16. URGENT BUSINESS APPROVED BY DECISION

Item: 16.1

Replacement Jetty - Final Concept Design

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Author/s: Matthew Scott Chief Executive Officer

File Ref: D19/4446

Applicant: Internal

Location/Address: Esperance Tanker Jetty

Executive Summary
For Council to consider endorsing the Replacement Jetty Final Concept Design.

Recommendation in Brief
That Council endorse the Final Concept Design presented by H+H Architects and also endorse the Final Concept Design, and proceed to the Detail Design Stage of the project, incorporating the advice from the Heritage Council.

Background
The Shire engaged heritage architect H+H Architects to undertake the detailed design development for the replacement jetty. The project will ultimately produce a detailed design approved by the Heritage Council of WA ready for tendering.

The detailed design development of the replacement jetty has six stages to the project a summary of the stages is provided in the below info graphic.

- Stages one - Stakeholder Consultation - Complete
  - Stakeholder consultation was undertaken with the Jetty Replacement Working Group and Council on the 8th May 2018.
  - Consultation with the Heritage Council of WA took place on the 15th June 2018.

- Stage two – Review Previous Information – Complete
  - Previous information has been reviewed as well as information gathered during the stakeholder consultation
  - H+H Architects has provided a Summary of Key Issues for the project.

- Stage three - Develop Draft Concept – Complete
  - H+H Architects meet with the Jetty Replacement Working Group and Council on the 10th July 2018 to go through options for the Draft Concept.
  - H+H Architects have sort advice on the Draft Concept from the Heritage Council of WA on 10th August 2018.
  - A public comment period was opened for a period of 21 days closing the 21st September 2018.
  - An independent survey was undertaken with over 1,400 responses with over 80% support for the Draft Concept Design.
  - The Draft Concept Design was endorsed subject to advice by the Working Group and Council on the 18th and 23rd October 2018 respectfully.

- Stage four - Develop Final Concept – In Progress
o Advice was given to H+H Architects to be incorporated into Final Concept Design
o H+H Architects meet with the Jetty Replacement Working Group and Council on the 22nd January 2019 to present the Final Concept Design.
o H+H Architects have sort advice on the Final Concept Design from the Heritage Council of WA on 8th February 2019.

The Heritage Council has subsequently provided the Shire its advice on the Final Detail Design (Attached). This advice effectively states that the Heritage Council:
1. The current Final Concept Design appropriately interprets the history of the Tanker Jetty;
2. That the proposed replacement will mitigate the impact of demolition of the Tanker Jetty; and
3. Requests further information on the replacement jetty that will be available through the detailed design process.

For the project to now proceed to the Detailed Design Phase the Shire Council needs to endorse the Final Concept Design presented by H+H Architects.

On 22 February 2019, the Jetty Replacement Working Group considered the final concept design and the latest advice from Heritage Council WA and resolved the following:

That the Jetty Replacement Working Group:
1. Receive the advice from the Heritage Council of Western Australia regarding the Esperance Tanker Jetty, dated 20 February 2019;
2. Endorse the Replacement Jetty Final Concept Design Report; and
3. Recommend to the Shire Council to:
   a. Endorse the Replacement Jetty Final Concept Design Report;
b. Instruct H+H Architects to proceed to the detail design stage of the project; and

c. Instruct H+H Architects provide the further information requested by the Heritage Council of Western Australian as part of the detailed design stage.

Council is requested to now consider the recommendations from the Jetty Replacement Working Group.

Officer’s Comment

H+H Architects have now completed the Final Concept Design; incorporating the advice received from the Working Group and Council, based on the public feedback received. H+H Architects presented the Replacement Jetty Final Concept Design to the Working Group and Council on the 22nd January 2019. The Replacement Jetty Final Concept Design Report is included in attachment A.

H+H Architects as part of this stage of work has sort advice on the Final Concept Design from the Heritage Council of WA; advice is included in attachment B. The advice confirms the Replacement Jetty Concept Design meets the Heritage Council of WA requirements and they request further information to be provided in the detailed design stage.

Given the overwhelming positive feedback through the process to this stage, it is recommended Council endorse the Replacement Jetty Final Concept Design Report, Final Concept Design, and request H+H Architects to provide the requested information by the Heritage Council of Western Australian as part of the Detailed Design stage.

Consultation

Heritage Council of WA
H+H Architects
21 Days of Public Feedback
Survey Report
Jetty Replacement Working Group

Financial Implications

The Final Concept Design for the replacement jetty is based on the $6 million budget set by Council.

Asset Management Implications

Whole of life costs consideration have been taken in to account during in development of the Final Concept Design.

Statutory Implications

H+H Architects are working with the Heritage Council of Western Australia to meet the requirements of the ongoing Conservation Order on the Esperance Tanker Jetty.

Policy Implications

Nil

Strategic Implications

Strategic Community Plan 2017 - 2027
Built Environment
Services, infrastructure and public places that meet and adapt to community needs and changing priorities
Ensure services, infrastructure and public places are aligned to community needs now and in the future
Corporate Business Plan 2017/2018 – 2020/2021
B2.1 Plan for and Seek funding for Esperance Waterfront Stage 3 – New Esperance Jetty

Environmental Considerations
N/A

Attachments
A⇩ Replacement Jetty - Final Concept Design Report
B⇩ Heritage Council Advice - Final Concept Design

Jetty Replacement Working Group’s Recommendation

That Council:

1. Endorse the Replacement Jetty Final Concept Design Report;
2. Instruct H+H Architects to proceed to the detail design stage of the project; and
3. Instruct H+H Architects provide the further information requested by the Heritage Council of Western Australian as part of the detailed design stage.

Voting Requirement Simple Majority
REPLACEMENT JETTY
Shire of Esperance
Final Concept Design Report
January 2019
Project Scope

This project is focused on the detailed design of the Esperance Tanker Jetty replacement. The Design Brief was established by the Shire of Esperance based on the following parameters:

- The new jetty is to be located on the footprint or as near as possible to the current Tanker Jetty footprint
- Retain the current curve of the Tanker Jetty
- Longest possible jetty, with preferred length of 400m
- Retention of piles to demonstrate form and length of original Tanker Jetty
- Minimum width of 3.5m
- Includes a fish-cleaning facility
- Meets all relevant Australian Standards
- Approx Construction budget of $6M

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Summary of Key Issues

A review has been undertaken by H+H Architects of all the available information, as well as information personally gathered during preliminary stakeholder engagement sessions conducted in Exmouth on 8 March 2018. The intention of this review is to provide a synopsis of key issues affecting the project so that these can inform the Concept Design response and risk mitigations can be undertaken to manage any issues.

1.0 Heritage Issues

1.1 Statutory Protection of the "Old Tanker Jetty"
Summary: The Conservation Order issued by the Heritage Minister is required to be lifted before construction of a replacement jetty can begin and therefore it is a priority to meet the requirements stipulated by the Heritage Minister to allow the project to move forward.

1.2 Condition of the Old Tanker Jetty
Summary: Based on expert advice from Mariner Structural Engineers, it is not feasible to restore or reconstruct the Old Tanker Jetty, and moving forward, the priority should be on carefully salvaging the remaining heritage fabric so that it can be available for reuse in non-structural or interpretative applications in the new Replacement Jetty.

1.3 Retention of Cultural Heritage Values
Summary: One of the biggest challenges facing the design team for the Replacement Jetty is the ability to translate the valuable heritage qualities such as "character" of the Old jetty into a new Replacement Jetty, whilst retaining some of the meanings and associations the place holds so that it continues to be valued by current and future generations.

1.4 Heritage Brief}
Summary: Based on community feedback, Heritage Council requirements, and as a review of previous designs, the design should respond to the five-star quality of the Jetty fabric and interpret the 'stories' inherent in the Place. There are significant opportunities to retain the associations and meanings of the Old Tanker Jetty in the design of the Replacement Jetty.

1.5 Heritage Interpretation
Summary: Interpretation of the key themes should be inherent to the fabric of the Replacement Jetty, as well as being incorporated into its setting through signage, information devices, sculptural elements and creative installations. Heritage Council require the interpretation strategy to be clearly integrated within the concept design and this ensures that Burung Chippie principles are being addressed.

2.0 Funding Issues

2.1 Capital costs
Summary: The design features of the Replacement Jetty will have the greatest impact on the capital costs particularly length and width of the jetty, structural capacity, material selection, provision of services, compliance and decisions about safety, existing site conditions, design life, use of salvaged materials, retention of the original structural footprint and the structural expression of the new structure. With so many parameters impacting on the capital costs, the Shire of Exmouth will need to "cost plan" the project to ensure it stays on budget.

2.2 Ongoing maintenance costs
Summary: The ongoing maintenance costs will be impacted primarily by material selection, corrosion protection systems and the accessibility of components for monitoring and repairs.

2.3 Sources of income
Summary: Identifying sources of income for the upfront capital cost of the Replacement Jetty and ongoing maintenance costs is a priority for the Shire of Exmouth.

2.4 Economic benefits
Summary: The Replacement Jetty represents a significant opportunity to achieve economic and social benefits for the community of Exmouth, and to promote future growth and sustainability in outdoor recreation, tourism and business activities.

3.0 Community Buy-in

3.1 Community Consultation
Summary: The extensive community consultation has been incorporated into the Design Brief for the Replacement Jetty. Community buy-in is integral to the success of the project, and people need to feel that their views have been listened to and that the Replacement Jetty has been designed to suit their needs and preferences, otherwise they may feel left out in the process.

3.2 Impact of lobby groups
Summary: Lobby groups working against the Shire in the development of the Replacement Jetty have the potential to represent major roadblocks to progress and to prevent community consensus and buy-in by causing distrust and distrust.

3.3 Media
Summary: Communication strategies with the media should be pro-active and informative to ensure that key messages are being communicated and to demonstrate the Shire of Exmouth working with other agencies such as the Heritage Council of WA to achieve acceptable heritage outcomes for the Tanker Jetty site.

3.4 Political pressure
Summary: The Shire of Exmouth needs to demonstrate that they have taken support and "approval" of key agencies and bodies such as the Heritage Council of WA, Southern Ports, and the Shire of Exmouth for the Replacement Jetty option in order to attract political support for the project.

4.0 Shire Issues

4.1 Ownership & Responsibility
Summary: The Shire of Exmouth should clarify all ownership rights and responsibilities before constructing a Replacement Jetty to ensure relevant permissions are in place particularly if the new structure, its temporary plant or permanent interpretation devices, extend beyond the license area defined by Her 343.

4.2 Design risks (public safety, insurance)
Summary: The proposed Safety-in-Design Workshop will assist the Shire of Exmouth to identify and manage safety risks that might apply to public use of the Replacement Jetty, as well as OHS requirements for Shire staff and sub-contractors, and allow the Shire to consider insurance and indemnity obligations moving forward.

