ENVIRONMENT

Environmental Management Solutions

Effective environmental management is becoming increasingly important as social and regulatory demands increase.

Alberfield Environment focuses our specialist expertise to assist you develop environmental solutions that work for your organisation.

Environmental Management – Regulatory Context

Industry environmental performance in Australia is highly regulated and as such, organisations are required to comply with a plethora of State and Federal legislation. Some of the specific pieces of legislation that may impact your organisation include: -

- The Environment Protection and Biodiversity Conservation Act 1999
- The National Greenhouse and Energy Reporting Act 2007
- The Energy Efficiency Opportunities Act 2006
- Various State based legislation e.g.: -
  - Environmental protection Acts
  - Vegetation clearing legislation
  - Contaminated sites legislation
  - Industry specific legislation i.e. mining and petroleum Acts
  - The QLD Integrated Planning Act 1997
  - The QLD Waste Reduction & Recycling Act 2011

Related Products:

Waste and Water Management

Greenhouse Gas and Energy Solutions

Best Practice Environmental Management

(See individual product brochures)

And that's just a few!

Alberfield Environment – Assisting Organisations

Alberfield Environment provides a range of services to assist organisations meet the environmental requirements for their activities. Here are some of the things we can do for you: -

EnvMS 1 – Environmental Management Systems

EnvMS 2 – Environmental Management Plans

EnvMS 3 – Environmental Auditing & Reporting

EnvMS 4 – Environmental Offsets

EnvMS 5 – NPI Reporting

EnvMS 6 – Environmental Risk Assessment

EnvMS 7 – Environmental Impact Statements (EIS)

EnvMS 8 – Environmental Authorities and Approvals

Standards:

- EnvMS1:Various State based and industry specific standards
- EnvMS2: AS / NZS ISO 19011:2003 Guidelines for Quality and / or Environmental Management Systems Auditing
- EnvMS6: ISO 31000:2009 Risk Management – Principles and Guidelines

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Environmental Management Delivery Process – A few examples

EnvMS2 Environmental Management Plans

Information review
Review client information; formulate activity description and identify key environmental aspects

Site visit(s)
Attend site; inspect local environment and identify key threats / issues; liaise with site personnel (if site operational)

Environmental Risk Assessment
Refer to description of EnvMS6 (may or may not be required)

Document EMP
Document EMP according to State / industry specific requirements. Typically includes: description of activity and environment, threat ID, management / mitigating factor ID (often in form of ERA); objectives, standards and measurement criteria; implementation strategy & management systems, ID of reporting and community consultation requirements.

Document Review and Updates
EP reviews and updates. For regulatory review this may involve preparation of itemised response to comments

Preparation of Public Information
This step involves preparation of EMP summaries or versions excluding commercially sensitive information for public information (if required)

Implementation
If required Alberfield can assist with EMP implementation

EnvMS3 Environmental Auditing & Reporting

Develop Audit Plan
Develop an audit plan which defines: audit scope, objectives and criteria (high level), audit team roles and responsibilities, resource requirements, logistical arrangements and audit itinerary

Develop Audit Tool
Develop a checklist in tabular form which specifies individual audit criteria, evidence guide, responsible personnel and provides space for documentation of evidence cited, notes and assessment of compliance

Review and Update
Client review, comment and acceptance of audit plan and checklist. Issue of audit plan and checklist to audit team

Conduct Audit
Attend site and conduct audit, may also include remote auditing of documents

Audit close out meeting
Upon audit completion conduct meeting with audit team to discuss findings. All non-conformances identified should be raised and audit team allowed to respond. Goal is for no surprises in final audit report.

Audit Report
Audit report documented which includes: reiteration of audit scope and objectives, description of audit as undertaken, details as to collection and verification of information, completed version of the audit checklist, summary of audit findings and recommendations for corrective actions

Review, update & Final report submission
Client review and comment / response to audit findings. Report update, finalisation and resubmission of final version

EnvMS6 Environmental Risk Assessment

Information review
Review project / activity specific information

Develop and Issue Terms of Reference
A brief document which beds down logistics and communicates workshop scope, objectives, methodology, risk assessment criteria, agenda, references materials and other relevant items

Client review, comment and agreement of Terms of Reference

Pre-population of ERA spreadsheet / database
Preliminary identification of environmental aspects, impacts, mitigating factors and potential management measures. Pre-population of ERA spreadsheet or database. Involves reference to relevant codes, guidelines and past experience with similar projects / activities. This stage is intended specifically to reduce burden during the ERA workshop

Conduct ERA
Facilitated workshop with attendees present as determined by the client. Likelihood and consequence of environmental aspects are assessed; mitigating factors and management measures are identified to reduce risks to "ALARP". Risks are ranked according to severity using previously defined criteria (i.e. risk matrices).

