

4 Revised Statement of Commitments

The following revised Statement of Commitments amends the Statement which was submitted to the Department of Planning and Environment in May 2015 and has been prepared in response to the outcomes of additional investigations which have now been undertaken. Bicorp commit to the undertaking of the following:

4.1 Geotechnical Design Solutions, Works and Investigations

The following recommendations to address geotechnical constraints will be implemented by Bicorp:

- 1) Additional site investigations (confirmatory holes and pits) will be undertaken, if required by the supervising geotechnical consultant at critical locations (eg on steeply sloping ground) to ensure that the local and regional stability are assessed with respect to the proposed engineering elements and design performances.
- 2) As part of site preparation prior to construction works, all vegetation, topsoil and any uncontrolled fill will be removed.
- 3) All footings will be found on same bearing stratum.
- 4) The base of all footing excavations will be inspected by a qualified geotechnical engineer to ensure footing will found in competent materials as designed.
- 5) Should variation in descriptions in soil types, colour or depths be discovered during construction, a geotechnical engineer will be notified so that the potential influence on the footing as it may be affect surrounding engineering elements may be assessed.
- 6) During design consideration will be given to the CSIRO sheet BFT-18 *'foundation maintenance and footing performance'*.
- 7) Temporary surface protection against erosion will be provided in accordance with the requirements of the supervising geotechnical engineer.
- 8) In the long term, the excavation faces will be retained by engineered retaining structure in particularly along the eastern hilly section of the site. These structures will be designed to withstand the applied lateral pressures of the soil/rock layers, the existing surcharges in their zone of influence; including existing structures, and construction related activities, and also hydrostatic pressures (if it is appropriate).
- 9) The final pavement thickness shall be determined from geotechnical testing to establish the subgrade CBR.
 - Pavement shall be designed generally in accordance with Section D2 'pavement design' of the Wollongong Subdivision Code 2008.
 - Pavement shall be constructed generally in accordance with Section C242.27 'Flexible Pavement' of the Wollongong Subdivision Code 2008. Pavement thickness shall be nominally as follows:
 - o Base course 150mm layer of DGB20 compacted to 98% of modified compaction .
 - o Sub base course shall be not less than 150mm thickness of DGS40 compacted to 95% modified compaction.
 - Pavement seal shall be either two coat hot bitumen seal (14/7) or 40mm thickness of AC14.
 - If CBR values warrant a thicker sub-grade of DGS40 shall be placed in layers of compacted thickness of not less than 100mm and not exceeding 200mm thickness (refer C242.27).

4.2 Groundwater

The following will be implemented by Bicorp in relation to groundwater monitoring and reporting:

- 1) Groundwater presence or levels will be confirmed if construction is undertaken during or following adverse weather or if a significant time period elapses between this investigation and construction. The Office of Water will be notified prior to any works occurring that are likely to intercept or extract groundwater and an estimate of the likely take of groundwater will be provided to the Office of Water to assess the need for an authorisation.
- 2) Quarterly Testing of the groundwater on the site will be undertaken to identify any future trends and characterise the groundwater within the local area. Monitoring will commence at least three months prior to construction commencing and the results of the groundwater monitoring programme will be provided to the Office of Water.
- 3) Development of a Soil and Water Management Plan to minimise the amount of surface runoff and potential migration of contamination.
- 4) Engineering of the development working platform to minimise the infiltration of any contaminants into the underlying soils.

4.3 Hazards

The following measures will be implemented by Bicorp to address hazards associated with transport, construction, on site storage of fuels/hydrocarbons, and site operation in relation to dust, bushfire and theft:

- 1) Preparation of an Emergency Management/Response Plan.
- 2) Preparation of an Environmental Management Plan.
- 3) Preparation of a Work Health and Safety Plan.
- 4) Preparation of a Hazardous Material Management Plan.
- 5) Appropriate induction and training of personnel and the implementation of operator training.
- 6) The purchase of spill response equipment and the implementation of spill response training.
- 7) Emergency services (police, fire brigade) will be contacted when required.
- 8) The implementation of site security to limit public access, as required.
- 9) Procurement of fire fighting equipment adequate for the level of risk and regular maintenance and testing of such equipment.
- 10) Preparation of a Bushfire Management Plan.
- 11) Regular maintenance inspections of equipment.
- 12) The preparation of a Traffic Management Plan.
- 13) Implementation of procedures to ensure that handling and storage of flammable and combustible liquids is in accordance with Australian Standards.
- 14) Storage and handling of all substances, including waste, under conditions that minimise the risk of fire, explosion or toxic emissions, with implementation of specific measures that address the use of solvent-extraction reagents.
- 15) Implementation of specific procedures for high risk tasks.
- 16) Appropriate induction and training of personnel in emergency response (internal and external) procedures.

- 17) Ongoing communication with agencies such as Rural Fire Services and monitoring of risk levels in relation to fire danger ratings.
- 18) Vacuuming and sweeping of site, as required.
- 19) Procurement of spill and water cart equipment adequate for the level of risk identified for the project and regularly maintained and tested to ensure good working order.
- 20) If a major failure of air quality management systems occurs, processing will cease at the facility until the management system is repaired and operational.