4.3 Existing demolition tender
Summary: The Shire of Exmouth may need to consider additional terms for the Demolition contract to ensure that heritage values can be retained and environmental values protected during the course of demolition.

4.4 Other approvals required
Summary: A detailed assessment of relevant statutory bodies will be undertaken by the project team to the design phase of the Replacement Jetty process to allow for management of approvals processes.

4.5 Liability vs. asset
Summary: The Jetty is considered an asset so long as it can continue to be used by the community. Without ongoing use, the structure is a liability.

4.6 Timeframe
Summary: The Jetty project is time sensitive and although there are many important milestones to achieve before construction of a Replacement Jetty can be achieved, delays have the potential to impact on community support for the project and limit funding opportunities.

4.7 Recurrent costs
Summary: The Shire of Exmouth needs to take account of recurrent costs associated with the Replacement Jetty and make appropriate plans to fund these costs.
5.0 Design Issues

5.1 Location
Summary: The Replacement Jetty will be located on or near the original footprint of the 1935 Jetty, provided the screws of piling between or alongside the existing piles can be resolved, and on the basis that the old jetty has been demolished and that only the structural footprint of the 1935 Jetty will remain.

5.2 Functionality
Summary: The functionality of the jetty should be confirmed to ensure the Replacement Jetty is designed to cater for specific uses.

5.3 Structural Design
Summary: The structural design will be informed by structural load requirements, material selection, construction methodology and options for corrosion protection systems.

5.4 Length, width, depth, height
Summary: The length, width and height of the Replacement Jetty will be informed by a number of factors including amenity, constructability and its relationship to adjoining ground levels and sea levels.

5.5 Compliance
Summary: Compliance with relevant codes and standards will dictate some of the design features, particularly the elements which contribute to public safety such as handrails and ladders.

5.6 Metocean Design
Summary: Metocean data such as wind loads, wave loads, currents and sea levels will inform aspects of the design, particularly with regard to deck heights and structural design of jetty bents.

5.7 Geotech Design
Summary: There are opportunities to consider different pile orientations and spacing depending on selected materials and structural expression, and the outcomes of the geotechnical investigations.

5.8 Services Design
Summary: Certain aspects of lighting design will be determined by compliance with standards, but there is opportunity to design lighting that connects with the foreshore development and interprets the original lighting scheme of the Old Trawler Jetty. Water services are feasible, but viability will be determined on the basis of the specific functional requirements of the jetty.
Detailed Discussion of Key Issues

A detailed discussion of each of the key issues has been prepared by HVA Architects with Q3D Engineers, as follows:

1.0 Heritage Issues

1.1 Statutory Protection of the “Old Tanker Jetty”

All places that are permanently entered on the State Register of Heritage Places are protected by the provisions of the Heritage Act 1977 (following repudial of the 1996 Heritage Act). The Objectives of the Act are, with due regard for the rights of property ownership:

- To promote understanding and appreciation of Western Australia’s cultural heritage;
- To recognise the importance of places of cultural heritage significance and their stories in understanding the course of Western Australia’s history;
- To provide for the identification and documentation of Western Australia’s places of cultural heritage significance; and
- To encourage and facilitate the conservation, continuing use, development and adaptive reuse of places of cultural heritage significance in ways that represent high standards of heritage conservation and are in harmony with cultural heritage values.

Tanker Jetty, Esperance was permanently entered on the State Register of Heritage Places on 26/09/2008 and has recognised cultural heritage value for the following reasons:

- The place is a rare and good representative example of a substantially intact timber jetty on the coast of Western Australia, as one of only four comparable structures remaining in Western Australia;
- It has aesthetic significance due to its considerable size, scale and construction. Its visibility from the town of Esperance and its strong presence in the seascape ensure its landmark status and contributes to the Esperance community’s sense of place;
- The place is valued by the community as it has been the site of commercial, social and recreational pursuits since its construction, and for its association with the period of economic growth in the region in the 1880s and the development of local industries since that time; and
- The place is significant for bringing employment to many workers in the vicinity during the period of economic depression in the 1930s, and is associated with the government’s efforts to employ destitute men in a variety of jobs during this time.

The Tanker Jetty, Esperance is currently specifically protected from demolition by a Conservation Order placed by the Minister for Environment; Heritage in December 2015 utilising Section 59 of the Heritage Act (1990). The conditions of the Conservation Order state that demolition is prohibited but does not apply to “routine maintenance or other works specified in the Heritage of Western Australia Regulations 1991 (WA), or the installation of fencing, barriers, floating booms or similar measures to ensure public safety”.

Section 3A of the Heritage Regulations identifies that the following works are excluded from the Conservation Order:

- Building maintenance that does not involve the removal of, or damage to, the existing fabric of the building or the use of new materials;
- Cleaning that is low pressure, non-abrasive and non-chemical;
- Gardening or landscape maintenance;
- Repairs, including replacing, mixing or deteriorated fabric with like for like fabric, that does not involve the removal of, or damage to, the significant fabric of the building;
- Replacement of utility services using existing routes or voids that does not involve the removal of, or damage to, the fabric of the building;
- Repainting of the surface of a building;
- Any excavation that does not affect the archaeological remains, for the purpose of exposing, inspecting, maintaining or replacing utility services;
- The erection or installation of temporary fencing;
- Temporary signage;
- Digging a new grave or the erection of a monument or grave marker.

Of these exclusions, only items a) and d) might specifically apply to the Tanker Jetty, Esperance, as they relate to repairs and maintenance, which aside from demolition, are the only other works likely to be undertaken at the place.

The Heritage Minister has specifically stated that the Conservation Order will not be lifted until “the Shire of Esperance develops a fully funded and detailed design for a jetty that is supported by the Heritage Council and that meets the needs of the local and wider Western Australian community.” (Statement by then Heritage Minister Albert Jacob MLA, Media Release, Dec 2016 and position reaffirmed by Minister David Templeman MLA, May 2018).

This statement clarifies any number of key aspects with regards to the current statutory protection, as follows:

- The fate of the Old Tanker Jetty is explicitly linked with the design of the New Replacement Jetty;
- The Shire of Esperance has been given the responsibility for developing a replacement jetty;
- The detailed design of the replacement jetty must be supported by the Heritage Council of WA;
- The detailed design of the replacement jetty must meet the needs of the local community, as well as the needs of the wider WA community;
- The Replacement Jetty must be fully funded.

It should also be noted that even if the Old Tanker Jetty is destroyed by storms other than demolition (e.g. extreme weather conditions or unauthorised collapse) the Conservation Order continues to apply to the place.

Summary: The Conservation Order is required to be lifted before construction of a replacement jetty can begin and therefore it is a priority to meet the requirements stipulated by the Heritage Minister to allow the project to move forward.

1.2 Condition of the “Old Tanker Jetty” and Viability of Repair

Various independent structural assessments of the Old Tanker Jetty have been undertaken since it was first visited in the Shire of Esperance and despite ongoing maintenance and repair efforts, in 2015 the jetty was closed to the public due to serious structural failure and safety risks. It is now widely recognised that the condition of the fabric and the structural integrity of the jetty itself has exceeded its design life and cannot be feasibly repaired. This was noted in Minister Albert Jacob MLA’s letter that accompanied the Stop Work Order (dated 8.11.2016), “While the Conservation Order prohibits demolition, I recognise that restoration or reconstruction of the jetty to its original form and scale is unlikely and appreciate there is an urgent need to address the future of the current structure due to its condition...”

REPAIR

According to the COMOS Bern Charter there are two types of repairs: restoration or reconstruction. Restoration means returning the existing fabric of a place to a known earlier state by removing accretions or reassembling existing components without the introduction of new material, whilst Reconstruction means returning a place to its known earlier state and is distinguished from restoration by the introduction of new material into the fabric.

The original fabric of the Old Tanker Jetty, particularly the timber elements, but also the steel fixings and that held the timber members together, are of insufficient quality and structural integrity to allow them to be returned to an earlier state. Even if short sections of timber could be salvaged from the existing fabric for possible repair efforts, the structural testing required to confirm the integrity of individual members would be invasive and would further damage the condition of the material itself, as well as increasing its vulnerability to future decay. Detailed examination of the timber previously salvaged from the place suggests that most of the timber has failed due to moisture ingress at fixing points, with the timber itself rotting and splitting due to the corrosion of steel fixings. Works to restore the timber to an earlier finish would also result in the loss of patina acquired after decades in a marine environment, and this would impact on the defining aesthetic qualities and character that the community values.
As part of any restoration project, it is not feasible to remove the existing socles as these are the remaining structural elements of the timber fabric. The Heritage Council of WA has provided the Shire of Esperance with the ongoing heritage advice, which assists in understanding the position with regards to Timber Jetty restoration (March 2019). The Preservation of the Heritage Council in not supporting demolition is consistent with the guiding principles of the ICOMOS Burra Charter. The Burra Charter advocates a cautious approach to change: do as much as necessary to care for a place and make it useable, but otherwise change it as little as possible so that its cultural heritage significance is retained. Clause 15.3 specifically states that “Demolition of significant fabric of a place is generally not acceptable”. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. It is therefore difficult to support demolition when there is an intrinsic link between the fabric of a place and its cultural value. Nevertheless, the Heritage Council acknowledges that interpretation is the means by which the cultural heritage values can extend beyond the life of the fabric.

- in the event that the Timber Jetty cannot be retained and there is no feasible or prudent alternative except to demolish, measures should be taken to minimise the adverse effects on the heritage place and the following conditions would apply:
  - a detailed Architectural Record of the Timber Jetty shall be prepared
  - removal of the jetty shall allow for retention of the structural footprint of the jetty at a level that allows safe navigational water above, and there shall be a meaningful interpretation demonstrating the original alignment and extent of the Jetty

The interpretation plan shall be updated to include the demolition of the structure and opportunity to provide for the interpretation of the structural footprint of the Jetty as an archaeological site and inclusion of interpretation of the former town jetties into the proposed new jetty

The Heritage Council’s desire to ensure that the cultural heritage values of Timber Jetty, Esperance are retained is reiterated in their correspondence to the Shire throughout 2016 and 2017. The main requirements are summarised as follows:

- Consideration and exploration of the conservation of a meaningful section(s) of the original timber jetty at the height of the existing jetty to be incorporated is to form the new design as a representation of its original construction
- The jetty must present a strong presence in the seascape to ensure its landmark quality is retained
- Implementation of the Interpretation Plan should be considered in the design process of the jetty and be taken into consideration during the early design phase
- A suitably qualified heritage professional and suitably qualified interpreter should form part of the design team

These requirements are in addition to the Design Criteria outlined by Hocking Heritage Studio (July 2015) and generally supported by the Heritage Council:

- Retain the existing location of the jetty
- Retains the relationship of the jetty to town
- Retain the important contribution of the jetty to the seascape and identity of Esperance
- Retains landmark status, scale and curve of the new structure as well through retention of the original piles from the end of the new structure through to the end of the original jetty, combining old with new and retaining the cultural heritage significance of the original jetty
- Respect the associations and meanings between the people of Esperance and the jetty and allow for new ones to develop
- Commissions the past commercial function of the ‘Timber Jetty’ and its contribution to the economic success of Esperance through interpretation
- Retain fabric for use in the new jetty

**ESPERANCE COMMUNITY**

The community of Esperance has also expressed strong views about the retention of the cultural heritage values of ‘Timber Jetty, Esperance’. In general, the social values that the jetty holds for the local community are as follows:

- They value the meaning of the place and the associations they have with the old jetty
- They want the place to be continued to be used as a jetty
- They value the character of the old jetty - its age-worn appearance that represents its long-standing presence in the town, its quirk, its rough and readily appearance
- They value the style of the old jetty with its modest but functional expression that references an era of utility not set in a sequence of daily life. From the day it opened, the Timber Jetty was open to the public despite being a fully operational commercial jetty. It immediately created a sense of community ownership, and helps explain why this ageing infrastructure has so many associations with the

**FINAL CONCEPT DESIGN REPORT**

January 2019
many people. Whereas many other commercial and industrial structures have the strongest meanings for those few people who worked on them, in the case of the Tanker Jetty, Esperance, the whole community (and visitors from other places) were able to experience the jetty and create memories of the place.