Submit ERA Report
Report detailing ERA methodology and outcomes is submitted to client. Report structure an content tailored to meet specific ERA objectives. Note: not required if ERA to be incorporated into an EMP.

Review, update & Final report submission
Client review and comment / response to audit findings. Report update, finalisation and resubmission of final version

Kick-off Meeting

Finalise schedule; re-confirm key objectives, nominate site visits (if required); identify key personnel and confirm communication channels; make arrangements for information exchange; circulate MoM

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ENVIRONMENT

Environmental Management Solutions - Best Practice

Today, organisations are recognising the benefits of reaching beyond the minimum requirements of environmental compliance and moving their business towards Best Practice. Alberfield Environment offers a range of Best Practice Environmental Management Solutions that can be built into your organisation.

Best Practice Environmental Management – Why Bother?

No matter which industry, state or even country you operate in, Best Practice Environmental Management applies to your organisation. Here are just a few of the reasons why: -

- Identify opportunities to save money
- Stay ahead of the game by buffering against increasing regulatory pressure
- Get the most bang out of your regulatory buck – you're already doing it so why not tell people about it?
- Attract "Green" investment
- Corporate social responsibility – show the world you're doing the right thing

Alberfield Environment – Best Practice Environmental Solutions

Let Alberfield Environment be your guide through the maze of best practice management structures. These may include: -

EnvBP 1 – ISO 14001 Management Systems

EnvBP 2 – Sustainability Reporting

EnvBP 3 – Ecological Footprint Assessments

EnvBP 4 – Industry Best Practice Management

EnvBP 5 – Auditing and Benchmarking

Related Services:

EngNAB 1D – NABERS Assessments

EngGS 1E – Green Star Assessments

Standards and guidelines:

- ISO 14001:2004 Environmental management systems – Requirements with guidance for use, and
- ISO 14004:2004 Environmental management systems – General guidelines on principles, systems and support techniques
- GRI Sustainability Reporting Guidelines

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The Delivery Process – A few examples

EnvBP1 ISO 14001 Management Systems

Kick-off Meeting
Finalise schedule; re-confirm key objectives, nominate site visits (if required); identify key personnel and confirm communication channels; make arrangements for information exchange; circulate MoM

Policy, Objectives and Targets
Screening of key environmental aspects, formulation of Organisational environmental policy, objectives and targets.

Procedures and Programme
Develop procedures as per ISO 14001 requirements. Develop a programme for achieving objectives and targets which as a minimum documents roles & responsibilities and identifies specific timeframes

Resource allocation
Identification and allocation of adequate people, skills, technology and financial resources for EMS implementation

Training
Identify needs and develop training packages for EMS implementation

Documentation
Develop documentation required for EMS implementation and establish and document control system for ongoing maintenance

Checking and Continual Improvement
Establish triggers for continual checks of the EMS (i.e. internal and external audits) to be followed up by regular Management reviews and implementation of corrective actions and / or measures for improvement

Systems
Collate all of the above elements into a "system" for implementation (i.e. intranet, electronic database, hardcopy folders etc.) and "go live"

EnvBP2 Sustainability Reporting

Kick-off Meeting
Finalise schedule; re-confirm key objectives, nominate site visits (if required); identify key personnel and confirm communication channels; make arrangements for information exchange; circulate MoM

Define report content
Confirm report scope, purpose and objectives. Identify applicable standards and broad social, environmental and economic indicators to be reported on. Agree on report structure.

Identify and prioritise specific indicators for reporting
Examine and prioritise sustainability indicators most relevant to the activities being undertaken. Decide level of coverage and detail that will be afforded for each specific indicator.

Data collection, review & validation
Collation and analysis of sustainability data.

Prepare Draft Report
Collate information and draft sustainability report.

Review, update & final report submission
Client review of report and update as per comments received. Submission of report revision 0.

