

These tables set out the operational controls required to achieve the objectives and targets set out in Environmental Program 14 Waste Management. BBA will, as a minimum, implement the control activities and performance measures set out below.

Table OCO 14.1 Waste Management

Table OCO 14.1 Waste Management

| Ref | Subject | Reference | Control Activity | Responsibility | Timing | Performance Measure | Audit Check |
|-------------------------------|--|---------------------|---|---|--|--------------------------------------|-------------|
| INDUCTION AND TRAINING | | | | | | | |
| 1. | Design Consultant briefing | CEMP 10 | The Design Consultants will be briefed on the design aspects of this Control Document | Design Director | Prior to start of design. | Briefing record | |
| 2. | Project and site induction | CEMP 13 | All employees, consultants and subcontractors involved will be inducted into the environmental aspects and controls related to this Control Document. The induction will emphasise: <ul style="list-style-type: none"> • Importance of waste minimisation • Waste management requirements on site | Construction Director or Project Manager, as applicable Start up Manager for Early Works | Prior to personnel commencing work on site | Induction records | |
| 3. | Staff Construction Environmental Management Plan induction | CEMP 13 | All relevant staff will be inducted into the requirements of the Construction Environmental Management Plan and all associated documents. | Construction Director or Project Manager, as applicable | Prior to staff commencing work on site | Induction records | |
| 4. | Awareness training | CEMP 13 CEMP 14 | Conduct awareness instruction of relevant BBA staff, contractors and field personnel. | Project Manager | As per Training Plan | Training records | |
| 5. | Briefings | CEMP 13 CEMP 14 | Environmental briefings shall emphasize site-specific Waste Management requirements. | General Superintendent | Prior to working in a specific area | Record of Briefing (eg SEP Briefing) | |
| DESIGN | | | | | | | |
| 6. | Use modular approach | Project Requirement | If practicable, the designers shall use a “modular” approach (standard sizes) | Design Director | Design Phase | Design verification | |

OPERATIONAL CONTROLS 14 WASTE MANAGEMENT

| Ref | Subject | Reference | Control Activity | Responsibility | Timing | Performance Measure | Audit Check |
|---|---|---------------------|---|------------------------|--------------------------|----------------------------------|-------------|
| 7. | Packaging materials | Project Requirement | Supply specifications will include requirements to minimise the use of packaging materials | Procurement Manager | Procurement | Volume of waste packaging | |
| 8. | Maximise pre-cast concrete use | Project Requirement | Wherever possible, maximise the use of precast concrete. | Design Director | Design Phase | Design Verification | |
| PRE-CONSTRUCTION | | | | | | | |
| 9. | Subcontract agreements include waste requirements | Project Requirement | Subcontract agreements shall include provisions for waste avoidance and/or reduction, waste reuse, recycling and reclamation, waste treatment and waste disposal, no use of ozone depleting substances. | Contract Manager | Subcontract Negotiations | Subcontract | |
| 10. | Appropriate approvals obtained | EMPC Act 2004 | Appropriate approvals shall be obtained for the disposal of controlled waste. | Environmental Manager | Initial site preparation | Approvals obtained | |
| 11. | Use licensed contractors | EMPC Act 2004 | Only appropriately licensed (Waste transport business environment protection notices) contractors shall handle and transport controlled (including contaminated) waste. | Contract Manager | Initial site preparation | WTB-EPNs | |
| 12. | Waste storage areas encourage separation | Project Requirement | All waste storage areas shall be designed to encourage separation of recyclable material. | General Superintendent | Initial site preparation | Waste storage area configuration | |
| 13. | Clearly signed designated waste storage areas | Project Requirement | Designated waste storage areas shall be clearly signed showing the type of waste and related precautions (hazardous substances /dangerous goods). | General Superintendent | Initial site preparation | Signage of areas | |
| CONSTRUCTION | | | | | | | |
| Construction waste landfill cell | | | | | | | |

