State Planning Policy—state interest guideline

Emissions and hazardous activities

April 2016
Preface

Using this state interest guideline

The Queensland Government established the State Planning Policy (SPP) to define the specific matters of state interest in land use planning and development. To support the implementation of the SPP, each state interest in the SPP is supported by a state interest guideline such as this one.

This state interest guideline must be read in conjunction with the SPP.

The SPP does not prioritise one state interest over another and thus provides flexibility for local governments to respond to specific regional and local contexts. This allows for the state interests to be considered as an entirety rather than as individual competing or conflicting priorities.

The SPP guiding principles carry equal weight with the state interests and must be considered by local government as part of the integration of state interests as an entirety rather than as individual policies. This supports decision making which integrates and balances the economic, environmental and social needs of current and future generations, promotes innovative approaches to design and development where consistent with the strategic intent of a planning scheme and enables flexible and performance-based decisions as part of the assessment process.

Where text in this guideline is in a coloured text box, it is an excerpt from the SPP and is the state’s policy about a matter of state interest.

In relation to making or amending a planning scheme, the SPP quoted text defines what a local government should do in preparing or amending a planning scheme (i.e. the state prefers this policy but will consider alternative approaches based on specific local context or issues).

Where interim development assessment requirements apply for a state interest (because the relevant planning scheme has not yet integrated the state interest or an amendment to the SPP has occurred subsequent to the scheme), the SPP quoted text defines requirements that must be applied in the assessment of applicable development applications.

Content within this state interest guideline that is not an excerpt from the SPP provides further context and explains how the SPP policies can be applied. It does not introduce or define any new policies which do not exist in the SPP itself.

The use of such guidance material is optional—it does not form a statutory component of the SPP and hence is not a mandatory requirement of the state.
PART A: Background and core concepts

State interest—emissions and hazardous activities

Community health and safety, sensitive land uses and the natural environment are protected from potential adverse impacts of emissions and hazardous activities, while ensuring the long-term viability of industrial development, and sport and recreation activities.

Background

The sustainable operation of industrial development is essential to Queensland’s economy. Equally as important to community wellbeing are the many diverse sport and recreational activities enjoyed by many Queenslanders. There are some sport and recreation activities (such as shooting and motor sports) and types of industrial development that have the potential to cause adverse impacts on communities, and particularly sensitive land uses, where proper consideration has not been given to their location. Inversely, incompatible development may impact detrimentally on industry and established sport and recreation activities where encroachment poses a risk to the long-term viability of these uses, from a health and safety, economic and employment aspect. It is therefore important that the state interest—emissions and hazardous activities seeks to address these concerns and provide a capable interface for industry and the community in a mutually beneficial manner.

Core concepts

Sensitive land uses
Sensitive land uses are defined in the State Planning Policy (SPP) as uses including a caretakers accommodation, child care centre, community care centre, community residence, detention facility, dual occupancy, dwelling house, dwelling unit, educational establishment, health care services, hospital, hotel, multiple dwelling, non-resident workforce accommodation, relocatable home park, residential care facility, resort complex, retirement facility, rooming accommodation, rural workers accommodation, short-term accommodation and tourist park.

Industrial land uses
Industrial thresholds are identified in the Queensland Planning Provisions (QPP) as low, medium, high impact and special industrial land uses. The activities approved as part of these land uses typically generate noise, air or odour emissions but are required to manage potential impacts on surrounding sensitive land uses. Potential for significant or noticeable off-site impacts and high traffic flows may also exist.

Former mining activities and hazards
Many of Queensland’s local government areas have a history of past mining. The remaining landforms and infrastructure associated with past mining activity has potential to pose a range of hazards to people and property. Local planning instruments that cover land affected by identified former mining activities or hazards should ensure that appropriate investigations and assessments are undertaken so that consequent risks to proposed new development can be managed.

