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Australian Federal Police

Australian Institute of Police Management, North Head

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

PREFERRED PROJECT

Report for Brewster Hjorth Architects by

GONDWANA CONSULTING

Final Report - 15 December, 2008

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1 Introduction and Purpose

1.1 Introduction

This Construction Environmental Management Plan (CEMP) has been prepared by Gondwana Consulting Pty Ltd, on behalf of Brewster Hjorth Architects and THINC Projects, to manage potential environmental impacts associated with the demolition of existing buildings and construction of new buildings for the Australian Institute of Police Management, North Head.

For the purposes of this CEMP, the areas to which this CEMP applies will be referred to as "the site".

The proposed project is located on a 1.7 hectare parcel of land (a Commonwealth place) accommodating the Australian Institute of Police Management (AIPM). The site consists of land and all existing facilities and associated infrastructure at the Australian Institute of Police Management as shown in the Site Map (Appendix A). The site is accessed via Collins Beach Road, North Head and is bordered on three sides by the Sydney Harbour National Park, with the northern side fronting Spring Cove (part of the North Harbour section of Sydney Harbour).

Within the context of North Head, the site is considered to have cultural, indigenous landscape and natural heritage values. The AIPM site itself contains a number of buildings and other features considered to have historic heritage significance as well as being associated with two endangered fauna species (under the Commonwealth *Environment Protection and Biodiversity Conservation Act, 1999* as well as the *NSW Threatened Species Conservation Act 1995*).

Procedures for environmental management during construction activities at the site have been outlined in Section 4 of this CEMP. The procedures identify specific commitments, actions and conditions to ensure that the environmental management requirements are managed effectively.

Environmental management activities and mitigation measures identified in the CEMP will be monitored on a regular basis and/or following major changes to operations or equipment to ensure that objectives and targets of the CEMP are achieved.

The construction site works will be audited in accordance with the requirements of this CEMP (see Section 4.1).

1.2 Purpose

The aim of this Construction Environmental Management Plan (CEMP) is to:

- Briefly describe the project site and its setting;
- Summarise the key environmental aspects and impacts related to the proposed redevelopment of the AIPM site at Manly;
- Note the applicable legislative requirements and responsibilities for environmental management during the project's construction; and

- Provide the Project Manager and Contractors with guidance on the likely minimum environmental management requirements to be met in dealing effectively with the potential environmental risks associated with the proposed redevelopment project.

This CEMP incorporates and builds on a body of earlier work undertaken by GHD Pty Ltd, particularly the "AIPM Project - Outline Construction Environmental Management Plan" of February 2006 and "Australian Institute of Police Management Facilities Upgrade Issues Paper" of February 2007. It has been revised from an earlier document prepared by Gondwana Consulting (May 2007) to respond to changes in the Preferred Project (as below) for the site's redevelopment.

1.3 Scope of Activities

This CEMP covers activities associated with the demolition and construction phases of the development only. This CEMP will cover all related activities from site establishment, through demolition and construction works, to reinstatement.

A separate Operational Environmental Management Plan has been prepared in relation to the on-going operation of the redeveloped facility.

1.4 Project Overview

This CEMP has been prepared on the basis of the proposed redevelopment of the AIPM site in accordance with the Preferred Project Scheme by Brewster Hjorth Architects.

As a Commonwealth Agency, the Australian Federal Police (AFP) has submitted a referral under the *Environment Protection and Biodiversity Conservation Act, 1999* to the (now) Federal Department of the Environment, Water, Heritage and the Arts (DEWHA) who reviewed and commented on this latest proposal. Comments were also referred from the NSW Department of Environment and Climate Change, NSW Department of Planning (Heritage Branch), NSW Roads and Traffic Authority, NSW Maritime, NSW Rural Fire Service and Manly Council. Comments from all these agencies have been considered in the preparation of this revised CEMP.

A previous redevelopment proposal for the facility was subject to the scrutiny of a Parliamentary Standing Committee on Public Works (PWC) Hearing where several government agencies and stakeholders were able to voice their concerns with particular aspects of the earlier proposal's environmental, visual and heritage impacts. Some of these comments remain relevant to the revised Preferred Project Scheme and so have also been addressed in preparing this updated CEMP.

As a result of these comments, the initial scheme for the project was revised to provide a more environmentally sensitive solution. Staff of the AIPM and AFP have advised that this revised Preferred Project Scheme has been positively received by various stakeholders and the interested government agencies.

However as with any project there are inevitably a range of issues which will need careful attention, during both the construction and subsequent operational phase of the redeveloped AIPM facility, to ensure that environmental impacts are appropriately mitigated.

1.5 Summary of Proposed Refurbishment, Demolition and Construction Activities

The proposed redevelopment project involves:

- internal refurbishment of a number of existing buildings, mostly in the central core (the Axial Hospital Group) of the AIPM site;
- demolition of several buildings in the northern, southern and south western sectors of the site;
- construction of new buildings in the southern and south western sectors of the site; and
- reinstatement of much of the northern sector of the site to grassed open space.

The proposal also includes a number of other design initiatives - such as reinstatement of much of the former central drainage line, expression of the historic Jetty Roadway, and on-site rainwater harvesting and re-use.

Appendix A shows the site as it now is, while Appendix B provides a Site Layout Plan illustrating the location of new buildings and infrastructure such as internal roads and footpaths.

1.6 Construction Scheduling and Hours

Staging of works will be at the Contractors discretion, with due consideration and incorporation of the guidelines of this CEMP.

In order to reduce impacts on nesting activities of Little Penguins it is recommended construction hours be limited from 7 am or sunrise (whichever is later) to 6 pm or sunset (whichever is earlier), Monday to Friday. Consistent with Schedule 10 of Manly Council's *Local Environment Plan, 1988* it is recommended construction hours be limited from 7 am or sunrise (whichever is later) to 1 pm on Saturday, and that no work be undertaken on Sundays or Public Holidays.

2 Environmental Management Framework

2.1 Statutory Requirements

The AIPM site is located on NSW Crown land and the proposed development is declared a Major Project, subject to the assessment and approval instruments under Part 3A of the *Environment Planning and Assessment Act 1979* (EP&A Act). Concurrently with the assessment of the proposal under Part 3A, the Commonwealth Department of Environment, Water, Heritage and the Arts (DEWHA) has declared the AIPM redevelopment project as a controlled action and agreed that it will be subject to a "one-off accredited assessment" under the Bilateral Agreement with NSW, resulting in the requirements of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) being assessed under the NSW planning and approval process.

2.1.1 Legislative and Other Requirements

The Commonwealth *Environment Protection Biodiversity Conservation Act 1999* is the key environmental legislation for reference at the site. The following list of NSW legislation is provided as a guide for site activities.

Legislation:

NSW

- *Contaminated Land Act 1997*
- *Dangerous Goods Act 1975*
- *Environmental Planning and Assessment Act 1979*
- *Heritage Act 1977*
- *Local Government Act 1993*
- *Noxious Weeds Act 1999*
- *Ozone Protection Act 1989*
- *Occupational Health and Safety Act 2000*
- *Pesticides Act 1999*
- *Waste Avoidance and Resource Recovery Act 2001*

Regulations:

- *Protection of the Environment Operations (General) Regulation 1998*
- *Protection of the Environment Operations (Noise Control) Regulation 2000*
- *Protection of the Environment Operations (Waste) Regulation 1996*
- *Ozone Protection Regulation 1987*
- *RTA Manual "Traffic Control at Work Sites" 2003*

2.2 Organisational Structure and Responsibilities

The overall responsibility for environmental compliance lies with AFP and AIPM, however The Contractor and all construction contractor's personnel are responsible for the environmental performance of their activities and for complying with this CEMP.

The training of all Contractor personnel involved in the operation will ensure that each individual is aware of their environmental responsibility (refer Section 5).

Any sub-contractors employed by the head Contractor will also be made accountable for environmental management through their conditions of employment or contract.

The responsibilities of these positions are detailed in Table 2.1 and in the Environment Procedures (refer to Section 4).

Table 2.1 Site Roles and Responsibility

Role	Responsibility
THINC Projects Project Manager	◗ Liaise with the Contractor during construction to ensure that the activities are carried out in accordance with the CEMP. ◗ Activities planning, implementation and management; ◗ Review of performance and effectiveness of the CEMP. Undertake periodic inspections of the site; ◗ Notify Department of Environment and Climate Change (DECC) in the event of an environmental incident.
Head Contractor	◗ Conduct all activities in accordance with this CEMP; ◗ Carry out training of construction personnel in accordance with this CEMP; ◗ Undertake routine inspections of the site as required; ◗ Arrange independent audits of the site and compliance with this CEMP; ◗ Ensure that the site is maintained in a clean and tidy state; ◗ Arrange site maintenance and rubbish removal as necessary; ◗ Ensure sub-contractors carry out contract duties in accordance with this CEMP. ◗ Ensure the site is secured from public access; and ◗ Notify the THINC Projects Project Director in the event of an environmental incident.
Sub-Contractors	◗ Carry out contract duties in accordance with this CEMP.

3 Environmental Aspects and Impacts

This section outlines the environmental aspects and potential adverse environmental impacts relevant to the construction phase of the project.

3.1 Identification of Environmental Aspects

As defined in ISO 14001, an environmental aspect is "an element of an organisation's activities or products or services that can interact with the environment" (SAI Global, 2004).

Environmental aspects within this project are specific construction actions or items that could cause an impact. The proposed works have been reviewed, and aspects have been identified, in Section 3.2 below.

3.2 Classification of Environmental Impacts

Where potential environmental impacts have been identified, environmental protection measures must be introduced to mitigate the impact. For each impact, reference is made to that section of the CEMP where relevant mitigation measures/criteria will be detailed.

Individual sub-plans have not been developed within this document. Instead for each of the environmental impact areas procedural or performance-based requirements have been identified. Where recommended, sub-plans will need to be developed (by the specialists and others as specified in Section 4, the majority under direction and responsibility of the Contractor) to manage and mitigate potential environmental impacts and meet the performance requirements provided in Section 4.

Table 3.1 Summary of Environmental Aspects and Impacts

Category	Environmental aspect	Potential environmental impacts	Mitigation
Air emissions	Bulk earth works for buildings, roads and car parks. Storage of spoil and fill. Transport of spoil and fill. Vegetation clearance. Operation of plant and machinery. Vehicle movements.	▪ Dust generated from earthworks. ▪ Dust generated from materials handling. ▪ Wind-generated dust from exposed areas of soil and mounds of stored soil. ▪ Dust generated from vehicle movements. ▪ Emissions from construction traffic and on-site machinery	Section 4.2
Flora and fauna	Bulk earth works related to buildings, roads and car parks. Excavation for provision of services and building foundations	▪ Loss or degradation of habitat for threatened species or populations including: ‣ Little Penguin ‣ Long Nosed Bandicoot. ▪ Sediment mobilisation and surface	Section 4.3

Category	Environmental aspect	Potential environmental impacts	Mitigation
	foundations. Construction occurring throughout Little Penguin moulting season. Proximity of construction activities to Little Penguin nesting areas and Long Nosed Bandicoot foraging areas. Construction noise. Provision of night lighting. Security personnel on site in evenings. Import of fill. Storage of spoil and fill. Transport of spoil and fill. Vegetation clearing. Traffic movement, trucks and vehicles, to and within site.	runoff from exposed soils, degrading Little Penguin nesting sites and Long Nosed Bandicoot foraging areas. ▪ Site excavations (pits, holes and trenches) resulting in injury or death of Long Nosed Bandicoot. ▪ Disturbance to moulting Little Penguins resulting in death of chicks. ▪ Construction activity and associated noise disturbing and/or disrupting Little Penguin nesting activity and Long Nosed Bandicoot foraging activity. ▪ Night lighting disturbing and/or disrupting Little Penguin nesting activity and Long Nosed Bandicoot foraging activity. ▪ Security personnel disturbing and/or disrupting Little Penguin nesting activity and Long Nosed Bandicoot foraging activity. ▪ Introduction and spread of noxious or environmental weeds. ▪ Spread of *Phytopthera cinnamomi* into/out of site. ▪ Inadvertent impacts on other threatened/significant species with potential to occur on-site, but not yet located. ▪ Removal or damage to mature trees identified for retention. ▪ Removal or damage to native vegetation and bushland identified for retention. ▪ Increased fire risk from storing cleared and/or mulched vegetation. ▪ Increased risk of vehicle/road deaths or injury of Long-nosed Bandicoots. ▪ Increased bushfire risk due to greater on-site activity levels.	
Hazardous materials	Excavations and bulk earth works. Disturbance of contaminated soils. Protection of existing services. Storage and use of fuels and chemicals. Operation of plant	▪ Inappropriate identification, handling and disposal of the following potential contaminants of concern: ‣ asbestos-containing materials; ‣ lead-based paint; ‣ polychlorinated biphenyl (PCB)-containing materials; ‣ nickel cadmium batteries;	Section 4.4 Hazardous Material Manage-ment Plan to be developed.

Category	Environmental aspect	Potential environmental impacts	Mitigation
	and machinery. Demolition or refurbishment of existing structures.	▸ CFC containing equipment such as fridges and freezers; and ▸ disinfectants and fungicides from Pc washdown facility. ▪ Leaks or spills during the protection or relocation of existing services and utilities (e.g. sewerage and wastewater and an LPG tank). ▪ Mobilisation of pollutants or sediments from contaminated soils. ▪ Cross-contamination of previously non-contaminated soils. ▪ Spills or leaks of fuel or other chemicals associated with the demolition and construction works, leading to contamination of soil and water. ▪ Inappropriate disposal of spoil or building materials that contain contaminants of concern. ▪ Import of potentially contaminated materials. ▪ Increased fire risk and the resulting mobilisation of hazardous smoke/air-borne pollutants.	
Heritage buildings and sites	Proximity of construction activities to heritage items identified for retention. Excavations and bulk earth works. Transport of spoil and fill. Modifications to structures of heritage significance (as identified in Peter Freeman Conservation Architects and Planners, 2006): ▪ Main AIPM Building, including kitchen ▪ Spring Cove Cottage ▪ Kookaburra Cottage ▪ Garden Cottage	▪ Proximity of earthworks and construction activity and potential damage to retained heritage buildings. ▪ Potential loss of heritage value from modifications to structures of heritage significance (consistent with provisions of the Noel Bell Ridley Smith and Partners Pty Ltd. 2007. *Australian Institute of Police Management Manly NSW 2095 Conservation Management Plan*.) ▪ Disturbance of Aboriginal sites/values that may be present or discovered on the site.	Section 4.5

Category	Environmental aspect	Potential environmental impacts	Mitigation
	▪ Harbour Cottage Re-establishment of Jetty Road.		
Noise and vibration	Excavation and bulk earth works. Proximity of construction activities to heritage items identified for retention. Construction noise.	▪ Disturbance of local residents by truck and vehicle movements. ▪ Disturbance of local residents by operation of plant and equipment and other activities during construction. ▪ Structural impacts to retained heritage buildings from vibratory equipment/machinery.	Section 4.6 Noise & Vibration Manage-ment Plan to be developed
Traffic	Excavation and bulk earth works. Transport of spoil and fill. Increased truck and vehicle traffic flow and volume through Manly CBD, along Darley Road and North Head Scenic Drive. Vehicle movements and parking within site.	▪ Increased traffic volumes on access roads during construction with disruption of local traffic and increased traffic congestion, conflicts and accident risks (for both vehicles and other road users). ▪ Construction traffic in proximity to heritage buildings with potential for direct (impact) and indirect (vibration) damage. ▪ Disruption of visitor access to NPWS Collins Beach car park. ▪ Disruption of emergency egress/ingress to site. ▪ Worker/vehicle conflicts and safety risks. ▪ Potential for environmental impacts arising from inappropriate construction traffic movement and parking on-site.	Section 4.7 Traffic manage-ment sub-plan to be developed
Waste	Excavation and bulk earth works. Demolition of buildings. Construction waste. Domestic waste. Vegetation clearance.	▪ Generation of waste for disposal through excess excavations. ▪ Generation of waste from building demolition. ▪ Generation of waste from construction activities. ▪ Generation of domestic waste from construction personnel. ▪ Generation of contaminated waste. ▪ Inappropriate disposal of contaminated waste (including asbestos and asbestos contaminated materials). ▪ Cross-contamination of previously non-contaminated soils. ▪ Generation of vegetation waste from land clearing.	Section 4.8 Waste Manage-ment Plan to be developed.

Category	Environmental aspect	Potential environmental impacts	Mitigation
Water quality, stormwater and erosion	Excavation and bulk earth works. Storage of spoil and fill. Transport of spoil and fill. Relocation, modification and construction of drainage structures.	▪ Sediment mobilisation and surface runoff from exposed soils, polluting Spring Cove. ▪ Sediment mobilisation and surface runoff from exposed soils, degrading Little Penguin nesting sites and Long Nosed Bandicoot foraging areas. ▪ Spills and leaks of fuels and chemicals, into watercourses, from storage or use. ▪ Disturbance of contaminated soils and transfer to surface or groundwater. ▪ Spoil/fill stockpile failure and sediment mobilisation and surface runoff. ▪ Adverse changes to natural drainage patterns/hydrology. ▪ Disposal of contaminated material if excavated.	Section 4.9

4 Environmental Management Program

The following environmental management procedures apply to the environmental issues relevant to the site. The procedures aim to provide criteria and indicators to measure the environmental performance, as well as mitigation controls to reduce potential impacts.

4.1 EP01 – Environmental Management Procedure

Performance Objective	◗ Responsible environmental management of the site. ◗ No whole-site "stop work" environmental incidents. ◗ Provide open communication and consultation with the DECC (NPWS) and other agencies as well as employees and the general public. ◗ Carry out regular audits and inspections of the site during construction. ◗ Minimise outstanding corrective actions.
Goals	◗ All personnel inducted prior to commencing work. ◗ All personnel are aware of the site's natural and cultural heritage values, this CEMP and their environmental responsibility. ◗ Record all non-conformances and evidence of corrective actions taken. ◗ No adverse environmental impact resulting from any incidents or emergencies on site, and no cessation of works due to environmental incidents or breaches.
Mitigation Measures	**Training and Awareness** ◗ All personnel should be trained to carry out their designated duties relating to the implementation of this CEMP. Where specific tasks or duties require the personnel to be licensed or approved by relevant agencies (notably the DECC (NPWS)) then the Contractor will provide appropriate training or time for licences or approvals to be obtained. A register of training certificates and Contractor or other staff approved for specific tasks will be maintained. ◗ All Contractor personnel will be inducted prior to commencing work on site. The induction will include the site's natural/cultural heritage and other environmental values, operating constraints and protocols in relation to environmental protection, environmental reporting and incident response procedures, this CEMP and its core content, and other environmental awareness and management issues. A register of induction participants will be maintained. ◗ Sub-contractors will be inducted on site prior to carrying out their work to ensure they understand the key values, constraints and environmental management practices on site. A register of sub-contractor induction will be maintained. A targeted induction, providing relevant site information and responsibilities, will be provided for external suppliers and deliveries to the work site wherever practical, especially those likely to have a repeated or continuous presence on-

site.

Communication and Consultation

- Internal communication will occur on site through normal daily, weekly and monthly meetings where environmental issues will be discussed as part of each meeting.
- Consultation and communication with external bodies including government agencies and other affected stakeholders will be undertaken as required. This will be the responsibility of the AFP Project Director and the THINC Project's Project Manager.

Audits and Inspections

- The internal site audit process will be used to verify that the site procedures are managing the environmental risks for the site and enable demonstration of the Contractor's environmental due diligence. An internal site audit will be conducted every week during construction.
- Weekly site inspections aim to ensure that environmental management requirements are addressed and that the environmental objectives are met at the site. The Site Health Safety and Environment Officer and Contractor representative, will carry out these site inspections. A member of THINC Project's Management Team will attend as required. The inspection will be undertaken in accordance with the Inspection Checklist given in Appendix F.
- The weekly site inspections will review environmental aspects associated with the site operations and identify any non-conformances or issues that may require remedial action. The date and time of inspections will be recorded, as well as comments on non-compliance with the CEMP and remedial action taken as required. A register of weekly internal site audits will be maintained, including originals of the Inspection Checklists.
- The Contractor will engage an independent environmental auditor, as nominated by THINC Projects, to undertake a monthly external environmental audit of the site during construction. The audit reports will be provided to the THINC Project Manager. Where non-conformances and corrective actions have been recorded an action plan to rectify the issues will be prepared and implemented.

Non-conformance and Corrective Action

- If a non-conformance is identified, the Contractor will take appropriate measures to ensure that the non-conformance is recorded and corrective action implemented. Non-conformances and corrective actions will be recorded on the Environmental Complaints, Non-conformance and Corrective Action Register.

Records

- Records will be kept for the following:
  - A register of environmental complaints, detailing the nature of the complaint, date of complaint, corrective

	action taken and the date it was resolved - this will include non-conformances as identified from the weekly internal site audits and monthly external environmental audits; ▪ A register of incidents, such as spillages and leakages, which would include the date, nature of the incident and corrective action taken; ▪ Data on the types and quantities of waste removed from the site; ▪ Records in relation to Little Penguin and Long-nosed Bandicoot monitoring and activity (as detailed in EP03); ▪ Records of formal consultation or communication; ▪ Site audit reports; ▪ Site inspection checklists; and ▪ Training and induction attendance. ◗ These records will be maintained by the Contactor and made available upon request, in the event of an incident, and for inspection by the THINC Project's Project Manager or relevant authorities. ◗ Prior to commencing mobilisation and demolition the Contractor will establish photo monitoring points at key locations across the site to record the progress of works and associated impacts/changes - with photographs taken at least monthly as well as at key stages of the works. Significant locations will be included in the establishment of photo monitoring points – such as the Axial Hospital Group, Little Penguin foreshore nesting/breeding area, Long-nosed Bandicoot northern lawn/foraging area, the former Jetty Road, and bushland areas to be retained. **Emergency and Incident Management** ◗ In the event of an emergency the site emergency procedures take precedent. The environmental implications will be assessed and managed only when the emergency has been contained and it is safe to access the site. ◗ If an incident takes place that has environmental implications, an incident reporting form will be completed, including implementation of any corrective actions. ◗ If the emergency or incident has caused or may cause material harm the Contractor must notify THINC Project's Project Manager.
Performance Measures	◗ Environmental management of the site proceeds within the parameters of this CEMP, and non-conformances are addressed in accordance with the guidelines identified and within timelines specified. ◗ Only 2 or fewer environmental incidents of sufficient seriousness to require the cessation of work at the site (as a whole) occur during the course of the entire demolition and

	construction works. ◗ All required records are complete and up-to-date. ◗ Emergencies are handled in accordance with the site emergency response plan.
Monitoring / Auditing / Reporting	◗ Training and Induction Register. ◗ Formal consultation and communication records. ◗ Audit and Inspection Reports, including completed site Inspection Checklists. ◗ Environmental Complaints, Non-conformances and Corrective Actions Register. ◗ Incident Report Forms. ◗ Little Penguin and Long-nosed Bandicoot monitoring, activity and management records. ◗ Waste generation and disposal records. ◗ Photo monitoring points at key locations across the site (as above).
Corrective Action	◗ If 3 or more environmental incidents that result in or require a "stop work" on the site occur during the entire duration of the demolition and construction works, then a full review of work practices and operating procedures - as well as the provisions of this CEMP and environmental guidelines - will be carried out jointly by the Contractor and THINC Projects. ◗ Investigations/corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions Register. ◗ The Contractor, according to an agreed responsibility and timescale, will assign or close out correction actions,
Responsibility	The Contractor.

