



## 2008 Performance Audit and Asset Management System Review for Transfield Services Kemerton Power Station

Audit Report	Authorisation	Name	Position	Date
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Agreed By (licensee)		Wayne Roberts	Plant Manager (Kemerton Power Station)	25 <sup>th</sup> July 2008

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*This report is prepared by representatives of GES Pty Ltd in relation to the above named client's conformance to the nominated audit standard(s). Audits are undertaken using a sampling process and the report and its recommendations are reflective only of activities and records sighted during this audit process. GES Pty Ltd shall not be liable for loss or damage caused to or actions taken by third parties as a consequence of reliance on the information contained within this report or its accompanying documentation.*

## Quality Control Record

PREPARED BY	Nicole Davies (GES Pty Ltd)	18 <sup>th</sup> July 2008
CHECKED BY	Neema Premji & Brian McKenry (GES Pty Ltd)	22 <sup>nd</sup> July 2008
REVIEWED BY	Wayne Roberts (Plant Manager)	23 <sup>rd</sup> July 2008
REVISION	5	19 <sup>th</sup> August 2008

## 1. EXECUTIVE SUMMARY

Kemerton Power Station (KPS) engaged Geographe Environmental Services Pty Ltd (GES) to undertake the first Performance Audit and Asset Management System Review as required by the Economic Regulation Authority (ERA/Authority) under generation licence EGL5. This combined report contains the audit findings for both the performance audit and Asset Management System Review.

The Performance Audit has been conducted in order to assess the licensee's level of compliance with the conditions of its licence.

Sections 13 & 14 of the *Electricity Industry Act 2004* require as a condition of every licence that the licensee must, not less than once in every period of 24 months (or any longer period that the Authority allows) calculated from the grant of the licence, provide the Authority with a Performance Audit and Asset Management System Review conducted by an independent expert acceptable to the Authority.

The Authority approved the appointment of GES Pty Ltd on the 13<sup>th</sup> March 2008 and subsequently required the development of an audit plan for ERA approval. Notification of the approval of the audit plan for the 2008 Performance Audit of Licence EGL5 was provided on the 5<sup>th</sup> June 2008.

This audit plan has been executed as planned in accordance with the process flowchart for performance/operational audits and asset management system reviews as detailed in the Audit Guidelines – Electricity, gas and Water Licences (September 2006).

The period for the audit and review is, 20<sup>th</sup> March 2006 to 31<sup>st</sup> March 2008 and the submission of this report before 31<sup>st</sup> July 2008 is evidence of compliance with the Authority's requirements. A one month extension for the submission of the report was requested by the licensee and granted by the Authority.

### Summary Opinion

The Asset Management System Review and the Performance Audit have been conducted in order to assess the effectiveness of the Kemerton Power Station Asset Management Systems and level of compliance with the conditions of its Generation Licence EGL5. Through the execution of the Audit Plan and assessment and testing of the control environment, the information system, control procedures and compliance attitude, the audit team members have gained reasonable assurance that the Kemerton Power Station has established an asset management system. During the audit period 20 March 2006 to 31 March 2008, the Licensee has complied with its Generating Licence, with the exception of clauses 16.1, 16.2 and 18.1 (ref 110) it is noted that all of these breaches were in regards to communication of information to the Authority, and subsequently systems implemented should reduce the risk of re-occurrence. This audit report is an accurate representation of the audit

teams findings and opinions.

### 1.1 Performance Audit Summary

Generating Licence Reference (CI = Clause, Sch = Schedule)	Generation Licence Criteria	Likelihood	Consequences	Inherent Risk	Adequacy of existing controls	Compliance Rating					
						0	1	2	3	4	5
CI 1	Definitions	Unlikely	Major	High	Strong						✓
CI 2	Grant of Licence										
CI 3	Term	Unlikely	Major	High	Strong						✓
CI 4	Fees	Unlikely	Minor	Low	Strong					✓	
CI 5	Compliance	Probable	Major	High	Strong					✓	
CI 6	Transfer of Licence	Unlikely	Major	High	Strong						✓
CI 7	Cancellation of Licence										
CI 8	Surrender of Licence										
CI 9	Renewal of Licence										
CI 10	Amendment of Licence on application of the Licensee	Unlikely	Moderate	Medium	Strong						✓
CI 11	Amendment of Licence by the Authority										
CI 12	Expansion or Reduction of Generating Works, Distribution Systems and Transmission Systems										
CI 13	Accounting Records	Unlikely	Major	High	Strong						✓
CI 14	Individual Performance Standards										
CI 15	Performance Audit	Unlikely	Major	High	Strong					✓	
CI 16	Asset Management System	Unlikely	Major	High	Strong	✓					
CI 17	Reporting	Unlikely	Major	High	Strong					✓	
CI 18	Provision of Information	Unlikely	Major	High	Strong					✓	
CI 19	Publishing Information	Unlikely	Major	High	Strong						✓
CI 20	Notices	Unlikely	Major	High	Strong						✓
CI 21	Review of the Authority's Decisions	Unlikely	Major	High	Strong						✓

Auditor hours required for the completion of the Audit between 20<sup>th</sup> March 2008 and 6<sup>th</sup> June 2008 as stated in the Audit Plan are detailed below;

- Preliminary site visit - 6 hours (20<sup>th</sup> March 2008)
- Documentation Review – 20 hours
- Site Audit – 6.0 hours (6<sup>th</sup> June 2008)

### 1.1.2 Limitation of Scope

There were Generation Licence compliance elements that were not included in the scope of this audit because they did not eventuate in this audit period or have not been established within licence EGL5 (refer to table above).

### Operational/Performance Audit Rating Scale

Compliance Status	Rating	Description of Compliance
Compliant	5	Compliant with no further action required to maintain compliance
Compliant	4	Compliant apart from minor or immaterial recommendations to improve the strength of internal controls to maintain compliance
Compliant	3	Compliant with major or material recommendations to improve the strength of internal controls to maintain compliance
Non-Compliant	2	Does not meet minimum requirements
Significantly Non-Compliant	1	Significant weaknesses and/or serious action required

## 1.2 Asset Management System Review Summary

The Asset Management System established by the Kemerton Power Station is effective in the maintenance of the assets. However the maintenance system is heavily reliant on the knowledge and experience of the current personnel at the station, in particular the Plant Manager. At the time of the audit the audit team did note that training in the use of the maintenance management system (SAP) was imminent and utilising SAP as the main maintenance management tool would provide some assurance that maintenance priorities will be met in the future regardless of the personnel on site. The asset management system was sighted and provided the audit team with assurance that a continual improvement environment exists for the management of assets at Kemerton Power Station.

