

**SCHEDULE 1**  
**PENRITH STP AMPLIFICATION & GLENBROOK WASTE**  
**WATER TRANSFER**

**CONDITIONS OF APPROVAL**

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The following acronyms and abbreviations are used in this section:

ANZECC	Australian and New Zealand Environment and Conservation Council
BMCC	Blue Mountains City Council
dB(A)	Decibel (A-weighted scale)
Department, The	Department of Urban Affairs and Planning
Director-General, The	Director-General of the Department of Urban Affairs and Planning (or delegate)
DLWC	Department of Land and Water Conservation
DUAP	Department of Urban Affairs and Planning
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EMR	Environmental Management Representative
EMS	Environmental Management System
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPA	NSW Environment Protection Authority
HIPAP	Hazardous Industry Planning Advisory Paper
Minister, The	Minister for Urban Affairs and Planning
NPWS	National Parks and Wildlife Service
Proponent, The	Sydney Water Corporation (SWC)
RTA	NSW Roads and Traffic Authority
SPS	Sewage Pumping Station
STP	Sewage Treatment Plant
SWC	Sydney Water Corporation

**General**

1. The proposal shall be carried out in accordance with:

- the proposal contained in the environmental impact statement (EIS) *Penrith Sewage Treatment Plant Amplification and Glenbrook Waste Water Transfer*

prepared for the Sydney Water Corporation (SWC) by Environmental Resources Management Australia, dated May 2000;

- all modifications, identified plans, safeguards and mitigation measures presented in the Representations Report prepared by SWC, dated April 2001 (including all measures outlined in Table 6.1 and 6.2);
  - the Penrith STP Amplification and Glenbrook Waste Water Transfer Director-General's Report (hereafter referred to as 'the Director-General's Report'); and
  - the conditions of approval granted by the Minister.
2. Despite the above, in the event of any inconsistency with the EIS and the Representations Report, the conditions of approval granted by the Minister shall prevail.
  3. **It shall be the ultimate responsibility of Sydney Water Corporation to ensure compliance with the conditions of this approval.<sup>1</sup>**
  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. The Proponent shall comply with the terms and conditions of such approvals and licences.**

#### **Compliance**

5. The Proponent shall comply with all 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 must ensure that these instructions are implemented to the satisfaction of the Director-General within any time specified in the instructions.

#### **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(s)**

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 report(s) detailing compliance with all relevant conditions that apply prior to commencement of substantial construction and shall address:

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<sup>1</sup> Any modification to the proposal that would be inconsistent with the conditions of approval shall only be carried out with the prior written approval of the Minister, in accordance with the relevant provisions of the EP&A Act.

- 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.

#### **Pre-Operation Compliance Report(s)**

8. 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 report(s) 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**

9. 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**

10. Prior to commencement of construction, the Proponent shall provide to the Director-General, the EPA, Penrith City Council and Blue Mountains City 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**

11. The Proponent shall maintain a Complaints Register. The register shall be used to record details of all complaints received and actions taken by the Proponent. The Complaints Register shall be available to all relevant government agencies including but not limited to the Director-General, the EPA, Penrith City Council, Blue Mountains City Council and the DLWC.

## **Community Notification and Liaison**

12. The Proponent shall, undertake targeted consultation with residents adjacent to proposed vent shaft locations prior to construction. The consultation shall include issues of the exact location and measures to minimise the impacts of vent shafts.
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. 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 of any traffic disruptions and controls, construction of temporary detours, disruption of access and work required outside of the nominated working hours prior to such works being undertaken. Prior consultation with local bus companies for traffic detours and disruptions shall also be required.

## **Environmental Management Representative**

15. Prior to the commencement of construction, the Director- General shall approve the appointment of the person nominated to serve as the EMR. In considering the appointment, the Director- General shall take into account:
  - (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 EMR shall have responsibility for

- Consideration and advice on matters specified in the conditions of approval;
- Review of compliance with these conditions, and
- Facilitation of an induction and training program for all persons involved with the construction activities.

The EMR shall immediately bring to the attention of the Director-General any major issues resulting from the construction of the project that have not been dealt with

expediently or adequately by the Proponent.

