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**Australian Government**

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**Department of Innovation  
Industry, Science and Research**

**STATEMENT OF EVIDENCE TO THE  
PARLIAMENTARY COMMITTEE ON  
PUBLIC WORKS**

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**Proposed Relocation of  
National Measurement Institute (Pymble),  
Australian Astronomical Observatory (Marsfield)  
and Enterprise Connect Centre (North Ryde) to  
105 Delhi Road, Riverside Corporate Park ,  
North Ryde, New South Wales**

**November 2010**

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## **SUMMARY**

The Department of Innovation, Industry, Science and Research (DIISR) has components of three Divisions (National Measurement Institute, Australian Astronomical Observatory and Enterprise Connect) requiring new accommodation in Sydney due to expiring leases and the need to replace outdated and inadequate accommodation.

The need for alternative accommodation was identified a number of years ago and the review of alternatives has progressed over several years. Various options were considered from “do nothing” to new owned or leased accommodation. A “do nothing” option is impractical and an option for new owned facilities is not financially viable. The search for suitable leased accommodation that could accommodate chemical laboratories was commenced in early 2010. Following a market analysis and evaluation of formal expressions of interest, DIISR has identified suitable new premises for lease in the Precinct Corporate Centre at 105 Delhi Road Riverside Corporate Park, North Ryde.

The site is owned and is being developed by the Goodman Industrial Trust No 3 (ARSN 130 854 938).

The proposed leased premises consist of two buildings joined on the Second and Third Floors and a link bridge on the First Floor. The building developer (Goodman) had commenced construction of the buildings with the two basement slabs completed. The floors above the basement car parks of the building are yet to be completed, providing the opportunity for a fully integrated fitout. Specific changes will be made to the original buildings design under the lease agreement to meet the DIISR requirements. The net lettable area of the buildings will be 10270 square metres.

Fitout of the buildings will conform to the operational requirements of the various specialist laboratories and comply with Commonwealth and Australian Standards associated with laboratories.

Occupancy of the building is currently scheduled in two Stages. Stage 1 will comprise all work associated with the relocation of the National Measurement Institute from Pymble by May 2012. Stage 2 will comprise all work associated with the relocation of the Australian Astronomical Observatory (Marsfield) and Enterprise Connect Centre (North Ryde).

The fitout costs for the leased premises will be \$25.66 million (GST exclusive) which equates to a rate of \$1,542 per square metre for the Offices and a rate of \$4,725 per square metre for Laboratories.

The development at 105 Delhi Road will conform to all relevant building and laboratory codes including the occupational health and safety requirements for laboratories. Environmental opportunities will be benchmarked against comparable buildings with the objective of delivering better performance.

This work is regarded as Public Works under the Public Works Committee Act and this submission is brought forward by DIISR for the Committee’s consideration.

## **1. INTRODUCTION**

- 1.1 It is proposed to consolidate the Pymble activities of the National Measurement Institute (NMI) and those of the Marsfield Australian Astronomical Observatory (AAO) and North Ryde Enterprise Connect Centre (EC) in new leased premises at Riverside Corporate Park, North Ryde.
- 1.2 NMI, a division of the Department of Innovation, Industry, Science and Research (DIISR), is responsible for Australia's national infrastructure in physical, chemical, biological and legal measurements. Under the National Measurement Act 1960, NMI is responsible for coordinating Australia's units and standards of measurement, thereby allowing Australian industry to operate competitively in a global environment.
- 1.3 NMI delivers essential services to the Australian economy by providing the legal and technical framework for disseminating measurement standards; working with clients in industry and government to provide measurement expertise, calibration services, chemical and biological analysis and pattern approval testing; and supporting Australia's standards and conformance infrastructure.
- 1.4 NMI is Australia's representative under the international measurement treaties that establish the International Committee for Weights and Measures and the International Organisation of Legal Metrology. In regional measurement forums, NMI also represents Australia at the Asia Pacific Metrology Programme and the Asia-Pacific Legal Metrology Forum. NMI's contributions in these activities are key factors in formally securing international mutual recognition of Australia's measurement standards which, in turn, underpins the international acceptance of testing and certification of Australian commodities and products.
- 1.5 In order to meet the measurement needs of government, the public, industry and scientific organisations, NMI undertakes cutting edge research to anticipate the trends of new measurement technologies. NMI maintains a broad range of scientific and technical capabilities to fulfil its statutory responsibilities and to meet government and private sector requirements for traceability of measurements.
- 1.6 Two Branches of NMI are currently located at Pymble and are the subject of this submission. They are Analytical Services and Chemical and Biological Metrology.
- 1.7 The two Branches of NMI occupy leased premises at Pymble which are now outdated and do not meet the requirements of a modern analytical facility.
- 1.8 The Australian Astronomical Observatory (AAO), previously the Anglo-Australian Observatory until 30 June 2010, has become a division of the DIISR. The Australian Astronomical Observatory Act 2010 enables the AAO to operate and support access to Australia's national optical astronomy facilities, to develop and construct instrumentation, to conduct and support research and to facilitate education and outreach programmes.

