## Moama Lifestyle Villages Pty Ltd Post Audit Action Plan Operational Audit and Asset Management System Review Water Licence WL40 (Non-potable and sewerage)

### 2.7 Current Audit Non-Compliances and Recommendations: 1 October 2012 – 30 September 2014

Table of Cu	Table of Current Audit Non- Compliances and Recommendations							
B. Unresolve	ed at end of current audit period							
Reference (no./year)	Non-Compliance/Controls Improvement (Legislative Obligation/ Rating/ /Details)	Auditor's Recommendation	Management Action	Person Responsible and Anticipated Completion Date	Status			
01/2014	Customer Charter (Previous) Water Services Licensing Act 1995  Compliant  As the TLLV Customer Charter contains information on the resident's as well as TLLV responsibilities for a healthier recycled water system that are not being provided to the village residents in any other document, the auditor considers the continual provision of the TLLV Customer Charter to be beneficial to the village residents.  Document version control should be introduced.	The licensee should arrange for TLLV to include document version control in the TLLV Customer Charter. (process improvement opportunity)	Moama will update the current Customer Charter and include version control.	Village Manager 31 March 2015	Underway			

Reference (no./year)  Non-Compliance/Controls Improvement (Legislative Obligation/ Rating/ /Details)  Auditor's Recommendation	Management Action	Person Responsible and Anticipated Completion Date	Status
Water Services Code of Conduct (Customer Service Standards) 2013, Clause 35.1  Non-Compliant – Minor impact  Treat Lalea Lifest de Villege is the callege statement.	Moama will liaise with their advisor to create a new written complaints procedure as per the recommendation.	General Manager 30 June 2015	Underway

Reference (no./year)	Non-Compliance/Controls Improvement (Legislative Obligation/ Rating/ /Details)	Auditor's Recommendation	Management Action	Person Responsible and Anticipated Completion Date	Status
03/2014	Compliance and Performance Reporting to the Authority  Licence WL40 Clause 16.1 – 16.3  Non-compliant – Minor impact  In accordance with the Water Compliance Reporting Manual April 2014, the licensee is required to submit to the Authority annual compliance reports by 31 August for the year ending 30 June. The auditor reviewed the licensee's correspondence with the Authority and licensee's Compliance Reports 2012/13 and 2013/14 and noted the following exceptions:  • Performance Report for 2012/13 was submitted on 1 August 2013. This should be reported as a non-compliance in the 2014 Compliance Report.  • Compliance Report for 2013/14 was submitted on 8 September.  • No evidence was available on whether the 2013/14 Performance Report was submitted by the due date.	a) The licensee should ensure that all future Compliance and Performance Reports are submitted to the Authority within the timeframes required and copies of correspondence between licensee and the Authority retained. b) The licensee should maintain a Compliance Register as a reminder of license obligations for review, recording of any non-compliances and due dates for annual reporting to the Authority.	Moama will liaise with their advisor to create a new Compliance Register as per the recommendation.	General Manager 31 March 2015	Underway

### 3.6 Current Review Asset System Deficiencies and Recommendations: 1 October 2013 – 30 September 2014

Table of Cu	Table of Current Review Asset System Deficiencies and Recommendations					
B. Unresolve	ed at end of current review period					
Reference (no./year) Rating	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period	Person Responsible and Anticipated Completion Date	Status	
05/2014 C3	Asset Planning – Service Levels  Service levels are defined  There is a Service Agreement in place with Tristar to perform daily operational and maintenance tasks at the WWTP. The Operational Service Requirements are documented in a separate TLLV internal document that outlines the service levels required. However, this document is not part of the Service Agreement with Tristar. The service levels are not well defined in the Tristar Service Agreement.  The Service Agreement with Tristar was dated 11 February 2014 is for a term of 12 months and due for renewal in February 2015. Moama could not locate the signed Service Agreement. However, it could be argued that the contract is implied as Moama continued to use Tristar's services and pay their bills.	<ul> <li>a) The licensee should ensure that clear and well defined service levels are included in the next revision of the operations and maintenance contract.</li> <li>b) The licensee should ensure that a signed copy of any future operations and maintenance contract is retained.</li> </ul>	Moama are currently negotiating a new contract with the plant operator which includes service levels and KPIs.	General Manager 31 March 2015	In progress	