With respect to contingency planning, it is noted that the Kemerton Power Station has no capability to cover a loss of generation due to the failure of a critical plant item. Kemerton is a peaking plant which provides generation capacity to the system during high demand periods or during the loss of base generation, and as such would not have the standby capacity to cover the failure of its own generation. However, Transfield Services have identified a number of strategic spares which are held on site to minimise any disruption to generation and have, through their membership of both the Australian and Worldwide V94.2 User Groups, access to spares held at other power stations.

The Audit Teams assessment of the effectiveness ratings for each key process in the licensee's Asset Management System are summarised in the following table. A comprehensive report of the audit findings is included in Appendix 2. Auditor hours required for the completion of the review between 20<sup>th</sup> March 2008 and 6<sup>th</sup> June 2008 as stated in the Audit Plan are detailed below;

- Preliminary site visit - 6 hours (20<sup>th</sup> March 2008)
- Documentation Review – 10 hours
- Site Audit – 6.5 hours (6<sup>th</sup> June 2008)

### Asset Management Effectiveness Summary

ASSET MANAGEMENT SYSTEM	Not Performed	Performed Informally	Planned and Tracked	Well Defined	Quantitatively Controlled	Continuously Improving
AMS Criteria	0	1	2	3	4	5
Effectiveness Rating	0	1	2	3	4	5
1. Asset Planning					✓	
2. Asset creation/acquisition					✓	
3. Asset disposal					✓	
4. Environmental analysis					✓	
5. Asset operations				✓		
6. Asset maintenance			✓			
7. Asset Management Information System				✓		
8. Risk Management					✓	
9. Contingency Planning					✓	
10. Financial Planning						✓
11. Capital expenditure planning					✓	
12. Review of Asset Management System					✓	

## 2. PERFORMANCE AUDIT

### 2.1 Performance Audit Scope

This is the first audit of Kemerton Power Station’s compliance with obligations relating to Generation Licence EGL5. As such, the scope of the audit is to:

- assess the license holders internal compliance systems
- assess the license holders compliance with it’s license

for the period 20 March 2006 to 31 March 2008.

As there were no performance standards defined within the generation licence, the Authority's Electricity Compliance Reporting Manual May 2007 was used as the performance criteria for the compliance elements.

The intent of subsequent audits and reviews will be to measure performance over time.

The Plant Manager of Kemerton Power Station participated in the Performance Audit.

### 2.2 Performance Audit Objective

The objective of the performance audit, as defined by the Audit Guidelines, is to assess the effectiveness of measures taken by the licensee to meet obligations of the performance and quality standards referred to in the licence.

In addition to compliance requirements, a specific focus is to be taken on the systems and effectiveness of processes used to ensure compliance with the standards, outputs and outcomes required by the licence. The audit outcome is to identify areas of non-compliance and areas of compliance where improvement is required and recommend corrective action as necessary.

The Audit was conducted in three phases as defined by the Audit Guidelines. The phases and the appropriate audit guide/tool are detailed below;

Phase	Auditor	Relevant Auditing Standard
1. Risk & Materiality Assessment  Outcome - Operational/ Performance Audit Plan		AUS 302: Planning AUS 402: Risk Assessments and Internal Controls AUS 808: Planning Performance Audits AS/NZS ISO 19011:2003: Guidelines for quality and/or environmental management systems auditing (i.e. consistent with AUS 302) AS/NZS 4360:2004: Risk Management



2. System Analysis		AS/NZS 9004:2000: Quality Management Systems – Guidelines for performance improvements AUS 810: Special Purpose Reports on Effectiveness of Control Procedures As 3806-2006: Compliance Programs
3. Fieldwork Assessment and testing of; <ul style="list-style-type: none"> <li>▪ The control environment</li> <li>▪ Information system</li> <li>▪ Compliance procedures</li> <li>▪ Compliance attitude</li> </ul>		AUS 502: Audit Evidence AUS 806: Performance Auditing

### 2.3 Performance Audit Methodology

A risk assessment, assessment of control environment and allocation of audit priority was undertaken in accordance with the Audit Guidelines – Electricity, gas and Water Licences (September 2006) on each element relating to Generation licensee’s of the Electricity Compliance Reporting Manual May 2007 issued by the Authority. It was the opinion of the audit team that this approach would provide an effective assessment of compliance due to each licence condition being incorporated into document.

The Electricity Compliance Reporting Manual (May 2007) specifically classifies each licence condition according to non-compliance rating. The Generation Licence held by Transfield Services results in mainly Minor and Moderate Ratings for non-compliance, there is one Major ratings classified in relation to breach of the Environmental Licence.

In order to focus the audit effort and identify areas for testing and analysis a preliminary assessment of the risk and materiality of non-compliance with the Generation Licence was undertaken in accordance with the requirements of AS/NZS4360 Risk Management, Section 5.3 and Appendix 1 of the Audit Guidelines. This assessment rating was reviewed during the audit process subject to the verification of control environment.

There were several changes made to the pre-assessment ratings during the audit process due to an error in the audit plan that was noted during the audit. That is the incorrect Priority were assigned for several items, however as the risk assessment and controls were unchanged and the changes related to downgrading from Priority 2 to Priority 4 as such no notification to the ERA was given.

#### Summary table of Variation to Audit Priorities

Priority Rating	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Audit Plan	0	29	0	4	15
Audi Report	0	1	0	32	15

## Performance Audit Key Findings, Recommendations & Post Audit Plan

Ref	Licence Condition	Issue	Recommendation	Post-Audit Action Plan
81	A licensee must, not less than once every 24 months, provide the Authority with a performance audit conducted by an independent expert acceptable to the Authority.	Whilst compliance with this requirement is well evidenced, the allocation of responsibility and process for ensuring changes to licence conditions/legislation are identified was not defined.	Potential to use SAP as a tool for monitoring license and regulatory requirements	ACTION: Review the potential for the establishment of a compliance scheduling system (i.e. SAP) for the organisation in order to manage critical compliance functions and assign responsibilities.
84	A licensee must provide the Authority with a report by an independent expert as to the effectiveness of its asset management system every 24 months, or such longer period as determined by the Authority.			RESPONSIBILITY: Plant Manager KPS DATE: 5 <sup>th</sup> September 2008
82	A licensee must provide for an asset management system.	System and processes heavily reliant on personnel to manually plan, track, prioritise and schedule operational tasks.	Full implementation of SAP would assist personnel to prioritise operational tasks. During interview personnel informed that SAP training was imminent	ACTION: Fully implement SAP. RESPONSIBILITY: Plant Manager KPS DATE: 5 <sup>th</sup> September 2008
83	A licensee must notify details of the asset management system and any substantial changes to it to the Authority.	As per Generation Licence Condition 16.1 & 16.2	As per Generation Licence Condition 16.1 & 16.2	As per Generation Licence Condition 16.1 & 16.2
85	A licensee must pay to the Authority the prescribed licence fee within one month after the day of grant or renewal of the licence and within one month after each anniversary of that day during the term of the licence.	System is a requisitional cheque based process with the potential for payment to be delayed (i.e. not received within 30 days)	Include the requirement in the SAP as a routine and investigate to the option of paying by EFT to ensure the trail for payment is complete	ACTION: Following planned implementation of SAP include payment of licence as a routine. RESPONSIBILITY: Plant Manager KPS DATE: 5 <sup>th</sup> September 2008

