# Assessment of small-scale marinas and boating facilities

## Introduction

This guideline will assist a relevant authority (as defined by the *Development Act 1993*) undertake an environmental assessment of proposals for small scale marinas and boating facilities (designed or used to provide moorings or dry storage for fewer than 50 vessels at any one time) outside of a River Murray Protection Area under the *River Murray Act 2003*.

The information in this guideline is in lieu of the advice that was given by the Environment Protection Authority in response to referred development applications prior to removal of the activity from Schedule 21 of the *Development Regulations 2008*.

Where a proposed development falls within the definition of marina and boating facilities set out in Schedules 21 and 22 of the *Development Regulations 2008*, the proposal must be referred to the Environment Protection Authority under Schedules 8(2)(10)(b) and 8(2)(11), respectively, of the same *Regulations*.

There may be activities such as surface coating, maritime construction works, or dredging that are associated with a marina and which may require referral to the Environment Protection Authority under Schedules 10a, 10b or 11 of the *Development Regulations 2008*.

The information in this guideline does not remove any requirements to comply with the *Code of Practice for vessel and facility management (marine and inland waters)* (2008).

## Assessing environmental issues

The potential impacts of small scale marina and boating facilities are associated not only with vessel berthing and storage, but also with a range of activities that may be associated with such development, including use of vessels for overnight accommodation, recreational activities such as live-a-boards and jet skiing, refuelling, workshops (for repair, cleaning, fibreglassing, abrasive blasting, painting), toilets and ablution blocks, car parking and licensed premises.

Further information can be found in the *Code of Practice for vessel and facility management (marine and inland waters)* (2008) and in Australian Standard AS 3962-2001 *Guidelines for design of marinas.*

**Air quality and noise**

Air and noise issues associated with marina and boating facilities may include from:

- fuel and exhaust odours
- abrasive blasting
- volatile organic compounds
- fumes and odours from fibreglassing
- toxic metals from surface-coating, spray painting and powder coating

- noise impacts from the movement, repair and maintenance of vessels, waste water pump-out, delivery vehicles, waste removal and other vehicles. Noise associated with the use of a vessel (eg use of on-board generators, horns, compressors and pumps, and recreational activities) is not addressed in this guideline as it is not development.

The EPA's *Guidelines for separation distances* (2007) recommend separation distances between developments that may result in noise, odour, or polluting air emissions, and sensitive land uses. A separation distance of 100m is recommended for marina and boating facilities for fewer than 5 vessels and 200m for facilities with between 5 and 50 vessels. A separation distance of 300m is recommended where works for the repair or maintenance of vessels with the capacity to handle fewer than five vessels or vessels less than 12m in length.

It is particularly important to note that ancillary activities that form part of the marina and boating facility development may have a greater separation distance requirement (e.g. surface coating).

If the proposed development is within the recommended separation distance the applicant should demonstrate that a lesser distance would be appropriate. How this can be demonstrated will depend on how the activity is to be undertaken. The *Guidelines for separation distances* (2007) contains criteria in section '5 Amendments to Separation Distances' that should be addressed when a site-specific variation from the recommended separation distance is being sought. However, some of the criteria may be overly complicated for low risk activities, and it may not be necessary for them to be addressed. For example, it may be sufficient for a dust management plan to be prepared rather than air quality modelling being undertaken.

The applicant will need to demonstrate that relevant indicative noise levels specified in Clause 5 of the *Environment Protection (Noise) Policy 2007* are not exceeded at any nearby sensitive land uses, both during the day and at night. This could be achieved by providing an acoustic report prepared by a suitably qualified and experienced acoustics engineer which demonstrates that noise meets the relevant noise levels, or provides details of what is required to ensure noise levels meet the relevant noise criteria.

**Landfill sites**

When considering a site for a marina and boating facility consideration needs to be given to the presence of any historic or currently operational landfills.

There are a range of inherent risks associated with landfills including adverse impact on the environment and human health due to odour, litter, vermin, dust, leachate, and landfill gas.