Associations mean the special connections that exist between people and a place. With its commanding presence in the seascape, and wide inviting platform perfect for promenading or fishing, the ‘Tanker Jetty’ was a venue and a back drop for many pleasurable experiences in Esperance for many generations. Many West Australians feel a personal connection with the structure and value the role it has played in their life.

When the jetty closed permanently in 2015, the community felt the loss of the jetty acutely, and reaffirmed the value of this unique multi-use platform located close to town, which by this time, approximately 40 years after it ceased being a commercial jetty, had become the focus of recreational and tourist activities in the town. Its value was reaffirmed by the establishment of various local groups who have made it their mission to ‘save the jetty’ because of what it means to the community. Community support for conserving the jetty was again demonstrated in 2018 when community consultation was undertaken by the Heritage Council of WA and 77% of respondents supported retention of the jetty, resulting in the Minister placing the Conservation Order over the place.

Summary: One of the biggest challenges facing the design of the Replacement Jetty is the ability to translate the valuable heritage attributes and “character” of the Old Jetty into a new Replacement Jetty, whilst retaining some of the essences and associations the place holds as it continues to be valued by current and future generations.

1.4 Heritage Design Brief

When concept designs for a Replacement Jetty were first released back in 2016 and 2017 (with designs commissioned separately by the Friends of Esperance Tanker Jetty, who engaged Boscacci to provide a “repair option”, and the Shire of Esperance, who engaged GTO to provide an “iconic design option”), there was a general consensus that neither design had adequately captured the heritage values of the Tanker Jetty. Structural pragmatism, use of modern materials and loss of “character” help explain why neither concept was readily endorsed by the Heritage Council of WA or the local community. People value the authenticity of the Old Jetty - its honest structural expression, its patina of age, its unique curving form, all the spirits of the uneven timber deck, the open balustrades and the rough and ready appearance, and these aspects are difficult to capture in the design of a new structure.

An earlier Concept prepared in 2014 by BMT-JTA for the Shire of Esperance for the purpose of assessing the cost comparisons associated with different lengths, widths and material configurations proposed a concept which was much more successful in combining functional requirements with structural efficiency and heritage aesthetics, albeit without attempting to fully interpret the heritage values of the place. The BMT-JTA concept proposes a short 50m section of timber decked jetty with raised steel piles akin to the 1935 design, with the remainder of the jetty length constructed using a more economical system of raised steel piles supporting a pre-stressed concrete deck. Conceptually, this design creates an opportunity for timber salvaged from the Old Jetty to be re-used in a non-structural application, possibly in the section of timber decking and the handrail. It does not make allowance for the retention of the original piles (these are proposed to be demolished to seal bed level), nor adherence to the original curve of the 1935 jetty, which are both key aspects of the heritage requirements identified by Heritage Council, but does propose the creation of a “meaningful section” of timber jetty, which is a worthwhile consideration.

With consideration of the importance of retaining the heritage values of Tanker Jetty, Esperance, the concept design for the New Replacement Jetty needs to go further than the BMT-JTA Concept in responding to the retention of heritage values, as follows:

**MATERIALS**

There is an intrinsic link between the heritage values of a place and its fabric. Material is a key aspect of fabric and so it is critically important for the design of the Replacement Jetty to use appropriate materials, as follows:

- Timber needs to be a feature of the new jetty, preferably a hardwood timber of scale and finish to match the proportions of some of the original elements. With its natural variation and tendency to weather to expose to the elements, timber changes with time and this is one of the characteristics that allow people to connect with the material, finding meaning in the way it has been shaped by time. Timber is also tactile material, and has long held associations with its use in marine structures. Timber should be used in a way that allows people to touch and see the material, ideally in the super-structure which is the main human-activity zone.

- Steel and iron were also a feature of the old jetty, used for all the fixing bolts and straps, as well as the steel rail tracks, the cast-iron balustrades and pile shoes. As with timber, steel is very robust and durable, but does change over time, usually with the action of water (fresh and salt water) causing corrosion. The old steel bolts were likely forged, giving them a unique rusted character, and most fixings were expressed, consistent with the basic utilitarian structural design of the Tanker Jetty. Experience, the effects of corrosion gave the steel components a distinct patina, as well as having effects on the surrounding timber, which were often stained (and later rotted) with the impact. The use of steel and cast iron for exposed fixings (structural or aesthetic only) could be considered as part of the design of the Replacement Jetty, or salvaged steel and cast iron components could be incorporated into the fabric for the purposes of interpretation only (ie. non-structural application) to ensure that this material remains visible.

- Salvaged material - the material that comprises the Old Tanker Jetty is highly valued by the community and what remains of it demonstrates the character and style of the 1935 design intent, as well as the history of repairs and patching that have taken place over subsequent decades. The remaining portions of the original hardwood piles can be identified by the distinctive carpenter’s notches (known as ‘Norman’ notches) that are inscribed on each member, responsible to identify the pile number, classifying the traditional building techniques used in construction. Similarly, the old beams can be identified by the distinctive circular saw marks on their finished surface, typical of mill equipment used the inter-war era (although later replacements have distinct vertical hand-saw marks). There is also likely to be deck or larboard elements that feature engraving and graffiti left by previous generations of jetty users who left their mark on the fabric which also contributes to the history of the material. Reuse of salvaged material should be focused on preserving significant features that tell the story of the jetty and recognise the meanings and associations of the material itself. This approach should be prioritised above general interest in recycling timber, as every new hardwood will quickly weather and change. In the exposed marine environment to achieve the patina of aged timber, what can’t be replicated is the authentic markers of past use.

**DESIGN FEATURES**

The design of the 1935 jetty was typical of modest and utilitarian timber structures designed by the Public Works Department of WA. In the inter-war era, with a focus on practically, constructability and lack of artifice. The design took advantage of the availability of large sections of hardwood and made simplistic methods of attachment and bracing that would allow a low-skilled workforce to work on the construction in situ. It will be important that any new Replacement Jetty respects the humble origins of the Old Tanker Jetty, and perhaps there is opportunity for the construction methodology to be sufficiently simplistic to allow for the local workforce to be engaged to assist in its construction.

The sub-structure of the 1935 jetty consisted of two hardwood timber piled piles (barreled 3.0) either side of a central straight pile, tied together with simple cross braces and wattles that were scabbed cut to fit over the piles, and twin half caps to create the distinctive jetty heads spaced at 35’ centres (400mm). On top of each pile was a 3.5m long timber octagon, which assists in supporting the superstructure...
above and provides a fixing zone between the pile and the stronger beams. The design is simplistic and represents a traditional arrangement of post and beams to support an upper platform, with resistance to lateral loads provided by the raking piles and the timber bracing providing resilience to racking. Extra supports were added through the centre of the jetty to support the railway tracks which once ran the full length of the jetty. Once this function became redundant (when commercial operations ceased) the railway tracks were removed and the central piles were no longer replaced, with now only a few remaining in evidence.

- Railways were a key feature of the structural design of the Old Tanker Jetty as well as being a characteristic feature of the architectural expression of the structure. The design of the piles, their batter and their headdeck workings are all important aspects of the original design that can feasibly be interpreted in the design of the new structure without detracting from the integrity of the original design. It is debatable whether the central pile is an equally important element in the jetty best design if there is no intention to revitalize the railway line, as it was a purely functional element which became redundant as soon as the commercial operations of the jetty ceased.

- The railway track was installed to the centre of the deck, splitting into multiple tracks at Pier 149 where the deck width increased. The track consisted of standard WG&R 8’9” gauge (suitable for a “G” class locomotive) with metal rails. The timber rail bearing was located on a specially constructed underdeck between Piers 147 & 186, now no longer extant as jetty terminates at Pier 143. As the railway track was specifically associated with the commercial operations of the jetty, some consideration should be given to interpreting the original location of the track and the role it played in the original functions of the jetty.

- The jetty deck was characterised by its wide boards (5”x4”) that spanned the full width of the jetty (15’), treated at each cut end with hot tar. A timber bollard (5”x4”) ran along the top edge of the jetty deck on both sides, fixed down with bolts and joined by scarcely joints. The north side of the jetty featured a timber balustrade consisting of a 4”x4” top rail laid on the diagonal and checked into a 5”x4” post, with strap and bolt fixings, and a 4”x3” central rail laid on the flat, also with bolt fixings. By the 1960s the timber balustrade was substantially replaced with tubular steel balustrading. Likewise, the timber deck was topped by mossy/decaying concrete in the early 2000s. Considering the aesthetic value of the timber deck railing and balustrade, its longevity, and its role in the commercial activity zone of the jetty, consideration should be given to reinstating these elements in the concept design for the Replacement Jetty, albeit with regard to modern standards and codes for construction.

- The width of the jetty was originally determined on the basis of the functional requirements for clearances either side of the “G” Class locomotives. The width of the jetty was variable, being 15’ wide (4600mm approx.) for the main length, and widening to 48’ wide (14000mm approx.) at Pier 155 where the Jetty Head was located. The deck was also widened between Piers 136 & 143 to accommodate sheds (1863) giving this area a total width of 29’ (8840mm approx.). This would suggest there is some design precedent to look at variable widths along the jetty (particularly at the head) to accommodate changing structures. The width of the replacement jetty should also be based on the functional requirements of the new structure, with consideration given to pier placement and retention of the structural footprint of the original jetty.

