2.3 NOTIFICATION OF GRANTED LEAVE OF ABSENCE

Nil

3.0 DECLARATIONS OF INTERESTS:

3.1 DECLARATIONS OF FINANCIAL INTERESTS – LOCAL GOVERNMENT ACT SECTION 5.60A

Nil

3.2 DECLARATIONS OF PROXIMITY INTERESTS – LOCAL GOVERNMENT ACT SECTION 5.60B

Nil

3.3 DECLARATIONS OF IMPARTIALITY INTERESTS – ADMIN REGULATIONS SECTION 34C

Item 5.1 Tanker Jetty Condition Assessment - Cr Reynolds as he runs and operates a Tourism business

4.0 PUBLIC QUESTION TIME:

Nil

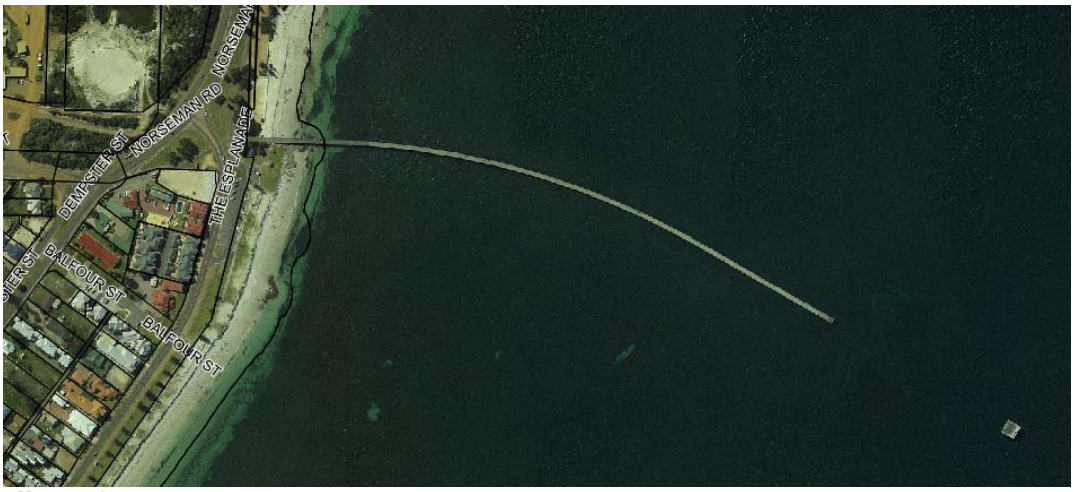
5.0 PURPOSE OF MEETING

Simon Dennis from BG&E presented the Tanker Jetty Assessment Report to Council and gave a thorough overview of its contents.

5.1 TANKER JETTY CONDITION ASSESSMENT

Applicant: Engineering Services

Location/Address:



File Ref: OAH.3.5

Reporting Officer/Position: Scott McKenzie - Manager Engineering Administration

Objective: This report recommends that Council accept that the Tanker Jetty has reached the end of its useful life, and that the Shire commence the process of replacing the current structure with a new Jetty.

Background: Construction of the Tanker Jetty commenced in 1934 and was completed in 1935. The jetty originally comprised 192 piers, but was reduced to 143 piers with an overall length of 656m (average width of 4.5m) following a large storm in 1988. A portion of the original jetty head remains, but is isolated from the main structure by a 210m gap. Various repairs to the jetty structure have been undertaken since 1987.

Usage of the Tanker jetty reduced soon after the construction of a new jetty located near the Taylor St area in 1976. The Tanker jetty has subsequently been used for recreational pursuits by pedestrians, and is no longer used for rail transportation or vessel berthing.

Responsibility for maintenance of the Jetty was transferred from the Western Australian State Government to the Shire of Esperance in 1990. At the time of accepting the Jetty, the Shire of Esperance executed a Jetty Licence Agreement with the State Government. In basic terms, in exchange for $150,000, the Shire of Esperance agreed to: "*at its own expense to put (sic) keep and maintain the Jetty Structures in a state of good and substantial repair order and condition at all times*".

Since this time the Shire has undertaken significant repair and refurbishment works, including installation of replacement timber piles, concrete encasement and protective wrapping to piles at the tidal zone, installation of steel cross-bracing to piers, reinforced concrete deck overlay and installation of new steel balustrading.

In order to effectively ascertain the structural integrity of the Tanker Jetty, Tender 15/08 was issued in May 2009. BG&E were awarded the tender and the visual condition inspection (above and below water) was conducted in November 2009. Once BG&E commenced the loading calculations, it was realised that a new Wave Study was required that targeted the Esperance Bay specifically.