- 1.9 Since January 2008 the AAO has been the host organisation for AusGO, the Australian Gemini Office, which supports Australia's partnership in the two 8.1 metre Gemini telescopes in Hawaii and Chile. It also supports Australia's access to the two 6.5 metre Magellan Telescopes, located in Chile and operated by a consortium of US institutions. The AAO is thus the centre for all of Australia's national involvement in optical astronomy facilities.
- 1.10 Through a collaboration involving the ANU and a consortium of research institutions called Astronomy Australia Limited (AAL), Australia is now a partner in the 25-metre Giant Magellan Telescope (GMT), which is currently in the design and development stage. As well as the prospect that AAO might help construct large new instruments for this telescope (including MANIFEST, an innovative and versatile fibre-optics front-end), there is also the expectation that it will host the national office for GMT. The AAO's laboratory in Sydney would then become the focus for Australian involvement in the new generation of Extremely Large Telescopes.
- 1.11 The AAO in Sydney is currently housed on the CSIRO site at Marsfield, a suburb of North West Sydney, in two buildings that are 30 years old and are inadequate in size and configuration.
- 1.12 Enterprise Connect has the task of connecting businesses to the knowledge, tools and expertise necessary to improve productivity, increase competitiveness and fully capitalise on the growth potential of businesses. Enterprise Connect works closely with Partner Organisations to assist in that task. The services are delivered through a network of state based Centres in Sydney, Brisbane, Melbourne, Adelaide Perth and Burnie as well as five specialist innovation Centres strategically positioned around the Country. The EC Centre currently located at North Ryde, Sydney in leased premises, forms part of this submission.

## **2. IDENTIFICATION OF NEED**

### **2.1 Background**

- 2.1.1 NMI currently occupies two leased sites in Sydney; one in CSIRO owned premises at West Lindfield and a privately-owned site at Pymble (formerly the Australian Government Analytical Laboratories). The Pymble facility was built in the 1970's as purpose-built chemical research laboratories and its design was based on design philosophies which are now outdated as the nature of analysis has changed to a far more instrumentation based approach. The lease was established when the current owner purchased it from the Commonwealth in 2002.
- 2.1.2 Operationally, the building was designed as a wet chemistry laboratory with limited instrumentation and with low sample numbers. It does not readily accommodate the need to handle large quantities of chemical and biological samples for testing in an effective manner or meet the needs of a modern analytical facility. Moreover the building is already occupied to capacity and does not offer the possibility of NMI expansion into new areas of scientific activity.
- 2.1.3 The Pymble building infrastructure is approaching the end of its effective life with many areas that do not comply with current statutory requirements and standards. The building engineering services have not been effectively maintained and in a number of cases, fail to comply with current statutory requirements for OH&S and are inefficient by contemporary standards. The facility is overcrowded and NMI operations are hindered by lack of space. For example, staff have to perform their office work in laboratory areas due to overcrowding. The use of inefficient fume cupboards causes significant problems with an air-conditioning system that does not have a modern Building Management System. Building power infrastructure is at its limit and cannot provide for new generation testing equipment that continues to grow in demand for power. The one lift in the building, which is critical for transportation of samples, has its original control system and spare parts are no longer available. To date repairs have been made on an adhoc basis but this will only last for a limited time.
- 2.1.4 The Pymble site lease is due to expire on 30 June 2012, with an option to extend for an additional 5 years
- 2.1.5 It is an important operational and OH&S requirement that laboratories such as those required by NMI are correctly and efficiently maintained to ensure compliance with standards for health, safety and the environment. This is increasingly difficult and costly in the existing premises and is an objective which will be more readily achieved in one new location.
- 2.1.6 The AAO in Sydney is currently housed on the CSIRO site at Marsfield, a suburb of north west Sydney, in two buildings that are 30 years old and are inadequate in size and configuration for the current number of AAO staff, for modern opto-mechanical laboratories and for the construction of large and

complex astronomical instruments. AAO owns the existing buildings and has a lease from CSIRO for the use of the site.

