CIVIL ENGINEERING BRIEF

For

MILESTONES 3 & 4

LIVERPOOL HOSPITAL REDEVELOPMENT

REPORT NO. R00218.B

REVISION B

OCTOBER 2010

PROJECT DETAILS

Property Address: Liverpool Hospital
Elizabeth St, Liverpool, NSW

Development Proposal: Milestones 3 & 4
Liverpool Hospital Redevelopment

REPORT CERTIFICATION

Report prepared by:

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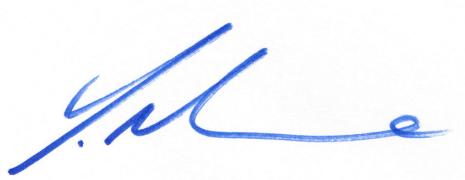
Report reviewed by:



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DOCUMENT CONTROL

REVISION	ISSUE DATE	ISSUED TO	ISSUED FOR
A			
B			

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1. INTRODUCTION

1.1. General

This engineering report has been prepared to supplement the proposed Project Application for Concurrent Works (Milestones 3 and 4) to the Department of Planning.

This report addresses civil engineering design aspects of the re-development, mainly on stormwater, flooding and sediment and erosion control associated with the hospital re-development.

1.2. Design Standards and Codes

The concurrent works will be designed in accordance with the latest issue of all relevant design standards, codes and other statutory and authority requirements. As a minimum requirement, the design will be based on but not limited to:

- Liverpool City Council's Guidelines for Engineering Works for Subdivisions and Developments – Part 1 (Design)
- Liverpool City Council's Guidelines for Engineering Works for Subdivisions and Developments – Part 2 (Construction)
- Managing Urban Stormwater: Soils and Construction Manual
- Australian Rainfall & Runoff
- AS 3500.3 Stormwater Drainage

2. THE DESIGN BRIEF

2.1. Stormwater Drainage

Stormwater drainage for the site will be designed to collect and convey stormwater drainage via a conventional piped stormwater drainage system for storm events up to and including a 1 in 20 year Average Recurrence Interval (ARI) storm event. The connection will be made to the existing pipe located within the site.

The existing stormwater pipe will be relocated clear of the proposed buildings as shown on Drawing ZC-C0-7601.

Provision will be made for the safe conveyance of storms via overland flow paths for storm events up to the 1 in 100 year ARI storm event.

Adequate freeboard will be provided within the overland flowpaths to allow some protection from overland flows generated from storm events larger than a 1 in 100 year ARI event.

2.2. Flooding

A Section 149 Flood Certificate for the whole site has been applied for with Liverpool Council for planning purpose and they are:

- Probable Maximum Flood (PMF) RL 10.9 (AHD)
- 1 in 100 ARI Flood (1%AEP Flood) RL 8.8 (AHD)

Finished floor levels for all proposed buildings will be reviewed to confirm that they are sufficiently higher (i.e. adequate freeboard) than either the PMF or 1%AEP Flood as appropriate as per the recommendations made in SKM's report "Liverpool Hospital Redevelopment Stage 2 – Stormwater & Flooding Assessment Report (5 November 2007)"

The civil engineering design will consider the effects of the proposed development on existing flood regimes within the catchment. A review of the available flood studies, flood plain risk management plans and other literature will be conducted in the design and if considered appropriate, compensatory measures will be recommended and provided for within the design to minimise (i) loss of flood storage and (ii) changes to flood levels and velocities within the catchment.

2.3. Sediment and Erosion Control

Temporary sediment and erosion control measures will be designed to be incorporated into the construction works and sequencing of the project to ensure that the proposed construction activities on site to not pollute local drainage systems nor have a detrimental effect on downstream waterways.

APPENDIX A

DRAWING

LEGENDS

Symbol	Description
(double line)	EXISTING STORMWATER PIPE
(dashed heavy line)	PROPOSED STORMWATER PIPE
(pit symbol)	PROPOSED STORMWATER PIT
UP INV. 8.30 DN600 RCP 25m @ 1.0% DN INV. 8.05	PROPOSED STORMWATER PIPE DETAILS

PRELIMINARY
NOT FOR CONSTRUCTION

KEY PLAN

No.	DATE	REVISION / ISSUE DETAILS
02	27/10/10	CLINICAL BUILDING ADDED
01	20/10/10	STORMWATER LINE AMENDED
00	19/10/10	PRELIMINARY FOR COORDINATION

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PROJECT:
LIVERPOOL HOSPITAL
REDEVELOPMENT STAGE 2.1
ELIZABETH STREET
LIVERPOOL, NSW, 2170

DRAWING TITLE:
MILESTONE 3 & 4 ZONE C STORMWATER PLAN

DESIGNED:	W.MARTIN	DATE:	19/10/10
VERIFIED:	E.SHIN	DATE:	19/10/10
DRAWN:	W.MARTIN	SCALE @ B1:	1:50
PROJECT NUMBER: PN-00218	DRAWING NUMBER: ZC-C0-7601	ISSUE:	02

NOT FOR CONSTRUCTION

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APPENDIX B

SECTION 149 CERTIFICATE

ATT: EDWARD

ANNEXURE TO SECTION 149(5) CERTIFICATE

Liverpool city council
creating our future together

Issue Date: 1/07/2008

Issue No: 2025347

File No: 2006/0292

Premises at Lot 2 DP 596770
Elizabeth Street Liverpool

Further to the advice contained in the Section 149(2) Certificate and on the basis of the latest information available to the Council:

1. the maximum calculated level of the probable maximum flood (PMF) in the vicinity of your property in metres AHD is **10.90.**

2. the maximum calculated level of the 1% annual exceedance probability flood (previously referred to as the 1 in 100 year) in the vicinity of your property in metres AHD is **8.70.**

3. the maximum calculated level of the 2% annual exceedance probability flood (previously referred to as the 1 in 50 year) in the vicinity of your property in metres AHD is **8.50.**

4. the maximum calculated level of the 5% annual exceedance probability flood (previously referred to as the 1 in 20 year) in the vicinity of your property in metres AHD is **7.80.**

The requirements and limitations applicable to each of the foregoing are defined in Counicl's current "FLOODPLAIN MANAGEMENT PLAN", a copy of which is attached.

The Council does not possess accurate information on the natural surface levels of individual allotments or on constructed building levels, and these should be established by private survey to ascertain their relationship to the above flood levels.

Flood levels are obtained from **Georges River Floodplain Risk Mangement Study & Plan - July 2004**

Name of Assessor: **W. Siripala**

Signature: