

**THE OAKS, OAKDALE & BELIMBLA PARK SEWERAGE  
SCHEME  
CONSOLIDATED CONDITIONS OF APPROVAL**

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**Approval 23 July 2001**

**Modification 1 Approved 18 May 2004**

**Modification 2 Approved 18 December 2012**

**General**

The Project shall be carried out in accordance with:

- a) the proposal contained in the environmental impact statement (EIS), The Oaks, Oakdale & Belimbla Park Priority Sewerage Program prepared for the Sydney Water Corporation (SWC) by CH2MHILL Australia, dated September, 1999 as modified by the Review of Environmental Factors – Low Pressure Sewerage System at Belimbla Park, dated August 2003 and the Representations Report for a Low Pressure Sewerage System at Belimbla Park, dated October 2003;
  - b) all identified plans, safeguards and mitigation measures presented in the Representations Report prepared by SWC, dated August 2000 (including all measures outlined in Table 6.1) as modified by the Review of Environmental Factors – Low Pressure Sewerage System at Belimbla Park, dated August 2003 and the Representations Report for a Low Pressure Sewerage System at Belimbla Park, dated October 2003;
  - c) The Oaks, Oakdale & Belimbla Park Sewerage Scheme Director General's Report dated June 2001 as amended by The Oaks, Oakdale and Belimbla Park Sewerage Scheme – Proposed Modification – Low Pressure System at Belimbla Park Director General's Report dated January 2004;
  - d) Request for modification to Minister's approval for The Oaks, Oakdale and Belimbla Park Sewerage Scheme Consistency Review and Environmental Assessment of Project Modification 2 dated October 2012 and Sydney Water's Response to Submissions dated 29 November 2012; and
  - e) the conditions of approval granted by the Minister.
- 1A. Nothing in condition 1a) and 1d) authorises additional connections where additional flows would result in the capacity of the sewerage system, as permitted by conditions 1a) to 1c) inclusive, being exceeded.
- 1B. The Proponent shall, prior to authorising any additional connections as described under condition 1a) and 1d):
- a) review the uncommitted spare capacity of collection system and sewage treatment plant; and
  - b) ensure that this capacity is sufficient to cater for the proposed additional connections.
2. In the event of an inconsistency between:
- a) the conditions of this approval and any document listed in conditions 1a) to 1d) inclusive, the conditions of this approval shall prevail to the extent of the inconsistency; and
  - b) any document listed from condition 1a) to 1d) inclusive, the most recent document shall prevail to the extent of the inconsistency.
3. It shall be the ultimate responsibility of Sydney Water Corporation to ensure compliance with the conditions of this approval.

4. These conditions do not relieve the Proponent of the obligation to obtain all other approvals and licences from all relevant authorities required under any other Act. Without affecting the generality of the foregoing, the Proponent shall comply with the terms and conditions of such approvals and licences.

#### **Compliance**

5. The Proponent shall comply with all reasonable requirements of the Director-General in respect of the implementation of any measures arising from the conditions of this approval. The Proponent shall bring to the attention of the Director-General any matter that may require further investigation and the issuing of instructions from the Director-General. The Proponent shall implement these instructions to the satisfaction of the Director-General within such time that the Director-General may specify.

#### **Dispute Resolution**

6. In the case of a dispute between the Proponent and any public authority, in the implementation of the conditions of this approval, the matter shall be referred to the Director-General for resolution, or if not resolved, to the Minister whose determination of the disagreement shall be final and binding on all parties.

#### **Pre-Construction Compliance Report**

7. At least one month prior to commencement of substantial construction (or within such period as otherwise agreed by the Director-General), the Proponent shall submit for approval of the Director-General a compliance report detailing compliance with all relevant conditions that apply prior to commencement of substantial construction and shall address:
  - the dates of submissions of the various studies and/or requirements of various relevant conditions, and their approval and terms of approval; and
  - action taken or proposed to implement the recommendations made in terms of approvals and/or studies.
8. The Proponent shall submit a report to the Director-General as part of the Pre-Construction Compliance Report indicating any changes to the route alignment and design of the proposed scheme from that shown in the Representations Report. The report shall assess any design changes against relevant environmental criteria such as impacts upon threatened flora and fauna and habitat, noise and erosion and sediment control and demonstrate consistency with the approved proposal.

#### **Pre-Operation Compliance Report**

9. At least one month prior to commencement of operation (or within such period as otherwise agreed by the Director-General), the Proponent shall submit for approval of the Director-General a compliance report detailing compliance with all relevant conditions that apply prior to commencement of operation and shall address:
  - the dates of submissions of the various studies and/or requirements of various relevant conditions, and their approval and terms of approval; and
  - action taken or proposed to implement the recommendations made in terms of approvals and/or studies.