The particular features found on a former mining site will depend on the nature and scale of the mining that has occurred, e.g. coal-mining, hard-rock mining, gem-field operations, alluvial mining or mineral processing. Complexity increases as the scale of mining increases. Depending on the feature(s) existing on the historic mine site, potential hazards may extend to off-site impacts including low quality water discharge.
Development involving hazardous chemicals

Industrial land uses involving the storage, handling or processing of hazardous chemicals with potential noticeable, significant or extreme off-site impacts require on-site controls to avoid such risks. Improper mitigation of the risks could lead to fire, explosions or toxic release. The QPP defines such industry as medium impact, high impact and special industry. Local planning instruments shall ensure that the on-site controls for hazardous chemicals are adequate to avoid off-site risks for any material change of use for medium impact, high impact or special industry. To increase clarity to industry, local government can include the model self-assessable and/or assessable development thresholds for hazardous chemicals with off-site risks identified in the Model Planning Scheme Development Code for Hazardous Industries and Chemicals via the Department of Justice and Attorney-General’s (DJAG) www.worksafe.qld.gov.au/__data/assets/pdf_file/0009/82935/model-planning-scheme-development-code-haz-industries-chemicals.pdf. In addition, the HICC contains a selection of model outcomes for avoiding off-site risks from industry with hazardous chemicals above model thresholds.

Contaminated land

Contaminated land is defined in schedule 4 of the Environmental Protection Act 1994 (EP Act). Contaminated land refers to land contaminated by hazardous substances that may pose a risk to human health or the environment. Land in this category may include land formally used for industrial, military, mining, waste disposal, explosives testing or chemical application activities. Some, but not all, of these activities may be ‘notifiable’ activities listed under Schedule 3 of the Environment Protection Act 1994. This includes land listed, or required to be listed, on the Environmental Management Register (EMR) and the Contaminated Land Register (CLR), as well as land previously used for an industrial activity which, for whatever reason, is not listed on the EMR or CLR. The CLR and EMR are also defined in the EP Act. To prevent unnecessary costs and delays, it is recommended that consideration be given to land contamination issues early in development planning.

Management area

Industrial activities are important to the economy for the provision of goods and services that support transport, infrastructure and development and the day-to-day materials for our homes and workplaces. Equally, industrial activities can cause impacts from air, noise and odour emissions, as well as hazardous materials. In certain locations, management areas have been mapped to protect industrial activities from incompatible development and minimise any adverse impacts on sensitive land uses from industrial emissions. Mapping of management areas is available on the SPP Interactive Mapping System.

Major hazard facilities

Major hazard facility (see Schedule 19, Work Health and Safety Regulation 2011) means a facility:

1. at which Schedule 15 chemicals are present or likely to be present in a quantity that exceeds their threshold quantity, or

2. that is determined under Part 9.2 to be a major hazard facility.
PART B: Integrating the state interest into planning schemes

Policy 1

Locating industrial land uses and major sport, recreation and entertainment facilities in areas that avoid, mitigate and manage the adverse impacts of emissions on sensitive land uses.

Industrial land uses and major sport, recreation and entertainment facilities provide valuable economic and social benefits for communities throughout Queensland. It is important to recognise these benefits while ensuring appropriate measures are in place to protect the uninhibited operation of industry and sport and entertainment businesses, and providing provisions within the planning scheme that support healthy and safe environments for sensitive land uses.

How to appropriately integrate the policy

1.1 Identify suitable areas (including the interface between these areas) for the following:
   a) industrial land uses;
   b) major sport, recreation and entertainment facilities and other sport and recreation activities including shooting and motor sports; and
   c) sensitive land uses (with appropriate buffers).

1.2 Include policy statements within the strategic framework that discourage the development of industrial uses in close proximity to sensitive land uses.

1.3 Within the strategic framework—hazards and safety theme, highlight the impact of industrial land uses and the importance of their location in order to protect the community from potential health and safety risks.

1.4 Consider the exposure of sensitive land uses to air, noise and odour emissions when zoning land for industrial development and various sport and recreation activities. For example, common land use strategies to avoid, mitigate and manage the adverse impacts of industrial emissions include:
   a) clustering high impact and incompatible land uses in areas away from sensitive land uses (e.g. industrial estates)
   b) locating uses of progressively lesser impact around zones of highest impact (e.g. low impact industry surrounding medium impact industry, surrounding high impact industry).

REFER TO: PART D: Model code provisions.