- The original 1935 jetty featured a lower boat landing and ladders located at Piers 130 – 152, which were accessible from the main deck via a ladder, and situated approximately 3’ above the low water mark. The landing featured a crude Reel in the screen such that the boat could have direct access directly into the shaft. The boat landing also appears to have provided access to the underdeck switching gear for the over head railway tracks. This boat landing became a popular fishing spot and consideration should be given to reinstatement of a lower landing deck if this function is still desirable. Refer also to Section 05 Design Issues with regards to the meaning of vessels.

- A fish cleaning area was located between Piers 18 & 19 on the north side of the jetty but is no longer extant due to removal of piers up to Pier 31 to accommodate the new headland. The fish cleaning area was noted in a condition report undertaken in 1999 (marked on PWG 27408 Drawing No. 5 by C. O’Conner), but is lorry to date back to the 1970s or 90s. Consideration should be given to reinstatement of a fish cleaning area in the design of the Replacement Jetty, possibly close to the shoreline as per the earlier facility, and on the north side due to the direct impact of prevailing weather conditions from southwest to southeast.

- In 1992, the west piers were noted as being located at Piers 36, 37, 38, 118, 119, and 120, creating a typical spacing of approximately 80m (262’), with no lighting documented beyond Pier 144, as by this stage the Jetty Head Island was separated by a gap of 200m due to the condition of the existing structure. New lighting will need to comply with current standards and codes, but consideration could be given to interpretation of the earlier lighting design, with its contribution to the visible appearance of the structure at both day and night.

- Archival drawings and photographs show how oil storage pipes were extended along the underside of the jetty deck to supply tankers. Although all of this infrastructure is no longer extant, the route of the oil pipes and their function could be interpreted in the deck surface or other interpretative devices.

- In 1995, seats were noted as being located at Piers 19 and 32. Photos of the era suggest that these were not original features but could be associated with recreational use of the structure. Consideration should be given to the installation of seating along the length of the jetty to provide observers and potentially also interpretation nodes.

- The archival plans of the 1935-36 indicate an observation deck on the shoreline detailing how the jetty transitioned from a jetty to a landing. The abutment consisted of a sheet-rolled retained edge with piles spaced every 7’9” and the rawing walls lined with timber board cladding. The transition from sea and land has changed considerably over the years, particularly with the construction of the new headland and rock revetment immediately to the jetty landing in 2011. A narrow gangway formed the access bridge between the jetty and the foreshore between 2013-2015. The design of the Replacement Jetty will have to consider the practicability of spanning the new headland and rock revetment, but there is design precedence for a range of options including a retained abutment. The design solution should consider whether changes to the headland can be interpreted as part of the changing setting of Old Tanker Jetty Experience.

### 1.5 Heritage Interpretation

The Heritage Council has clearly stated that any Concept plans for a Replacement Jetty at the site of Tanker Jetty, Experience needs to demonstrate how the Interpretation Plan (prepared by Hocking Heritage Studies, September 2018) will be implemented (amended dated 13 Sept 2017). The report includes a number of strategies that can be readily incorporated into the Concept design, as follows:

**SITE 1: ENTRANCE TO THE NEW JETTY: Main Interpretative Node**

- The main themes identified here relate to the closure of the jetty, its demolition and replacement.
- The expression of the built form in this zone will provide multiple opportunities to interpret these themes, particularly as the new headland and rock revetment require an entirely new design response to bridge the new transition between land and sea.
- The entrance to the jetty represents a place where people have gathered to observe the deterioration of the Old Tanker Jetty (particularly after extreme weather events or unscheduled collapses of the structure) and to identify how it is to be saved. It has formed the backdrop for community demonstrations and media announcements. The entance symbolises the place where the piers for the 1935 Tanker Jetty were first placed, and the place where entry was first barred to the Jetty in 2015 due to structural failure and risk to public safety. The design of the entry structure can express these tensions between old and new, and aspects of these events can be interpreted in interpretative devices such as signage, imagery and the structural expression of the "bridge" itself.
- Being land-based, with a direct connection to the high quality foreshore development, the entrance node may also offer opportunities for more technologically advanced interpretative devices such as virtual reality displays or audio/visual experiences rather than just static displays.
SITE 2: GROUND BASED INTERPRETATION / Along the surface of the new jetty

- The main themes identified here relate to the original construction and use of the jetty, key facts, changes to the jetty over time, reference to the social values of the jetty and information about the archaeological potential of the original jetty footprint.
- The new jetty deck would be a potential site for some of the key artefacts to be displayed, such as examples of the old piles with their characteristic marks, perhaps alongside information about modern construction methods employed in the Replacement Jetty. These elements could be incorporated into functional pieces such as seating or shelter structures so that they don't detract from the utilitarian expression of the Replacement Jetty, or become static displays that visitors can't engage with.
- The previous uses of the Jetty could be interpreted with the aid of steel "railway tracks" into the deck surface, for example, with basic information about how the design of the jetty accommodated the "G" class locomotives, or how oil pipes ran to the seawall of the deck to supply the tanker ships berthed at the Jetty Head.
- The decades of change evidenced in the existing and lost fabric of the Tenerife Jetty, Experience could be recorded or interpreted in the design of the new jetty. For example, if a lower loading is constructed, it may include information about the original boat landing (at different levels), or if new shelters are constructed, they could be inspired by the design and detailing of the early shed buildings.
- The original design and potential environmental values of the world before the water line can be identified, potentially reimagined with information about the diverse people and their community to preserve the habitat of the bird and use wildlife in the vicinity of the Old Jetty.

SITE 3: POSTS AND FURNITURE

- The main themes for this node relate to the historic use of the Jetty, its social value to the local community, and documentation regarding the interpretative description of the Old Jetty.
- The new jetty can accommodate a continuation of some of the design and interpretive devices already in place on the Foreshore, including the vertical steel enameled timber posts that have been constructed of salvaged material and engraved with information plaques. This will be for visual connection to be reiterated, and allow the Replacement Jetty to link with the landscape elements of the new Foreshore setting.
- Reuse of the salvaged material can allow for the old Jetty timbers and ironwork to be made available to the public in creative and interpretative applications, perhaps with detailed information available to allow people to understand the process of change in these materials, and why they couldn't be used to rebuild the jetty.
- Incorporate the quotes from the Experience Tenerife Jetty experience survey to illustrate the readings and associations the area has for the local community, both in the past and into the future. These quotes could be engraved into the timber benches, or into the larboard or deck boards. Quotes could be selected on their suitability for different locations, either looking out to sea or back towards the town, allowing for the stories and the worlds about the old jetty to form part of the new jetty fabric.

SITE 4: PUBLIC ART

- The main themes for this node relate to fishing, whaling, commercial shipping, farming/agriculture, recreation/sports.
- Depending on the quantity of material salvaged from the Old Jetty, artists could be invited to create public art pieces using this material for incorporation into the setting of the Replacement Jetty.
- Art pieces could focus on the utilitarian and functional aesthetic of the old jetty, or the traditional structural expression of the jetty.
- Locations for potential public art should be considered in the context of the overall expression of the Replacement Jetty, being cautious about creating visual clutter or detracting from the special qualities of the Jetty in trying to capture its form, style and materials.

Summary: Interpretation and key themes should be inherent to the fabric of the Replacement Jetty, as well as being incorporated into its setting through signage, interpretive devices, sculptural elements and creative installations.

January 2019

FINAL CONCEPT DESIGN REPORT
2.2 Ongoing maintenance costs

Managing maintenance costs of any new infrastructure is a key issue for the Shire of Esperance moving forward, and is the key reason for stipulating a 50 year design life for the Replacement Jetty. Maintenance costs will be impacted by the following projected decisions:

- **Material selection** – The materials being considered for the replacement jetty include steel, concrete and timber. Steel and concrete will both require corrosion protection and maintenance to achieve the required design life, whilst timber has a reduced design life which will require maintenance and replacement of components within 25 years.
- **Corrosion Protection systems** – there are multiple options available depending on selection of materials.
- **Accessibility to components –** the jetty components most difficult to access are those that comprise the sub-structure, below deck level. Typically access to these components is by water-based transport only, which requires costly re-configuration of craft and equipment to undertake monitoring and/or repairs. Above the deck, elements of the superstructure are more readily accessible, therefore materials that require more maintenance and repair can more feasibly be monitored and accessed. On this basis, timber should not be considered feasible for use in any of the sub-structure (below deck) unless these components are considered sacrificial. Similarly, consideration should be given to routing other services (ie. electrical, water) in upper space of the deck to increase accessibility and reduce costs. Limiting the maintenance requirements for the components forming the substructure will reduce ongoing maintenance costs.

Summary: The ongoing maintenance costs will be impacted primarily by material selection, corrosion protection systems and the accessibility of components for monitoring and repair.

2.4 Economic & social benefits

A detailed Business Case is likely to be required for any major funding application and should be considered part of the project parameters for the Shire of Esperance moving forward, once some of the early project milestones have been achieved. A Business Case will determine value and benefits associated with the construction of a Replacement Jetty however the following benefits are anticipated with the construction of a Replacement Tanker Jetty:

- **Tourism potential** – the new Jetty will be a drawcard to the region, offering a multi-use platform that can be used as a pedestrian promenade, for recreational fishing, for diving and underwater exploration, and an attractive venue for photography and creative arts.
- **Local economic benefits** – the new Jetty will attract visitors to the Esperance and Forrestdale areas which will directly benefit nearby businesses and may encourage new businesses to be established in the vicinity to service visitors.
- **Local identity** – the design of the Replacement Jetty can contribute to the identity of the Esperance foreshore, as a major feature of the waterfront, and being highly visible from the Esperance and Forrestdale, it has the potential to become a postcard-worthy backdropp to many important local events.
- **Employment & local business opportunities** – the construction contract terms can be developed to encourage local subcontractors, trades and suppliers to be able to tender on portions of the building work to ensure that Buy-Local Policy objectives can be achieved.
- **Opportunities** – the new multi-use platform will present opportunities for future development particularly in recreational tourism. The Replacement Jetty will potentially be the largest purpose-built recreational platform in Western Australia offering premier fishing and deep water diving facilities to immediate proximity to the town. Unlike the Lesueur Jetty, the new Tanker Jetty will not be constrained by the need to accommodate a tourist train (which takes up a substantial proportion of the Jetty width) and achieves much greater depth over a shorter length, making the facility even more accessible for visitors.
- **The Replacement Jetty presents an opportunity to encourage more nature-based and environmentally-sustainable outdoor activities in the Esperance Harbour, extending the human-centric zone beyond the foreshore and encouraging greater connections with the ocean environment.
- **The Replacement Jetty has the potential to support future commercial and/or tourism operations, particularly if these align with historic sites or themes, and are compatible with retaining the heritage values of the place.
- **The Replacement Jetty offers the ability for the Jetty to be a centrepiece to the recreation of new associations and meanings for current and future generations of Esperance locals and West Australians generally.

Summary: The Replacement Jetty represents a significant opportunity to enhance economic and social benefits for the community of Esperance, and to promote future growth and sustainability in outdoor recreational and business activities.

3.0 Community Buy-in

3.1 Community Consultation

The Shire of Esperance and the Heritage Council of WA have undertaken comprehensive community and stakeholder consultation with regards to the future of Tanker Jetty. Esperance and the outcomes are well documented (Esperance Harbour Market Study, October 2013; Heritage Council of WA public survey, November 2016). As well as the social and heritage values held by the community (refer to Section 3.0 Heritage Issues), the community views can be summarised as follows:

- **The Jetty needs to be replaced**
- Replacement options such as width, length, materials, etc should be dependant on cost.
- Replacement planning should incorporate multi-use options.
- Action needs to be taken as soon as possible and access to the existing structure needs to be provided in the meantime (consultation from 2013 pre-dated the current closure in 2015, but nonetheless maintaining public access was already a concern with the construction of the lowland Impacts accessibility).
- A staged approach to replacement is favoured.
- Replacement in the current location is favoured, following the existing curve and alignment
- The primary use to be recreational, with a focus on fishing.
- There is support for incorporating commercial operations and potentially accommodating cruise ships or tenders.

In addition to these views, preferred design elements were identified:

- **Use of appropriate materials, namely steel and concrete with some timber to highlight heritage of Old Jetty**
- **Match height of existing jetty**
- **Maximise width, but generally widths of 3m – 4.5m acceptable**
- **Maximise length, but generally length of 250-400m acceptable**
- Incorporate lower decks to allow for different uses
- A Jetty Head at the seaward end for shared recreational use and vehicle turnaround.
The Shire have incorporated the majority of the community preferences into the Replacement Jetty Design Brief, and it will be important to communicate these preferences have been translated during upcoming design feedback.

There is a general understanding that there is strong community support for the Replacement Jetty, but that concerns about ongoing time delays and uncertainty of funding cause fear and distrust about what the Jetty outcome will be. Community buy-in is integral to the success of the project, so that they feel their opinions have been listened to, and that the Replacement Jetty has been designed to respond to community needs and preferences.

Summary: The extensive community consultation has been incorporated into the Design Brief for the Replacement Jetty. Community buy-in is integral to the success of the project, and people need to feel that their opinions have been listened to and that the Replacement Jetty has been designed to meet their needs and preferences, otherwise it loses its interest to the community.

3.2 Impact of lobby groups

Within the community, there are special interest groups who advocate for the restoration and reconstruction of the Old Tanker Jetty, not replacement. The ‘Friends of the Tanker Jetty’ have lobbied on a number of fronts, administering a fundraising campaign for the restoration of the Old Jetty, and also securing independent advice to investigate structural engineering options to repair of the old structure. With limited resources to actually engage an engineer to design a solution, nor for a heritage professional to help guide the process, the Friends are limited by what they can achieve without the support of the Shire of Esperance, the body responsible for the care and maintenance of Tanker Jetty, Esperance since a Jetty Licence to that effect was established in 1990. The Friends campaign is very public, including television commercials and a strong presence on social media and local radio. Unfortunately this has not always been divisive in the community and the Friends are a strong lobby group acting against the Shire in their efforts to move forward with a Replacement Jetty.

The Friends of the Tanker Jetty could be potent advocates for the Replacement Jetty Project if they were to pre-focused their energies towards Replacement in lieu of restoration or reconstruction, and could contribute meaningfully to the design process. In particular, their passion for the place and their desire to preserve its associations and meanings could be better directed towards the implementation of the Interpretation strategy, which is inherent in the design of the Jetty itself, its setting and its cultural heritage.

It would appear that sharing additional information and knowledge about heritage ‘best practice’ and the practical application of these Charter principles may assist in avoiding resistance from the Friends, but this will need to be reinforced by other Statutory bodies such as the Heritage Council of WA, particularly with the esteem listing of the Corporation Order, to ensure that these actions are not perceived or construed as a loss for heritage.

Summary: Lobby groups working against the Shire in this development of the Replacement Jetty have the potential to represent major roadblocks to progress and to prevent community consensus and buy-in by causing division and distrust.

3.3 Media

Communication strategies with the media should be proactive and informative to ensure that key messages are being communicated about the project, and to make sure that the Shire of Esperance is not continually being seen in opposition to other parties such as the Friends of the Tanker Jetty group, or Western Australia. The lack of success to date in addressing key heritage hurdles has had a negative impact on the community perceptions of the Shire, and this has been exploited by the media and lobby groups. Local media understand how important the Tanker Jetty, Esperance is to the community, and also how divisive the topic can be, as they have no vested interest and will continue to cover stories and articles about the lack of progress made by the Shire, or the challenged lack of progress being made.

The Shire of Esperance has already established a communication strategy for this phase of the project, which involves more regular communication with local media, and publication of general information about the project progress. This strategy is also attempting to share knowledge about heritage principles and issues at play, providing people with more information to allow them to make more informed opinions. In keeping with this approach, it is recommended that extra time and effort is taken at the public release of the Concept Design to clearly articulate all the detailed considerations behind the concept so that the media can share this information, and the public can understand it and provide feedback if appropriate.

Summary: Communication strategies with the media should be proactive and informative to ensure that key messages are being communicated about the project.
Aside from the obvious statutory restrictions currently preventing demolition from taking place, should the Conservation Order be lifted, the Shire of Esperance will need to consider whether any of the existing contract conditions for the demolition tender need to be modified with regard to the following:

- the current condition of the structure, which has deteriorated further since 2006.
- ensuring the interests of salvaging heritage material from the Old Jetty are adequately covered by this contract, including use of methodologies that limit damage or loss of significant fabric.
- Retention of heritage values of the site are also a key factor in the demolition phase, including the archaeological potential of the area beneath the dock which may be disturbed during demolition and salvage.
- Protection of environmental values of the site, particularly bluestone which currently inhabits the jetty structure, and marine life which lives under the deck.

Summary: The Shire of Esperance may need to consider additional terms for the demolition contractor to ensure that heritage values can be conserved and environment values protected during the course of demolition.

4.4 Other approvals required

There are a number of statutory bodies that are likely to be involved in the approvals process for the construction of the Replacement Jetty and these bodies should be clearly identified as part of the design process. Identification of statutory bodies early on assists in ensuring a smooth and effective approvals process and ensures that appropriate and targeted stakeholder engagement can be undertaken well before construction is scheduled. It also assists in identifying any major issues that could cause impacts on the project feasibility, timeframes or budget.

Summary: A detailed assessment of relevant statutory bodies shall be undertaken by the project team in the design phase of the Replacement Jetty process to allow for procurement of appropriate processes.

4.5 Liability vs asset

During the Stakeholder Engagement sessions undertaken with Shire Councillors in both 2013 and 2018, concerns were expressed about whether the Experience Trawler Jetty should be considered as a liability or an asset, and this question is fed to the Old Jetty as well as the Replacement Jetty.

The Shire was given responsibility for the Old Jetty in 1990, well after the structure had outlived its design life, and once commercial operations had ceased and the Jetty became primarily a recreational platform. So began decades of expenditure on maintenance, repair and replacement, which was effective in extending the life of the Jetty another 10 years, until its closure in 2013. Prior to, and since, the closure of the Jetty, the Shire has also expended considerable resources in obtaining professional advice, with a number of reports and designs commissioned between 2014-2017 addressing the ability of repair, reconstruction or replacement of the Old Jetty.

It would seem that prior to the closure of the Jetty in 2013, the structure was considered to be an asset to the community and the wider community, for its commercial, recreational and cultural opportunities. The cost to stabilise the structure was sufficient for safe public access. Once the condition of the structure reached a point where it was no longer safe for public use and the Jetty was closed, the community felt responsible for the jetty becoming a liability for the Shire, who were required to continue to maintain and stabilise the structure although it was no longer able to be used.

In community consultation undertaken since 2013 the community have clearly demonstrated that ongoing use of the Old Jetty is key and the community do not support managing the Jetty rule until it is completely gone.

Summary: The Jetty is considered as an asset so long as it can continue to be used by the community. Without ongoing use, the structure is a liability.

4.6 Timeframe

Time is a key issue for the Replacement Jetty project and the Shire of Esperance need to allow contingencies to manage possible delays or impacts caused by the following events:

- Delays in approvals – particularly lifting of the Conservation Order
- Deterioration of the Old Jetty and the complications further collapses and failures might cause
- Inclement weather –impacting upon the program for geotechnical investigations during the design phase
- Timing of funding rounds for State and Federal funding
- Community buy-in – the longer the process takes, the more the community loses faith in the process and wheels in their support.

Summary: The Jetty project is time- sensitive and although there are many important initiatives to achieve before construction of a Replacement Jetty can be started, delays have the potential to impact on community support for the project and limit funding opportunities.

4.7 Recurrent costs

Funding issues have already been identified and discussed in Section 2.0, but recurrent costs is an ongoing issue for the Shire of Esperance which will be responsible for the New Jetty and need to make provision for the ongoing costs that can be expected over its lifetime.

Above meeting the initial Capital Costs associated with the Infrastructure itself, the Shire of Esperance will need to manage other recurring costs such as payment of Insurance premiums, maintenance programmes (which can involve material costs as well as personnel costs), costs to modify the infrastructure to maintain ongoing compliance with changes in standards if applicable, license costs (if applicable), and other costs associated with managing the Jetty as a tourist site (for example, if entry fees are enforced or special licenses distributed).

Summary: The Shire of Esperance needs to take account of recurrent costs associated with the Replacement Jetty and identify appropriate phases to fund these costs.

5.0 Design Issues

5.1 Location

The engineering consultant has identified the following potential issues associated with the proposed location of the Replacement Jetty:

- The concept design will assume that piloting between or alongside the existing piers is possible. This is still a risk despite the availability of the existing pile survey (from 1933) and will increase if further debris is identified on the sea floor (i.e., particularly during demolition of the existing structure).
- The concept design assumes that the existing jetty structure will be demolished and that only the piles remaining from 1933 will be retained. Issues would be created if any other elements are required to be retained in their current location.

Summary: The Replacement Jetty will be located at or near the original footprint of the 1935 jetty, providing the issues between or alongside the existing piers can be resolved, and on the basis that the old jetty has been demolished and that only the structural footprint of the 1935 jetty will remain.

5.2 Functionality

The following potential issues are associated with the proposed functionality of the Replacement Jetty:

- The design brief does not indicate any specific requirement for low level platforms however these might be desirable to accommodate the proposed use of the jetty, particularly as the previous low landing area is a popular fishing spot and could also be useful as a dive platform. Any low level platform would ideally be located on the north side of the Jetty as the strongest and predominant wind is from south-west to south-east. If the platform is required to be used as a horizontal dive platform, consideration may be given to whether this should have ladder or stairs, or if compliant ramp access is required.
- The design brief does not specify whether mooring or berthing is required. The site is currently a no-boat zone, but boat access may be desirable for emergency services or maintenance crews, or for recreational purposes.

