4.0 Statement of Commitments

4.1 Introduction

The Statement of Commitments for the Liverpool Hospital Redevelopment project outlines how the project will be managed to minimise potential environmental impacts during the detailed design, construction and operation phases.

4.2 General Commitments

The development will be undertaken generally in accordance with the Environmental Assessment Report dated August 2006 and the Concept Plan shown therein.

NSW Health is committed to the principles of sustainability as defined in the Environmental Planning and Assessment Act 1979. The construction and operation of the hospital will be undertaken in accordance with Premier's Memorandum No. 2003-2 High Environmental Performance for Buildings and the requirements of the Environmental Performance Guide for Buildings (EPGB).

The proponent will obtain all necessary approvals required by State and Commonwealth legislation in undertaking the project.

The proponent will continue to liaise with the local community during the development process.

The buildings will be set out by a registered surveyor to verify the correct position of each structure in relation to property boundaries and the approved alignment levels. The registered surveyor will provide evidence to Council that structural works are in accordance with the approved project application.

A separate application will be made to Council for approval under Section 68 of the Local Government Act, 1993, for the erection of hoardings or scaffolding in a public place.

Early Works and Demolition

Early works, excavation and structural works proposed as part of the project will be undertaken in accordance with relevant guidelines and legislation.

Prior to commencement of Early Works, a Construction Environmental Management Plan (CEMP) will be prepared. This plan will include procedures for the following:

- **Contact details of the site manager;**
- **Air quality/dust control;**
- **Noise and vibration management;**
- **Waste management;**
- **Flora and fauna protection;**
- **Community access and safety;**
- **Site specific soil erosion and sediment control;**
- **Traffic and pedestrian management;**
- **Storage and handling of materials;**
- **Environmental training and awareness;**
- **Contact and complaints handling procedures;**
- **Emergency preparedness and response;**
- **Site induction, OHS&R management and training;**
- **Services disruption planning and management;**
- **Archaeological and heritage management; and**
- **Site contamination review and remediation, hazardous materials and contamination management.**

The Traffic and Pedestrian Management procedures will address the following matters:

- **Ingress and egress of vehicles to the site,**
- **Loading and unloading, including construction zones,**
- **Predicted traffic volumes, types and routes, and**
- **Pedestrian and traffic management methods,**

A copy of the plan will be provided to Liverpool City Council.

Prior to the commencement of works at the site all asbestos based and other hazardous materials that will be disturbed during refurbishment works will be removed. Removal of asbestos based materials will be undertaken in accordance with the regulations and requirements of the NSW Government and the Worksafe Australia Asbestos Code of Practice and Guidance Notes.

The Contamination Management procedures will be prepared by a suitably qualified person in accordance with relevant legislation and guidelines, identifying any contaminants on site and the required procedure for removal of contaminants and remediation of the site.

Prior to the commencement of building works, a Site Audit conducted by a suitably qualified person will be undertaken to ascertain that all identified hazardous materials have been removed from the site.
Measures to control soil erosion during demolition and construction will be in accordance with currently accepted principles, as described in Managing Urban Stormwater (EPA NSW) and Soil Erosion and Sediment Control (The Institution of Engineers, Australia).

Construction hours – The hours of construction, including the delivery of materials to and from the site, will be restricted as follows:

- **Between 7:00am and 6:00pm, Mondays to Fridays inclusive;**
- **Between 8:00am and 1:00pm, Saturdays;**
- **No work on Sundays and public holidays.**

Works may be undertaken outside these hours where:

- **The delivery of materials is required outside these hours by the Police or other authorities;**
- **It is required in an emergency to avoid the loss of life, damage to property and/ or to prevent environmental harm;**
- **The work is approved through the Construction Noise and Vibration Management Plan; and**
- **Residents likely to be affected by the works are notified of the timing and duration of these works at least 48 hours prior to the commencement of the works.**

Public ways will at all time to be kept clear of any materials, vehicles, refuse, skips or the like.

A sign will be erected in a prominent position on the site prior to the commencement of works in accordance with NSW Health policy.