#### **Project Commencement**

10. The Proponent shall notify the Director-General and all relevant authorities in writing of the project commencement date(s) prior to construction and operation as relevant.

#### **Contact Telephone Number**

11. Prior to commencement of construction, the Proponent shall provide to the Director-General, the EPA, SCA, Wollondilly Shire Council, Camden Council and all relevant

government agencies a 24 hour contact telephone number which will reach a person who can arrange appropriate action to be taken. The contact telephone number must be published in the local area and shall allow any member of the public to contact the Proponent with respect to seeking information or making a complaint. An initial response to any complaint is to be made to the complainant within 24hrs of receipt. The Proponent shall then:

- investigate the concerns raised by the complainant and undertake all reasonable attempts to determine the cause of concern; and
- if adverse impacts are identified, undertake all practicable measures to modify the activity which may be causing the impacts.

### **Complaints Register**

12. The Proponent shall maintain a Complaints Register which shall be used to record details of all complaints received and actions taken by the Proponent during the construction and operation stage. The Complaints Register shall be available to all relevant government agencies including but not limited to the Director-General, the EPA, Wollondilly Shire Council, Camden Council, and the SCA.

### **Community Notification and Liaison**

13. The Proponent shall, at three-monthly intervals during the construction phase, advertise in relevant local newspapers or as otherwise directed by the Director-General, the nature of works proposed for the forthcoming three months, the areas in which these works are proposed to occur, the hours of operation and the contact telephone number.
14. Property owners shall be notified, in writing, of an intention to enter and install sewer pipes within their property at least two weeks prior to the works commencing. The notification shall include details of the type and duration of works to be undertaken.
15. During the construction phase, the Proponent shall keep the local community informed (by way of local newsletters, leaflets newspaper advertisements and community notice boards etc.) of the progress of the project including any traffic disruptions and controls, construction of temporary detours, work required outside of the nominated working hours prior to such works being undertaken.
16. A Community Liaison Group shall be established and maintained by the Proponent during the construction period. It shall meet regularly during construction to provide comments and recommendations about the design and implementation of the proposal which shall be considered by the Proponent. The Group shall include the Environmental Management Representative, representatives from SWC, the contractor, relevant local community representatives/groups, Wollondilly Shire Council, Camden Council and the SCA.
17. The Proponent shall develop and implement a community education campaign prior to operations, directed specifically at the local community to minimise the potential for increase in water consumption. The campaign shall be developed and implemented in consultation with Wollondilly Shire Council, Camden Council and the Community Liaison Group and be generally consistent with any Sydney Water system wide demand management program.

### **Environmental Management Representative**

18. A suitably qualified Environmental Management Representative (EMR) shall be available during construction activities at the site and be present on-site during any critical construction activities as defined in the Environmental Management Plan (EMP). The EMR shall have responsibility for considering and advising on matters specified in the conditions of approval and compliance with such and facilitation of an induction and

training program for all persons involved with the construction activities. The following information shall be provided to the Director-General:

- (i) appropriateness of the qualifications of the EMR including demonstration of general compliance with the principles of AS/NZS ISO 14012:1996 *Guidelines for Environmental Auditing: Qualification criteria for environmental auditors*;
- (ii) role and responsibility of the EMR; and,
- (iii) authority of the EMR including details of the Proponent's internal reporting structure. This shall include the authority to stop work immediately if in the view of the EMR an unacceptable impact is likely to occur or to require other reasonable steps to be taken to avoid or minimise any adverse impacts

The appointment of the person nominated to serve as the EMR shall be approved by the Director-General prior to the commencement of construction.

19. The EMR shall immediately bring to the attention of the Director-General any major issues resulting from the construction of the project which have not been dealt with expediently or adequately by the Proponent.

#### **Environmental Management System**

20. In the assessment of tenders for construction and operation of the proposal, the Proponent shall include as a key evaluation criterion, the tenderer's demonstrated commitment to environmental management. Demonstration should be by way of commitment to a recognised Environmental Management System (such as ISO 14000, BS7750-1994 or similar) and/or have a proven satisfactory environmental management performance record.

#### **Environmental Management Plan(s) (Construction Stage)**

21. A project specific Environmental Management Plan(s) (Construction Stage) shall be prepared by the Proponent to the satisfaction of the Director-General, following consultation with the EPA, the DLWC, the NPWS, SCA, Wollondilly Shire Council, Camden Council, the Community Liaison Group and any other relevant government agency nominated by the Director-General, prior to commencement of construction works. The EMP(s) shall be prepared in accordance with the conditions of this approval, all relevant Acts and Regulations and accepted environmental management best practice.