Reference (no./year)	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period	Person Responsible and Anticipated Completion Date	Status
06/2014 A1	Asset Planning – Future Capacity  Non asset options are considered (eg demand management).  Demand is linked solely to the occupancy level of the village which is capped at a maximum of 470 residences when the village is complete. Once TLLV reaches maximum occupancy, no further allowance will be made by NLV for expansion of the WWTP operations and the associated Water Recycling Scheme infrastructure.  The WWTP was planned to be installed in two stages. The capacity of the system was reportedly adequate for a design flow of 75 cubic metres per day. Based on the assumption of the WWTP operating at its maximum capacity per day, the WWTP was assumed to have a maximum capacity to serve 180 connections under Stage 1. Stage 2 was to upgrade the WWTP to meet growing need. However, the current actual flow, from 143 residences, is 35 cubic metres per day. Therefore, the WWTP has a capacity to serve at approximately 300 residences. Once the capacity of the system is reached in approximately 3 years at the current sales rate, there are various development options that will be considered such as possible connection to a future Water Corporation system.	The licensee should continue to monitor the capacity of the WWTP, currently at 50% capacity for 143 houses. When the system nears its maximum capacity, an Asset Transition Plan should be developed to provide further capacity, depending upon the options available at the time such as connecting to the Water Corporation's sewer network or upgrading the plant.	Moama are currently investigating options for plant upgrade and expansion.	General Manager N/A – Ongoing	In progress

Reference (no./year)	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	A	Auditor's Recommendation	Management Action taken by end of audit period	Person Responsible and Anticipated Completion Date	Status
07/2014 C3	Asset Planning – Asset Management Plan  Plans are regularly reviewed and updated  The historical Tuart Lakes Lifestyle Village (TLLV) Asset Management Plan (AMP), dated 13 <sup>th</sup> October 2009 is outdated and revision and update of the AMP is required to incorporate modifications of the plant and changes to all aspects of the AMP that have occurred since its issue in October 2009. Also, the financial forecasts of owning and operating assets should be reviewed and updated based on the current costs and in terms of the current operation of the plant.  The reviewer also noted that the AMP is not included on the TLLV WWTP Document Register. The AMP should be reviewed and updated every two years or whenever major changes occur.	,	The licensee should ensure that a full review and revision of the Asset Management Plan is undertaken covering all aspects of the AMP, including the financial information and modifications of the plant.  The licensee should include the AMP on the TLLV WWTP Document Register and ensure that AMP is reviewed and updated every two years or whenever major changes occur.	Moama have already commenced this update and will follow the recommendations.	General Manager 30 June 2015	In progress
08/2014 C3	Asset Operations – Policies and Procedures  Operational policies and procedures are documented and linked to service levels required.  Documentation of an update to the Operation and	a)	The licensee should revise the documentation of all Operational and Maintenance policies and	a) Moama have already commenced this update and will follow the	General Manager and Village Manager 30 June 2015	Underway
	Maintenance Manual was not available. The Tristar O&M Manual sighted, consisted of only manufacturers' manuals for two items of plant infrastructure. The historic Aquasol O&M manual provided has details of the original plant and would require revision to incorporate plant modifications if adopted.  The daily operations procedure was only evident from the Operational Checklist – Daily Report. These report sheets are detailed and report on the operation and maintenance of all separate items of the plant infrastructure. The Operational Checklist – Daily report was updated for the plant modifications. All operational activities were the subject of an individual report.  In addition to Tristar inspections, a daily visual inspection of the plant by NLV maintenance	b) c)	procedures.  The licensee should ensure that the procedure of a daily visual inspection of the plant undertaken by NLV personnel is added to the Operational and Maintenance policies and procedures.  The licensee should ensure that monthly recycled water samples are taken, analysed and reported to the Department of Health.  The licensee should ensure that all aspects of alarm monitoring procedures, including a formal hierarchy	recommendations. b) Moama have already commenced this update and will follow the recommendations. c) Moama have already commenced this update and put in place reminders to follow up the plant operator to ensure the samples are taken. d) Moama, in conjunction with the plant operator, have been working on the alarms system for a		

Reference (no./year)	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period	Person Responsible and Anticipated Completion Date	Status
	personnel was reported to be carried out focusing on compound security, alarms, odour emissions and overflows. Although, the daily inspection tasks performed by NLV personnel have been documented in the daily NLV WWTP inspection log sheet and evidence of these daily inspections has been sighted, the WWTP Operational and Maintenance policies and procedures should be updated for NLV personnel daily inspection requirement and procedure.	of referrals, are documented to ensure failsafe operation of the WWTP.	number of months and will follow the recommendations		
	Monthly recycled water samples are taken with the exception of October 2013 and November 2013 not being reported to DoH.				
	The alarm system has been improved to include sludge levels. The alarm monitoring is carried out by Tristar and NLV staff. An informal cross check within NLV staffing is carried out prior to referral of the alarm callout to Tristar. A daily visual inspection of the plant by NLV maintenance personnel was reported to be carried out.				
	Documentation of all aspects of alarm monitoring procedures, including a formal hierarchy of referrals, is required to ensure failsafe operation of the WWTP.				
	While actual operation and maintenance of the WWTP is adequate, the revision of the documentation of all O&M procedures is required to ensure continued adequacy of WWTP operation regardless of personnel or contractual changes.				