Ref	Licence Condition	Issue	Recommendation	Post-Audit Action Plan
86	A licensee must take reasonable steps to minimise the extent or duration of any interruption, suspension or restriction of the supply of electricity due to an accident, emergency, potential danger or other unavoidable cause.	Although past operational history is of a high standards the system and processes heavily reliant on personnel to manually plan, track, prioritise and schedule operational tasks.	Full implementation of SAP would assist personnel to prioritise operational tasks. During interview personnel informed that SAP training was imminent	ACTION: Fully implement SAP. RESPONSIBILITY: Plant Manager KPS DATE: 5 <sup>th</sup> September 2008
110	A licensee must provide the Authority, in the manner prescribed, any information the Authority requires in connection with its functions under the Electricity Industry Act.	The Annual Compliance Report to the ERA was due on 31/8/07, however the Authority's records indicate that the 2007 Compliance report for Transfield Services Kemerton Pty Ltd's electricity generation licence EGL5 was received late on 17/9/07.  This is not considered a breach by definition of compliance in Table 1 of the Audit Guidelines.	Include the requirement in the SAP as a routine upon receipt of the letter requiring the compliance report.	ACTION: Fully implement SAP. RESPONSIBILITY: Plant Manager KPS DATE: 5 <sup>th</sup> September 2008
Generation Licence condition 14.1	Performance standards are contained in applicable legislation.	Potentially the effectiveness of the processes is reduced due to lack of legal/regulatory database while reliant on personnel to manually monitor legal compliance	Consideration could be given to the development of a legal/regulatory database	ACTION: Develop a legal/regulatory database that includes the requirements of the ERA licence RESPONSIBILITY: Plant Manager KPS DATE: 5 <sup>th</sup> September 2008

Ref	Licence Condition	Issue	Recommendation	Post-Audit Action Plan
Generation Licence condition 16.1	The licensee must provide for, and notify the Authority of, an asset management system in relation to the generating works within 2 business days from the commencement date or from the completion of construction of the generating works, whichever is later.	The TSI Fund Website states that this project commenced in January 2008 however formal notification was not provided to the ERA of this in accordance with the Licence Condition 16.1.  KPS have not fulfilled this notification requirement at any stage other than original application for EGL. Therefore they are not compliant under this licence condition.	Provide notification to the ERA regarding this matter.	ACTION: Provide notification to the ERA regarding this matter.  RESPONSIBILITY: Plant Manager KPS  DATE: 31 <sup>st</sup> July 2008  NB: Completed on 30 <sup>th</sup> July 2008
Generation Licence condition 16.2	The licensee must notify the Authority of any material change to the asset management system within 10 business days of such change.			
	Environment Licence Number: L8026/2004/4 (Expiry 31 October 2008)	It is noted that the Environmental Licence is required to be paid 70 days prior to expiry and the organisations environmental monitoring schedule should refer to the licence renewal being in July and not in October which is the expiry date for the licence (i.e. 31/10/08).  (NB this document is not subject to document control and as such reference to date or document number is not possible)	Amend the environmental monitoring schedule to accurately reflect the requirements of legislation in regards to payment of licence fees i.e. renewal date for licence to be amended.  It is noted that the environmental monitoring schedule is not a controlled document.	ACTION: Amend the environmental monitoring schedule to accurately reflect the requirements of legislation in regards to payment of licence fees i.e. renewal date for licence to be amended.  Include the document control requirement on the environmental monitoring schedule  RESPONSIBILITY: Plant Manager KPS  DATE: 5 <sup>th</sup> September 2008

### **3. ASSET MANAGEMENT SYSTEM EFFECTIVENESS REVIEW**

#### **3.1 Scope of the AMS Review**

The review has been established as a requirement of the current Generating Licence EGL5 issued by the Economic Regulation Authority to Transfield Services for the Kemerton Power Station

The scope of the AMS review includes an assessment of adequacy and effectiveness of the Kemerton Power Station asset management system, by evaluating during the audit period from 20<sup>th</sup> March 2006 to 31<sup>st</sup> March 2008 the following audit elements:

1. Asset Planning
2. Asset creation/acquisition
3. Asset disposal
4. Environmental analysis
5. Asset operations
6. Asset maintenance
7. Asset management information system
8. Risk management
9. Contingency planning
10. Financial planning
11. Capital expenditure planning
12. Review of asset management system

This is the first Asset Management System Review conducted since the issue of the licence and as such previous audit report findings are not relevant to the content of the report. The review was conducted during April – June 2008 and included a preliminary site visit and a 1-day site audit, desktop review and interview session.

The Plant Manager of Kemerton Power Station participated in the AMS Review.

The key documents and other information sources are detailed within Appendix 2.

The Audit Plan for Asset Management System Review included three phases as defined by the Audit Guidelines. The phases and the appropriate audit guide/tool are detailed below;

Phase	Auditor	Relevant Auditing Standard
1. Risk & Materiality Assessment Outcome – Asset Management System Audit Plan	Nicole Davies Neema Premji	AUS 302: Planning AUS 402: Risk Assessments and Internal Controls AUS 808: Planning Performance Audits AS/NZS ISO 19011:2003: Guidelines for quality and/or environmental management systems auditing AS/NZS 4360:2004: Risk Management
2. System Analysis	Neema Premji Brian McKenry	AS/NZS 9004:2000: Quality Management Systems – Guidelines for performance improvements AUS 810: Special Purpose Reports on Effectiveness of Control Procedures AS 3806-2006: Compliance Programs
3. Fieldwork	Neema Premji Brian McKenry	AUS 502: Audit Evidence AUS 806: Performance Auditing

### **3.2 Objective of the Asset Management System Review**

The objective of the review is to examine the effectiveness of the processes used by Kemerton Power Station to deliver asset management, the information systems supporting asset management activities and the data and knowledge used to make decisions about asset management. These elements were examined from a life cycle perspective i.e. planning, construction, operation, maintenance, renewal, replacement and disposal using the guidelines developed by the Economic Regulation Authority.