In the event of any damage being caused to any existing kerb, guttering, stormwater pit, footpath trees and/ or footpath during building operation, the applicant will repair or reimburse Council for the full costs of repairing and making good.

Public reserves, public roadway or private property (other than subject site) will not be used for storage or disposal of building materials or waste or excavated materials.

Demolition will be undertaken in accordance with the requirements of Australian Standard AS2601 – 2001: The Demolition of Structures which is incorporated into the Occupational Health and Safety Act 2000 administered by WorkCover NSW.

A licensed asbestos contractor will be engaged to monitor demolition of buildings containing asbestos or other contaminants.

Following removal of all asbestos from the site final clearance certificates will be obtained.

Urban Form and Design

The detailed design of the facilities will incorporate the strategies of resource consumption, environmental loadings, quality of indoor environment, functionality and wider planning issues of economics, management, transport and cultural environment as outlined in the Environmental Performance Guide for buildings.

The detailed design will comply with the principles and development controls set out in the Concept Application and as detailed in Section 3.0 and 4.0.

The key commitments include:

- Ensuring the compatibility of the proposals with the existing bulk and scale of the surrounding development and the controls set out in the Liverpool City Council DCP No. 30.
- Minimising impacts on the existing landmark buildings, topography, streetscape and view corridors in the locality.
- Establish urban form and design proposals that minimise the overshadowing of existing private land.
- Improve the pedestrian, vehicular connectivity of the hospital and its environs together with improved links to the transport interchange including an upgrade to pedestrian links along College Street and Moore Street to maximise safety and security for staff and patients and visitors.
- Provide measures to maximise active street frontages and improve street address.

Transport, Traffic and Access

Roads and other traffic based element will be designed and constructed in accordance with Australian Standards and/or the relevant standards of Liverpool City Council, RTA or RailCorp as applicable.

Car parking and loading bays will be constructed in accordance with the relevant Australian Standards.

The transport, traffic and access proposals will support the strategic transport policy objectives contained in the Metropolitan Strategy, SEPP 11, LLEP 1997 and DCP 30.

Alternative means of vehicular and pedestrian access across the railway line will be provided. These are scheduled to be completed and operational in 2009 in conjunction with commencement of operations of the SSFL. Joint funding arrangements with ARTC and RailCorp are to be agreed and incorporated into the forthcoming VPA.

Review the Construction Management Plan (CMP) for the SSFL and pursue assurances that any damage to existing hospital roads associated with the construction of the SSFL will be repaired/reinstated.

Establish a new north link road aimed to minimise traffic on sensitive road frontages, provide an efficient vehicular system for public and emergency vehicles and improve the safety of ‘drop off’ zones.
Promote alternate forms of transport including increased use of rail, bus, transitway services as well as car pooling and promoting cycling.

Access and Safety protocols will be included in a CEMP to maintain access and use of the site during the redevelopment of the hospital site to ensure the safety of staff, visitors and patients.

The design of facilities will permit effective, appropriate and safe use by all people, including those with disabilities and will be in accordance with:

- NSW Health Facility Guidelines, including Part B - Design for Access, Mobility, OH&S and Security.
- DDS32 Improved Access for Health Care Facilities.
- AS 1428.
- The Building Code of Australia.

Construction traffic requirements will be included in the CEMP.