Reference (no./year)	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period	Person Responsible and Anticipated Completion Date	Status
09/2014 C3	Asset Operations – Asset Register  Assets are documented in an Asset Register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition and accounting data.  The original Aquasol Asset Register sighted, covers most of the plant components, but does not reflect recent changes and has not been fully populated with all required details.  The reviewer was advised by the licensee that the External Consulting Engineer is in the process of producing a new asset register but it is still at an early stage.	The licensee should ensure that a new Asset Management Register is developed and includes all assets including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition.	Moama are currently in the process of updating the Asset Management Register in consultation with their consultant engineer and plant operator.	General Manager 30 June 2015	In progress

Reference (no./year)	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period	Person Responsible and Anticipated Completion Date	Status
10/2014 B2	Asset Operations – Competency and Training  Staff resources are adequate and staff receive training commensurate with their responsibilities.  The Service Agreement between NLV and Tristar Water Solution Pty Ltd (dated 26 February 2014) provides for one service technician on site for 3 days per week, one engineer on site as required and Perth-based process engineering support during normal working hours, including weekly review of plant log sheets. The service technician is also available by telephone to provide trouble-shooting assistance to plant operators if required in case of emergency. No evidence of appropriate training of Tristar technicians was sighted.  The TLLV WWTP Asset Management System Competency and Training Record template has been developed as part of the Register of TLLV Asset Management System Documents but has not been populated as yet. A record of Tristar operators training is required as well as NLV staff where relevant.  The reviewer was advised by the licensee that all maintenance team members that are involved with daily plant inspection and frontline operation monitoring activities are inducted in Health and Safety Guidelines. The reviewer sighted the Plant Induction Record provided and noted that one maintenance staff member advised to the reviewer as performing the majority of the daily inspections of the plant was not included on the Plant Induction Record. The reviewer also noted that the entries in the Plant Induction Record for the External Consulting Engineer and two other NLV staff members were dated 6 <sup>th</sup> and 11 <sup>th</sup> of November 2014.	a) A record of Tristar operators training as well as NLV staff where relevant should be documented in the TLLV WWTP Asset Management System Competency and Training Record template. b) The licensee should ensure that all NLV staff involved with daily plant inspection and frontline operation monitoring activities are inducted in Health and Safety Guidelines prior to conducting the daily inspections and a record of this is kept in the Plant Induction Record template. c) The licensee should ensure that the TLLV WWTP Asset Management System Competency and Training Record and Plant Induction record are regularly reviewed and kept up to date.	Moama will follow these recommendations.	a) General Manager 30 April 2015 b) Village Manager c) Village Manager	Underway

Reference (no./year) Rating	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period	Person Responsible and Anticipated Completion Date	Status
11/2014 B2	Risk Management – Reticulation Risks  Risks are documented in a risk register and treatment plans are actioned and monitored.  All the risks currently identified relate to the WWTP. The risks associated with the non-potable water reticulation/re-use (e.g. cross connection, unauthorised use of recycled water, residents coming into contact with below ground irrigation system, etc.) are not captured in the Risk Register.  A current copy of the WWTP Risk Register was not observed to be included on the Tristar's WWTP procedures file kept on site. The requirement to keep current copy of the WWTP Risk Register on the Tristar's WWTP procedures file should be added into the Internal Audit Checklist and compliance reviewed regularly.	<ul> <li>a) The licensee should ensure that risks associated with the non-potable water reticulation/re-use (e.g. cross connection, unauthorised use of recycled water, residents coming into contact with below ground irrigation system, etc.) are captured in the Risk Register.</li> <li>b) The licensee should ensure that a current copy of the WWTP Risk Register is kept on the Tristar's WWTP procedures file kept on site.</li> <li>c) The requirement to keep current copy of the WWTP Risk Register on the Tristar's WWTP procedures file should be added into the Internal Audit Checklist and compliance reviewed regularly.</li> </ul>	a) Moama have already commenced a review of the current Risk Register and will add this as per recommendations. b) Moama will follow this recommendation. c) Moama will follow this recommendation in consultation with their consultant engineer.	a) General Manager 30 April 2015 b) Plant Operator and Village Manager 30 April 2015 c) General Manager 30 April 2015	In progress

