BCM x 90% / 26 weeks / 5 working days per week
 = 415 BCM per day

Further adjustment for bulking of material is required to convert from "bank cubic metres (BCM)" in the pit to "loose cubic metres (LCM)" in the truck. Assume a 15% bulking factor unless a different factor can be justified):

Average daily extraction rate (main season):
 = 415 x 1.15
 = 478 LCM per day

The LCM volume can be converted to "number of truck loads" using the assumed load capacities from the table on the following page:

![](_page_16_Picture_1.jpeg)

| TADIE 4 | CONVEDSION | OF LOW TO | TOUCKIOADS |
|---------|------------|-----------|------------|
| IADLE I | CONVERSION | OF LOW TO | TRUCKLUADS |

| Truck Type   | 19.0m Semi-Tipper      | 12.5m Rigid Truck   |
|--|------------------------|---------------------|
| GVM  | 42.5t                  |                     |
| Tare (typical)   | 16t                    |                     |
| Net Payload (typical max)  | 26.5t                  | 14.5t               |
| Gravel Payload capacity<br>(assuming loose gravel<br>density of 1.8t per LCM)          | 26.5/ 1.8 =<br>14.7LCM | 14.5/ 1.8 = 8.1LCM  |
| Limestone Payload<br>capacity<br>(assuming loose limestone<br>density of 1.5t per LCM) | 26.5/ 1.5 =<br>17.7LCM | 14.5/ 1.5 = 9.7LCM  |
| Sand Payload capacity<br>(assuming loose sand<br>density of 1.4t per LCM)              | 26.5/ 1.4 =<br>18.9LCM | 14.5/ 1.4 = 10.4LCM |

Source: B & J Catalano Transport and Earthmoving Contractors pers. Comms. 12-6-08)

This example proposes (mostly) rigid trucks to haul sand, therefore:

- Average daily truck loads (main season):
  - = 478LCM / 10.4LCM per truck
  - = 46 truck loads per average working day.

The demand on the sand resource will be variable from day to day in the peak season. It is reasonable to assume that peak day truck loads may be twice the average estimated truck trips season to account for the daily variation in demand. Unless a more accurate estimate of peak movements can be justified a factor of two should be applied to derive the peak movements. Therefore:

- Indicative Peak Day Truck Loads (main season):
  - = 46 x 2
  - = 92 truck loads.

Each truck load requires an exit and a return trip. Therefore:

- Route A Peak Day Truck Trips = 92 x 2 = 184
- Route B Peak Day Truck Trips = 92 x 2 = 184\*
- Route C Peak Day Truck Trips = 92 x 2 = 184\*

Based on the above calculation the applicant's proposed limit of 200 truck trips per day on each route A, B & C can be accepted as a feasible value for further assessment of road upgrade requirements. This example assumes no reduction in the Route B and Route C calculations relative to the anticipated 20% and 80% of annual materials hauled on these routes, given that the peak day haulage on each route will probably be to a major construction site using only one of route B or C on that day, in which case the peak day truck numbers on route B or C will be similar to the peak day value calculated for route A, unless reasonable justification for a lower number or limit can be justified by the applicant. In this example the applicant might nominate and justify a reduced figure of 100 peak day truck trips on route B to avoid a road upgrade obligation on that route.

![](_page_17_Picture_1.jpeg)

## Step 3 – Point of Access onto the Local Road Network

Applicants shall identify the trucking access/egress alignments proposed to be used from the local roads to connect to the extractive industry property.

Applicants should develop and submit a plan that clearly identifies:

- the extractive industry (pit) location;
- the proposed point or points of access from the pit onto the public road (crossover location);
- the expected swept path of the largest vehicle expected to use the crossover; and
- the sight distance from the crossover(s) along the carriageway.