- 2.1.7 The Enterprise Connect Centre is currently accommodated in leased premises at North Ryde. The current lease expires on 16 October 2011. Consolidation of its facilities with NMI and AAO will realise efficiencies through shared common facilities and improve adaptability of accommodation on a single site.
- 2.1.8 The proposed fitout design will enable the consolidation and rationalisation of a number of joint use areas to save on duplication. These areas were included as individual areas in the existing buildings. They include lunch room, library, meeting rooms and reception areas.
- 2.1.9 Current occupancy arrangements for the three divisions proposed to be relocated are summarised in Table 1.

**Table 1**

<b>Property</b>	<b>Current Areas (m2)</b>	<b>Proposed New Area (m2)</b>	<b>Tenure</b>	<b>Lease Expiry</b>
NMI Pymble	5637	6631	Leased	30 June 2012
AAO Marsfield	1770	1937	Owned Building Leased Site	Occupancy licence at both parties' discretion
Enterprise Connect North Ryde	522	326	Leased	16 Oct 2011

- 2.1.10 The proposed NMI Branches of Analytical Services and Chemical and Biological Metrology fitout areas will increase to address current overcrowding problems and accommodation inadequacies and to meet minimum contemporary research facility standards and statutory requirements, for example in providing laboratory write-up areas and increased area requirements for laboratories, specialised equipment and instrument rooms.
- 2.1.11 The proposed new AAO fitout area will also increase to meet minimum contemporary research facility accommodation standards and statutory requirements for offices, laboratories and workshop areas and to accommodate the need for construction of complex astronomical instruments. The new fitout plan will provide for a more space effective planning solution than is available in existing facilities.
- 2.1.12 The Enterprise Connect Centre North Ryde area has reduced in size to better reflect their current area requirements
- 2.1.13 Provision for future growth has been included in the base building leased space for future laboratories fitout.

## **2.2 Options Considered**

- 2.2.1 In 2009/2010 investigations were undertaken to determine a suitable alternative location for the NMI activities currently at Pymble. These investigations included options for consolidation of all NMI Sydney operations on a single site. The studies indicated that the capital cost of such a consolidation was prohibitive.
- 2.2.2 The initial review was centred on the existing site at Lindfield, owned by CSIRO but occupied by NMI's Physical Metrology Branch as well as CSIRO. This review indicated that the basic design of the Lindfield property with its long corridors and "fixed" spaces made incorporation of the NMI Pymble function into the building very disjointed and operationally inefficient as well as costly to implement.
- 2.2.3 An alternative proposal was developed to relocate the total NMI function to land at North Ryde currently held in a long term lease by CSIRO. The proposal could not proceed due to non-availability of capital funds. If NMI was to be relocated from Pymble prior to 30 June 2012 the only remaining option available was to lease a building of suitable size and in an appropriate location.
- 2.2.4 The opportunity to house DIISR functions (NMI, AAO and Enterprise Connect) in one location became evident when the lease options were identified.
- 2.2.5 It was determined that any leased building would need to have or be capable of meeting the following requirements:
- a. Have as its basis the ability to meet the Commonwealth requirement for a 5 star NABERS rating environmental rating;
  - b. Single tenancy/or a large building where one wing would form the tenancy of 9000 m<sup>2</sup> to 10000 m<sup>2</sup>;
  - c. Provide a large floor plate capable of housing the Analytical Services Branch on one level (2000 m<sup>2</sup> approx);
  - d. Able to be economically modified to house laboratories;
  - e. Having a loading dock for receipt of numerous samples;
  - f. Have good access to public transport as well as adequate onsite parking;
  - g. Be in an area zoned by Local Government to allow scientific/laboratory activities;
  - h. Be capable of being completed together with an integrated fitout by April/May 2012 with the building ready for occupation by 30 June 2012.
  - i. Affordable rental; and
  - j. Have on site car parking for approximately 200 cars.

## **2.3 Location Options**

- 2.3.1 The availability of potential sites adjacent to CSIRO was identified during the 2009/10 consolidation studies. In addition to these sites a number of alternative options were investigated over a cross section of the Sydney market.