Reference (no./year)	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period	Person Responsible and Anticipated Completion Date	Status
12/2014 B2	Contingency Plans – Location and Contacts  Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.  The WWTP Emergency Response Plan provides contingency plans for Discharge to Environment and Spillage to Bund Area and sets out clear lines of authority and responsibility for both the licensee and the maintenance contractor. No regular testing is carried out, due to simplicity of the procedure.  The associated Contact List identifies primary and alternate contacts and contact mobile phone numbers for Tristar, NLV as well as licensed waste disposal contractor. The AMS Contact is included on the TLLV WWTP AMS Document Register and is to be reviewed on a 12 monthly basis. The AMS Contact List sighted was last updated on 28 <sup>th</sup> February 2014. The reviewer noted that the name and mobile phone number of General Manager Operations, who recently resigned, is still listed as an alternate contact in case of emergency.  The AMS Contact List was observed to be clearly displayed on electrical control cabinet on site. Emergency contact number was sighted on sign at WWTP gate.  A current copy of the WWTP Emergency Response Plan was not observed to be included on the Tristar's WWTP procedures file kept on site.	a) The licensee should ensure that a current copy of the WWTP Emergency Response Plan as well as TLLV Emergency Response Plan is kept on the Tristar's WWTP procedures file kept on site. b) The licensee should update the AMS Contact List, outside of the normal review frequency, when changes to staffing occur.	a) Moama have already commenced this update and will follow the recommendations. b) Moama will follow the recommendations.	a) Plant Operator and Village Manager 31 March 2015 b) General Manager	a) to commence b) ongoing

Reference (no./year)	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period	Person Responsible and Anticipated Completion Date	Status
13/2014 B2	Financial Planning – Income and Expenditure Forecasts  The financial plan states the financial objectives and strategies and actions to achieve the objectives.  The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets).  The financial plan provides firm predictions on income for the next five years and reasonable indicative predictions beyond this period.  The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services.  As part of the licence application, the financial plan was presented in the historical AMP (dated 13 <sup>th</sup> October 2009) sighted. The financial plan was not updated since.  The historical financial plan states the financial objectives and strategies and actions to achieve the objectives. However as the key assumptions in preparing the financial plan were based on 2009 figures prior to the operation of the WWTP, the financial objectives and strategies and actions to achieve the objectives in the AMP should be reviewed for validity and accuracy in term of the current operation of the WWTP.  The Financial Plan provided financial projections of operating statements (profit/loss) and statements of financial position for NLV, Moama's parent company and primary source of funding, for first five years (2010-2014). No projections of operating statements (profit/loss) and statements (profit/loss) and statements of financial position were made beyond 2014.  Indicative projections of income were presented in the Appendix O of the AMP for life of the licence (2010 – 2034) in the static cash flow forecast. Income predictions have been calculated based upon initial headworks fees obtained from village occupants as	<ul> <li>a) The licensee should review the financial objectives and strategies and actions to achieve the objectives in the Financial Plan, for validity and accuracy in terms of the current operation of the WWTP.</li> <li>b) The licensee should update the Financial Plan for financial projections of operating statements (profit/loss) and statements of financial position for the next 5 years from 2014.</li> <li>c) The licensee should update the Financial Plan for firm predictions of income for next 5 years from 2014 and reasonable indicative predictions beyond this period.</li> <li>d) The licensee should review and update the Financial Plan for operations and maintenance, administration and capital expenditure requirements of the services based on the current data collections and verifications, and for the WWTP modifications and current operation of the WWTP.</li> </ul>	Moama will update and create the required Financial Plans as pre the recommendations.	General Manager 30 June 2015	To commence