#### Step 4 – Rural Road Widths/Road Condition Assessment

The width of rural roads outside of townsites and their corresponding capacity to support extractive industries (with or without upgrade) shall be assessed using the following tables:

Table 2 - Passenger Car Equivalents for Trucks on Multi Lane Roads

| Type of Terrain  | Passenger Car Equivalents (PCE) factor |  |
|--|--|--|
| Level  | 1.7                                    |  |
| Rolling  | 4.0                                    |  |
| Mountainous  | 8.0                                    |  |
| O DELLA DELL | T-11-10                                |  |

Source - "Austroads GTEP 2", Table 4.3

| Design Traffic Volumes<br>(AADT) (veh/day)<br>(Note 1) | Carriageway Width<br>(seal width + trafficable<br>shoulders)<br>(m) | Sealed Width<br>(m)   |
|--|---|-----------------------|
| 0 - 75   | 7   | Unsealed (see note 1) |
| 75 - 150   | 7.5   | 3.5 (note 2)          |
| 150 - 500  | 8.0   | 6.0(note 3)           |
| Over 500   | 8.0 (note 4)  | 7.0                   |

Table 3 - Seal Widths and Carriageway widths for Rural Roads

Source - Based generally on "Rural Roads Guide", Table 4.1 & 4.2

Notes:

- (1) The Design Traffic Volumes include the existing traffic before the extraction plus anticipated movements from the extraction pit plus annualized traffic growth. AADT based upon seasonal variations may be considered but the value must also factor annualized traffic growth of 5.0%/yr on rural roads across the life of the pit. The figure will also factor approved but not commenced extractive industry utilizing the same routes in the area to avoid competition for routes.
- (2) A 3.5m seal width may be deemed acceptable where the seal already exists, to accommodate up to 150v.p.d. as indicated and subject to compliance with other specific criteria listed in Appendix D. However, where extractive industry proposals on existing unsealed roads warrant sealing due to volumes exceeding 75v.p.d. as above, then the minimum upgrade shall be a seal of 6.2m. Refer also to note 3.
- (3) A 6.0m seal width may be deemed acceptable where the seal already exists, to accommodate up to 500v.p.d. as indicated. However, where extractive industry proposals in the AADT range of up to 500v.p.d warrant sealing or seal widening of existing unsealed roads or underwidth roads as above, then the minimum upgrade shall be a seal width of 6.2m. Whilst the Rural Roads Guide suggests two lanes of 3.0m to yield a 6.0m wide seal, the City's current standard for this type of road is 2 x 3.1m lanes to yield a 6.2m seal.

![](_page_18_Picture_1.jpeg)

(4) Specific consideration should be given to providing additional carriageway (unsealed shoulder) width in excess of 8.0m to provided a carriageway width of 9.0 to 10.0m where AADT>1000 v.p.d. and particularly if the "speed environment" is high (in excess of 80km/h). Refer to the "Appendix B of the MRWA RAV Route Assessment Guide recommendations for RAV Category 2 vehicles for guidance. Otherwise the 8.0m width is nominated based on a general desire to minimize roadside clearing in rural areas of the City of Busselton and in consideration of the 8.2m standard nominated in the MRWA guide applicable to RAV Category 2 vehicles operating up to 100km/h on roads up to 1,000AADT.

By assigning the expected traffic volumes defined at step 2 to the current and forecast traffic volumes along the expected routes, the future traffic volumes post approval can be determined for the routes. This should be done for each year in which the use will be operational. From this a determination can be made as to the capacity of the road system to absorb the additional traffic and still meet the standards outlined at Table 3 for carriageway and seal width for the life of the pit.

## Step 5 – Other matters to be addressed

Road carriageway and seal width are two components of the road system that require assessment for the increased traffic volumes however there are other design parameters that may need to be met, based on the changes precipitated by the proposed land use as follows;

- Horizontal curve widening and vertical alignments for rural roads shall be assessed and determined having regard to the applicable Austroads rural design standards.
- Bridge load capacity along the route(s) shall be assessed if necessary.
- Analysis of intersection(s), including proposed treatment and method of control. This may involve a summary of the analysis of average delay, degree of saturation (DOS), 95 % queue lengths and available capacity.
- Acceptable mitigation works and their timing to offset identified impacts and to maintain acceptable traffic operations and levels of safety to the planning horizon year. Intersections upgrades (general geometry, sight distances, seal, channelization, delay).
- An assessment of whether provision of slip lanes is beneficial.
- Dust mitigation.
- Road verge Vegetation Impacts

## DETERMINATION

Based on a Traffic Impact Assessment outlined above, the suitability of the route will be determined by the City.

Where the City determines that the Design Traffic Volumes and other parameters will be exceeded due to the traffic generated by the extraction industry, the proponent will be responsible for meeting this through a road upgrading condition on the Planning Consent.