4.4 Biodiversity

Bicorp commit to the implementation of the following biodiversity protection measures:

- 1) Retention of remnant intact native vegetation / endangered ecological communities.
- 2) Erection of a standard three strand wire fence around the extent of the Illawarra Subtropical Rainforest located within the area of workings to indicate and protect this particular remnant. A buffer zone of 5m will apply within this fencing.
- 3) Retention of identified hollow bearing trees.
- 4) Retention of a 10m wide vegetated riparian corridor to protect aquatic habitats.
- 5) Retention of identified hollow bearing tree.
- 6) Revegetation of disturbed batters and landscape areas with native flora species.
- 7) Undertaking of weed management in accordance with the requirements of the Noxious Weeds Act (1993).
- 8) Removal of vegetative matter from earth moving machinery prior to entering and leaving the site.
- 9) Undertaking of weed management of the vegetated riparian buffer area in accordance with the Vegetation Management Plan prepared by Southern Habitat (Version 6, dated August 2015).
- 10) Rapid revegetation and/or stabilisation of disturbed areas.
- 11) Remove windblown rubbish.

4.5 Vegetation

- 1) The following will be implemented by Bicorp to protect the Moreton Bay Fig on the site:
 - Retention of a reserve as shown on the Landscape Plan dated August 2015.
 - Removal of the Hickory Wattles 4 & 5 (simply by cutting out with a chainsaw, not heavy machinery) which will disrupt the Fig's roots.
 - Removal of the Lantana infestation.
 - Retention of the small Whalebone Tree east of the Fig, and the young Moreton Bay Fig about 7m south - west of the Fig.
 - Secure quarantining of the Fig's reserve on the works (i.e. east) side with a steel picket and ribbon fence (known as a Tree Protection Zone/TPZ exclusion fence).
 - No works (apart from Lantana & Hickory removal) to be undertaken within this zone.
- 2) The Restoration Plan of Action, as contained in the Vegetation Management Plan, updated by Southern Habitat in August 2015 will be implemented.
- 3) A two (2) year maintenance programme will commence following completion of primary weed control and revegetation throughout the riparian corridor. Following this maintenance period and final report, the ongoing maintenance shall continue for the operational life of the facility. The maintenance will require the compilation and submission of an annual report to NSW Office of Water

and must be prepared by a suitably qualified person/organisation. The annual report must include but is not limited to site conditions including:

- Weed cover percentage
- Native cover percentage
- Identification and determination of actions to remedy any issues pertaining to the ongoing maintenance of the riparian vegetation for the 12 months following the report.

4.6 Bushfire

The following bushfire mitigation and protection recommendations will be adhered to by Bicorp:

- 1) The stockpiling and loading area for green waste and timber is to be confined to the western and south-western sides of the 'Indoor Processing & Storage Shed' over 100 m from the riparian area or within the Indoor Processing & Storage Shed.
- 2) The development will be serviced by a static water supply to meet the PBP requirement for a minimum amount of 20,000 litres for fire fighting purposes.. The water supply will be visible and readily accessible to fire fighting vehicles and a suitable connection for Rural Fire Service purposes will be made available (65 mm Storz fitting). The supply will be accessible to within 3 m by fire fighting appliances

4.7 Acoustic Measures

The following general noise mitigation measures will be implemented by Bicorp to mitigate construction noise impacts:

- 1) All engine covers will be kept closed while equipment is operating.
- 2) As far as possible, materials dropping heights into or out of trucks will be minimised.
- 3) Vehicles will be kept properly serviced and fitted with appropriate mufflers. The use of exhaust brakes will be eliminated, where practicable.
- 4) Machines found to produce excessive noise compared to industry best practice will be removed from the site or stood down until repairs or modifications can be made.
- 5) All equipment will be selected to minimise noise emissions. Equipment will be fitted with appropriate silencers and be in good working order. Machines found to produce excessive noise compared to normal industry expectations will be removed from the site or stood down until repairs or modifications can be made.
- 6) The constructor will provide a phone number at the site entrance detailing the site contact so that noise complaints can be received and addressed in a timely manner.
- 7) Upon receipt of a noise complaint, monitoring will be undertaken and reported as soon as possible. If exceedances are detected, the situation will be reviewed in order to identify means to attempt to reduce the impact to acceptable levels.
- 8) All site workers will be sensitised to the potential for noise impacts on local residents and encouraged to take practical and reasonable measures to minimise the impact during the course of their activities. This will include:
 - Avoid the use of loud radios.
 - Avoid shouting and slamming doors.
 - Where practical, machines will be operated at low speed or power and switched off when not being used rather than left idling for prolonged periods.