### **3.3 Methodology for Asset Management System Review**

The audit methodology detailed in Appendix 1 & 2 of the Audit Guidelines – Electricity, Gas and Water Licences (September 2006) was used in the execution of the Asset Management System Review and is detailed in a tabular form in Appendix 2 of this report

The audit elements for the Asset Management System Review followed the key processes in an asset management lifecycle as defined in the Audit Guidelines:

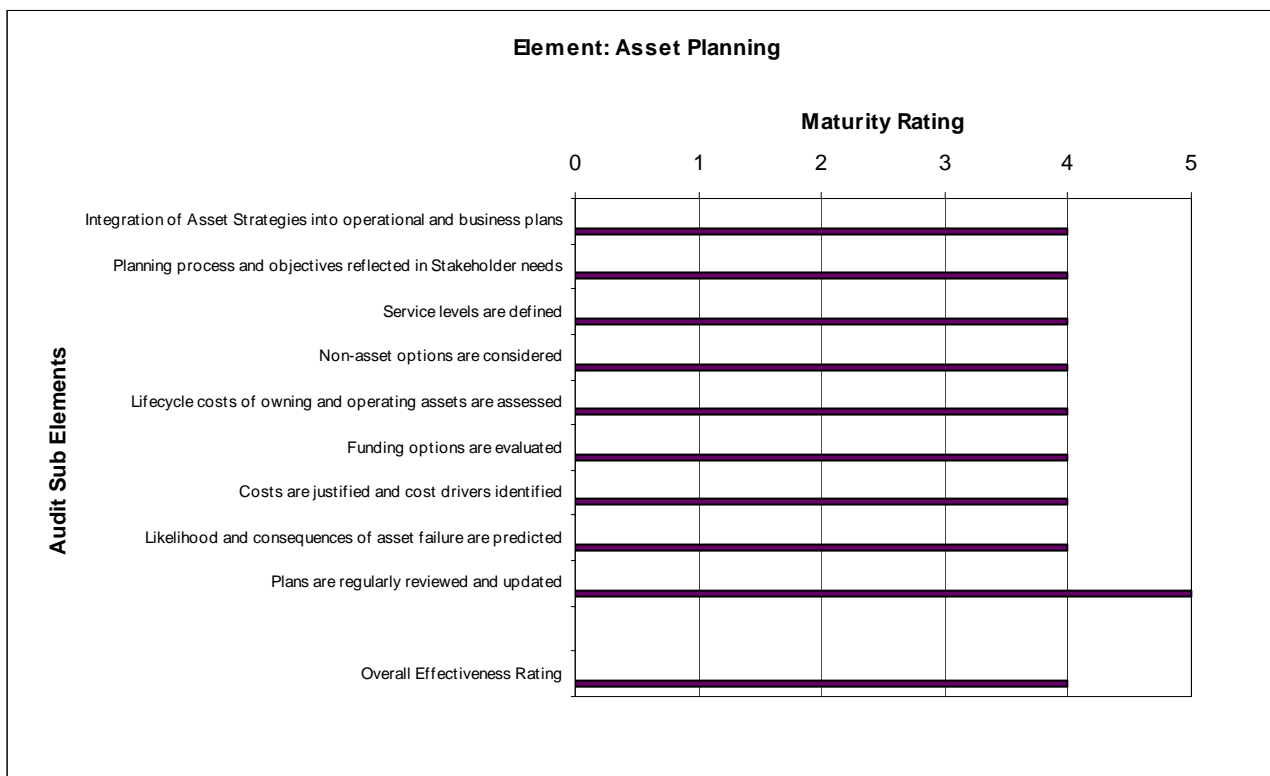
#### **Asset Management System Effectiveness Rating**

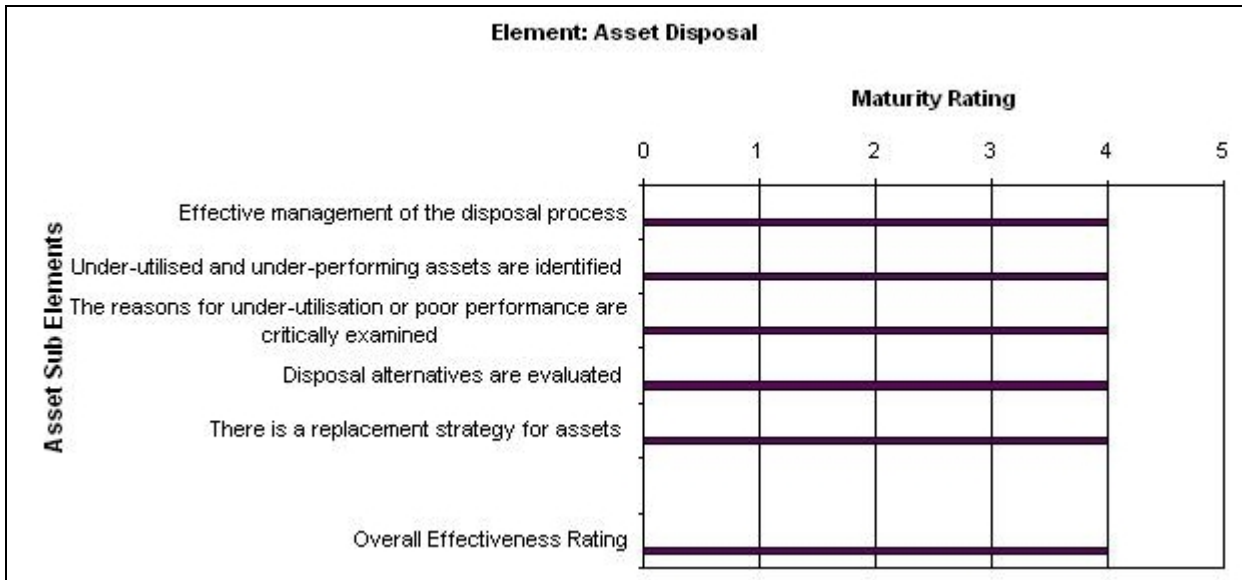
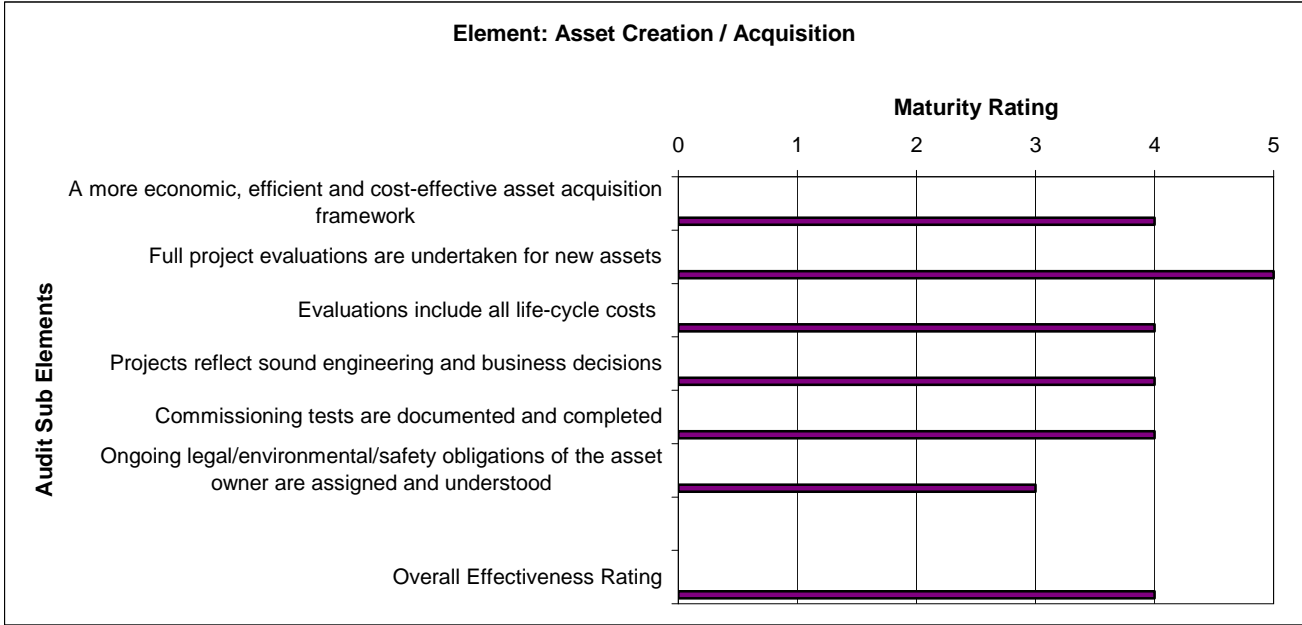
A 6 point rating scale was used as defined in the Audit Guidelines to evaluate the effectiveness of the Asset Management System.