For the proposed extractive industry to operate in a manner that satisfies these guidelines significant upgrading of the public infrastructure may be required. In such cases, the proponent should be advised that the proposal exceeds operational requirements and be invited to submit further details to either amend the application and/or mitigate the development impacts such as:

- i.) Adopt alternate routes on better roads, or split exit and return truck journeys onto different routes where possible to reduce the impact on any one road;
- ii.) downscale the overall proposal (the pit volume) or the nominated peak day truck trips to acceptable levels.

![](_page_19_Picture_1.jpeg)

A proponent funded road upgrade to the required acceptable standard may still be required following these details being submitted but in any event any road upgrading requirements will be specified as a condition of any approval issued by the City or as a reason for refusal of the application.

The City will expect any works to be carried out by a competent contractor and completed to the satisfaction of the City prior to the issue of a permit to commence extraction in accordance with a construction approval. This may require an agreement and design drawings to be prepared by the proponent and approved by the City prior to the land use commencing.

If the Traffic Impact Assessment identifies that additional road works are required, then it is necessary to determine whether those road works can be accommodated within the City's 5 year Works Program.

The City may consider using a "Bring Forward Methodology" through a "cost absorption arrangement" where the City has programmed works to commence within its Five (5) yr Works Plan and the proponent seeks to contribute to these works. (Refer Table 4.0)

| Route<br>Determination   | Status of the route in the 5 yr works plan  | Likely requirements for the<br>fulfilment of the road Upgrading<br>Condition   | Special comments   |
|--|---|--|--|
| The route is<br>determined to<br>be conditionally<br>acceptable<br>subject to<br>upgrading of the<br>route/road<br>infrastructure to<br>meet a<br>specified<br>standard. | At the time of the<br>application being<br>considered by the City<br>the road (s) is not within<br>the Citys 5 year works<br>program                        | The proponent is responsible for<br>the full cost of the construction and<br>completion of the works specified<br>by the City prior to the issue of a<br>permit to commence.   | The City will charge<br>1.5 % of the<br>construction cost as<br>a supervision fee<br>pursuant to the Local<br>Government Act<br>1995.                  |
| The route is<br>determined to<br>be conditionally<br>acceptable<br>subject to<br>upgrading of the<br>route/road  | At the time of the<br>application being<br>considered by the City<br>the road(s) is within the<br>Citys 5 year works<br>program but within the<br>timeframe | The proponent is responsible for<br>the full cost of the construction and<br>completion of the works specified<br>by the City prior to the issue of a<br>permit to commence.<br>The Council may consider in<br>adopting its next capital works | The City will not<br>charge 1.5% of the<br>construction cost as<br>a supervision fee in<br>view of the listing of<br>the works on the 5 yr<br>program. |
| infrastructure to<br>meet a<br>specified<br>standard.  | commencement of the<br>extractive industry.   | program and 5 year works program<br>bringing the project forward on the<br>basis on contributing part funding<br>to assist the completion of the<br>works on a negotiated basis.   |  |

Table 4- Possible Shared Cost Road Upgrading Scenarios

The proponent may further substantiate the basis for the City's review of its determination, by submitting additional information relevant to the City's consideration. The City will review the additional information and if in agreement modify the condition.

![](_page_20_Picture_1.jpeg)

## **ATTACHMENT 2 – APPLICATION REQUIREMENTS**

In many instances the processing delays involved with extractive industry proposals results from poorly prepared applications and/or the need for additional detailed information to be obtained to complete the application prior to assessment.

It is the responsibility of the proponent to ensure that all of the following information is provided in order for an accurate and timely assessment of the proposals. The minimum information requirements for a completed application to be registered and assessed by the City are as follows:

#### **Administrative Requirements**

- 1. Completed Development Application Form
- 2. Payment of the Application Fee (additional for advertising)
- 3. A completed Social Impact Statement: To be prepared in accordance with Council's Provisions on the "Preparation of Social Impact Statements"
- 4. A Copy of a "Permit to Clear" from Department of Environment and Conservation (if the proposal involves clearing of native vegetation) with conditions attached and submitted with the Development Application Form. While the provision of this information will not preclude the City's assessment of the application it is preferable and in the proponent's interests to lodge this at the time the application is made.
- 5. Assessment of the potentials of the proposal to activate acid sulphate soils
- Reference to compliance of the proposal with: The Department of Mines and Petroleum "Environmental Management of Quarries" and Department of Environment and Conservation – "Code of Practice for Extractive Industries"
- 7. Four (4) plans to scale providing the following details:

