

2.0 Site Analysis

2.1 The Region

Liverpool is a major commercial centre within the southwest region of Greater Sydney and Southern Highlands. Liverpool Hospital, located within the Liverpool Central Business District, is the primary medical facility within this region and serves the Local Government Areas of

- Bankstown
- Camden
- Campbelltown
- Fairfield
- Liverpool
- Wingebarbee
- Wollondilly

The region has a total population in the order of 800,000 which is expected to grow to 925,000 by 2016 and to 1.25 million by 2031.

Liverpool and Camden LGAs are expected to experience the highest growth of all LGAs in NSW over the next 20 years with a significant proportion of this growth occurring by 2016. The population forecasts indicate that Liverpool will become the second most populous Local Government Area in NSW after Blacktown.

Liverpool has been identified as one of the river cities in the Metropolitan Strategy together with Penrith and Parramatta. It is planned that a full range of business, government, retail, cultural, entertainment and recreational activities will be provided in or near to the City centre.

The southwest growth centre identified in the Metropolitan Strategy (located 10km west of Liverpool) will contribute a substantial proportion of the new population in the region and Liverpool Hospital will be the major health facility servicing the area.

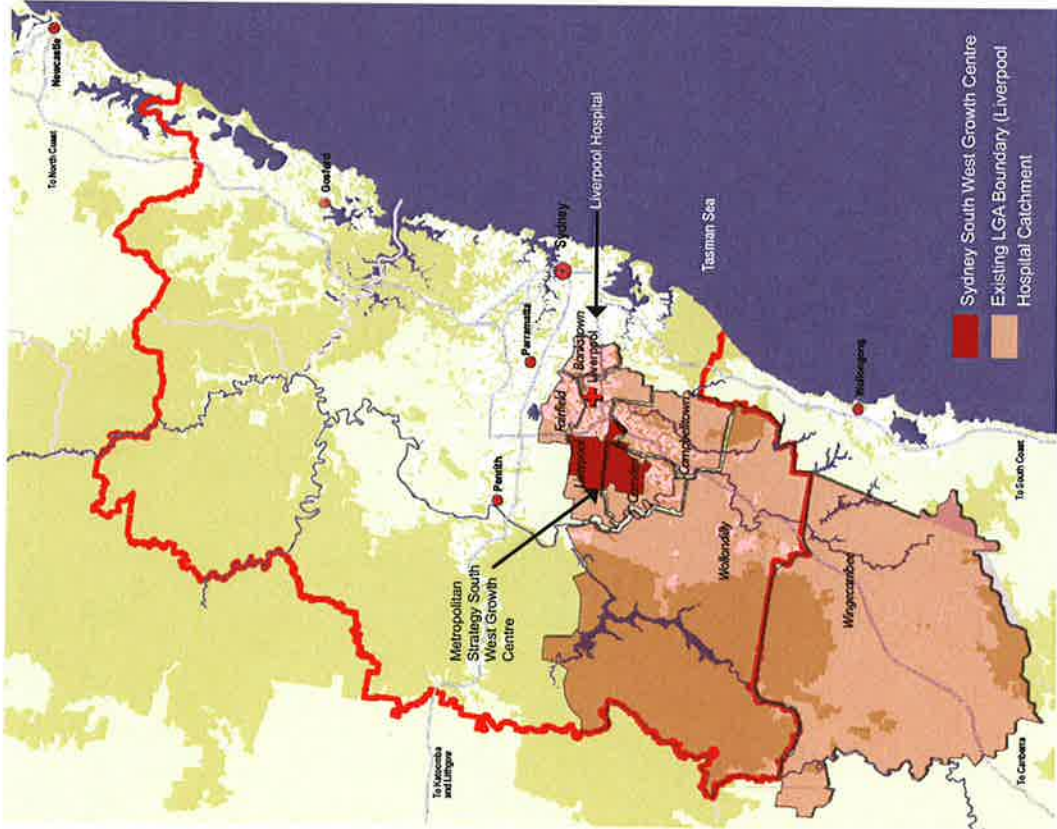
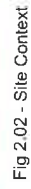


Fig 2.01 - Regional Context and Local Government Areas

- Georges River, Lake Moore and associated open space.