4.2 EP02 – Air Emissions

Performance Objective	◗ To minimise the potential impact of construction related air emissions, including dust, on neighbouring and nearby receptors.
Goals	◗ No complaints received from neighbouring and nearby receptors relating to air quality due to site activities. ◗ No adverse irreversible impacts on site values. ◗ No impacts on staff health.
Mitigation Measures	◗ Dust suppression will be aided by the retention of existing vegetation, including grasses, across those areas of the site not affected by demolition/construction activities - including environmentally sensitive and protected areas. Clearing of the work area to mineral soil will not be a routine forerunner to commencing operations, and grass cover will be maintained across work areas as far as is practical. ◗ Excavation of soil and rock, including rock cutting/breaking, can generate dust. Weather conditions will be assessed during excavation and rock removal activities, and under strong wind conditions (39-49 kph average wind speeds) that can raise excessive dust these activities will cease. ◗ The storage of soil and spoil has potential to generate dust in adverse weather conditions. Soil and spoil dumps/mounds will be stabilised using suitable materials such as hessian or jute-mat covers. Soil/spoil will be stored for as short a time as practical, and long-term storage areas will receive interim stabilisation. ◗ Vegetation mulching can generate dust. Weather conditions will be assessed during the mulching activities, and under strong wind conditions (39-49 kph average wind speeds) that can raise excessive dust mulching will cease. ◗ Water application will be used for dust suppression. However water application will be used cautiously in the lower/northern area of the site - to minimise the risk of sedimentation and excess water flow, including potentially contaminated water, downslope across the foraging area for the Long-nosed Bandicoot and the Little Penguin nesting/breeding area (as described in EP03). Mulching and hessian or jute-mat covers are alternative dust suppression measures that may be used, especially in areas not subject to vehicle traffic. ◗ Soil stabilisers and chemical dust suppressants will not be used on the site, to avoid potential impacts on wildlife and habitat values. ◗ Cleared, disturbed or exposed areas will be stabilised as soon as practical after construction. Dust control measures will be left in place, and maintained as required, until vegetation/grass cover has been established or the location

	developed to its final stable use/condition. ◗ Silt fencing and erosion control structures will be regularly maintained to ensure that deposits do not become a dust source (refer EP09). ◗ Except in emergencies, vehicles will be restricted to sealed or otherwise hardened/surfaced routes wherever possible. Low vehicle speeds will be enforced on unsealed accesses and work areas within the site in order to reduce dust. ◗ Vehicles carrying fill, spoil or other potential dust generating materials will not be loaded above their side and tail boards, and all such loads will be covered. Suppliers and delivery vehicles will be required to cover their loads, where there is a potential for dust generation (or spills), as part of the Contractor's supply/purchasing procedures. ◗ Prior to exiting the site, trucks will be checked clear of dust and spoil that could potentially be deposited on Collins Beach Road or other public roads surrounding the site. ◗ Maintain all vehicles, plant and equipment used during demolition/construction in a proper and efficient condition to ensure emissions are minimised. ◗ Operate all vehicles, plant and equipment used during demolition/construction in a proper and efficient manner. ◗ Vehicle emissions will be minimised by avoiding un-necessary engine running time - such as while loading, waiting, or for driver comfort. ◗ Hazardous materials with the potential to generate dust or air-borne particulates will be treated in accordance with the Hazardous Materials Management Plan (see EP04). ◗ The Contractor will be vigilant for weather conditions/events - such as "southerly busters" or extended dry periods - that could exacerbate dust and air quality problems, and potentially adversely impact neighbouring receptors as well as the Bandicoot foraging and Penguin nesting areas. Dust generating activities will cease during these, and other, extreme conditions. ◗ Under no circumstances will waste, vegetation or other materials be burnt on-site during demolition/construction activities (excluding hazard reduction operations or the ecological use of fire as approved by the DECC (NPWS). ◗ The use of ozone depleting substances during demolition and construction operations will be avoided.
Performance Measures	◗ Number of dust related complaints received from neighbouring receptors - target of less than 3 complaints for the entire demolition/construction period. ◗ Incidences of excessive dust deposition across grassed Bandicoot foraging area and adjoining bushland areas of SHNP.
Monitoring / Auditing / Reporting	◗ Dust and air quality complaints from neighbouring receptors will be recorded in the Environmental Complaints, Non-conformances and Corrective Actions Register.

	◗ All Contractor staff will conduct constant visual monitoring for excess emissions and dust generation. ◗ Vehicles, plant and machinery entering or in use on the site will be regularly checked by the Contractor to ensure compliance with the appropriate emission standards. Checks will be by visual inspection (no visible exhaust emissions after 30 seconds running). ◗ Weekly visual inspections will be conducted of the grassed Bandicoot foraging area along the northern side of the site, and the adjoining bushland in SHNP along the site's southern and western boundaries, for excess dust visible on the grass and vegetation. ◗ Audits and reporting will be conducted in accordance with EP01, including the implementation of the recommendations and corrective actions.
Corrective Action	◗ The Contractor will follow-up all dust and air quality complaints from neighbouring receptors (nearby land holders/uses) within 2 business days. Mitigation measures will be reviewed and implemented within 2 days. ◗ If staff observations and external complaints indicate air quality and/or dust objectives are not being met - on more than 3 incidences in any 7 day period - the Contractor will identify those activities most likely to be contributing to the problems, review the operations and environmental controls in place for the activity(s), and implement appropriate corrective actions. ◗ Where air quality and/or dust objectives are repeatedly unmet, or external complaints persist, the Contractor will install a High Volume Air Sampler (HVAS) or other appropriate air quality monitoring technology at a selected location on or off site to provide continuous empirical data to assist in managing this issue. ◗ Street sweeping will be undertaken as required along Collins Beach Road, from the AIPM gate to the junction with North Head Scenic Drive, in response to material accidentally deposited along this access. ◗ Investigations and/or corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions Register as maintained by the Contractor and THINC Projects. ◗ The Contractor according to an agreed responsibility and timescale will assign or close out all corrective actions undertaken by them, or undertaken as directed by THINC Projects or the DECC (NPWS).
Responsibility	All site personnel.

4.3 EP03 – Flora and Fauna

Little Penguin (*Eudyptula minor*)

Preamble:

The Little Manly and Spring Cove colony of Little Penguins is listed as an endangered population under the NSW *Threatened Species Conservation Act 1995*. Areas of North Harbour, both the foreshore and harbour margins (50 metres seaward from the mean high water mark), have been declared as critical habitat - or areas considered crucial to the survival of an endangered population - for the protection of this Little Penguin population. The AIPM site does not fall within this declared critical habitat area.

The population is the only breeding colony of Little Penguins known on the NSW mainland. The colony once numbered in the hundred, however it is now believed to comprise only around 60 pairs of birds. It is threatened by loss of habitat, attacks by Foxes and Dogs, and the disturbance of nesting burrows. A recovery plan for the population has been in place since late 2000 to guide conservation efforts aimed at the colony's protection and survival. This includes an active monitoring program, in place since 1997/98, focused during the breeding season (from June/July to February) when the DECC (NPWS) carries out population counts, monitors Penguin nesting habitats, and microchips individual birds for monitoring and research purposes. This work has found that the colony has remained relatively stable over the last 6 years, and has a higher breeding success rate than many other Little Penguin populations.

The Little Penguins nest, breed and moult on the rocky vegetated cliff and foreshore slope along the northern edge of the AIPM site. They are adept at climbing the rocky face, and occasionally Penguins are seen venturing above the vegetated cliffline and into the main AIPM complex. A single active breeding burrow is also - at present (2008) - located above the cliffline, in the vicinity of the sewage pump house in the north-west of the site. The public access restrictions associated with the AIPM site have helped protect the colony from disturbance by members of the public, dogs and other pressures that the Penguins encounter elsewhere in the North Harbour area - with the result that the AIPM colony is an important nesting and breeding site for the population.

The declared Little Penguin critical habitat does not include any part of the AIPM site. However the area north from the existing low wall at the edge of the grassed/mown area and extending down the rocky vegetated cliff and foreshore to the High Water Mark at the boundary of the site has been managed in the past by the AIPM in recognition of its importance as a Little Penguin nesting and breeding area. This approach has been supported by the DECC (NPWS) who have assisted the AIPM in directly managing this area, including undertaking contract weed control, and providing advice. The AIPM allows access for the DECC (NPWS) for Little Penguin monitoring and other tasks. The AIPM has generally only undertaken essential management works in this area to-date. The DECC (NPWS) has also adopted a very precautionary approach to the management of this zone, and has only undertaken very limited trial weeding and rehabilitation in parts of the area over the past several years (despite the abundance of introduced plants along the cliffline).

Under the existing layout of the AIPM complex the two long northern accommodation blocks (adjacent to Spring Cove Cottage) are only approximately 12 metres from the upper edge of the cliffline and Little Penguin nesting/breeding area. The proposed development includes the removal of these accommodation blocks and rehabilitation of this area to open grass with occasional clumped low native plantings. Therefore, with the exception of the heritage-valued Spring Cove and Kookaburra Cottages (which would be retained as visitor accommodation),

the nearest major buildings and activity centres under the proposed layout would be 26 metres back (south) from the cliff edge with a corresponding reduction in the potential for direct disturbance to the Little Penguin nesting and breeding areas.

Performance Objective	▪ To minimise any impacts of the works on the Little Penguin colony. ▪ To protect the Little Penguin foreshore nesting/breeding area and any other parts of the site important to the species. ▪ To ensure continued use of the area by Little Penguins during construction, at levels comparable to existing levels.
Goals	▪ No disruption to the Little Penguin population, particularly during breeding and moulting periods. ▪ No reduction in the numbers of Little Penguins using the site, outside the range of previously observed population and breeding variability.
Mitigation Measures	▪ Site induction of all personnel, including contractors, will include information on the Little Penguin, the extent of the foreshore nesting/breeding area and its importance, and the measures in place or to be followed to protect both. ▪ Advisory and regulatory signs will be installed at the entrance to the construction site (AIPM complex) and along the upper (southern) margin of the site's northern cliffline/foreshore (approximately along the line of the existing low wall, and extending west past the known active Penguin breeding burrow near the sewage pumping station) indicating "sensitive habitat/restricted access" and advising access restrictions associated with the Little Penguin foreshore nesting/breeding area. The signs will identify the area as environmentally sensitive, specify access/use protocols and/or restrictions, and include contact details for the Contractor's Health Safety and Environment Officer or other appropriate Contractor representatives. ▪ No part of the foreshore nesting/breeding area, and no vegetation in the vicinity (within 10-12 metres) of the known active breeding burrow above the cliffline (near the sewage pumping station), will be cleared during the project. Any unforeseen activity/works that may be essential in this area will require discussion with, and prior approval by, the DECC (NPWS). ▪ The Contractor will endeavour to schedule the works, notably demolition and external/building envelope construction, in recognition of the location of individual works activities on the site (and especially proximity to the Little Penguin foreshore nesting/breeding area) and periods of Little Penguin vulnerability (especially moulting and breeding times) so as to minimise potential impacts wherever practical. ▪ The two existing northern accommodation blocks (adjacent to Spring Cove Cottage) will be retained while demolition

works and construction of the external building envelopes takes place across the southern/south-western parts of the site. These buildings will provide a barrier - physical, visual and acoustic - between much of the works site and most of the Little Penguin foreshore nesting/breeding area. This should negate the need for a special noise and light barrier in this area during these works. However the need for such a barrier will be regularly reviewed in consideration of the monitoring of Little Penguin numbers/activity during construction and discussions with the DECC (NPWS).

- The two existing northern accommodation blocks (adjacent to Spring Cove Cottage) will be demolished following, or at substantial completion of, construction works across the remainder of the site. This will only occur, subject to project staging, at a time outside the Little Penguin breeding season (July to February) and the moulting period (from approximately February to the end of April) - but may occur inside these times with DECC (NPWS) approval if breeding is not occurring and dependent on monitoring results. A construction fence and silt fencing will be installed along the downslope side of these structures - no more than 3 metres north of the existing building line - during demolition and construction works to limit access/movement and impacts on the Little Penguin foreshore nesting/breeding area (and grassed Bandicoot foraging areas, as below). No heavy machinery will be permitted in the area above the nesting/breeding colony below the line of the construction/silt fence, with all machinery to work east-west "along contour" or from upslope of the site. This area will be rehabilitated to match the existing ground surface and turfed.
- THINC Project's Project Manager and the Contractor will liaise with the DECC (NPWS) regarding the need for a temporary noise and light barrier downslope of the two existing northern accommodation blocks (adjacent to Spring Cove Cottage) during the demolition of these structures and reinstatement of this site – especially if works are approved by the DECC (NPWS) during the breeding/moulting seasons. Such a temporary structure may be warranted in order to retain noise levels as close as possible to ambient levels and minimise disruption to the Little Penguin colony, and/or in response to the findings of the monitoring of Little Penguin numbers/activity. This barrier, if required, will be designed and installed so as not to impede fauna movement (and the passage of stormwater) and could be installed as part of the hay bales silt barrier. However its final position and structure will (if it is warranted) would require further detailed design, to be undertaken by the Contractor and approved by the THINC Projects Project Manager and the DECC (NPWS) prior to construction.
- Temporary fencing will be erected to protect the known active Little Penguin breeding burrow downslope of the sewage pumping station (but above the cliffline) north-west of Kookaburra Cottage. Temporary plastic mesh fencing, or similar, will be supported by signage - with all fencing/barriers not extending to within 200 millimetres above the ground surface, to allow for the passage of Little

Penguins underneath (and Long-nosed Bandicoots that transit this area, as below).

- Any night or security lighting of the construction area will be directed away from the Little Penguin nesting areas, wherever possible. Any lighting essential in this area will be provided with suitable hoods or glare-foils to reduce light spill across the Penguin nesting areas.
- The Contractor will ensure that all security personnel, including contractors, are suitably inducted prior to commencing work on site - with particular reference to the Little Penguin nesting area and the requirements/behaviour of this species. Security personnel's patrol routes and operating procedures may be modified to minimise disturbance to Little Penguins. Dogs will not be permitted on-site as part of security operations.
- In conjunction with management measures for the Long-nosed Bandicoot - refer below for further details - all pits/holes/trenches within 25 metres of the upper edge of the Little Penguin nesting/breeding area, and other known active breeding burrows, will be fitted with "escape ramps" (planks with cross slats/baffles) or if necessary, due to repeated incidents of trapped wildlife, covered each night (or when not "in use" for any multiple days) to prevent entrapment, injuries or death of Little Penguins.
- All pits/holes/trenches (including covered excavations and the proposed vehicle wash-down facility - see EPO7) will be checked by the Contractor for Little Penguins within 2 hours of sunrise in winter and 1 hour of sunrise in summer (in conjunction with the similar checks required for the Long-nosed Bandicoot, as below). This will be done every day, including all non-work days, while ever there are open pits/holes/trenches on-site. Any Little Penguins found are to be released immediately by encouraging their movement out of the excavation by carefully placing one or more planks (with cross slats/baffles if required) into the hole which would allow the Penguin to escape by their own volition. If this method fails to enable safe movement of a Penguin from an excavation they will be carefully relocated to immediately adjacent nesting areas by suitably qualified personnel engaged by the Contractor or inducted/trained Contractor staff, as approved by the DECC (NPWS).
- Before the use of machinery or stockpiled materials (building materials, soil, vegetation) these will be inspected by hand, within 2 hours of sunrise in winter and 1 hour of sunrise in summer (in conjunction with the similar checks required for the Long-nosed Bandicoot, as below), for Little Penguins that may have ventured into them. Any Penguins found are to be allowed to escape by their own volition or if they do not move of their own accord they will be relocated to immediately adjacent nesting areas by suitably qualified personnel engaged by the Contractor or inducted/trained Contractor staff, as approved by the DECC (NPWS).
- Little Penguins will only be handled by persons trained in the handling of the Penguins, as approved by the DECC (NPWS). Local "Penguin Wardens" may also be

considered for these roles, if appropriate.

- The Contractor will identify up to 4 personnel, one of whom will be the Site Health Safety and Environment Officer, who will receive additional training and be approved by the DECC (NPWS) to be able to enter the Little Penguin foreshore nesting/breeding area to carry out monitoring, assessment and other tasks as specified in this CEMP and as may be essential during the project's demolition/construction phase. Except in emergencies, access for other staff and activities - on a one-off or specific tasks basis - will first be discussed with the DECC (NPWS) and appropriate precautionary/protective measures identified.
- Silt fencing, and other erosion and sedimentation control measures, will be implemented according to the Erosion and Sediment Control Plan (Appendix D) to limit the movement and deposition of sediment, building wastes and other materials downslope into the Little Penguin nesting area.
- During the initial construction phase, and prior to harvesting and re-use, stormwater and surface water flows across the site will continue to be directed into the existing stormwater discharge system - comprising inlet drains, piping, holding/settling pits, and established discharge points at three locations in the cliffline (towards the western portion of the site, via the existing/piped central drainage line and via an existing outlet near the eastern sandstone wall). This drainage system and stormwater discharge points have co-existed with the Little Penguin colony for many years. However additional stormwater and erosion and sediment control measures will be implemented - as set out in the Erosion and Sediment Control Masterplan (Appendix D), refer EP09 - to prevent over-loading or contamination of the stormwater system during the demolition/construction phase and any possible impacts on the Little Penguin foreshore nesting/breeding area.
- The central drainage line will be channelised/lined with rock surfacing and clumped plantings, during construction and a rock anti-scour/energy-diffusing bed installed at its discharge point above the cliffline and Little Penguin nesting/breeding area - as shown in the Site Landscape Plan (Appendix C). One additional stormwater discharge point will be installed upslope of the cliffline at the extreme western end of the site, discharging via rock anti-scour/energy-diffusing bed onto the grassed area west of the Penguin colony.
- The grassed area above (south) of the Little Penguin nesting area will be retained, and enhanced, to assist in filtering surface water flows from the site before they reach the nesting area (as well a being an important Long-nosed Bandicoot foraging area, as below). Small pockets of clumped plantings of low native species will also be established along the downslope edge of the lower (northern) roadway - as shown on the Site Landscape Plan (Appendix C) - to intercept minor surface runoff before spilling this out to filter across this grassed area as overland

	flow. ▪ An 8 kph speed limit will apply, and be enforced, for all vehicle movements within the site to minimise the risks posed to any Little Penguins that may venture beyond the nesting area (as well as for safety and logistical reasons, given the confined site area).
Performance Measures	▪ Penguins continue to follow normal nesting, breeding and moulting activities throughout demolition and construction activity (as benchmarked from existing DECC (NPWS) population monitoring data). ▪ No reduction in the numbers of Penguins nesting during demolition and construction, outside the range of previously observed population and breeding variability as compared to past years (from existing DECC (NPWS) population monitoring data) and in reference to local habitat in use elsewhere. ▪ No abandoned Little Penguin nests, beyond those that could be expected under normal breeding behaviours (as advised by DECC (NPWS) and previously observed breeding behaviours/variability). ▪ No death of adults or chicks on-site due to demolition/construction activities. ▪ No intrusions or disturbance of the Little Penguin nesting area, or known active breeding burrows above the cliffline.
Monitoring / Auditing / Reporting	▪ The established DECC (NPWS) Little Penguin monitoring program provides considerable background/pre-works data. This will be employed as a pre-construction benchmark against which to assess any effects of the works on the Little Penguin colony. ▪ The Contractor, under DECC (NPWS) direction or supervision, will monitor ambient night lighting levels below the cliffline in the central area of the site (using a hand held light meter) between 9pm and 10pm of a weekday evening and at the same times on Sunday night for three consecutive weeks before the start of works. This will provide a baseline against which to assess any increased light levels at this location, due to security lighting, during the demolition/construction works. Monitoring of night light levels - at the same position and times - will be undertaken, by the Contractor, quarterly during the works if requested by the DECC (NPWS) (and preferably undertaken in conjunction with other Little Penguin monitoring efforts to avoid additional disturbance). ▪ Weekly monitoring of Little Penguins will be undertaken at the start of demolition/construction works, and will take place weekly for the first 3 months of activity. After this time monitoring frequencies will revert to fortnightly, including during the breeding and moulting season, or as consistent with the DECC (NPWS) established monitoring programme. ▪ Monitoring frequencies will also be increased whenever possible impacts are suspected, as evidenced by Little Penguin numbers dropping (or increasing) to outside the range of previously observed population and breeding

variability, the DECC (NPWS) direction, or on the Contractor's and/or THINC Project's own accord.

- Little Penguin breeding burrows will be determined by visual inspection, in a manner similar to the established DECC (NPWS) monitoring program, and recorded. Non-breeding burrows will also be recorded.
- The Contractor will engage suitably qualified personnel or induct and train nominated staff, as approved by the DECC (NPWS), to undertake the above monitoring tasks and to be available (if required) for the identification, handling and release of Little Penguins from pits/holes/trenches, stockpiles, machinery or other work sites. The DECC (NPWS) will be offered the opportunity to undertake the monitoring program before other personnel are engaged to undertake this role. Local "Penguin Wardens" may also be considered for these roles, if appropriate.
- The Contractor will regularly - at least weekly during the nesting/breeding season and least fortnightly at other times - monitor that area of the work site north of the northernmost silt fence to the top of the cliffline and Little Penguin nesting/breeding area for new Little Penguin breeding burrows and other nesting or Penguin activity. All Contractor staff (including sub-contractors) will be vigilant for Little Penguins, or sightings of activity, across other "higher" parts of the site. Any sign of new Little Penguin activity will be immediately notified to THINC Project's Project Manager and the DECC (NPWS), and measures for the protection of possible outlying burrows agreed for implementation by the Contractor. The Contractor will maintain a record of all Little Penguin incursion, evidence or activity above the cliffline and foreshore nesting/breeding area.
- The Contractor will maintain a record of all Little Penguins, and other fauna, removed from pits/holes/trenches, stockpiles, machinery or other work sites - including the timing, species, condition, location and other relevant information.
- The Contractor will conduct regular inspections - at least twice weekly - to assess the integrity and effectiveness of fencing, barriers, stormwater and erosion and sedimentation control measures, in particular after rain events.
- Stormwater quality will be assessed, at least fortnightly or immediately after major rainfall events, by the Contractor over the duration of the demolition/construction, and the results recorded - refer EP09 for stormwater assessment parameters.
- The Contractor will notify THINC Project's Project Manager and DECC (NPWS) immediately if erosion and sedimentation controls are breached, stormwater management measures fail, or contaminated stormwater discharges are detected to the extent that sediment or other material is deposited within the nesting area through erosion and water movement or excess/contaminated stormwater passes over the cliff edge and into the nesting

	area. ▪ The Contractor will notify THINC Project's Project Manager and DECC (NPWS) immediately if the Little Penguin colony is disturbed in any way. ▪ The Contractor will notify THINC Project's Project Manager and DECC (NPWS) immediately if dead or sick Penguins are noted. Any injured animals will be dealt with immediately according to a protocol to be developed with the DECC (NPWS). The Contractor will maintain a record of all Little Penguins, and other fauna, injured or killed on-site. ▪ The Contractor will undertake "before and after" light and noise monitoring, using hand held light and noise meters, at a minimum of two locations in the Little Penguin foreshore nesting/breeding area (one above and one below the cliffline) to assess the effectiveness of any temporary noise and light barrier installed above the Little Penguin foreshore nesting/breeding area. The "after" noise monitoring will undertaken at no more than monthly intervals, between 9am and 11am, when routine demolition/construction activities are in progress - and the results recorded and reported to the THINC Project's Project Manager. "After" light monitoring, if requested by the DECC (NPWS), are specified above. All such monitoring efforts will be planned and undertaken so as to avoid additional disturbance Little Penguins.
Corrective Action	▪ In the case of the abandonment of nest sites and/or chicks or death of Little Penguins all works on the site will cease and, as soon as is practical, the DECC (NPWS) will inspect the Little Penguin colony and remedial/corrective actions identified in liaison with THINC Projects. The Contractor will be responsible for implementing corrective actions as per DECC (NPWS) advice. ▪ If monitoring indicates a marked reduction in Little Penguin numbers or activity generally within the colony - outside the range of previously observed population and breeding variability to a level to be agreed with the DECC (NPWS) - and this can be reasonably attributed to the demolition/construction works (rather than off-site or other influences), then the following strategies may be implemented after prior discussion with the DECC (NPWS): o additional or upgraded fencing of the nesting area - including installing or upgrading noise and light barriers if appropriate - to further reduce the impacts of demolition/construction activities; o modification of night lighting to reduce light spill across the nesting area; o modification of evening and night security patrols/activity; o reviewing daily operations and limiting the most disruptive or intrusive operations to the middle of the work day, or other periods when Little Penguins are least active or susceptible;

- reviewing and limiting work hours in the 2 to 3 hours immediately before dusk and after sunrise; and
- rescheduling highly disruptive works to outside the Little Penguin breeding and moulting periods.