Summary: The functionality of the Jetty should be confirmed to ensure the Replacement Jetty is designed to cater for specific cases.

5.3 Structural Design

There are a number of issues to consider with regard to the structural design of the Replacement Jetty:

- The design brief assumes that pedestrian loads only are required (ie. 5kPa). Light vehicles for maintenance can be accommodated under the 5.4kPa load, but consideration may be given to designing piers and cross heads to suit larger commercial cranes. Load requirements may also restrict construction options to water-based plant only and exclude an “over the top” construction methodology which will most likely be a cheaper construction method but with higher material costs for piloting. The pier and corn will be planned during the detailed design phase.
- Material selection will directly impact upon pile spacing and spans of beams. Steel beams can span up to 9m, with concrete panels achieving similar. Steel and concrete structures will result in the least number of piles, but this may impact upon the aesthetics of the Jetty structure, particularly as the original was timber, with only 4-6m spans.
- Material options for the various elements are steel (for piles, for sub-structure and cross beams), concrete (for sub-structure, cross beams and decking) and timber (for decking or super-structure elements that are accessible from the deck), noting that timber typically has a design life of 25 years and higher maintenance requirements.
- There are a range of corrosion protection systems available including sacrificial and impressed anode systems. The steel piles can be protected by a combination of painting, corrosion protection systems, steel thickness and HDPE sleeves. Concrete can be protected by coatings design to slow down chloride ingress, by the thickness of the concrete cover and through appropriate selection of concrete grade. Timber can be protected through treatment and application of penetrating treatment systems, although full replacement is usually advised after 25 years in a marine environment.

Summary: The structural design will be informed by structural load requirements, material selection, construction methodology and options for corrosion protective systems.
5.4 Length, width, depth, height

There are a number of design issues to consider with regard to the proposed height, length and width of the Replacement Jetty, and the impact this will have on the depth of water at the jetty entrance:

- For purposes of practicality and constructability, the preference is to develop a repetitive design format for the new jetty bents and spans between piers. If different sections are created (i.e. more than one repetitive design format, such as a non-timbered section and a timber "measuring stick") this will have design and cost implications as the transition between sections will need to be created, and some design formats might be more expensive than others.

- Noting the council’s preference for the largest possible jetty, maximising the length of the jetty will likely impact construction costs. It is assumed that there are no major design issues relating to the final length of the jetty.

- The existing jetty width is 4500mm, therefore a reduced width may affect amenity of the jetty and not allow for the turning of light vessels (used for maintenance or emergency). Changing the width may also present a risk for pile driving within the existing footprint, as opposed to alongside it.

- The current deck level is 4300mm LAT which will be significantly over-topped in storm events, including the previously proposed BMT-JRA design event of 200-ARI wave. Whilst overtopping can be managed, if the existing deck level is retained, it may pose a safety risk during a storm event. Consideration may be given to increasing the finished deck level for this reason, noting the Heritage Council’s preference for maintaining the original deck level.

- The new jetty deck level needs to lie within the finished levels of the new headland and foreshore, either through ramping or adjustment of levels of the foreshore or the finished jetty.

Summary: The length, width and height of the Replacement Jetty will be informed by a number of factors including amenity, constructability and its conformity to adjoining coastal areas and sound levels.

5.5 Compliance

When designing a new jetty structure, compliance with relevant codes and standards can dictate some aspects of the design, as follows:

- Handrails need to be provided to both sides of the deck as per the Building Code of Australia and AS4997, designed to comply with the requirements of AS1157. Some concessions may be possible from a heritage perspective, if use of handrails on both sides of the deck is considered to be an unacceptable impact on heritage values, but public safety is likely to be considered a higher priority by all statutory authorities.

- Ladders need to be provided as a minimum of 10mm intervals as per AS4997 and there is a potential safety issue to jetty users if there are no ladders provided.

Summary: Compliance with relevant codes and standards will dictate some of the design features, particularly the elements which contribute to public safety such as handrails and ladders.

5.6 Metocean Design

The engineering consultants have identified the following potential design issues with relation to metocean data:

- The functional category of the structure determines the appropriate design wave event (per AS4187 Section 5.3), in this case the engineers suggest that Category 2: structures presenting a low degree of hazard to life or property is likely to be appropriate as the jetty can be closed in storm events or to undertake repairs and maintenance. The risk of a 500 ARI event occurring in a 50 year design period is approximately 15%, the risk of a 200 ARI event occurring in a 50 year period is 22%. On this basis, the engineers propose to design with a wave design event of 200 ARI, which is also consistent with previous designs developed for this location on behalf of the Shire (BMT-JRA in 2014, and GHD in 2017). The Shire will need to confirm that a Category 1 assessment is acceptable.

- An extreme wave level of 5.8m CLD/LAT for a 200 ARI storm is recommended to be adopted. This influences the final recommended deck height for the jetty.

- A 450mm allowance (to 2070) for sea level rise is proposed as per the Dept of Transport 2020 Guidelines. This influences the final recommended deck height for the jetty.

- Currents are assumed to be negligible.

- Wind loads need to be considered in tandem with wave loads to determine maximum lateral loads on jetty. Winds are predominantly from the south-west to south-east sector. Cyclonic design is not required, and recommendations from AS1170 and available TNM data will be used in absence of site specific recorded information.

- Bathymetry data will inform structural design modelling and pile toe levels for design. The consultant team will undertake further information from (IGS 2016) survey and Dept of Transport 2010 survey.

Summary: Metocean data as well as local wave, wind loads, currents and sea level will inform aspects of the design, particularly with regard to deck heights and structural design of jetty elements.

5.7 Geotech Design

The geotechnical engineers have identified the following potential design issues which relate specifically to pile design:

- Pile orientation – driving piled piles will require higher driving energy compared to vertical piles. By using piled piles, this would help to reduce the pile lateral and torque capacity requirements, but these are not expected to be significant loads for this project. The cost comparison between the two methods needs to be considered, noting that the pile differential is not expected to be great due to the small anticipated pile size.

- Pile spacing: will be influenced by existing pile locations and alignment, any heritage considerations, choice of materials which govern maximum span, determined pile size. It is recommended from a cost perspective to optimize the pile spacing vs. pile size.

- Pile installation method – it is expected that the piles will be driven, however if shallow refusal is encountered in the rock then it may be necessary to drill through the pile and re-drive the pile to toe level. This assumption can be built upon following the geotechnical investigation.

Summary: There are opportunities to consider different pile orientation and spacing depending on selected materials and structural expression and the outcomes of the geotechnical investigations.

5.8 Services Design

The Services engineers have identified the following potential design issues which relate specifically to the provision of hydraulic features and electrical services to the Replacement Jetty:

LIGHTING & ELECTRICAL

- Lighting – lights are assumed to be required for the length of the jetty, with lux levels as per AS/NZS 1315.6. The number of lights to be provided (i.e. spacing) will be governed by lux levels, but there may be opportunity to interject the existing lighting design of the jetty with the placement of pole, colour temperature, etc.

- The lights are assumed to be LED and/or similar to the foreshore lighting, incorporating bird protection. Solar lighting has been disregarded at this stage as sufficient mains power source is available which is more economical.

- Lighting pole materials to be confirmed, but assumed they will be aluminium or re-used timber/steel same as per the foreshore design. Shire to confirm whether swing down arms are required for maintenance.

- It is assumed that sufficient capacity is available in the local switchboard and that the spare electrical conduit running to the jetty, as drawn on the ‘as constructed’ drawings of the foreshore, can be utilised for lighting.

- The mounting arrangement for the poles and conduits needs to be considered in the design – it may be possible to incorporate the conduit into the lift rather than mounting it underneath the deck, which is not preferable.

- It is assumed that there are no other power requirements for the jetty.

WATER SERVICES

- Potable water – it is assumed that a potable water supply is required to services hose taps only (2 off), no troughs, it is assumed that there is sufficient supply in the existing network and sufficient pressure, although this will depend on the location along the jetty. The Shire should provide flow and pressure test results if available, and confirm location of the cleaning stations or other taps located along the jetty.

- Fire hydrants/valves – Based on AS4241, provided there are no moored vessels, fire hydrants are not required. Should this not be the case, flow and pressure test results will be required.

- Drainage – no specific drainage systems required. Inlet is straight run-off from jetty.

- No requirements for sewers, communications, CCTV, GPS, fuel or WIFI services. Should this not be the case, additional consultants may be required.

Summary: Certain aspects of lighting design will be determined by compliance with standards, but there is opportunity to design lighting that connects with the foreshore development and integrates the original lighting scheme of the Old Tender Jetty. Water services are reasonable, but stability will be determined on the basis of the specific functional requirements of the jetty.
Design Approach

Following a detailed review of the key issues and the site-specific information available, H+H Architects with GHD Engineers, propose the following design approach for the Replacement Jetty:

- 400m long jetty in alignment of the original jetty, with new piles spaced to allow retention of original footprint
- Short, meaningful “Historic section” which pays homage to the traditional industrial nature of the Old Tanker Jetty (approximately 50-75m length, depending on budget) bridging the revetment and forming the entry to the new jetty
- Create longer, modern fishing jetty with some design influences from the Old Tanker Jetty incorporated into the jetty bent design (approximately 250m length, depending on budget)
- Widened deck at the Jetty Head to facilitate community activities and with reference to the original jetty head design (approximately 75m length)
- Lower platform to accommodate fishing and diving access
- Interpretation elements incorporated into all jetty sections and on land-based approach, as well as beyond Pier 143
- Continuation of original deck level elements including timber handrails, steel balustrade, timber farrail and light poles to full length of jetty deck
- Jetty furniture and elements inspired by original elements such as rail buffer stops, timber punts and store sheds.
- Jetty-based fish-cleaning station positioned over water
- Fish & fauna friendly lighting to fishing areas, with potential for architectural lighting to jetty substructure for special events
- Inlay of original railway alignment to full length of jetty surface to interpret original commercial shipping functions of the Old Tanker Jetty

Other elements now included in the design as a result of community feedback on the Draft Concept Design (survey undertaken in September 2018) and the recommendations of the Jetty Replacement Working Group:

- The dive platform to be located at the Jetty Head with a central internal stair providing access from the main deck to the platform below
- Swap timber balustrade to south side of the Jetty and use steel guardrail on the north side of the Jetty, to better suit fishing
- Interpret the original jetty length
- Integration of indigenous cultural heritage values into the design and fabric of the Replacement Jetty
- Consideration of a new seal haul-out facility
Type 1 - Historic Section
Type 1 - Historic Section
Type 2 - Fishing Jetty
Type 3 & 4 - Jetty Widening & Jetty Head
HERITAGE INTERPRETATION NODES