EnvBP4 Industry Best Practice

Kick-off Meeting
Finalise schedule; re-confirm key objectives, nominate site visits (if required); identify key personnel and confirm communication channels; make arrangements for information exchange; circulate MoM

Define Activity and Aspects
Define the Organisation's activity and identify specific environmental aspects arising (typically includes both desktop research and site visit).

Standards
Identify and review legislation, regulations, standards and codes of practice applicable to the Organisation's activity.

Industry Leaders
Identify what other Organisations operating in the same industry are doing to manage environmental aspects over and above regulatory requirements. Confirm the benchmark for best practice

Review Environmental Performance
Review the Organisation's past & current performance against the above standards (typically involves an audit – see EnvMS3) and best practice benchmarks.

Improvement ID
Identify areas of improvement to meet minimum standards (if gap exists). Identify work required to meet best practice benchmark. Identify opportunities for the organisation to be better than the best (most effectively achieved via workshop)

Prepare Draft Report
Present the above information in the form of a report which makes specific recommendations for achieving industry best practice environmental management.

Review, update & final report submission
Client review of report and update as per comments received. Submission of report revision 0.

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Product Life Cycle Environmental Management

Increasing consumption levels, together with constrained natural resources puts an ever increasing pressure on our environment to provide our resources and absorb our wastes. Alberfield Environment provides assessment and management services to help you minimise environmental impacts of your products throughout their entire life cycle including carbon, water and waste.

Benefits of knowing and managing impacts of your products:

- **Optimise elements of the supply chain** – assess and utilise technological advances to save resources and reduce environmental impacts and costs
- **Access new markets** – reach domestic and international customers with strict environmental requirements
- **Develop better, genuinely more environmentally friendly products** – gain marketing advantage
- **Avoid green-washing** – no need to guess or make it up, you can find out the facts about your products and / or services
- Strengthen relationship with suppliers and customers

How can we help?

Alberfield Environment staff have extensive experience in life cycle assessment (LCA), carbon footprinting and supply chain environmental management. The services we offer to assist you manage your product impacts include:

EnvLCA 1 – Life Cycle Assessment

EnvLCA 1A – Full LCA (“cradle to grave”)

EnvLCA 1B – Partial LCA (e.g. “cradle to gate”)

EnvLCA 2 – Carbon Footprinting

EnvLCA 3 – New Product Concept Development

EnvLCA 4 – Product Redesign

EnvLCA 5 – Impact Reduction Plan, Company

EnvLCA 6 – Impact Reduction Plan, Supply Chain

EnvLCA 7 – Impact Reduction Communication Plan

Product life cycle:

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Product Life Cycle Environmental Management

The delivery process options include standalone assessments and verification of environmental credentials according to ISO14040:2006 and PAS2050:2011 requirements, as well as assessments combined with advisory services.

EnvLCA 1 Assessment

Objectives Meeting
Set out the assessment goals, scope, boundaries and information requirements.
Circulate action notes to ensure objectives are clear to all parties.

Life Cycle Inventory Analysis (LCI)
Data collection and calculation to quantify relevant inputs and outputs of a product system.

Life Cycle Impact Assessment (LCIA)
Evaluating the significance of potential environmental impacts of a product system using the LCI results.

Life Cycle Interpretation: Draft Report
Delivery of results consistent with the defined goals and scope and which reach conclusions; explaining limitations and providing recommendations. Peer review of report findings.

Final Report
Review and verification of report conclusions.

Presentation of Final Report

EnvLCA 1, 5, 7 Assessment and Management: Company Level

Objectives Meeting
Set out the project goals and desirable outcomes.
Circulate action notes to ensure objectives are clear to all parties.

EnvLCA 1 Assessment

EnvLCA 5 Impact Reduction Strategy: Company
Identify ecoefficiency measures targeting environmental "hot-spots" directly controlled by the company. Input / output management, process optimization recommendations: plan.

EnvLCA 7 Communication Strategy
Recommendations for communicating environmental impact reduction efforts and results to stakeholders, suppliers, customers and general public: plan.

Presentation of Impact Reduction and Communication Plans

EnvLCA 1, 5, 6, 7 Assessment and Management: Supply Chain Level

Objectives Meeting
Set out the project goals and desirable outcomes.
Circulate action notes to ensure objectives are clear to all parties.

EnvLCA 1 Assessment

EnvLCA 5 Impact Reduction Strategy: Company
Identify ecoefficiency measures targeting environmental "hot-spots" directly controlled by the company. Input / output management, process optimization recommendations: plan.

EnvLCA 6 Impact Reduction Strategy: Supply Chain
Developing standards of environmental conformance for suppliers and distributors. Developing a long-term integrated collaborative strategy of reducing environmental impacts from "cradle-to-gate" life cycle stages not directly controlled by the company: plan.

EnvLCA 7 Communication Strategy
Recommendations for communicating environmental impact reduction efforts and results to stakeholders, suppliers, customers and general public: plan.

Presentation of Impact Reduction and Communication Plans

EnvLCA 1, 3/4, 5, 6, 7 Assessment and Management: Entire Product Life Cycle

Objectives Meeting
Set out the project goals and desirable outcomes.
Circulate action notes to ensure objectives are clear to all parties.

EnvLCA 1 Assessment

EnvLCA 3/4 Impact Reduction Strategy: Product
Product redesign and re-imagining to target environmental "hot-spots" of its entire life cycle: product concept and specifications.

EnvLCA 5 Impact Reduction Strategy: Company
Identify Ecoefficiency measures targeting environmental "hot-spots" directly controlled by the company. Input / output management, process optimization recommendations: plan.

EnvLCA 6 Impact Reduction Strategy: Supply Chain
Developing standards of environmental conformance for suppliers and distributors. Developing a long-term integrated collaborative strategy of reducing environmental impacts from "cradle-to-gate" life cycle stages not directly controlled by the company: plan.

EnvLCA 7 Communication Strategy
Recommendations for communicating environmental impact reduction efforts and results to stakeholders, suppliers, customers and general public: plan.

Presentation of Product Concept, Specifications, and Impact Reduction and Communication Plans

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Environmental Management Solutions - Greenhouse Gas Management

Alberfield has been helping organisations meet the challenge of greenhouse gas management since the year 2000. Our focus is on identifying your key concerns and working with you to address your concerns cost effectively.

What is Greenhouse Gas Management?

Greenhouse gas management is focussed on:

1. Reducing atmospheric emissions; and
2. Offsetting emissions that cannot be avoided.

Alberfield refers to the following international standards for greenhouse gas management: -

ISO14064-1: 2006 – Greenhouse Gasses Part 1:

Organisational quantification and reporting of greenhouse gas emissions and removal

ISO 14064-2: 2006 – Greenhouse Gasses Part 2:

Project quantification, monitoring and reporting of greenhouse gas reductions or removal enhancements

ISO 14064-3: 2006 – Greenhouse Gasses Part 3:

Validation and verification of greenhouse gas assertions

How Can We Help?

Alberfield provides a range of services pertaining to greenhouse gas management. Some of these services include: -

EnvGHG1 - Greenhouse Gas Management Systems

Design and implementation

EnvGHG2 - Greenhouse Gas Management Audits

Auditing of greenhouse gas management systems in order to identify non-conformances, inefficiencies and improvement opportunities

EnvGHG3 - Carbon Footprint Management

Reduce your Carbon Footprint

EnvGHG4 - Carbon Sink Assessments

Quantifying the storage potential of carbon sinks

NGERS and EEO Assessments

Please refer to our Energy capability statements for information on EEO and NGERs compliance

Standards:

- EnvGHG1: ISO14064-1: 2006 – Greenhouse Gasses Part 1
- EnvGHG2: ISO 14064-3: 2006 – Greenhouse Gasses Part 3

  AS / NZS ISO 19011:2003 Guidelines for Quality and / or Environmental Management Systems Auditing
- EnvGHG3/4: ISO 14064-2: 2006 – Greenhouse Gasses Part 2

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Greenhouse Gas Emissions Management Delivery Process – A Few Examples

EnvGHG1 Greenhouse Gas Management Systems

Information review
Review client information; formulate activity description and identify key greenhouse gas aspects

Site visit(s)
Attend site; inspect and identify key issues / opportunities; liaise with site personnel (if site operational)

Greenhouse Gas Emissions and Sinks Assessment
(Refer to EnvGHG3/4)
(may or may not be required)

Document GHGMP
Document GHGMP according to State / industry specific requirements. Typically includes: description of activities and environment, issues/ opportunities ID and management); objectives, standards and measurement criteria; implementation strategy & management systems, ID of reporting and consultation requirements.