- The above reduction in Little Penguin numbers/activity will also trigger an inspection of the site, as soon as is practical and within a maximum of 3 working days, by the DECC (NPWS) and the identification of corrective actions as per DECC (NPWS) advice for discussion with the Contractor and THINC Project's Project Manager. These actions may include the above, or alternative, corrective measures.
- Penguin monitoring measures will be increased, if this is supported by the DECC (NPWS) and will not further disrupt/stress the population, to assess the efficacy of the above remedial measures.
- The Contractor will liaise with the THINC Project's Project Manager and DECC (NPWS) prior to undertaking any works to remediate any inadvertent damage/impacts to the Little Penguin nesting area or individual burrows. As soon as is practical the DECC (NPWS) will inspect any damage/impact to the nesting area and provide advice as to preferred corrective actions.
- If monitoring indicates that Little Penguins are observed to stray into the main works area on more than 1 occasion in any 2 week period, then the following strategies may be implemented (after prior discussion with the DECC (NPWS) where relevant):
  - additional warning signage will be installed at high risk locations or sites with a record of near-misses or incidents;
  - speed humps and other traffic slowing devices may be installed at high risk locations or sites with a record of near-misses or incidents; and
  - perimeter fencing on the main works area will be upgraded/reinforced (where this does not adversely effect other species, notably the Long-nosed Bandicoot, as below).
- If monitoring shows pits/holes/trenches to be a serious hazard for Little Penguins, with Penguins being found on more than 1 occasion in any 2 week period, low level fencing (anchored to, or below, the ground surface) or similar more substantial measures will be installed at problem sites where Little Penguins have been repeatedly located in pits/holes/trenches or for all such features within 25 metres of the top of the cliffline and nesting area.
- The need for a temporary noise and light barrier downslope of the two existing northern accommodation blocks (adjacent to Spring Cove Cottage) during the subsequent demolition of these structures and reinstatement of this site, will be reviewed in discussions with the DECC (NPWS) in consideration of the findings of the monitoring of Little Penguin numbers/activity. This barrier, if required, will be designed and installed so as not to impede fauna

	movement (and the passage of stormwater) and could be installed as part of the hay bales silt barrier. However its final position and structure will (if it is warranted) would require further detailed design, to be undertaken by the Contractor and approved by the THINC Projects Project Manager and the DECC (NPWS) prior to construction. ▪ Damaged fencing, barriers, signage, stormwater and erosion/sedimentation control measures threat could pose a threat to the Little Penguin nesting area will be repaired/reinstated as soon as practicable after damage or failure - within 5 days maximum, or within 3 days if further significant rainfall events are predicted. ▪ Where monitoring shows that the nature/quality of stormwater passing through the nesting area poses a potential threat to Little Penguins measures such as on-site detention, treatment, diversion or capture and removal from site will be identified in discussions with the DECC (NPWS) and implemented by the Contractor as/where/when required. ▪ Investigations and/or corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions Register as maintained by the Contractor and THINC Projects. ▪ The Contractor according to an agreed responsibility and timescale will assign or close out all corrective actions undertaken by them, or undertaken as directed by THINC Projects or the DECC (NPWS).
	THINC Projects (where specified).
Responsibility	Contractor. All site personnel.

Long-nosed Bandicoot (*Perameles nasuta*)

Preamble:

The North Head population of the Long-nosed Bandicoot (*Perameles nasuta*) is listed as an endangered population on Schedule 1, Part 2 of the NSW *Threatened Species Conservation Act 1995*.

Although the Long-nosed Bandicoot is not a threatened species in NSW, the North Head population is unique in that it has survived within a highly urbanised environment, is isolated from other populations, and is subject to a range of adverse land uses and habitat pressures and threats that render it susceptible to local extinction. The population is very small, limited to 100-150 individuals, and occurs across an area of around 360 hectares of natural and modified environment on North Head (much of which is protected within Sydney Harbour National Park) and adjacent urban areas. The population is highly valued by the local community. The Department of Environment and Climate Change (DECC) is, in collaboration with other land managers and stakeholders, at present finalising a Recovery Plan to guide efforts to maintain and where possible enhance the population of Long-nosed Bandicoots. Habitat loss, road mortality, and predation by feral/introduced animals have all been identified as serious threats to the population's future survival.

Performance Objective	▪ To minimise any impacts of the works on the Long-nosed Bandicoot. ▪ To ensure continued use of the area by the Long-nosed Bandicoot during construction at comparable to existing levels.
Goals	▪ No reduction in the numbers of Long-nosed Bandicoot using the site in comparison to pre-construction monitoring and on-site observations from past years as well as observed activity levels across other known locally comparable habitat. ▪ No death or injury to the Long-nosed Bandicoot on-site or in surrounding areas, including Collins Beach Road, due to construction activities.
Mitigation Measures	▪ Site induction of all personnel, including contractors, will include information on the Long-nosed Bandicoot as well as the measures in place to protect them, their foraging areas and habitat. ▪ Advisory and regulatory signs will be installed at the entrance to the construction site (AIPM complex), in association with all habitat/foraging area protective fencing, and along the upper (southern) margin of the extended northern grassed foraging zone (this "sensitive habitat/restricted access" sign could also address access restrictions associated with the Little Penguin foreshore nesting/breeding area, as above). The signs will identify these areas as environmentally sensitive, specify access/use protocols and/or restrictions, and include contact details for the Contractor's Health Safety and Environment Officer or other appropriate Contractor representatives.

- A Bandicoot injuries and deaths “running tally” sign (similar to the “safety record” signage typically employed on large work sites) will be prominently displayed at the entry to the AIPM site - to reinforce the presence of Bandicoots and the risks posed to them - for all workers, contractors, delivery drivers and visitors entering the site.
- Any areas of native vegetation or potential Long-nosed Bandicoot habitat/refuge to be cleared will be thoroughly inspected - on foot - prior to clearing. Any Bandicoots encountered, that do not move to suitable nearby bushland/refuges of their own volition, will be relocated to adjacent areas of suitable habitat/refuge by suitably qualified personnel engaged by the Contractor or inducted/trained Contractor staff, as approved by the DECC (NPWS).
- The two existing northern accommodation blocks (adjacent to Spring Cove Cottage) will be retained while demolition and construction works take place across the southern/south-western parts of the site. These buildings will provide a barrier - physical, visual and acoustic - between much of the works site and the extended northern grassed Bandicoot foraging zone. This should negate the need for a special noise and light barrier in this area. However the need for such a barrier will be regularly reviewed in consideration of the monitoring of Bandicoot numbers/activity during construction and discussions with the DECC (NPWS).
- The two existing northern accommodation blocks (adjacent to Spring Cove Cottage) will be demolished following, or at substantial completion of, construction works across the remainder of the site - subject to project staging and the need to minimise possible impacts on the Little Penguin colony (as above). This area will be rehabilitated to match the existing ground surface and turfed - increasing the extent of Long-nosed Bandicoot foraging area. These works will be timed to minimise impacts on the Bandicoots (and Little Penguins, as above). A construction fence and silt fencing will be installed along the downslope margin of these structures during demolition, to limit impacts on the grassed foraging area (and Little Penguin foreshore nesting/breeding area).
- Clumped plantings of low-growing native species will be established as occasional vegetation islands across the expanded grassed foraging area as shown on the Site Landscape Plan (Appendix C), and will serve as additional refuge areas for Bandicoots.
- Temporary barrier fencing will be erected to protect the Bandicoot foraging and movement zone (to/from SHNP) in the area north of Harbour Cottage and west of Kookaburra Cottage. This fencing will stop access by site personnel or vehicles/machinery as well as preventing stockpiling and other uses/activities (but is not intended to control noise and light). Temporary plastic mesh fencing, or similar, will be used - with all fencing/barriers not extending to within 200 millimetres above the ground surface to allow for the

passage of Long-nosed Bandicoots underneath.

- Temporary fencing will be used to delineate other parts of the site where no works, storage, access/parking or other activity are proposed/planned – such as possibly along the bushland/vegetated areas of the site's southern margin. This fencing will be plastic mesh or other construction/safety style fencing. Where such temporary barriers are used they will not extend to below 200 millimetres above the ground surface, to allow for the passage of Long-nosed Bandicoots.
- Any night or security lighting of the construction area will be directed away from the main northern grassed foraging area used by Bandicoots, or provided with suitable hoods or glare-foils to reduce light spill across grassed areas.
- The contractor will ensure that all security personnel, including contractors, are suitably inducted prior to commencing work on site – with particular reference to the nocturnal and crepuscular activity of Long-nosed Bandicoots, feeding behaviour, and the location and extent of preferred foraging areas. Security personnel's patrol routes and operating procedures may be modified to minimise night disturbance to Bandicoots. Dogs will not be permitted on-site as part of security operations.
- All pits/holes/trenches that are too deep or steep sided to allow any Bandicoots falling into them to escape of their own volition - considered to be any pit deeper than 300 millimetres and with vertical sides all round - will be fitted with one or more "escape ramps" (planks at least 150 millimetres wide with cross slats/baffles for grip) each night, or when not "in use" for any multiple days, to prevent entrapment, injuries or death of Bandicoots. Multiple "escape ramps" will be provided in those excavations obstructed by steel reinforcing or other obstacles that may limit the movement of Long-nosed Bandicoots or other wildlife (notably Little Penguins).
- All pits/holes/trenches (including covered excavations and the proposed vehicle wash-down facility - see EPO7) will be checked by the Contractor for Long-nosed Bandicoots as close to sunrise as possible, with all excavations to be checked within 2 hours of sunrise in winter and 1 hour of sunrise in summer. This will be done every day, including all non-work days, while ever there are open pits/holes/trenches on-site. Any Bandicoots found are to be released immediately by encouraging their movement out of the excavation by carefully placing a plank into the hole which would allow the Bandicoot to escape by their on volition to suitable nearby bushland/refuges. If this method fails to enable safe movement of a Bandicoot from an excavation they will be carefully removed by suitably qualified personnel engaged by the Contractor or inducted/trained Contractor staff, as approved by the DECC (NPWS), to adjacent areas of suitable habitat/refuge.
- Before the use of machinery or stockpiled materials (building materials, soil, vegetation) these will be inspected by hand and as close to sunrise as possible, with all

	excavations to be checked within 2 hours of sunrise in winter and 1 hour of sunrise in summer, for Bandicoots that may have taken refuge in them overnight. Any Bandicoots found are to be allowed to escape by their on volition to suitable nearby bushland/refuges. If Bandicoots do not move of their own accord they will be relocated to adjacent areas of suitable habitat/refuge by suitably qualified personnel engaged by the Contractor or inducted/trained Contractor staff, as approved by the DECC (NPWS). ▪ Bandicoots should only be handled by persons trained in the handling of the Long-nosed Bandicoots, as approved by the DECC (NPWS). ▪ Silt fencing, and other erosion and sedimentation control measures, will be implemented according to the Erosion and Sediment Control Plan (Appendix D) to limit the deposition of sediment and building wastes across downslope Bandicoot foraging areas. ▪ Clumped plantings of low native species will be established along the downslope edge of the lower (northern) roadway - as shown on the Site Landscape Plan (Appendix C) - to intercept minor surface runoff before spilling this out to filter across the grassed foraging area, and to provide Bandicoot refuges. ▪ An 8 kph speed limit will apply, and be enforced, for all vehicle movements within the site to minimise the risks posed to Bandicoots from construction vehicles (as well as for safety and logistical reasons, given the confined site area). ▪ All construction staff, including contractors and (as far as practical) regular suppliers/delivery drivers, will be alerted to be vigilant for Bandicoots on or beside Collins Beach Road - and especially during the period 1 to 2 hours after sunrise and 1 hour each side of dusk. All drivers will be altered to the 40 kph speed limit on Collins Beach Road.
Performance Measures	▪ Bandicoots continue to be regularly seen foraging on-site at levels comparable to before the start of demolition/construction works. ▪ Maintenance of viable Bandicoot foraging habitat outside of the demolition/construction area and any temporary fencing. ▪ No injures to Bandicoots on-site. ▪ No Bandicoots deaths on-site. ▪ Road mortality rates for Bandicoots along Collins Beach Road are comparable to those already observed prior to the start of demolition/construction works.
Monitoring / Auditing / Reporting	▪ In addition to the established DECC (NPWS) program, monitoring of Long-nosed Bandicoots across the site will be increased prior to the start of works and within the first months of demolition and construction to establish a pre-construction benchmark and ensure Bandicoot numbers are not significantly impacted by the works. Monitoring of the presence of Long-nosed Bandicoots, involving trapping

and/or spotlight transects of foraging areas and/or surveys of Bandicoot diggings, will occur for at least three nights/occasions each month for three months prior to construction. Monitoring, of the same survey intensity and using the same set of techniques, will continue during the first three months of demolition and construction. Pre-construction monitoring will be the responsibility of THINC Projects, while the Contractor will be responsible for monitoring following the commencement of demolition and construction.

- The Contractor will monitor ambient night lighting levels (using a hand held light meter) in the western, central and southern areas of the main northern Bandicoot foraging area above the cliffline between 9pm and 10pm on three occasions when a residential course in occupation at the site. This will provide a baseline against which to assess any increased light levels at these locations, due to security lighting, during the demolition/construction works. Monitoring of night light levels - at the same three positions and times - will be undertaken, by the Contractor, monthly fro the duration of the works.
- These monitoring frequencies will be reviewed, in collaboration with the DECC (NPWS), after the first three months of demolition and construction and may be varied if warranted, however monitoring will continue to be undertaken at least quarterly during the entire demolition/construction period.
- DECC (NPWS) thereafter continue to monitor Bandicoot numbers at site as per their established monitoring program.
- In addition to the above monitoring measures, the Contractor will establish up to two "duration monitoring sites" where the digging activity of Long-nosed Bandicoots will be recorded one morning each month for the entire duration of demolition and construction. The site(s) will be selected in collaboration with the DECC (NPWS), and will be locations unaffected by construction activity during the entire course of the project, and each should cover an area of at least 4 metres by 4 metres.
- THINC Projects (for pre-works monitoring) and the Contractor will engage suitably qualified personnel or induct and train nominated staff, as approved by the DECC (NPWS), to undertake the above monitoring tasks and to be available (if required) for the identification, handling and release of Bandicoots from pits/holes/trenches, stockpiles, machinery or other work sites. The DECC (NPWS) will be offered the opportunity to undertake these roles before other personnel are engaged.
- The Contractor will maintain a record of all Long-nosed Bandicoots, and other fauna, removed from pits/holes/trenches, stockpiles, machinery or other work sites – including the timing, species, condition, location and other relevant information.
- The Contractor will arrange for the inspection of Collins Beach Road and margins, from the AIPM gate to the

	junction with North Head Scenic Drive, each evening within 1 hour of the end of work and departure from site of the majority of vehicles and again in the morning within 1 hour following the arrival of most on-site/worker traffic - to locate and record any injured or dead Bandicoots. ▪ The Contractor will notify the THINC Project's Project Manager and DECC (NPWS) immediately if dead or injured Bandicoots are noted on-site or along Collins Beach Road. Any injured animals will be dealt with immediately according to a protocol to be developed with the DECC (NPWS). The Contractor will maintain a record of all Bandicoots, and other fauna, injured or killed on-site or along Collins Beach Road. ▪ The Contractor will conduct regular inspections - at least twice weekly - to assess the integrity and effectiveness of fencing, barriers, stormwater and erosion and sedimentation control measures, in particular after rain events. ▪ The Contractor will notify the THINC Project's Project Manager and DECC (NPWS) immediately if erosion and sedimentation controls are breached to the extent that sediment is deposited across Bandicoot foraging areas.
Corrective Action	▪ In the case of a death or injury of a Bandicoot, the DECC (NPWS) will inspect the site as soon as is practical and the Contractor implement corrective actions as per DECC (NPWS) advice. ▪ If Long-nosed Bandicoots, or other wildlife (notably Little Penguins), are repeatedly trapped in pits/holes/trenches despite the use of "escape ramps" then each night, or when not "in use" for any multiple days, to prevent entrapment, injuries or death of Bandicoots and other wildlife these holes will: o have their margins delineated by scattering timber along the drop's edges; or; o be covered with plyboard sheeting or similar); or o be fenced, by fencing pegged to ground level and at least 500 millimetres high. ▪ If monitoring indicates a marked reduction in Bandicoot foraging activity generally across the site - to a level to be agreed with the DECC (NPWS) - then the following strategies may be implemented after prior discussion with the DECC (NPWS): o artificially enhancing Bandicoot foraging areas, such as by irrigation and/or aeration and/or light tilling; o additional or upgraded fencing of foraging areas - including noise and light barrier fencing if appropriate – to further reduce the impacts of demolition/construction activities; o modification of night lighting to reduce light spill across foraging areas; o modification of evening and night security

patrols/activity;

- reviewing daily operations and limiting the most disruptive or intrusive operations to the middle of the work day, or other periods when Bandicoots are least active or susceptible;
- adjusting the staging works to minimise the extent of foraging areas that are subject to impacts or disturbance at any one time; and
- reviewing and limiting work hours in the 2 to 3 hours following sunrise and before and immediately after dusk.

- The above reduction in Bandicoot foraging across the site will also trigger an inspection of the site, as soon as is practical, by the DECC (NPWS) and the identification of corrective actions as per DECC (NPWS) advice for discussion with the Contractor and THINC Project's Project Manager. These actions may include the above, or alternative, corrective measures.
- Damage to protected grassed foraging areas will be remediated, and the area reinstated to a condition equal to or above its former state, within a maximum of 3 days. This may include removal of sediment, fill or other contaminants, returfing, irrigation, and aeration/tilling. As soon as is practical the DECC (NPWS) will inspect any damaged foraging areas and provide advice as to preferred corrective actions.
- If Bandicoot injuries or fatalities due to construction traffic within the site exceeds 1 incident in any 6 month period the following strategies may be implemented where relevant (after prior discussion with the DECC (NPWS)):
  - additional warning signage will be installed at high risk locations or sites with a record of near-misses or incidents;
  - the on-site vehicle speed limit will be reduced to 5 kph;
  - speed humps and other traffic slowing devices may be installed at high risk locations or sites with a record of near-misses or incidents;
  - sub-contractors and suppliers will be required to report any incidents or repeated problems involving Long-nosed Bandicoots; and
  - reviewing daily operations in an effort to limit the majority of vehicle movements to the middle of the work day, or other periods when Bandicoots are least active or susceptible.
- If Bandicoot injuries or fatalities along Collins Beach Road, from the AIPM gate to the junction with North Head Scenic Drive, exceed 1 incident in any 6 month period - and this can be reasonably attributed to construction traffic - the following strategies may be implemented (after prior discussion with the DECC (NPWS), as owners of this road, where relevant):
  - additional warning signage will be installed at high risk

locations or sites with a record of near-misses or incidents (with approval from the DECC (NPWS));

- additional temporary speed humps and traffic slowing devices may be installed (with approval from the DECC (NPWS));
- a special construction traffic speed limit of 20 kph will be notified and enforced, by the Contractor (with signposting as appropriate, with approval from the DECC (NPWS));
- the construction traffic speed limit may be progressively reduced by 5 kph for every vehicle related Bandicoot injury/fatality (to a lower limit of 8 kph);
- fencing of key sections of the roadside, possibly in conjunction with existing or additional speed humps/traffic claming, to funnel Bandicoots to managed low-speed road sections;
- aggressive slashing of the narrow grass road verges, to temporarily reduce their foraging appeal to Bandicoots;
- reviewing work hours and daily operations in an attempt to limit access traffic during periods of high Bandicoot activity - especially during dusk in the winter months when Bandicoot activity and departing traffic may clash most heavily; and
- actively managing arriving departing worker traffic to travel Collins Beach Road in "pulses" or groups of vehicles to reduce the duration/frequency of vehicle movement along this road.

- If delineating the margins of pits/holes/trenches by placing timber or logs around the edge proves inadequate in deterring Bandicoot entry, low level fencing (anchored to or below the ground surface) or similar more substantial measures to guide foraging activities away from these openings will be installed at problem sites where Bandicoots have been repeatedly located in pits/holes/trenches.
- The need for a temporary noise and light barrier downslope of the two existing northern accommodation blocks (adjacent to Spring Cove Cottage) during demolition and construction works across other parts of the site, and during the subsequent demolition of these structures and reinstatement of this site, will be reviewed in discussions with the DECC (NPWS) in consideration of the findings of the monitoring of Bandicoot numbers/activity. If required this barrier will be designed and installed so as not to impede fauna movement.
- Investigations and/or corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions Register as maintained by the Contractor and THINC Projects

	▪ The Contractor according to an agreed responsibility and timescale will assign or close out all corrective actions undertaken by them, or undertaken as directed by THINC Projects or the DECC (NPWS).
Responsibility	THINC Projects (for pre-works Bandicoot monitoring). The Contractor. All site personnel.

Phytophthora cinnamomi (Pc)

Preamble:

Phytophthora cinnamomi (Pc) is an introduced mould that attacks the roots of susceptible plant species - such as many species found on the AIPM site and surrounding SHNP including the Smooth-barked Apple, Bangalay and Sydney Peppermint - causing the roots to rot, inhibiting the uptake of water and nutrients, and ultimately leading to death of the tree or plant. Pc does not, at present, occur within the AIPM site. However it is known from other bushland areas along the northern margins of Sydney Harbour and on North Head. The risk of its introduction to the site, and further spread across the North Head area, are serious concerns.

Dieback, caused by Pc and other factors, is a listed "key threatening process" under both the Federal *Environment Protection and Biodiversity Conservation Act 1999* and the NSW *Threatened Species Conservation Act 1995*. Pc cannot be eradicated from an area once it has become infested. The translocation of infested soil, water and plant material through human activity presents the greatest risks of spreading Pc.

The Sydney Harbour Dieback Working Group comprising local, state, and commonwealth land managers around the harbour has been established to co-ordinate efforts to fight the spread and effects of PC at the regional level.

Performance Objective	◗ To protect the native vegetation across the site and within the Sydney Harbour National Park (SHNP) from the introduction and impacts of *Phytophthora cinnamomi* (Pc). ◗ To protect the habitat of the Little Penguin, and especially the foreshore nesting/breeding area.
Goals	◗ No introduction of Pc onto the site or further occurrence/spread across North Head as a result of site works and associated activities.
Mitigation Measures	◗ The contractor will prepare and implement an appropriate *Phytophthora cinnamomi* Dieback Management Plan that is based on the precautions, guidelines and management responses as set out in the *Management of Phytophthora cinnamomi for Biodiversity Conservation in Australia: Part 2 - National Best Practice Guidelines*. Reference will also be made to the *Draft Best Practice Guidelines* produced by Sydney Harbour Dieback Working Group. ◗ The *Phytophthora cinnamomi* Dieback Management Plan will be prepared by a person suitably skilled and experienced in the management of PC, and both the author and final document will be endorsed by the DECC (NPWS). ◗ Site induction of all personnel, including contractors and regular suppliers/deliveries, will include information on Pc, the risks and implications of its introduction to the site, and the measures in place and procedures to be adhered to prevent its introduction/spread (notably use of the washdown facility). ◗ The Contractor will control site access/entry to ensure that only authorised vehicles associated with the works - and AIPM staff - enter the site.

- Vehicles will be restricted to sealed or otherwise hardened/surfaced routes as far as possible, and unsealed or natural surfaced areas subject to frequent vehicle movements will be temporarily sheeted or surfaced (refer EP07).
- The contractor will establish and maintain a vehicle washdown facility - as a Pc hygiene measure - at the main site entry gate (in conjunction with the "shakedown area" - refer EP09), across the entire width of roadway as shown on the Erosion and Sediment Control Masterplan (Appendix D). The vehicle washdown will also incorporate a facility for the washing/cleaning of the footwear of employees and other personnel entering and leaving the site. The Contractor will ensure that all vehicles, plant, equipment, tools (that are likely to be used in contact with soil, water or vegetation), and personnel entering the site (including personnel travelling in vehicles) use the washdown facility and follow Pc hygiene protocols.
- Design of the washdown facility - as outlined in the Erosion and Sediment Control Masterplan (Appendix D) - will ensure:
    - the contained use of appropriate disinfectants or fungicides for vehicle, plant/equipment, tool, and footwear washdown (such as diluted methylated spirits, sodium hypochloride, or quaternary ammonium compounds) - including measures to contain any spray drift and overflow, while providing adequate ventilation to ensure OH&S compliance;
    - it is supplied with the appropriate tools and equipment for efficient cleaning and operation - such as appropriate PPE, long and short handled hard brushes, , scrapers and spikes, hand held spray bottles, pressurised spray units and the like;
    - it is developed on an impervious base with fully self-contained and internalised drainage to allow for wastewater collection;
    - waste water and disinfectants from the washing down of vehicles, tools and personnel entering and leaving the site is captured in a holding tank for later collection and disposal by a licenced liquid waste contractor;
    - it is of sufficient area to prevent splash-out or over-spray of wash/waste water from the wash/cleaning area;
    - the holding tank is of sufficient capacity to enable the efficient operation of the site;
    - the facility is appropriately bunded to prevent escape of waste water and inflow of surface stormwater - with particular care to preventing stormwater ingress from Collins Beach Road and the overflow of toxic wastewater from the facility to off the AIPM site;
    - the facility is appropriately covered to prevent any inflow/overflow of rainwater;
    - it is not connected to existing stormwater infrastructure;
    - it incorporates an audible and visible alarm (with muting

facilities for the audible component) located in a conspicuous position to warn when the holding tank is 75% full;

- includes a device to shut down the supply of reticulated water to the washbay/cleaning area if the holding tank is filled to capacity due to a leak or lack of maintenance pumping;
- signage is provided instructing personnel of the Pc hygiene and washdown requirements and appropriate/effective use of the facility;
- the facility does not provide potential for injuries or death of Long-nosed Bandicoots (by, for example, grating being of width that enables Bandicoot access to the holding tank) and includes a means of covering any exposed pits/tanks each night or when not in use to prevent entrapment of Little Penguins, Long-nosed Bandicoots and other wildlife.