The EPA guideline, *Environmental management of landfill facilities (municipal solid waste and commercial and industrial general waste)* (2007), recommends a minimum separation distance of 500m between development and a landfill boundary, including from historic, currently operational and future designated landfill areas, not just the active tipping face. The buffer should be maintained for the life of the landfill[1]. Maintaining a 500m separation distance will reduce the likelihood of impacts from the landfill, including the accumulation of landfill gas in structures.

A proposed marina and boating facility within 500m of a landfill should proceed only on the basis of a landfill risk assessment undertaken by a site contamination consultant or a site contamination auditor. Any development within the buffer should be assessed and determined as suitable and compatible. The EPA Information Sheet, *Landfill gas and development near landfills – advice for planning authorities and developers* (2012) contains further information.

[1] The life of the landfill includes the period after closure and capping, and continues for as long as the landfill has the potential to create off site impacts to the environment (particularly due to landfill gas emissions or leaching to groundwater), which may be decades after the landfill has closed.

**Site contamination**

The role of the planning system in relation to site contamination is to ensure the ongoing protection and sustainable management of our environment so that communities are protected and can enjoy a clean environment. Addressing site contamination through the planning system can ensure, as far as is practically possible, that land is not developed for a more sensitive use unless/until site contamination risks have been considered and it is ensured that the land is suitable for the proposed use.

Site contamination is addressed in the planning system via a risk-management approach which allows for progressive certainty to be delivered within the lowest prudent cost and time parameters. The *Framework for managing site contamination through the South Australian Planning System* describes the staged approach for addressing site contamination through the planning system to ensure that land that is being developed for a more sensitive uses does not move from one stage in the development process to the next without clear measures being in place to ensure that site contamination either:

- has been appropriately addressed; or
- will be appropriately addressed at or before occupation of development.

The *Framework for managing site contamination through the South Australian Planning System* should be consulted to determine the process for assessing site contamination.

**Waste management**

Waste likely to be generated includes fish wastes, general litter, oils and lubricants, solvents and cleaning products, paint, tyres and batteries.

The development should include:

- provision for implementation of the waste management hierarchy (avoidance, minimisation, reuse, recycling, recovery, treatment, disposal) as identified in the *Environment Protection (Waste to Resources) Policy 2010*.
- dedicated covered areas for all non-toxic solid waste materials
- dedicated covered and bunded areas for all toxic waste materials
    - liquid wastes must be contained and / or treated before transport off-site by an EPA-licensed transporter
    - solid wastes must be removed from the site regularly by an appropriately EPA-licensed transporter.

    The EPA guideline, *Bunding and spill management* (2012), contains further information on design, capacity, operation and maintenance of bunds

These dedicated areas for waste may take the form of a waste transfer (reception) station, which is designed to temporarily store wastes such as oils, fish waste, oil absorbent materials and garbage in an environmentally responsible manner.

**Wastewater management**

Wastewater at marinas and boating facilities is most likely to come from discharge from vessels (blackwater, grey water and bilge water), contaminated stormwater and other wastewater and waste discharges from ongoing activities (refuelling, cleaning and repair of vessels) at the site.

The *Water Industry Act 2012* prohibits the discharge of certain substances into the sewerage system and establishes a requirement for industries to have approval to discharge certain substances to sewer. Where land-based sewage or wastewater collection systems do not exist or cannot be utilised then the development must include provision for waste water holding tanks and for the regular removal of the stored waste water by an EPA-licensed transporter.

Where on-site wastewater treatment facilities are proposed they should be located above high river level to ensure they are not flooded.

**Water quality**

Pollutants generated in association with marina and boating facilities are likely to include wastewater, toxic paint chips, paint residues, solid and liquid wastes containing heavy metals, nutrients, acid, oil, and hydrocarbons, fish wastes, and general litter.

Under the *Environment Protection (Water Quality) Policy 2003* contaminated stormwater is defined as 'wastewater' and should be managed appropriately.

Design of the marina or boating facility is critical to minimising the potential to contaminate stormwater.

