

18 July 2014

Please quote: 465791 DL:lc

Dr Bill Freeland  
Northern Territory Environment Protection  
Authority  
GPO BOX 3675  
DARWIN NT 0801

Dear Dr Freeland

### **Draft Stormwater Strategy For The Darwin Harbour Region**

Subsequent to the 2<sup>nd</sup> Ordinary Council meeting of 15 July 2014 and further to the City of Darwin Officer level response to the Draft Stormwater Strategy for the Darwin Harbour Region dated 27 June 2014 (see enclosed), Council provides the following supplementary comments on the Draft Stormwater Strategy for the Darwin Harbour Region (the Draft Strategy):

#### *Gross Pollutant and Other Pollutant Traps*

The use of gross pollutant traps should be encouraged not only at the discharge points of stormwater drainage systems into the harbour, but also closer to the source. The use of other pollutant capture mechanisms (such as grease traps and devices to capture other pollutants harmful to the environment) on-site should be regulated through planning and other controls for a particular land use. This at-source control will further reduce the likelihood of pollutants entering downstream stormwater drainage systems and eventually the harbour.

#### *Impacts from Small Business Irregularities*

Subsequent to the planning approval process, particular businesses may commence in a development site which generate pollutants as part of their operations on-site. Some form of mechanism needs to be developed, beyond pure planning controls, to deal with this. These impacts should be considered in the Stormwater Strategy for the Darwin Harbour Region.

#### *Impacts of Travellers Utilising Public Space*

There is an increasing tendency for travellers within the catchment areas to the Darwin Harbour Region to utilise public space for accommodation and other uses

that may generate pollutants that could enter Darwin Harbour. These impacts should be considered in the Stormwater Strategy for the Darwin Harbour Region.

*Integrated Approach to Compliance*

An integrated approach to compliance, involving multiple entities, should be implemented as part of the Stormwater Strategy for the Darwin Harbour Region.

*Stormwater Management Examples in the Tropics*

The Stormwater Strategy for the Darwin Harbour Region includes examples of stormwater management practices in non-tropical environments. Examples of successful stormwater management practices in tropical environments should be included.

*Time frame for implementation*

A time frame should be provided in the Stormwater Strategy for the Darwin Harbour Region for the development of an active program to monitor and manager stormwater quality within the Darwin Harbour Region. Council considers that a time frame of three (3) years should be sufficient to achieve this.

Council has now endorsed the attached City of Darwin Officer level response to the Draft Stormwater Strategy for the Darwin Harbour Region dated 27 June 2014 forwarded to your office. With the additional comments above the City of Darwin submission is no longer required to be confidential. Thanks again for the opportunity to provide comment on the Draft Stormwater Strategy for the Darwin Harbour Region.

If you have any further queries please contact Drosso Lelekis on 8930 0414 or [darwin@darwin.nt.gov.au](mailto:darwin@darwin.nt.gov.au) .

Yours sincerely



**DROSSOS LELEKIS**  
**MANAGER DESIGN, PLANNING PROJECTS**

Encl.

Correspondence And Submission Form



27 June 2014

Please quote: 465791 DL:lc

Dr Bill Freeland  
Northern Territory  
Environment Protection Authority  
GPO Box 3675  
DARWIN NT 0801

Dear Dr Freeland

### **Draft Stormwater Strategy for the Darwin Harbour Region**

Thank you for the opportunity to comment on the Draft Stormwater Strategy for the Darwin Harbour Region (Draft Strategy).

This response is provided at City of Darwin Officer level and will be presented to the Ordinary Council Meeting of 15 July 2014 for Council's endorsement. Pending endorsement by Council, comments contained herein and within the attached submission form shall remain confidential. You will be notified if any changes are needed following the above mentioned Council Meeting, and we would expect that comments will then be publically available.

Concise comments in response to the Draft Strategy are provided in the Submission Form attached and these comments are expanded upon within this correspondence. The overall response is the sum of the comments provided below and those provided in the attachment to this correspondence.

The City of Darwin supports the development of a stormwater strategy for the Darwin Harbour region and the *Objectives* outlined in the Draft Strategy. Some comments regarding particular areas of the Draft Strategy are given below.

#### **2. Management Issues**

The following statement is made under this section:

*"The water quality of Darwin harbour is regarded as being good in most places (i.e. a "healthy aquatic ecosystem"). This determination is based on long term monitoring of nutrients, dissolved oxygen, acidity-alkalinity, turbidity, and chlorophyll." It is then added that "There are no comparable data on metals,*

.../2

*petroleum chemicals or other toxic chemicals (toxicants).*" The water quality is even described as "pristine" within the Draft Strategy document. How can such a statements be made on water quality within Darwin harbour, if no such data on toxicants is available for assessment?