Reference (no./year)	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period	Person Responsible and Anticipated Completion Date	Status
	well as yearly service rates per home at that time.  As the assumptions made in the historical financial plan in preparing forecasts of income were based on the 2009 figures, the financial forecasts should be updated.  As the assumptions made in the historical financial plan in preparing forecasts of required capital expenditure and asset values, operations and maintenance, depreciation expense and carrying estimates were based on the 2009 figures prior to the				
	operation of the WWTP, the financial forecasts should updated.				
14/2014 B2	Capital Expenditure – Plan  The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan.  As part of the licence application, the historical financial projections capital costs for TLLV WWTP were presented in the Appendix O of the AMP for life of the licence (2010 – 2034) in a static cash flow forecast. The financial projections allowed for full replacement costs of all assets every ten years.  As the assumptions made in the historical financial plan in preparing forecasts of required capital expenditure and asset values were based on the 2009 figures prior the operation of the WWTP, the accuracy of the financial forecasts should be improved based on the current data collections and verifications and in terms of WWTP modifications and	a) As part of the Financial Plan review and update, the licensee should review and update the capital expenditure plan in the financial plan to be consistent with the asset life and current assets.	Moama will update and create the required Financial Plans as pre the recommendations.	General Manager 30 June 2015	To commence

# **Attachment 3: 2014 Audit Recommendations**

Table of C	Table of Current Audit Non- Compliances and Recommendations						
A. Resolved	A. Resolved during current audit period						
Manual Reference	Non-Compliance/Controls Improvement (Legislative Obligation/ Rating/ /Details)	Date Resolved (& management action taken)	Auditor's Comments				
	Nil						
B. Unresolve	B. Unresolved at end of current audit period						
Reference (no./year)	Non-Compliance/Controls Improvement (Legislative Obligation/ Rating/ /Details)	Auditor's Recommendation	Management Action				
01/2014	Customer Charter (Previous) Water Services Licensing Act 1995  Compliant  As the TLLV Customer Charter contains information on the resident's as well as TLLV responsibilities for a healthier recycled water system that are not being provided to the village residents in any other document, the auditor considers the continual provision of the TLLV Customer Charter to be beneficial to the village residents.  Document version control should be introduced.	The licensee should arrange for TLLV to include document version control in the TLLV Customer Charter.  (process improvement opportunity)					

Reference (no./year)	Non-Compliance/Controls Improvement (Legislative Obligation/ Rating/ /Details)	Auditor's Recommendation	Management Action
02/2014	Customer Complaints Procedure  Water Services Code of Conduct (Customer Service Standards) 2013, Clause 35.1  Non-Compliant – Minor impact  Tuart Lakes Lifestyle Village is the sole customer (under the Water Services Act 2012) but it should record any complaints from village residents and lodge these with Moama for action.  The auditor was advised by the licensee that any complaints from TLLV relating to their customers would be forwarded to the licensee for attention. TLLV has a written complaints procedure in the TLLV Customer Charter in a management pack that is discussed by the Village Manager with each prospective new resident and displayed in the TLLV administration office.  The auditor reviewed the TLLV Complaints Register and noted that there were no complaints received that related to water services provided by the licensee.	The licensee (Moama) should create a written complaints procedure in relation to investigating and dealing with complaints from TLLV on behalf of their customers about the provision of water services by the licensee or a failure by the licensee to provide a water service.  The licensee's complaints procedure must:  • be developed using as a minimum standard, the relevant provisions of the AS/ISO 10002-2006 and the Authority's guidelines (if any);  • provide for the matters specified in relation to lodgement of complaints, responding to complaints, dispute resolution arrangements and resolving complaints; and  • inform the customer (TLLV) that they do not have to use the licensee's complaints procedure, provide details of procedures under the Act, and set out the costs and benefits to the customer of the procedures under the Act.	

Reference (no./year)	Non-Compliance/Controls Improvement (Legislative Obligation/ Rating/ /Details)	Auditor's Recommendation	Management Action
03/2014	Compliance and Performance Reporting to the Authority  Licence WL40 Clause 16.1 – 16.3  Non-compliant – Minor impact  In accordance with the Water Compliance Reporting Manual April 2014, the licensee is required to submit to the Authority annual compliance reports by 31 August for the year ending 30 June. The auditor reviewed the licensee's correspondence with the Authority and licensee's Compliance Reports 2012/13 and 2013/14 and noted the following exceptions:  • Performance Report for 2012/13 was submitted on 1 August 2013. This should be reported as a non-compliance in the 2014 Compliance Report.  • Compliance Report for 2013/14 was submitted on 8 September.  • No evidence was available on whether the 2013/14 Performance Report was submitted by the due date.	<ul> <li>a) The licensee should ensure that all future Compliance and Performance Reports are submitted to the Authority within the timeframes required and copies of correspondence between licensee and the Authority retained.</li> <li>b) The licensee should maintain a Compliance Register as a reminder of license obligations for review, recording of any non-compliances and due dates for annual reporting to the Authority.</li> </ul>	