Heritage

- **An archaeological assessment of the site will be undertaken prior to the commencement of works on the site. Consultation regarding Aboriginal heritage will be carried out with the local Land Council.**
- **Any works done to the existing built fabric of listed buildings will be done in accordance with Articles 3, 5.2, 7, 22.2, 30 and 27.2 of the Burra Charter.**
- **All recorded archaeological work on site will be submitted to the NSW Heritage Council for information.**
- **An interpretation strategy for movable heritage items will be prepared.**
- **Undertake further archaeological assessment monitoring of identified PAD sites in accordance with relevant guidelines and legislation prior to the commencement of works on the site.**
- **In the event that any historical or Aboriginal relics are uncovered during excavations, all excavation and disturbance to the area will stop immediately and the Department of the Environment will be informed in accordance with Section 91 of the National Parks and Wildlife Act 1974.**
- Implement tree protection measures to prevent damage from construction to the listed avenue of Cabbage Tree Palms located in the road median on East Campus and existing trees on the southern side of Elizabeth Street which form a visual buffer between the hospital and the TAFE.
- Ensure the existing heritage wall located on the TAFE boundary is protected in association with works or the TAFE site.
- Minimise the impact of any future development on the TAFE site by employing the guidelines set out in the Heritage Report (Appendix F) and as detailed elsewhere in this report. In addition, any impact from future development proposals on the TAFE site will be subjected to a heritage impact assessment and further archaeological assessment by a qualified consultant.
- Undertake a Heritage Impact Assessment of the Hugh Jardine building in association with any proposals on the East Campus future development site and undertake archival recordings as necessary in accordance with the recommendations of the Heritage Impact Assessment prior to commencement of any demolition works or alterations on this site.
- Undertake archival recordings of 1 Campbell Street prior to commencement of any demolition works on this site.
- Any heritage structures to be demolished will be recorded in accordance with NSW Heritage Office guidelines prior to the commencement of works on the site.

Services

- **The proponent will comply with the requirements of the relevant public authorities in regard to the connection to, relocation and/or adjustment of services affected by the construction of the proposed development.**
- **The diversion of the existing services will be carried out in consultation with the Council and/or the relevant agency and in accordance with the necessary requirements.**
- **The proponent will ventilate all buildings in accordance with relevant codes.**
- **All cooling towers and cooling and warm water systems will be operated and maintained in accordance with AS 3666:1995 (or AS 3666:2000) the Public Health Act 1991 and Public Health (Microbial Control) Regulation 2000.**

Acoustics and Vibration

- **Prior to the commencement of any works on the main works on the site, Noise and Vibration Management procedures will be prepared as part of the CEMP which will address the following matters:**
  - **All work, including demolition, excavation and building work will comply with Australian Standard AS2436: 1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites.**
  - **A suitably qualified acoustic consultant will be utilised to ensure that building isolation and internal noise requirements are met.**
  - **Identification of the specific activities that will be carried out and associated noise sources,**
  - **Identification of all potentially affected sensitive receivers including residences, schools, and properties containing noise sensitive equipment (including the hospital itself),**
  - **Noise and vibration monitoring, reporting and response procedures.**
  - **Assessment of potential noise and vibration from the proposed construction activities including noise from construction vehicles and any traffic diversions,**
  - **Description of specific mitigation treatments, management methods and procedures that will be implemented to control noise and vibration during construction;**
  - **Review the visual impact of any noise mitigation measures proposed as part of the development to assess the adequacy and potential additional architectural treatments required in the hospital locality.**
  - **Justification of any proposed activities outside the construction hours specified in the conditions of this consent.**
  - **Construction timetabling to minimise noise impacts including time and duration restrictions, respite periods, and frequency,**
  - **Procedures for notifying residents of construction activities that are likely to affect their amenity through noise and vibration,**
  - **Contingency plans to be implemented in the event of non-compliances and/or noise complaints,**
- **Noise and Vibration management will be in accordance with the CMP.**
- **The design of the building fabric will respond to the increased noise and vibration levels arising from the proposed rail corridor development works. This will take into account the mitigation measures undertaken by the rail agencies in accordance with the forthcoming VPA taking into consideration the government policy documented in Interim Guidelines for the Assessment of Noise from Rail Infrastructure Projects Department of Environment and Conservation / Department of Planning September 2006 and Planning Guidelines for development adjacent Rail Corridors November 2006.**
- A suitably qualified acoustic consultant will be utilised to ensure that building isolation and internal noise requirements are met.
- A reconfiguration of Hart Street is proposed in order to move traffic away from existing residential properties. Landscaping and a car park area will also provide a buffer.
- Procedures to minimise noise impact on nearby residences from helicopter movements include:
  - Minimising ground running time while on the helipad,
  - Avoiding ‘shallow’ approach and departure angles,
  - Aligning the final approach and departure path parallel to Elizabeth Street, except where necessary (due to strong winds) to deviate slightly in the final stages of landing or initial stages of take-off so as to orient the helicopter into the wind.
- Careful consideration of glazing, wall construction and openings will be undertaken during the detailed design phase so that an acceptable acoustic environment is achieved.
- Noise and vibration sensitive equipment and work areas will be located away from the building facades where possible especially on the eastern and southern facades.
- Operating theatres and MRI equipment to be appropriately located and treated for noise and vibration as required.
- Due to the proximity of proposed construction works to vibration sensitive areas, careful consideration will be paid to construction techniques and equipment.
- Detailed design for noise and vibration mitigation will consider:
  - Architectural acoustics and building envelope design,.
  - Design of specialized acoustic spaces such as auditoria, and conference rooms.
  - Internal space planning.
  - Sound isolation from external sources.
  - Mechanical services/plant noise and vibration prediction and design of mitigation measures.
  - Control of reverberant noise build-up and specification of materials.
  - Speech privacy and intelligibility.
  - Sound system and audio-visual design.
- **Pursue noise control measures and building acoustic work contained in the SSFL Environmental Assessment that are appropriate.**
- **Pursue a Noise and Vibration Mitigation Plan to be prepared by RailCorp associated with any construction works in the vicinity of the hospital.**
- **Review the Construction Management Plan (CMP) for the SSFL to ensure appropriate controls relating to dust, noise, vibration and access hours.**
- **Review the visual impact of the noise mitigation measures proposed as part of the SSFL to assess the adequacy and potential additional architectural treatments required in the hospital locality.**