2.3 Liverpool Hospital Precinct

Liverpool Hospital is a major component of the social and economic infrastructure of the city centre and the sub-region. The importance of the Hospital to the long term sustainability of the city centre is underpinned by the fact that approximately 40% of all jobs in the City Centre are directly associated with the Hospital or are involved in allied health services.

By 2016 the number of people employed in the health services sector in Liverpool city is expected to increase by 70% to over 7,000 people. The Hospital therefore is a critical part of the social infrastructure and economic base of the City Centre and will be a key determinant in developing the Metropolitan Strategy's River City vision.

The presence of a major hospital within the CBD, close to major public transport links, provides a vital service for the residents of the Liverpool LGA, and also for people from throughout the south west of Sydney. The Hospital's presence is an important stimulus for the economy of the City of Liverpool.

The Hospital site is within a short walking distance of the retail core as well as Liverpool transport interchange and Warwick Farm Railway Station.

2.4 Zoning

The Liverpool Local Environmental Plan 2008 is the principal planning instrument applying to the Hospital site.

The Liverpool Local Environmental Plan 2008 was gazetted by the NSW Government on 29 August 2008. The Hospital site (East and West Campus) is zoned SP2 (Health Services Facility and Educational Establishment). The land on which the proposed northern link road is to be constructed is zoned IN1 (General Industrial). The Hart Street land is zoned R3 (Medium Density Residential) while the adjacent Hart Park is zoned (RE1 Public Recreation). The Hume Highway is zoned SP2: Infrastructure (Classified Road).

DCP 30 was initially replaced by the Liverpool City Centre DCP 2007 which has subsequently been replaced by the Liverpool DCP 2008. Part 4 of DCP 2008 covers the City Centre and is similar in content to the Liverpool City Centre DCP 2007.

Detailed information related to zoning and Liverpool City Council environmental planning instruments is set out in Section 5.2 of this report.

The proposed Hospital development covered by this application is consistent with both the Liverpool LEP 2008 and the Liverpool DCP 2008.