Document Review and Updates
GHGMP reviews and updates. For regulatory review this may involve preparation of itemised response to comments

Preparation of Public Information
This step involves preparation of GHGMP summaries or versions excluding commercially sensitive information for public information (if required)

Implementation
If required Alberfield can assist with GHGMP implementation

EnvGHG3/4 Carbon Footprint / Sink Assessments

Develop Assessment Plan
Develop a plan that defines: scope, objectives and criteria (high level), assessment team roles and responsibilities, resource requirements, logistical arrangements and itinerary

Conduct Assessment
Attend site and conduct assessment/s, may also include remote review of documents; collect relevant data, (energy, water, waste etc.); liaise with site personnel as needed (if site operational)

Site Assessment close out meeting
Upon completion of site assessment conduct meeting with assessment team to discuss findings. All issues and opportunities identified should be raised and the team allowed to respond. Goal is for no surprises in final assessment report.

Assessment Report
Assessment report documented which includes: reiteration of scope and objectives, description of assessment as undertaken, details as to collection and verification of information, completed, summary of findings and recommendations

Review, update & Final report submission
Client review and comment / response to assessment findings. Report update, finalisation and resubmission of final version

EnvGHG2 Greenhouse Gas Management Audits

Develop Audit Plan
Develop an audit plan which defines: audit scope, objectives and criteria (high level), audit team roles and responsibilities, resource requirements, logistical arrangements and audit itinerary

Develop Audit Tool
Develop a checklist in tabular form which specifies individual audit criteria, evidence guide, responsible personnel and provides space for documentation of evidence cited, notes and assessment of compliance

Review and Update
Client review, comment and acceptance of audit plan and checklist. Issue of audit plan and checklist to audit team

Conduct Audit
Attend site and conduct audit, may also include remote auditing of documents

Audit close out meeting
Upon audit completion conduct meeting with audit team to discuss findings. All non-conformances identified should be raised and audit team allowed to respond. Goal is for no surprises in final audit report.

Audit Report
Audit report documented which includes: reiteration of audit scope and objectives, description of audit as undertaken, details as to collection and verification of information, completed version of the audit checklist, summary of audit findings and recommendations for corrective actions

Review, update & Final report submission
Client review and comment / response to audit findings. Report update, finalisation and resubmission of final version

Kick-off Meeting

Finalise schedule; re-confirm key objectives, nominate site visits (if required); identify key personnel and confirm communication channels; make arrangements for information exchange; circulate MoM

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Waste Management Solutions

Whether you want to implement resource reduction, recycle, treat or dispose of your waste, Alberfield Environment can assist with a range of solutions and policy options to help overcome your waste related problems.

Waste Management tips

Effective waste management considers total material flows and focuses on efficient use of materials, reuse and waste minimisation.

Here are just a few tips for your organisation: -

- First and foremost – wherever possible Avoid, Reduce, Reuse and Recycle!
- Identify material flows and establish baseline data
- Utilise baseline data to identify resource use inefficiencies
- Engage your workers in waste management – especially those at the “coal face”, they know more about your waste than you or your managers do
- Know your landfill – who can take what, when and for how much?

How we can help

Alberfield Environment offers a range of services pertaining to waste management.

Below is a list of some of the services we can offer to assist your organisation: -

EnvWM 1 – Waste management systems

EnvWM 2 – Waste management plans

EnvWM 3 – Waste load auditing

EnvWM 4 – Waste reduction / management strategies

EnvWM 5 – Purpose specific options studies

EnvWM 6 – Treatment options investigations

EnvWM 7 – Disposal plans

Standards:

- Various state based and industry specific standards and guidelines
- AS / NZS ISO 19011:2003 Guidelines for Quality and /or Environmental Management Systems Auditing

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Waste Management Delivery Process – A few examples

EnvWM 1 Waste management systems

Preliminary
System development best informed by preliminary waste load audit (EnvWM 3) and purpose specific options studies (EnvWM 5). However, generic waste management system can be developed based on readily available existing Organisation and industry data (i.e. as outlined below)

Set measurable waste objectives and targets

Conduct Reviews
Review activity processes, waste streams, waste data and regulatory requirements. Characterise inputs, outputs and processes.
Review existing systems, procedures and controls for waste management and conduct gap analysis against intended management system functions.

Roles, Responsibilities and Resourcing
Define specific roles & responsibilities with respect to waste management. Identify and allocate resources required to achieve desired outcomes.