## **Location and Site Details**

- 1. Property details and a location plan showing the location of the property in a district context.
- 2. Contoured topography of site and surrounds including up to date orthophoto mapping showing the whole of the property.
- 3. Existing and surrounding land use (including all buildings and dwellings) within 1500 metres of the perimeter of the lot(s).
- 4. The location and extent of any existing extractive industry within 1000 metres of the proposal.
- 5. Property access (public and private) surface, sub base, shoulder condition and suitability for the intended level of use.
- 6. Existing vegetation, including any declared rare fauna and flora or threatened Ecological Communities if known.
- 7. Existing and surrounding watercourses, dams and wetlands indicating setbacks of the proposal and internal access roads from neighbouring properties.

#### Scale and Nature of Operation

- 1. Size and depth of pit(s) including the results, details and locations of soil test pits (The proponent is required to clearly demark the proposed intended pit perimeter on the land.
- 2. Intended crushing, blasting and method of material extraction.
- 3. Timing and extent of crushing and blasting if proposed
- 4. Sand, gravel, rock or clay extraction
- 5. Whether On-site maintenance of or storage of vehicles or fuels is contemplated

![](_page_21_Picture_1.jpeg)

- 6. If Storage and stockpiling of materials on-site is proposed the height, perimeter location and cubic capacity of the intended stockpile and the measures to be deployed to control dust dispersal.
- 7. Proposed capacity and source of water to be made available to the site for dust management and general purposes
- 8. A dust suppression plan prepared in accordance with provision 6.3 of these provisions.
- 9. Estimated amount of resource to be extracted
- 10. Period over which operation is to occur
- 11. Proposed operating times
- 12. Type of equipment to be used
- 13. Staging of operation
- 14. The name and telephone number of the proposed operations manager for the site if known.

## **Resource Haulage**

- 1. The maximum number of truck movements per day/week
- 2. The likely frequency of machinery and truck movements including the frequency of truck movements on private internal haul tracks and all public roads.
- 3. Type and size of trucks/machinery to be used
- 4. Access to the site operation including any proposed new crossovers.
- 5. Haulage routes and destination(s), including all local and major roads
- 6. Location of proposed and existing road signage
- 7. Anticipated road maintenance and/or upgrade requirements (see provision 4)
- 8. Extent of roadside vegetation to be removed if road upgrade is required
- 9. Anticipated intersection upgrades
- 10. Anticipated drainage and or bridge upgrades
- 11. A completed road impact assessment.

## **Environmental Considerations**

- 1. An assessment of compliance with Land Use Planning and Policy Statements of the Leeuwin Naturaliste Ridge Policy (LNRP) if appropriate, including the potential impacts of road widening on Travel Corridors, impacts on areas of Landscape Significance and/or the provisions relevant to Visual management.
- 2. The anticipated or potential adverse impacts on the environment and the environmental management controls and rehabilitation programs intended to avoid or reduce these impacts.
- 3. That the need for the development outweighs its adverse impacts on the environment.
- 4. Noise and Dust Management Plan(s).
- 5. Dieback status of property and a Dieback Management Plan.
- 6. Drainage implications
- 7. Proposed end use of site/rehabilitation concept plan, including staging
- 8. Potential loss of amenity for nearby land owners or residents and measures to ameliorate/correct this.
- 9. Surface Water Management
- 10. The stratification and absolute depth of the resource relative to the groundwater table, bedrock or underlying clay layer; and the proposed extraction depth.

It should be noted that a Social Impact Statement prepared in accordance with Council provisions must also be prepared and will also address some of the above issues.

![](_page_22_Picture_1.jpeg)

SHIRE OF DONNYBROOK -BALINGUP Plan 1. Extractive Industry Policy Areas 42 LEGEND SHIRE OF CAPEL Policy Area 2 Policy Area 3 Policy Area 1 Cadastre 8 2 Policy areas are defined by the Extractive Industry Policy. Sections 5.0 Policy Areas: and 6.2 Land Use Compatibility have been used largely to determine the spatial fluctration. SHIRE OF AUGUSTA ARGARET RIVER EXTRACTIVE INDUSTRY POLICY AREAS 0 10 Shine of Busseltor tradewiden Tel Area 2008 Angeneria A