

Key Process	Outcome	Effectiveness Criteria	Consequence	Likelihood	Inherent Risk	Existing Controls	Review Priority	Review approach	Findings	Effectiveness	Recommendations
<b>1. Asset planning</b> Asset planning strategies are focused on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price).	Integration of asset strategies into operational or business plans will establish a framework for existing and new assets to be effectively utilised and their service potential optimised.	<ul style="list-style-type: none"> <li>Planning process reflects the needs of all stakeholders.</li> <li>Service levels are defined.</li> <li>Likelihood and consequence of asset failure are predicted.</li> <li>Impacts on reliability and quality of supply are assessed.</li> </ul>	2	B	Medium	M	4	<ul style="list-style-type: none"> <li>Assess the adequacy of the asset planning process.</li> <li>Assess the adequacy of the asset management plan.</li> <li>Assess whether the asset management plan is up-to-date and implemented in practice.</li> <li>Assess whether the plan clearly assigns responsibilities and whether these have been applied in practice.</li> </ul>	No formal AMP exists. Planning occurs as a sub-element of mining expansion projects and consultants are engaged to perform the planning process. The consultants use Engineering Standards to the design planned systems.	3	Formalise an AMP and define service levels.  Strategy to be formalised in the next 6 months and implemented over the next 12 months in line with budgetary guidelines. Responsible: BH
<b>2. Asset creation and acquisition</b> Asset creation/acquisition means the provision or improvement of an asset where the outlay can be expected to provide benefits beyond the year of outlay.	A more economic, efficient and cost-effective asset acquisition framework which will reduce demand for new assets, lower service costs and improve service delivery.	<ul style="list-style-type: none"> <li>Full project evaluations are done for all new assets including life cycle costs.</li> <li>Projects reflect sound engineering and business decisions.</li> <li>Commissioning tests are documented and completed.</li> <li>Ongoing legal/environmental/safety/maintenance obligations are assigned and understood.</li> </ul>	2	C	Medium	M	4	<ul style="list-style-type: none"> <li>Assess the adequacy of policies and procedures covering the creation and acquisition of assets.</li> <li>Select a sample of creations/acquisitions over the review period and confirm that adequate procedures have been followed and actual costs are as predicted.</li> </ul>	Standard Engineering Specifications detail the methods of procurement, DDI and plant requirements. These specifications are reviewed regularly. New assets are entered into local asset registers after the contractor supplies a construction notice and the new plant is inspected before commissioning. Commissioning tests are stored on site.	5	Nil
<b>3. Asset disposal</b> Effective asset disposal frameworks incorporate consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets. Alternatives are evaluated in cost-benefit terms.	Effective management of the disposal process will minimise holdings of surplus and under-performing assets and will lower service costs.	<ul style="list-style-type: none"> <li>Non-utilised assets are identified as part of a regular review.</li> <li>Disposal alternatives are identified.</li> <li>Decommissioning procedures are evaluated.</li> <li>There is a replacement strategy for assets.</li> </ul>	1	C	Low	M	5	<ul style="list-style-type: none"> <li>Determine whether unnecessary assets are identified.</li> <li>Select a sample of disposals over the review period and confirm that adequate procedures have been followed.</li> </ul>	Customers are on radial supplies with online monitoring for load usage. In addition, transformers are periodically load checked.  Decommissioned assets are all returned to a central stores dept for refurbishment, reuse or disposal. No spares list was available.  Decommissioning is done as part of the mining projects. Asset lives are longer than the mine life. NIW does not have a replacement strategy for aged assets.	1	Develop, maintain and distribute a list of available and required critical spares to avoid disposing of critical or retaining unnecessary plant. High level disposal plans for electrical plant should be included in the AMP.  To be implemented in the next 6 months. Responsible: BH

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<b>4. Environmental analysis</b> Environmental analysis examines the asset system environment and assesses all external factors affecting the asset system.	The asset management system regularly assesses external opportunities and threats and takes corrective action to maintain performance requirements.	<ul style="list-style-type: none"> <li>Opportunities and threats in the environment are assessed.</li> <li>Compliance with statutory and regulatory requirements.</li> </ul>	2	C	Medium	M	4	<ul style="list-style-type: none"> <li>Investigate any breaches and assess corrective action taken.</li> <li>Review the adequacy of reporting and monitoring tools.</li> </ul>	Environmental Impact Assessments are done as part of the overall mine project of which the electrical component is a small part. Local environmental conditions are recorded and used for the purchasing of equipment.	5	Nil