In some local government areas, there may be pre-existing medium and high impact industry development in close proximity to sensitive land uses and vice-versa, which makes achieving the policy outcome difficult. In these situations the local government could use an interface such as an overlay or precinct to mitigate emissions from surrounding industrial land uses. The following suggestions can assist with interface operability:

- require that new development is designed and operated in a way that responds to adjacent development;
- prevent new industry operations from being developed;
- transition the industry operation to a use that is of a lower impact; and
- prevent further expansion of residential or sensitive land uses.
PART B

Developments involving hazardous chemicals carry a level of risk associated with their storage, handling and use. Risk analysis is the primary tool for identifying off-site hazards and assessing the on-site controls designed to avoid them. The roles of risk analyses in land use safety planning is to demonstrate that risk from a hazardous chemical facility is tolerable when considering surrounding land uses. The Model Planning Scheme Development Code for Hazardous Industries and Chemicals provides model ways for undertaking such analyses.

Policy 2

Locating and managing development for activities involving the use, storage and disposal of hazardous materials and hazardous chemicals, dangerous goods and flammable or combustible substances to avoid or mitigate potential adverse impacts on surrounding uses, and minimise the health and safety risks to communities and individuals.

How to appropriately integrate the policy

2.1 Consider the location of any major hazard facilities within the local government area (if applicable).

2.2 Within the strategic framework—hazards and safety theme, highlight the potential health and safety risks of major hazard facilities on the community and the importance of adequate separation distances between sensitive land uses and development involving hazardous materials/chemicals.

2.3 Consider the level of off-site risks from hazardous chemicals when considering appropriate zoning and location of development:
   a) locate and zone uses involving noticeable off-site risks in medium impact industry zones
   b) locate uses involving significant off-site risks in high impact industry zones
   c) locate uses involving extreme off-site risks in special industry zones.

2.4 Provide outcomes for ensuring on-site controls for development involving off-site risks adequately avoid such risks and where required, provide a risk analysis framework that can be used to demonstrate that risks are tolerable with surrounding land uses. Model outcomes and a risk analysis framework have been included in the Model Planning Scheme Development Code for Hazardous Industries and Chemicals.
Policy 3

Protecting the following existing and approved land uses or areas from encroachment by development that would compromise the ability of the land use to function safely and effectively:

a) medium impact, high impact, extractive, and noxious and hazardous industries, and
b) major hazard facilities, and
c) intensive animal industries, and
d) explosives facilities and explosives reserves, and
e) waste management facilities and sewerage treatment plants, and
f) industrial land in a state development area (SDA), or an enterprise opportunity area or employment opportunity area identified in a regional plan, and
g) major sport, recreation and entertainment facilities (including shooting or motor sport facilities) that may cause a nuisance or adverse impacts.

Encroachment of sensitive land uses and other incompatible development on the existing or approved uses listed in policy 3 may adversely impact upon the operation of the existing or approved use and/or prompt health and safety issues for encroaching sensitive land use. It is important for local government to address these concerns to ensure protection from adverse impacts and ensure the long-term viability of industrial development.

How to appropriately integrate the policy

3.1 Identify adequate and appropriately designated land for uses listed in items a–g above, including the interfaces between surrounding land uses. This may take the form of a strategic framework map, specific zoning map and code or overlay code.

3.2 Within the strategic framework, include policy statements requiring the protection of industrial zones from the encroachment of sensitive land uses (except where ancillary to the industrial nature of the area).

3.3 Include within the strategic framework—hazards and safety theme, strategic outcomes that protect industrial areas from encroachment by incompatible development, not ancillary to the industrial use (this may be achieved through the use of interfaces such as zone precincts).

It is recommended that local government consult with the Hazardous Industry and Chemicals Branch of Workplace Health and Safety Queensland to determine if a major hazard facility exists in its area and if so, its corresponding tier. This information will greatly assist in determining zoning, interface and assessment provisions.

REFER TO: PART D: Model code provisions.

REFER TO: PART E: Supporting information 1. Technical resources.
PART B

Impacts from previous land uses such as former mining activities, former landfill and refuse sites, and contaminated land, can result in risks to community health and safety if not properly managed. In some cases, land may have been contaminated, mined, or utilised by activities not known to be dangerous at the time, often involving chemicals which have since been banned or are now subject to much stricter controls. Some of the legacies of past activities include low quality water discharge, disused tunnels and shafts, hazardous substances and materials, soil contaminants, subsidence, and remnant infrastructure.

