

## CLAISE BROOK CATCHMENT GROUP

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Tony Morgan  
Chief Executive Officer  
East Perth Redevelopment Authority  
PO Box 6828  
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### **RE: EAST PERTH POWER STATION MASTERPLAN**

Dear Mr Morgan,

The Claise Brook Catchment Group would like to offer the following comments on the draft East Perth Power Station Masterplan.

We support the intention to deal with soil and groundwater contamination of the site and aim for best practice in the management of stormwater.

We consider that this site, when completed, could provide an opportunity for residents and visitors to interact with and learn about the natural riverine environment, through the restoration of the natural river foreshore, landscaping throughout with local plants, enhancement of the stormwater fed wetlands along the southern boundary of the site and supporting interpretive works. See further comments under "Landscaping and Public Spaces" below.

Specific Comments:

#### **4.3.7 Environmental (Soil and Groundwater contamination)**

The Masterplan notes significant soil and groundwater contamination across the site, including the possible presence of acid-sulphate soils, and states there is inadequate information regarding contamination underneath some existing structures.

To ensure water quality within the site is improved and any current or potential impacts on the Swan River are mitigated we consider that:

- Groundwater sampling and analysis across the site must be undertaken prior to further design work with the provision for ongoing monitoring including post-development,
- The site should be remediated and validated for suitability for its planned use consistent with Department of Environment requirements,
- Any soil contamination of the crown land on the river foreshore should be assessed, and if found, treated by removal concurrent with or prior to the development of the rest of the site with subsequent replacement of material with clean soil for revegetation,
- The potential for contamination of the existing stormwater fed wetlands along the southern boundary through intrusion of contaminated groundwater or surface water be investigated. If any problems are identified, the site drainage design should incorporate measures to reduce the risk of contamination from within the site, and
- The potential and extent for contaminated groundwater from under the site to reach the Swan River should be investigated, with consideration of the effect proposed stormwater infiltration measures such as vegetated swales will have on groundwater movement and water quality. Any negative impacts that are identified should be addressed during the design phase, prior to any construction.

### **12.4.2 Grey water**

We share the concerns expressed in the Draft Masterplan regarding reuse of greywater for landscape irrigation in this location which is so close to the Swan River. We suggest that grey water reuse should be restricted to uses that will not affect ground or surface water quality such as for toilet flushing, irrigating roof gardens (draining to sewer) or vehicle washing (connected to sewer).

### **11.4.2 Stormwater Reuse (p91 between sections 12.4.2 and 12.4.3)**

We support the principle of in-situ stormwater management, managing runoff and maximising infiltration through porous paving and vegetated swales.

We consider that reuse of stormwater runoff from buildings for a high level use such as toilet flushing, general cleaning or vehicle washdown areas should be strongly encouraged.

### **12.4.3 Alternative Non Potable Water Supply**

The proposal to use stormwater diverted from Walter's Brook via the Mt Lawley Main drain is in conflict with a concept plan, prepared by Syrinx Environmental for the Town of Vincent for nutrient stripping wetlands at Banks Reserve. We consider that the best use of the Walter's Brook stormwater is any system which will improve the quality of the water, provide habitat and allow reuse. While the Masterplan suggests that this water could be used to irrigate landscaping, the proposal for nutrient stripping wetlands at Walter's Brook would seem to have more advantages in also providing habitat and stripping nutrients and other pollutants from the water prior to discharge into the Swan River. Further discussions with the Town of Vincent and the catchment group could clarify this.

### **12.9.1 Existing Drainage – Impacts to the Swan River**

We support the intention to “minimize runoff and protect water quality” “consistent with the approaches to stormwater management as defined in the Draft Stormwater Management Manual for Western Australia” pp89-90.

We consider that this should include all drains on the site including the drainage outfall from the East Perth Railway Station and any other drains which outfall to the Swan River via the site. The redevelopment of this site may provide the only opportunity to reduce or remove contaminated flows into the Swan River from these drains, which are particularly of concern considering that the report acknowledges that “these drains may contain contaminated sediments”.

### **Groundwater and disturbance of Acid-Sulphate Soils**

We note the statement in the report that groundwater is extremely shallow at some locations on site and could be contaminated. Potential surface expressions of groundwater and appropriate management strategies must be identified prior to works commencing.

We are also concerned at the possible acidification of groundwater through exposure and subsequent oxidation of acid-sulphate soils through construction or excavation. We consider that it is very important that acid-sulphate soil issues are well managed in this location and acid or potential acid sulphate soils should preferably be left undisturbed. The risk of disturbing acid-sulphate soils must be investigated prior to the design and construction phases and an Acid Sulphate Soil Management Plan prepared consistent with requirements of the Department of Environment.

In particular, the proposed underground carpark could intercept acid-sulphate soils and groundwater. The potential impact of this must be investigated and appropriate management applied.

### **13.3 Landscaping and Public Spaces**

We support the enhancement of the existing stormwater drainage ponds on the southern boundary of the site adjacent to the freeway. Whatever the eventual use of the Power Station buildings, the wetlands together with the river foreshore will provide opportunity for visitors to experience the original vegetation systems of the area. Together with other interpretive works including

interpretive tours by Nyungar guides, there is an opportunity for city visitors to interact with and learn about the natural environment and Nyungar culture.

This would be enhanced if the landscaping throughout the site, apart from the heritage rose gardens, primarily utilised West Australian plants. The connection of the site to the river through water flows via the wetlands is a possible interpretive theme which could be reinforced through landscaping, artworks, signage and paving.

While deciduous trees may be necessary where winter sun and summer shade is required we consider that with Perth's relatively warm climate, shade all year round is often preferable, and that deciduous trees should only be used where absolutely necessary. Deciduous trees should not be planted where the leaves will wash into stormwater drains.

### **13.3.3 The River Foreshore**

Control of foreshore erosion and safeguarding existing mature trees which are being undercut is important. We support reinforcing existing tree planting with local species of trees and restoring the reeds along the river's edge.

Attention could be drawn to the layer of oyster shells which have been exposed by erosion providing both scientific and cultural explanations for their existence. (Former oyster beds and the scales of the Wagyl)

#### **Other issues**

##### **Litter**

With the development of retail, recreational and tourist facilities particularly any near the river, such as the proposed Ferry terminal, good litter management is essential to prevent litter blowing into the river.

##### **Clean Sites**

In addition we would suggest EPRA contact the Clean Sites Coordinator to consider requiring involvement of all builders in the Clean Sites program.

"Clean Site - Building a Better Environment" is a new education and training program being run by Keep Australia Beautiful WA and the Department of Environment. Clean Site aims to instruct the building industry in litter and waste management, resource recovery and recycling, and erosion and sediment control. The program works with local councils, industry associations, developers, builders, trades and suppliers to promote behavioural changes and achieve positive environmental outcomes.

Clean Site aims to achieve positive gains for the building industry such as:

- Improved cost savings
- Better resource utilisation
- Improved occupational health and safety on site
- Better community relationships

The program and associated materials was developed by Keep Australia Beautiful National. For more information telephone the Clean Sites Coordinator on 9278 0300.

Should you require any additional information please do not hesitate to contact our Coordinator, Sally Lake, on 9227 9514.

Yours truly

Warren McGrath  
Deputy-Chairperson