

**SUBMISSION TO THE LEGISLATIVE COUNCIL STANDING COMMITTEE ON
ENVIRONMENT & PUBLIC AFFAIRS - RE PETITION NO 64**

The definition of 'Canal Estate' can be found on pg 45 of the WAPC's [Development Control Policy 1.8 Canal Estates and Artificial Waterway Developments \(DCP 1.8\)](#).

Canal Estates are extremely risky developments; they have been banned in NSW, Victoria and the Gold Coast, because of their adverse environmental, social and economic impacts. Though many planners find it hard to believe in this day and age, there are two Canal Estates currently under consideration in WA, the Mangles Bay Marina (MBM) in Rockingham (Point Peron) and the Ocean Reef Marina (ORM) in Ocean Reef.

Problems with canal developments typically start to arise about 10 years after construction, long after the developers have been released from any contractual liabilities. The high costs of correcting problems and on-going maintenance falls unfairly on rate and taxpayers.

Following are some of the negative environmental, economic and social risks and impacts associated with Canal Estates;

- **Water quality issues due to inadequate flushing** is the most common and expensive problem with Canal Estates in Australia. The South West of WA is particularly unsuitable for canals because of our small tides. If canals do not flush within about 3 days the water begins to stagnate, especially in warm weather. Weed, algae, bacteria and other contaminants such as diesel from boats and effluent accumulate, causing unpleasant odours and discoloured water. See the ABC article "Counting the costs of building canals". The US EPA requires canal developments to flush completely within 3 days, this is also the recommendation of the WAPC (DCP 1.8 p 16). According to experts the design for the MBM will cause it to flush every 12 to 14 days and are warning that it will have the same problems as the disastrous Port Geographe development in Busselton, which the State Government has recently committed another \$28M to try and fix (see "Groyne Pain" <http://www.wswmag.com.au/emag/sept-oct-2013/index-20.html> and the AFR article, "Westpac felled by stinky town"). In addition, they are going to add a pumping system to recirculate and help flush the water.
 - **Algae blooms** in single entrance marinas
 - **Interruption of the long-shore sand movement** which can cause beach erosion and seaweed build up (as at Port Geographe)
 - **Siltation** of entrances and canals
 - **Deposition of wrack** (seaweed) at or near entrances
 - **Concrete cancer** of canal walls and foundations
 - **Loss of seagrass** (in Mangles Bay in particular) from dredging sediment plumes, boat diesel and pollution. Seagrass has a vital role; it stabilises the sand, helps prevent coastal erosion, helps protect from tidal waves during storms, filters and cleans the water, prevents algal blooms, provides food and habitat for many marine species and popular juvenile fish (Snapper, Herring, crabs), animals, birds and other sea plants.
 - **Infiltration of salt water** into nearby lakes, wetlands, ground water, and bores (a big threat to Lake Richmond near Point Peron)
 - **Collapse of Karst limestone** leading to pot holes
 - In the case of MBM and ORM, the **loss of Bush Forever**, which is habitat for wildlife (Carnaby's cockatoos, Graceful sun moth)
 - **Clearing of protective coastal vegetation** which provides important protection from the impacts of storms and erosion. After Super Storm Sandy, New York is spending \$350m to build a vegetation buffer around Manhattan (The Big U), to shield the city against hurricanes, floods and stormwater.
- Burden on Local Governments (LG)** - Though LGs have increasingly less say over the approval of these developments, they are burdened with much of the expense and responsibility. See the **Current role/responsibility in canal management for Local Governments'** in the DCP 1.8 p 41. In 2009 recommendations were made by the **State Council** to ban Canal Estates in WA, see the State Council [Agenda March 2012](#) (p25) and also see liability concerns for LGs at the bottom of p25 under "Policy Implications".
- **Negative impacts on marine animals** popular with tourists, such as dolphins and Little Penguins (see the recent WA 7.30 Report)
 - **Climate Change and Extreme Weather Events** - Climate scientists are warning that due to the effects of climate change and increases in Sea Level Rise (SLR), cyclones and other types of storms normally experienced along our WA coastline will become more intense and more frequent. They also predict that the tropical cyclones common in the NW of WA will come further south.



Canal Estates are built in low lying coastal and estuarine areas.
Also Note: the arrow on the northern side is showing areas of beach erosions and the arrow on the southern side is indicating seaweed accumulation.

This is an image from a real estate promotion, taken from the deck of a property in the Port Geographe development. This shows how low lying and vulnerable these properties are to extreme weather events coming in off the ocean.

According to Blake Dawson in 2011, “Western Australia has Coastal Climate Change (CCC) policies but they cover a limited scope of issues”. They also state that “residential canal estates are particularly vulnerable to SLR” and therefore “such permissive policies may act as barriers to implementing effective SLR risk management strategies.”

Storm surges from a big cyclone would cause serious damage to coastal developments. They can push up rivers, into estuaries and harbours causing damage for many kilometres inland. See the Perth Now article, “**Would Perth Cope with a 100-Year Flood**” and the West Australian article, “**Perth at risk of cyclone flood**”, with this comment, “if Perth was affected by another cyclone that coincided with unusually high tides and forecast SLRs upwards of 50cm, the city could be faced with a “wall of water effectively as high as a tsunami”.



The damage caused by a cyclone’s storm surge can be far more extensive and widespread than the damage from its wind and rain.