Maturity Rating Model		
Rating	Descriptor	Description
0	Not Performed	
1	Performed Informally	Base practices performed
2	Planned & Tracked	Committing to perform Planning performances Disciplined performance Tracking performance Verifying performance
3	Well Defined	Defining a standard process Tailoring standard process Using data Perform a defined process
4	Quantitatively Controlled	Establishing measurable quality goals Determining process capability to achieve goals Objectively managing performance
5	Continuously Improving	Establishing quantitative process for effective goals Improving process effectiveness

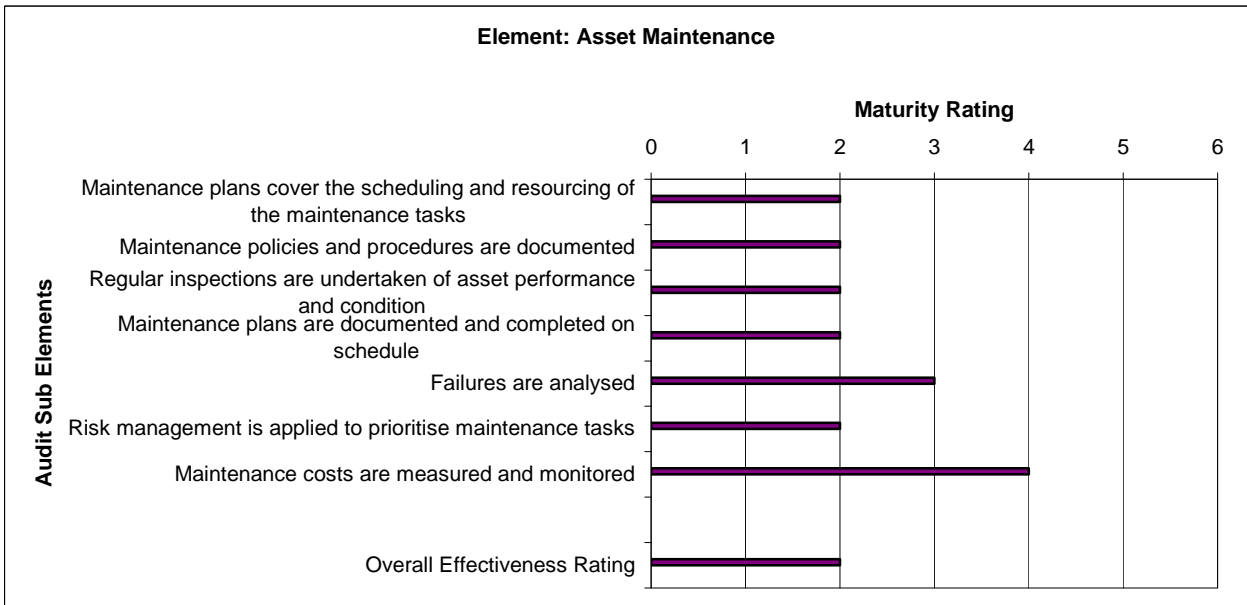
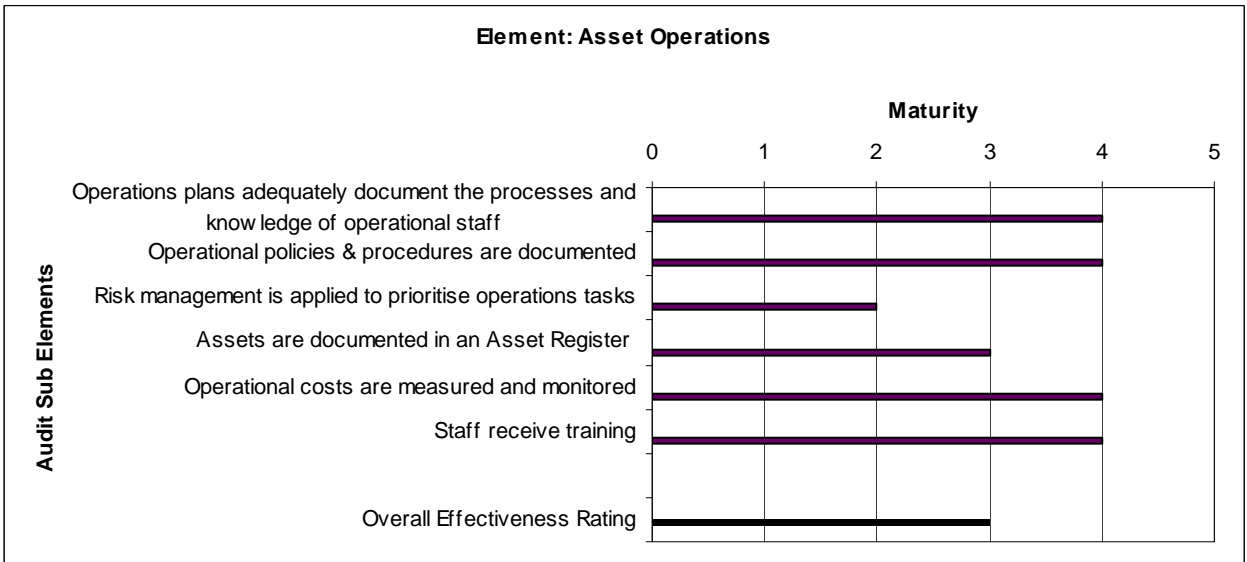
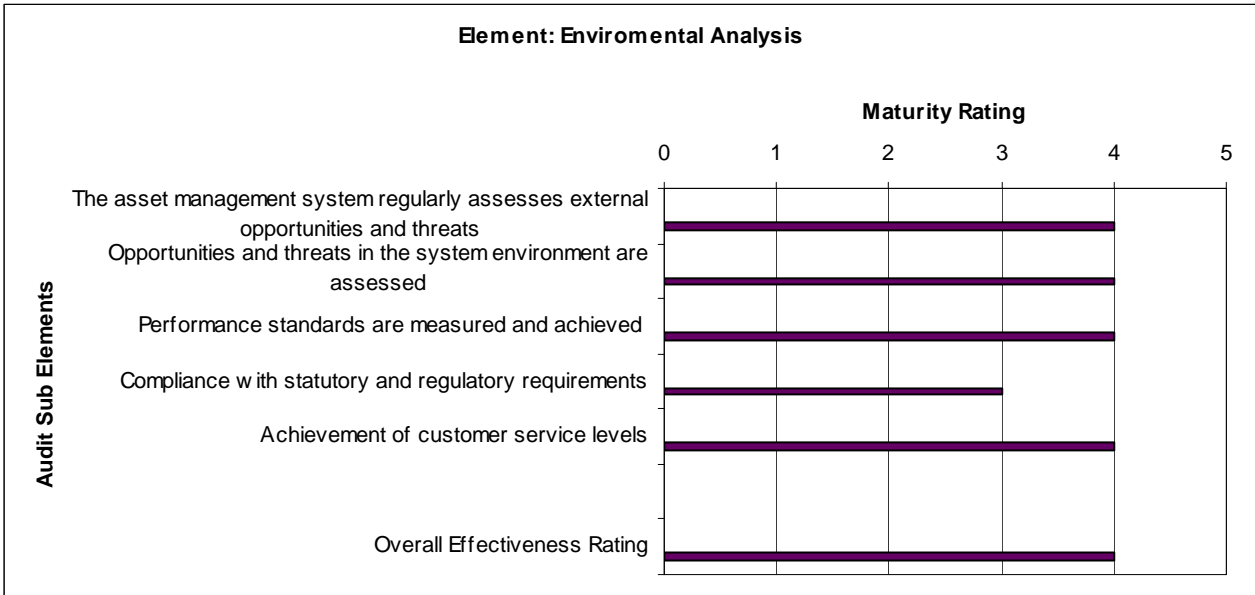
The overall effectiveness rating for each of the audit element is illustrated below:

