
Council Briefing

KWINANA FREEWAY FORESHORE MANAGEMENT PLAN 2014

1.0 PROJECT TITLE

Kwinana Freeway Foreshore Management Plan (KFFMP) 2014.

2.0 PROJECT DESCRIPTION

In 1993 the City of South Perth (City) adopted a management plan for the Western Foreshore in response to State Government's Swan River Management Strategy (1988) recommendations. This plan has been a good guiding document however it no longer reflected the key stakeholders' current and future needs in the area of foreshore asset management, climate change adaption, social and cultural needs and biodiversity conservation. Therefore in 2013 the City in partnership with key stakeholders engaged a consultant to review the Western Foreshore Management Plan (1993) and develop a new management plan for the Kwinana Freeway Foreshore (KFF) that addresses the City's and other key stakeholders' current and future issues related to foreshore erosion, conservation, recreation and protection of assets. Key stakeholders include the City, Main Roads WA (MRWA), the Swan River Trust (Trust) and the Department of Parks and Wildlife (DPaW).

In September 2014 the consultant completed development of the KFFMP. This plan covers management of the foreshore from the Mount Henry Bridge to the Narrows Bridge, outlines values of the foreshore, sets long term goals to address the issues that the western foreshore will be facing in the future, identifies and prioritises projects and works to be undertaken to meet the goals. The KFFMP also includes the City's adaptation response to anticipated climate change impacts on this foreshore.

3.0 PROJECT BACKGROUND

Construction of the Kwinana Freeway during the 1950's and 1970's involved the dredging of nearby riverbed to the west and deposit of a large amount of dredge spoil and other infill along the western foreshore. This infill has inevitably affected shoreline dynamics and asset protection along the Kwinana Freeway is a major ongoing concern. In order to protect the KFF from erosion, construction of shore stabilisation structures such as groynes, revetments and seawalls has taken place over a number of years.

Construction of the Kwinana Freeway has isolated this area from nearby suburbs and the transport network. Access is obtained either along the Principal Shared Path (PSP) running the full length of the foreshore, via six pedestrian access bridges across the Kwinana Freeway, or from the single lane vehicle overpass south of Canning Bridge.

Most of the KFF has been heavily modified, in-filled and revegetated due to the construction of the Kwinana Freeway. Subsequent revegetation has met with mixed success and many plant species introduced have been found to be unsuitable for the harsh riverside conditions, resulting in much of it being a semi-barren landscape. Nonetheless the KFF is valued for its cultural importance, river vistas and recreational opportunities and enjoyed by walkers, cyclists, Kwinana Freeway users and local residents. Despite the traffic noise levels, the KFF, particularly Como Beach, is still a popular family recreation area, and bird life is abundant along the length of the foreshore and on the river, especially at Milyu Nature Reserve.

Native vegetation on the KFF exists in the northern area of Milyu Nature Reserve, the area around Como Sea Scouts, the foreshore to the south of Cloister Reserve and the Mount Henry Spit. The Milyu Nature Reserve and Marine Park is one of three reserves which form the Swan Estuary Marine Park and associated Nature Reserves. Together they make up a valuable refuge for water birds, trans-equatorial migratory wader birds and other species. The foreshore south of Cloister Reserve and the Mount Henry Spit are included as part of the Bush Forever Site 227 due to their unique representation of remnant vegetation.

The KFF is also an important conduit for a range of services. Stormwater drainage from the Kwinana Freeway and from the drainage network in nearby suburbs is conveyed into the estuary through the foreshore reserve. Many of the drainage outlets were originally constructed within armoured rock groynes. Most of the groynes are in a very poor state of repair, however some still function assisting the stability of the foreshore.

The condition of the drainage pipes within the groynes and under the foreshore is considered to be poor. The condition of the pipes under the freeway is unknown. During the construction of the Kwinana Freeway bus transit lane (which was later converted into the Southern Suburbs Railway), emergency spill storage tanks and drainage separator units were installed at a number of points along the foreshore linking the Kwinana Freeway drainage with the City of South Perth drainage in most cases. Apart from these upgrades, very little work has been performed on the pipe drainage.