Vegetation

- Landscaping in accordance with the Masterplan Concept drawing will be provided.
- The proponent will seek to retain as many trees as possible on the perimeter of the site.
- **All trees on the site that are to be retained will be suitably protected by way of tree guards, barriers or other measures as necessary prior to the commencement of works on the site. These are to be provided to protect root system, trunk and branches, during construction and demolition. Stockpiling or storage or mixing of materials, washing of equipment, vehicle parking, disposal of liquids, machinery repairs and refuelling, disposal of building materials such as cement slurry, siting of offices or sheds will not occur within the protective fencing.**
- **There will be no soil level changes under the canopy of trees to be retained**
- **Any branch or root pruning required will be carried out by a qualified arborist.**
- **Where mature trees are removed, consideration will be given to replacement with mature specimens where feasible.**

Drainage, Stormwater and Water Management

- The design of the stormwater disposal system will be based on the latest edition of AR&R and Bureau of Meteorology ARI statistics, Authority Guidelines and AS3500.
- Existing in-ground stormwater drainage will be diverted in consultation with Liverpool Council.
- Measures to control soil erosion during demolition will be introduced in accordance with current accepted principles, as described in Managing Urban Stormwater (EPA NSW) and Soil Erosion and Sediment Control (The Institute of Engineers, Australia).
- Habitable floor levels to be no lower than the PMF (i.e. 10.9m AHD).
- Engineer's report required, prior to the finalisation of design of the new hospital facilities, to certify that the development will as much as practicable minimise flood effects elsewhere, having regard to:
  (i) loss of flood storage.
  (ii) changes in flood levels and velocities caused by alterations to the flood conveyance.
- The minimum surface level of open car parking spaces will be as high as practical.
- Enclosed car parking, with a floor level below the 20 year flood or more than 0.8m below the 100 year flood, will have adequate warning systems and signage.
- Consultation will be conducted with Council to determine proposed mitigation strategies.
- Maintain adequate access in and around the Hospital during major flood events and to mitigate the escape of potentially hazardous materials stored below the PMF.
- Where it is not practicable to design all floor levels, including the basement, above the PMF level, additional measures to provide flood immunity will be considered and/or the subject areas restricted to compatible non-critical uses only including excluding patient assessment, accommodation or procedural areas.
- Emergency management procedures for events greater than 1 in 100 year for both the local catchment and Georges River will be established. Hospital to maintain post-disaster functions.
- Access in and out of areas lower than PMF e.g. storerooms, carparks, and associated ramps/stairwells will be provided.
- No public consultations, assessments, procedures or accommodation would take place below 10.9 AHD.
- Access to the hospital is be maintained in a PMF event.
- Hospital operational policies will be implemented for adequate warning and means of access for evacuation of all persons, vehicles, records and stores and removal of garbage and waste out of basement areas and temporary alternative collection and storage areas for a major flood event prior to the opening of the new hospital facilities.
- Access to loading docks for delivery and removal and storage areas on the western portion of the site above the PMF level will be available for such situations.
- Only non-critical uses will be permitted in potential PMF affected areas (ie non patient or procedural or sensitive equipment and storage of hazardous or environmentally sensitive material unless adequate flood proofing or immunity and/or means of removal for areas that would be subject to flood inundation is provided).
- Suitable water quality devices to treat the early flows at stormwater outlet points with larger flows allowed to bypass will be installed.
- Drainage outlets are to incorporate erosion and sediment control where required and ongoing maintenance of all adopted WSUD systems will be required on a regular ongoing basis.
- Any onsite stormwater system will connect into Council's existing trunk stormwater lines and/or be discharged directly to the Georges River.
- Stormwater runoff for minor events will be handled by pit and pipe systems with larger flows also utilising overland flow paths such as roadways and footways.
- The scope of work required for design development and detailed design includes:
  - Detailed survey of the site and adjacent areas.
  - Confirmation of the precise flood extent for the 100 year and PMF events referencing Flood levels from the Floodplain Management Plan
  - Ongoing consultation with Council to confirm floodplain management objectives, obtain information on their existing drainage infrastructure upstream of the site, confirm OSD, water quality treatment objectives
  - Hydrologic Assessment as detailed in Section 4.0.
  - Selection of water quality treatment devices.