OPERATIONAL CONTROLS 14 WASTE MANAGEMENT

| Ref | Subject | Reference | Control Activity | Responsibility | Timing | Performance Measure | Audit Check |
|------------------------|---|---|--|------------------------|--|---------------------------------|-------------|
| 14. | Onsite landfill available | LU1, Part 3, Sect 4, 4GN7.3, pg 139, (Seq pg 152) | A dedicated onsite landfill cell will be constructed to receive all inert construction waste from the project. No controlled waste, liquid waste, putrescible waste, organic waste or treatment plant sludge may be disposed of in the landfill. | General Superintendent | Prior to significant construction waste generation | Landfill cell constructed | |
| Housekeeping | | | | | | | |
| 15. | Keep site clean and tidy | Project Requirement | The site shall be maintained in a clean and tidy condition. | General Superintendent | Ongoing | Site clean and tidy | |
| 16. | Keep site free of litter | Project Requirement | The site shall be kept free of litter. | General Superintendent | Ongoing | Site free of litter | |
| 17. | Keep public areas unobstructed | Project Requirement | Areas where the project interacts with public areas, such as footpaths, etc shall be kept tidy and unobstructed. | General Superintendent | Ongoing | Public areas unobstructed | |
| Waste avoidance | | | | | | | |
| 18. | Determine requirements before purchase | Project Requirement | Before purchasing any materials, accurately determine the requirements for the scope of works. | Contract Manager | Ongoing | Dockets Waste Register | |
| 19. | Order only quantity required | Project Requirement | Only order the quantity of material required for the specific purpose and not over-orders. | Contract Manager | Ongoing | Dockets Waste Register | |
| 20. | Purchase materials in bulk where Possible | Project Requirement | Materials to be purchased in bulk where possible to minimise packaging. | Contract Manager | Ongoing | Purchase records Waste Register | |
| 21. | Coordinate use of raw materials between sites | Project Requirement | The use of raw materials is to be coordinated between sites (eg plywood, noise hoarding, site fencing and formwork for concrete) to reduce waste. | General Superintendent | Ongoing | Materials shared | |
| Waste reuse | | | | | | | |

OPERATIONAL CONTROLS 14 WASTE MANAGEMENT

| Ref | Subject | Reference | Control Activity | Responsibility | Timing | Performance Measure | Audit Check |
|------------------------|---|---------------------|--|------------------------|---------|--|-------------|
| 22. | Materials to be collected separately | Project Requirement | Wood packaging, pallets formwork and off-cuts, and cardboards and plastic wrapping are to be placed in separate bins and collected for recycling. | General Superintendent | Ongoing | Materials segregated | |
| 23. | Excavated material and spoil to be reused | Project Requirement | All excavated material and spoil shall be utilised during construction. | General Superintendent | Ongoing | Excavated material and spoil utilised | |
| 24. | Vegetative material to be mulched | Project Requirement | Leaf material and other cleared vegetation shall be mulched. | General Superintendent | Ongoing | Material mulched | |
| 25. | Fuel and lubricant containers to be collected for reuse | Project Requirement | Fuel and lubricant containers are to be collected by a drum recycler for cleaning and reuse. | General Superintendent | Ongoing | Drums recycled Waste Register | |
| 26. | Reuse wastewater contained on site | Project Requirement | Wastewater retained onsite (sediment basins) will be reused where practicable on the worksites for dust suppression, wheel wash etc. | General Superintendent | Ongoing | Water reused | |
| Waste recycling | | | | | | | |
| 27. | Separate recyclable materials where practicable | Project Requirement | Recyclable waste materials shall be separated into dedicated bins/ areas where practicable, for either reuse on-site or collection by a waste contractor and transport to off-site recycling facilities. | General Superintendent | Ongoing | Waste separated Subcontract Agreement | |
| 28. | Materials sorted offsite where separation not practicable | Project Requirement | Where space is not available on the worksite(s) for placement of multiple bins, all wastes are to be deposited into one bin and sorted off-site by a waste contractor. | General Superintendent | Ongoing | Wastes sorted Subcontract Agreement | |
| 29. | Scrap metal segregated | Project Requirement | Scrap metal is to be segregated into ferrous and non-ferrous bins for collection by a scrap metal contractor for recycling. | General Superintendent | Ongoing | Waste register | |