- The washdown facility will be in place and operational from the start of on-site mobilisation and prior to commencing demolition works. All vehicles entering the site, except in the case of an emergency, must enter and exit via the washdown bay and make appropriate use of this facility.
- The Contractor will liaise with the DECC (EPA and NPWS) regarding the most appropriate disinfectants or fungicides for use at the washdown facility and elsewhere on the site, in consideration of the risk of Pc introduction and the site's other environmental values/constraints.
- Waste disinfectants and fungicides from the washdown facility are not to be disposed of on site, even if further diluted and neutralised.
- Use of the washdown facility will be mandatory for both entry to and departure from the site. Once treated vehicles, plant, equipment and tools that remain on-site do not need to repeat the hygiene protocols as long as they do not leave the area (unless Pc is subsequently detected or suspected on-site during the works).
- Site personnel will be restricted from entering bushland and foreshore areas surrounding the site without first undertaking the wash down procedure.
- The contractor will restrict vehicle and works access to areas of the site that repeatedly pond water until these areas have been drained/dried.
- All fill and landscaping materials brought onto the site must be certified Pc-free or from a Pc free area and the Contractor maintain with appropriate records/verification to support this.
- The contractor will ensure that specific Pc hygiene and management prescriptions are included in contract arrangements for sub-contractors undertaking high Pc risk operations - such as earthmoving and excavation, bush clearing/regeneration, and landscaping.
- The Contractor will give preference to the use of rubber tyred vehicles and machinery on-site - over track-mounted

	machinery - as these present an easier cleaning/washdown option with less risk of Pc introduction and spread.
Performance Measures	◗ No introduction or spread of Pc to or from the site.
Monitoring / Auditing / Reporting	◗ The contractor will regularly, at least fortnightly, conduct a visual inspection of Pc susceptible tree species on-site for any early indications of Pc or dieback (such as wilting yellowing or drying out of leaves and darkening of roots). The Contractor will notify THINC Project's Project Manager and DECC (NPWS) as soon as possible if vegetation on site or in adjacent areas shows signs of stress or disease. ◗ The Contractor will inspect the washdown facility daily to ensure its operational effectiveness and compliance of the facility, water levels and containment of washdown wastes/disinfectants, and cleaning equipment supplies. ◗ The Contractor will conduct spot checks to ensure that all personnel, including sub-contractors and regular suppliers/deliveries, are using the washdown facility correctly and thoroughly. Records will be kept of these spot checks and the results. ◗ The Contractor will maintain records of inspections and cleandowns of all vehicles, plant and equipment entering and leaving the site. ◗ The Contractor will monitor and enforce sub-contractor compliance with Pc hygiene and management provisions, including applying penalty provisions and contract termination where required. ◗ The Contractor will maintain appropriate documentation or records to validate the "Pc clean" status of all fill, landscaping and other materials brought onto site. These records will be made available for inspection by the THINC Project's Project Manager at least fortnightly. ◗ The Contractor will monitor and enforce access and movement restrictions on-site.
Corrective Action	◗ Investigations / corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions Register. ◗ The Contractor according to an agreed responsibility and timescale will assign or close out correction actions. ◗ Any vehicle, plant, equipment or tools found to be in breach of the wash down procedures will be removed from the site immediately and penalty provisions may be enforced if appropriate. ◗ Any fill or landscaping materials brought onto the site that are subsequently found to be Pc infected will be removed from the site immediately and the stockpile area and other effected locations suitably treated. ◗ The Contractor will immediately rectify any overflow or containment breach for washdown waste water and disinfectants/fungicides, including remediation of

	contaminated areas. ◗ In the case of death or stress of vegetation and Pc being the suspected cause the Contractor liase with the THINC Project's Project Manager and DECC (NPWS) immediately to identify and implement appropriate management actions as directed. ◗ If there is any suspected or definite occurrence of Pc within or adjacent to the site the Contractor will have the *Phytophthora cinnamomi* Dieback Management Plan rewritten to address these changed circumstances, with input/advice from the DECC (NPWS) and Sydney Harbour Dieback Working Group.
Responsibility	Contractor. All site personnel.

Vegetation, Weeds and Pests

Performance Objective	▪ No damage to native vegetation identified for retention on site. ▪ To minimise the potential for the introduction and spread of weeds. ▪ No increase in the occurrence and impacts of feral and pest animals within the site.
Goals	▪ No unauthorised removal of, or damage to, native vegetation. ▪ No new weed species introduced into the site as a result of demolition and construction activities. ▪ Identified weed infestations on-site are controlled, where consistent with other habitat/biodiversity management objectives. ▪ No increase in the occurrence or activity of feral and pest animals across the site
Mitigation Measures	▪ Native vegetation clearing will be minimised across the site during demolition and construction activities in line with the Preferred Project Scheme and Site Landscape Plan (see Appendix C). Operational areas and works scheduling will be planned/identified to avoid any un-necessary clearing of native vegetation/bushland. Areas of native vegetation to be retained, and restricted areas, will be clearly flagged and/or fenced on-site using woven barrier fencing or similar. ▪ Fencing around trees and other retained native vegetation will be erected to prohibit access and prevent soil compaction during demolition and construction works, as identified in the Site Landscape Plan (see Appendix C). Fencing will be around the "dripline" as far as possible. ▪ Soil, spoil, demolition wastes and other materials will not be stockpiled within the "dripline" of trees to be retained. ▪ Trees will be pruned in preference to total removal wherever practical. The Contractor will engage a qualified arborist or tree surgeon to conduct all pruning, using the "three-cut" technique or other appropriate methods to minimise tree damage and health risks. ▪ Trees to be removed will first be inspected for any hollows and the presence of larger wildlife species which, if found, will be relocated to areas of suitable adjoining habitat by a person trained and approved (by the DECC (NPWS)) in wildlife handling. ▪ Each existing tree removed will be replaced by one or more new native tree plantings, of local provenance, as show in the Site Landscape Plan (see Appendix C) to achieve a net increase in the number of trees ultimately on-site. ▪ Erosion and sedimentation control measures will be implemented - refer EP09 - to minimise areas conducive to the introduction and establishment of weeds. ▪ Except in emergencies, only approved access roads and

parking/turning areas are to be used by vehicles on site, and vehicles will be restricted to sealed or otherwise hardened/surfaced routes as far as possible. Vehicles will not be permitted to park on any unsealed areas under retained trees.

- Areas of bushland or native vegetation to be cleared will first be inspected for the presence of the following threatened plant species which have the potential to occur on the site - *Genoplesium baueri* (an orchid), *Chamaesyce psammogeton* (a prostrate herb) and *Eucalyptus camfieldii* (a stringy-barked mallee-form eucalypt). The Contractor will engage an appropriate specialist to conduct the inspection(s). If any of these species are located the Contractor will liaise with the THINC Project's Project Manager and DECC (NPWS) regarding the development of appropriate management actions.
- Prior to works on the central drainage line, or other frequently moist habitats on the site, the contractor will engage an appropriate specialist to conduct an inspection of this area(s) for the presence of the Red-crowned Toadlet which has the potential to be found on the site. If the species is located in, or near, planned work areas the Contractor will liaise with the THINC Project's Project Manager and DECC (NPWS) regarding the development of appropriate management actions.
- Noxious weeds will be controlled as required by the relevant legislation/regulation, and class of weed in question.
- Areas with environmental weed infestations that are to be developed or disturbed as part of the demolition and construction works will first be subject to primary weeding or "knock down", to reduce risk of weed spread during subsequent works.
- Weed control programs are to be carried out by personnel qualified in the recognition of weeds and potential weed species. The Contractor will be responsible for the engagement and management of appropriate weed removal and bush regeneration staff.
- Existing weed-infested areas outside of work zones will be identified, and suitably fenced or marked where appropriate, all reasonable precautions will be taken to prevent the spread of weeds from these sites. Such measures may include:
    - implementing control measures in advance of demolition/construction works, to reduce the risk of weed spread when larger areas of the site are exposed/disturbed;
    - preventing or limiting access to these areas;
    - preventing or limiting disturbance and exposed soils in the vicinity of these sites;
    - avoiding the translocation of soil, fill and other materials from these sites;
    - increased surveillance of the surrounding areas for weed growth/spread.

- Spraying will not be permitted as a weed control measure within the site. Herbicide use - using low-risk low persistence products and direct application methods (such as "scrape and paint" or "cut and paint") - will be carefully managed, especially around known Long-nosed Bandicoot foraging areas and in proximity of the central drainage line and major stormwater inlet points (that now discharge across the Bandicoot foraging area and/or over the Little Penguin nesting area).
- Weeds and other introduced plants within the Little Penguin foreshore nesting/breeding area will not be removed. Many introduced plant species in this area, and the mixed vegetation cover of native and introduced plants, are used by the Penguins for shelter and nesting - and the DECC (NPWS) has advised that this species' shelter and habitat needs take precedence over weed removal in this area. This also includes no weed removal/clearing in the vicinity of the known active breeding burrow above the cliffline (near the sewage pumping station) in the site's north-west.
- Any mulched material from vegetation required to be removed or lopped that is retained on site will be stored outside of the identified Asset Protection Zone or Long-nosed Bandicoot foraging areas as well as clear of the central drainage line and major stormwater inlet points (that now discharge across the Bandicoot foraging area and /or over the Little Penguin nesting area). Mulch stockpiles will be suitably silt fenced along their downslope and cross-slope margins where warranted.
- Removed/cleared vegetation likely to include propagules of environmental or noxious weeds will not be mulched or re-used/recycled on-site, but bagged and removed to an appropriate greenwaste disposal facility (using covered trucks/vehicles to further prevent weed spread).
- Any soil, fill and mulched material introduced to the site should be certified as being free of weeds and *Phytopthera cinnamomi*. Appropriate documentation to verify this will be provided by the Contractor to the THINC Project's Project Manager.
- Any soil with the potential to contain seeds of exotic species will be stockpiled well away from areas of native vegetation and watercourses.
- Cleared/disturbed areas will be stabilised, rehabilitated and planted according to the Site Landscape Plan (see Appendix C).
- Clumped plantings of low-growing native species will be established at selected locations across the site - as shown on the Site Landscape Plan (Appendix C) - to serve as refuge areas for Long-nosed Bandicoots and other wildlife.
- Landscape and amenity plantings - as shown in the Site Landscape Plan (see Appendix C) - will employ native species propagated from plants of local provenance. The Contractor will be responsible for sourcing local seed stock and plants, and will provide documentary evidence to THINC Project's Project Manager to verify the local

	provenance of plant material used. ▪ Food scraps and putrescible waste will be stored in securely covered bins/containers, so as not to attract pest (and native) animals. ▪ The Contractor will discuss with the THINC Project's Project Manager and AIPM officers any measures (such as flammable materials storage, access restrictions, etc) that may reduce the effectiveness of the site's current Asset Protection Zone (APZ) (according to a prior agreement between AIPM and the DECC (NPWS) an APZ will be established and maintained immediately outside the site's southern and western boundaries, extending up to 10 metres inside SHNP, as part of the "stepped" bushland interface and bushfire protection for the AIPM facility). ▪ Access for bushfire suppression and fire management activities around the site's margins - to the external APZ and inside perimeter of the site - will be maintained throughout demolition and construction works. This access will be by vehicle - to a standard suitable for an RFS Category 9 ultra-light tanker (or an NPWS "Striker" appliance) or similar - and/or on foot, as appropriate. ▪ Existing access points to the site for bushfire suppression and fire management activities will be maintained during demolition and construction works, and reinstated as fully serviceable access points at the end of the works, at the ingress/egress points through the perimeter fencing as shown on the Site Landscape Plan (see Appendix C). Vehicle access to these perimeter ingress/egress points - preferably to an RFS Category 9 ultra-light tanker (or an NPWS "Striker" appliance) or similar - will be maintained internally across the site during all demolition and construction works, with the emergency accesses signposted and/or mapped as appropriate. Up-to-date emergency access information will be provided to the local DECC (NPWS) Area Manager, NSW Fire Brigades local command and relevant Rural Fire Service Fire Control Centre. ▪ The Contractor will ensure that high fire risk activities across the site are located away from bushland areas or otherwise managed/restricted, or cease entirely if appropriate, during declared Total Fire Ban days or other periods of unacceptably high bushfire risk.
Performance Measures	▪ No net reduction in the extent of native vegetation/bushland across the site as a whole. ▪ No new weed occurrences, no spread of existing weed infestations. ▪ Weed management controls have been carried out on site, with an overall reduction in the incidence of weeds. ▪ No increase in the occurrence of feral and pest animals. ▪ Fire management, including access requirements, proceeds unimpeded during demolition/construction and any wildfire incidents are appropriately managed.

Monitoring / Auditing / Reporting	▪ Existing occurrences of environmental and noxious weeds will be surveyed and recorded (type, extent and density) by the Contractor prior to the commencement of works, and the information reviewed quarterly during the entire demolition/construction period. ▪ All workers on site will be vigilant for any new weed outbreaks, and immediately report any suspected occurrences to the Contractor's on-site manager. ▪ The Contractor will notify THINC Project's Project Manager and DECC (NPWS) if any introduction of noxious or weeds of national environmental significance are reported on site, especially within the Little Penguin foreshore nesting/breeding area and main Bandicoot foraging locations. ▪ Flagging and fencing to protect trees and native vegetation/bushland areas to be retained will be inspected weekly, and repaired or upgraded as required. ▪ The Contractor will keep records of the area, and type, of native vegetation/bushland cleared of disturbed during the works - and whether such impacts were planned/approved or accidental/inadvertent and unauthorised. ▪ The Contractor will record details of any wildlife injuries or deaths across the site due to demolition/construction activities (in addition to Long-nosed Bandicoots and Little Penguins data) and report this information monthly to the THINC Project's Project Manager. ▪ All workers on site will be vigilant for any Fox sightings on or near the site, and immediately report any confirmed or suspected sightings to the Contractor's on-site manager. ▪ The Contractor will arrange for spotlight surveys to be conducted every month, for a minimum of two hours from 8pm onwards, to gauge the number and type of pest/feral animals on the site - particularly Foxes, Rabbits, Cats, and Black Rats. These efforts may be combined with Long-nosed Bandicoot surveys. Fox sightings will immediately be reported to the DECC (NPWS). The Contractor will also liaise with the DECC (NPWS) in relation to feral animal surveys/numbers in the North head area generally. ▪ Audits will be conducted in accordance with EP01 including the implementation of the recommendations and corrective actions. Monitoring for weed outbreaks will be conducted during these audits.
Corrective Action	▪ The Contractor will immediately make good any areas of native vegetation/bushland that are inadvertently disturbed or cleared without authorisation - unless otherwise advised by the THINC Project's Project Manager. These areas will be replanted/regenerated using plant material of local provenance, and the Contractor will be responsible for the maintenance of these plantings to the THINC Project's Project Manager satisfaction for the duration of the demolition/construction and defects liability period. ▪ The Contractor will - at the direction of THINC Projects - be responsible for compensatory plantings of native vegetation

	where required to replace areas removed/disturbed during demolition/construction – and especially for any unplanned or unauthorised clearing. Only local provenanced plant material will be used. ▪ If a substantial outbreak of a declared noxious weed is found then as soon as practicable the Contractor will have a qualified person assess and treat the area, if necessary, by hand pulling individual plants. Under no circumstances will the plants found be chopped, slashed or burned due to the potential for spreading of seed. ▪ Survey frequencies for noxious and environmental weeds will be increased in those areas subject to repeated infestations during the works and during activities with higher risk of weed introduction/spread (such as major earthworks and soil exposure, fill and mulch importation, and landscaping works) and during peak growth periods. ▪ If wildlife injuries or death due to demolition/construction activities become unacceptable - as advised by the DECC (NPWS) - the Contractor will introduce a similar suite of measures as identified above in relation to Long-nosed Bandicoots and Little Penguins to limit wildlife injury/mortality. ▪ The contractor will implement control measures for pest/feral animals - particularly Foxes, Rabbits, Cats and Black Rats – when and where the DECC (NPWS) considers the number of these species likely to be on site during demolition and construction reaches unacceptable levels. The Contractor will liase with the DECC (NPWS) regarding appropriate control measures and only those that pose a minimal risk to Long-nosed Bandicoots and Little Penguins, and their habitats, will be used. ▪ Fox control measures will be undertaken in close collaboration with the DECC (NPWS), and may be taken over by this agency if appropriate as part of the wider co-operative regional Fox control programme. ▪ The origin of weeds occurring on site will be identified wherever practical, so weed infestations can be attacked/managed at their source (with co-operation of the DECC (NPWS) if required). ▪ Investigations and/or corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions Register as maintained by the Contractor and THINC Projects ▪ The Contractor according to an agreed responsibility and timescale will assign or close out all corrective actions undertaken by them, or undertaken as directed by THINC Projects or the DECC (NPWS).
Responsibility	All site personnel.

4.4 EP04 – Hazardous Materials

Performance Objective	◗ To reduce the potential risk of contamination of air, land and water arising from Dangerous Goods. ◗ To reduce the potential of health risks and contamination of water from contaminated soils on site. ◗ To reduce the potential of health risks to site workers, and others, from Dangerous Goods.
Goals	◗ No asbestos related incidents. ◗ No spills and or land contamination on-site or off-site. ◗ Contaminated soils remain inert on site or are removed from site if area is within building envelope. ◗ No adverse health effects for site workers, and others.
Mitigation Measures	◗ In the absence of sufficient information, a detailed pre-demolition audit will be undertaken to determine the exact nature and extent of hazardous materials on-site, with particular attention to asbestos hazards. ◗ Based on the outcomes of the audit, a Hazardous Material Management Plan will be prepared, addressing the potential environmental impacts and incorporating the measures included in this CEMP as well as other mitigation measures appropriate to the findings of the audit. ◗ The Contractor will ensure that all asbestos handling, removal/disposal, repair, sealing/painting and other works will be undertaken in accordance with the *Occupational Health and Safety Act (Asbestos Removal Works Regulation) 1995*, *Construction Safety Act 1912* (Regulations 84A-J in particular) and the Worksafe Australia Asbestos Code of Practice and Guidance Notes. ◗ Sub-contractors working with asbestos, or in asbestos effected areas of the site, will be required to prepare and lodge a safe work method statement for the Contractor's approval before starting work. ◗ Site induction of all personnel, including contractors, will include information on hazardous materials and emergency response procedures. ◗ Persons handling dangerous chemicals and materials will wear appropriate PPE and receive appropriate training in its use. ◗ No bulk (in excess of 20 litre containers) fuels, lubricants and chemicals will be stored on site. Any limited quantities of fuels, lubricants and chemicals on-site will be held in a centralised location(s) with suitable bunding, on an impervious base, vented, and other containment/safety measures as well as appropriate spill kits or incident response equipment provided. ◗ Fuels, chemicals, solvents and other hazardous liquids will

	not be decanted or handled in the vicinity of the central drainage line and major stormwater inlet points (that now discharge across the Bandicoot foraging area and /or over the Little Penguin nesting area). ◗ Material Safety Data Sheets (MSDS) will be located at the site office for all hazardous and dangerous goods used during construction operations. The Contractor will ensure that all materials are handled, used and disposed of in accordance with their MSDS. ◗ The Contractor will provide and maintain appropriate first aid, emergency response and fire-fighting equipment at readily accessible locations across the site at all times. ◗ Spill containment and treatment equipment and materials will be available near storage areas of hazardous materials. Spill kits and other suitable incident response equipment will also be located at other key points around the site and maintained ready for use. Spills of hazardous materials will be contained and collected for treatment at a licensed waste disposal facility. ◗ Workers will be vigilant for hazardous materials that may be uncovered during excavations, any suspect material(s) will be reported to the Contractor's on-site manager immediately. ◗ Totally enclosed containment will be provided for all hazardous waste prior to removal from site. ◗ Hazardous waste, including any contaminated soils and stormwater, must be disposed of to an EPA licensed waste disposal facility as soon as possible. The Contractor will ensure that hazardous/contaminated wastes will only be transported and disposed of by disposal contractors holding appropriate EPA licences and copies of appropriate disposal documentation must be provide to the Contractor. ◗ Plant, equipment and vehicle refuelling on-site will be limited to essential requirements only where it is not practical to refuel off-site. ◗ No vehicle maintenance, and non-operational/routine plant or equipment maintenance, will be conducted on-site.
Performance Measures	◗ Hazardous Material Management Plan prepared and implemented. ◗ Number of incidents involving the handling or storage of Dangerous Goods - target of 1 (or fewer) non-conformance per month, with no significant environmental or health consequences. ◗ Appropriate handling and storage of Dangerous Goods to be evident on-site at all times. ◗ No asbestos related incidents.
Monitoring / Auditing / Reporting	◗ The Contractor will maintain a Hazardous Substances Register listing all hazardous/dangerous materials occurring on-site or brought onto the site, along with MSDS and emergency response procedures. ◗ The Contractor will keep records of the appropriate disposal of any hazardous/contaminated wastes or materials,

	including copies of appropriate disposal documentation. ◗ The Contractor will conduct inspections, at least every second day, to ensure that hazardous materials guidelines are being adhered to across the site and all spill/response equipment is available. These inspections will be increased to daily for activities involving asbestos, or in asbestos affected areas of the site. ◗ Incident Report Forms will be completed by the Contractor for any unplanned events/incidents involving hazardous/dangerous materials. These will include details of the implementation and effectiveness of any corrective actions, and measures identified to prevent a recurrence of the incident. Incident Report Forms will be provided to the THINC Project's Project Manager and recorded in the Environmental Complaints, Non-conformances and Corrective Actions Register. ◗ Audits will be conducted in accordance with EP01, including the implementation of the recommendations and corrective actions. ◗ The Contractor will notify the DECC (EPA) immediately in the event of a "pollution incident" which could cause harm to the environment or personnel.
	◗ Asbestos incidents, spills or other non-conformances involving hazardous/dangerous materials will be dealt with immediately by the Contractor including remediation as directed by the THINC Project's Project Manager and appropriate agency (if warranted). Incident management will involve a stop work around an effected area or across the entire site if necessary to protect the health/safety and the environment. ◗ In the event of an emergency the site emergency procedures take precedent and environmental implications will be assessed and managed only when the emergency has been contained and it is safe to access the site. ◗ Operating procedures will be reviewed following any serious spills or hazardous materials incidents.
Corrective Action	◗ If hazardous materials are uncovered/suspected during excavations the Contractor all cease all work in that vicinity (and fence the area if appropriate) and investigate the nature and risk of the material(s). Appropriate management responses will be determined in discussion with the THINC Project's Project Manager. ◗ Investigations and/or corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions Register as maintained by the Contractor and THINC Projects. ▪ The Contractor according to an agreed responsibility and timescale will assign or close out all corrective actions undertaken by them, or undertaken as directed by THINC Projects or the DECC (EPA) or other agency.

Responsibility	All site personnel.

4.5 EP05 – Heritage Buildings and Sites

Preamble:

The topography and landform of the AIPM site is part of the listing of the wider North Head area on the National Heritage List (Place Identification 105759), with the AIPM site identified as part of the "Spring Cove Precinct". The site is also specifically listed in Schedule 4 of the Manly Local Environment Plan 1988 as a local heritage item. As a consequence it also has an entry in the State Heritage Inventory database (site number 2020403), however it is not individually listed as a heritage item at the state level or on the Commonwealth heritage list.