# **Attachment 4: 2014 Review Recommendations**

A. Resolved	during current review period			
Reference (no./year) Compliance rating	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)		Date Resolved (& management action taken)	Auditor's Comments
	Nil			
B. Unresolve	ed at end of current review period			
Reference (no./year) Rating	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)		Auditor's Recommendation	Management Action taken by end of audit period
05/2014 C3	Asset Planning – Service Levels  Service levels are defined  There is a Service Agreement in place with Tristar to perform daily operational and maintenance tasks at the WWTP. The Operational Service Requirements are documented in a separate TLLV internal document that outlines the service levels required. However, this document is not part of the Service Agreement with Tristar. The service levels are not well defined in the Tristar Service Agreement. The Service Agreement with Tristar was dated 11 February 2014 is for a term of 12 months and due for renewal in February 2015. Moama could not locate the signed Service Agreement. However, it could be argued that the contract is implied as Moama continued to use Tristar's services and pay their bills.	a) b)	The licensee should ensure that clear and well defined service levels are included in the next revision of the operations and maintenance contract. The licensee should ensure that a signed copy of any future operations and maintenance contract is retained.	

Reference (no./year) Rating	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period
06/2014 A1	Asset Planning – Future Capacity  Non asset options are considered (eg demand management).  Demand is linked solely to the occupancy level of the village which is capped at a maximum of 470 residences when the village is complete. Once TLLV reaches maximum occupancy, no further allowance will be made by NLV for expansion of the WWTP operations and the associated Water Recycling Scheme infrastructure.  The WWTP was planned to be installed in two stages. The capacity of the system was reportedly adequate for a design flow of 75 cubic metres per day. Based on the assumption of the WWTP operating at its maximum capacity per day, the WWTP was assumed to have a maximum capacity to serve 180 connections under Stage 1. Stage 2 was to upgrade the WWTP to meet growing need.  However, the current actual flow, from 143 residences, is 35 cubic metres per day. Therefore, the WWTP has a capacity to serve at approximately 300 residences. Once the capacity of the system is reached in approximately 3 years at the current sales rate, there are various development options that will be considered such as possible connection to a future Water Corporation system.	The licensee should continue to monitor the capacity of the WWTP, currently at 50% capacity for 143 houses. When the system nears its maximum capacity, an Asset Transition Plan should be developed to provide further capacity, depending upon the options available at the time such as connecting to the Water Corporation's sewer network or upgrading the plant.	
07/2014 C3	Asset Planning – Asset Management Plan  Plans are regularly reviewed and updated  The historical Tuart Lakes Lifestyle Village (TLLV) Asset Management Plan (AMP), dated 13 <sup>th</sup> October 2009 is outdated and revision and update of the AMP is required to incorporate modifications of the plant and changes to all aspects of the AMP that have occurred since its issue in October 2009. Also, the financial forecasts of owning and operating assets should be reviewed and updated based on the current costs and in terms of the current operation of the plant.	a) The licensee should ensure that a full review and revision of the Asset Management Plan is undertaken covering all aspects of the AMP, including the financial information and modifications of the plant.      b) The licensee should include the AMP on the TLLV WWTP Document Register and ensure that AMP is reviewed and updated every two years or whenever major changes occur.	

Reference (no./year) Rating	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)		Auditor's Recommendation	Management Action taken by end of audit period				
	The reviewer also noted that the AMP is not included on the TLLV WWTP Document Register. The AMP should be reviewed and updated every two years or whenever major changes occur.							
08/2014	Asset Operations – Policies and Procedures	a)	The licensee should revise the					
C3	Operational policies and procedures are documented and linked to service levels required.		documentation of all Operational and Maintenance policies and procedures.					
	Documentation of an update to the Operation and Maintenance Manual was not available. The Tristar O&M Manual sighted, consisted of only manufacturers' manuals for two items of plant infrastructure. The historic Aquasol O&M manual provided has details of the original plant and would require revision to incorporate plant modifications if adopted.	i i	, t s	;   ' t   s			The licensee should ensure that the procedure of a daily visual inspection of the plant undertaken by NLV personnel is added to the Operational and Maintenance policies and procedures.	
	The daily operations procedure was only evident from the Operational Checklist – Daily Report. These report sheets are detailed and report on the operation and maintenance of all separate items of the plant infrastructure. The Operational Checklist – Daily report was updated	c) d)	The licensee should ensure that monthly recycled water samples are taken, analysed and reported to the Department of Health.  The licensee should ensure that all aspects of alarm monitoring					
	In addition to Tristar inspections, a daily visual inspection of the plant by NLV maintenance personnel was reported to be carried out focusing on compound security, alarms, odour emissions and overflows. Although, the daily inspection tasks performed by NLV personnel have been documented in the daily NLV WWTP inspection log sheet and evidence of these daily inspections has been sighted, the WWTP Operational and Maintenance policies and procedures should be updated for NLV personnel daily inspection requirement and procedure.	t d / o s	procedures, including a formal hierarchy of referrals, are documented to ensure failsafe operation of the WWTP.					
	Monthly recycled water samples are taken with the exception of October 2013 and November 2013 not being reported to DoH.							
	The alarm system has been improved to include sludge levels. The alarm monitoring is carried out by Tristar and NLV staff. An informal cross check within NLV staffing is carried out prior to referral of the							