OPERATIONAL CONTROLS 14 WASTE MANAGEMENT

| Ref | Subject | Reference | Control Activity | Responsibility | Timing | Performance Measure | Audit Check |
|-----------------------|--|---------------------|---|------------------------|--|--------------------------------------|-------------|
| 30. | Use recycled materials where practicable | Project Requirement | Use of recycled materials (to the limits of design) in concrete, road base, asphalt and other construction materials. | Project Manager | Ongoing | Recycled materials used | |
| 31. | Waste oil, grease and lubricants to be collected for recycling | Project Requirement | Lubricants, oil, grease and radiator fluid shall be collected for recycling. Lubricants, oil and fluids for collection will be separated and kept in appropriate receptacles within a bunded area. | Plant Manager | Ongoing | Waste register | |
| 32. | Tyres to be collected for recycling | Project Requirement | Tyres shall be stored for collection and recycling. | Plant Manager | Ongoing | Waste Register | |
| Waste disposal | | | | | | | |
| 33. | Dispose of waste in accordance with guidelines | Project Requirement | Non re-useable and recyclable wastes are to be classified and disposed of in accordance with the DTAE guidelines. | General Superintendent | Ongoing | Waste register | |
| 34. | Maintain Waste Register | Project Requirement | A Waste register will be maintained for all waste that The types of waste, destination and receipt by the disposal site are to be recorded and in the Waste Register | Environmental Manager | Ongoing | Waste register | |
| 35. | Inert construction waste to onsite landfill | Project Requirement | Inert construction waste that cannot be reused or recycled will be disposed of to the construction waste cell of the onsite landfill. The types of waste, destination and receipt by the disposal site are to be recorded and in the Waste Register | General Superintendent | Prior to significant construction waste generation | Appropriate waste to onsite landfill | |

OPERATIONAL CONTROLS 14 WASTE MANAGEMENT

| Ref | Subject | Reference | Control Activity | Responsibility | Timing | Performance Measure | Audit Check |
|-----|--|--|---|------------------------|---------|---------------------|-------------|
| 36. | Putrescible waste | Project Requirement | No putrescible waste will go to the onsite construction waste landfill cell but will be taken for disposal at an appropriately licensed municipal landfill. | General Superintendent | Ongoing | Waste register | |
| 37. | Waste collection trucks appropriately licensed | Project Requirement | All trucks transporting wastes off-site are to be appropriately licensed to carry the materials to appropriately licensed waste facilities. | General Superintendent | Ongoing | Waste register | |
| 38. | Skips at all sites and compounds and regularly emptied | Project Requirement | Waste skips are to be provided at all construction sites and site compounds and are to be regularly removed / emptied. | General Superintendent | Ongoing | Waste register | |
| 39. | Hazardous waste managed appropriately | EMPC Act 2004 | Any hazardous waste is to be managed by a licensed (waste transport business environment protection notice) contractor and handled and transported for disposal to a DTAE approved site. | General Superintendent | Ongoing | WTB-EPN | |
| 40. | Chemical wastes stored and managed appropriately | Project Requirement | Chemical wastes are to be placed in sealed drums for collection by a waste contractor and off-site treatment or management in accordance with the manufacturer's instructions. Empty drums are to be disposed of as prescribed waste. | Environmental Manager | Ongoing | Waste register | |
| 41. | Burning | DIIS | There will be no burning of waste other than approved controlled burning of vegetation | General Superintendent | Ongoing | Burning approvals | |
| 42. | Toilet facilities | LU1, Part 3, Sect 5, 5WM4.1, pg 157, (Seq pg 170) LU1, Part 3, Sect 6, 6WM4.1, pg 166, (Seq pg 179) | Portable toilet facilities will be provided and maintained at all major work sites, including major watercourse crossings and hydrotest locations. | General Superintendent | Ongoing | Inspection records | |

Water

OPERATIONAL CONTROLS 14 WASTE MANAGEMENT

| Ref | Subject | Reference | Control Activity | Responsibility | Timing | Performance Measure | Audit Check |
|-------------------|---|---------------------|--|------------------------|-------------------------------------|-------------------------------------|-------------|
| 43. | Water reuse | Project Requirement | Reuse water on-site to the maximum extent practicable | General Superintendent | Ongoing | Water recycled | |
| 44. | Wheel cleaning facilities to use recycled water where practicable | Project Requirement | Wheel cleaning facilities, if practicable, shall use recycled water at each work site. | General Superintendent | Ongoing | Water recycled | |
| 45. | Sewage to be removed by licensed contractors, where necessary | Project Requirement | If sewer is not available, sewage from sanitary amenities is to be discharged to holding tanks for removal by licensed (waste transport business environment protection notice) waste contractors. | General Superintendent | Ongoing | Holding tanks used WTB-EPNs | |
| 46. | Contaminated water | Project Requirement | All potentially contaminated water will be collected and either treated on site or removed by licensed (waste transport business environment protection notice) waste contractors. | General Superintendent | Ongoing | Treatment or tanks used WTB-EPNs | |
| Excavation | | | | | | | |
| 47. | Reuse and disposal of material detailed in SEP | Project Requirement | Prior to excavation works the reuse and disposal of material is to be detailed in the Site Environmental Plan. | Environmental Manager | Site Environmental Plan preparation | Site Environmental Plans | |
| 48. | Spoil to be used as fill | Project Requirement | Generally all excavated material will be used in fill. | General Superintendent | Construction planning | Spoil used as fill | |
| 49. | Topsoil reused | Project Requirement | Topsoil suitable for reuse (i.e. free of weeds, uncontaminated) is to be segregated for stockpiling and use in landscaping where practicable. | General Superintendent | Construction planning | Topsoil stockpiled | |