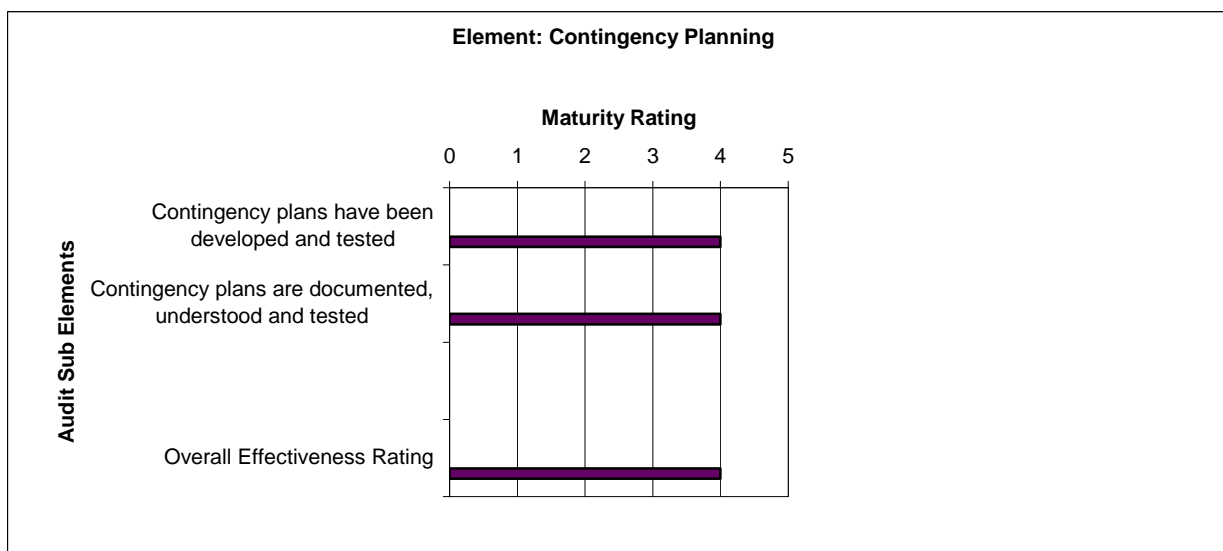
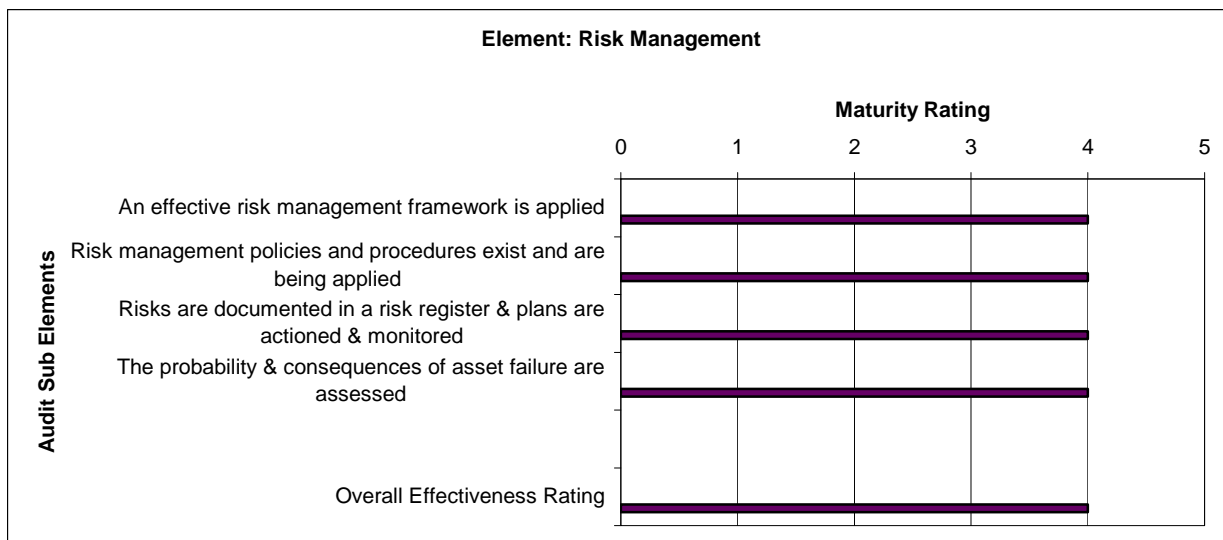
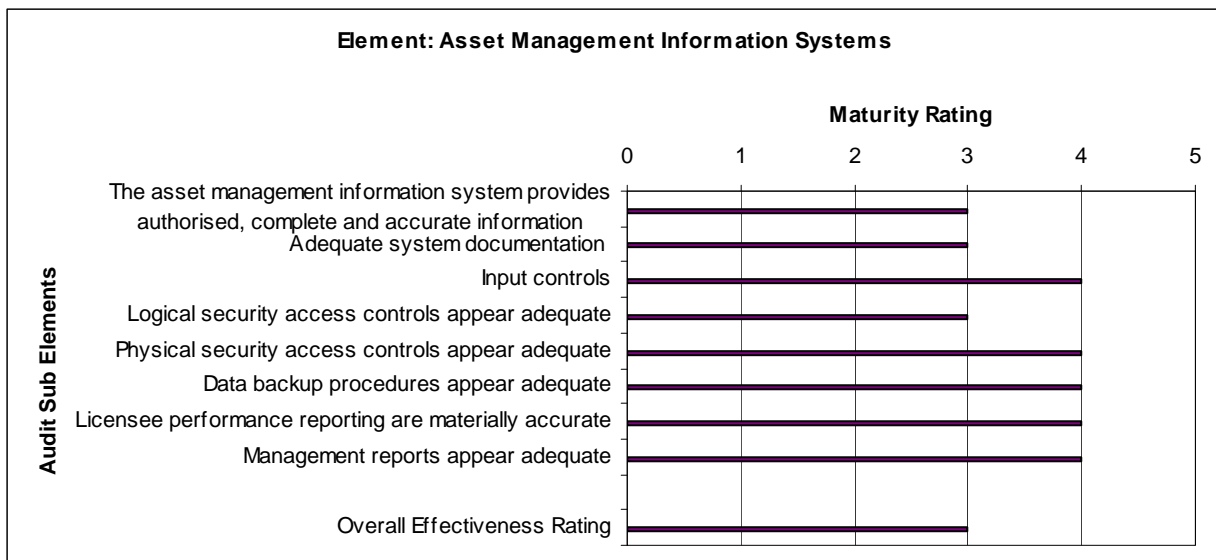
### Asset Management System Maturity Ratings