- Keep truck drivers informed of designated vehicle routes, parking locations and delivery hours.
 - Minimise reversing.
 - Avoid dropping materials from height and avoid metal to metal contact on material.
 - All engine covers would be kept closed while equipment is operating.
- 9) When the expanded facility is operational compliance noise monitoring will be undertaken at that time to determine the noise contribution of all significant site equipment and machinery and the impact on nearby receivers.
 - 10) Upon receipt of a valid noise complaint, monitoring would be undertaken and reported as soon as possible. If exceedances were detected, the situation would be reviewed in order to identify means to attempt to reduce the impact to acceptable levels.
 - 11) Where possible, avoid the use of noisy equipment such as the crusher and screen during the night time period (6am-7am) when the site is operational.

4.8 Environmental and Amenity Impacts

The following flood mitigation and water quality measures will be implemented by Bicorp:

- 1) Up to three 100,000L rainwater tanks in addition to a permanent pool to provide for dust suppression.
- 2) Use of recycled crushed concrete in road pavements and hardstand areas to promote infiltration and reduce the volume of surface runoff.
- 3) Provision of two OSD basins, one on either side of the watercourse.
- 4) Capture of hydrocarbons, including two Rocla downstream defenders to capture hydrocarbons in oil and grease from runoff. A Humeceptor is also to be installed upstream.
- 5) Implementation of a Operation and Maintenance Plan for WSUD in regard to weekly and monthly inspection and maintenance, as well as after every rainfall event >25mm, in addition to six monthly inspections and maintenance.

4.9 Dust and Odour Management

The following general dust mitigation will be implemented by Bicorp:

- 1) Material will be watered prior to it being loaded for haulage, where appropriate.
- 2) Watering of truck turn around and reversing areas will be undertaken with at least 2L/m²/hr as required to control dust emissions. Any other areas that are visible sources of dust will be appropriately watered until dust impact is no longer an issue.
- 3) Chemical Dust suppressant spraying will be undertaken on the unsealed access road from the site office into the site. This will be undertaken as per the supplier's requirements. Additional dust suppression will be applied if dust from the road is visibly observed to be leaving the site boundary.
- 4) A dust suppression system will be installed and operated for the crushing plant. The system will be operated as per manufacturers' specification and used whenever dust from the crusher has the potential to be transported offsite in the direction of sensitive receptors.
- 5) The size of storage piles will be minimised where possible.
- 6) Cleared areas of land will be limited and cleared only when necessary to reduce fugitive dust emissions.
- 7) On site traffic will be controlled by designating specific routes for haulage and access and limiting vehicle speeds to below 25 km/hr.

- 8) All trucks hauling material should be covered before exiting the site and should maintain a reasonable amount of vertical space between the top of the load and top of the trailer.
- 9) Material spillage on sealed roads will be cleaned up as soon as practicable.
- 10) A rumble-strip at the interface of the sealed road and the unsealed access road will be provided.
- 11) Excavating operations conducted in areas of low moisture content material will be suspended during high wind speed events or water sprays will be used.

The following odour mitigation measures will be implemented by Bicorp:

- 12) Design and installation of an appropriate building ventilation system at negative pressure at all times during operation.
- 13) A site odour management plan be developed prior to commissioning the facility with the increased capacity.
- 14) On site storage times of organic material will be minimised prior to processing.
- 15) If the chosen composting process allows, the matured compost stockpiles will be covered to reduce the ingress of water and reduce odour.
- 16) If the leachate pond is a significant source of odour Bicorp will investigate the use of aerators to minimise odour, enhance biological degradation and encourage evaporation.
- 17) Validation sampling of odour from any key odour discharge points will be undertaken after commissioning.
- 18) Annual odour sampling of the building ventilation stack will be undertaken.
- 19) If required (as demonstrated by annual odour sampling), all air will be treated in an odour control system prior to discharge.

4.10 Energy Efficiency

The following recommendations pertaining to energy efficiency will be implemented by Bicorp:

- 1) Diesel will be used in the on site generator during construction and operation to provide all power to the site.
- 2) Diesel will be used in on site vehicles.
- 3) Diesel will be used in the transport of construction materials, operation raw materials and waste to the site and to transport site outputs to end- use/disposal location, where such machinery is operated by Bicorp.
- 4) Implement energy metering and monitoring
- 5) Employ efficient lighting and lighting control technologies (timers and light level sensors)
- 6) Utilise energy efficient appliances and office equipment.

4.11 Waste Management

The following will be adhered to by Bicorp in relation to the acceptance, processing, storage and disposal of waste:

- 1) The proposed development will operate at a maximum capacity of 230,000 tonnes of waste per annum;
- 2) The facility will have a maximum storage capacity of 45,000 tonnes of waste at any one time;
- 3) The facility will have a processing capacity of up to 871 tonnes per day;

- 4) The facility will process up to 30,000 tonnes of non putrescible organics per annum (of which 6,300 tonnes per annum will be composted and 23,700 tonnes per annum will be mulched or sold as firewood);
- 5) The facility will store no more than 2500m³ of organic matter on the site at any time (which includes timber , tree stumps etc). Of the 2500m³ of organics, no more than 500m³ tonnes of this will comprise compost.

4.12 Heritage Conservation

If impacts are proposed outside the current development footprint in conjunction with a future development application in areas of low-moderate Aboriginal archaeological potential, further investigations will be undertaken at that time.