Procedures and Programme
Develop procedures, forms etc. as required to facilitate desired outcomes. Develop programme for achieving specific waste objectives and targets.

Training
Identify training needs for system implementation, develop training packages and roll out.

System
Collate the above components into a "system" for implementation (i.e. intranet, electronic database, hardcopy folders etc.) and "go live".

EnvWM 3 Waste load auditing

Develop Audit Plan
Develop an audit plan which defines: audit scope and objectives, audit team roles and responsibilities, resource requirements, logistical arrangements and audit itinerary.

Desktop Waste Analysis
Identify Organisational waste streams and review historical waste data for comparison. Review of waste generation and disposal records for the audit period.

Develop Audit Tool
Develop client specific audit tool to assist site based collection of waste data. Should include baseline data derived during the above analysis for checking whilst onsite

Site Based Waste Audit
Attend site and confirm physical waste sources, generation rates, disposal and record keeping

Audit Report
Document audit report which includes: reiteration of audit scope and objectives, description of audit as undertaken, details pertaining to collection and verification of information, completed version of the audit checklist, summary of audit findings and recommendations.

Review, update & final report submission
Client review and comment / response to audit findings. Report update, finalisation and resubmission.

EnvWM 5 Purpose specific options studies

Preliminary (recommended)
Complete waste load audit as described adjacent (EnvWM 3)

Analysis of Waste Streams
Analyse waste streams in terms of inputs and outputs. Compare against standards, guidelines, industry best practice and latest innovative technologies.

Waste Management Improvement ID
Identify opportunities for waste reduction and improved management measures.
Collate information for presentation and use during waste workshop

Conduct Waste Workshop
Conduct waste workshop to identify waste minimisation strategies specifically tailored to the engaging Organisation. Attendees recommended to include employees from ground up (i.e. factory floor to senior management).
Information collated during the above improvement ID to be presented to the group for discussion in addition to brainstorming exercises within the group to generate new / fresh ideas.

Prepare Waste Reduction Strategy Report
Document waste reduction strategy. Strategy to include: description of steps outlined above and associated outcomes; waste reduction opportunities identified and pro's / con's analysis for each presented in tabular form; high level cost impact assessment for key opportunities identified; recommendations for implementation of waste management improvements.

Review, update & final report submission
Submission of draft report for client review and comment. Report update, finalisation and resubmission.

Kick-off Meeting

Finalise schedule; re-confirm key objectives, nominate site visits (if required); identify key personnel and confirm communication channels; make arrangements for information exchange; circulate MoM

ENVIRONMENT

Water & Waste Water Management Solutions

Our climate is becoming increasingly unpredictable, swinging between drought and flood conditions, thus water management has never been so important.

Alberfield Environment brings together specialist technical expertise to help you meet your water management challenges.

The four "R's" of water management

When it comes to managing water, Alberfield takes the four "R's" approach as follows: -

- Replace – assess and utilise technological advances to save resources and reduce costs
- Reduce – maximise water efficiency whilst understanding the process complications that may arise as a result
- Reuse – reuse effluent whilst remaining compliant with various codes and regulatory requirements
- Recycle / treat – Utilise the best available water treatment technology and recycle waste water effluent

Standards and guidelines:

- AS / NZS ISO 19011:2003 Guidelines for Quality and / or Environmental Management Systems Auditing
- State based WEMP guidelines
- Various standards for water quality and sampling

How can we help?

Alberfield Environment staff have extensive water and waste water management experience. Just some of the services we offer to assist your organisation manage its water include: -

EnvHM 1 – Water management systems

EnvHM 2 – Water audits

EnvHM 3 – Water Efficiency Management Plans (WEMPs)

EnvHM 4 – Purpose specific options studies
e.g. water infrastructure retrofitting and water and effluent options studies

EnvHM 5 – Water treatment process design

EnvHM 6 – Water storage and migration studies

EnvHM 7 – Water Sensitive Urban Design (WSUD)