Rehabilitation and remediation of land are important aspects of development that offer assurances for future generations to live, work, and play in areas once deemed unsuitable for urban purposes. The state government has measures that assist local government in identifying these former activities to guide appropriate development in its local area.

How to appropriately integrate the policy

4/5.1 Former landfill, refuse, and mining activities and hazards can be identified within applicable zones where these activities previously existed. There may be provision for some of these sites to be remediated; however, the majority the risks often outweigh the benefits and therefore allotments subject to these previous uses are often considered too dangerous and are recommended to be zoned limited development.

4/5.2 When an extractive industry site has been exhausted and reached its end of life for the extractive use, there are often remediation measures that can be undertaken to provide a renewed use of the site. The remediation provisions can be included within an extractive industry code to ensure any extractive industry development is conditioned to provide remediation measures that assist in future use of the site.

4/5.3 Sites that contain contaminated land are not generally identified within a planning scheme, however identification occurs during a proponent’s due diligence. The planning scheme may, however, include overall outcomes and performance outcomes that require sites that are contaminated or pose a health risk from previous hazardous uses to be remediated prior to being developed for sensitive land uses.

Refer to: PART D: Model code provisions.
Floodwaters have moved, buried or damaged hazardous chemical containers causing them to end up in various and sometimes unexpected locations, often outside the boundary of the facility at which they were originally held. Given the historical flood events in Queensland that have seen widespread impacts and relatively high frequency of flooding events, it is important and appropriate that new developments involving the storage of hazardous chemicals consider the potential for flooding and mitigate the impacts.

Policy 6

*Planning for development involving the storage of hazardous chemicals that exceed a hazardous chemicals flood hazard threshold in a flood hazard area, to minimise the likelihood of inundation of flood waters from creeks, rivers, lakes or estuaries on storage areas.*

How to appropriately integrate the policy

Flood hazard areas found on local council mapping and/or the SPP Interactive Mapping System should be referred to when determining the likelihood of the proposed development being inundated by flood waters.

6.1 Where there is a known flood hazard, include provisions in the relevant code that minimise the associated risk of storage for hazardous chemicals exceeding a hazardous chemicals flood hazard threshold.

REFER TO: PART D: Model code provisions.
PART C: Application of interim development assessment requirements

The SPP requires that where a planning scheme has not yet appropriately integrated a state interest that the interim development assessment provisions apply. The state interest—emissions and hazardous activities has interim development assessment requirements.

These SPP interim development assessment requirements must be considered by local government in relation to the assessment of development applications mentioned in Part E of the SPP and apply in addition to any other relevant requirements in a local government planning scheme.

A material change of use or reconfiguring a lot for a sensitive land use, where the development application is located wholly or partly within a management area (as shown on the SPP Interactive Mapping System), triggers assessment of the interim development assessment provisions for the state interest—emissions and hazardous activities.

How a development application may demonstrate compliance with these assessment requirements

It is important that sensitive land uses are not exposed to industrial air, noise and odour emissions that could adversely impact on human health, amenity and wellbeing. The relevant acoustic and air objectives are included in Appendix 6 of the SPP. Sensitive land uses should be planned designed and managed to achieve the objectives in Tables F and G in Appendix 6 of the SPP, consistent with the environmental protection policies.

Where a proposed development involves a sensitive land use, the required noise and air quality levels may be achieved through a number of methods. One example is through the application of construction materials such as double glazed windows, insulated walls and doors which can reduce the level of exposure from obnoxious emissions. Adequate separation distances such as vegetation buffers also assist in reducing the impacts of surrounding development.

Development assessment requirement 1

(1) Development is designed to avoid or otherwise minimise adverse impacts from emissions that will affect the health and safety, wellbeing and amenity of communities and individuals.

Development assessment requirement 2

(2) Development supports the achievement of the relevant acoustic and air quality objectives of the Environmental Protection (Noise) Policy 2008 and Environmental Protection (Air) Policy 2008.