Operation

- **Prior to the opening of the new hospital facilities existing operating policies and procedures will be reviewed and updated as necessary for the impact of the new development prior to occupation of the proposed hospital buildings. These will include:**
- **Measures to ensure protection of heritage buildings and assets.**
  - **Protection of flora and fauna and minimisation of anti-social behaviour.**
  - **Visitor safety.**
  - **Site security.**
  - **Noise management.**
  - **Traffic and pedestrian management.**
  - **Storage of materials.**
  - **Emergency and evacuation procedures.**
  - **Fire safety.**
  - **Waste management and ESD initiatives.**
  - **Lighting.**
  - **Signage.**
- **At the completion of works, a Final Fire Safety Certificate is to be issued by the owner detailing each essential fire safety measure provided in the building. A copy of such certificate is to be forwarded to the Fire Commissioner and a further copy is to be prominently displayed in the building.**
- **Each year, the owner of the building will furnish to Council an annual fire safety statement for the building. The annual fire safety statement is to address each essential fire safety measure in the building.**
- **All loading and unloading activities in connection with the use will be carried out wholly within the property.**
- **All parking spaces, loading and unloading areas, vehicle manoeuvring and driveway areas will be left free of goods and be available at all times.**
- **The design and construction of the premises will comply with Australian Standard AS 1940 – 2004 'The storage and handling of flammable and combustible liquids' and the WorkCover 'Code of Practice for the storage and handling of Dangerous Goods'.**

Waste Management

Prior to the opening of the new hospital facilities existing waste management policies and procedures will be reviewed and updated as necessary for the impact of the new development prior to occupation of the proposed hospital buildings. This will include consideration of waste management practices that comply with all relevant legislation relating to waste and resource recovery, environmental protection, and occupational health and safety, including:

- **NSW Government Waste Reduction and Purchasing Policy,**
- **NSW DOH Infection Control Policy (02/45)**
- **NSW DOH Waste Management Guidelines for Health Care Facilities, Aug. 1998.**
- **ISO 14001:1996,**
- **ISO 9001:2000 and**
- **Relevant Council and EPA requirements.**