22. The EMP(s) shall:

- (a) address construction activities associated with all key sites;
- (b) cover specific environmental management objectives and strategies for the main environmental management elements and include, but not be limited to: water quality; noise and vibration; air quality/odours; erosion and sedimentation; access and traffic; property acquisition and/or adjustments; heritage and archaeology; contamination; drilling slurry management; waste/resource management; flora and fauna; weed control; hydrology and flooding; geotechnical issues such as presence of groundwater along directional drill lines; visual screening, landscaping and rehabilitation; location of stockpile sites; bunding for fuel and maintenance sites; hazards and risks; energy use, resource use and recycling; and utilities.
- (c) address, but not be limited to:
  - (i) identification of the statutory and other obligations which the Proponent is required to fulfil during project construction including all approvals and consultations/agreements required from authorities and

- other stakeholders, and key legislation and policies which control the Proponent's construction of the project;
- (ii) definition of the role, responsibility, authority, accountability and reporting of personnel relevant to the EMP;
- (iii) measures to avoid and/or control the occurrence of environmental impacts;
- (iv) measures (where practicable and cost effective) to provide positive environmental offsets to unavoidable environmental impacts;
- (v) the role of the EMR;
- (vi) environmental management procedures for all construction processes which are important for the quality of the environment in respect of permanent and/or temporary works;
- (vii) monitoring, inspection, and test plans for activities and environmental qualities which are important to the environmental management of the project including performance criteria, specific tests, protocols (eg frequency and location) and procedures to follow;
- (viii) environmental management instructions for complex environmental control processes which do not follow common practice or where the absence of such instructions could be potentially detrimental to the environment;
- (ix) steps the Proponent intends to take to ensure that all plans and procedures are being complied with;
- (x) consultation requirements with relevant government agencies;
- (xi) community consultation and notification strategy (including local community, Local Aboriginal Land Councils, relevant local Councils, and all relevant authorities) and the SWC customer complaints procedures.

Specific requirements for some of the main environmental management elements referred to in (b) shall be as required under the conditions of this approval and/or as required under any licence or approval.

The EMP shall be made publicly available.

23. Revisions and updates may be made to the EMPs (Construction and Operation) without further approval of the Director-General if these are:
- a) consistent with the approved EMPs; and
  - b) prepared to the satisfaction of the EMR.

#### **Environmental Monitoring - Construction**

24. The Proponent shall submit to the Director-General, a report(s) in respect of the environmental performance of the construction works and compliance with the Environmental Management Plan (Construction Stage) and any other relevant conditions of this approval. The report(s) shall be prepared at six monthly intervals or at other such periods as requested by the Director-General to ensure adequate environmental performance over the duration of the construction works.

25. The report(s) shall include, but not be limited to, information on:
- (a) applications for consents, licences and approvals, and responses from relevant authorities;
  - (b) implementation and effectiveness of environmental controls and conditions relating to the work undertaken;
  - (c) identification of construction impact predictions made in the EIS and any supplementary studies and details of the extent to which actual impacts reflected the predictions;

- (d) details and analysis of results of environmental monitoring;
  - (e) number and details of any complaints, including summary of main areas of complaint, action taken, response given and intended strategies to reduce complaints of a similar nature; and
  - (f) any other matter relating to the compliance by the Proponent with the conditions of this approval or as requested by the Director-General.
26. The report(s) shall also be submitted to the EPA, the DLWC, the NPWS, Wollondilly Shire Council, Camden Council, SCA and any other relevant government agency nominated by the Director-General. The report(s) shall also be made publicly available. The report shall be certified by the EMR.