Development assessment requirement 3

(3) Development does not compromise the viability of existing or future industrial development, including industrial land within an SDA, or an enterprise opportunity area or employment opportunity area identified in a regional plan.

How a development application may demonstrate compliance with the assessment requirement

Compatibility between existing or future industrial development and adjacent areas is critical to the success of the land use. If land has been designated for industrial development it is important that surrounding land uses do not compromise the ongoing operation of the industrial land use/activity. As an example, due to the heavy and noxious industrial nature of some SDAs, development that is incompatible with an industrial SDA land use such as a residential reconfiguring a lot proposal, is not recommended to occur within close proximity or adjacent to these areas.

Similarly, for enterprise opportunity areas or employment opportunity areas identified in a regional plan, it is important to provide for compatible development through appropriate zoning within and adjacent to these areas, to ensure continued success in contributing toward a stronger Queensland economy.
PART D: Model code provisions

Example model code provisions for the emissions and hazardous activities state interest have been prepared below that may be adapted by a local government when making or amending a planning scheme. Where a local government seeks to adopt model code provisions, it should ensure the provision’s suitability to local circumstances prior to adoption. It is not intended that a local government would use all of these model provisions verbatim, as local context and tailoring is an essential part of adopting the SPP.

2. Model code provisions for emissions and hazardous activities

Due to the varying aspects of development contained within this state interest, the following provisions are recommended to be included within a general development code (for example an environment and infrastructure code or similar) in a local government planning scheme. Alternatively, the provisions may be split amongst the relevant sections of a planning scheme.

Purpose

The purpose of the code will be achieved through the following overall outcomes:

1. Industrial, noxious and hazardous land uses are adequately separated from sensitive land use to avoid the occurrence of environmental harm or environmental nuisance.

2. Industrial development, extractive, noxious and hazardous industries are protected from the encroachment of incompatible development.

3. Sites that are contaminated or pose a health risk from previous hazardous uses and/or listed on the EMR or CLR are remediated prior to being developed for sensitive land uses.

4. Extractive industry sites are rehabilitated once the resource has been exhausted or the extractive industry use becomes no longer viable.

5. Hazardous chemicals are appropriately stored to reduce the risk of contamination on the environment.

1. Strategic framework—model provisions for emissions and hazardous activities

Strategic outcome

- Planning that encourages innovation and enables positive responses to challenges and change can help to establish more resilient settlement patterns, safeguard the wellbeing of people and better protect property, the environment and infrastructure.

- The impacts and risk assessments of weather events and natural hazards, when determining the location, scale and intensity of development.

- Community health and safety, sensitive land uses and the natural environment are protected from the potential adverse impacts of hazardous air, noise and odour emissions from higher impact uses (including industrial development and major sport, recreation and entertainment facilities and other noisy sport and recreation activities such as shooting and motor sports).

- Industrial development and major sport, recreation and entertainment facilities are:
  - protected from encroachment by development (such as sensitive uses) that would compromise their safe and effective function;
  - located to ensure their long-term viability; and
  - located to reduce adverse impacts on sensitive land uses.

- Extractive industry sites must be rehabilitated once the resource has been exhausted or the extractive industry use is no longer viable (i.e. reaches end of life).
### Assessment criteria

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<th>Performance outcomes</th>
<th>Acceptable outcomes</th>
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<td><strong>Air and noise pollution</strong></td>
<td><strong>AO1.1</strong></td>
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| **PO1** Development should not result in sensitive land uses being exposed to air, noise and odour emissions from industrial uses, major sport, recreation and entertainment facilities or other noisy sport and recreation activities that have the potential to adversely impact on human health, amenity and wellbeing. | The use is designed to ensure that:  
(1) the indoor noise objectives set out in the Environmental Protection (Noise) Policy 2008 are met;  
(2) the air quality objectives in the Environmental Protection (Air) Policy 2008 are met; and  
(3) noxious and offensive odours are not experienced at the location of sensitive land uses. |

**Editor’s note:** noisy sport and recreation activities include shooting and motor sport facilities.


Design measures may include:  
(1) landscape buffers and physical barriers such as fences and that set appropriate setback/separation distances;  
(2) adequate allotment design that reduces impacts of emissions; or  
(3) adequate construction materials and positioning of rooms and windows to mitigate impact of emissions.