Contamination and Geotechnical

- NSW Health will undertake demolition in accordance with the requirements of *Australian Standard AS2601 - 2001: The Demolition of Structures* which is incorporated into the Occupational Health and Safety Act 2000 administered by WorkCover NSW.
- Management of hazardous building materials will be contained in a CMP prepared prior to demolition commencing.
- A licensed asbestos contractor is to be engaged to monitor demolition of the buildings (noted as containing asbestos) in the central section of the site.
- Following removal of all asbestos from the site final clearance certificates will be obtained.
- Undertake further analysis where significant amounts of soil are to become exposed or disturbed as part of the redevelopment works.
- Undertake further investigations of groundwater conditions and quality particularly if soil contamination is encountered.
- During demolition and/or excavation works, the site will be regularly inspected by experienced environmental personnel if unexpected conditions or subsurface facilities are discovered between investigation locations and beneath the existing buildings.
- Monitor demolition works at the site and provide final clearance certificates and further investigation is undertaken in areas where soil is to be exposed or disturbed.
- Normal good engineering site management practice including control of run-off and dust suppression is recommended during earthworks and construction.
- Existing Fill
  - Confirm actual fill conditions in locations where new buildings/structures are proposed and seek further geotechnical advice.
  - Undertake sub-grade preparation for external pavements.
- Clayey subsoil
  - Provide good and effective site drainage both during construction and for long-term site maintenance. The earthworks will be carefully planned and scheduled to maintain good cross-falls during construction.
- Excavation
  - Establish test pits to confirm the footing details and foundation materials of all adjoining buildings/ structures.
  - Excavation of the shale bedrock be carried out using the bucket and ripping tyne of a large excavator. Use hydraulic rock hammers due to noise nuisance and the potential for ground borne vibration damage to nearby buildings/structures should be avoided.
- Demolition
  - Depending on the details and extent of demolition, vibration monitors will be installed as necessary on nearby buildings to assess vibration levels.
- Sub-grade preparation.
  - Stockpiling excavated top soil for re-use in landscaping
  - Use of engineered fill as appropriate.
  - Avoiding vibratory compaction.
  - Inspections of compacted areas by qualified engineers.
- Engineered fill.
  - Use of appropriate fill type
  - Compaction in layers approximately 200m thick
  - Carry out density tests
  - Inspection by qualified engineers.
- Retention systems.
  - Temporary batters to basements to be maximum 1:1 gradient
  - Contiguous pile walls to be used where battered slopes are not possible.
- New footings.
  - Footings for large buildings and bridges are to be uniformly supported on piles founded in shale bedrock using the 'limit state design' as detailed in the paper by Pells, Mostyn and Walker (1998).
- Slab on-grade.
  - Slabs on-grade are to be constructed independent of building footings and walls.
- Soil aggression
  - Reference to be made to Cement and Concrete Association of Australia's Technical Note TN57 and Section 6 of AS2159-1995 for appropriate precautions for footing design in moderate to high acidic subsoil conditions.

Planning Agreements and/or Developer Contribution

NSW Health will establish VPAs with other government agencies as follows. These will be completed for the Project Plan Application.

- Department of Education
  - An agreement in relation to future development zone on TAFE lands and widening of the roadway to the Liverpool Girl's High School.

- RailCorp
  - **An agreement which includes the following:**
    - **Support for the new rail crossings, the north link road and associated land transfers;**
    - **Support for the rail developments and associated land transfers;**
    - **Coordination between the projects and agreement to the mutual objective of completion of each parties respective projects;**
    - **Funding of the rail crossings;**
    - **Achieving construction of the grade separated crossings of the rail line in time for operation of the SSFL (in 2009) to enable closure of the level crossing to all but specified emergency use and other planned use;**
    - **Criteria for emergency use and other planned use of the level crossing; and**
    - **Agreement to design, undertake and/or fund and respond in accordance with government policy for mitigation of noise and vibration arising from rail operations and development and that each party shares responsibility in this regard.**

- Liverpool Council
  - An agreement in relation to the new north link road proposals associated with the extension of Lachlan Street, Hart Street, Hart Park and Berryman Reserve (given that this land is under the care and control of the Council). An additional agreement will include details of the proposed upgrade to the pedestrian link along College Street and Moore Street to the transport interchange.

- Roads and Traffic Authority
  - An agreement in relation to the new intersection at Hume Highway associated with the new north link road.

- Department of Planning
  - An agreement in relation to the land required at Berryman Reserve associated with the new north link road.