The EMR shall be available during construction activities at the site and be present on-site during any critical construction activities as defined in the relevant Environmental Management Plan (EMP).

### **Environmental Management System**

16. 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)**

17. 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, Penrith City Council, Blue Mountains City Council 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.

18. 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; groundwater; contamination; drilling slurry management; waste/resource management; flora and fauna; weed control; hydrology and flooding; geotechnical issues such as the presence of groundwater along the directional drill lines; visual screening, landscaping and rehabilitation; 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 compliance with 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; and
- (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.

19. 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**

20. 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.

21. 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.
22. The report(s) shall also be submitted to the EPA, the DLWC, Penrith City Council and Blue Mountains City Council 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)**

23. 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, Penrith City Council and Blue Mountains City Council 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 treatment plant, sewage pumping stations and transfer pipelines.
24. 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;
  - (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 with relevant government agencies, the local community, Blue Mountains City Council and Penrith City Council; and
- (g) management strategies employed for: effluent management including monitoring at discharge points in terms of quality and quantity, biosolids disposal; noise; access and traffic; water quality (including erosion and sedimentation controls); 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; 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 (g) 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.

- 25. 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. Only accredited laboratories can be used for laboratory analysis.

#### **Environmental Impact Audit Report**

- 26. An Environmental Impact Audit Report shall be submitted to the Director-General, EPA, Blue Mountains City Council, Penrith City Council and upon request by the Director-General, to any other relevant government authority 12 months and two 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 specialists to be approved by the Director-General.

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. 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 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.

#### **Water Quality**

- 27. A monitoring program shall be developed by the Proponent and include locations



upstream and downstream of the Glenbrook STP discharge point on Lapstone Creek. Monitoring shall be undertaken at least monthly for a period of no less than 12 months prior to transfer pipeline operations and 12 months after transfer pipeline operations at which time the results shall be reviewed to determine whether additional monitoring should continue as required by the Director-General. The monitoring of water quality shall include investigations into macroinvertebrates. The monitoring program shall be detailed in the Construction EMP and prepared in consultation with the EPA. The results of the monitoring shall be reported in the Environmental Impact Audit Reports.

28. As part of the EMP (Operation Stage) specified in Condition 23, the Proponent shall prepare a detailed Water Quality Management Sub-Plan. The Sub-Plan shall provide details of pollution control measures to be undertaken during the proposal's operation and shall satisfy all relevant pollution control approval/licence requirements and shall reference environmental issues and goals set out in relevant EPA and other guidelines. A copy of the Sub-Plan shall be forwarded to the EPA and Blue Mountains City Council.
29. The Sub-Plan shall address, but not be limited to:
- (a) identification of baseline water quality monitoring locations;
  - (b) design and implementation of a monitoring program(s);
  - (c) emergency responses to overflows, chokes and sewage pumping station failures;
  - (d) monitoring of groundwater quality beneath the Penrith STP site ; and
  - (e) notification of potentially affected parties when the biological or disinfection processes at the STP are bypassed.

### **Overflow Management**

30. As part of the EMP (Operation Stage) specified in Condition 23, the Proponent shall prepare an outline of the proposed Operation and Maintenance Plan designed to minimise the number and frequency of overflows. The Plan shall include proposed monitoring, inspection and testing, incident management and ongoing monitoring and management strategies consistent with any EPA licence requirements. A copy of the outline Plan shall be forwarded to the EPA.
31. There shall be no release of effluent into Knapsack Creek during the decommissioning of Glenbrook STP.

### **Safety and Hazard Management**

32. No later than two months prior to the commencement of commissioning of the project, or within such further period as the Director-General may agree, the Proponent shall prepare and submit for the approval of the Director-General a Safety Management System document. Commissioning shall not commence until approval has been given by the Director-General.

The Safety Management System document must cover all hazardous materials in operations on the Penrith STP site, and associated transport activities involving hazardous materials. The document shall clearly specify all safety related

procedures, responsibilities, and policies, along with details of mechanisms for ensuring adherence to procedures. Records shall be kept on-site and shall be available for inspection by the Director-General upon request. The Safety Management System shall be developed in accordance with the Department's Hazardous Industry Planning Advisory Paper (HIPAP) No. 9, "Safety Management".