Although the Spring Cove area has a long history as an early contact site between European and Aboriginal people, and the area's use for quarantine purposes dates from 1828 (with the first works at the nearby Quarantine Station commencing in 1837), the AIPM site remained undeveloped until 1916. Between 1916 and 1918 the site was developed as an isolation hospital to detain, diagnose and treat merchant seamen suspected of having sexually transmitted infections (at a site separate from returning WWI servicemen). The principal buildings of the AIPM and overall layout of the site date from this time - notably the "Axial Hospital Group" (five pavilions comprising four wards and a central dining room built in a row, linked and shaded by a long verandah facing Spring Cove), an operating and treatment rooms and a dispensary, an administration block, and kitchen. The hospital core was supplemented by a jetty (at nearby Stores Beach with a connecting road) and staff housing over the two years from 1916, and the first admissions taken in late 1918.

The hospital was not used exclusively for patients suffering sexually transmitted infections. During the influenza epidemic of 1918-20 it received influenza patients from the adjoining Quarantine Station which was then filled to capacity, and within ten years of its establishment new uses were being considered for the complex. The site was subsequently adapted for a variety of uses by the Federal Government during the mid twentieth century - including defence uses during WWII and as a deportee camp and migrant hostel following the war. Since the late 1950s the complex has been a training facility for Federal Police - most recently known as the Australian Institute of Police Management (AIPM). Throughout these changes the core layout and principal buildings have remained in place, but some structures have been adapted to accommodate subsequent uses and so now their original use appears obscure.

The AIPM site has been the subject of a comprehensive heritage assessment (Freeman *et al*, 2006) as well as preparation of an historic heritage management plan in relation to the area's proposed redevelopment (NBRS and Partners, 2008).

The site generally shares heritage significance with North Head as a whole for military, quarantine, defence, ecological and Indigenous heritage values. The historic heritage management plan provides an overall statement of significance for the place, against the current Commonwealth criteria, and identifies the site's built components in terms of their assessed levels of significance - as follows:

- items of exceptional significance - none;
- items of high significance - the axial hospital group including ward blocks and dispensary (but excluding the kitchen and dining room);
- items of moderate significance - the kitchen and dining room of the axial hospital group, former staff cottages, and the administration building;
- items of little significance - the senior common room, the library, and the syndicate building; and
- intrusive elements detracting from heritage values - the infill adaptation of the former ward blocks and the two long dormitories north of the axial hospital group.

The conservation management plan also identifies the roadways as areas of heritage archaeological potential, as well as the northern cliffline/foreshore and bushland south of the library as areas of natural significance.

The conservation management plan includes many recommendations as to the layout, design, finish and adaptive uses of the site's buildings. These have driven preparation of, and been reflected, in the Preferred Project Scheme, including:

- Recommendation 32 - the axial hospital group (including ward blocks, dining room, kitchen and dispensary which is now Spring Cove Cottage) to be retained and conserved in accordance with the specific conservation recommendations presented in the plan;
- Recommendation 32 and 42 - the four staff cottages, to be retained and conserved in accordance with the specific conservation recommendations presented in the plan;
- Recommendation 33 - depending on future use requirements the retention and adaptation, or demolition (but only if preceded by detailed recording, as per Recommendation 53) of the two long accommodation dormitories north of the axial hospital group, the senior common room, the library and administration, the syndicate building, and other minor buildings across the site;
- Recommendations 34-38 - limited new structures may be constructed in specific areas of the site subject to differing height, bulk and finish requirements in particular parts of the site as well as employing a contemporary and simple design so as to be identifiable as new work;
- Recommendation 39 - working progressively towards reconstruction and restoration of the form of the axial hospital group to its earliest style as linked pavilions;
- Recommendation 25 - the protection of the natural heritage values, and specifically retention of the open northern area and escarpment as open space managed with the assistance of expert ecological advice;
- Recommendation 26 - reinstatement of the drainage line flowing from the south to north through the site as an open watercourse;
- Recommendation 27 - retention of the undeveloped bushland south of the library;
- Recommendation 28 and 29 - retention and recovery of the two early roadways - the former Jetty Road and the former Quarantine Station road - as open space as far as possible (with further archaeological investigation and advice as needed, as per Recommendation 47);
- Recommendation 31 - views to and from the site should be retained and new development sited to minimise impacts on and take advantage of these views; and
- Recommendation 10 - existing security arrangements safeguard the site's heritage values, and should be continued.

An Indigenous archaeological assessment has been carried out for the AIPM site in relation to the facility's proposed redevelopment (*Proposed Redevelopment at the Australian Institute of Police Management at North Head, Manly - Indigenous Archaeological Assessment*, McCardle Cultural Heritage Pty Ltd, 2008). This report included an on-ground assessment of the site and an interrogation of the Aboriginal Heritage Information Management System (a record of known/recorded Aboriginal cultural heritage sites as maintained by the DECC). The report concluded that:

- no Aboriginal heritage or archaeological sites are at present recorded as occurring within the AIPM facility, although there are numerous recorded sites in the surrounding area;
- no potential archaeological deposits where noted within the area; and
- there is "no potential for sub-surface deposits" due to the past "level of disturbance" across the site.

Performance Objective	◗ Protection of significant cultural heritage buildings and sites. ◗ Measures are in place to protect and manage any historic heritage values discovered during the works. ◗ Measures are in place to protect and manage any Aboriginal heritage sites/values that may be present or discovered on the site.

	◗ No heritage buildings or items identified for retention/adaptation to be effected/impacted beyond the scope and terms as set out in the Preferred Project Scheme, Conservation Management Plan and related documents or specifications during all demolition and construction works.
Goals	◗ No unplanned/accidental/inadvertent damage to heritage buildings or items identified for retention/adaptation. ◗ No human damage to any Aboriginal cultural heritage sites or values that are present or discovered on the site. ◗ Any "discovered" historic and Aboriginal heritage values are appropriately managed.
Mitigation Measures	◗ All works at the site involving building or features of heritage value/significance will be carried out in accordance with the recommendations and guidelines of the NBRS and Partners 2008 Historic Heritage Management Plan as well as the requirements of relevant (Commonwealth) legislation and recognised heritage protocols (notably the Burra Charter). ◗ The contractor will have access to the services of a suitably qualified and experienced heritage architect or heritage professional to aid in interpreting the conservation management plan and other heritage requirements/protocols, and to provide regular advice on heritage matters in detail, throughout all demolition and construction works. ◗ Site induction of all personnel, including contractors, will include information on the site's overall heritage values, the heritage value of buildings to be retained, and the mitigation measures of this CEMP to protect them. Specialist workers, or those working on/in heritage buildings, will receive additional briefings targeted to their areas of operation. ◗ Structures of (low) heritage significance that are to be demolished or adapted will be recorded photographically and in drawn form and the record kept on durable stock in at least two permanent archives - one on-site and one off site. ◗ A pre-construction condition audit of all heritage buildings to be retained, including those to be adapted/modified, will be undertaken by the Contractor using a suitably qualified heritage architect/professional. ◗ Heritage buildings/items to be retained will be appropriately identified during demolition and construction. Fencing, supported by signage as required, will be used by the Contractor to identify heritage buildings/items to enable their appropriate identification and provide an appropriate buffer area for their protection and access/works controls during demolition and construction. ◗ Sub-contractors, tradespeople and other construction workers directly involved in the working on buildings or items of heritage value will be appropriately qualified in their relevant fields and have knowledge and experience of built heritage conservation principles and practices. ◗ The Traffic Management Plan (refer EPO7) will provide for the establishment and delineation of non-trafficable or minimum traffic areas around retained heritage buildings to

	ensure the potential for vehicle damage to buildings is minimised. ◗ If during the demolition or construction works any unexpected historical relic(s) are encountered, all work likely to affect the relic(s) will cease immediately, temporary barriers or fences around the worksite will be erected and the Department of Planning (Heritage Branch) notified in accordance with the *Heritage Act 1977*. THINC Projects, in collaboration with the Contractor's heritage specialist, will be responsible for liaison with the Heritage Branch regarding the development of appropriate management actions. ◗ If during the demolition or construction works any unexpected Aboriginal relic(s) are encountered, all work likely to affect the relic(s) will cease immediately, temporary barriers or fences around the worksite will be erected and the DECC (NPWS) notified. The contractor will ensure that there is no further disturbance of the area while THINC Projects, in collaboration with the Contractor, liaise with the DECC (NPWS) regarding the development of appropriate management actions.
Performance Measures	◗ No significantly adverse/unintended impacts on heritage elements (outside the scope and terms of the Preferred Project Scheme, Conservation Management Plan and related documents/specifications) occur during the course of the entire demolition and construction works. ◗ No irreparable adverse unplanned/unapproved impacts on heritage buildings/items. ◗ No impacts on any Aboriginal heritage site(s) that may be present or discovered on the site. ◗ Number of new heritage sites recorded during construction.
Monitoring / Auditing / Reporting	◗ Retained heritage buildings will be regularly inspected - fortnightly as a minimum - for evidence of adverse unplanned/unapproved impacts from demolition and construction works. This inspection frequency will be increased - to daily or half-daily inspections if warranted - when works are occurring on, or near, a building/item that are expected to pose a greater risk or impact/damage. The Contractor and THINC Project's Project Manager will negotiate appropriate inspection frequencies for specific sites and tasks as/when required. ◗ Any unplanned/unapproved impact/damage to retained heritage buildings/items will be immediately reported to the Contractor's on-site manager, and work stopped in that vicinity while remedial/corrective and future preventative measures are developed by the Contractor, with input from the Contractor's heritage specialist, for the approval of THINC Project's Project Manager. ◗ In response to any Aboriginal heritage sites that may be present or discovered or other areas found to have archaeological/or cultural heritage potential, and subsequent advice from the DECC (NPWS), the Contractor will if required engage Aboriginal heritage monitors to observe major disturbance works likely to expose or disturb artefacts or

	cultural material - such as ground-breaking work and excavations. ◗ Site audits and inspection reports will be conducted in accordance with EP01 including the implementation of any recommendations and/or corrective actions.
Corrective Action	◗ The Contractor will stop work at and around a site where accidental damage has occurred to any heritage building/item while appropriate management/corrective actions are developed - unless approval to continue work is given by THINC Project's Project Manager. ◗ The Contractor will carry out remedial/corrective actions to repair any adverse/unintended impacts on heritage buildings/items (outside the scope and terms of the Preferred Project Scheme, Conservation Management Plan and related documents/specifications), with input from the Contractor's heritage architect or heritage professional and direction from THINC Projects' Project Manager, and advice/direction from the Heritage Branch where relevant. ◗ The Contractor will implement appropriate protective measures for any Aboriginal site(s) that may be present on-site or discovered during the works, as advised by the DECC (NPWS) and/or suggested by the Metropolitan Local Aboriginal Land Council. Such protective measures would include barrier fencing to prevent inadvertent access and damage during demolition/construction works with signposting where needed (but not generally signposting any such area as an Aboriginal site, but simply flagging it as a "no access" or "sensitive area"), setting buffer zone and proximity limits on likely nearby work/movement areas, or employing Aboriginal cultural heritage monitors for certain works (such as ground-breaking). ◗ Major issues surrounding any Aboriginal heritage sites/values that may be present or discovered on-site - such as site destruction, salvage and relocation, or off-site storage - will require discussion between the THINC Projects, the AIPM, DECC (NPWS), and Metropolitan Local Aboriginal Land Council. ◗ The Contractor will carry out remedial/corrective actions (or undertake other compensatory actions) in response to any adverse/unintended impacts on Aboriginal heritage sites/values, as directed by THINC Projects' Project Manager and the DECC (NPWS) as well as input from the Metropolitan Local Aboriginal Land Council if warranted. ◗ Investigations and/or corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions Register as maintained by the Contractor and THINC Projects. ◗ The Contractor according to an agreed responsibility and timescale will assign or close out all corrective actions undertaken by them, or undertaken as directed by THINC Projects, the Heritage Branch or DECC (NPWS).

Responsibility	AIPM (where specified). THINC Projects (where specified). Contractor. All site personnel.

4.6 EP06 – Noise and Vibration

Performance Objective	◗ To minimise the potential demolition/construction noise impact on neighbouring receptors and comply with relevant EPA construction noise level objectives (LA10) targets). ◗ To minimise the potential demolition/construction noise impact on Little Penguins and Long-nosed Bandicoots. ◗ To minimise the impact of vibration on retained heritage buildings.
Goals	◗ Minimise noise complaints due to site demolition/construction activities. ◗ No vibration impacts on retained heritage buildings. ◗ No disruption to the Little Penguin population, particularly during breeding and moulting periods, and minimal impacts on Long-nosed Bandicoots. ◗ Establish a baseline visual impact record.
Mitigation Measures	◗ The Contractor will prepare a Noise and Vibration Management Plan. The Noise and Vibration Management Plan should refer to the *Protection of the Environment Operations (Noise Control) Regulation 2000.* Reference is also made to the NSW EPA's *Environmental Noise Management Series* and to Australian Standard (AS 2436-1981) *Guide to Noise Control on Construction, Maintenance and Demolition Sites.* ◗ The Contractor will adhere to the standard construction hours as detailed in Section 1.6 of this CEMP. Work outside these hours will require prior approval, to be obtained via the THINC Project's Project Manager. The Contractor will ensure that all sub-contractors are aware of, and adhere to, these construction hours. ◗ Deliveries to the site will be scheduled to occur during the standard construction hours. The timing of truck movements and heavy machinery access to and from the site will also be scheduled to limit any potential noise impacts on surrounding receptors. ◗ Vehicles, plant and machinery will be fitted with appropriate noise abatement equipment, regularly maintained in accordance with the manufacturers' instructions and in good working order. ◗ Vegetation clearance and rock breaking/drilling machinery is not expected to be a major issue for noise and vibration, due to limited sensitive receptors. However controls on these potentially noisy activities will include: o all such activities will be co-ordinated to minimise potential impacts; o chainsaws, wood chippers and mulchers, and rock breakers/drillers (which generate high decibel noise) will

be limited to the minimum frequent of use practical; and

- all such activities will be conducted in daylight hours (the standard construction hours as detailed in Section 1.6 of this CEMP) and outside noise sensitive periods of dawn or early mornings.

- Noisy hand-held construction toots/equipment – such as power saws, planers, nail-guns etc – will be used inside the structures where the works are occurring wherever practical or as close to the final works site as practical or on the side of structures facing away from potential receptors.
- Sub-contractors will be deterred from playing loud music, or radios, outside structures or from vehicles.
- During demolition works care will be taken to avoid dropping material from height into truck bodies (thus generating excessive noise).
- Potentially noisy fixed/static plant and equipment, such a compressors or generators, as well as the construction depot/yard (if required), will be located towards the southern parts of the site - and away from the Little Penguin nesting area - wherever practical.
- Transportable site/construction offices and other temporary site/works buildings may be sited to serve as noise barriers for the Little Penguin nesting area or other noise-sensitive locations (where this does not conflict with other environmental or operational objectives).
- Vehicles, plant and equipment will be turned off when not in use - idling or "standby" modes will be avoided.
- The two existing northern accommodation blocks (adjacent to Spring Cove Cottage) will be retained while demolition and construction works take place across the southern, south-eastern and eastern sections of the site. These buildings will provide an acoustic and visual screen between the works and most of the Little Penguin foreshore nesting/breeding area. This should negate the need for a special noise and light barrier in this area during these works. However the need for such a barrier will be regularly reviewed in consideration of the monitoring of Little Penguin numbers/activity during construction and discussions with the DECC (NPWS).
- Self-propelled vibrating rollers will not be used on the site, and the use of heavy machinery in the proximity (within 5 metres) of retained heritage buildings or other structures will be limited to absolutory essential activities.
- The Contractor may advise surrounding landholders/users of the commencement, and expected duration, of major noise producing stages of the demolition/construction process as well as the contact/complaints process in place.
- PPE will be worn by all workers undertaking or in the proximity of noisy activities, as required by Work Place Health and Safety Legislation.
- Refer to EPO3 for mitigation measures regarding noise impacts on Little Penguins and Long-nosed Bandicoots.
- Refer to EPO5 for mitigation measures regarding vibration

	impacts on heritage buildings.
Performance Measures	◗ No excess or un-necessary noise generation. ◗ The LA10 level, as measured at the three established noise monitoring sites (as below) over at least 15 minutes and when normal demolition/construction works are in progress, does not exceed the previously recorded background noise levels by more than 10 dB(A). ◗ Number of noise complaints received from nearby receptors, and dutiful response to any complaints received. ◗ Number of structural impacts to heritage buildings arising from vibration.
Monitoring / Auditing / Reporting	◗ Prior to the start of demolition/construction works on site the Contractor will measure current background noise levels, measuring adjusted decibel levels dB(A) using a hand held noise meter, at the following locations and times: ▪ At the eastern end of Stuart Street, Little Manly Point, between 8.00am and 9.00am and between 3.00pm and 4.00pm on a weekday, and at the same times on a Sunday, over 3 consecutive weeks; ▪ at the centre (rear) of Spring Cove Beach between 8.00am and 9.00am and between 3.00pm and 4.00pm on a weekday, and at the same times on a Sunday, over the same 3 consecutive weeks; and ▪ at the south-western boundary of Manly Hospital between 8.00am and 9.00am and between 3.00pm and 4.00pm on a weekday, and at the same times on a Sunday, over the same 3 consecutive weeks. ◗ The contractor will measure noise levels at the same locations and times (as above) at least every 2 months for the duration of the demolition/construction works, with additional noise measurements taken at times of anticipated noisier than usual activities on-site. These readings will be recorded. ◗ Noise levels will also be measured by the Contractor as required in response to complaints, and the results recorded. ◗ Retained heritage buildings will be visually inspected (inside and out) at least twice daily when activities that may pose a vibration risk are being conducted within a 25 metre radius. Damaging activities will cease immediately if impacts are observed (such as structural cracking, paint flaking/damage, glass breakage, and dust fall (as an indicator or movement)). ◗ Any vibration damage to retained heritage buildings will be immediately reported to the Contractor's on-site manager and work stopped in that vicinity while remedial/corrective and future preventative measures are developed by the Contractor for the approval of THINC Project's Project Manager. ◗ Prior to the start of demolition/construction works on site the Contractor will establish photo monitoring points at the eastern end of Stuart Street on Little Manly Point and at the centre (rear) of Spring Cove Beach (in conjunction with the

	noise monitoring carried out at these locations) recording digital photographs, at 50-55mm aperture (approximating the naked-eye view), looking toward the facility to provide baseline record of the facility's pre-works visual "presence" when viewed from outside the site. ◗ Audits will be conducted in accordance with EP01 including the implementation of any recommendations and/or corrective actions. ◗ Maintain the Complaints Register, in regard to noise complaints from nearby receptors and authorities.
Corrective Action	◗ The Contractor will follow-up all noise complaints from neighbouring receptors (nearby land holders/uses) within 2 business days. Complaints from Manly Hospital will be followed up on the same day, or next morning at the latest (if received after 4 pm). Mitigation measures will be reviewed and implemented within 2 days where necessary. ▪ If noise monitoring and/or complaints indicate prolonged and excessive noise levels, or if the LA10 noise generation standard has not been met at any site on 2 consecutive monitoring incidences. then the following corrective actions may be implemented: o restrict excess noise generating activities to specific. less noise sensitive, times of the day; o modify work practices, where practical, to generate less noise; o install temporary acoustic barriers for problem activities/sites; o include, and enforce, penalty provisions in sub-contractor arrangements for excess noise generation; o reviewing and limiting work hours for problem activities/sites, or plan noise generating activities to be undertaken concurrently where practical in short burst of excess noise; o conduct follow-up monitoring to assess the effectiveness of actions taken, and liase with complainants as required. ◗ The contractor will investigate and rectify any unusually noisy plant, machinery and equipment - including requiring investigation and repair actions by sub-contractors. ◗ Where vibration, accidental or other damage to retained heritage buildings has occurred temporary protective/stabilisation works will be put in place (if appropriate) and work practices modified or additional special protection provided prior to works recommencing in that vicinity. Longer term repair/restoration measures, if necessary, will be discussed with THINC Project's Project Manager. ◗ Investigations and/or corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions

	Register as maintained by the Contractor and THINC Projects. ◗ The Contractor according to an agreed responsibility and timescale will assign or close out all corrective actions undertaken by them, or undertaken as directed by THINC Projects or the EPA.
Responsibility	AIPM (where specified) Contractor. All site personnel.

4.7 EP07 – Traffic and Parking Control

Performance Objective	◗ To provide a safe working environment and minimise disruption/impacts to the local traffic, neighbours and the public. ◗ To ensure no traffic impacts on retained heritage buildings, fenced or environmentally sensitive areas and significant wildlife species.
Goals	◗ No disturbance to local traffic, neighbours and the public. ◗ No unauthorised parking. ◗ No vehicle or machinery impacts on environmentally sensitive areas, significant wildlife and retained heritage buildings.
Mitigation Measures	◗ The Contractor will prepare a Traffic Management Plan based on their proposed demolition/construction programme and in consultation with the relevant road authority, DECC (NPWS), Manly Council and other relevant stakeholders (such as those involved with the North Head Traffic and Transport Workshop). The Traffic Management Plan will be prepared prior to the start of works by a traffic consultant and approved by the Principal Certifying Authority. It will address access to the site, heavy vehicle haulage routes to/from the site, impacts on the local road network and minimising potential disruption to traffic and residents, efficient circulation within the site, parking needs of construction vehicles and employees vehicles, and similar. The Traffic Management Plan shall comply with RTA *Manual for Traffic Control at Work Sites* and AS 1742.3-2002 *Manual of uniform traffic control devices - Traffic control devices for works on roads*. ◗ The contractor will ensure that workers including sub-contractors, as well as regular delivery drivers and suppliers as far as practical, are altered to the 40 kph speed limit on Collins Beach Road. The Contractor will respond promptly to any complaints of excessive speeds on this road by works related traffic - this may include warnings, penalties and contract termination or similar. ◗ The Contractor will ensure that all construction vehicles using public roads, including sub-contractors' vehicles, are adequately maintained in order to minimise accident risks and to prevent any loss of loads (whether dust, liquid or soils). Trucks and other carrier vehicles will not be loaded above the level of the side boards and tail boards and all loose loads will be appropriately covered. All trucks and other works traffic are to only leave the site via the "shakedown area" (refer EP09). ◗ Traffic leaving and entering the site will be restricted to designated access points, roads and parking areas as identified in the Traffic Management Plan. All traffic will be

required to enter and leave the site in a forward direction.