There is a heavy emphasis on stormwater discharges from Darwin's urban environments, including the Darwin CBD when compared with rural areas. What about other land uses, such as industrial, both within Darwin Harbour itself and the various industrial areas within the Harbour catchments?

It is not only important to control pollutants from sources such as building sites, stormwater discharges, dumping, parks, homes, golf courses and roads, but more emphasis should also be placed the control of pollutants from industrial sites, both within Darwin Harbour itself and the various industrial areas within the Harbour catchments. Management improvements should also be developed for these industrial land uses, which are considered to pose a significant risk to the health of Darwin Harbour if not managed correctly.

Recommendation:

- Greater consideration to be given to the type and nature of pollutant as well as the source;
- Greater consideration to be given to the size of the catchment.
- 4. *Management Actions*

The City of Darwin can only manage stormwater quality from/within its own road reserves, parks and other property owned, not from private property, where it has no jurisdiction. Planning controls (administered and controlled by the Northern Territory Government) should be put in place to ensure that pollutants on private property are adequately addressed and contained on-site, prior to the discharge finding its way into Council's drainage networks. The same should apply for any private property discharging to the drainage networks of other Authorities.

Consideration should be given to including stormwater/washdown water quality controls on privately owned land at the source in the Northern Territory Planning Scheme, rather than try and treat the problem after these pollutants have already entered to the drainage networks.

The management actions should be developed further to address the industrial land uses both in the harbour itself (e.g. East Arm port loading, unloading, storage, INPEX, shipping, others), that may contribute significantly to pollution of Darwin



harbour. In the case of the land uses within the harbour itself, pollutants are directly discharged into the harbour, not conveyed by stormwater drains.

Recommendation:

- Remedy of regulatory framework may require more than just a review of the WMPC (Waste Management and Pollution Control) Act;
- Introduce planning controls to address discharge from private properties;
- Improve management actions to address industrial land use in the catchment.

- *Appendix A - 2The Vulnerability of Darwin harbour to Future Pollution*

Recommendation: "future land uses, including industrial, commercial or residential land use within the harbour stormwater drainage catchments" should be added to the primary factors that affect future water pollution within Darwin harbour.

- *2.3 Sources of Stormwater Pollutants*

Table 2: Potential Stormwater Pollutants and Their Sources does not adequately consider the impacts of industrial uses (including operations at the East Arm wharf) both within the harbour itself and within its catchment areas.

Recommendation:

- Industrial sources of pollutant to be included in Table 2

- *2.4 Pollutant Input to Darwin Harbour*

There is an over emphasis on pollutant input from the Darwin CBD. More emphasis on pollutants generated by industrial land uses both within the harbour itself and within its drainage catchments should be given in this section. Although there is no doubt greater urbanisation can increase stormwater flows, the quality of those stormwater flows is critical and industrial land use (which is not typical for the Darwin CBD) has the potential to greatly influence the quality of stormwater flows. The direct link between population growth and pollution of the harbour is overly simplified. Strategies for urban development can minimise impacts on stormwater runoff. For example, increasing residential intensity of the Darwin CBD is unlikely to have as a great an impact as new "greenfield" developments.

Recommendation:

- Greater consideration of industrial pollutant input;
- Develop greater understanding of best practice urban development strategies.
- *3.2.2 Discharges Directly to Stormwater*

The statement "...there are no effective ways to prevent purposeful, negligent or incidental discharges to stormwater drains", contradicts the statement that the local authority, as the owner of the stormwater drains has potentially committed an offence under the Water Act. This would be disputed in the case of Council, as Council has no control over pollution at point sources on privately owned land.

Again, the Darwin CBD is identified as an area generating "high levels of pollutants". It is considered that industrial land use also significantly contributes to pollution within Darwin Harbour.

In any case, the City of Darwin requires in some instances that private developers of residential subdivisions install gross pollutant traps (GPT's) or other appropriate treatment control to capture these pollutants prior to them entering downstream stormwater drainage systems. Furthermore, GPT's have been installed by the City of Darwin in some locations and are maintained by Council at CBD stormwater drains discharging directly into Darwin harbour.

Recommendation:

- Pursue at-source control of pollutants.
- *3.3.2 Streets and Roads*

The City of Darwin supports and implements measures such as sediment control and water sensitive urban design to control the quality of stormwater flows within its road and open space network.

Recommendation:

- Support and promote organisations that implement sediment control measures.
- *3.3.3 Preservation of Riparian Ecosystems*

Council supports retaining vegetation in natural drainage systems and natural wetlands and acknowledges their importance in retaining suspended sediments. At the same time, it considers the maintenance of these areas and also the prevention of mosquito breeding as important elements in management regimes for these areas.

Recommendation:

- Vegetation should be maintained in natural drainage systems;
- Vegetation should be managed to prevent mosquito breeding habitats.
- *4 Conclusions on Stormwater Management for Darwin Harbour*

More emphasis should be placed on private land holders and businesses to control their levels of pollution by way of statutory planning controls or other regulations and penalties, rather than holding the authorities that have care and control of the drainage systems downstream, which eventually discharge these pollutants into Darwin harbour.