### **Environmental Management Plan (Operation Stage)**

27. The Proponent shall prepare an Environmental Management Plan for the operation of the proposal. The EMP (Operation Stage) shall be prepared to the satisfaction of the Director-General, following consultation with the EPA, the DLWC, SCA, the NPWS, Wollondilly Shire Council, Camden Council, the Community Liaison Group and any other relevant government agency nominated by the Director-General, prior to the commencement of operation. The EMP (Operation Stage) shall be prepared in accordance with the conditions of this approval, all relevant Acts and Regulations and accepted best practice management procedures. The EMP (Operation Stage) shall address each of the key sites including the sewage pumping stations, transfer and reticulation pipelines.
28. The EMP (Operation Stage) shall address, but not be limited to:
- (a) identification of the statutory and other obligations which the Proponent is required to fulfil including all licences/approvals and consultations/agreements required from authorities and other stakeholders, and key legislation and policies which control the Proponent's operation of the project;
  - (b) requirements of and compliance with relevant EPA guidelines;
  - (c) sampling strategies and protocols to ensure the quality of the monitoring program including specific requirements of the EPA and the DLWC;
  - (d) monitoring, inspection and test plans for all activities and environmental qualities which are important to the environmental performance of the project during its operation including description of potential site impacts, performance criteria, specific tests and monitoring requirements, protocols (eg frequency and location) and procedures to follow;
  - (e) steps the Proponent intends to take to ensure that all plans and procedures are being complied with;
  - (f) consultation requirements including consultation with relevant government agencies, the local community, Wollondilly Shire Council, Camden Council and the SWC customer complaint procedures;
  - (g) detailed contingency procedures **prepared in consultation with relevant energy providers** for dealing with: power failures; **including, in Belimbla Park, protocols designed to avoid overflows at households and to provide emergency responses in the event of long term power outages;** sewer overflow following failures at the wastewater pumping stations and/or during extended periods of wet weather flows; structural failures in the wastewater transfer pipeline; and bushfires; and
  - (h) management strategies employed for: noise; access and traffic; water quality; air quality (including odours); health and public safety; landscaping and maintenance and issues relating to flora and fauna; security; waste/resource minimisation, management, removal and disposal; hydrology and flooding; monitoring of the reticulation system particularly in terms of identifying

system leaks; chemical handling; hazards and risks and emergency response plans; energy use and measures for minimisation.

Specific requirements for some of the main environmental management elements referred to in (h) shall be as detailed under the conditions of this approval and/or as required under any licence or approval.

The EMP (Operation Stage) shall be made publicly available.

29. All sampling strategies and protocols undertaken as part of the EMP (Operation Stage) shall include sampling and analytical strategies in accordance with EPA approved analytical methods to ensure the effectiveness and quality of the monitoring program. All laboratories undertaking the analysis of samples should be accredited by the National Association of Testing Authorities, Australia (NATA).

### **Environmental Impact Audit Report**

30. An Environmental Impact Audit Report shall be submitted to the Director- General, SCA, Wollondilly Shire Council, Camden Council and the EPA, and upon request by the Director-General, to any other relevant government authority 12 months, two and five years after commissioning of the project, or unless otherwise agreed by the Director-General, and at any additional periods thereafter as the Director-General may require. The technical studies required as part of the report shall be prepared by appropriately qualified, independent specialists. The Report shall assess the key impact predictions made in the EIS and any supplementary studies and detail the extent to which actual impacts reflect the predictions. **Where relevant, data from other SWC schemes in regard to low pressure energy use shall be detailed for comparative purposes.** The suitability of implemented mitigation measures and safeguards shall also be assessed. The Report shall also assess compliance with the EMP (Operation Stage).

The Report shall discuss results of consultation with the local community in terms of feedback/complaints on the construction and operation phases of the project and any issues of concern raised. **The Report shall include, for Belimbla Park, an overview of fault frequency experienced, fault response achieved, maintenance problems not within the normal expectations or experience of LPSS technology and how these problems were addressed.** The Proponent shall comply with all requirements of the Director-General with respect to any measure arising from, or recommendations in, the report.

The Report shall be made publicly available.

### **Project Design**

31. During detailed design, the Proponent shall liaise with Wollondilly Shire Council with respect to the lots that will be serviced. The area to be serviced as part of this project shall be limited to the outer limit boundaries identified in the Representations Report.
32. The proposed fixing of any pipeline to bridge or culvert crossings within Wollondilly LGA shall be submitted to Wollondilly Shire Council for comment prior to construction.
33. That part of the collection system in Oakdale bounded to the west by Blattman Rd and to the south by Burraborang Rd shall be connected to the remainder of the sewerage scheme by directional drill, as indicated in Figure 2-3 of the Representations Report, unless otherwise approved by the Director-General.

### **Overflow Management**

34. As part of the EMP (Operation Stage) specified in Condition 27, the Proponent shall prepare an outline of an Asset Management Plan designed to minimise the number and

frequency of overflows and to ensure adequate response to rectify collection tank and grinder pump faults at households. The Plan shall include proposed monitoring, inspection and testing, incident management and ongoing monitoring and management strategies. A copy of the Plan shall be forwarded to the EPA and SCA.

35. The Proponent shall prepare a detailed Overflow Clean-up Sub-Plan as part of the EMP (Operation Stage). The Sub-Plan shall detail all measures to ensure that any potential health and water quality impacts associated with sewage overflows are reduced to acceptable levels and shall include but not be limited to:

- requirements and procedures for mobilisation of clean-up staff,
- removing/diluting/disinfection of any sewage;
- advising the local community and relevant agencies; and
- public safeguards (ie. temporary fencing, warning signs) etc.

Notification will be as per EPA licence requirements. A copy of the Sub-Plan shall be forwarded to the EPA and SCA.

36. Prior to operations, the Proponent shall develop a Local Trade Waste Control Program for the establishment of Trade Waste Agreements for discharges to the system other than domestic discharges. The Program shall address legal, technical and administrative frameworks for achieving effective control of trade waste discharges. The Program shall be prepared in consultation with the EPA and SCA.

37. The Oaks, Oakdale and Belimbla Park Sewerage Scheme is to be designed and constructed such that when it is operational:

- a) Dry weather overflows from the sewerage reticulation system (excluding sewage pumping stations) are not to occur, if a cause of the overflow is a failure to operate and maintain any part of the system in a proper and efficient manner;
- b) No sewage overflows are to occur from sewage pumping stations in dry weather; and
- c) There shall be no more than five (5) wet weather overflows in a ten year period from the sewerage reticulation system within the Lake Burragorang water catchment. The adequacy of this standard for wet weather overflows shall be monitored for environmental performance and reported as part of the Environmental Impact Audit Reports in Condition No. 30.

### **Flora and Fauna**

38. The proponent shall prepare, in consultation with Wollondilly Shire Council and Camden Council, a detailed Flora and Fauna Management Sub-Plan as part of the EMP (Construction Stage) prior to any clearing of vegetation. The Sub-Plan shall address all elements of the proposal, which are likely to affect native vegetation. Specific procedures shall be developed for the native vegetation areas associated with the SPS sites and all pipelines located within 20m of a creek line.

The Sub-Plan shall identify requirements for:

- identification and protection of sensitive areas such as all creeklines along the pipeline route and the Shale Sandstone Transition Forest, Sydney Coastal Riverflat Forest, Cumberland Plain Woodland and *Acacia pubescens*;
- seed collection;
- strategies for minimising vegetation clearance and protection of riparian vegetation and other vegetated areas outside the direct impact zone;
- control, spread of debris and refuse;
- movement and storage of materials and equipment;

- controlling impacts due to any spillages and/or overflows;
  - clearance of vegetation and soil for construction;
  - re-vegetation of cleared areas;
  - ongoing maintenance; and
  - noxious and environmental weed control.
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39. As part of the Flora and Fauna Management Sub-Plan, a Weed Control Plan shall be prepared in consultation with SCA, Wollondilly Shire Council and Camden Council. The purpose of the Plan shall be to ensure that surrounding vegetation is not adversely affected by the introduction of weeds, rehabilitation is successful and landscaped areas are maintained during the operation of the scheme. The Plan shall also detail site specific weed control measures to be undertaken, such as the installation during construction of wash down bays or equivalent, to prevent the spread of noxious weeds.
  40. As part of the Flora and Fauna Management Sub-Plan, the Proponent shall outline construction methods to be used, such as auger boring, for pipeline construction in areas identified as Shale Sandstone Transition Forest. The aim in developing these methods is to avoid any removal or impact upon this ecological community.
  41. Stringent erosion, sedimentation and weed control measures are to be implemented in the vicinity of Merlin Street to avoid indirect impacts on Cumberland Plain Woodland. There shall be no clearing of the identified Cumberland Plain Woodland (indicated in Figure 5.3 of the EIS).
  42. The pipeline shall be aligned so as to avoid areas identified as Shale Sandstone Transition Forest in the vicinity of 47 Wanawong Street, Belimbla Park. The pipeline shall be bored underneath 225 Binnalong Road, Belimbla Park. All construction works shall be in accordance with the recommendations in the AMBS report (AMBS, May 2001).
  43. The proponent shall ensure that any deviations in pipeline routes as a result of detailed design do not have a significant impact upon any threatened flora or fauna species or ecological communities. The EMP (Construction Stage) shall identify the pipeline route in relation to native vegetation and any threatened flora or fauna species or ecological community.
  44. Medium to large tree hollows (>20cm diameter) and nests removed during construction shall be salvaged and immediately replaced into adjacent vegetation.
  45. All trenches shall be covered at night to prevent animals becoming trapped. This activity shall be maintained throughout the course of construction and be in coordination with the Proponent's hazard, risk and safety policies.
  46. If, during the course of construction, the Proponent becomes aware of the presence of any threatened flora and fauna which were not identified in the EIS or Representations Report, all work likely to affect the site(s) shall cease immediately and the NPWS shall be consulted to determine an appropriate course of action prior to the recommencement of work at that site. Any required permit/consent(s) shall be obtained and shall be accompanied by appropriate supporting documentation. All recommendations by the NPWS shall be complied with prior to any works likely to affect any threatened species being undertaken.

## **Aquatic Ecology**

47. Aquatic ecological surveys shall be conducted for macroinvertebrates and algae in Back Creek and Werriberri Creek and be undertaken one, two and five years after operations commence. The findings of the surveys shall be incorporated in the Environmental Impact Audit Reports as described in Condition No. 30.

### **Landscape and Rehabilitation**

48. The proponent shall prepare a Landscape and Rehabilitation Sub-Plan(s) as part of the EMP (Construction Stage) and for all pumping stations and pipeline routes prior to any clearing of vegetation. The Sub-Plan(s) shall be consistent with the Sub-Plan required by Condition No. 38. The Sub-Plan(s) shall be prepared in consultation with SCA, Wollondilly Shire Council, Camden Council and the Community Liaison Group. The Sub-Plan(s) shall include the location and names of existing and proposed tree and shrub species, mounds, bunds, structures or any other proposed treatments, finish of exposed surfaces (including paved areas), lighting, measures to preserve regional biodiversity, colour and specifications, timing and staging of works, methodology of landscaping works, monitoring and maintenance.
49. The Proponent shall, in consultation with Wollondilly Shire Council and Camden Council, restore and allow to regenerate all disturbed areas to at least the standard prior to construction. The works, where applicable to public roads within Wollondilly LGA, shall be undertaken in accordance with the Wollondilly Roadside Reserve Strategy.
50. A suitably qualified bushland regeneration specialist shall also be consulted in the development of the Sub-Plans referred to in Condition 48, in terms of selection of flora species and specific implementation strategies.
51. Seed of locally indigenous tree and plant species or suitable tube stock shall be used for revegetation purposes to the satisfaction of the EMR. Topsoil and leaf mulch are to be stripped and stored for placement back in the vegetation zone from where it was removed, subject to Condition 52.
52. Weed infested topsoil, as identified by a qualified bush regeneration officer, shall not be used in rehabilitation works where native vegetation has been removed unless it is sterilised or treated as specified by the EMR.
53. All landscaping and rehabilitation works undertaken and regenerating sites shall be monitored and maintained at regular intervals to ensure their effectiveness. All costs of such monitoring and maintenance shall be borne by the Proponent unless otherwise agreed to by the relevant property owner. The Proponent shall ensure that any vegetated areas cleared for construction purposes are restored to at least its original condition.
54. Monitoring of rehabilitation and regeneration within areas of disturbed Shale Sandstone Transition Forest shall continue for at least 3 years after construction or until the ecological community has become re-established whichever is the minimum.

### **Traffic and Roadworks**

55. A detailed Traffic Management Sub-Plan shall be prepared as part of the EMP (Construction Stage) in consultation with Wollondilly Shire Council and Camden Council. The Sub-Plan shall be prepared in accordance with the RTA *Traffic Control at Works Sites Manual*. The Sub-Plan shall detail the following:
- traffic safety requirements (eg. warning and speed limit signs);
  - the management of access;

- actions to be taken in sensitive traffic areas such as in the vicinity of SPS 6 (eg. time restrictions for construction traffic movements); and
  - actions to be carried out should partial or total road closures, traffic detours be required (including the identification of parties to be consulted).
56. A road dilapidation report shall be prepared for all non-arterial roads likely to be used for construction traffic including any non-arterial roads used temporarily for detours. The report shall be prepared in consultation with Wollondilly Shire Council and Camden Council prior to the commencement of construction activities and then finalised as soon as possible after construction is complete. Any road/footpath damage (aside from that resulting from normal wear and tear) attributable to the construction of the proposal, shall be repaired to a standard at least equivalent to that existing prior to any disturbance in consultation with Wollondilly Shire Council or Camden Council.
57. The Proponent shall be responsible for minimising any disruption to services resulting from such work and shall be responsible for advising local residents and businesses on disruption to services.
58. Restoration of excavations within public road reserves shall be made to a reasonable standard in consultation with Wollondilly Shire Council and Camden Council and with reference to Wollondilly Shire Council's Road Restoration Policy and the corresponding policies of Camden Council.