To this end, ITQ 06/09 was issued in March 2010. The successful company was JFA & Associates. They undertook to prepare a digital model of the Esperance Bay and using data from wave buoys at various locations throughout Esperance Bay and the surrounding ocean have calculated the force transferred onto the Jetty with regard to various wave events, ranging from a 1 in 1 year event to a 1 in 200 year event.

Australian Standards dictate that a new Jetty should be designed to handle the forces generated by a 1 in 200 year wave event.

Structural analysis of the existing jetty structure indicates that it is suitable for ongoing pedestrian usage only in the short term, subject to remedial works to specific elements identified as deficient and control of crowding. The jetty capacity is not adequate to achieve compliance with the relevant Australian Standards for publicly accessible facilities which are subject to crowd loadings, and for this reason its suitability for ongoing access can only be considered short-term (up to 3 years) subject to future re-assessment of structural condition and risk of over-loading.

ACTION	DESIGN CRITERIA	JETTY CAPACITY	A.S. COMPLIANCE
Imposed Load	5kPa	3kPa	No
Wind	500 yr ARI	500 yr ARI	Yes
Wave	200 yr ARI	< 1 yr ARI	No
Earthquake	500 yr ARI	< min ARI	No
Robustness	2.5% Gravity Load	2.5% Gravity Load	Yes

Table 1: Compliance with Australian Design Standards from BG&E Report

The Tanker Jetty is subjected to two quite separate loads, being gravity loading and lateral loads. Gravity loading refers to the permanent load or self weight of the structure and the imposed live loads associated with the use of the structure (as in pedestrians, vehicles, etc). Lateral Loading is the horizontal forces associated with wind, waves, earthquakes, etc.

The attached report (pages 4-7) gives a detailed breakdown of the ability of the Tanker Jetty to handle both types of loading. Importantly, the report specifically states that the Tanker Jetty cannot handle vehicular loading of any type, has restrictions on the amount of pedestrian loading it can handle and "r*esults from the 3-D analysis indicate the jetty can resist the peak design wave occurring as part of a 1yr ARI storm event as far as Pier 124. Beyond Pier 124 the depth to seabed becomes too large such that the pile capacity is not adequate to achieve the level of safety required by Australian Standards*"

Attachments: Esperance Tanker Jetty Structural Analysis Report prepared by BG&E

Officer's Comment: It is important for Council to consider the information contained within the Structural Analysis Report Executive Summary, the important section to note is reproduced below:

> *Structural analysis of the existing jetty structure indicates that it is suitable for ongoing pedestrian usage in the short term, subject to remedial works to specific elements identified as deficient and control of crowding. The jetty capacity is not adequate to achieve compliance with the relevant Australian Standards for publicly accessible facilities which are subject to crowd loadings, and for this reason its suitability for ongoing access can only be considered short-term (up to 3 years) subject to future re-assessment of structural condition and risk of over-loading. The jetty decking does not have adequate capacity for vehicular traffic.*
> *The capacity of the jetty to withstand lateral loads arising from storms (wind and wave action) and earthquake events is very low. Analysis indicates that the jetty is not wholly capable of resisting the design wave for a 1 yr return period storm event with an appropriate safety margin. In addition the jetty is unable to meet the minimum earthquake design requirements in accordance with Australian Standards.*
>
> *To address the structural limitations of the jetty in the short-term it is recommended that access management strategies are implemented to control crowding during planned events eg. annual jetty birthday celebrations, and to prevent vehicular access onto the deck. It is also recommended that the jetty be closed to public access when storm warnings are present. Three localised areas of jetty structure require priority pile repairs, and regular inspection of these areas for progressive signs of distress is recommended until repairs can be undertaken.*
> *The limited lateral load resistance of the jetty structure is primarily due to inadequacies in the existing pier element sizes and connectivity, rather than the actual condition of the individual elements. The existing structure is not capable of achieving any significant improvement in the lateral load capacity from remedial works to isolated elements.*

The works required to upgrade the existing structure to achieve appropriate capacity for pedestrian crowd loads, wave action and earthquake are very extensive, requiring replacement of all halfcaps, piles and ironwork to the retained superstructure (corbels, stringers and decking). Given the large cost of such works and the limited working life of the retained superstructure elements, upgrade or refurbishment works are not considered cost-effective or practical. The most appropriate long-term approach to provision of a recreational jetty facility would be for reconstruction of the jetty in accordance with current Department of Transport and Australian Standard design criteria, in much the same manner as the works recently undertaken for the similarly historic Busselton Jetty.