The KFF also contains the PSP linking the CBD from the south. In recent years, due to the growing popularity of cycling as an alternative transport, this route has taken on importance. In addition, major telecommunication fibre optic cables have been laid north south within the road reserve adjacent to the foreshore and the PSP.

In October 2003, MRWA wrote the City a letter containing drawings and photographs of the foreshore protection structures they considered the City and MRWA were responsible for

maintaining. In response, the City engaged MP Rogers & Associates to develop an Asset Management Plan (AMP) which would detail the condition and maintenance responsibility of coastal protection structures along all of the City's foreshores including the western foreshore. Later MRWA became an active partner in this project, which was completed in 2011.

In 2007, the City independently commenced a review of the 1993 Western Foreshore Management Plan; however this was abandoned at the pre-draft stage due to a lack of key documents being available to support the recommendations of that plan. These included:

- A clear understanding of foreshore processes;
- Knowledge of anticipated climate change impacts on the City's foreshores;
- Knowledge of the condition of the various coastal protection structures along the foreshore; and
- An agreement into the maintenance responsibility of the foreshore assets.

The City commenced meeting irregularly with MRWA in early 2010 to discuss western foreshore issues. This led to the formation of the Kwinana Freeway Foreshore Group (KFFG) which was later expanded to include representation from the Trust and the DEC. The KFFG has been meeting on a monthly basis to coordinate resources and programs to study and improve the management and maintenance of the Kwinana Freeway foreshore (western foreshore).

The KFFG has developed Memorandum of Understanding on asset maintenance responsibility and ownership and commissioned a number of studies and foreshore assessments to determine condition of the assets and specifics of the western foreshore movement.

The KFFG has identified anticipated climate change impacts as a significant threat to KFF infrastructure and other values and expressed its commitment to protect and enhance western foreshore.

4.0 PROJECT OBJECTIVES

The main objective of this project was to review the existing Western Foreshore Management Plan and develop the KFFMP to a standard that addresses the KFFG's needs.

The KFFMP meets the following objectives:

- Establishes consistency with the Swan River Trust *Guidelines for Developing Foreshore Management Plans in the Swan Canning River Park* (February, 2012) and the *Swan Estuary Marine Park and Adjacent Nature Reserves Management Plan 1999-2009*;

- Provides adequate interpretation of available sea level rise data and integrate current sea level rise modelling data into the report to reflect various sea level rise scenarios in order to offer appropriate climate change adaptation options;
- Assesses available sea level rise data (modelling) for the Swan and Canning Rivers system and identify gaps in data. Provides recommendations to the KFFG on proposed strategies to alleviate any gaps;
- Considers the City of South Perth's climate change risk assessment report;
- Outlines management options for erosion control and the impacts of climate change with a focus on KFF asset and infrastructure protection (e.g. Kwinana Freeway and the PSP) based on various sea level rise scenarios (e.g. low, medium and high);
- Provides recommendations for stormwater drainage asset management including functionality, and response to predicted sea level rise;
- Establishes foreshore restoration priority areas based on available mapping data;
- Offers specific landscape/rehabilitation treatments for the different sections of foreshore and remnant vegetation, in particular;
- Integrates the recommendations of the City's Foreshore Management Master plan - Section 18 Notice;
- Integrates the recommendations of the Management Plan for the Protection of Trans-equatorial Migratory Wader Birds adjacent to the Personal Watercraft Freestyle Area, South Perth in the revised management plan;
- Considers future projects such as the Canning Bridge development proposal;
- Makes recommendations for the ongoing management of newly included study areas such as Cloisters and Edgewater Reserves, Infill and Mount Henry Spit;
- Identify gaps for future foreshore management taking into consideration anticipated climate change impacts; and
- Addresses the key stakeholders' current and future issues related to foreshore erosion, conservation, recreation and infrastructure protection.