- Wherever practical deliveries to the site will be scheduled outside morning and evening peak traffic periods.
- Construction traffic, including workers' private vehicles will not be permitted to park in the small parking area immediately outside the AIPM entry. This area is intended to serve visitors to Spring Cove Beach and the Contractor will ensure that this use is not prevented/compromised by construction traffic/parking.
- The Contractor will ensure that emergency access to the site is possible at all times when work/workers are on-site and so will monitor illegal parking and obstructing vehicles in the Spring Cove carpark and lower section of Collins Beach Road. If illegally parked or otherwise obstructing vehicles are posing access problems in this area the Contractor will contact the local DECC (NPWS) office or NPWS Duty Ranger for a response.
- Except in emergencies, vehicles will be restricted to sealed or otherwise hardened/surfaced routes as far as possible (to limit dust generation, reduce erosion potential, lower Pc risks, and other environmental and management reasons). Where an unsealed or natural surfaced area is to be, or becomes, subject to regular vehicle movements the Contractor will temporarily surface this area with crushed sandstone, gravel, geotextile or other suitable materials.
- An 8 kph speed limit will apply, and be enforced, for all vehicle movements within the site during demolition and construction works for safety and logistical reasons, given the confined site area (as well as to minimise the risks Long-nosed Bandicoots as above).
- Construction traffic circulation within the site will minimise truck reversing movements in order to reduce noise from truck alarms.
- Prior to exiting the site, trucks will be checked clear of dust and spoil that could potentially be deposited on Collins Beach Road or other public roads surrounding the site (refer EP09 for details of the "shakedown area").
- The Contractor will establish and maintain a vehicle wash down facility at the site entry for washdown of vehicles before entering and on leaving the site (refer EPO3).
- For measures to reduce the impacts of vehicles on wildlife refer EP03.
- Refer EPO5 for mitigation measures regarding traffic and machinery impacts on heritage buildings.
- The Traffic Management Plan will need to be integrated with other aspects of site management such as the management of water quality and stormwater (in the case of the wash down facility) and heritage buildings.
- The Contractor will control site access/entry to ensure that only authorised vehicles associated with the works - and AIPM staff - enter the site.
- The Contractor will provide for nominated AIPM staff to

	access and use/occupy designated areas of the site during demolition and construction works. Conditions may be placed on such access and use in relation to vehicle access and parking, safety, and operations/logistics with these special arrangements to be negotiated between the parties as and when required to adhere to the same environmental, safety and other management conditions - including the provisions of this CEMP - during such occupancy during this access and use.
Performance Measures	◗ Vehicles are only using the designated on-site roads/accesses and only parking in the designated areas - with fewer than 1 non-conformance or incident per fortnight. ◗ Speed limits adhered to, on and off site. ◗ No complaints recorded regarding vehicle movements and parking.
Monitoring / Auditing / Reporting	◗ The Contractor will prepare a detailed written and photographic record of the condition of Collins Beach Road, from the AIPM site to the junction with North Head Scenic Drive, prior to the commencement of works - to provide a baseline road condition assessment for later reference if required. ◗ The Contractor will refer to the baseline traffic surveys undertaken (by TEF Consulting in May 2007) - at the AIPM gate, the junction of Collins Beach Road and North Head Scenic Drive and the junction of Darley Road and Marshall Street - and update any or all of these if warranted by repeated complaints to assess actual increased traffic levels generated by the works. ◗ Vehicle movement log will be maintained for all vehicles entering the site. ◗ As part of routine daily operations the Contractor's senior on-site staff will monitor and enforce on-site speed limits and access/parking restrictions. Significant or repeated breaches will be recorded, for reporting the THINC Project's Project Manger and enforcement/penalty actions where required. ◗ Audits will be conducted in accordance with EP01, with implementation of the recommendations and corrective actions.
Corrective Action	◗ The Contractor will follow-up all traffic related complaints from the DECC (NPWS), neighbours, Manly Council or other agencies within 2 business days. Complaints from Manly Hospital will be followed up on the same day, or next morning at the latest (if received after 4 pm). Correction or mitigation measures will be reviewed and implemented within 2 days where necessary. ◗ All near misses or vehicle accidents on-site will be immediately investigated by the Contractor and appropriate corrective/preventative actions identified and implemented as necessary. ◗ If the speed of works related traffic on Collins Beach Road continually exceeds the posted speed limit or is the source of repeated (legitimate) complaints the following strategies may

	be implemented (after prior discussion with and approval from the DECC (NPWS) as owner of this road): ○ additional temporary speed humps and traffic slowing devices may be installed; and ○ a special construction traffic speed limit of 20 kph will be notified and enforced, by the Contractor. ◗ If illegal/obstructive parking by members of the public becomes a continuing problem along the lower sections of Collins Beach Road jeopardising emergency access to the site, the Contractor will liaise with the DECC (NPWS) regarding possible measures to prevent this (such as increased patrols/enforcement or physical solutions such as bollards or placed sandstone blocks). ◗ Street sweeping will be undertaken if/when required along Collins Beach Road, from the AIPM gate to the junction with North Head Scenic Drive, in response to any works related material accidentally deposited along this access. ◗ If parking for workers' vehicles on the site becomes problematic - in environmental, operational and congestion, traffic management, or local disturbance terms - the Contractor will consider alternative access arrangements (such as off-site parking and shuttle access). In view of limited parking opportunities on site, the Contractor is to prepare a Transport Access Guide aimed at reducing car travel to and parking on site by construction workers. It is recommended that arrangements be considered for delivery of workers from parking areas outside the Sydney Harbour National Park. ◗ Penalty provisions will be included in the contract arrangements for relevant sub-contractor for breaches of traffic standard/conditions and these will be enforced for repeated breaches of these requirements - both on and off site. ◗ Investigations and/or corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions Register as maintained by the Contractor and THINC Projects. ◗ The Contractor according to an agreed responsibility and timescale will assign or close out all corrective actions undertaken by them, or undertaken as directed by THINC Projects or other relevant agencies.
Responsibility	Contractor. All site personnel.

4.8 EP08 – Waste Management

Performance Objective	◗ To minimise the generation of wastes, maximise reuse and recycling and ensure that waste is disposed of at approved locations and in an authorise fashion.
Goals	◗ No evidence of site contamination as the result of waste. ◗ No waste disposal infringements.
Mitigation Measures	◗ Identify the likely demolition and construction waste for the site - including the nature and anticipated volumes of waste. Investigate appropriate disposal and handling options for construction. The Contractor will be required to prepare a Waste Management Plan prior to the commencement of works. ◗ The Contractor will be required to make the best efforts to accurately calculate and order materials requirements, to assist in minimising waste due to over-ordering, and will encourage minimum packaging practices and suppliers. ◗ The site induction of all personnel, including contractors, will include information on recycling, wastes and spill or incident response procedures. ◗ The Contractor will encourage and assist sub-contractors to minimise waste and maximise re-use/recycling wherever practical. ◗ On-site temporary ablution facilities will be established for the construction personnel and bunded to prevent any spills contaminating stormwater or soils. These facilities will be sourced and maintained by a licensed contractor. ◗ All wastes will be separated and segregated into: ‣ hazardous and non-hazardous wastes (i.e. oils, paints, contaminated/non-contaminated soil, etc.) ‣ waste states (liquids, solid) ‣ waste types (flammables, corrosives, etc.) in accordance with the *Assessment, Classification and Management of Liquid and Non-liquid Wastes* (DEC 1999). ◗ The Contractor will be required to separate and recycle, as far as practical, the following waste types/streams – steel, timber, concrete, masonry, vegetation, glass, plastics, and paper/cardboard. ◗ The Contractor and THINC Project's Project Manager will agree, at the commencement of each major stage of the demolition and construction process, on targets for the volume of material to endeavour to recycle. ◗ Vegetation likely to include propagules of environmental or noxious weeds will not be re-used/recycled on-site. ◗ The Contractor will separate and stockpile reusable and recyclable products for re-use on-site or collection by an approved recycling contractor.

	◗ Demolition and waste/recyclable construction materials will be stockpiled/stored well clear of environmentally sensitive areas, including the central drainage line and major stormwater inlet points (that now discharge across the Bandicoot foraging area and /or over the Little Penguin nesting area). Waste/recyclables stockpiles will be suitably silt fenced along their downslope and cross-slope margins if they contain mobile/erodible, soiled or suspect materials. ◗ The contractor will use only waste transporters who hold an appropriate environment protection licence (issued by DECC). ◗ Road vehicles carrying waste material will not be loaded above their side and tail boards and all loads will be covered. ◗ The Contractor will supply necessary bins and skips, including bins/containers at individual work areas plus larger centralised receptacles if required, for the effective management of wastes and recyclables across the site. The Contractor will supply recycling bins for glass, aluminium cans, scrap metal, paper for collection and transport to a recycling facility. ◗ All skips and bins will be provided with suitable lids, that will be locked at night where necessary (especially those containing food or putrescible waste), to prevent the spread of waste by wind or foraging by animals. ◗ All non-recyclable waste - including litter, garbage, other solid waste - will be removed to a licensed waste disposal facility. ◗ All non-recyclable hazardous waste - including petroleum products, chemicals and solvents, and other potentially hazardous materials - will be removed to a licensed waste disposal facility authorised to dispose of such materials. Separate containers will be provide for chemicals and chemical containers, paint and paint containers, render waste and other materials that cannot be disposed of in the general waste stream. ◗ The disposal of asbestos waste will be as described in EP04. ◗ All works areas will be maintained in a clean and hygienic condition. The Contractor will organise a weekly “sweep” of the entire site to remove any stray/windblown litter and ensure that the area is clean. ◗ Suitable containment materials, spill kits, and other incident response equipment will be maintained on-site throughout the works. ◗ Personnel on site will be required to not feed fauna. Food scraps and putrescible waste should be either removed from site each day or adequately contained to prevent foraging by native and feral fauna.
Performance Measures	◗ Wastes are stored and managed correctly on site, with fewer than 1 waste non-conformance or “incident”- such as uncontained materials, windblown waste, bin/hopper overflows, unhygienic work sites - per week, on average, across the entire demolition and construction period. ◗ No stormwater or soil contamination due to waste non-

	conformances or "incidents". ◗ Target recycling volumes are achieved, on monthly intervals, over the entire demolition and construction period. ◗ Licensed sub-contractor used for hazardous and non-hazardous waste disposal. ◗ Documented evidence that waste has been disposed of correctly/legally by sub-contractors/waste contractors.
Monitoring / Auditing / Reporting	◗ The Contractor will conduct weekly inspections of all waste and recycling stations, stockpiles, facilities and equipment to ensure their functionality and continuing effectiveness. Records will be kept of these inspections. ◗ Records of waste generation and disposal, as well as the extent of re-use and recycling, will be maintained and available on-site. ◗ The Contractor will provide a summary of the above records ands inspections to the THINC Project's Project Manager monthly - including details as to the attainment, or otherwise, of agreed recycling targets. ◗ The Contractor will keep records of waste volumes and disposal locations, including transfer receipts and other documents to validate the appropriate disposal of wastes from the site. These records will be made available for inspection by the THINC Project's Project Manager at least fortnightly. ◗ Audits will be conducted in accordance with EP01, including the implementation of any recommendations and/or corrective actions. ◗ MSDS's for all potentially hazardous substances used on site will be maintained.
Corrective Action	◗ Any spills or leakages/overflows, or non-conformances with specified waste management practices, involving non-hazardous wastes will be remediated by the Contractor within 2 working days. ◗ Any waste infringements will be addressed immediately, or within 1 working day at most. ◗ Any spills or leakages/overflows, or non-conformances with specified waste management practices, involving hazardous wastes will be responded to immediately upon detection. Further details of hazardous material management are provided in EP04. ◗ Penalties and punitive measures will be included, and enforced as warranted, in contracts with waste disposal sub-contractors. ◗ The Contractor will seek to continually improve waste minimisation and management as well as recycling/reuse performance throughout the entire demolition and construction works. ◗ Investigations and/or corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental

	Complaints, Non-conformances and Corrective Actions Register as maintained by the Contractor and THINC Projects. ◗ The Contractor according to an agreed responsibility and timescale will assign or close out all corrective actions undertaken by them, or undertaken as directed by THINC Projects and the EPA or DECC (NPWS).
Responsibility	Contractor. All site personnel.

4.9 EP09 – Water Quality, Stormwater and Erosion

Performance Objective	◗ Minimise the impact of water movement on and off site and its associated erosions, sedimentation and potential pollution effects.
Goals	◗ No extended or unmanaged areas of erosion on-site, and no sediment deposition or run-off across or from the site. ◗ No discharge of sediment into the Little Penguin foreshore nesting/breeding area or Spring Cove. ◗ No detrimental modification to the existing drainage patterns. ◗ No uncontrolled stormwater discharges across the Little Penguin foreshore nesting/breeding area. ◗ No discharge of contaminated stormwater. ◗ No pollution incidents.
Mitigation Measures	◗ The Contractor will install all soil and water management structures in accordance with the Erosion and Sediment Control Masterplan (Appendix D). These will be in place prior to the commencement of demolition and construction works, and any advance activities likely to generate erosion and sedimentation impacts. ◗ Silt fencing with blue metal groynes (sausage), or staked hay bales where approved, is the principal erosion and sediment control device to be employed on the site. The entire northern and western margins of the demolition and construction works area will be fully contained by these barriers for the entire duration of the works - as detailed on the Erosion and Sediment Control Masterplan (Appendix D). The upper (southern) section of the existing central watercourse will also be entirely contained by these heavy-duty erosion and sediment control barriers (as shown in Appendix D). ◗ Along the northern margin of the site this heavy-duty barrier will initially be upslope (south) of the Kookaburra Cottage, the existing workshop, two long dormitories and Spring Cove Cottage. However before the demolition of the two dormitories adjacent to Spring Cove Cottage commences the same style erosion and sediment barrier will be installed along the northern (downslope) side of these structures - as shown on the Erosion and Sediment Control Masterplan (Appendix D). If the existing barrier is to be relocated for this purpose, this will only occur during a period of dry weather and after all sediment/material has been removed/cleaned from the upper barrier before removal. ◗ Temporary silt fencing will be installed at selected locations across the site, as shown on the Erosion and Sediment Control Masterplan (Appendix D), and elsewhere as considered necessary by the Contractor or as directed by the

THINC Project's Project Manager during the course of demolition and construction works.

- The Contractor will install a "shakedown area" inside the main site entry gate (on conjunction with the "washdown bay" - refer EP03), across the entire width of roadway as shown on the Erosion and Sediment Control Masterplan (Appendix D), to prevent soil and other material leaving the site on vehicle wheels and bodies. This feature will be serviced and maintained for the duration demolition and construction works.
- The Contractor's works schedule will, as far as practical and efficient, endeavour to minimise the extent of excavation and disturbed soil exposed at any one time.
- Top soil will be separated from sub-soil materials and rock and will be re-used on-site wherever possible - if not compromised by weed propagules, the risk of *Phytophthora cinnamomi*, or other constraints. The Erosion and Sediment Control Masterplan (Appendix D) identifies a preliminary top soil stockpile location on the site's southern boundary, with heavy-duty erosion and sediment control fencing.
- The Contractor's works schedule will minimise the stockpiling of excavated or imported material to prevent exposure to wind and potential for sediment mobilisation in runoff. Excessively steep faces or long slopes will be avoided to minimise erosion potential and the risk of slumping/slope failure. The Contractor will protect stockpile sites by silt fences on the lower side and margins (if needed) and upslope berms (to divert water flows), to the THINC Project's Project Manager's satisfaction.
- Stockpiles will not be located in proximity to existing or proposed drainage lines and major stormwater inlets, in environmentally sensitive areas, or within the "dripline" of trees to be retained.
- Excavated, filled or sheeted/top-dressed areas with exposed soil will be stabilised as soon as practicable to minimise opportunities for erosion and sediment mobilisation. Silt fencing and other erosion/sediment control measures will remain in place until a site is revegetated and/or stable.
- The Contractor will be vigilant to identify any areas of the site that may become susceptible to erosion as a result of excavation, stockpiling, modifications to surface flows, or other factors during the demolition/construction works and will take appropriate measures to protect such sites (and downslope areas) from adverse erosion and sediment impacts.
- The contractor will regularly clean and maintain silt fences and other erosion and sediment control devices, including the removal (as required) of sediment and other build-up. Cleaning will only occur during periods of dry weather.
- Temporary diversion structures, to intercept and divert clean runoff around work areas, will be installed by the Contractor as/where required.
- The Contractor will inspect the site within 24 hours of a

significant rain event for signs of erosion or contaminated holding waters.

- Heavy plant and vehicle movements will be restricted to hard surfaces within the site after significant rain events or periods of waterlogging.
- The cleaning of tools, vehicles, plant and equipment – only carried out as part of routine/efficient operations - will be undertaken away from sites where runoff could enter the stormwater or drainage systems.
- Drains will be suitably protected to ensure that sediment-laden runoff does not enter the stormwater system.
- The site's two existing stormwater discharge points will be used during initial demolition and construction works, with suitable stormwater filtration/settling measures and erosion/sediment control devices in place - as shown on the Erosion and Sediment Control Masterplan (Appendix D) and the Stormwater Drainage Masterplan (Appendix E). This drainage system and stormwater discharge points have co-existed with the Little Penguin colony for many years.
- Additional stormwater and erosion/sediment control measures will be implemented - as set out in the Erosion and Sediment Control Masterplan (Appendix D), refer EP09 - to prevent over-loading or contamination of the stormwater system during the demolition/construction phase (and any possible impacts on the Little Penguin nesting area).
- As shown in the Site Landscape Plan (Appendix C) and Stormwater Drainage Masterplan (Appendix E) the central drainage line will be reinstated as an open watercourse for part of its length – including channelisation/lining with rock surfacing, clumped plantings, and a rock anti-scour/energy-diffusing bed to be installed at its discharge point above the cliffline (and Little Penguin nesting area). The Contractor will time this work to minimise the risk of excess stormwater being directed to other parts of the drainage system and suitable measures - such as holding ponds and flow diversions - will be installed to compensate for the temporary loss of this outlet point while these reinstatement works occur.
- The grassed area above (south) of the Little Penguin nesting/breeding area will be retained, and enhanced, to assist in filtering surface water flows from the site before they reach the cliffline. An additional stormwater discharge point to be installed at the extreme western end of the site, and the upgraded eastern stormwater discharge point adjacent to the sandstone wall, will both be fitted with rock anti-scour/energy-diffusing beds where they discharge stormwater onto this grassed area.
- All redundant/obsolete stormwater pipes or pits, and other old/unused pipes, will be removed or crushed/filled or otherwise made unusable to prevent access and possible entrapment by Long-nosed Bandicoots, Little Penguins or other wildlife.
- The Contractor will consult with the THINC Project's Project Manager regarding appropriate wastewater removal

	techniques and disposal areas/methods prior to any dewatering of trenches or excavations. ◗ The Contractor will take measures necessary to manage flows from the natural spring, located west of the existing library, during construction activities in this area to avoid erosion/sedimentation, water quality and drainage problems. ◗ To ensure the quality of stormwater leaving the site fuels, lubricants, chemicals and wastes will be stored and handled - and any spills managed - as set out in EP04 and EP08.
Performance Measures	◗ Only minor localised areas of erosion evident for limited periods during demolition and construction, and all erosion is under active management/control/remediation. ◗ Only minor localised areas of sediment run-off and deposition within the site and no sediment discharge/deposition across the northern grassed long-nosed Bandicoot foraging area, the Little Penguin foreshore nesting/breeding area, and Spring Cove. ◗ All stormwater and drainage on-site is managed to minimise or ameliorate impacts. ◗ There is no oily sheen on the water surface, or litter in the discharge, of catchment stormwater structures. ◗ There is no turbid water released from the sediment structures. ◗ No discharge of contaminated stormwater, with stormwater leaving the site meeting the following parameters: o less than 50mg/L suspended solids; o pH 6.5 to 8.5; and o no visible oil or grease, and no surface sheen. ◗ No uncontrolled stormwater discharges across the Little Penguin foreshore nesting/breeding area. ◗ No pollution incidents.
Monitoring / Auditing / Reporting	◗ The Contractor will conduct a daily inspection, prior to the start of works, of the northern erosion and sediment control barrier to ensure its integrity and effectiveness (and ability to protect the Little Penguin foreshore nesting/breeding area below). This will include monitoring any sediment deposition across the clifftop grassed area and checking for excessive sediment or obvious contamination from stormwater discharge points in or above the cliffline. ◗ The Contractor will conduct regular inspections (at least twice weekly) of other erosion and sediment control devices to ensure their efficient operation and capacity. ◗ The Contractor will regularly - at least twice weekly - inspect watercourses and drainage lines (including stormwater drainages) for visual signs of contamination and sediment. ◗ The Contractor will monitor the quality of stormwater leaving the site, at least fortnightly or immediately after major rainfall events, over the duration of the demolition and construction works and the results recorded. Monitoring frequencies may

	be increased during period of higher risk for stormwater contamination - as directed by the THINC Project's Project Manager. Monitoring will include an assessment of suspended solids and turbidity, pH, salinity, petroleum products, visible oils and grease, potassium and nutrients, and heavy metals. ◗ The Contractor will monitor the lower section of Collins Beach Road for any excess sediment and spoil inadvertently transported off the site. This will occur daily when excavated material is being removed from the site. ◗ The Contractor will inspect the site within 24 hours of a significant rain event for signs of erosion or contaminated holding waters and to ensure that all erosion and sediment control devices are intact and operational. This will include visual assessment of any turbidity in adjacent waters of Spring Cove ◗ Monitoring of revegetation progress and soil stabilisation. ◗ Site audit and inspection reports.
Corrective Action	◗ Any defects detected in, or sustained by, the northern erosion and sediment control barrier will be repaired the same day - or immediately if upslope works likely to pose an erosion/sedimentation risk are underway or scheduled. ◗ Silt fencing and other erosion/sedimentation control measures will be upgraded, and additional fencing or other measures installed, as required by the results of site inspections and monitoring. ◗ The Contractor will install any additional temporary stormwater detention and settling ponds, geotextile fabric filters, and other measures as/where required to better control stormwater flows and discharges from the site as indicated by the results of site inspections and monitoring. ◗ Excessive sediment movement through the Little Penguin nesting area or turbidity in Spring Cove, due to demolition/construction works, will be priority issues requiring immediate corrective and preventative action by the Contractor. This will include stopping work across all or part of the site as necessary, until the source of these problems can be identified and addressed to the satisfaction of the THINC Project's Project Manager and the DECC (NPWS and EPA). ◗ Street sweeping will be undertaken if/when required along Collins Beach Road (refer EP07). ◗ Investigations and/or corrective actions undertaken as a result of a complaint, audit, inspection or incident will be documented and compiled within the Environmental Complaints, Non-conformances and Corrective Actions Register as maintained by the Contractor and THINC Projects. ◗ The Contractor according to an agreed responsibility and timescale will assign or close out all corrective actions undertaken by them, or undertaken as directed by THINC Projects and the EPA or DECC (NPWS).

Responsibility	Contractor. All site personnel.

5 Environmental Training and Inductions

5.1 Environmental Induction

All Contractors, sub-contractors and visitors will receive site induction into the requirements of this CEMP, prior to starting work on this project. The induction will be appropriate to the level of their involvement in the project.

Site inductions will be developed to induct personnel into the broad aspects of the Project. The environmental component of this induction will reinforce that it is the responsibility of all personnel to adhere to the stated environmental requirements and procedures. The induction training will be delivered by the Contractor or delegate and will cover, but not be limited to, the following environmental topics:

- role of the CEMP;
- project responsibilities;
- identification of legal obligations;
- identification and management of sensitive areas;
- flora and fauna;
- hazardous materials;
- heritage buildings and sites;
- waste management; and
- water quality, stormwater and erosion.

A register of all environmental training carried out including dates, names of persons trained and trainer details will be kept and maintained.

5.2 Environmental Training

Personnel for specific tasks shall have the relevant training, skills or experience. Where project-specific environmental training needs are required, these will by provided by the Contractor's Environment Manager or delegate, and will cover specific environmental issues, control measures and equipment.

A register will be kept and maintained of all environmental training, including dates, names of persons trained and trainer details. Prior to commencement on site, all project personnel, including Contractors, will undergo a site induction covering awareness of quality, safety and environment issues and controls, site rules and administration.

Additional environmental training will be provided to project personnel via toolbox, and pre-start, meetings. This will include additional on-site training for specific work packages conducted by the specific work package Contractor. Records of all employees trained and of details of the toolbox meetings will be maintained.

6 Glossary of Terms

AFP	Australian Federal Police
AIPM	Australian Institute of Police Management
CBD	Central Business District
CEMP	Construction Environmental Management Plan
DECC	NSW Department of Environment and Climate Change
DEWHA	Australian Government Department of Environment, Water, Heritage and the Arts
EPA	NSW Environment Protection Authority
External building envelope	The external structural elements of a building, including walls and cladding, sufficient to help in containing the noise and other impacts of internal fitout and other construction activity - and for the structure to serve a noise barrier function for other works in the vicinity.
LA10	The noise levels that are exceeded for 10% of each sample period
LPG	Liquefied Petroleum Gas - Automotive LPG may be propane or a mixture of propane and butane, while bottled gas used for domestic purposes (such as cooking and heating) consists solely of propane.
MSDS	Material Safety Data Sheets
NPWS	NSW National Parks and Wildlife Service
PCB	Polychlorinated Biphenyl – a toxic organochlorine used extensively as fluids in electrical equipment such as transformers and capacitors. They are also used in pesticides, carbonless copier paper, fluorescent light ballast and other products.
Rain events	Rainfall in excess of 20mm in one hour, or more than 40mm over any consecutive 2 day period, as measured at the site or the North Head/Manly area.
Strong wind conditions	Beaufort Scale No. 6, “strong breeze”, 39-49 kph average wind speeds with gusts stronger.