To summarise the above, the Tanker Jetty, at 78 years of age, has reached the end of its useful life and it is not considered economically feasible to refurbish the structure, it is recommended by the Consultant and Staff that Council consider a full replacement with a new structure, designed to handle a 1 in 200 year storm event, in line with Australian Standards. A new jetty structure would be built to have a 50 year life span.

Council's Insurer (LGIS) have been provided with a copy of the Structural Analysis Report and have been requested to undertake a Risk Assessment of the Tanker Jetty and provide guidance to Council as to how the Shire of Esperance can minimise any risks to users of the Jetty. Council will be requested to adopt a policy on usage controls once the recommendation from LGIS is received.

BG&E were heavily involved in the replacement of the Busselton Jetty. BG&E have calculated an indicative cost to demolish and build a new jetty, based on the current design, the Esperance Tanker Jetty based on the costing for the Busselton Jetty, escalated for an Esperance regional loading and inflation.

If the Tanker Jetty Headland is constructed as part of the Esperance Foreshore Protection and Enhancement Project (EFPEP) then the first 80m of the jetty would no longer be required and the indicative cost to demolish the jetty and build a new jetty from Pier 30 to 143 is $14.6M. This equates to $2.3 million for demolition and $12.3 million for construction of a new jetty or based on the above scenario this is approximately $4,170/$m^2$.

Consultation will need to be undertaken with the community to discuss a number of issues including –

- How important is it to the community to have a jetty?
- What are the community expectations if a new jetty is to be constructed?
- How much will a new jetty cost (depending on community expectations)?
- What funding sources / options are available?
- How does the Shire manage the jetty and associated known risks until a new structure is built?

The EFPEP total cost estimates of approximately $45 million included an amount of $7 million to refurbish the existing jetty structure.

Manager Engineering Operations Comment: The Structural Analysis Report indicates that 6 piles require immediate replacement. In the past, Shire employees have replaced piles but this was when we were able to take a backhoe out on the jetty deck. As there is now no ability to take vehicles onto the Jetty deck the only safe way to carry out this operation would be to use a piling barge, which is a specialized piece of equipment and would have to sourced externally and possibly mobilised to Esperance from Perth.

Director Development Services Comment: The Tanker Jetty is a permanently listed site (register number 831) on the State Register of Heritage Places. Any works proposed on or to the Jetty are to be referred to the Office of Heritage for comment and approval.

The proposal to build a new jetty would need to be referred to the Office of Heritage. On the basis of demolition of the jetty being request consulted on the matter and they will be requested to provide the Shire with their advice (the Development Committee meets every fourth Tuesday of the month (except in December). In order to assist the Development Committee, the Shire should provide all necessary information to them in order for the Committee to gain a better understanding of the current condition of the jetty, the proposed new jetty and its design (if available) or the concept plan. A Heritage Impact Statement prepared by a heritage consultant must accompany the proposed works.

Consultation: LGIS
BG&E
Office of Heritage
Department of Transport
Minister for Transport
Friends of the Esperance Tanker Jetty

Strategic Implications: *Strategic Plan 2007-2027*
Heritage - Endeavour to preserve and protect heritage structures in the Shire of Esperance.
18. Support the investigation and implementation of strategies to assist in the preservation of the Tanker Jetty.
a) Build a reserve fund for Tanker Jetty Preservation and seek government funding assistance towards its refurbishment and maintenance.
b) Support options for the generations of funds for jetty preservation (e.g. businesses on the jetty, bequests).
c) Endeavour to raise community awareness and support of the need to undertake major preservation work in the near future.

Statutory Environment: See above comments from Director Development Services with regard to the Heritage Act and the State Register of Heritage Places.

Policy Implications: It is likely that the Risk Assessment (once complete) by LGIS will require a policy to be developed that limits the usage of the Tanker Jetty to minimise risk to users.

Environmental Considerations: The construction of a new Jetty may require a clearing permit as the sea grass is deemed to be natural vegetation.

Asset Management Implications The construction of a new Jetty will be a significant project that will have substantial impacts on future budgets.

It is recommended below that Staff commence lobbying the Western Australian and Australian Governments with a view to obtaining financial allocations.

