

2019 RIA Asset Management System Review- Post review implementation plan

Recommendation reference	Process and policy deficiency / Performance deficiency	Auditor's recommendation	Action proposed to be taken by the licensee	Responsible
01/2019	<p>B2 Asset Planning – Does the asset management plan cover all key requirements?</p> <p>The Multi Utility Asset Management Plan (MUAMP) is review each year and is a very comprehensive and large document. For efficiency reasons RIA propose to extend the review period from 1 year to 2 years.</p>	<p>1. Agree and get sign off on the proposed extended frequency of review and document accordingly.</p> <p>2. Determine and action accordingly if it is more efficient to break the MUAMP document out into separated documents for respective utility assets.</p>	<p>June 2021- RIA is recruiting a Project Manager for the development of its own Asset Management System with appointment envisaged by December 2019.</p> <p>The relevant asset management plans will be progressively (and separately) produced through 2020 to June 2021, in that addressing this recommendation.</p>	Director Infrastructure
02/2019	<p>B2 Asset Planning - Have the lifecycle costs of owning and operating assets been assessed?</p> <p>The Life Cycle Costing (LCC) model uses predicted costs and actual costs are not always recorded</p>	<p>Capture actual operational and maintenance costs of electricity production and regularly review against forecasted values</p>	<p>December 2021- RIA's own Asset Management System will be capable of performing this function.</p>	Director Infrastructure
03/2019	<p>B2 Asset Planning - Have the likelihood and consequences of asset</p>	<p>Assess and document the residual risk for risks identified in the ERMP</p>	<p>June 2021- RIA to amend ERMP to include reporting of residual risk.</p>	Manager Internal Audit and Risk

	<p>failure been predicted?</p> <p>The Enterprise Risk Management Plan (ERMP) does not report residual risk after the application of controls</p>			
04/2019	<p>B2 Asset Planning – Are the plans being regularly reviewed and updated?</p> <p>The MUAMP does not clearly articulate the review cycle of every 2 years</p>	<p>Develop a document review program and articulate the process in respective management plans.</p>	<p>RIA is recruiting a Project Manager for the development of its own Asset Management System with appointment envisaged by December 2019. The relevant asset management plans will be progressively (and separately) produced through 2020 to June 2021, in that addressing this recommendation.</p>	<p>Director Infrastructure</p>
05/2019	<p>B2 Asset Planning - Is the capability of the plant adequate to meet future demand?</p> <p>The review found that the network is not N-1 compliant. N-1 refers to an abnormal situation in which one asset that otherwise contributes to the system is out-of-service; the analysis is conducted under the assumption that the asset with the largest impact is out-of-service, thereby identifying the most conservative outcome.</p>	<p>1. Develop a software model of the electricity network. 2. Prioritise a risk review of the power system reliability and capacity requirements. 3. Consider larger transformers in future asset replacement plans</p>	<ol style="list-style-type: none"> 1. December 2020 - In October 2019 RIA engaged an Electrical Engineering firm to provide a software model to assist with the assessment of the existing capacity and an impact of future requirements. The software model will also include load flow and fault analysis. 2. December 2020- The RIA shall review the power system reliability and capacity requirements . 3. December 2020- The aging HV network cables shall be augmented. The RIA is installing a 	<p>Director Infrastructure</p>

			duplication of HV cable's between the powerhouse and Windfarm.	
06/2019	<p>A2 Asset Creation & Acquisition - Do evaluations include all life-cycle costs?</p> <p>Actual operational and maintenance cost are not always captured.</p>	Capture actual operational and maintenance cost of electricity production and regularly review against forecasted values.	December 2021- RIA's own Asset Management System will be capable of performing this function to a high level. Under the current maintenance contract with PFM due to expire 2024, RIA is not privy to PFM's routine maintenance costs for electrical infrastructure.	Director Infrastructure
07/2019	<p>B2 Asset Disposal - Are underutilised and underperforming assets identified as part of a regular systematic review process?</p> <p>The LCC model only focuses on the assets in the Powerhouse. No other evidence of other underutilised and underperforming assets processes were provided.</p>	<ol style="list-style-type: none"> 1.Continue with identification of legacy cable and joint locations. 2.Update network drawings to show cable and joint locations. 	<p>Ongoing-</p> <ol style="list-style-type: none"> 1. HV cables are identified, location of underground joints is impossible to identify. 2. HV Single Line Diagrams (SLDs) were updated in September 2019. 3. albeit aged no asset is performing below requirement 	Director Infrastructure
08/2019	<p>B2 Asset Disposal - Is there a replacement strategy</p>	Develop a program to identify underground legacy cables and joints and plan for their replacement.	Ongoing- As 07/2019 Above RIA's current plan is to duplicate the Northern HV main with a new	Director Infrastructure