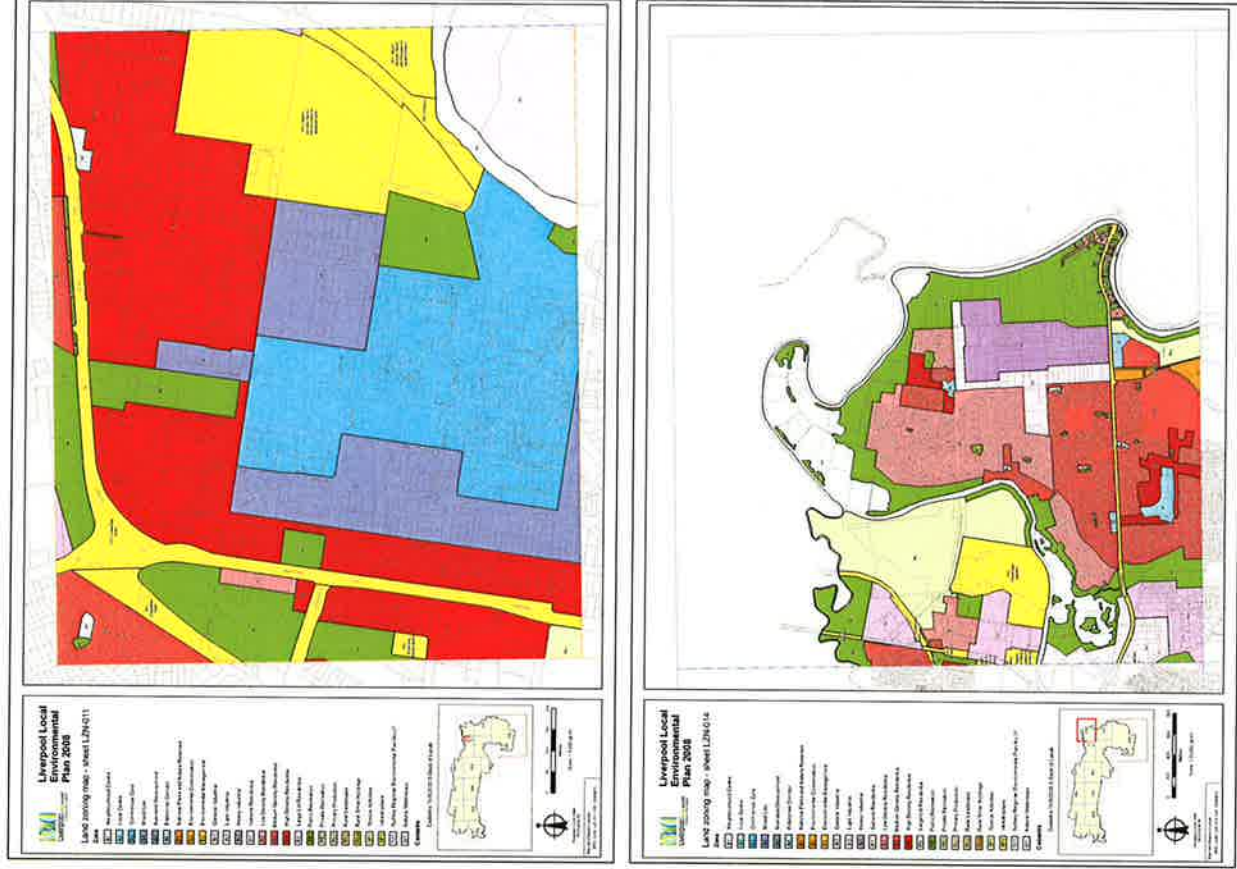


Fig 2.03 - Liverpool LEP (2008) Land Zoning Maps

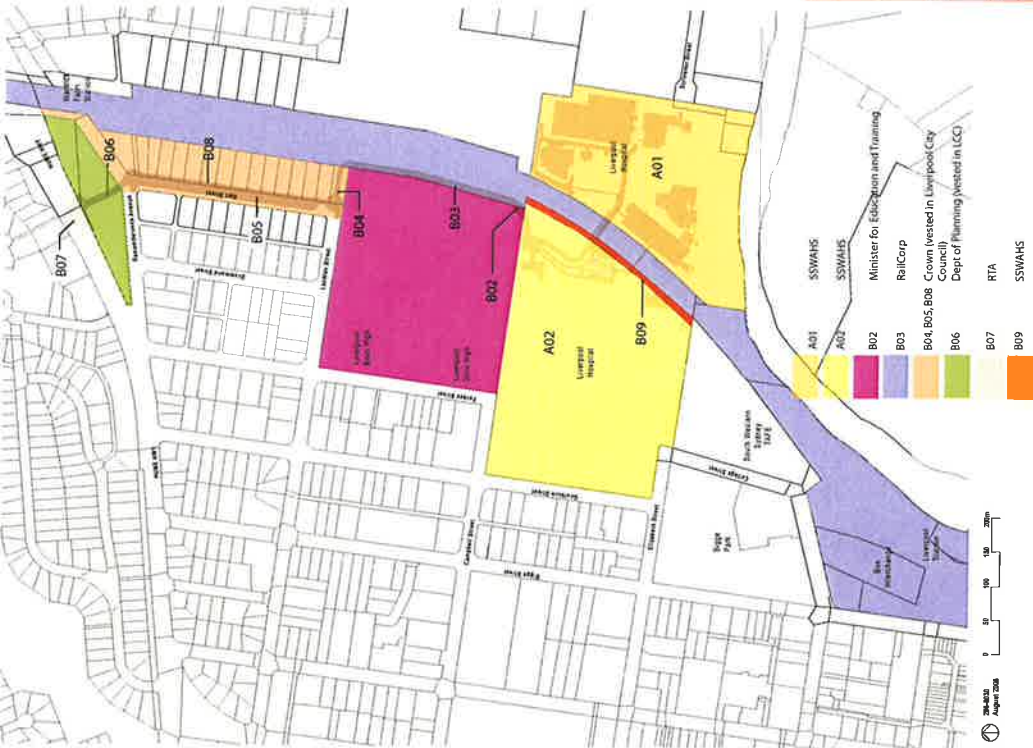


Fig 2.04 - Land Ownership

2.5 Land Ownership

The zoning and ownership details are shown on the Figs 2.03 and 2.04 and Table 2.01.