### **Archaeology**

59. Hand trenching techniques shall be used, wherever practicable, in the vicinity of non-Indigenous heritage items identified in the EIS. Should hand trenching not be possible near heritage items and rock breaking be required within 100m of such items then vibration monitoring and building condition surveys shall be undertaken both before and after construction.
60. If, during the course of construction, the Proponent becomes aware of any heritage items or archaeological material that could be affected by the proposed works, all work likely to affect the site(s) shall cease immediately and the NPWS, the relevant LALCs or the Heritage Office, as relevant, shall be consulted to determine an appropriate course of action prior to the recommencement of work at that site. Any required permit/consent(s) shall be obtained and shall be accompanied by appropriate supporting documentation.

### **Air Quality**

61. An Odour Management Sub-Plan as part of the EMP (Operation Stage) referred to in Condition 27, shall be developed in consultation with the EPA, Wollondilly Shire Council and Camden Council. The Sub-Plan shall reference environmental issues and goals set out in the EPA's guidelines. The Sub-Plan shall detail all aspects of odour management including identification of odour sources, control devices, treatment, adopted criteria and implementation of additional mitigation strategies, methodology for monitoring odour emissions (including representative meteorological conditions), reporting procedures, measures for dealing with exceedances, arrangements to inform residents and contact points, complaints handling systems, reporting of complaints and response actions. The Plan shall be made publicly available.
62. A specific Dust Management Sub-Plan (DMP) as part of the EMP (Construction Stage) referred to in Condition 21, shall be prepared in consultation with the EPA, Wollondilly Shire Council and Camden Council. The Sub-Plan shall detail all dust control measures to be implemented during construction. The DMP shall include measures to reduce dust generation from stockpiles, cleared areas and other exposed surfaces and

responsibilities for the implementation of controls and reporting requirements. Measures such as temporary planting of stockpiles and progressive rehabilitation of any exposed areas shall be designed to achieve EPA local air quality protection goals.

63. All construction vehicles shall be maintained and covered as appropriate to prevent any loss of load whether in the form of dust, liquid, solids or otherwise and shall be maintained and cleaned in such a manner that they will not track mud, dirt or other material onto any street which is opened and accessible to the public.

## **Noise**

### **Noise Management Sub-Plan**

64. As part of the EMP(s) referred to in Conditions 21 and 27, the proponent shall prepare a detailed Noise and Vibration Management Sub-Plan to the satisfaction of the Director-General. The Sub-Plan shall provide details of noise standards to be met, noise monitoring requirements and noise control measures to be undertaken during both the construction and operation stages. The Sub-Plan shall be prepared in consultation with the EPA, Wollondilly Shire Council and Camden Council.
65. The Sub-Plan shall include, but not be limited to: tests for ascertaining acoustic parameters; anticipated airborne noise for all major noise generating activities and locations and duration of these activities; impacts from site compounds/construction depots; noise control equipment to be fitted to machinery; temporary noise mitigation measures such as noise barriers, shrouds around stationary plant to be installed prior to the commencement of noisy activities, predicted noise levels at any sensitive receivers (such as schools, churches, hospitals etc.); noise monitoring and reporting procedures; measures for dealing with exceedances; arrangements to inform residents of construction activities likely to affect their noise amenity, contact point for residents; and compliance with relevant EPA guidelines as far as practicable, including the Environmental Noise Control Manual, and the Industrial Noise Policy.

### **Construction Noise**

66. The Proponent shall monitor construction noise levels to verify compliance with the requirements specified in the Noise Management Sub-Plan. Should monitoring indicate exceedance, the Proponent shall consult the EPA and implement any additional mitigation measures to ensure that 'best practice' is being implemented. In any event, construction noise shall aim to meet the following guideline levels:
  - For a construction period of four weeks and under, the L10 level, measured over a period of not less than 15 minutes when the construction site is in operation, must not exceed the background level by more than 20 dB(A).
  - For a construction period of greater than four weeks and not exceeding 26 weeks, the L10 level, measured over a period of not less than 15 minutes when the construction site is in operation, must not exceed the background level by more than 10 dB(A).
  - For a construction period greater than 26 weeks, the L10 level, measured over a period of not less than 15 minutes when the construction site is in operation, must not exceed the existing background noise level by more than 5 dB(A).

A value of 5 dB(A) shall be added to the sound pressure levels recorded from the construction activities if the noise is substantially tonal or impulsive in character.

67. Achievement of the above levels in Condition 66 shall be sought through best practicable means. In situations where it is identified that these levels would not be achieved, then all reasonable measures shall be undertaken to reduce the level of noise impact.