The annualised cost of a new Jetty can be calculated as follows;

	Capital	**Annual**	**Comments**
	$12.33M		Not including Demolition of current Jetty
Interest (Economic Cost)		$ 98,640	8%
Depreciation (Ongoing Cost)		$246,600	Over 50 years
Maintenance (estimated)		$ 70,000	Based on Current Costs
Operational (Ongoing Cost)		$ 35,000	Based on Current Costs
Demolition		$ 45,420	$2,271,000 annualised over 50 years
		$495,660	

As a matter of interest, the 2010/12 Budget included an allocation of $70,000 for Structural Maintenance.

Financial Implications: BG&E were heavily involved in the replacement of the Busselton Jetty. BG&E have calculated an indicative cost to demolish and reconstruct the Esperance Tanker Jetty based on the costing of the recently renewed Busselton Jetty and escalated for regional loading and taking into account inflation.

If the Tanker Jetty Headland is constructed as part of the Esperance Foreshore Protection and Enhancement Project (EFPEP) then the first 80m of the jetty would no longer be required and the indicative cost to demolish the jetty and reconstruct from Pier 30 to 143 is $14.6M.

There are two Reserve Accounts that relate to the Tanker Jetty, balances as at 30 June 2011 are;

Tanker Jetty Reserve	$1,489,920
Tanker Jetty Donation Reserve	$28,186

The Tanker Jetty Reserve Account includes $1m that has been allocated to the Shire of Esperance by the Royalties for Regions programme through the Country Local Government Fund in the first year of the grants.

There has been approximately $626,000 of renewal and upgrade works undertaken on the jetty since 1996, while approximately $133,000 has been spent on operations since 2000. Traditionally over the last 5 years $70,000 has been allocated annually since 2006 and any funds not expended have been placed into reserve.

In terms of the structural assessment $134,285 has been expended on the Esperance tanker Jetty Structural Assessment and a further $85,215 was expended on the Tanker Jetty Wave Study.

Officer's Recommendation:

That Council;

1. **Receives the Esperance Tanker Jetty Structural Analysis Report as presented.**
2. **Accepts that the existing Tanker Jetty is now beyond its useful life and supports its complete replacement as a priority.**
3. **Requests the CEO undertake community consultation with regard to the replacement of the Tanker Jetty.**
4. **Requests the CEO prepare preliminary designs for a new jetty based on community consultation.**
5. **Requests the CEO to prepare a business case (including capital costs, whole of life costs, operational costs and renewal costs) for the development of a new jetty structure based on the agreed jetty design.**
6. **Requests the CEO commence lobbying the Western Australian and Australian Governments for funding to replace the Tanker Jetty.**
7. **Requests the CEO prepare and present to Council a policy on the use of, and access to the Tanker Jetty once the LGIS Risk Assessment report is received.**
8. **Requests the CEO seek expressions of interest from heritage consultants to prepare a Heritage Impact Statement for the proposed demolition of the Tanker Jetty and the replacement jetty.**
9. **Refer the proposal to demolish the Tanker Jetty and plans for a new jetty, together with a Heritage Impact Statement, to the Office of Heritage.**

Voting Requirements: Simple Majority.

The general consensus of members was that at this stage they would receive the report and Request that the CEO prepare and present to Council a policy on the use of, and access to the Tanker Jetty once the LGIS Risk Assessment report is received. The following motion was put to reflect this.

Moved: **Cr Rodgers**
Seconded: **Cr Starcevich**

SO177-1646
That Council;

1. **Receives the Esperance Tanker Jetty Structural Analysis Report as presented.**

2. **Requests the CEO prepare and present to Council a policy on the use of, and access to the Tanker Jetty once the LGIS Risk Assessment report is received.**

Amendment
Moved: **Cr Reynolds**
Seconded: **Cr Stewart**

That Council;

1. **Receives the Esperance Tanker Jetty Structural Analysis Report as presented.**

2. **Requests the CEO prepare and present to Council a policy on the use of, and access to the Tanker Jetty once the LGIS Risk Assessment report is received.**
3. **Requests the CEO seek expressions of interest from heritage consultants to prepare a Heritage Impact Statement for the proposed demolition of the Tanker Jetty and the replacement jetty.**

The amendment was put and lost

CARRIED
F2 - A4
(Against Crs Starcevich; Rodgers; Smith & Mickel)

The substantive motion was put and carried

CARRIED
F6 - A0

6.0 CLOSURE OF MEETING

The President closed the meeting at 4.40pm

These Minutes were confirmed at a meeting held on _____

Signed _____

Presiding Member at the meeting at which the Minutes were confirmed.

Dated_____