The major landowners in the precinct, other than Health Administration Corporation (HAC) and Sydney South West Area Health Service (SSWAHS) include:

- RailCorp
- Ministry for Education and Training
- Liverpool City Council
- Department of Planning
- Road and Traffic Authority

This Project Application includes proposed development on land not owned by HAC or SSWAHS. To facilitate the development proposals contained in this Project Application, Planning Agreements have been established with the relevant landowners.

Map Key Location	Facility	Address	Ownership	Lot	Title Detail	Area (Ha)	Current Zoning*	Proposed Use
HEALTH SITES								
A01	East Campus	Somerset Street, Warwick Farm	SSWAHS	1,2,3 PART 2	DHS2031 DP 596770	7.0	SP2: Infrastructure (Health Services Facility and Educational Establishment)	Child Care Centre Multi storey car park, Engineering Services Building, Internal roads
A02	West Campus	50 Coulburn Street, Liverpool	SSWAHS	1 + Part 2	DPS96770	7.99	SP2: Infrastructure (Health Services Facility and Educational Establishment)	2 storey car park, Internal roads
NON HEALTH SITES								
B02	Part of Liverpool Girls' High School	Fobes Street, Liverpool	Minister for Education & Training	1	DP415417		SP2: Infrastructure (Health Services Facility and Educational Establishment)	Private road providing access to Hospital Campus
B03	Pen Easement - Main Southern Railway	Off Remembrance Ave, Liverpool	RailCorp	N/A	N/A		SP2: Infrastructure (Health Services Facility and Educational Establishment)	Public road providing access to Hospital Campus
B04	Part of Lachlan Street (Mimade)	Lachlan Street, Liverpool	Liverpool City Council	N/A	N/A		RE1: Public Recreation	Private road providing access to Hospital Campus
B05	Hart Street	Hart Street, Liverpool	Liverpool City Council	N/A	N/A		R3 Medium Density Residential	Public road
B06	Part of Blayney Reserve	Hume Highway, Warwick Farm	Department of Planning (Crown land vested in Liverpool City Council)	A	DP432628		RE1: Public Recreation	Public road access to Hume Highway (Hume Street extension)
B07	Part of Hume Highway	Hume Highway, Warwick Farm	RTA	N/A	N/A		SP2: Infrastructure (Classified Road)	Modifications to Hume Highway (modification of signalised intersection)
B08	Part of Hart Park	Hart Street, Warwick Farm	Crown (vested in Liverpool City Council)	A&B 1	DP432628 DP724028 DP758620		RE1: Public Recreation	Modifications to Hart Street
B09	West Campus	Adjacent to railway line West Campus	SSWAHS	1	DPS96770		SP2: Railway	Alleviate car parking, Bridge access ramp, Private road

* Liverpool Local Environmental Plan 2008

Table 2.01 - Landownership

2.6 Topography

The Hospital site is located within a slight valley formation that falls in a north easterly direction toward the industrial area on the eastern side of the rail corridor. Overall level changes within the Hospital site are in the order of a 2.5m fall between Goulburn and Scrivener Streets representing an approximate gradient of 1 in 200.

2.7 Contamination

The results of the laboratory tests on selected soils samples covered a range of contaminants commonly encountered in the Sydney region. Elevated levels of contaminants were not detected in the samples analysed. All results were less than the appropriate Health Investigation Levels.