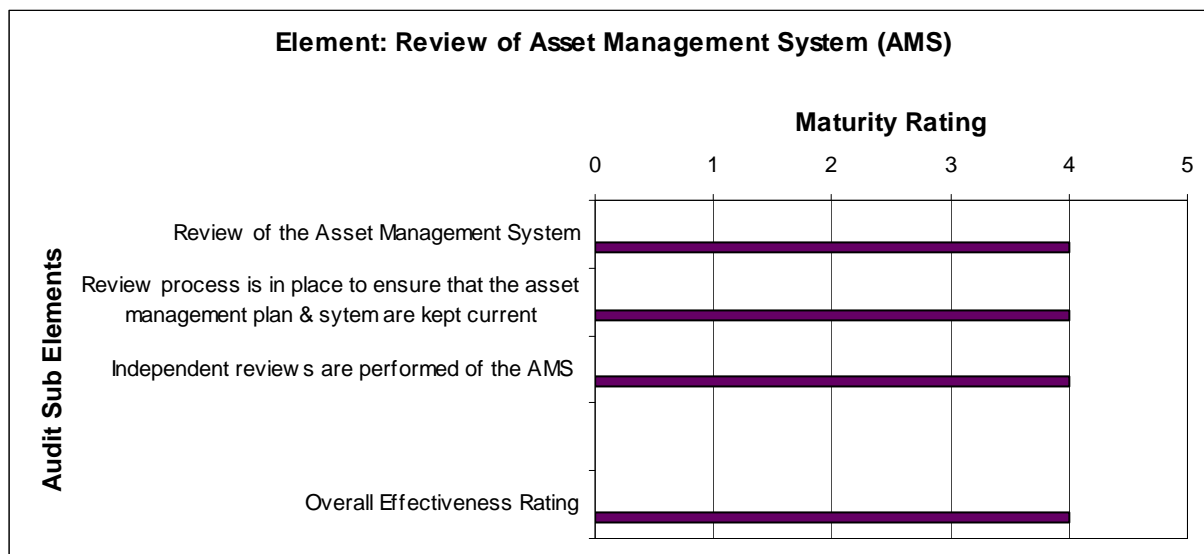






<b>Element: Financial Planning</b>	
<b>Maturity Rating</b>	
	0      1      2      3      4      5
<b>Audit Sub Elements</b>	Contingency plans are documented, understood and tested
	The financial plan states financial objectives & strategies & actions
	The financial plan identifies the source of funds
	The financial plan provides profit & loss & balance sheets
	The financial plan provide firm predictions on income for the next five years
	The financial plan provides for the operations and maintenance, administration and capital expenditure
	Significant variances in actual/budget income and expenses are identified
	Overall Effectiveness Rating

<b>Element: Capital Expenditure Planning</b>	
<b>Maturity Rating</b>	
	0      1      2      3      4      5
<b>Audit Sub Elements</b>	A capital expenditure plan that provides reliable forward estimates of capital expenditure and asset disposal
	There is a capital expenditure plan
	The plan provide reasons for capital expenditure and timing
	The capital expenditure plan is consistent with AMP
	Adequate process to ensure capital expenditure plan is regularly updated & actioned
	Overall Effectiveness Rating



### Asset Management System Review Key Findings, Recommendations and Post Audit Plan

Ref	Audit Requirement	Issue	Recommendation	Post-Audit Action Plan
2.6	Asset Creation/Acquisition - Ongoing legal/environmental/safety obligations of the asset owner are assigned and understood  Effectiveness Rating - 3	At the time of the audit a central database of legal obligations did not exist. Diaries/spreadsheets were being used by personnel to monitor ongoing obligations	A central database and the use of SAP to trigger legal obligations would reduce the risk of omission	ACTION: Develop a database of legal/safety/environmental obligations and to utilise SAP to trigger key dates  RESPONSIBILITY: Plant Manager (KPS Transfield Services)  DATE: 5 <sup>th</sup> September 2008
4.4	Environmental analysis – Compliance with statutory and regulatory requirements	At the time of the audit a central database of statutory and regulatory requirements did not exist. Diaries were being used by personnel to monitor ongoing requirements	A central database and the use of SAP to trigger key dates would reduce the risk of omission	ACTION: Develop a database of statutory/regulatory obligations and to utilise SAP to trigger key dates  RESPONSIBILITY: Plant Manager (KPS Transfield Services)  DATE: 5 <sup>th</sup> September 2008