### Construction Hours

68. All construction activities including entry and departure of heavy vehicles shall be restricted to the hours 7:30 am to 5:00 pm (Monday to Friday); 8:00 am to 1:00 pm (Saturdays) and at no time on Sundays and public holidays. Noisy activities, such as significant earthworks, shall be restricted to the hours 8.00am to 4.00pm Monday to Friday only, when within 100m of any residence. 69. Works outside these hours which may be permitted include:
- any works which do not cause noise emissions to be audible at any nearby residential property;
  - the delivery of materials which is required outside these hours requested by police or other authorities for safety reasons;
  - emergency work to avoid the loss of lives and/or property and/or to prevent environmental harm; and
  - any other work as approved by the EPA through its licence for the project.

### Flooding

70. Site specific flood studies shall be undertaken for each SPS prior to construction in consultation with DLWC and Wollondilly Shire Council.
71. All electrical equipment associated with the SPSs shall be located above the 100 ARI flood level.

### Soil and Water Management

72. A detailed assessment of soil characteristics shall be undertaken prior to the commencement of construction. This shall include the identification of potentially contaminated soils, high erosion risk areas and potential areas of instability. Necessary actions to be undertaken in the event of the identification of sensitive soils shall be outlined, including required actions by personnel.
73. Where directional drilling is to be used, geotechnical investigations shall be undertaken at the drilling sites and along the route of the proposed sewer to determine the soundness of the strata and the presence or absence of groundwater. Details of the geotechnical investigations shall be included as part of the Construction EMP, as well as management and contingency measures to minimise any impacts upon groundwater.
74. As part of the EMP(s) referred to in Condition 21 and 27, the Proponent shall prepare a comprehensive Soil and Water Management Sub-Plan in accordance with the Department of Housing's guideline *Managing Urban Stormwater – Soils and Construction (1998)*, and shall include consultation with DLWC, EPA, Wollondilly Shire Council and Camden Council. The Sub-Plan shall provide full details of all pollution control measures to be undertaken during the construction stage and satisfy all requirements for pollution control approval/licences.
75. The Soil and Water Management Sub-Plan shall incorporate a detailed Erosion and Sedimentation Control Plan which shall be prepared in consultation with DLWC, SCA, EPA, Wollondilly Shire Council and Camden Council and shall satisfy all relevant pollution control approvals and licence conditions.

### Waste Disposal and/or Recycling

76. As part of the EMP(s) referred to in Conditions 21 and 27, the Proponent shall prepare a detailed Waste Management Sub-Plan to address the management of wastes during both the construction and operation stages. The Sub-Plan shall be prepared prior to

construction and operation as appropriate and shall identify requirements for waste avoidance, reduction, reuse and recycling. It shall also detail requirements for handling, stockpiling and disposal of wastes specifically spoil, contaminated soil or water, demolition material, cleared vegetation, oils, greases, lubricants, sanitary wastes, timber, glass, metal, etc. It shall also identify any site for final disposal of any material and any remedial works required at the disposal site before accepting the material. Any waste material which is unable to be reused, reprocessed or recycled shall be disposed at a landfill licensed by the EPA to receive that type of waste.

#### **Utilities and Services**

77. The Proponent shall, in consultation with the relevant service authority, identify all services potentially affected by construction activities to determine requirements for diversion, protection and/or support. Any alterations to utilities and services shall be carried out to the satisfaction of the relevant authority(ies). The costs of any alterations shall be borne by the Proponent unless otherwise agreed to by the affected service/utility authority.
78. During the detailed design process for the Chemical Dosing Facility at Gundungurra Park the Proponent must consult with Wollondilly Shire Council, WorkCover and surrounding residents and ensure that:
  - (a) the visual impacts of the facility are minimised including consideration of use of existing trees in the Park and/or additional landscaping to screen the facility;
  - (b) the need to enclose the facility in a fenced enclosure is determined in consultation with WorkCover and Wollondilly Shire Council;
  - (c) the ferric chloride shall be stored and handled according to the requirements/recommendations of WorkCover and relevant Australian Standards; and
  - (d) native vegetation identified as Shale Sandstone Transition Forest in the Park is not disturbed during construction and other vegetation clearing is minimised.
79. As part of the EMP (Operation Stage) the Proponent shall develop a focussed Information and Education Program including a Homeowner's Manual. The Manual must detail how the low pressure system works, the responsibilities of the householder and how to contact SWC for maintenance or in case of an emergency. The Manual must also be tailored to individual householder needs such as for people who are hearing impaired. The Manual shall be provided to householders at the time of connecting to the scheme and methods established to make the manual available where house ownership or tenure are transferred.