- 2.3.2 A postcode review of staff residences indicated that their locations were broadly dispersed in the North/North-Western side of the city. This was taken into account in considering areas for the proposed relocation.
- 2.3.3 The rental values of the North/North-West Sydney metropolitan areas were those considered most affordable. Those areas included:
- a. Norwest Business Park;
  - b. North Ryde (CSIRO Precinct);
  - c. Rhodes;
  - d. Macquarie Park;
  - e. Olympic Park
- 2.3.4 There were ten (10) buildings investigated and inspected which met the briefed requirements in some part. Only two (2) met the substantial requirements of the brief and they were short listed for further detailed investigation.
- a. 1 Rivett Road, North Ryde  
(a completed office building of 5 floors); and
  - b. 105 Delhi Road, North Ryde  
(a partially completed building constructed to Ground Floor Level).
- 2.3.5 These properties were the only two located in a dedicated Research and Development zone, would be single tenancies, were approximately to the required size and were adjacent to other scientific organisations.
- 2.3.6 The two shortlisted property owners were then invited to submit proposals with a commercial offer to lease.
- 2.3.7 The offers subsequently submitted were very competitive in commercial terms and investigations were then undertaken to determine the best “fit” for the NMI/AAO/Enterprise Connect requirements. It also determined what alterations were needed to the buildings to make them better fit NMI/AAO/Enterprise Connect requirements.
- 2.3.8 The required modifications were transmitted to the two building owners and final offers based on providing those modifications were requested.
- 2.3.9 A comparative assessment of the technical, operational and financial terms of each proposal was undertaken. On a technical and operational basis the 105 Delhi Road proposal was considered significantly better than the alternative. The financial assessment concluded that there was only a marginal financial difference between the two proposals, the 105 Delhi Road being the most economical. The proposed lease term is 20 years plus two five year options.

## **2.4 Preferred Proponent**

- 2.4.1 Following the assessment of the two proposals, the Goodman submission for 105 Delhi Road was considered to offer the best value for money and had significant advantages in the non financial considerations. These included:
- Ability to make significant modifications to the building design prior to construction;
  - Larger floor plates on the upper 2 levels;
  - More effective floor plan design;
  - Ability to have growth space adjacent to some laboratories;
  - Ability to fully integrate the fitout at substantial cost/time saving.

## **2.5 Lease Negotiations for preferred proponent**

- 2.5.1 The final aspects of lease negotiations with the preferred proponent are currently being undertaken following the completion of a Heads of Agreement. All financial aspects including approval pursuant to Regulation 10 of the FMA Act will be sought from the Minister prior to the Agreement to Lease being executed.

## **2.6 Proposed new premises**

- 2.6.1 The proposed new leased premises will have 2 levels of car parking (which are currently completed) with two buildings located above the car parks. The buildings have separate Ground Floors, First Floors joined by a link bridge and second and Third Floors joined by infill floors. The link bridge and the infill floors on the second and Third Floors and an increase in floor to floor level of 250 mm will accommodate the engineering servicing requirements of NMI/AAO.
- 2.6.2 The site has provision for 233 car park spaces.
- 2.6.3 The site is well located in relation to public transport and excellent road frontage to Delhi Road.
- 2.6.4 The layout of the floors has been designed to enable the most efficient flow of samples to laboratories.
- 2.6.5 The buildings contain allowances to enable future expansion into new areas of activity which is not possible in the current premises.

## **2.7 Heritage Issues**

- 2.7.1 There are no known heritage issues in relation to the site.

## **2.8 Environmental Issues**

- 2.8.1 The proposed base building works will comply with the Commonwealth guidelines relating to energy efficient buildings. There is currently no rating for laboratory buildings, however particular attention will be given to inclusion of energy saving design items.

2.8.2 Development of the site will:

- Have no significant impact on the natural or human environment;
- Encourage improved utilisation of existing public facilities and transport infrastructure;
- Make use of existing engineering service utilities including water, sewerage and stormwater in the area; and
- Have a positive effect on the economy of the area via the creation of up to 400 jobs during base building construction and fitout works.

2.8.3 The following are included as part of the base building and fitout to minimise energy use and operating costs and optimise indoor air quality, without reduction in building standards:

- Insulated double glazing to reduce solar radiation and conductive heat gains in summer whilst reducing heat losses in winter;
- Workstations on perimeter and inboard offices with glass walls to optimise use of natural light;
- High frequency compact T5 fluorescent luminaries;
- Automatic perimeter lighting controls;
- Water efficient low flow sanitary and tapware (AAAA) and dual flush cisterns;
- Recirculation and recycling of fire sprinkler and hydrant routine maintenance test water;
- Rainwater harvesting to roof storage tanks provides irrigation for landscaping;
- Basement rainwater storage tanks supplies water for toilet flushing;
- High levels of air filtration and air change effectiveness to reduce CO<sub>2</sub> levels;
- Building facade designed to maximise natural day light, external views and minimise solar glare;
- Use of low level pollutants (Low VOC's) by careful selection of low gassing materials;
- Removal of indoor pollutants from printing and photocopying through dedicated exhaust risers;
- Recycled timber and timber sourced from sustainably managed plantations;
- Recycled steel and cement replacement where appropriate;
- Management of construction waste to ensure maximum recycling;
- Secure bicycle, shower and locker facilities;
- Close proximity to all forms of public transport;
- Reuse and remediation of existing brown field land;
- Use of recirculating fume cupboards where possible, to minimise the amount of air-conditioned air directly exhausted to atmosphere with consequential reduction in electrical load;
- Use of integrated fitout reducing need for rework of completed works;
- Provision of supplementary cooling water loops to allow for 24 hour cooling of specialised communication areas without the need for the main chillers to be running at full capacity; and
- Replacement of multiple refrigerators/freezers with energy efficient large scale units.