*Vessel maintenance and repair facilities*

Vessel maintenance, cleaning, and repair works should only be carried out in a designated maintenance facility that is, where practicable and economically viable, roofed and bunded. Storage of vessels awaiting maintenance should be on a hard surfaced, bunded area. Oils, grease, lubricants, engine coolants, solvents, detergents and other pollutants used in repair and maintenance should be stored in roofed and bunded structure.

*Refuelling facilities*

Refuelling should only take place at a dedicated facility that is bunded and preferably located under a covered structure that extends beyond the bunded area by 1m for each 3m in height. The fuel storage tanker delivery standing area should be located within the covered area, and vessels should not be refuelled outside of the drainage area of the designated refuelling area.

*Above ground petroleum storage systems*

If petroleum products are to be stored in above ground storage tanks then those storage tanks need to be appropriately bunded and, where practicable and economically viable, roofed. Any underground pipework associated with above ground storage tanks should meet the requirements for underground petroleum storage systems.

*Underground petroleum storage systems*

Leakage from underground petroleum storage systems (UPSS) is a significant issue that can have impacts on soil and groundwater and cause site contamination, as well as safety implications.

To prevent leaks the underground petroleum storage systems (including tanks and piping) should be designed and installed to meet the requirements of Australian Standard AS 4897-2008, *The design, installation and operation of underground petroleum storage systems*. AS 4897-2008 describes equipment requirements to ensure tanks and piping are non-corrodible, requirements for cathodic protection where steel tanks and piping are proposed, and requirements for secondary containment for tanks and piping where they are proposed.

AS 4897-2008 also describes requirements for leak monitoring systems in order to detect leaks from any portion of the tank or piping and include requirements for systems such as automatic tank gauging, statistical inventory analysis, interstitial monitoring, link leak detection for pressure piping, and groundwater monitoring.

Other relevant Australian Standards include:

- AS 1940-2004 *The storage and handling of flammable and combustible liquids*
- AS 1692-2006 *Steel tanks for flammable and combustible liquids*
- AS 4977-2008 *Petroleum products - pipeline, road tanker compartment and underground tank identification*
- AS 4976–2008 *Removal and disposal of underground petroleum storage tanks*.

*Water sensitive urban design*

Water sensitive urban design is an approach to urban planning and design that seeks to integrate the management of the total water cycle to minimise the impacts of development, protect water quality, make more efficient use of water, reduce the cost of water infrastructure, and address flooding.

Further information on water sensitive urban design can be found at:

https://www.sa.gov.au/topics/housing-property-and-land/building-and-development/land-supply-and-planning-system/water-sensitive-urban-design
http://www.watersensitivesa.com
http://www.environment.sa.gov.au/files/sharedassets/public/water/water-sensitive-urban-design-policy-gen.pdf.

**Construction management**

Construction activities undertaken as part of a development can detrimentally affect the environment and community health. Air emissions, noise, site contamination, stormwater, and waste need to be managed to prevent impacts on nearby land uses and the natural environment.

The relevant authority may require a construction environmental management plan from the proponent. A construction environmental management plan describes how activities undertaken during the construction phase of development will be managed to avoid or mitigate negative environmental impacts on site and how the environmental management requirements will be implemented.

For further information on the impacts of construction activities and preparing a construction environmental management plan refer to the EPA's guideline, *Construction environmental management plans*.

## Disclaimer

This publication is a guide only and does not necessarily provide adequate information in relation to every situation. This publication seeks to explain your possible obligations in a helpful and accessible way. In doing so, however, some detail may not be captured. It is important, therefore, that you seek information from the EPA itself regarding your possible obligations and, where appropriate, that you seek your own legal advice.

## Further information

***Legislation***

Legislation may be viewed on the Internet at: <www.legislation.sa.gov.au>

Copies of legislation are available for purchase from:

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|---|---|---|
| Service SA Government Legislation Outlet | Telephone: | 13 23 24 |
| Adelaide Service SA Centre | Facsimile: | (08) 8204 1909 |
| 108 North Terrace | Website: | <shop.service.sa.gov.au> |
| Adelaide SA 5000 | | |

***For general information please contact:***

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