The document shall also include a hazard review containing aspects related to the storage and use of chemicals.

33. Twelve months after the commencement of operations of the proposed development or within such further period as the Director-General may agree, the Proponent shall carry out a comprehensive hazard audit of the Penrith STP, and within one month of the audit, submit a report to the Director-General. The audit shall be carried out at the Proponent's expense by a duly qualified independent person or team approved by the Director-General prior to commencement of the audit. Further audits shall be carried out every three years or as determined by the Director-General. A report of each audit shall be submitted to the Director-General within a month of the audit. Hazard audits shall be carried out in accordance with the Department's HIPAP No. 5 *Hazard Audit Guidelines*.

The audit shall include a review of the site safety management system and a review of all entries made in the incident register since the previous audit.

#### **Directional Drill**

34. The Proponent shall prepare a Drilling Slurry Management Plan for the directional drilling site prior to construction. The Plan shall cover monitoring of cutting fluid returns and actions to be taken in the event of losses in drilling fluid. The Plan shall be incorporated into the EMP (Construction Stage).
35. The Proponent shall conduct detailed geotechnical investigations such as core samples, along the route of the proposed direction drill boreholes 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 EMP (Construction Stage).
36. The Proponent shall prepare a Contingency Plan prior to construction in case of groundwater ingress to the drilled pipeline. The Contingency Plan shall include environmental management measures for the disposal and treatment of groundwater. The Contingency Plan shall be incorporated as part of the EMP (Construction Stage).

#### **Recreation**

37. The Proponent shall consult with Blue Mountains City Council, Rail Infrastructure Corporation and Penrith City Council prior to construction, in relation to the proposed pipeline route and potential disturbance and rehabilitation of Skarratt Park and Woodriff Gardens.

## Flora and Fauna

38. The proponent shall prepare, in consultation with Penrith City Council and Blue Mountains City 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. The Sub-Plan shall identify requirements for:
- 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;
  - clearance of vegetation and soil for construction;
  - re-vegetation of cleared areas; and
  - weed control including aquatic species.
39. As part of the Flora and Fauna Management Sub-Plan, a Weed Control Plan shall be prepared in consultation with Blue Mountains City Council and Penrith City Council. The purpose of the Plan shall be to ensure that surrounding vegetation is not adversely affected by the introduction of weeds. 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. The population of *Lissanthe sapida* found in close proximity to the proposed works in the Lapstone Hill Railway Reserve shall be surveyed and pegged and temporarily fenced prior to construction works, to avoid any adverse impact on this community.
41. 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.
42. All trenches shall be covered or fenced 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.
43. If, during the course of construction, the Proponent becomes aware of the presence of any threatened flora and fauna, 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.

### **Landscape and Rehabilitation**

44. The proponent shall prepare a Landscape and Rehabilitation Sub-Plan(s) as part of the EMP (Construction Stage) prior to any clearing of vegetation. The Sub-Plan(s) shall be prepared in consultation with Penrith City Council and Blue Mountains City Council. The Sub-Plan shall include a timetable for implementation and shall be consistent with the Flora and Fauna Management Sub-Plan.
45. The proponent shall prepare specific Weed Management and Rehabilitation Plans in consultation with landowners, BMCC and relevant bushcare/community groups, for areas of Lapstone Hill railway reserve and Skarratt Park to be disturbed by construction activities. The proponent shall also prepare Plans for collaborative work to control weeds along Knapsack and Lapstone Creek. These Plans shall include rehabilitation of impacts upon those creeks that have resulted from the Glenbrook STP operations. The Plans shall identify and be consistent with existing BMCC programs and identify the value and timetable of works and/or contributions from SWC towards these programs. The Plans shall be included as part of the EMP (Construction Stage).
46. A suitably qualified bushland regeneration specialist shall also be consulted in the development of the Sub-Plans and Plans referred to in Conditions 44 and 45, in terms of selection of flora species and specific implementation strategies.
47. 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 48.
48. 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.
49. All landscaping 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.