Reference (no./year) Rating	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period
	alarm callout to Tristar. A daily visual inspection of the plant by NLV maintenance personnel was reported to be carried out.  Documentation of all aspects of alarm monitoring procedures, including a formal hierarchy of referrals, is required to ensure failsafe operation of the WWTP.  While actual operation and maintenance of the WWTP is adequate, the revision of the documentation of all O&M procedures is required to ensure continued adequacy of WWTP operation regardless of personnel or contractual changes.		
09/2014 C3	Asset Operations – Asset Register  Assets are documented in an Asset Register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition and accounting data.  The original Aquasol Asset Register sighted, covers most of the plant components, but does not reflect recent changes and has not been fully populated with all required details.  The reviewer was advised by the licensee that the External Consulting Engineer is in the process of producing a new asset register but it is still at an early stage.	The licensee should ensure that a new Asset Management Register is developed and includes all assets including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition.	
10/2014 B2	Asset Operations – Competency and Training  Staff resources are adequate and staff receive training commensurate with their responsibilities.  The Service Agreement between NLV and Tristar Water Solution Pty Ltd (dated 26 February 2014) provides for one service technician on site for 3 days per week, one engineer on site as required and Perthbased process engineering support during normal working hours, including weekly review of plant log sheets. The service technician is also available by telephone to provide trouble-shooting assistance to plant operators if required in case of emergency. No evidence of appropriate training of Tristar technicians was sighted.	<ul> <li>a) A record of Tristar operators training as well as NLV staff where relevant should be documented in the TLLV WWTP Asset Management System Competency and Training Record template.</li> <li>b) The licensee should ensure that all NLV staff involved with daily plant inspection and frontline operation monitoring activities are inducted in Health and Safety Guidelines prior to conducting the daily inspections and a</li> </ul>	

Reference (no./year)	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Audi	itor's Recommendation	Management Action taken by end of audit period
	The TLLV WWTP Asset Management System Competency and Training Record template has been developed as part of the Register of TLLV Asset Management System Documents but has not been populated as yet. A record of Tristar operators training is required as well as NLV staff where relevant.  The reviewer was advised by the licensee that all maintenance team members that are involved with daily plant inspection and frontline operation monitoring activities are inducted in Health and Safety Guidelines. The reviewer sighted the Plant Induction Record provided and noted that one maintenance staff member advised to the reviewer as performing the majority of the daily inspections of the plant was not included on the Plant Induction Record. The reviewer also noted that the entries in the Plant Induction Record for the External Consulting Engineer and two other NLV staff members were dated 6th and 11th of November 2014.	c) The lic TLLV System Record	of this is kept in the Plant on Record template. ensee should ensure that the WWTP Asset Management of Competency and Training and Plant Induction record are lay reviewed and kept up to date.	
11/2014 B2	Risk Management – Reticulation Risks  Risks are documented in a risk register and treatment plans are actioned and monitored.  All the risks currently identified relate to the WWTP. The risks associated with the non-potable water reticulation/re-use (e.g. cross connection, unauthorised use of recycled water, residents coming into contact with below ground irrigation system, etc.) are not captured in the Risk Register.  A current copy of the WWTP Risk Register was not observed to be included on the Tristar's WWTP procedures file kept on site. The requirement to keep current copy of the WWTP Risk Register on the Tristar's WWTP procedures file should be added into the Internal Audit Checklist and compliance reviewed regularly.	associareticula connec recycle contact system Registe b) The lic current Registe proceduc) The recof the Tristar's be add	censee should ensure that a copy of the WWTP Risk er is kept on the Tristar's WWTP ures file kept on site.  quirement to keep current copy WWTP Risk Register on the s WWTP procedures file should ded into the Internal Audit ist and compliance reviewed	