Ref	Audit Requirement	Issue	Recommendation	Post-Audit Action Plan
5.3	Asset Operations – Risk Management is applied to prioritise operations tasks  Effectiveness Rating – 2	System and processes heavily reliant on personnel to manually plan, track, prioritise and schedule operational tasks	Full implementation of SAP would assist personnel to prioritise operational tasks	ACTION: Full implementation of SAP  RESPONSIBILITY: Plant Manager (KPS Transfield Services)  DATE: 5 <sup>th</sup> September 2008
5.4	Asset Operations - Assets are documented in an Asset Register including asset type, location, material, plans of components, an assessment of asset physical/structural and accounting data  Effectiveness Rating - 3	Asset maintenance and condition history is not entered into SAP where the asset register resides	Full implementation of SAP would enable a full history of the plants condition to be maintained	ACTION: Full implementation of SAP  RESPONSIBILITY: Plant Manager (KPS Transfield Services)  DATE: 5 <sup>th</sup> September 2008
6.1	Asset Maintenance – Maintenance plans cover the scheduling and resourcing of the maintenance tasks so that work can be done on time and on cost  Effectiveness Rating – 2	Maintenance tasks are scheduled, resourced and tracked manually. Priority is given to critical plant only, non-critical plant is run to failure and replaced or repaired	Full implementation of SAP would enable all aspects of maintenance for both critical and non-critical plant to be effectively prioritised and managed.	ACTION: Full implementation of SAP  RESPONSIBILITY: Plant Manager (KPS Transfield Services)  DATE: 5 <sup>th</sup> September 2008
6.2	Asset Maintenance - Maintenance policies and procedures are documented and linked to service levels required  Effectiveness Rating – 2	Maintenance policies and procedures are established and implemented for critical plant. Only fault maintenance is presently being performed on non-critical plant	As above	As above
6.3	Asset Maintenance - Regular inspections are undertaken of asset performance and condition  Effectiveness Rating – 2	Inspections of critical plant are undertaken. Records of inspections were available for review on site. Inspections of non-critical plant presently being performed on an informal basis.	As above	As above

Ref	Audit Requirement	Issue	Recommendation	Post-Audit Action Plan
6.4	Asset Maintenance - Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule Effectiveness Rating – 2	Emergency, corrective and preventative maintenance plans for critical plant are established – tracked manually. Only fault maintenance is presently being performed on non-critical plant.	As above	As above
6.5	Asset Maintenance – Failures are analysed and operation/maintenance plans are adjusted where necessary Effectiveness Rating – 3	The analysis of failures is effective for critical plant however operations/maintenance plans have to be annually adjusted and tracked	As above	As above
6.6	Asset maintenance – Risk management is applied to prioritise maintenance tasks Effectiveness Rating - 2	Oil sampling and vibration analysis forms part of the risk management approach for critical plant only.	A risk management approach should be applied to all plant.	ACTION: A risk matrix should be developed for all plant as part of the full implementation of SAP  RESPONSIBILITY: Plant Manager (Transfield Services KPS)  DATE: 5 <sup>th</sup> September 2008
7.7	Asset Management Information Systems – Key computations related to licensee performance reporting are materially accurate	The measurement of station output is reliant on the accuracy of WPC metering which is not under the control of KPS	An assessment should be undertaken to the viability of periodic independent measurement of output to verify WPC metering, if viable periodic measurements should be taken to determine accuracy of metering	ACTION: As per recommendation  RESPONSIBILITY: Plant Manager (Transfield Services KPS)  DATE: 5 <sup>th</sup> September 2008

The Post Audit Plan has been developed by the audit team in consultation with the licensee. Approval of the report endorses the content of the post audit plan and implementation of the actions will be included in the next audit.

#### 4. RECOMMENDATIONS FOR AMENDMENT TO AUDIT PROCESS

The purpose of the operational/performance audit is to assess the effectiveness of measures taken by the licensee to meet the obligations of the performance and quality standards referred to in the licence (Section 5.1 Audit Guideline – Electricity, Gas and Water Licences September 2006)

The Generation Licence EGL5 issued for Kemerton Power Station does not contain any performance standards and varies significantly in content from that of a Water Utility. As such the methodology outlined in the Audit Guideline – Electricity, Gas and Water Licences September 2006 has limited applicability in some areas. For example, section 7.4.1 Operational/Performance Audit Compliance Summary. Several aspects of the Generation Licence do not apply on an ongoing basis and are not relevant to the scope of the audit which limit the value of the report, such as;

- Clause 1 – Definitions
- Clause 3 - Term
- Clause 7 – Cancellation of Licence
- Clauses 8 – Surrender of Licence
- Clause 9– Renewal Of Licence

The audit approach to the Performance Audit is subject to auditor interpretation, although reference to applicable legislation does provide a guide to audit criteria and a review of this process could facilitate more effective audit reports for Electricity Licences.

Consideration could be given to providing an alternative approach where there are a lack of specified performance standards for a licensee such as referencing of the Electricity Compliance Reporting Manual published by the Authority. This enables the auditor to follow specified audit criteria as defined by the classification of the licence.

In addition, consideration could be given to exception reporting for licensees. That is a specified set of performance criteria could be established within the licence and if these were not adhered to i.e. availability, forced outage rates then an exceedence report could be provided to the ERA in order to effectively communicate this issue.

## **5. FOLLOW UP AUDIT PROCESS**

This is the first Performance Audit conducted since the issue of the licence and as such previous audit report findings are not relevant to the content of the report. Review of actions taken in response to recommendations will form part of subsequent audit plans as this is the initial audit/review.

Kemerton Power Station operates as a peaking plant and provides input into the SWIS in Western Australia. The power station comprises two open cycle gas turbines. It was developed by Transfield Services and commenced operation in November 2005.

In August 2007, Transfield Services Infrastructure Fund announced a 40MW upgrade to Kemerton Power Station, increasing capacity to 300MW. The upgrade will make the power station more efficient and improve the environmental rating by reducing greenhouse gas emissions, while providing power for an additional 10,000 households.

In June 2008, Transfield Services Infrastructure Fund announced the completion of the upgrade at Kemerton Power Station.

The innovative \$20.4 million upgrade involves retrofitting an existing power generator with a wet compression system, enabling the power station to operate at full capacity even in extreme temperatures.

During the Audit Scope there were no changes to generating works however due to the completion of the wet compression project and the planned change to implement a maintenance management system the next audit report may vary appropriately.



# **APPENDIX 1**

## **KEMERTON POWER STATION PERFORMANCE AUDIT**

## **APPENDIX 2**

# **KEMERTON POWER STATION ASSET MANAGEMENT SYSTEM REVIEW**