- NODE 1 - Original jetty landing (Pier 1); oil supply pipes; connection with rail network; commercial operations of the jetty
- NODE 2 - ‘For the love of fishing’; adjacent to fish cleaning area; info about recreational fishing at Esperance Jetty
- NODE 3 - ‘Save the Tanker Jetty’, memorial to the community efforts to save the old structure; long-standing protest site; reference to social values
- NODE 4 - Entry control gate; design intent of Replacement Jetty
- NODE 5 - ‘Crossing over’; reference to the old beach landing and new headland
- NODE 6 - ‘How it was made’; a detailed look at the construction of the original tanker jetty, the saw-cut timber, hand-forged bolts, old piles with carpenter’s marks, old bollards & jetty toes, etc.
- NODE 7 - ‘Ravages of the environment’: impact of the teredo worm, salt water, rainwater, wind & tide; steel vs. concrete vs. timber
- NODE 8 - ‘History of the jetty’, detailed overview of history including graphic display in proposed shelter sheds
- NODE 9 - ‘Beyond Pier 14B’, history of berthing ships, Jetty Island, remaining piles and jetty footprint
- NODE 10 - ‘Beneath the deck’, overview of environmental values of marine life, bird life, potentially located on the new lower platform
Interpretation ideas

Node 1 – Tanker Jetty

Old oil pipes connecting oil tanks to the Jetty

- Furniture elements
- Sculptural or play elements
- Information displays
Node 2 – For the Love of Fishing
Near fish cleaning area, info about recreational fishing at Esperance
- Fish cleaning station and disposal site
- Information about local fish species, catch limits and size limits
- Developed in consultation with Recfish WA
Interpretation ideas

Node 3 – Save the Tanker Jetty Memorial

Meanings and associations

- Memorial to community efforts to save the Old Tanker Jetty
- Information about the issues
- A site of community protest

Jetty demolition opposed

Neil Watkinson

Nationals Member for Roe Peter Rundle believes spending more than $1.5 million on demokskiing as a State parliamentarian. Albany firm H and H Architects is developing a detailed design for a replacement jetty after last month winning a council tender with a Davey option', which he believes would cost no more than $5 million. Mr Davey is a South Australian expert who has been involved in several jetty restoration projects. "I will be interested to see what design they come up with," he said. He expressed concern about how long the design process might take and what it would produce.
**Interpretation ideas**

**Nodes 4 & 5 – Entry to the new Jetty, the old shoreline**

**Historic changes to the shoreline and jetty entry**

- Interpret original vehicle control gate (from 1966) in new jetty entry location
- Information panels about original alignment of shoreline and the construction of the new headland
- Before and After imagery of the old shoreline and the new headland
Interpretation ideas

Node 6 - How it was built

Materials and methods
- Construction methodology and the use of unskilled labour
- Saw cut timber and the carpenter’s marks
- Hand forged ironwork and cast steel elements
- Repairs
Node 7 – Ravages of the Environment

Impact of the teredo worm, salt water, rain water, wind & tide
- Real life examples of salvaged material showing the environmental impacts
- Creative re-use of salvaged material
- Information panels inset into seating
Interpretation ideas

Node 8 – History of the Jetty

Furniture and shelters inspired by original features

- Shelter shed as interpretation node
- Visitor seats inspired by old timber punts
- Visitor seats inspired by old buffer stops
- Rail tracks inlaid into deck surface
Interpretation ideas

Node 9 – Beyond Pier 143

Then and Now

* Visualisations of the old jetty based on archival photos, perhaps incorporated into balustrade down to lower platform
* Interpretation of the original jetty length using imagery to re-create the view
* Digi-glass or purpose-designed view finder which allows imagery of skeleton jetty?
Interpretation ideas

Node 10 – Beneath the Deck

Overview of environmental values of marine life, bird life, etc.

• Information about the environmental values
• Diving guidelines
• A site of community protest
Heritage Impact Statement

Heritage Listings:
Tanker Jetty, Esperance was first adopted on the Shire of Esperance's Municipal Heritage Inventory in 1996 and was permanently en-
terted on the State Register of Heritage Places in 2006. The place currently has the special protection of a Conservation Order placed by the Heritage Minister Hon. Albert Jacob, MLA (dated 19th December 2016).

Statement of Significance:
The State Register of Heritage Places Permanent Entry for Tanker Jetty, Esperance, provides the following Statement of Significance for the place:
Tanker Jetty, Esperance, a predominantly timber jetty of approximately 670 metres in length which projects out into Esperance Bay in a south easterly direction, has cultural heritage significance for the following reasons:

The place is valued by the community as it has been the site of commercial, social and recreational pursuits since its construction, and for its association with the period of economic growth in the region in the 1930s and the development of local industries since that time. The place is significant for bringing employment to many workers in the vicinity during the period of economic depression in the 1930s, and is associated with the government's efforts to employ destitute men in a variety of jobs during this time.

Significance and Description of Specific Building:
The following description comes from the Assessment Documentation and observations made onsite:
The design was typical of modest and utilitarian timber structures designed by the Public Works Department of WA in the 1930s. It demonstrates a degree of resourcefulness and the ability to construct functional structures using available materials.

The deck was constructed from timber and included a timber gangway placed on the south side of the jetty, a timber shed located on the north side of the jetty and a timber cabin located on the north side of the jetty.

Heritage Impacts:
The following works are proposed to the place. Where aspects of the proposal could detrimentally impact on the heritage significance, the reasons are explored as well as the measures to be taken to mitigate impacts:

The following outlines the proposed works in detail and their impact on the heritage values of the place:

EXISTING TANKER JETTY

It is proposed to demolish the existing Tanker Jetty, Esperance, to make way for the construction of the Replacement Jetty, which is intended to align with the footprint of the 1935 Jetty.

The existing Tanker Jetty, Esperance is in poor condition and has been condemned due to the significant failure of the structure. It is recognized that there is no feasible repair options for the jetty which is currently being managed as a rural

The removal of the fabric of the jetty will have a significant impact on the aesthetic and integrity of the place, although it is acknowled-
ged that the jetty length between Pilis 143 and 192 has previously been demolished and much of the fabric that remains is the result of repair campaigns undertaken since the 1990s, including full renewal of the pile caps, bracing, ballast and the covering of the original deck surface with concrete.

Maintaining the original current alignment of the Tanker Jetty, Esperance assists in retaining its historical and aesthetic values, as this is part of its original expression in the seascapes of Esperance Bay and contributes to the landscape qualities of the place. Allowing the new structure to follow the alignment of the original structure will ensure that an understanding of the original context and setting of Tanker Jetty, Esperance can be maintained, in particular, its location off Heriot’s Point, and its relationship with the original rail infrastructure that was a key function of the original Jetty, and is no longer extant.

It is proposed to retain the original structural footprint of the Tanker Jetty, Esperance, with retention of the original pile locations to be maintained.

It is proposed to salvage material during the demolition of Tanker Jetty, Esperance, to provide material for re-use in construction of non-

EXTRUDED TANKER JETTY

It is proposed to construct the new Tanker Jetty, Esperance, on the same alignment as the original jetty, with the new structure to be constructed in the same alignment as the original jetty.

The new structure will be constructed using modern materials and techniques, and will be designed to align with the existing structure in terms of its alignment and function.

The new structure will be constructed, albeit using steel sections in lieu of timber to assist in achieving a higher design life. The bracing and ballastings are for aesthetic purposes only, and are not required structurally, so these are proposed to be in timber, like the original. Simple flanged steel members will allow these elements to be easily replaced as part of future programmed maintenance.

The original piles were spaced at 4600mm spacings, but it is proposed for the new piles to be at 9200mm intervals, to achieve a consistent pile spacing for the length of the jetty.

The railing pile works were a key feature of the structural design of Tanker Jetty, Esperance as well as being a characteristic feature of the architectural expression of the structure. The diameter of the piles, their batter and their headstock flanges are all important aspects of the original design intent that are proposed to be reinterpreted in the new structure. The new steel piles will have a diameter that closely matches the original proportions of the original timber piles and will be rounded to match.

Each jetty head in the original design also featured a central straight pile which was designed to support the central railway track. Once the old straight piles were no longer required, the central piles became redundant, and they were no longer replaced as part of other re-piling works conducted at the jetty. As the central piles were purely functional elements, and are still not required for any structural function, the jetty heads in the historic section will not include central piles.

The railway track was installed to the centre of the deck, splitting into multiple tracks at Pilis 148 where the deck width increases. The track consisted of standard gauge standard gauge rail with a 50 kg/m rail, forming a single track for the replacement jetty, which will have a similar alignment as the original jetty.

The new structure will feature a new structural footprint that is in line with the existing structure, with the new structure to be constructed in the same alignment as the original jetty.
• The jetty is noted to be characterised by its wide berths (5m*) that span the full width of the jetty (15m*), treated at each end with hot tar and fixed down using hanging rope fastenings. It is proposed to utilise timber decking to the "Type 1 - Historic Section" in order to provide shelter to the users who are using the jetty, and promotes the creation of a safe and accessible environment valued by the community. This material has potential cost and maintenance implications, and therefore it is considered most practical to use timber in the shallow water section of the jetty.

• A timber deck (5m*) along the horizontal section of the jetty on both sides, fixed down with bolts and joined by neatly arched joints. It is proposed to re-create the timber berthing on the "Type 1 - Historic Section" using timber of similar dimensions and profile, and possibly extend it through for the full length of the jetty. To assist in extending the life of the timber sections, it is proposed to fit LR 200 to the timber deck surfaces in the area of the new jetty berthing. Interpretation Notice 3 will include a creative element inspired by the old pipe line and information panels about the original commercial operations of the jetty.

• The metallic frame on one of the jetty sections on the shoreline detailing how the jetty transitioned from land to sea. The abutment consists of a sheet pile retaining wall with piles spaced every 7.8m and the resulting walls lined with timber board cladding. The transition between sea and land has changed considerably over the years, particularly with the removal of the new jetty deck and rock revetment immediately to the jetty landing in 2011, which has removed the breakwater in this zone. A narrow gap then formed the access bridge between the jetty and the forest between 2011-2015. It is proposed to temporarily modify the existing revetment to allow new jetty piles to be headled so that the new jetty deck can bridge this area to the most cost effective way (ie, rather than a long asparagus span between the headland and the first pier). The first section of the jetty will also include some Interpretation elements (see Interpretation Notice 4 & 5) including a representation of a new deck landing set into the surface, with rocks retaining the headland in lieu of the sheet piling.