Reference (no./year) Rating	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)		Auditor's Recommendation	Management Action taken by end of audit period
12/2014 B2	Contingency Plans – Location and Contacts  Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.  The WWTP Emergency Response Plan provides contingency plans for Discharge to Environment and Spillage to Bund Area and sets out clear lines of authority and responsibility for both the licensee and the maintenance contractor. No regular testing is carried out, due to simplicity of the procedure.  The associated Contact List identifies primary and alternate contacts and contact mobile phone numbers for Tristar, NLV as well as licensed waste disposal contractor. The AMS Contact is included on the TLLV WWTP AMS Document Register and is to be reviewed on a 12 monthly basis. The AMS Contact List sighted was last updated on 28th February 2014. The reviewer noted that the name and mobile phone number of General Manager Operations, who recently resigned, is still listed as an alternate contact in case of emergency. The AMS Contact List was observed to be clearly displayed on electrical control cabinet on site. Emergency contact number was sighted on sign at WWTP gate.  A current copy of the WWTP Emergency Response Plan as well as TLLV Emergency Response Plan was not observed to be included on the Tristar's WWTP procedures file kept on site.	a) b)	The licensee should ensure that a current copy of the WWTP Emergency Response Plan as well as TLLV Emergency Response Plan is kept on the Tristar's WWTP procedures file kept on site.  The licensee should update the AMS Contact List, outside of the normal review frequency, when changes to staffing occur.	
13/2014 B2	Financial Planning – Income and Expenditure Forecasts  The financial plan states the financial objectives and strategies and	a)	The licensee should review the financial objectives and strategies and actions to achieve the objectives in the	
	actions to achieve the objectives.  The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets).		Financial Plan, for validity and accuracy in terms of the current operation of the WWTP.	
	The financial plan provides firm predictions on income for the next five years and reasonable indicative predictions beyond this period.  The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services.	b)	The licensee should update the Financial Plan for financial projections of operating statements (profit/loss)	

Reference (no./year)	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)		Auditor's Recommendation	Management Action taken by end of audit period
	As part of the licence application, the financial plan was presented in the historical AMP (dated 13 <sup>th</sup> October 2009) sighted. The financial plan was not updated since.  The historical financial plan states the financial objectives and strategies and actions to achieve the objectives. However as the key assumptions in preparing the financial plan were based on 2009 figures prior to the operation of the WWTP, the financial objectives and strategies and actions to achieve the objectives in the AMP should be reviewed for validity and accuracy in term of the current operation of the WWTP.  The Financial Plan provided financial projections of operating statements (profit/loss) and statements of financial position for NLV, Moama's parent company and primary source of funding, for first five years (2010-2014). No projections of operating statements (profit/loss) and statements of financial position were made beyond 2014.  Indicative projections of income were presented in the Appendix O of the AMP for life of the licence (2010 – 2034) in the static cash flow forecast. Income predictions have been calculated based upon initial headworks fees obtained from village occupants as well as yearly service rates per home at that time.  As the assumptions made in the historical financial plan in preparing forecasts of income were based on the 2009 figures, the financial forecasts should be updated.  As the assumptions made in the historical financial plan in preparing forecasts of required capital expenditure and asset values, operations and maintenance, depreciation expense and carrying estimates were based on the 2009 figures prior to the operation of the WWTP, the financial forecasts should updated.	c) - d) -	and statements of financial position for the next 5 years from 2014.  The licensee should update the Financial Plan for firm predictions of income for next 5 years from 2014 and reasonable indicative predictions beyond this period.  The licensee should review and update the Financial Plan for operations and maintenance, administration and capital expenditure requirements of the services based on the current data collections and verifications, and for the WWTP modifications and current operation of the WWTP.	
14/2014 B2	Capital Expenditure – Plan  The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan.		As part of the Financial Plan review and update, the licensee should review and update the capital expenditure plan in	

Reference (no./year) Rating	Asset System Deficiency (AMS Component/Effectiveness Criteria/Details)	Auditor's Recommendation	Management Action taken by end of audit period
	As part of the licence application, the historical financial projections capital costs for TLLV WWTP were presented in the Appendix O of	the financial plan to be consistent with	
	the AMP for life of the licence (2010 – 2034) in a static cash flow forecast. The financial projections allowed for full replacement costs of all assets every ten years.	the asset life and current assets.	
	As the assumptions made in the historical financial plan in preparing forecasts of required capital expenditure and asset values were based on the 2009 figures prior the operation of the WWTP, the accuracy of the financial forecasts should be improved based on the current data collections and verifications and in terms of WWTP modifications and current operation of the WWTP.		