	<p>for assets?</p> <p>There is an active program to replace wooden poles but no documented plan to replace aged underground legacy cables</p>		<p>cable – and thus allow for a ring configuration - by December 2020 thus providing additional capacity and redundancy.</p>	
09/2019	<p>B2 Asset Operations - Are operational costs measured and monitored?</p> <p>Some operational costs are monitored and captured on separate spreadsheets with in some cases predicted values used.</p>	<p>Capture actual operational costs of electricity production.</p>	<p>November 2019- RIA received report from ACIL Allen detailing costs of generation and distribution. production. RIA's own Asset Management System will be capable of performing this function to a high level. Under the current maintenance contract with PFM due to expire 2024, RIA is not privy to PFM's routine maintenance costs for electrical infrastructure.</p>	<p>Director Infrastructure</p>
10/2019	<p>B2 Asset Maintenance - Are the maintenance costs measured and monitored?</p> <p>Some maintenance costs are captured and noted in a separate spreadsheet. Information on labour hours and parts is entered into Navision, a system that is separate from Maximo</p>	<p>Capture actual maintenance costs of electricity production.</p>	<p>November 2019- RIA received report from ACIL Allen detailing costs of generation and distribution. production. RIA's own Asset Management System will be capable of performing this function to a high level. Under the current maintenance contract with PFM due to expire 2024, RIA is not privy to PFM's routine maintenance costs for electrical infrastructure.</p>	<p>Director Infrastructure</p>
11/2019	<p>B3 Asset Management Information System - Does the physical security access control appear adequate?</p> <p>All assets inspected had</p>	<p>1. Formal notification to be sent to PFM from RIA highlighting non-compliance to electricity safety standards (maintain the security of assets with reference to unlocked main switchboard).</p>	<p>June 2020</p> <ol style="list-style-type: none"> 1. RIA to send formal notification off noncompliance (e.g. unlocked switch board); and 	<p>Director Infrastructure</p>

	mechanical devices fitted for locking. A main switchboard outer cabinet was found to be unlocked, all others were secure.	2.Appropriate training to be provided to relevant personnel regarding asset security.	2. Request PFM to detail security asset procedures and training for personnel	
12/2019	<p>B1 Risk Management - Are risks documented in a risk register and are treatment plans actioned and monitored?</p> <p>Appropriate high level risk were identified and treatments listed in the Power Risk Matrix. Risk ratings were determined however future action and risk owner were not clearly defined which may lead to confusion of implementation.</p>	Provide clear single responsible person or position as being responsible for the implementation of hazard treatments in the Power Risk Matrix register	June 2020 - the RIA shall review PFM Power Risk Matrix and ensure responsibility is allocated to risks and future actions to a person or position.	Director Infrastructure
13/2019	<p>B2 Capital Expenditure Planning - Is the capital expenditure plan consistent with the asset life and condition identified in the asset management plan?</p> <p>The underground paper-lead cables are legacy technology and are subject to failure at the joints. This ageing asset may not be adequately reflected in the capital expenditure plan, however, it will get assigned to capital expenditure if RIA align with PFM. Clear supporting evidence of the plan being supported by current asset</p>	<p>1.RIA to interrogate the PFM provided detailed condition reports including estimated remaining operating life to support in confirming asset capital replacement planning, including the paper-lead cables.</p> <p>2.RIA to revise their capital expenditure plan and commence actions to secure appropriate future capital expenditure to meet the requirements of the updated plan</p>	<ol style="list-style-type: none"> 1. By December 2020, the RIA shall review the PFM detailed condition reports including estimated remaining operating life and confirm asset capital replacement planning, including the paper-lead cables. 2. The RIA shall finalise the capital replacement plan by December 2020. 3. The RIA shall commence seeking funding for capital replacement by June 2021. 	Director Infrastructure