## **2.9 Organisations Consulted**

2.9.1 A formal consultative approach has been adopted to provide expert advice in relation to various aspects of this project. The following agencies and businesses will be consulted and/or have been consulted to date:

- Department of Finance and Deregulation;
- Australian Government Solicitor (Legal);
- Department of Climate Change and Energy Efficiency;
- Wilde and Woollard, Quantity Surveyors;
- Rice Daubney, Architects;
- Forcefield Services (security advisor);
- George Froth, Services Engineers;
- Jones Lang LaSalle (property advisors);
- Ryde City Council;
- CSIRO;
- Local Federal and State members

### **3. TECHNICAL SOLUTION**

#### **3.1 General**

The NMI/AAO/Enterprise Connect fitout will occupy the whole of Buildings 2 and 3 at 105 Delhi Road, Macquarie Business Park.

#### **3.2 Scope of Work**

3.2.2 The works include:

- a. Completion of construction of the base building by the developer/lessor incorporating modifications to accommodate NMI/AAO/Enterprise Connect requirements;
- b. Integration of engineering services into the base building works, including electrical, mechanical, communications, security, specialist laboratory gases, fire and hydraulic services;
- c. Provision of supplementary air-conditioning in specialist laboratory areas such as clean rooms and some instrument rooms where lower tolerance of temperature or humidity is required and in larger meeting rooms and amenities areas;
- d. Installation of fume cupboards that are exhausted as well as specialised recirculating fume hoods;
- e. Installation of cabling throughout the building for telephones and extensive data cabling required for equipment in the Instrument Rooms, including provision for future expansion;
- f. Incorporation of an emergency generator into the electrical reticulation to ensure that continuous power is available for the Cool Room/Freezer Rooms, essential equipment and some selected crucial instruments;
- g. Construction of NMI/AAO/Enterprise Connect fitout works to conform to the operational requirements of the various specialist laboratories and to comply with Commonwealth and Australian Standards associated with laboratories;
- h. Provision of door hardware and electronic access control at main entrances, other secondary points of entry, with some areas having higher than normal security controls;
- i. Supplementation of the base building fire services where required as a result of the fitout to ensure compliance with the relevant codes. These services include additional exit lights, fire detection and sprinkler supplementation as necessary. Specialist fire suppression systems will be used in instrument rooms with high value instruments as well as computer rooms;

- j. The complete fitout has been designed to meet the operational requirements of the various specialist sections. The laboratories have been designed so as to minimise the impact on the external glazed walls. The offices and work stations have been located so that staff have ready access to laboratory and instrument areas;
  - k. Provision of standardised offices and workstations;
  - l. Provision of meeting rooms which are accessible from major paths of travel, generally in central areas, available to staff through a central booking system;
  - m. Provision of a First Aid Room;
  - n. Provision of Amenity area and dispersed tea stations;
  - o. Provision of an integrated library facility.
- 3.2.3 Space allowances for the workstation/office/reception areas have been designed to be consistent with the requirements of the Department of Finance and Deregulation.
- 3.2.4 The fitout design will enable the hundreds of samples received each week to be readily moved to the sample preparation area before being distributed to the appropriate laboratory for testing.
- 3.2.5 The Drugs in Sport and the Forensic Laboratories will receive samples in accordance with the requirements of “chain of custody” requirements and in appropriate security.
- 3.2.6 The fitout has been designed with capacity to enable expansion on levels one and two as well as the ground floor.
- 3.2.7 Floor Plans that have been developed in consultation with user staff are included at Annexure B. It is anticipated that only minor adjustments will be made to these plans as further design development is undertaken.

### **3.3 Zoning and Approvals**

- 3.3.1 Planning approval on this site is the responsibility of Ryde Council. The specific location at North Ryde is zoned “Research and Development”. This zoning is consistent with the requirements of the proposed building use by NMI/AA)/Enterprise Connect.
- 3.3.2 The base building has a pre-existing Development Application approval and a Section 96 approval is currently being sought to meet the changes to the building required by NMI/AAO/Enterprise Connect.
- 3.3.3 The Development Application for the proposed fitout works will be submitted for consent in November 2010.