7 Bibliography

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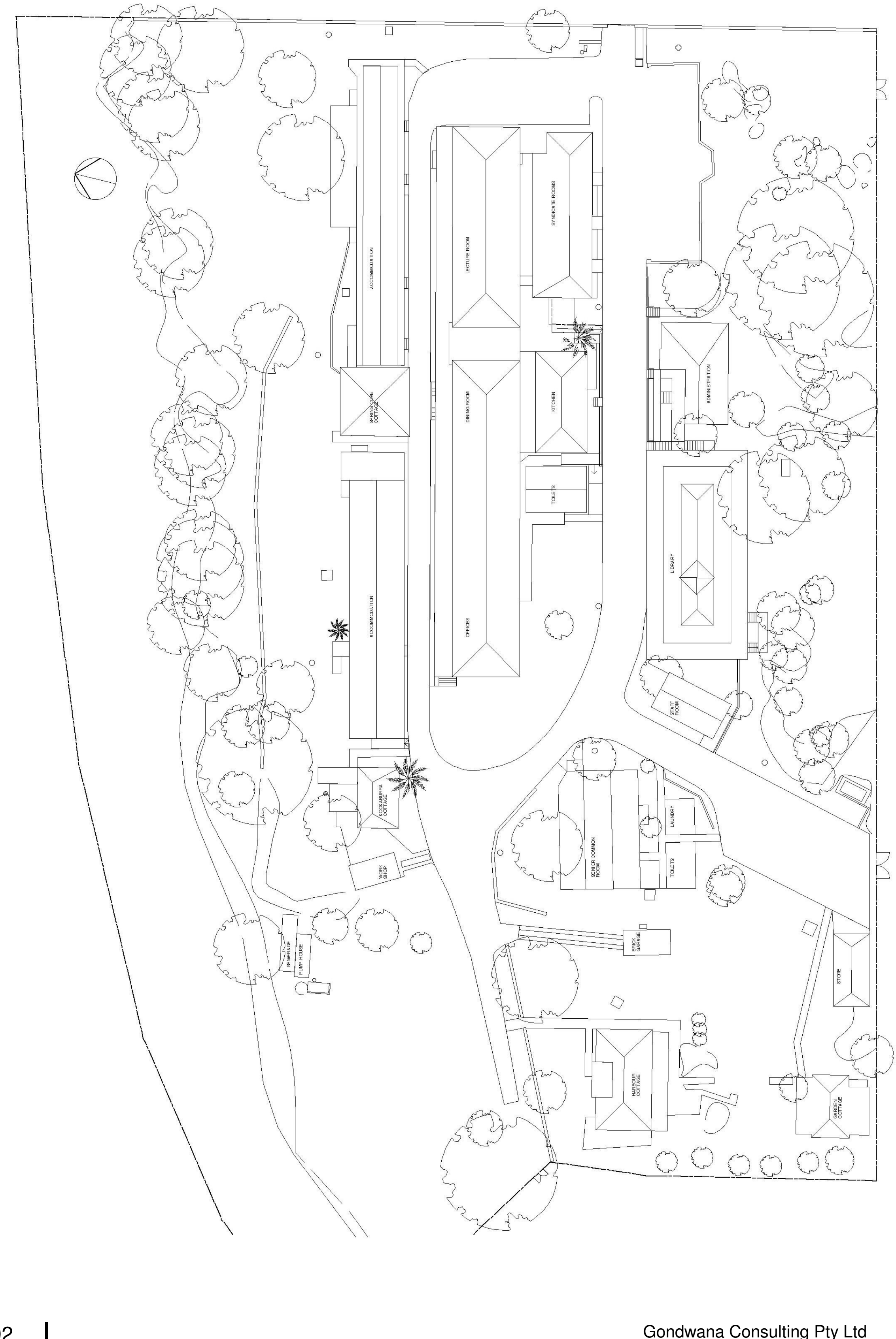
APPENDICES

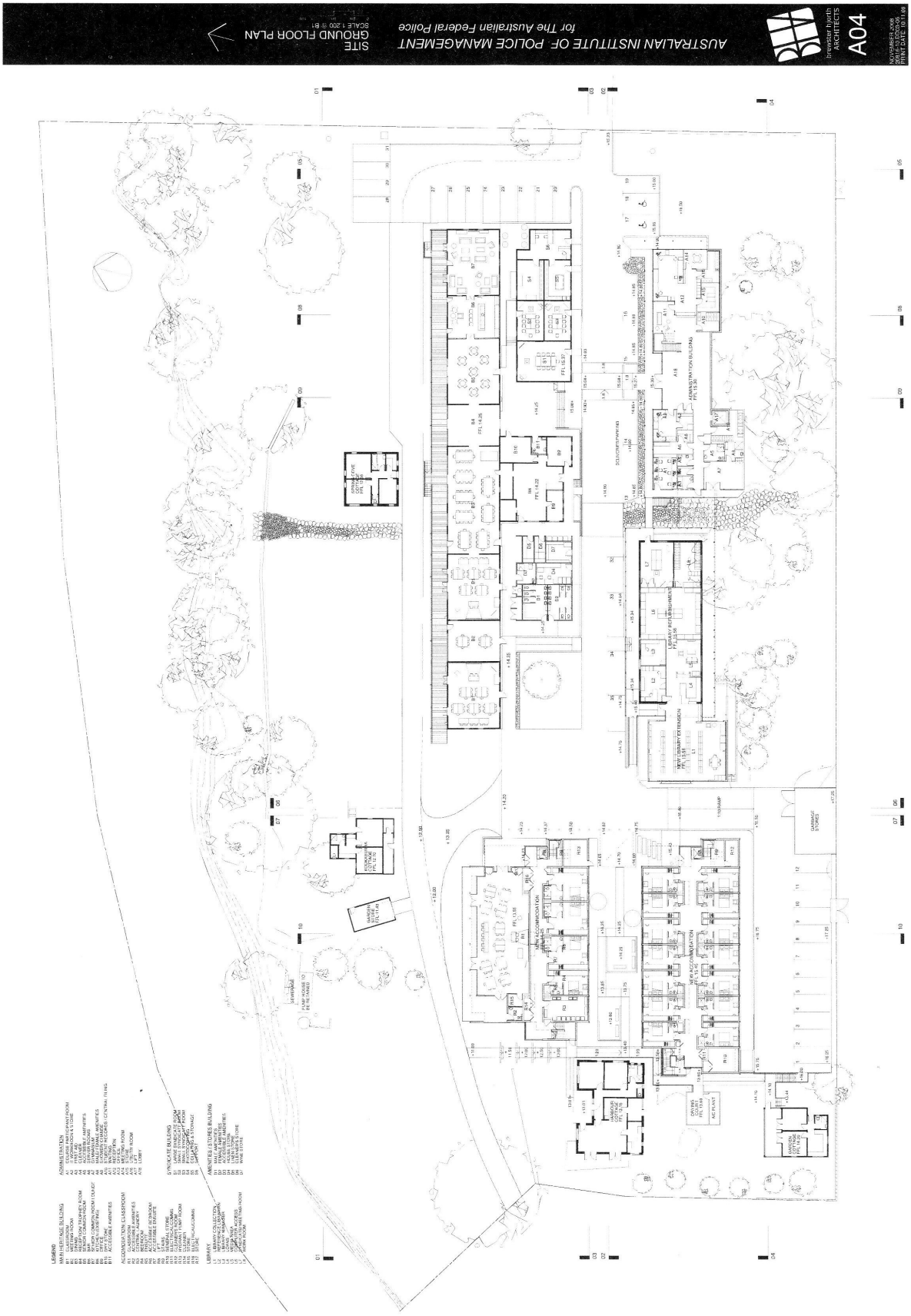
Appendix A

Site Map – Existing Facility


ACCOMMODATION
LECTURE ROOM
SYNDICATE ROOMS
ADMINISTRATION
SPRINGCOVE COTTAGE
DINING ROOM
KITCHEN
TOILETS
LIBRARY
ACCOMMODATION
OFFICES
STAFF ROOM
KOOKABURRA COTTAGE
LAUNDRY
SENIOR COMMON ROOM
TOILETS
WORK SHOP
BRICK GARAGE
SEWERAGE
PUMP HOUSE
STORE
HARBOUR COTTAGE
GARDEN COTTAGE

Appendix B

Proposed Redevelopment of AIPM Site (Preferred Project Scheme)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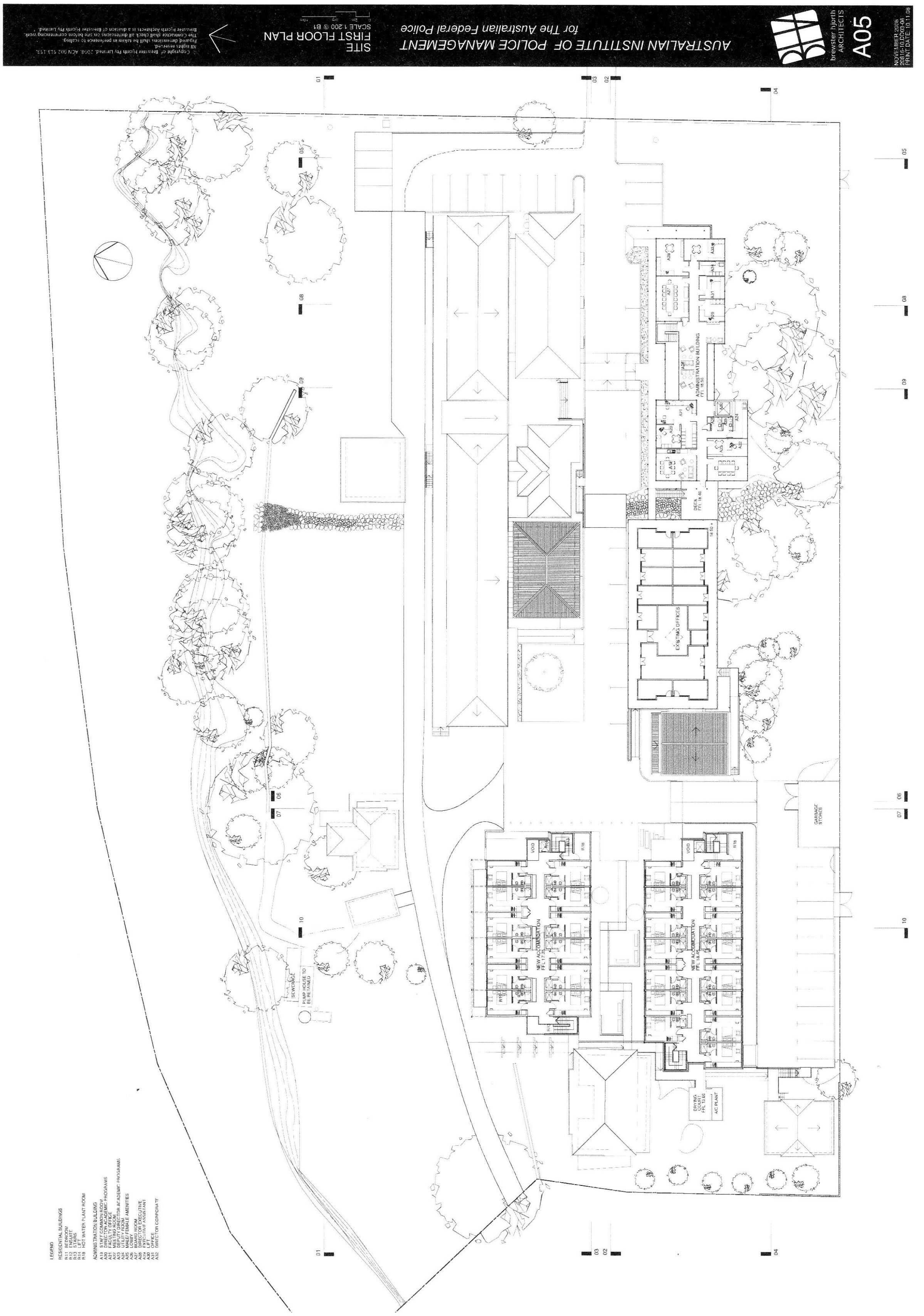
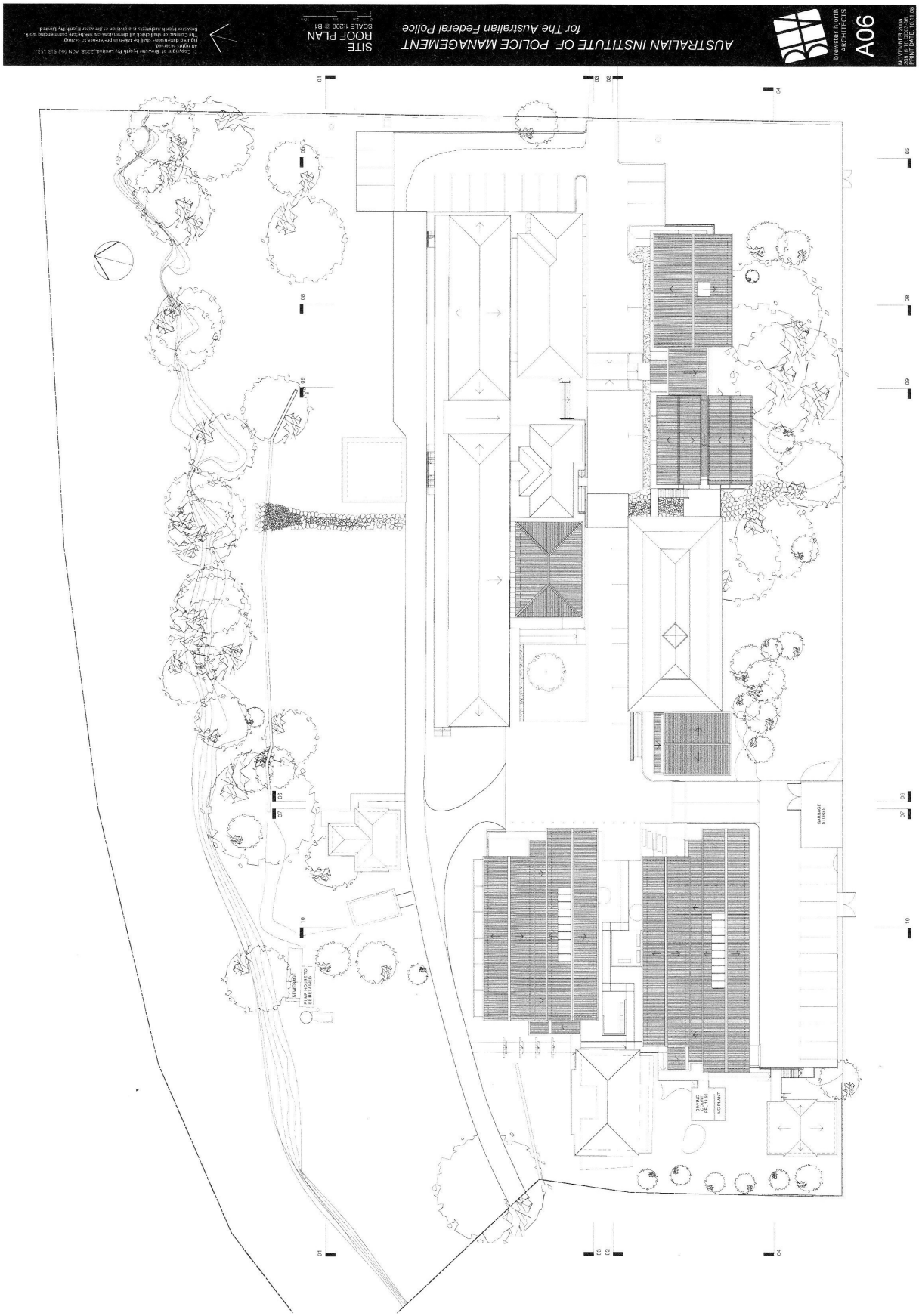
for The Australian Federal Police
SITE
GROUND FLOOR PLAN
SCALE 1:200 @ B1
brewster hjorth
ARCHITECTS
A04
NOVEMBER 08
DRAFT
FINAL DATE 10.11.08


AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
for The Australian Federal Police
SITE
FIRST FLOOR PLAN
SCALE 1:200 @ B1
brewster hjorth
ARCHITECTS
A05
ADMINISTRATION BUILDING
EXISTING OFFICES
NEW ACCOMMODATION
GARBAGE STORES
SEWERAGE


AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
for The Australian Federal Police
SITE ROOF PLAN
SCALE 1:200 @ B1
A06
BREWSTER HJORTH ARCHITECTS
NOVEMBER 2008
PRINT DATE: 16.11.08

AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
for The Australian Federal Police
Site Elevations 01
SCALE 1:200 @ B1
Brewster Hjorth ARCHITECTS
A07
BOUNDARY
EXISTING HARBOUR COTTAGE
NEW ACCOMMODATION
EXISTING WORK SHOP
NEW EXTENSION MESS BUILDING BEYOND
EXISTING KOOKABURRA BUILDING
EXISTING LIBRARY BUILDING BEYOND
NEW ADMINISTRATION BUILDING BEYOND
EXISTING SPRIGG COTTAGE
EXISTING MAIN BUILDING
ELEVATION 01
NORTH MAIN BUILDING
1:200
BOUNDARY
EXISTING HARBOUR COTTAGE
NEW ACCOMMODATION
NEW LIBRARY EXTENSION
EXISTING LIBRARY
ADMINISTRATION BUILDING
EXISTING GROUND LINE
PROPOSED GROUND LINE
ELEVATION 02
NORTH THROUGH ROAD
1:200

AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
for The Australian Federal Police
Site Elevations 02
SCALE 1:200 @ A1
A08
BOUNDARY
EXISTING SYNDICATE
EXISTING KITCHEN AND SUPPORT
NEW STORE BUILDING
ORIENTATION SPACE
NEW ACCOMODATION
ELEVATION 03
SOUTH THROUGH ROAD
BOUNDARY
NEW ADMINISTRATION BUILDING
EXISTING LIBRARY
EXISTING GROUND LINE
PROPOSED GROUND LINE
NEW ACCOMMODATION
CARPARK 2
EXISTING HARBOUR COTTAGE
ELEVATION 04
SOUTH THROUGH CARPARK 2

AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
for The Australian Federal Police
Site
Elevations 03
SCALE 1:200 @ A1
Brewster Hjorth
ARCHITECTS
A09
ELEVATION 05
EAST THROUGH CARPARK 1
1:200
ELEVATION 06
WEST THROUGH ROAD
1:200
ELEVATION 07
EAST THROUGH ROAD
1:200
BOUNDARY
MEAN HIGH WATER
EXISTING LIBRARY
NEW STORE BUILDING
EXISTING MAIN BUILDING
NEW ACCOMMODATION
CARPARK 1
ROAD

Appendix C

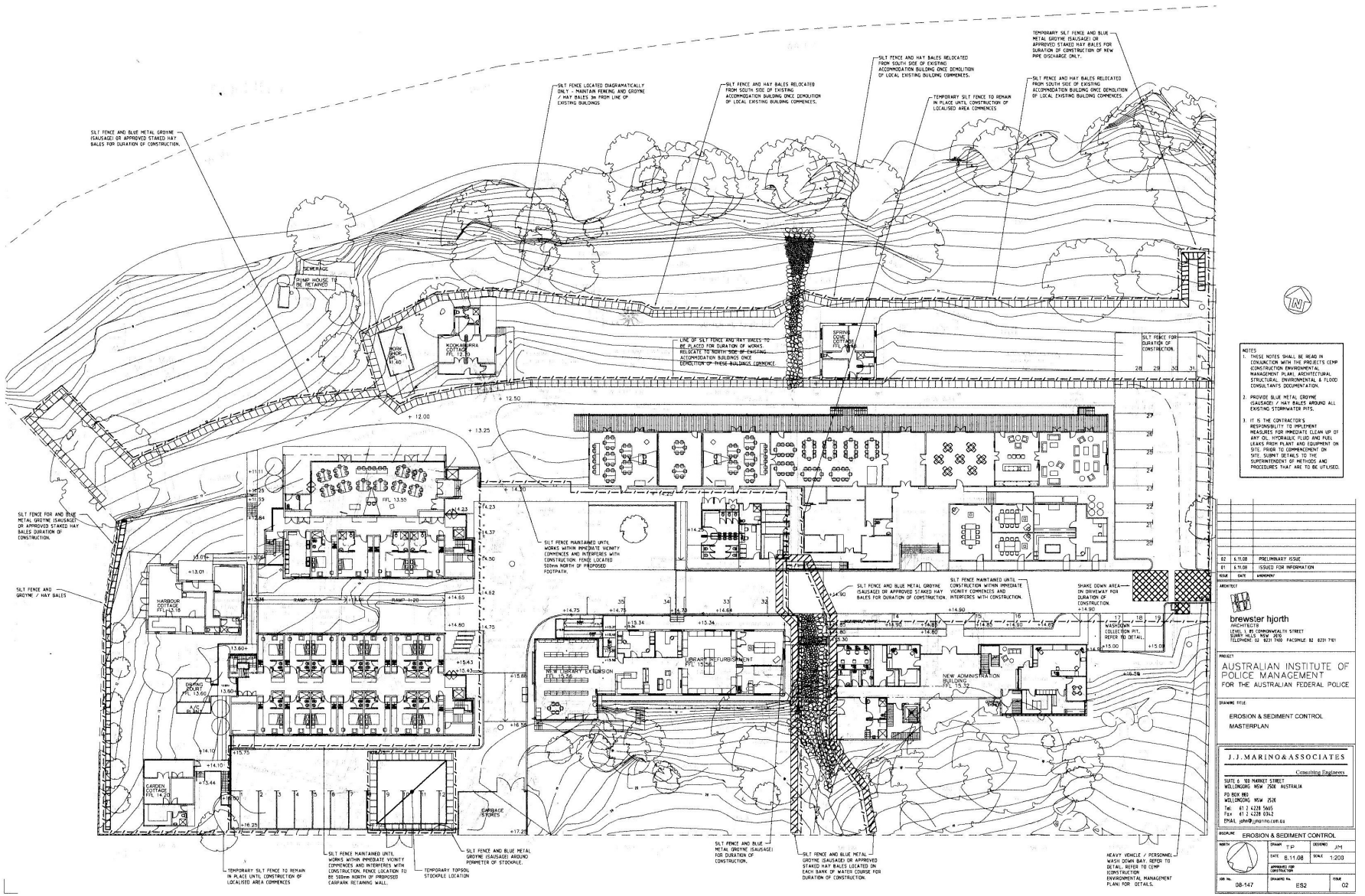
Site Landscape Plan

LANDSCAPE CONCEPT PLAN
SCALE 1:200 @ B1
AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
for The Australian Federal Police
Preliminary Issue
LC01
REVA
SEPTEMBER 2008
DESIGN NOTES
INDICATIVE PLANT LIST
LEGEND

AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
for The Australian Federal Police
LANDSCAPE SECTIONS
AND THEMES
LC02
REV A
SEPTEMBER 2008
LANDSCAPE IMAGES
SOFT LANDSCAPE
HARD LANDSCAPE
SECTION ELEVATION AA
1:100
SECTION ELEVATION BB
1:100
SECTION ELEVATION CC
1:100
SECTION ELEVATION DD
1:100
SECTION ELEVATION EE
1:100