<table>
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<tr>
<th><strong>Protection of medium impact, high impact, extractive and noxious and hazardous industries</strong></th>
<th><strong>AO2.1</strong></th>
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| **PO2** Industrial land uses are protected from encroaching incompatible land uses. | Sensitive land uses:  
(1) do not compromise the viability of existing or future industrial development, including industrial land within an SDA, or an enterprise opportunity area or employment opportunity area identified in a regional plan;  
(2) do not compromise the viability of major sport, recreation and entertainment facilities;  
(3) do not compromise the operation of major hazard facilities, intensive animal industries or explosive facilities and reserves; and  
(4) are not located within close proximity to waste and sewage treatment plants. |
### Site rehabilitation and end use

**PO3**  
The extractive industry provides for the progressive rehabilitation of all areas affected by its operations to a stable and restored state such that the land is suitable for use by alternative land uses.

**AO3.1**  
The extractive industry provides for site rehabilitation to be carried out on a progressive basis at the conclusion of each stage of extraction, providing for:

1. clean-up works (taking particular account of areas of possible soil contamination);
2. minimisation of potential for erosion from the site and sediment transport across the site;
3. management of the quality of stormwater, water and seepage released from the site such that releases of contaminants are not likely to cause environmental harm;
4. management of any actual and potential acid sulfate soils in or on the site;
5. a stable final landform and soil profile;
6. local native vegetation suitable for establishment in the coastal plain to be planted, established and maintained;
7. management of weed; and
8. public infrastructure (including pathways) to be provided in those areas dedicated as public open space suitable for secondary contact recreation use.

**AO3.2**  
The extractive industry provides for all rehabilitation works to be undertaken in accordance with an expected final landform design and site rehabilitation plan.

### Storage of hazardous chemicals (exceeding a threshold) in a flood hazard area

**PO4**  
Storage and handling areas, including manufacturing areas, containing hazardous chemicals in quantities greater than 2500 L or kg within a local government flood hazard area are located and designed in a manner to minimise the likelihood of inundation of flood waters from creeks, rivers, lakes or estuaries.

**AO4.1**  
The base of any tank with a water capacity > 2500 L or kg is higher than any relevant flood height level identified in a local government area (LGA) flood hazard area. Alternatively:

1. bulk tanks are anchored so they cannot float if submerged or inundated by water; and
2. tank openings not provided with a liquid tight seal, i.e. an atmospheric vent, are extended above the relevant flood height level.

**AO4.2**  
The lowest point of any storage area for packages > 2500 L or kg is higher than any relevant flood height level identified in an LGA flood hazard area. Alternatively, package stores are provided with impervious bund walls or racking systems higher than the relevant flood height level.
### Contaminated land

| **PO5** | Development is located and designed to ensure that users and nearby sensitive land uses are not exposed to unacceptable levels of contaminants. |
| **AO5.1** | Development is located where soils are not contaminated by pollutants which represent a health or safety risk to users, or contaminated soils subject to a development are remediated prior to plan sealing, operational works permit, or issuing of building works permit. |
1. Technical resources

Abandoned mines
- Historic information relating to abandoned mines is held by the Department of Natural Resources and Mines (DNRM). Information about specific historic mining sites can be obtained from the Abandoned Mines unit abandonedmines@dnrm.qld.gov.au or by contacting 13QGOV (13 74 68).

Contaminated land
- Queensland Auditor Handbook for Contaminated Land—Department of Environment and Heritage Protection
- Environmental Management and Contaminated Land Register search form—Department of Environment and Heritage Protection

Hazardous chemicals
- Model Planning Scheme Development Code for Hazardous Industries and Chemicals—Department of Justice and Attorney-General

Industrial and sensitive land uses
- Noxious and offensive odour impact assessment—Department of Environment and Heritage Protection

Major sport, recreation and entertainment facilities
- Planning for shooting and motor sport facilities fact sheet—Department of National Parks, Sport and Racing

2. Mapping information

Online mapping
- The SPP Interactive Mapping System provides the development assessment maps in relation to management areas as referred to within this guideline—Department of Infrastructure, Local Government and Planning.