### **3.4 Codes and Standards**

3.4.1 The fitout will comply with all statutory requirements including Building Code of Australia (BCA), Commonwealth and State building, health and safety regulatory requirements, Australian Standard Laboratory Codes and the National Code of Practice for the Construction Industry and the Australian Government Building and Construction Accreditation Scheme.

### **3.5 Planning and Design Concept**

3.5.1 The quality of the building finishes and services for the non laboratory component of the building will be consistent with Property Council of Australia “A” grade standard in accordance with the Property Council of Australia Office Quality Grade Matrix.

3.5.2 Base building changes to be provided by Goodman as part of the lease agreement include:

- a. Increasing the floor to floor height from 3650 to 3900 at levels 1, 2 and 3;
- b. Linking the upper 2 levels of the building with floors to provide a larger floor plate to ensure better linkages and planning solutions;
- c. Linking the First Floor with a 2 metre wide “bridge” for movement between the buildings;
- d. Revising the Ground Floor area to enable effective delivery of samples.

3.5.3 The building fitout works will provide for long term flexibility (multiple use of space), adaptability (easy conversion of layout/simple reservicing) and simplicity of maintenance (with fully accessible engineering services).

3.5.4 Laboratory finishes will be dictated by their functional requirements and the relevant laboratory codes. Some areas will have acoustic tile ceilings while others may have the exposed slab of the floor above. Clean Rooms will have flush finished plasterboard. All laboratories will have welded sheet vinyl with appropriate slip resistance or antistatic characteristics.

3.5.5 The building facade will comprise of transparent facade elements designed to meet the environmental requirements of Section J of the BCA, and include double glazing and solar shading.

### **3.6 Building Mechanical and Electrical Engineering Services**

3.6.1 The mechanical engineering plant, services and specialised gases installations will specifically address the following criteria.

- Proven reliability and performance;
- Ease of maintenance and replacement; and
- Low building energy consumption.

- 3.6.2 Two lifts will be provided in each core, one lift in each core will have additional load bearing capacity and extra door width to enable movement of large instruments.
- 3.6.3 Electrical services will be supplied from two 800 KVA Kiosk substations connected to main low voltage switchboard and distributed to distribution boards on each floor.
- 3.6.4 An emergency generator will be installed together with appropriate switch gear to provide essential power to areas of the building where loss of power may cause degrading of samples e.g. freezers/refrigerators or loss of significant test results from instruments which have 24 hour run cycles. These instruments will also have U.P.S. connections to provide time for the generator to reach load capacity.
- 3.6.5 Lighting to non laboratory areas will be provided utilising recessed T5 fluorescent luminaires in a layout designed to achieve 320 lux in open plan areas, supplemented where necessary by task lighting. Security lighting will be provided to Ground Floor outdoor areas and the main pedestrian access. Laboratory lighting will be designed to meet functional requirements.
- 3.6.6 Category 6 data cabling will be utilised throughout the building with provision for expansion.
- 3.6.7 A Master Antenna for TV services will be provided.

### **3.7 Fire Protection**

- 3.7.1 Fire Protection will consist of
- Automatic Wet Pipe Fire System installed throughout the building to meet BCA requirements including Control Valve and Booster Pump;
  - Portable Fire extinguishers/blankets to meet BCA requirements;
  - Fire Indicator Panel and Fire Fan Control Panel;
  - Battery operated self contained emergency lights and exit signs;
  - External and Internal fire hydrant systems;
  - Internal fire hose reel system;
  - An addressable smoke detection system;
  - An addressable fire indicator panel (FIP) located in the Fire Control Room Centre incorporating a fire fan control panel with fire signals to mechanical plant and switchboards/motor control centres. Mimic Panels shall be installed in the Lobbies of the building entry;
  - Required Mechanical service Fire Trips in the FIP and signal wiring to Mechanical Service Switch Boards.
- 3.7.2 Inert Gas Fire Suppression Systems will be installed in some instrument rooms where the equipment has very high value and water from sprinklers would destroy the instruments.



3.7.3 A bushfire assessment for the site has been undertaken by the developer. The site and buildings will be designed to meet the recommendations of the bushfire assessment report.

### **3.8 Hydraulic Services**

3.8.1 Hydraulic Engineering Services will include:

- Domestic cold water reticulation servicing all fixtures and required back flow prevention;
- Domestic hot water with energy efficient preheat independent of the system serving the mechanical services installation;
- Suspended sanitary drainage to all base building wet areas;
- Natural gas service for base building and fitout requirements;
- Neutraliser tanks at all sink units in laboratories;
- Elbow operated taps and fixtures to all laboratory fittings;
- Water efficient flushing devices and tapware in toilets/showers and tea areas;
- Rainwater collection and discharge to meet Local Government requirements.