<b>5. Asset operations</b> Operations functions relate to the day-to-day running of assets and directly affect service levels and costs.	Operations plans adequately document the processes and knowledge of staff in the operation of assets so that service levels can be consistently achieved.	<ul style="list-style-type: none"> <li>Operational policies and procedures are documented and linked to service levels required.</li> <li>Risk management is applied to prioritise operations tasks.</li> <li>Assets are documented in an Asset Register including asset type, location, material, plans of components, an assessment of assets' physical/structural condition and accounting data.</li> <li>Operational costs are measured and monitored.</li> <li>Staff receive training commensurate with their responsibilities.</li> </ul>	3	B	High	S	2	<ul style="list-style-type: none"> <li>Assess the adequacy of policies and procedures covering operations functions.</li> <li>Assess the adequacy of staff resourcing and training.</li> <li>Confirm the policies and procedures have been followed during the review period by testing of asset register, observation of operational procedures, analysis of costs, etc.</li> <li>Assess the significance of exceptions identified and whether adequate corrective action has been taken.</li> </ul>	OEM manuals are stored on site and SLDs were made available. SAP is used to plan works in advance and track costs. Registers of qualified personnel are also kept on site. Inspections are carried out on a routine basis as organised by SAP. No formal process for maintaining asset registers outside of SAP. Both sites use different systems for storing the data. CT / VT data was requested, but not received.	2  0	Link operational plans to service levels and review regularly.  Formalise asset registers and create a complete set of plans. To be implemented in the next 6 months. Responsible: BH
<b>6. Asset maintenance</b> Maintenance functions relate to the upkeep of assets and directly affect service levels and costs.	Maintenance plans cover the scheduling and resourcing of the maintenance tasks so that work can be done on time and on cost.	<ul style="list-style-type: none"> <li>Maintenance policies and procedures are documented and linked to service levels required.</li> <li>Regular inspections are undertaken of asset performance and condition.</li> <li>Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule.</li> <li>Failures are analysed and operational/maintenance plans adjusted where necessary.</li> <li>Risk management is applied to prioritise maintenance tasks.</li> <li>Maintenance costs are measured and monitored.</li> </ul>	3	B	High	S	2	<ul style="list-style-type: none"> <li>Assess the adequacy of policies and procedures covering maintenance functions.</li> <li>Confirm the policies and procedures have been followed during the review period by testing of maintenance schedules, analysis of costs, etc.</li> <li>Assess the significance of exceptions identified and whether adequate corrective action has been taken.</li> </ul>	Maintenance is carried out on a routine basis which is normally during shutdown. High risk items are identified during routine inspections. Common mode and minor failures are not analysed or the failure data linked to similar plant. Maintenance plans are a high level plans that can lead to items being missed by inexperienced staff. All maintenance is planned and tracked by SAP.	2  3	Maintenance plans for plant to be improved and reviewed regularly. To be implemented in the next 6 months. Responsible: BH

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<b>7. Asset Management Information System (MIS)</b> An asset management information system is a combination of processes, data and software that support the asset management functions.	The asset management information system provides authorised, complete and accurate information for the day-to-date running of the asset management system.  The focus of the review is the accuracy of performance information used by the licensee to monitor and report on service standards.	<ul style="list-style-type: none"> <li>Adequate system documentation for users and IT operators.</li> <li>Input controls include appropriate verification and validation of data entered into the system.</li> <li>Logical security access controls appear adequate, such as passwords.</li> <li>Physical security access controls appear adequate.</li> <li>Data backup procedures appear adequate.</li> <li>Key computations related to licensee performance reporting are materially accurate.</li> <li>Management reports appear adequate for the licensee to monitor licence obligations.</li> </ul>	2	B	Medium	S	4	<ul style="list-style-type: none"> <li>Assess the adequacy of policies and procedures covering the general control and security of the computer systems used to provide management information on service standards/licence obligations.</li> <li>Confirm that management reports on service standards/licence obligations are being reviewed and significant exceptions to service standards are promptly followed up and actioned.</li> </ul>	SAP is used as the primary MIS backed up by excel files at Leinster. Staff are being trained in the SAP and some links between operations and maintenance works were missing. However, the missing linkages were able to be found during searches. There is no overarching MIS that integrates all components. CITEC is used to store metering data and display system status.	1	An IT system should be developed that will provide a roadmap to all relevant data and capture compliance issues. The effectiveness of the MIS should be reviewed regularly. To be implemented in the next 6 months. Responsible: BH