	<p>condition reports with future asset life expectancy was not sighted</p> <p>A high level of reliance on emergency back-up (mainly portable generators) was evident</p>			
14/2019	<p>B1 Review of AMS - Is there a review process in place to ensure that the asset management plan and the asset management system described therein are kept?</p> <p>The MUAMP does not mandate a set review period.</p>	<p>Insert requirement in MUAMP that this document is reviewed every 2 years.</p>	<p>June 2020- the RIA shall update the MUAMP to include a review date of every two years.</p>	<p>Director Infrastructure</p>
15/2019	<p>C3 (1.4) Asset Planning - Non asset options (E.g. demand management) are considered</p> <p>Through inquiry and walkthrough with the Asset Manager, it was noted that PFM has implemented a system called COMEC which monitors power usage and demand, and controls engines and power supply on Rottnest Island. Therefore, the site has an active system in place automatically controlling assets to dynamically adjust the system to site demand levels.</p> <p>No evidence was found on RIA formally considering non-asset</p>	<p>RIA should formally consider non-asset options in its asset planning processes, i.e. demand side management instead of assets to increase the supply side capacity.</p>	<p>June 2021- the RIA shall have considered non-asset options in its asset planning processes.</p>	<p>Director Infrastructure</p>

	options in its asset planning processes, i.e. demand side management instead of assets to increase the supply side capacity.			
16/2019	<p>C3 (1.5) Asset Planning - Lifecycle costs of owning and operating assets are assessed</p> <p>A Life cycle costing (LCC) model is maintained by PFM and reviewed on a quarterly basis. This model details asset information, risk assessment and serviceability on major assets e.g. Generators, HV Power distribution, Wind Turbine. However, it was noted that the LCC does not provide detailed and actual lifecycle costing to operate individual assets at an engineering level.</p>	<p>It is recommended that life cycle costing of assets are prepared and reviewed on a key individual asset level (e.g. generator No 1). This should capture actual operational and maintenance costs of the assets which can then be regularly reviewed against forecasted values. This would inform planning for the future years on assets requiring increased maintenance due to age or network changes e.g. renewable solutions (wind and solar) added to the network, which in turn impact the load of existing assets.</p>	<p>June 2021- RIA shall have prepared life cycle costings at a key individual asset level.</p>	<p>Director Infrastructure</p>
17/2019	<p>B3 (1.9) Asset Planning - Asset management plan is regularly reviewed and updated</p> <p>It was noted that the Multi Utility Asset Management Plan 2016-2010 (finalised December 2016) has not been reviewed for over two and a half years at the time of review. It was also noted that the expectation on the frequency of review is not</p>	<p>1. The review frequency should be established and documented on the Multi Utility Asset Management Plan. 2. The Strategic Asset Management Plan and MUAMP should be updated in 2019.</p>	<p>June 2020</p> <ol style="list-style-type: none"> 1. The RIA shall update the MUAMP to include a review date of every two years. 2. RIA shall review the MUAMP 	<p>Director Infrastructure</p>

	outlined. Furthermore, the Strategic Asset Management Plan 2016-2017 (authorised September 2016) is outdated and some minor content within the document was noted to be outdated at the time of review.			
18/2019	<p>B3 (2.2) Asset creation and acquisition - Evaluations include all life-cycle costs</p> <p>Two RIA Business Case templates are available for use; Project short form (\$50k - \$250k) and Project long form (over \$250k). The two Business Cases sighted include areas such as investment proposal, scope (including cost benefit analysis) and a finance plan. However, no evidence was sighted on consideration of detailed break-down of lifecycle costs on operations and maintenance.</p>	Consider capturing actual operational and maintenance cost of electricity production and regularly review against forecasted values.	December 2021- RIA's own Asset Management System will be capable of performing this function to a high level. Under the current maintenance contract with PFM due to expire 2024, RIA is not privy to PFM's routine maintenance costs for electrical infrastructure.	Director Infrastructure
19/2019	<p>C3 (2.5) Asset creation and acquisition - Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood</p> <p>RIA maintains an Electrical, Water, Gas Licence Compliance Register which lists high-level compliance requirements and timing.</p>	Consider identification, monitoring and reporting of ongoing legal / environmental and safety obligations from an asset management level.	June 2021- the RIA shall align obligations register to asset management system.	Director Infrastructure