### **3.9 Lifts**

3.9.1 The buildings, including basements, will be serviced by two lifts in each core. One lift in each core will be upgraded to carry 300 kgs and 700 kgs as single pieces of equipment.

3.9.2 The lift cars will be designed to have finishes that are able to withstand the wear from the many trolleys that will be used to transport samples.

### **3.10 Security**

3.10.1 A security risk assessment will be conducted during the detailed design stage and the building design will match that assessment together with any additional specific requirements identified for the “secure” laboratories.

3.10.2 The laboratories on the Third Floor, Australian Forensic Drug Testing, Australian Sports Drug Testing and Chemical Reference Materials have particular security requirements that are more onerous than the other laboratories in the building.

3.10.3 All staff will be provided with security passes which interface with electronic proximity readers at the perimeter of the buildings and all laboratories. The security passes will be coded to ensure that only authorised staff access laboratories with specific security classifications.

3.10.4 A security desk will be located in the foyer of the building and all visitors will be required to be signed in by staff and escorted during their visit.

### **3.11 Acoustics**

- 3.11.1 The building design incorporates measures to reduce noise in work environments including double glazed windows, and in office areas, acoustic tile ceilings, and carpet tile on floors. The laboratories will be treated acoustically consistent with operation requirements. Equipment noise is an issue in some of these laboratories and specially designed housings will be built to suppress the noisier equipment.
- 3.11.2 Reduction of noise between offices, meeting rooms and work areas has been incorporated into the design.

### **3.12 Landscaping and Civil Works**

- 3.12.1 Landscaping surrounding the project will be designed to add to the visual amenity of the site. It will be designed to minimise the opportunity for vandalism by having vandal resistant lighting and finishes.

### **3.13 Barrier Free access**

- 3.13.1 The base building includes a number of provisions to assist people with disabilities including:
- The building has been designed to comply with AS1428.2 and comply with the mandatory provisions of the BCA;
  - Provision of disabled parking for staff;
  - Access for disability toilet areas for the offices will be provided in accordance with the following:
    - AS1428.1 – 2001
      - Design for access and mobility – General requirements for access – New Building Work;
    - AS1428.2 – 1992
      - Design for access and mobility – enhanced and additional requirements – Buildings and Facilities;
    - AS1428.4 – 2002
      - External Landscaping and layout to ensure wheelchair access is available to main entry;
    - AS1735.12, AS1428
      - Requirements of lifts for people with a disability.

### **3.14 Staff Consultation**

- 3.14.1 NMI, AAO and Enterprise Connect have adopted a number of communication strategies for internal and external consultation. This includes extensive consultation with representatives from the various functional areas in developing user requirements. Consultation will continue as documentation commences and construction proceeds. A Communication Plan will be developed to ensure that all staff are made fully aware of the proposed relocation and that timely information is provided as the project develops. This will include the following:

- a. All staff will be advised of the progress of the works during the documentation and construction phase by way of project bulletins, newsletters, Executive briefings, displays and presentations;
- b. A new small laboratory recently completed by NMI at Lindfield together with a larger NMI laboratory completed in 2008 will be used as prototypes;
- c. The use of emerging equipment and processes will be introduced to staff in NMI at Pymble so that training can be undertaken prior to the relocation;
- d. Information sessions will be provided to staff and staff visits organised with the agreement of the Builders;
- e. A reference group in NMI and AAO has been established among senior staff to advise on the more technical requirements of areas of the project.

### **3.15 Occupational Health and Safety**

- 3.15.1 The project team will work to ensure that the stringent requirements associated with laboratory design are incorporated into the design. These requirements are clearly detailed in the relevant Australian Standards. All internal furniture and fittings will be designed to ensure they are suitable for a wide range of staff to use safely and with minimal risk of injury.
- 3.15.2 Laboratories where chemicals are used will receive particular design attention to minimise potential spills, include oxygen level alarms and have a specialised exhaust system in high chemical use areas.
- 3.15.4 The design, materials and finishes used in the furniture, benches and fitout construction will take into account Occupational Health and Safety (OH&S) aspects and avoid sharp edges, furniture legs which cause obstructions and highly reflective surfaces.
- 3.15.4 Viewing panels between corridors, laboratories and in walls within laboratories will have viewing panels so that incidental visual observation is possible for staff.
- 3.15.5 Metal working machinery in the AAO workshop will be positioned as required by safe work practice.
- 3.15.6 Progressive design review will be undertaken to ensure that all OH&S requirements are being met and will be reassessed to ensure their workability.
- 3.15.7 The NMI/AAO/Enterprise Connect Occupational Health and Safety team will provide ongoing advice during the documentation and construction of the fitout.
- 3.15.8 All contractors and subcontractors will comply with the requirements of the Office of the Federal Safety Commissioner.