### **Traffic and Roadworks**

50. A detailed Traffic Management Sub-Plan shall be prepared as part of the EMP (Construction Stage) in consultation with the RTA, Blue Mountains City Council and Penrith City 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);
  - pedestrian/cyclist management and safety requirements;

- the management of access;
  - actions to be carried out should partial or total road closures (including the need for any Council 'Road Closure Permits') and/or traffic detours be required (including the identification of parties to be consulted, duration of closures, detour routes and assessment of suitability of detour routes).
51. The Traffic Management Sub-Plan shall include detailed procedures for the pipeline construction works on Victoria Bridge in consultation with the RTA and Penrith City Council. The procedures shall aim to minimise closure of Victoria Bridge in accordance with RTA requirements.
52. A road dilapidation report shall be prepared for all non-arterial roads likely to be used for construction traffic and/or as determined following consultation with Penrith City Council and Blue Mountains City Council including any non-arterial roads used temporarily for detours. The report shall be prepared in consultation with Penrith City Council and Blue Mountains City Council prior to the commencement of construction activities and then finalised as soon as possible after construction is complete. Any road/footpath/driveway 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 Penrith City Council and Blue Mountains City Council.
53. 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.
54. Restoring of excavations within public road reserves shall be made to a reasonable standard in consultation with Blue Mountains City Council and Penrith City Council with reference to the appropriate road restoration policies.

Nothing in Conditions 50 through 54 shall be taken as restricting the Proponent from negotiating an alternative payment for damage arrangements with the relevant council(s) subject to the agreement of the relevant council(s).

### **Non-Indigenous and Indigenous Archaeology**

55. The Proponent shall prepare an Archaeology Management Plan, in consultation with the Deerubbin Local Aboriginal Land Council and NPWS as part of the EMP (Construction Stage). The Plan shall include:
- details of licences/approvals to be obtained including those required under the *National Parks and Wildlife Act 1974*;
  - management measures for the fencing and protection of all identified features; and
  - procedures for monitoring of areas of potential archaeological sensitivity identified in the EIS during construction activities with the involvement of the Deerubbin LALC.

56. Where the proposed pipeline route deviates from the corridor surveyed in the EIS and described in the Representations Report, further archaeological investigations shall be undertaken by a suitably qualified person and to the satisfaction of NPWS and in consultation with the Deerubbin LALC.
57. SWC shall appoint an appropriately qualified heritage practitioner and archaeologist prior to the beginning of construction, to provide advice on construction works and in relation to the suitability of management measures.
58. Should rock breaking be required within 50m of an identified heritage item then vibration monitoring and building condition surveys shall be undertaken both before and after construction. Vibration from rock breaking shall not exceed 3mm/s at the foundation of heritage items. The Proponent shall ensure that all damages occurring as a result of construction is fully rectified at no cost to the owner.

#### Unexpected items

59. 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 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**

60. No offensive odour may be emitted from the premises, as defined in accordance with the provisions of the Protection of the Environment and Operations Act 1997.
61. The Proponent shall submit an odour assessment report to the EPA and Director-General prior to the beginning of operations. The report shall detail the results of additional odour modelling at the Penrith STP and indicate predicted performance compared to the EPA's interim odour performance criteria. Should exceedances be predicted the report shall detail proposed odour controls or additional odour mitigation measures to the satisfaction of the Director-General.
62. An Odour Management Sub-Plan as part of the EMP (Operation Stage) referred to in Condition 23, shall be developed in consultation with the EPA and Penrith City Council and Blue Mountains City 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 Sub-Plan shall be made publicly available.

63. A specific Dust Management Sub-Plan as part of the EMP (Construction Stage) referred to in Condition 17, shall be prepared. The Sub-Plan shall detail all dust control measures to be implemented during construction. The Sub-Plan shall include measures to reduce dust generation from stockpiles, cleared areas and other exposed surfaces, responsibilities for the implementation of controls and the reporting requirements. Measures such as temporary planting of stockpiles and progressive rehabilitation of any exposed areas shall be designed and operated with the intention of meeting EPA criteria for dust nuisance minimisation.
64. Where there is a risk of losing material, construction vehicles using public roads shall be maintained and covered to prevent any loss of load whether in the form of dust, liquid or solids. Construction vehicles shall be maintained 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. In the event of any spillage, the Proponent is required to remove the spilt material within the same working day.