Appendix D

Erosion and Sediment Control Masterplan


SILT FENCE AND BLUE METAL GROYNE (SAUSAGE) OR APPROVED STAKED HAY BALES FOR DURATION OF CONSTRUCTION.
SILT FENCE LOCATED DIAGRAMATICALLY ONLY - MAINTAIN FENCING AND GROYNE / HAY BALES 3m FROM LINE OF EXISTING BUILDINGS
SILT FENCE AND HAY BALES RELOCATED FROM SOUTH SIDE OF EXISTING ACCOMMODATION BUILDING ONCE DEMOLITION OF LOCAL EXISTING BUILDING COMMENCES.
SILT FENCE AND HAY BALES RELOCATED FROM SOUTH SIDE OF EXISTING ACCOMMODATION BUILDING ONCE DEMOLITION OF LOCAL EXISTING BUILDING COMMENCES.
TEMPORARY SILT FENCE TO REMAIN IN PLACE UNTIL CONSTRUCTION OF LOCALISED AREA COMMENCES
TEMPORARY SILT FENCE AND BLUE METAL GROYNE (SAUSAGE) OR APPROVED STAKED HAY BALES FOR DURATION OF CONSTRUCTION OF NEW PIPE DISCHARGE ONLY.
SILT FENCE FOR DURATION OF CONSTRUCTION.
LINE OF SILT FENCE AND HAY BALES TO BE PLACED FOR DURATION OF WORKS RELOCATE TO NORTH SIDE OF EXISTING ACCOMMODATION BUILDINGS ONCE DEMOLITION OF THESE BUILDINGS COMMENCE
SILT FENCE FOR AND BLUE METAL GROYNE (SAUSAGE) OR APPROVED STAKED HAY BALES DURATION OF CONSTRUCTION.
SILT FENCE AND GROYNE / HAY BALES
SILT FENCE MAINTAINED UNTIL WORKS WITHIN IMMEDIATE VICINITY COMMENCES AND INTERFERES WITH CONSTRUCTION. FENCE LOCATED 500mm NORTH OF PROPOSED FOOTPATH.
SILT FENCE AND BLUE METAL GROYNE (SAUSAGE) OR APPROVED STAKED HAY BALES FOR DURATION OF CONSTRUCTION.
SILT FENCE MAINTAINED UNTIL CONSTRUCTION WITHIN IMMEDIATE VICINITY COMMENCES AND INTERFERES WITH CONSTRUCTION.
SHAKE DOWN AREA ON DRIVEWAY FOR DURATION OF CONSTRUCTION.
SILT FENCE MAINTAINED UNTIL WORKS WITHIN IMMEDIATE VICINITY COMMENCES AND INTERFERES WITH CONSTRUCTION. FENCE LOCATION TO BE 500mm NORTH OF PROPOSED CARPARK RETAINING WALL.
TEMPORARY TOPSOIL STOCKPILE LOCATION
SILT FENCE AND BLUE METAL GROYNE (SAUSAGE) AROUND PERIMETER OF STOCKPILE.
TEMPORARY SILT FENCE TO REMAIN IN PLACE UNTIL CONSTRUCTION OF LOCALISED AREA COMMENCES
SILT FENCE AND BLUE METAL GROYNE (SAUSAGE) OR APPROVED STAKED HAY BALES LOCATED ON EACH BANK OF WATER COURSE FOR DURATION OF CONSTRUCTION.
SILT FENCE AND BLUE METAL GROYNE (SAUSAGE) FOR DURATION OF CONSTRUCTION.
HEAVY VEHICLE / PERSONNEL WASH DOWN BAY. REFER TO DETAIL. REFER TO CEMP (CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN) FOR DETAILS.
NOTES
1. THESE NOTES SHALL BE READ IN CONJUNCTION WITH THE PROJECTS CEMP (CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN), ARCHITECTURAL STRUCTURAL ENVIRONMENTAL & FLOOD CONSULTANTS DOCUMENTATION.
2. PROVIDE BLUE METAL GROYNE (SAUSAGE) / HAY BALES AROUND ALL EXISTING STORMWATER PITS.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT MEASURES FOR IMMEDIATE CLEAN UP OF ANY OIL, HYDRAULIC FLUID AND FUEL LEAKS FROM PLANT AND EQUIPMENT ON SITE. PRIOR TO COMMENCEMENT ON SITE, SUBMIT DETAILS TO THE SUPERINTENDENT OF METHODS AND PROCEDURES THAT ARE TO BE UTILISED.
02 6.11.08 PRELIMINARY ISSUE
01 4.11.08 ISSUED FOR INFORMATION
ISSUE DATE AMENDMENT
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AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
FOR THE AUSTRALIAN FEDERAL POLICE
DRAWING TITLE
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Consulting Engineers
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DRAWN FP
DESIGNED JM
DATE 8.11.08
SCALE 1:200
APPROVED FOR CONSTRUCTION
JOB No. 08-147
DRAWING No. ES2
ISSUE 02

AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT

FOR THE AUSTRALIAN FEDERAL POLICE

EROSION AND SEDIMENT CONTROL

LEGEND

SYMBOLS

- SUBSOIL PUMP (TEMPORARY)
- BLUE METAL GROYNE (SAUSAGE)
- STAKED HAY BALES
- STAKED HAY BALES / BLUE METAL GROYNE

LINETYPES

- BLUE METAL GROYNE
- WIND FENCE
- STORMWATER RISING MAIN (TEMPORARY)
- SILT FENCES
- FLOATING BOOM

NOTES

MINIMUM REQUIREMENTS

GENERAL
PROVIDE ON SITE CONTROLS THROUGHOUT THE ENTIRE WORKS TO ENSURE MINIMUM EROSION AND SEDIMENT LOSS.

ENSURE LEAST DISTURBANCE TO SITE.

AS EACH AREA IS COMPLETED, THAT AREA IS TO BE IMMEDIATELY/PROGRESSIVELY SEEDED AND FERTILISED. SILT FENCES, STRAW BALES OR OTHER CONTROLS NEED TO BE PROVIDED UNTIL THE SITE IS STABLE. SHOULD THIS APPROACH NOT BE PRACTICAL THE PROGRESSIVE REVEGETATION OF INDIVIDUAL AREAS WILL BE REQUIRED.

WHERE THERE IS GRADE ON EITHER AREAS OF THE SITE THAT MAY LEAD TO EROSION, FURTHER APPROPRIATE TREATMENT IS TO BE LOCATED TO CONTROL EROSION i.e. STRAW BALES

THE PROVISION AND MAINTENANCE OF SEDIMENT/ SILT FENCES WILL BE NECESSARY DURING THE CONSTRUCTION PHASE. PROGRESSIVELY REMOVE INDIVIDUAL SECTIONS OF SILT FENCES FOR CLEANING. CLEANING OF FENCES TO BE CARRIED OUT DURING PERIODS OF DRY WEATHER.

FILL AREAS
RUN-OFF AND SEDIMENT LOSS FROM THE AREAS OF FILL MUST BE CONTROLLED DURING AND AFTER CONSTRUCTION. BEFORE REVEGETATION TAKES PLACE USING SILT FENCES AND OR STRAW BALES AS INSTRUCTED BY THE PROJECT MANAGER TO DIRECT WATER FROM THE DISTURBED AREA. OTHER MEASURES SHALL BE CARRIED OUT AS DIRECTED BY THE PROJECT MANAGER AND/OR AS SHOWN ON THE PLANS.

STOCK PILES
THE STOCK PILE LOCATION SHOWN ON THE PLAN IS PRELIMINARY, SHOULD THE BUILDER WISH TO RELOCATE THE STOCKPILE, HE SHALL OBTAIN APPROVAL FROM PROJECT MANAGER PRIOR TO COMMENCEMENT OF WORKS. THE BUILDER SHALL PRODUCE DRAWINGS INDICATING THE LOCATION OF STOCK PILES.

STOCK PILE SITES SHALL BE LOCATED AWAY FROM EXISTING OR PROPOSED DRAINAGE LINES OR AREAS LIKELY TO BE DISTURBED DURING CONSTRUCTION. STOCK PILE SITES SHALL NOT BE LOCATED WITHIN THE DRIP ZONE OF TREES.

STOCK PILE SITES MUST BE PROTECTED FROM EROSION AND SEDIMENT LOSS BY THE INSTALLATION OF SILT FENCES/STRAW BALES OR OTHER CONTROLS APPROVED BY PROJECT MANAGER.

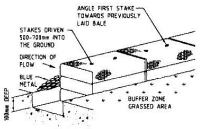
WIND EROSION
TO MINIMISE WIND EROSION DURING CONSTRUCTION, THE GROUND SURFACE SHOULD BE KEPT DAMP (NOT WET). THE SURFACE SHOULD BE LEFT IN A ROUGH CLODDY CONDITION TO INCREASE ROUGHNESS AND SLOW SURFACE WIND SPEED.

LOCATION
LOCATION OF SEDIMENT CONTROL METHODS ie. SILT FENCES ARE SHOWN DIAGRAMMATICALLY ONLY ON DRAWING FINAL LOCATION, EXTENT AND TYPE OF SEDIMENT CONTROL METHODS SHALL BE TO THE SATISFACTION OF PROJECT MANAGER.

THE CONTRACTOR, UNDER SECTION 16 OF THE CLEAN WATERS ACT, IS LIABLE FOR THE DEPOSITION OF ANY CONTAMINANTS DEPOSITED ON ROADWAYS AFTER LEAVING THE CONSTRUCTION SITE.

DRAWING SCHEDULE

DWG No.	DESCRIPTION
ES1	PROJECT INFORMATION AND DETAIL SHEET
ES2	EROSION & SEDIMENT CONTROL MASTER PLAN



DETAIL - STRAW BALE BARRIERS

DESCRIPTION
A TEMPORARY BARRIER OF STRAW BALES PLACED AROUND THE PERIMETER OF A DISTURBED AREA.

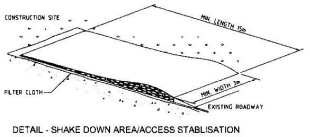
USAGE
STRAW BALE BARRIERS ARE USED TO DESILT CONTAMINATED WATER

INSTALLATION
STRAW BALES ARE ONLY EFFECTIVE ON SITES OF LESS THAN HALF A HECTARE. THE BALES MUST BE PLACED LENGTHWISE IN 100mm DEEP TRENCHES WITH THEIR BINDING WIRE HORIZONTAL TO THE GROUND.

THE BALES MUST BE CONNECTED AND ANCHORED TO THE GROUND BY DRIVING TWO STAR PICKETS OR POSTS THROUGH EACH BALE. THE FIRST STAKE MUST BE DRIVEN TOWARDS THE ADJOINING BALE AT A 45° ANGLE TO FORCE THE BALES TOGETHER.

MAINTENANCE
AFTER RAINFALL STRAW BALE BARRIERS MUST BE INSPECTED AND SEDIMENT REMOVED. DAMAGED BALES SHOULD BE REPAIRED OR REPLACED. BALES HAVE A LIFE EXPECTANCY OF THREE TO SIX MONTHS.

NOTE
THE LOCATION OF STRAW BALES ON THE ABOVE SITE PLAN IS DIAGRAMMATIC ONLY. THE REQUIREMENT FOR THE USAGE OF STRAW BALES IS TO BE AS A SUPPLEMENTARY MEASURE TO ASSIST THE SILT FENCES. FINAL LOCATIONS AND EXTENT OF STRAW BALES TO BE DETERMINED BY THE PROJECT MANAGER.



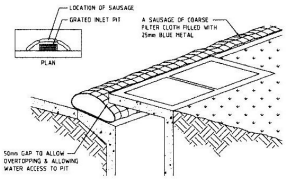
DETAIL - SHAKE DOWN AREA/ACCESS STABLISATION

DESCRIPTION
STABILISED ACCESS SHALL BE A BED OF AGGREGATE ON FILTER CLOTH, GRADE THE ENTRANCE SO THAT IT IS AT LEAST 15 METRES LONG WITH A MINIMUM WIDTH OF 3 METRES FOR A ONE WAY ENTRANCE AND 6 METRES FOR A TWO WAY ENTRANCE. PLACE FILTER CLOTH OVER THE ENTIRE AREA AND COVER IT WITH 150mm MINIMUM THICKNESS OF 50mm AGGREGATE (RIVER GRAVEL OR A RECYCLED OR RECLAIMED CONCRETE EQUIVALENT.

USAGE
SUCH STRUCTURES SHALL BE USED AT ALL POINTS WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE THE SITE AND EXISTING ROADWAYS.

TREATMENT/MAINTENANCE

SURFACE WATER FLOWING TO THE ENTRANCE MUST BE PIPED UNDER THE ENTRANCE, OR A BERM CONSTRUCTED TO DIRECT SURFACE FLOW AWAY FROM THE ROAD. ALL DEPOSITS ARE TO BE REGULARLY CLEARED FROM SITE ACCESS. THE DRAWBAR, TAILGATE ETC OF ANY VEHICLE INVOLVED IN THE TRANSPORT OF GRAVEL ETC TO A CONSTRUCTION SITE MUST BE MANUALLY CLEANED OF MATERIAL BEFORE THE VEHICLE LEAVES THE SITE. SHOULD THE MATERIAL BE DEPOSITED ON THE ROADWAY ETC, SUCH MATERIAL SHALL BE SWEPT AND REMOVED FROM THE ROADWAY.

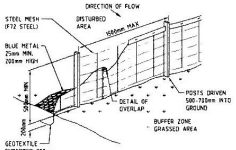


DETAIL - BLUE METAL GROYNE (SAUSAGE)

DESCRIPTION
THE GROYNE COMPRISES A SAUSAGE OF SHADE CLOTH OR OTHER PREVIOUS FABRIC, SOME 260mm DIAMETER, FILLED WITH 25mm BLUE METAL AND CLOSED BOTH ENDS.

INSTALLATION
THE SAUSAGE IS LAID ON THE GROUND ON THE CONTOUR SIMILAR TO A SILT FENCE. GENERALLY THE SAUSAGE SHOULD BE LAID TWO HIGH TO OBTAIN ENOUGH FILTER AREA.

LOCATION
THE GROYNES SHOULD BE LOCATED ACROSS THE ENTRY DRIVEWAY TO THE SITE AND AROUND THE NEAREST DOWNSTREAM KERB ENTRY PITS.



DETAIL - SILT FENCES

SILT FENCES

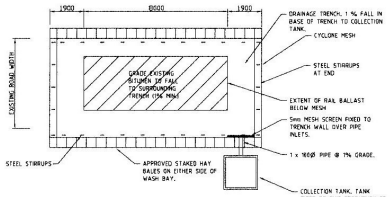
DESCRIPTION
SILT FENCES ARE TEMPORARY BARRIERS MADE FROM A COMBINATION OF FILTER CLOTH AND BLUE METAL

USAGE
SILT FENCES FILTER RUN-OFF LEAVING THE SITE TRAPPING THE SEDIMENT AND ALLOWING CLEAN FILTERED WATER TO PASS. SILT FENCES ARE TO BE PLACED ON THE CONTOUR OR SLIGHTLY CONVEX TO THE CONTOUR. IF ON THE CONTOUR, EACH END OF THE FENCE SHOULD BE TURNED UP TO CREATE A 'STILLING POND' UP SLOPE OF THE FENCE, WHERE POSSIBLE. A SILT FENCE SYSTEM SHOULD BE NO LONGER THAN ABOUT 30 METRES, THEY SHOULD NOT INTERCEPT LARGE CONCENTRATED OR CHANNELISED FLOWS.

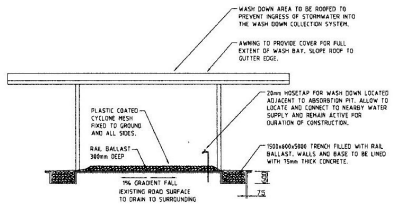
INSTALLATION
THE AREA BELOW A SILT FENCE MUST BE UNDISTURBED ON STABILISED GROUND.

MAINTENANCE
SILT FENCES REQUIRE REGULAR MAINTENANCE. TRAPPED SEDIMENTS SHOULD BE REMOVED. PICKETS STRAIGHTENED, FILTER CLOTH RESECURED AND TIGHTENED AND BLUE METAL REPLACED WHEN HEAVILY CONTAMINATED WITH SILT.

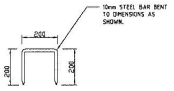
NOTE
FILTER FABRIC SHALL BE EQUIVALENT TO 'GEOLAB' AND BE CAPABLE OF INTERCEPTING SILT PARTICLES DOWN TO 2 MICRON IN SIZE.



VEHICULAR WASH DOWN BAY
PLAN
N.T.S.



VEHICULAR WASH DOWN BAY
SECTION
N.T.S.



STEEL STIRRUP DETAIL
N.T.S.

ISSUE	DATE	AMENDMENT
02	6.11.08	PRELIMINARY ISSUE
01	6.11.08	ISSUED FOR INFORMATION

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PROJECT
AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT
FOR THE AUSTRALIAN FEDERAL POLICE

DRAWING TITLE
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DISCIPLINE: EROSION & SEDIMENT CONTROL

NORTH	DRAWN	TP	DESIGNED	JM
	DATE	6.11.08	SCALE	AS SHOWN
	APPROVED FOR CONSTRUCTION			
JOB No.	08-147	DRAWING No.	ES1	ISSUE 02

Appendix E

Stormwater Drainage Masterplan

NOTES
brewster hjorth
AUSTRALIAN INSTITUTE OF POLICE MANAGEMENT FOR THE AUSTRALIAN FEDERAL POLICE
STORMWATER DRAINAGE MASTERPLAN
J.J.MARINO & ASSOCIATES
STORMWATER
08-147
SW2

Appendix F

Site Inspection Checklist

Internal Environmental Management Inspection

Date of Inspection / / Time of Inspection am/pm

Item	Issue	Acceptable	Not Acceptable	N/A	Comments / Remedial Actions
1	**General**				
	Is the CEMP readily available for use?				
	Are all personnel on site inducted, aware of their environmental responsibilities and relevant provisions of the CEMP?				
	Are required staff trained, and licensed or approved by relevant agencies, for necessary environmental management tasks?				
	Is the incident reporting system in place and working?				
	Is the emergency response plan readily available and are the personnel trained?				
	Are records kept of communication and consultation?				
	Is the Environmental Complaints, Non-conformance and Corrective Action Register maintained and up-to-date?				
	Are corrective actions assigned and closed out on site?				
	Are all other registers and records up to date?				
	Are photo monitoring points in place and on-going?				
2	**Air Emissions**				
	Is any dust being generated by the site activities being adequately managed?				
	Are soil, spoil, fill and mulch dumps/stockpiles and exposed soil areas adequately managed to reduce dust generation?				

Item	Issue	Acceptable	Not Acceptable	N/A	Comments / Remedial Actions
	Are low risk/impact dust suppression methods employed near the Little Penguin nesting/breeding area?				
	Are vehicle/plant/equipment emissions regularly checked and within acceptable standards?				
	No unauthorised burning off?				
3	**Flora and Fauna**				
	Is regulatory and information signage, and barrier fencing, in place in relation to the Little Penguin nesting/breeding area and northern Bandicoot foraging area?				
	Are potential noise and light impacts on the Little Penguin nesting/breeding area and northern Bandicoot foraging area being monitored and adequately managed?				
	Are approved Little Penguin and Bandicoot handlers available on-site or readily contactable?				
	Is the Little Penguin foreshore nesting/breeding area only being accessed by authorised personnel for approved activities only?				
	Are Little Penguin and Bandicoot monitoring efforts on-going, including the Bandicoot "duration" monitoring sites?				
	Is any night lighting directed away from Little Penguin nesting/breeding area and main Bandicoot foraging areas?				
	At the end of each workday, are any pits/holes/trenches fitted with "escape ramps", or covered or edges delineated, to prevent injury to Bandicoots and other wildlife?				
	Are all pits/holes/trenches checked for Bandicoots and other wildlife each morning, including non-work days?				

Item	Issue	Acceptable	Not Acceptable	N/A	Comments / Remedial Actions
	Is stockpiled material inspected for the presence of Bandicoots and other wildlife before being utilised?				
	Are Little Penguin, Bandicoot and other wildlife removal and sighting records maintained?				
	Are all fencing, barriers ands sediment/erosion control measures regularly inspected and effective?				
	Are bushland or vegetated areas inspected for Bandicoots prior to clearing?				
	Security personnel are not accompanied by dogs?				
	Are on-site speed limits signposted and enforced?				
	Are all staff, sub-contractors and regular delivery drivers warned of Bandicoots on Collins Beach Road?				
	Are vehicle risks to Bandicoots on Collins Beach Road being adequately managed and the route inspected morning and evening for dead/injured Bandicoots?				
	Is the *Phytophthora cinnamomi* Dieback Management Plan prepared and being implemented?				
	Is the vehicle washdown facility in place and being operated and maintained correctly?				
	Are vehicle inspection and cleandown records being maintained?				
	Has all fill and landscaping material brought onto site certified as free of Pc?				
	Are fortnightly checks of Pc susceptible tree species being carried out and recorded?				

Item	Issue	Acceptable	Not Acceptable	N/A	Comments / Remedial Actions
	Are trees and native vegetation areas to be retained and/or restricted entry flagged or fenced?				
	Are bushland or vegetated areas inspected for significant flora and fauna species prior to clearing?				
	Are noxious and environmental weeds across the site surveyed and recorded, and this information up-dated?				
	Are appropriate weed control measures in place for the site?				
	Are plantings and landscape treatments being undertaken consistent with the Site Landscape Plan?				
	No native fauna injured or killed?				
	Are pest/feral animal surveys being conducted?				
	Are bushfire risks being adequately managed during the works?				
	Has access to the site perimeter been maintained for fire suppression activities?				
4	**Hazardous materials**				
	Has a Hazardous Material Management Plan been prepared and is it being implemented on site?				
	Is the Hazardous Substances Register established and maintained?				
	Is PPE available for the handling of dangerous hazardous goods?				
	Is asbestos handling, removal/disposal, repair and maintenance being conducted in accordance with all necessary regulations?				
	Are the hazardous materials on site stored appropriately and isolated from the stormwater system?				

Item	Issue	Acceptable	Not Acceptable	N/A	Comments / Remedial Actions
	Are MSDSs available for all hazardous chemicals held on site?				
	Is there a procedure for handling and storing hazardous waste on site, and is it being followed and checked?				
	Are adequate spill kits and emergency response/safety equipment available for dealing with hazardous/dangerous materials incidents?				
	Is there a procedure for disposing of hazardous waste by a licensed contractor in place for the site and is it being followed and adequate records kept?				
5	**Heritage Buildings and Sites**				
	Are the relevant provisions of the Historic Heritage Management Plan being implemented and observed?				
	Has a pre-construction audit and comprehensive record of all heritage buildings been undertaken?				
	Are the retained heritage buildings fenced off, signposted, or otherwise protected, and non-trafficable areas defined?				
	Are the retained heritage buildings inspected fortnightly for evidence of unplanned construction impacts, and any inadvertent/accidental damage managed or repaired?				
	Are the services of a heritage professional accessible and being used as/when required?				
	Are any Aboriginal heritage sites/values that may be present or discovered on the site adequately protected?				
6	**Noise and Vibration**				
	Has a Noise and Vibration Management Plan been prepared and is it being implemented?				

Item	Issue	Acceptable	Not Acceptable	N/A	Comments / Remedial Actions
	Have the 3 off-site noise monitoring locations been established and is noise monitoring on-going?				
	Are the designated work hours being observed?				
	Are activities that generate excessive noise being managed to minimise their impacts?				
	Are noisy activities/equipment functioning correctly?				
	Are any noise complaints being addressed promptly?				
7	**Traffic**				
	Has a Traffic Management Plan been prepared and is it being implemented?				
	Is access to the site adequately maintained for AIPM staff remaining on-site?				
	Is unobstructed emergency access to the site adequately maintained?				
	Is the vehicle/pedestrian access controlled and maintained?				
	Is the vehicle movement log established and being maintained?				
	Are all vehicles leaving the site appropriately cleaned and secured to prevent loss of load and dust?				
	Are all vehicle movements and parking within the designated areas?				
	Is the Spring Cove parking area maintained clear of works-related traffic/parking?				
8	**Waste**				

Item	Issue	Acceptable	Not Acceptable	N/A	Comments / Remedial Actions
	Has a Waste Management Plan been prepared and is it being implemented?				
	Are waste minimisation, re-use and recycling practices being pursued wherever practical and recycling targets being met?				
	Are appropriate waste handling and storage practices being implemented to reduce the safety and environmental hazards from wastes and to encourage re-sue/recycling?				
	Is the site clean and tidy?				
	Are temporary ablution facilities bunded to prevent spills reaching stormwater?				
	Where recycle bins are provided they are being used properly?				
	Are waste bins/containers secured, and the scattering of waste an access by animals minimised?				
	Is waste being collected by a licenced contractor on a regular basis?				
	Are appropriate waste generation, recycling and disposal records kept?				
9	**Water Quality, stormwater and erosion**				
	Is the Erosion and Sediment Control Masterplan operating appropriately and all erosion/sediment control measures in place, maintained and effective?				
	Is the shakedown area installed, maintained and working effectively?				
	Is the Little Penguin nesting/breeding area adequately protected from erosion and sediment impacts?				

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	Is topsoil stockpiled separately from sub-soil materials?				
	Are exposed areas of soil minimised and stabilised as soon as practical?				
	Are soil, spoil and fill stockpiles appropriately sited away from drainage lines, stormwater inlets and sensitive areas?				
	Is stormwater quality assessed fortnightly and within specified limits?				
	Are inspections of the site carried out within 24 hours of a heavy rainfall event?				

Conformance Certification

(Tick appropriate) ❑ Checklist Fully Conforms ❑ Remedial Actions Required

Name: _____Signed: _____Date: / /