EnvHM 8 – Water quality testing and monitoring

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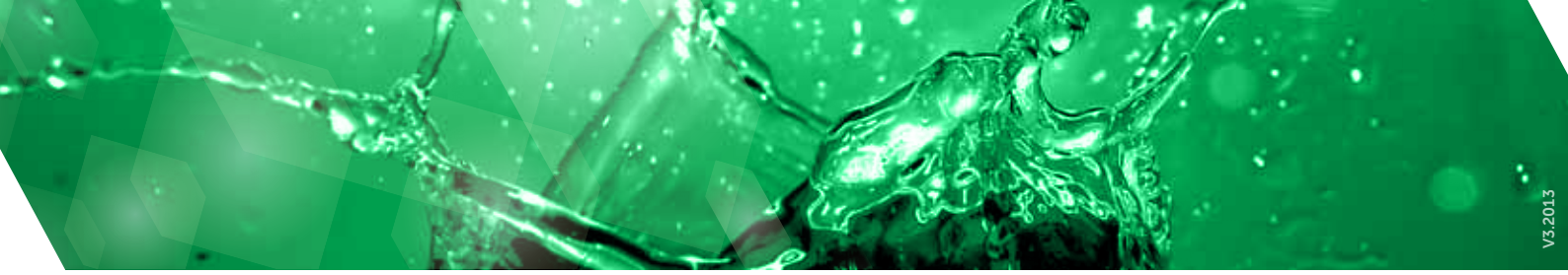

Water Management Delivery Process – A few examples

EnvHM 2 Water Audits

Develop Water Audit Plan & Tool
Develop an audit plan which defines: audit scope and objectives, audit team roles and responsibilities, resource requirements, logistical arrangements and audit itinerary. Develop audit tool (typically checklist in tabular form) to assist data and evidence collection and storage.

Conduct Desktop Water Audit
Remote desktop audit of water data and other relevant information e.g. purchasing records & usage data, design specifications, layout plans, relevant procedures & manuals etc.

Conduct Site based Water Audit
Attend site(s) to verify data, observe processes and site based physical factors. Typically includes: identification of key water-using areas, equipment, fixtures and flow rates; observation of operations to determine usage trends and identify opportunities for efficiency improvement; checking of metering equipment and assessment of sub-metering requirements; effectiveness assessment of current water saving measures (if any).

Prepare Water Audit Report
Prepare report according to agreed standards. Typically includes: activity and site description; description of audit as undertaken; completed audit checklist; consumption breakdown & water usage summary; usage comparison against applicable benchmarks; Discussion of historical water use and performance trends; recommendations for water saving opportunities.

Report Review, Update and Resubmission
Client review and comment / response to audit findings. Report update, finalisation and resubmission.

EnvHM 3 WEMPs

Conduct Water Audit
See adjacent description for water audits. Level of complexity (and hence cost) varies according to agreed scope

Data analysis and WEMP preparation
Analysis of water usage data; preparation of WEMP as per State based requirements (or other relevant standards if not a regulatory requirement). As a minimum WEMP's include: business and site data, water management review, end use categorisation, water use data inventory & aggregated data, efficiency targets & opportunities and action plan.

WEMP Review, Update and Resubmission
Client review and subsequent WEMP update, finalisation and submission of final.

Implementation
If required Alberfield can also assist with WEMP implementation

EnvHM 8 Water Quality

Prepare Sampling and Analysis Plan
Prepare sampling plan in accordance with standards agreed in job scope. Typically includes: purpose, scope & objectives; site(s) description; description of chemical analysis to be undertaken; description of sampling methodology (including quality control & safety considerations); material requirements; sampling patterns; logistical arrangements & timing; record keeping requirements etc.

Prepare Sampling Materials & Equipment
Gather all materials and equipment required for sampling exercise, typically includes: PPE, sampling containers, cold storage, collections aids (i.e. pumps or bailers), chain of custody forms, camera etc.

Conduct Site based Sampling and Analysis
Attend site and conduct sampling and analysis as per sampling and analysis plan. Particular care is taken with respect to treatment and handling of samples to avoid contamination and maintain sample integrity. May involve some site based measurements. Transfer samples to laboratory within specified timeframes.

Analysis of Laboratory Results
Receipt of laboratory results and comparison against water quality criteria relevant to intended use.

Prepare Sampling and Analysis Report
Prepare sampling and analysis report, typically includes: description of sampling as undertaken, presentation of results as compared to relevant quality criteria, results discussion (i.e. what does it all mean) and recommendations.

Report Review, Update and Resubmission
Client review and comment / response. Report update, finalisation and resubmission.

Kick-off Meeting
Finalise schedule; re-confirm key objectives; nominate site visits; identify key personnel and confirm communication channels; make arrangements for information exchange; circulate MoM