	<p>However, no evidence was found on the identification, monitoring and reporting of ongoing legal / environmental and safety obligations from an asset management level.</p>			
20/2019	<p>B3 (3.3) Asset Disposal - Disposal alternatives are evaluated</p> <p>PFM's Asset Disposal Procedure outlines the options available to dispose of assets, including sale by tender, auction or direct sale, salvage parts to use as spares, scrapping or donations. Professional valuation is performed to determine market value of an item before disposal. However, based on inquiries with the Asset Manager, it was noted that disposal alternatives are assessed on an ad-hoc, as needs basis by PFM staff, depending on the asset type.</p>	<p>PFM's Project Disposal Form should include at least one or two disposal alternatives, and the advantages or disadvantages of these alternatives. This will ensure that due diligence has been taken when disposing of assets.</p>	<p>December 2020- RIA shall review of project disposal form to include alternative options.</p>	<p>Director Infrastructure</p>
21/2019	<p>C3 (4.3) Environmental Analysis- Compliance with statutory and regulatory requirements</p> <p>RIA maintains an Electrical, Water, Gas Licence Compliance Register which lists high-level compliance requirements and timing. However, no evidence was found on the identification, monitoring and reporting of ongoing regulatory obligations.</p>	<p>Consider identification, monitoring and reporting of ongoing regulatory obligations.</p>	<p>October 2020- RIA is planning to implement a compliance monitoring system that shall capture reporting obligations.</p>	<p>Director Environment Heritage and Parks</p>

22/2019	<p>B3 (8.2) Risk management- Risks are documented in a risk register and treatment plans are implemented and monitored</p> <p>The Rottnest Island Power Risk Register outlines detailed risks on an individual asset level. The Programmed Risk Management Framework is applied to this register which includes assessing the severity, likelihood, inherent risk, mitigation options, action plan and responsible owners of each individual asset risk. The most recent risk assessment was performed in April 2019. However, no evidence could be sighted on the Power risk register of individual action owners being assigned and treatment plans being implemented and monitored.</p>	Assign individual action owners to the risks on the Power Risk Register and document evidence of regular monitoring of treatment plans.	June 2020- the RIA shall review PFM's register and request that the register assigns individual asset owners.	Director Infrastructure
23/2019	<p>C3 (11.3) Capital expenditure planning- The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan</p> <p>A Life cycle costing (LCC) model is maintained by PFM and reviewed on a quarterly basis. This model details asset information, risk assessment and serviceability on major assets e.g. Generators, HV</p>	It is recommended that life cycle costing of assets are prepared and reviewed on a key individual asset level (e.g. generator No 1). This should capture actual operational and maintenance costs of the assets which can then be regularly reviewed against forecasted values. This would inform CAPEX planning for the future years on assets requiring increased maintenance due to age or network changes e.g. renewable solutions (wind and solar) added to the network, which in turn impact the load of existing assets.	June 2021- the RIA shall have prepared life cycle costings at a key individual asset level.	Director Infrastructure

	Power distribution, Wind Turbine. However, it was noted that the LCC does not provide detailed and actual lifecycle costing to operate individual assets to inform accurate CAPEX planning for the future years based on the asset age and condition.			
24/2019	<p>B3 (12.1) AMS Review- A review process is in place to ensure the asset management plan and the asset management system described in it remain current</p> <p>MUAMP 2016-2020 was last updated in December 2016. SAMP was last updated in July 2016.</p>	Timely review and update (e.g. every two years) of the MUAMP and SAMP to ensure information described in these documents remains current.	June 2020- the RIA is recruiting for Enterprise Asset Management System Project Manager who will require some time to familiarise and learn the islands systems, practices and processes and to establish to new role. This role will lead review of the MUAMP and SAMP.	Director Infrastructure