• There was previously a timber gate to access control to the jetty for trams/vehicles (c.1936) and it is proposed to reintroduce this gate in some form to control vehicle access on to the Replacement jetty. It is required by the Shore. The original gate was a mod- ulation construction which did not limit pedestrian access. A new barrier at the jetty entry will assist in preventing unauthorized vehicle entry onto the jetty, whilst still ensuring accessibility for pedestrians and mobility scooters, etc. It is proposed to utilise a stainless steel gate from the old jetty to make some space fall-down ballasts at the jetty landing. It is proposed to re-create a widened section of deck at the Jetty Head to create a large platform area at the termination of the Jetty. As per the 1953 design. The widened area allows for the introduction of visitor shelters (inspired by the design of the original Store Sheds from 1933) and also a lower platform for deep water fishing close to the water line. The Type 4 section of the Jetty is pro- posed to be approximately 10m wide (existing established structural spans between piles) and will allow for a flexibility of uses at the new Jetty Head. Refers to interpretation note 8, which will be a part of the new jetty design. Inspired by the 1935 Store Sheds, fitted out with Interpretation panels and seating focused on the early history of the Jetty.

• The original 1935 jetty featured a very wide landing between Piers 150 – 152, which were accessible from the main deck via a wide flight of external steps that were positioned between both piles (5m* below) above the lower water mark (1.2m* below) and the bedroom access walkway connected to the jetty. The bedroom access walkway and flight of steps were part of the original 1935 jetty. Reinstating this feature would also allow for re-introduction of a significant social use of the jetty, as this platform was highly favoured as a fishing spot. Access to the lower platform will be via an internal stair positioned centrally at the Jetty Head, similar to the original design. The lower platform will be supported on its own piles and will have a stainless-steel framework and a deck made of Fibre Reinforced Plastic (FRP) to salt its position close to the waterline. The access stair is likely to be constructed of the same materials. It is proposed to integrate Interpretation panels into the upper and lower portions of the stairs to the platform (see Interpretation Notes 8 & 10) as these are new elements and may offer different viewing points seawards, towards the original Jetty Head. It is proposed to create a simplified and more contemporary interpretation of the original structural expression of Tarner Jetty, Epen- terent Yards, and the Jetty Head (inspired by the type of 2 - Fishing Jetty), which is proposed to form the main length of the Replacement Jetty. This includes:

- Retaining raised platforms, but maximising their structural spans to 9.2m* spacings, the "Type 2 - Fishing Jetty" is intended to be a more contemporary form for the raised platforms on the new jetty, but retaining key aspects of the original jetty, retaining the position of the new jetty landing, creating a stepped structural pragmatism to maximise span length and weight. The timber decking is replaced by concrete deck, and the jetty berms are simplified, retaining the appearance of the corbels and stringer beams to the outer elements, but without the timber bracing and fastening materials. The structural form of the new jetty design will create a new identity.

- The timber profile and detailing and the steel guardrail will be continuous through this section, to achieve visual design consistency for the length of the jetty.

• At the seaward end of the jetty, it is proposed to widen the deck ("Type 3 - Deck Widening") to create a wider Jetty Head ("Type 4 - Jetty Head"). These sections are designed to be constructed like "Type 2", utilizing more modern materials in a simplified interpretation of the Original Jetty, Tarner.

- Tarner Jetty, Experience had an elongated Jetty Head designed to accommodate berthing ships in the deep water. It is proposed to interpret this important original functional jetty of the Jetty in the design of the Replacement Jetty, with a Jetty Head form that is inspired by the original, albeit without the requirement to actually accommodate ships. The 1935 design had a core arrangement of berms and piles to create headlands at the Jetty Head, with a distinctive curved form at its termination. In the 1950s this Jetty Head was modified to create a Raised Jetty Head, with an extended end for additional berths, but nonetheless the position of the changes to the structure is proposed to interpret either the 1935 or 1950s Jetty Head in the design of the Replacement Jetty.

The additional interpretation of Jetty headlands will be accommodated with a new compartment of interpretation panels that will be used to explain aspects of the jetty’s early history.

The widened area allows for the introduction of visitor shelters which are proposed to be modest interpretation designed by the inspiration of the original Store Sheds from 1935, which will provide basic sheltering as well as an opportunity to create an Interpretation Node focusing on the history of the jetty.
Conclusion

The new jetty proposed to replace the Esperance Tanker Jetty will have both negative and positive impacts on the identified heritage values of this place. In the first instance, the existing Esperance Tanker Jetty needs to be de-embued to allow for the new Replacement Jetty to be constructed. This will have significant impacts on the authenticity and integrity of the place, and obviously represents the potential loss of original and early fabric, although a significant proportion of the jetty fabric is proposed to be salvaged for re-use in non-structural applications.

These negative impacts are offset by some significant positive heritage outcomes. The Replacement Jetty has been carefully designed to respond to the identified aesthetic, historic and social values of its predecessor, with the original design, structural expression and materiality used to inform the design of the new Jetty berths, the jetty alignment, its width, and its fine grain detail. Further to this, the interpretation of the heritage values has been carefully integrated into the design of the structure, with the reinstatement of many original features that have been lost or lost to time, now possible. The current social values relating to the place as a well-loved site for recreational fishing and diving, and as a site of social protest, can also be explored and recognised with the new Jetty. Most importantly, the Replacement Jetty allows for the Jetty to be used again by the community and therefore ensures a continuation of the important social, historic and aesthetic values into the future.

In its current state, the Esperance Tanker Jetty is no longer safe for use (closed since 2013), nor can it be feasibly repaired. Its failing condition is also having negative impacts on its integrity, its authenticity and its heritage values. The Community Survey undertaken in September 2018 has shown strong support for a Replacement Jetty, with the community keen to have a new jetty for them to use and share with future generations. The place is closely linked with their local identity and sense of place, and the degradation of the Esperance Tanker Jetty over time has been a source of considerable sport and division in the community.

References:

Register of Heritage Places Permanent Entry and Assessment Documentation, prepared by Prue Griffin, Historian, and Idris Kees, architect of KTA Partnership, with amendments and/or additions by HCWA staff and the Register Committee, 26 August 2008
Australia ICOMOS Burra Charter, 1999
Archival drawings, FWD WA Drawing set 27418 dating from 1933 – 1950
Beneath the Deck, The Esperance Tanker Jetty by Ailshia Orr & Sarah Fitzgerald, 2017
21 August 2018

Ms Julie De Jong
H+H Architects
julie@hharchitects.com.au

Dear Ms De Jong

ESPERANCE TANKER JETTY

Thank you for your email of 25 July 2018 regarding the following proposed development at:

Place Number: P831
Place Name: Esperance Tanker Jetty
Street Address: The Esplanade, Esperance
Development Description: Draft Concept Plan for Replacement Jetty

We received a drawing package and a Heritage Impact Statement prepared by H+H Architects.

As Esperance Tanker Jetty is in the State Register of Heritage Places, the proposed development has been considered in the context of its identified cultural significance and the following preliminary comments are given:

1. The proposed concept for the replacement jetty is an acceptable design. It appropriately interprets the original 1935 design whilst providing for a new jetty that will characterise the structure’s social value to the community.

2. Consideration should be given to the following aspects of the project:
   a. Demolition methodology that will ensure maximum lengths of salvageable timbers from the existing jetty structure and the least impact on the piles retained in situ.
   b. Information such as photographs and drawings should be compiled for the photographic archival record of the jetty structure that will be required prior to the demolition of the original jetty.

3. The Heritage Council requests that a strategy for the interpretation of the Jetty’s former length be developed, perhaps through lighting or other appropriate means.

4. The Heritage Council wishes to commend the Shire for its commitment to developing an appropriate solution and working with H+H Architects on the resulting design.

Should you have any queries regarding this advice please contact Adelyn Siew at adelyn.siew@dp/wa.gov.au or on 6652 4123.

Yours sincerely,

Anne Arnold
CHAIR
20 February 2019

Chief Executive Officer
Shire of Esperance
ceo@esperance.wa.gov.au

Dear Sir,

ESPERANCE TANKER JETTY

We received an email from H+H Architects on 23 January 2019 regarding the following proposed development at:

Place Number       P0831
Place Name          Esperance Tanker Jetty
Street Address      The Esplanade & Norrman Road, Esperance
Development Description Final Concept Design

We received the following information/drawings prepared by H+H Architects dated January 2019:

Final Concept Design Report
Stakeholder Presentation

As Esperance Tanker Jetty is in the State Register of Heritage Places, the proposed development has been considered in the context of its identified cultural significance and the Heritage Council resolved to provide the Shire of Esperance with the following comments:

Findings

1. The Final Concept Design Report for the replacement Tanker Jetty, Esperance, appropriately interprets the original 1935 design and subsequent historical evolution, whilst providing for a new jetty that will maintain the place’s social value to the community and respect its historic value.

2. The proposed replacement structure will mitigate the impact of demolition of the existing jetty by:

   o interpreting significant elements of the original design, alignment and historical evolution of the Tanker Jetty structure; and

   o enabling continued use as a jetty, retaining the significance of the place as a site valued by the community for social and recreational pursuits.

3. Further information is to be provided for the consideration of the Heritage Council by the Shire of Esperance at the detailed design stage:

   a. Demolition methodology that will provide for the salvage of timbers from the existing jetty structure of maximum lengths and/or containing significant markings.

   b. Location and impact of new piles on the remnant existing piles which are to be retained in situ to interpret the original alignment.

   c. Details of the implementation of the interpretation nodes and the way in which the proposed new interpretation elements relate to the existing interpretation.

   d. Details on elements that require modification to achieve compliance with the National Construction Code.

Should you have any queries regarding this advice please contact Adelyn Siew at adelyn.siew@dolph.wa.gov.au or on 6552 4123.

Yours faithfully

Anne Arrid
CHAIR

CC Julie de Jong, H+H Architects, julie@harchitects.com.au

State Heritage WA

info@stateheritage.wa.gov.au

State Heritage WA

info@stateheritage.wa.gov.au
20 February 2019

Chief Executive Officer
Shire of Esperance
ceo@esperance.wa.gov.au

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   b. Location and impact of new piles on the remnant existing piles which are to be retained in situ to interpret the original alignment.
   c. Details of the implementation of the interpretation nodes and the way in which the proposed new interpretation elements relate to the existing interpretation.
   d. Details on elements that require modification to achieve compliance with the National Construction Code.

Should you have any queries regarding this advice please contact Adelyn Siew at adelyn.siew@dph.wa.gov.au or on 6552 4123.

Yours faithfully

Anne Arnold

CHAIR

CC Julie de Jong, H+H Architects, julie@hharchitects.com.au
17. MATTERS BEHIND CLOSED DOORS

Item: 17.11

Construct Coomalbidgup Bush Fire Brigade Facility

CONFIDENTIAL ITEM

This report is considered confidential in accordance with the Local Government Act 1995, as it relates to a contract entered into, or which may be entered into, by the local government and which relates to a matter to be discussed at the meeting (Section 5.23(2)(c)).