<b>8. Risk management</b> Risk management involves the identification of risks and their management within an acceptable level of risk.	An effective risk management framework is applied to manage risks related to the maintenance of service standards	<ul style="list-style-type: none"> <li>Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system.</li> <li>Risks are documented in a risk register and treatment plans are actioned and monitored.</li> <li>The probability and consequences of asset failure are regularly assessed.</li> </ul>	2	B	Medium	S	4	<ul style="list-style-type: none"> <li>Assess the adequacy of policies and procedures covering risk management and contingency planning.</li> <li>Assess whether the risk management policies and procedures have been applied in practice.</li> <li>Assess the adequacy of staff understanding and training on risk management.</li> </ul>	Risk management is performed as a project planning exercise and not repeated during operation.  Risks are identified on a local, informal basis and if one is considered to be significant, a SAP works order is initiated. The risks are not documented.	1  0	Create a risk register and review regularly. To be implemented in the next 6 months. Responsible: BH  Risk analysis to be used and linked to service levels. To be implemented in the next 6 months. Responsible: BH
<b>9. Contingency planning</b> Contingency plans document the steps to deal with the unexpected failure of an asset.	Contingency plans have been developed and tested to minimise any significant disruptions to service standards.	<ul style="list-style-type: none"> <li>Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.</li> </ul>	2	A	High	W	1	<ul style="list-style-type: none"> <li>Determine whether contingency plans have been developed and are current.</li> <li>Determine whether contingency plans have been tested. If so, review the results to confirm that any improvements identified have been actioned.</li> </ul>	The networks operate predominantly as a radial network. Some spares are kept by stores, but the list of spares is not distributed. No formal contingency plans exist.	0	Contingency planning should be developed from the Risk Register and documented during reviews. To be implemented in the next 6 months. Responsible: BH

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<b>10. Financial planning</b> The financial planning component of the asset management plan brings together the financial elements of the service delivery to ensure its financial viability over the long term.	A financial plan that is reliable and provides for the long-term financial viability of the services.	<ul style="list-style-type: none"> <li>The financial plan states the financial objectives and strategies and actions to achieve the objectives</li> <li>The financial plan identifies the source of funds for capital expenditure and recurrent costs</li> <li>The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets).</li> <li>The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services.</li> <li>Significant variances in actual budget income and expenses are identified and corrective action taken where necessary.</li> </ul>	1	B	Low	S	5	<ul style="list-style-type: none"> <li>Obtain an understanding of the financial planning, budgeting and reporting process and assess its effectiveness.</li> <li>Obtain a copy of the current financial plan (including budget/actual) and assess whether the process is being followed.</li> </ul>	The network aims to operate as a non-profit centre. No formal financial plan exists. Operations and maintenance costs are planned and tracked through SAP.	2	Financial planning should form a part of the AMS. The current system is functional and sufficient for NIW's needs, but should be documented. To be implemented in the next 6 months. Responsible: BH
<b>11. Capital expenditure planning</b> The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure on each over the next five or more years.  Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates.	A capital expenditure plan that provides reliable forward estimates of capital expenditure and asset disposal income, supported by documentation of the reasons for the decisions and evaluation of alternatives and options.	<ul style="list-style-type: none"> <li>There is a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities and dates.</li> <li>The plan provides reasons for capital expenditure and timing of expenditure.</li> <li>The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan.</li> </ul>	1	C	Low	W	5	<ul style="list-style-type: none"> <li>Obtain an understanding of the capital expenditure planning process and assess its effectiveness.</li> <li>Obtain a copy of the capital expenditure plan for the current year and assess whether the process is being followed.</li> </ul>	CAPEX for major items follow a rigorous process defined in BHPBilliton Engineering Standards. CAPEX is drawn from mining projects. Asset life is considered, however the life of the assets always exceed that of the project.	5	Nil
<b>12. Review of AMS</b> The asset management system is regularly reviewed and updated.	Review of the Asset Management System to ensure the effectiveness of the integration of its components and their currency	<ul style="list-style-type: none"> <li>A review process is in place to ensure that the asset management plan and the asset management system described therein are kept current.</li> <li>Independent reviews (eg internal audit) are performed of the asset management system.</li> </ul>	1	A	Medium	W	5	<ul style="list-style-type: none"> <li>Determine when the asset management plan was last updated and assess whether any significant changes have occurred.</li> <li>Determine when the asset management plan was last updated and assess whether any significant changes have occurred.</li> <li>Determine whether any independent reviews have been performed. If so, review results and action taken.</li> <li>Consider the need to update the asset management plan based on the results of this review.</li> </ul>	No AMS was in place and as such no reviews were performed.	0	A mechanism for regular review of the AMS should be in the AMS. To be implemented in the next 6 months. Responsible: BH