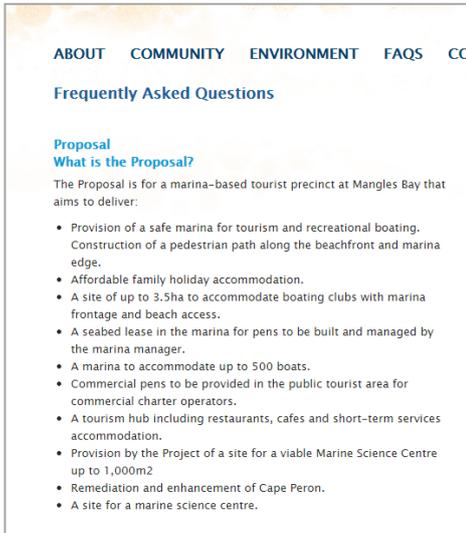
This diagram is of a computer simulation showing a storm surge from Super Storm Sandy pushing into the harbour. Big storm surges can be very high and travel inland and up rivers and waterways for many kilometres.

▪ **Insurance** for coastal properties, especially in Canal Estates is a subject of growing concern. See the recently released report by the **Climate Institute and Choice – “Buyer Beware”**. Planning authorities may ignore climate warnings, but the insurance industry takes them very seriously and they have adapted their policies accordingly. Flooding caused by ‘inundation from the ocean’ is not covered in WA and ‘storm surge’ or ‘tidal surge’ is only covered by a few companies in certain circumstances. The wording can be ambiguous and policies can be cancelled or changed at any time. Premiums for high risk coastal developments could become prohibitively high or disappear completely after a big cyclone. An inquiry into the level of insurance protection currently provided for coastal and canal properties, in the event of a major cyclone, between Perth and Busselton, is urgently required. People may think their properties are protected, because they have flood, storm and tsunami cover. But, ‘flood’ is typically deemed to be caused by water rising due to rain, ‘storm’ relates to wind, rain and hail damage and a ‘tsunami’ must be caused by an earthquake.

In the event of a destructive storm in WA, **developers** would get off scot-free, because they strictly follow planning regulations set by the State Government and therefore act within the law. **The State Government** may not be too concerned about natural disasters as much of the expenses would be covered by the Commonwealth’s [National Commission of Audit – 10.9 Natural Disaster Relief?](#) **Insurance companies** would be hard hit, but as is always the case, many people would find they were not covered by insurance after the event. The big winners would be the **building and construction companies**, because they would go into over drive, charging premium rates to rebuild it all again. This would cause the cost of building industry labour and materials to rise, many would be left destitute requiring Government assistance, insurance premiums would rise or cover in high risk areas would disappear completely, property prices would be reduce and rates and taxes would also rise.

- **Privatisation and commercialisation of public land.** In the case of the MBM marina in particular, the development is not fitting with the traditional cultural and heritage values of the site, which has been for generations an affordable sea side location for family picnics, day trips, holidays and school camps. It should not be sold for exclusive housing precinct.
- **Opportunity cost of not creating a pristine eco-tourist park in Point Peron** (a Kings Park of the South), in a rapidly growing region.
- **Loss of public access**
- **Noise and dust** during construction and regular dredging
- **Possible odour issues** from stagnant water.
- **Sulphite Soil issues** are very common with canal developments
- **A depressing wasteland** during construction and before building of houses
- **Solastalgia** – the sense of anxiety, loss and sadness experienced by people when their local environment is destroyed.
- **Safety issues**, if dredging in Canal Estates is neglected or not carried out properly, it can result in boating accidents. As occurred in the Ocean Reef Marina (Perth’s busiest marina) in October this year. Dredging has not be properly managed.
- **Wind** - Perth is arguably the 3rd windiest cities in the world and the windiest point on the Perth metropolitan coastline is Ocean Reef. There is a wind station there. It might be a great place for yachts and a marina, but it is not a suitably protected location for a housing estate or entertainment precinct?

- The developers and proponents of the MBM and ORM developments appear to be promoting these developments as marinas and tourist precincts, when they are clearly canal housing estates?



This new "District Context Plan" above is the least informative plan the developers have posted so far on the Mangles Bay Marina home page (take 13/11/2014)

A screen shot of the Mangles Bay Marina website, from the Frequently Asked Questions page on the 10/11/14. Note: No mention of the residential component here? You have to look deeper to find it. It certainly is not immediately apparent to the general public, many of whom are under the impression that these proposals are public marina facilities on public land, not private Canal Estates?

An "Indicative" plan that appeared for a short while on the Mangles Bay Marina home page (screen shot 06/11/14). Yellow = Residential, orange = commercial, pink = marina/boat pens. Note the blur between the yellow and orange, this could be because they don't have investors for all of the exciting attractions they are offering? This plan has been removed in the last few days and replaced with a far less informative plan. This plan does not show the destructive channel through the shallow seagrass?

The ORM proposal - At a council meeting in May 2009, the Joondalup Council endorsed Concept Plan 7.1 to go out for public advertising, without proper costing. Concept Plan 7.1 had (predictably) strongly supported by residents and boating clubs. However, subsequently, due to the enormous cost of Concept Plan 7.1, Concept Plan 7.2 was endorsed, which has a somewhat smaller marina and a bigger residential component, but it has not been readvertised for public comment.

Conclusion

Canal Estates are environmentally destructive and extremely expensive to repair and maintain and these costs invariably fall on the State Government (Taxpayers) and Local Governments (Ratepayers).

Why should society have to give up highly valued, environmentally significant public land and then pay for the up keep and repair of these exclusive private canal housing developments, so wealthy boat owners can have private jetties and stables for their pleasure crafts right on their door steps? There is a shortage of boat pens in Perth and this must be addressed, but this is not an excuse to build Canal Estates on our public land.

It is inappropriate that State Government assume the long term risks and expenses of Canal Estates, while developers make their profits and disappear before problems begin.

I urge the Committee to thoroughly investigate the environmental, economic and social impacts of Canal Estates, before anymore are approved.

Yours Faithfully

Leisha Jack