| Ref | Subject | Reference | Control Activity | Responsibility | Timing | Performance Measure | Audit Check |
|-------------------------|------------------------------------|-----------------------------------|---|------------------------|-----------------------|---------------------------|-------------|
| Demolition waste | | | | | | | |
| 50. | Demolition waste reused / recycled | Project Requirement | Demolition waste shall be reused / recycled where practicable. The demolition contractor is to be instructed to segregate and arrange for collection of demolition waste for reuse / recycling. | General Superintendent | Demolition activities | Waste reused/ recycled | |
| INCIDENTS | | | | | | | |
| 51. | Potential environmental harm | CEMP incident response procedures | <p>Class 1: <i>An actual adverse effect on the health or safety of human beings that is of a high impact or on a wide scale; an actual adverse effect on the environment that is of a high impact or on a wide scale; an actual loss or property damage of an amount, or amounts in aggregate, exceeding ten times the threshold amount (\$5,000); an environmental nuisance of a high impact or on a wide scale; an actual adverse effect on the health or safety of human beings that is not negligible; an actual adverse effect on the environment that is not negligible - cease relevant activities across all sites until the problem is fully understood and rectified; follow incident response procedures</i></p> <p>Class 2: <i>The emission of a pollutant that unreasonably interferes with, or is likely to unreasonably interfere with, a person's enjoyment of the environment; any emission specified in an environment protection policy to be an environmental nuisance; an actual loss or property damage of an amount, or amounts in aggregate, exceeding the threshold amount (\$5,000) - cease relevant activities at the site of occurrence until the problem is rectified; follow incident response procedures</i></p> | Environmental Manager | Ongoing | Incident response records | |

| Ref | Subject | Reference | Control Activity | Responsibility | Timing | Performance Measure | Audit Check |
|-------------------------------|---------------------------|-----------------------------------|--|----------------------------|-------------|---------------------------|-------------|
| 52. | Potential permit breach | CEMP incident response procedures | <p>Class A: <i>A permit condition has been breached and either the environmental consequences are significant or the breach is due to a wilful or negligent failure to attempt to satisfy the condition</i> – cease relevant activities across all sites until the problem is fully understood and rectified; follow incident response procedures</p> <p>Class B: <i>A permit condition has been technically breached but the intent of the condition has been or will be achieved and environmental consequences of the breach are not significant</i> – cease relevant activities at the site of occurrence until the problem rectified; follow incident response procedures</p> <p>Class C: <i>Compliance with the permit has been raised as an issue but the intent and requirements established by the permit condition have been met</i> – examine the significance and potential for corrective action; follow incident response procedures</p> | Environmental Manager | Ongoing | Incident response records | |
| EVALUATING PERFORMANCE | | | | | | | |
| 53. | Inspections | CEMP 16 | Inspect the condition of protection and control measures and arrange maintenance, as required. | Site Environmental Officer | Daily | Weekly Checklist | |
| 54. | Reporting | CEMP 17 | Report on the implementation of this EP in the environmental section of the monthly Project Report. | Environmental Manager | Ongoing | Monthly Report | |
| 55. | Assess monitoring results | CEMP 19 | Evaluate and assess monitoring results against specified targets | Environmental Manager | Ongoing | Reports | |
| 56. | Corrective action | CEMP 19 | Take corrective action, where required | Project Manager | As required | Action taken | |

Definitions

Controlled waste - Controlled waste is the most hazardous category of waste and includes those wastes that exhibit toxicity, chemical or biological reactivity, environmental persistence, or the ability to bio-accumulate or enter the food chain.

Revision Status

| Revision | Date | Revision Description | Prepared | Reviewed | Approved |
|----------|-----------------|---|----------|----------|----------|
| A0 | 27 April 2007 | Draft for BBA review | IW | | |
| A1 | 9 May 2007 | Draft for DTAE review | IW | | |
| B0 | 22 October 2007 | Revised for submission to DTAE following auditor's comments | IW | JD | JC |
| B3 | 30 January 2008 | Revised to include inspection frequency | JRD | JD | CF |