It should be acknowledged that authorities such as the City of Darwin, have no control over potential pollution generating practices on privately owned land, which eventually discharge into Darwin harbour via its stormwater drainage networks.

Recommendation:

- Pursue at-source control of pollutants

**Minor comments regarding style:**

- *Figure 1. The Darwin Harbour Region* does not reflect the true local government areas;
- There is a lack of referencing in the document, particularly noticeable in the Appendix section. While the Draft Strategy has an important role in community information there is also a requirement for technical rigour.  
Recommendation: Future versions of the Stormwater Strategy should apply appropriate technical referencing practices.

**In conclusion**

The City of Darwin supports the development of a stormwater strategy for the Darwin Harbour region and provides the initial comment contained within this correspondence and the Submission Form attached.



The City of Darwin acknowledges the importance of maintaining Darwin harbour as a valuable asset to the community.

If you have any further queries in relation to our submission please feel free to contact me on 8930 0414 or [darwin@darwin.nt.gov.au](mailto:darwin@darwin.nt.gov.au).

Yours sincerely



**DROSSO LELEKIS**  
**ACTING GENERAL MANAGER INFRASTRUCTURE**

Encl. submission form



**Submission Form for Comments and Feedback**  
**NT EPA Draft Stormwater Strategy for the Darwin Harbour Region**

*Submissions close: Friday 20 June 2014, 5pm*

<b>Name:</b>	City of Darwin	<b>Email:</b>	Darwin@darwin.nt.gov.au
<b>Organisation (if applicable):</b>	City of Darwin	<b>Telephone:</b>	89300300
<b>Address:</b>	GPO Box 84 Darwin NT 0801		
<p>Your comments will be publicly available.</p> <p>Mark the box here <input checked="" type="checkbox"/> if you do not want your comments to be made publicly available.</p> <p>Mark the box here <input type="checkbox"/> if you do not want your identity to be made publicly available.</p>			

Guideline Name	Section / Page of Draft Guideline	Comment
Draft Stormwater Strategy for the Darwin Harbour Region	2. Management Issues	<p>A statement is made in this section saying that the water quality of the Darwin Harbour is regarded as being good in most places, even though there has been no monitoring or data on metals, petroleum chemicals or "toxicants".</p> <p>There is a heavy emphasis on stormwater discharge from Darwin's urban environments. Other lands uses such as industrial would also be significant.</p>
	4. Management Actions	<p>The City of Darwin can only manage the quality of stormwater discharges from land under its care and control.</p> <p>Introduce planning controls to address discharge from private properties.</p> <p>Manage actions should be developed further to address the industrial land uses.</p>
	2. The Vulnerability of Darwin Harbour to Future Pollution	<p>Future land uses should be added to the primary factors that affect future water pollution within the Darwin Harbour</p>

**Please complete the form and send it via one of the following by no later than Friday 20 June 2014, 5pm:**

**Email:** [NTEPA.Consult@nt.gov.au](mailto:NTEPA.Consult@nt.gov.au)

**Post:** NT EPA, GPO Box 3675, Darwin NT, 0801

**Privacy:** Your personal information will be used for the purpose of collecting and collating comments received on the NT EPA draft guidelines. The NT EPA is subject to the *Information Act* and its Regulations. Information will not be disclosed to a third party, unless required by law or otherwise stated.

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

Guideline Name	Section / Page of Draft Guideline	Comment
	2.3 Sources of Stormwater Pollutants	The Table 2 does not adequately consider the impacts of the industrial uses.
	2.4 Pollutant Input to Darwin Harbour	Greater emphasis should be placed on pollutants generated by industrial land use. Develop greater understanding of best practice urban development strategies.
	3.2.2 Discharges Directly to Stormwater	Contradictory statements in regards negligent and incidental discharges. Pursue at-source control of pollutants.
Draft Stormwater Strategy for the Darwin Harbour Region	3.3.2 Streets and Roads	The City of Darwin supports and implements measures such as sediment control and water sensitive urban design to control stormwater flows within its road and open space network.
	3.3.3 Presentation of Riparian	The City of Darwin supports retaining vegetation in natural drainage systems and wetlands. Vegetation should be managed to prevent mosquito breeding habitats.
	4 Conclusions on Stormwater Management for Darwin Harbour	More emphasis should be placed on private land holders and businesses to control their levels of pollution. Pursue at-source control of pollutants.

**General comments**

Figure 1 the Darwin Harbour Region does not reflect the true local government areas

There is a lack of referencing in the document, particularly noticeable in the Appendix section. While the Draft Strategy has an important role in community information there is also a requirement for technical rigor. Recommend that future versions of the Stormwater Strategy should apply appropriate technical referencing practices.