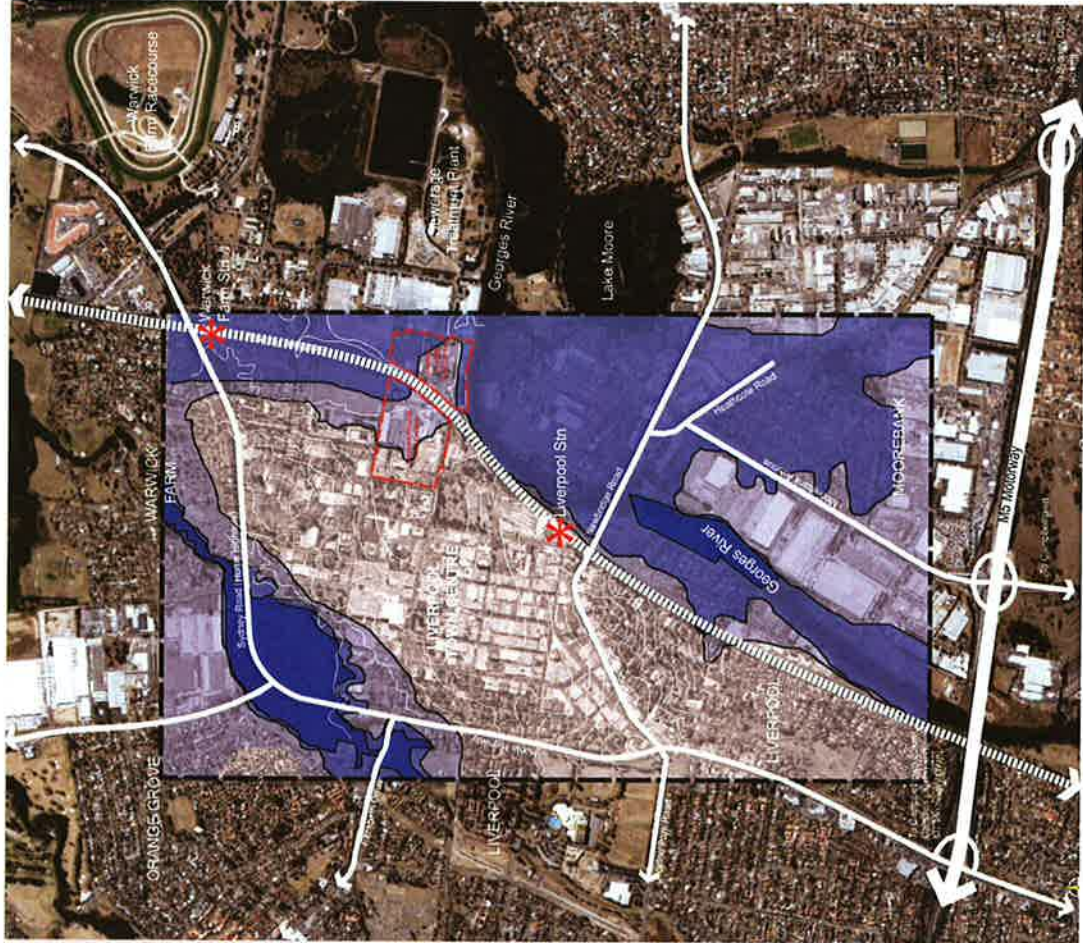


Fig 2.05 - Flooding
Liverpool Hospital Redevelopment - Stage 2 Infrastructure and Ancillary Hospital Works (MP08_0062)
October 2008

2.8 Flooding

The Liverpool CBD is located on Sydney's Cumberland Plain, and in close proximity to three watercourses (Georges River, Brickmakers Creek and Cabramatta Creek) and as a consequence the lower parts of the city centre are flood prone.

The 1:100 year flood event and Probable Maximum Flood (PMF) extend along the eastern side of the railway embankment (Georges River) and along the rail corridor in the northern part of the city centre.

Hospital lands and lands subject to this Project Application are affected by both the 1:100 year flood and PMF events. The 1:100 year event impacts on the East Campus including land adjacent to the Georges River and the north east sector of the West Campus. The PMF event affects all land on the East Campus and approximately two thirds of the West Campus.

Emergency egress in a PMF flood event is required given that all Hospital land east of the rail corridor is impacted. The proposed vehicular bridge across the rail corridor will provide egress from East Campus in a PMF event.

Both the Engineering Services Building and the Child Care Centre would be subject to a PMF event. The site of the Engineering Services Building is also within the 1:100 year flood event.

As part of the ongoing liaison between the Hospital and Liverpool City Council both the Child Care Centre and Engineering Services Building have been defined as non-critical facilities in the context of a major event (eg PMF).

Accordingly both have been designed with floor levels above the 1:100 flood event (8.8m (AHD) but below the PMF event (10.9m AHD).