### **3.16 Local Impact**

- 3.16.1 A number of projects in this area have commenced but have been stopped due to a significant decline in rental opportunities. The restart of construction of 105 Delhi Road and the integration of the fitout will provide a positive impact on the local construction industry. It is anticipated that up to 400 jobs will be created through on-site activities, off-site manufacturing and supplier activities and from demand induced employment.
- 3.16.2 Existing infrastructure services including power, communications, sewerage, gas and water supplies are well developed and can readily cope with the demand from this project.
- 3.16.3 There will be no job losses in NMI/AAO/Enterprise Connect as a result of this new fitout. Furthermore, growth through increasing medium term research and service delivery opportunities will now be able to be accommodated as a consequence of the inclusion of expansion space in the design.

### **3.17 Project Delivery Methodology**

- 3.17.1 NMI/AAO/Enterprise Connect intend to engage the developer to prepare the detailed design documentation and construction of the fitout concurrently with the base building. The fitout will be tendered as trade packages and the cost paid will be the actual tendered prices for the works completed with the developer charging a percentage fee for the management of the works plus a fixed cost for project preliminaries.
- 3.17.2 An integrated fitout is expected to provide NMI/AAO/Enterprise Connect with the following efficiencies and benefits.
- a. Construction costs will be less because the fitout related work will be done at the same time as the base building work, hence there is no need for rework in modifying the base building to accommodate the fitout after the base building is completed;
  - b. Significant time will be saved because the fitout does not have to wait until the base building is completed before the fitout works commence;
  - c. Coordination is more effective because the same project team manages all aspects of the work. As there are fewer over-laps in responsibilities there is less potential for disputes over matters of coordination;
  - d. There is less duplication of resources with one team of design and supervision and management personnel for both aspects of the work.
- 3.17.3 NMI/AAO/Enterprise Connect has engaged their own Project Manager to ensure their interests are protected throughout the process.
- 3.17.4 A schematic design for the fitout has been completed by the NMI/AAO/Enterprise Connect Project Manager after detailed consultation with the user groups and provided to the Developer's Architects to integrate into the building design.

- 3.17.5 An independent Quantity Surveyor will oversee the cost management of the project for both NMI/AAO/Enterprise Connect and the Developer.
- 3.17.6 A peer review group of consultants, consisting of Electrical and Mechanical Engineers will be engaged to ensure NMI/AAO/Enterprise Connect interests are protected throughout the design and construction process.

### **3.18 Construction Program**

- 3.18.1 Fitout will be undertaken concurrently with the base building construction. All the in-ground work on the site has been completed and on the basement level one carpark slab was completed prior to the project being halted. This will enable the upper levels of the development to proceed without the delays often experienced when building basement levels. The project program has been reviewed to ensure it is feasible.
- 3.18.2 High priority will be given to the monitoring of the program to ensure that any potential delay is identified at an early stage and action taken so that there is no impact on the completion date.
- 3.18.3 The major emphasis of the fitout will be completion of the offices and laboratories associated with the NMI activities relocating from Pymble.
- 3.18.4 Experience from the recently completed NMI laboratories at Melbourne and Lindfield have identified areas where special attention is required and to ensure that items delayed are not critical to initial occupancy.

### **3.19 Project Costs**

- 3.19.1 The estimated cost of the fitout of \$25.66 million is based on an elemental estimate prepared by Wilde and Woollard, Quantity Surveyors. The underlying rates of \$1,542 per square metre (excluding GST) for offices and \$4,725 per square metre (excluding GST) for laboratories are consistent with the rates achieved in three reference projects.

### **3.20 Sketch Designs**

- 3.20.1 The site plan, floor plans and perspective drawings are attached in Annexure A.

## **ANNEXURE A      DRAWINGS**

<b>Sheet No.</b>	<b>Title</b>
<b>1</b>	<b>Locality Plan</b>
<b>2</b>	<b>Locality Perspective</b>
<b>3</b>	<b>Aerial Perspective</b>
<b>4</b>	<b>Front Perspective</b>
<b>5</b>	<b>Front Entry Perspective</b>
<b>6</b>	<b>Ground Floor Plan</b>
<b>7</b>	<b>Level 1 Floor Plan</b>
<b>8</b>	<b>Level 2 Floor Plan</b>
<b>9</b>	<b>Level 3 Floor Plan</b>
<b>10</b>	<b>Section</b>