## **Noise**

### Noise Management Sub-Plan

65. As part of the EMP(s) referred to in Conditions 17 and 23, 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 control measures to be undertaken during both the construction and operation stages. A copy of the Sub-Plan shall be forwarded to the EPA, Penrith City Council and Blue Mountains City Council.
66. 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

67. The Proponent shall monitor construction noise levels to verify compliance with the requirements specified in the Noise and Vibration 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  $L_{10}$  level, measured over a period of not less than 15 minutes when the construction site is in operation,



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  $L_{10}$  level, measured over a period of not less than 15 minutes when the construction site is in operation, not exceed the background level by more than 10 dB(A).
- For a construction period greater than 26 weeks, the  $L_{10}$  level, measured over a period of not less than 15 minutes when the construction site is in operation, 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.

Achievement of the above levels 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 7:00 am to 6:00 pm (Monday to Friday); 8:00 am to 1:00 pm (Saturdays) and at no time on Sundays and public holidays.

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 agreed through negotiations between SWC and potentially affected noise receivers or as otherwise agreed by the EPA.

### Operational Noise

70. The Proponent shall prepare a report prior to any construction works undertaken on the Penrith STP site, which includes a detailed predictive assessment of operational noise at the nearest sensitive receptors to the Penrith STP. The assessment shall be prepared in accordance with the EPA's Industrial Noise Policy.

71. Penrith STP shall be designed to avoid exceedances of the operational criteria specified in the report prepared in accordance with Condition 70. The noise emission limits are to be achieved under any typically existing weather conditions in the area.

72. The Proponent shall monitor the operational noise emanating from the treatment plant in order to verify that the noise levels are within the amenity criteria. If noise limits in the criteria are exceeded the Proponent shall, in consultation with the EPA, assess the adequacy of the noise mitigation measures to ensure that 'best practice' is



being implemented. Should the assessment indicate a clear trend in noise levels which are inconsistent with the general predictions made, the Proponent shall implement further noise mitigation measures.

### **Soil and Water Management**

73. As part of the EMP(s) referred to in Condition 17 and 23, 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, Blue Mountains City Council and Penrith City 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.
74. The Soil and Water Management Sub-Plan shall incorporate a detailed Erosion and Sedimentation Control Plan which shall be prepared in consultation with DLWC, EPA, Blue Mountains City Council and Penrith City Council and shall satisfy all relevant pollution control approvals and licence conditions.
75. Regular inspections of temporary and permanent erosion and sedimentation control devices shall be undertaken to ensure that the most appropriate controls are being implemented and that they are being cleaned and maintained in an efficient condition at all times and meet the requirements of any approval/licence conditions.

### **Contaminated Soil**

76. Prior to construction, tests shall be carried out at Penrith STP to assess the type, extent and concentration of soil contamination. Measures for handling, treatment and disposal of the contaminated material shall be approved by the EPA before any likely disturbance. The investigations and proposed measures shall be detailed in the Construction EMP.
77. Disposal of any contaminated material shall only be to a landfill approved by the EPA.

### **Biosolids**

78. Biosolids generated by the operation of the proposal shall be used or disposed of in accordance with the EPA's guideline *Environmental Guidelines for the Use and Disposal of Biosolids (1997)* unless otherwise approved by the EPA.

### **Waste Disposal and/or Recycling**

79. As part of the EMP(s) referred to in Conditions 17 and 23, 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 that is unable to be reused, reprocessed or recycled shall be disposed at a site that can lawfully receive the waste.

#### **Glenbrook STP**

80. The Proponent shall, in consultation with the Blue Mountains City Council and the EPA, prepare a Decommissioning and Future Use Report for the Glenbrook STP site. The Report shall detail:

- the decommissioning activities proposed at the STP and the environmental management procedures during these activities;
- options for the potential demolition and reuse of the site including the proposed timeframe, approvals and licences required and environmental management procedures.

The Report shall be completed prior to the operations of the transfer pipeline and shall be made publicly available.

#### **Utilities and Services**

81. 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.