Both Hart Street and Hart Park fall within both the 1:100 and the PMF event.

2.9 Landscape and Open Space

Bigge Park, located adjacent to the Hospital site, is a major component of the city centre open space system and provides a high degree of amenity to the precinct. Bigge Park is also one of the only major civic open spaces located within proximity to the Georges River giving it a high degree of strategic importance as part of any future plans to improve connection between the river and the city.

Two small areas, both Hart Street and Hart Park, located to the north of the city centre adjacent to Warwick Farm Station. Apart from a small grove of trees within Hart Park and trees located in Berryman Reserve which abuts the Hume Highway there is limited landscape in the north east sector. These spaces have poor amenity and are under-utilised.

2.10 Building Height

The split level 6 storey car park has a indicative maximum roof height of 27.00m AHD against the existing ground plane of 9.5 m AHD with an effective height of 17.5m which falls well within the maximum permissible building height limit and hence the scale of the multi storey car park is compatible with the identified building height objectives.



2.11 Access

Road

The Liverpool Hospital location affords convenient ready access to/from the arterial road system serving the South-west Region of the Metropolitan area. The site is located immediately to the south and east of the Hume Highway which in turn provides access to the Cumberland highway and the M7 and M5 motorways.

This Project Application provides for a new intersection on the Hume Highway and a new access link to the Hospital from the north via a modified Hart Street and new Northern Link Road.

Other proposed works include upgraded roads within the East and West Campus areas as well as a new road bridge across the rail corridor linking the East and West Campuses.

Pedestrian

The DCP identifies the need for active street frontage along Elizabeth Street and Bigge Street in the vicinity of the Hospital and also identifies the need for street addresses to be provided along the Goulburn Street and eastern sector of Elizabeth Street adjacent to the Hospital. The Hoddle Grid provides for a high level of pedestrian accessibility and permeability within the city centre area adjacent to the Hospital.

This Project Application provides for a new pedestrian bridge across the rail corridor linking the East and West Campuses.

Cycle

Liverpool city centre is a junction for two regional bicycle routes and has potential for both commuter and recreational cyclists.

Car Parking

The existing Hospital site currently supports 1,500 car spaces, 800 spaces are located on West Campus, 660 spaces are located on East Campus and 40 spaces are located on the Campbell Street Annex.

This Project Application provides for a significant expansion of car parking within the Hospital complex to around 2,360 spaces with a total of 1,019 spaces on West Campus, 1,304 spaces on East Campus and 40 spaces located in the Campbell Street Annex.

This Project Application includes the proposed 800 multi-deck car park located on the East Campus and an additional 27 short stay spaces associated with the new Clinical Services Building and the Child Care Centre.

Public Transport

Bus

Liverpool is a key interchange for bus services in the south west of Sydney. Bus transport is provided by four private bus operators, Westbus, Oliven's Metro-Link Buslines, Busabout and Transit First.

The bus interchange is within a comfortable 500m walking distance of the existing Liverpool Hospital.

Rail

Liverpool Railway Station is the central public transport hub within the Liverpool city centre. The station services 4 train lines and forms part of the key bus interchange. The station has good facilities with lifts, accessible bus interchange and bicycle lockers.

The railway station is located within a comfortable walking distance of 500m from the Hospital site. Warwick Farm is also located within a 10 minute walk north of the Hospital providing alternative means of public transport access.

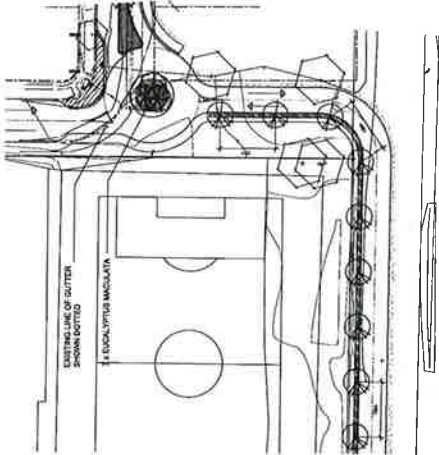


Fig 2.08 - Hume Highway Intersection



Fig 2.09 - Multi Storey Car Park North West Perspective