

Sydney Southwest Private Hospital

Healthscope

21 September 2010

Document No. HYD 001



Sydney Southwest Private Hospital

Stormwater Management Plan



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Stormwater Management Plan

Prepared for
Healthscope

Prepared by

AECOM Australia Pty Ltd

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21 September 2010

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Quality Information

Document Sydney Southwest Private Hospital

Ref 60160555

Date 21 September 2010

Prepared by Mathew Burke

Reviewed by Frank Caristo

Revision History

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
Rev 01	21-Sep-2010		David O'Neil Technical Director	

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1.0 Stormwater concept Plan

1.1 Introduction

The project consists of a major extension to the existing Sydney Southwest Private Hospital comprising two basement car parks, four clinical levels one Medical Consulting level and one plantroom level.

The departments are:

Level 1 – Operating Suites and consulting suites
Level 2 – medical/surgical inpatient Unit
Level 3 – Mental Health Inpatient Unit
Level 4 - Medical Consulting Suites
Level 5 – Plantroom

This stormwater management report will address the Director Generals Requirements as outlined below:

- Assessment of the current stormwater infrastructure and flooding environment in the immediate area;
- Concept stormwater plan indicating the proposed design of the stormwater infrastructure and measures to be constructed and operated to manage stormwater from the development and the site (this will include consideration of the stormwater measures currently in place for the existing hospital building);
- Modelling and stormwater calculations to support the design indicated in the proposed stormwater concept plan;
- The proposed stormwater concept design will comply with Council requirements and best practice; and
- Sediment and erosion control measures (shown also in a plan) are to be utilised during construction of the development.

1.2 Current Stormwater Infrastructure and Flooding Environment

The current stormwater infrastructure and flooding in the vicinity of this project has been discussed with Liverpool councils Drainage and Flooding Team Leader Mr Maruf Hossain.

It has been confirmed in writing by Liverpool councils Floodplain Engineer Mr Zeale Hoque (see appendix A) that the property is not in a flood zone and the Probable Maximum Flood (PMF) level is 10.7 Australian Height Datum (AHD). It is in our opinion that the area most vulnerable to flooding is the car park entry point. Given that the existing levels in this vicinity are 17.61 AHD, 6.91 meters above PMF, we believe that the project will not flood.

1.3 Stormwater Concept Plan

The stormwater drainage system for the project will be designed in accordance with Liverpool council requirements, AS 35000 and NSW code of practice.

Discussions have been held with Liverpool councils Senior Land Development Engineer, Mr Stephen Monte and the following confirmed (see appendix B)

- Onsite detention (OSD) is not required
- The stormwater from the site is to be piped to the nearest inlet pit within the road reserve, not to the kerb and gutter.

We have provided a Stormwater Concept Plan STW 001 showing connection to Councils infrastructure in Goulburn service way via a new kerb inlet pit (see appendix C).

1.4 Sediment and Erosion Control

During excavation, erosion and sediment control will be provided in accordance with the Erosion and Sediment Control Plan STW 002 (see appendix D).

All existing surface pits shall be protected as detailed in STW 002 and at all boundaries where the potential for runoff to contaminate downstream public or private property shall protected by use of silt fences and sediment traps.

Construction vehicles leaving the site shall be required to pass over a temporary construction vehicle exit at the entrance to the site of Bigge Street.

2.0 Appendix

2.1 Appendix A

Liverpool Council E-mail Re Flooding 17/9/2010

-----Original Message-----

From: Zeaul Hoque [mailto:FLOODPLAIN2@liverpool.nsw.gov.au]
Sent: Friday, September 17, 2010 12:28 PM
To: Burke, Mathew
Cc: Maruf Hossain
Subject: RE: Flood Levels at Liverpool Private Hospital

Hi Mathew,

The property (24-28 Bigge st Liverpool) is flood free. However, PMF level in the vicinity of the property is 10.7m AHD.

Regards,

Zeaul Hoque
Floodplain Engineer
Assets & Capital Works
Liverpool City Council
1 Hoxton Park Rd, Liverpool NSW 2170
Phone 9821 7706
Fax 9821 9333

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-----Original Message-----

From: Maruf Hossain
Sent: Thursday, 16 September 2010 3:47 PM
To: Zeaul Hoque
Subject: FW: Flood Levels at Liverpool Private Hospital

Zea, please provide the information.

Thanks

Maruf

-----Original Message-----

From: Burke, Mathew [mailto:Mathew.Burke@aecom.com]
Sent: Thursday, 16 September 2010 8:48 AM
To: Maruf Hossain
Subject: RE: Flood Levels at Liverpool Private Hospital

Maruf,
Attached is a site plan of our proposed development. The address is 24 - 28 Bigge st Liverpool.
Can you provide the PMF level, at your earliest convenience.

Mathew Burke
Senior Engineer
D +61 2 8295 5711 M +61 408 929 234
Mathew.Burke@aecom.com

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.. -.. -

-----Original Message-----

From: Maruf Hossain [mailto:M.Hossain@liverpool.nsw.gov.au]
Sent: Wednesday, September 15, 2010 4:22 PM
To: Burke, Mathew
Cc: Zeaul Hoque
Subject: Flood Levels at Liverpool Private Hospital

Hi Mathew,

In order to provide flood levels we need the property address (Street no or Lot and DP nos.). Alternatively you could scan and email a site plan/location map identifying the property.

As mentioned the property may be affected by the PMF.

Sincerely,

Maruf Hossain
Team Leader, Drainage and Flooding
Liverpool City Council
Mob: 0419985217

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2.2 Appendix B

Liverpool Council Letter Re Stormwater Management



21 September 2010
Stephen Monte 9821 9338

Mathew Burke
Co/- AECOM
Q410, QVB Post Office
Sydney, NSW, 1230

**RE: Sydney South West Hospital – Goulburn Serviceway/ Bigge St, Liverpool.
Proposed Extension.**

Dear Sir

To confirm our conversation last week Council will require the stormwater from the site to be piped to the closest drainage pit within Council's road reserve. The drainage can not be connected to the kerb.

OSD is not required on this site.

A concept stormwater plan will be required as part of any DA application submission.

Should you require any additional information regarding this matter please do not hesitate to contact myself.

Sincerely,
Liverpool City Council

Stephen Monte BE(CIVIL)
Senior Land Development Engineer



*Celebrating 200 years
1810-2010*

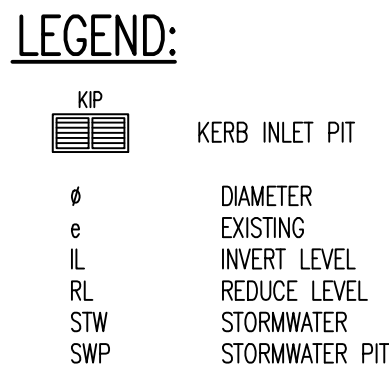
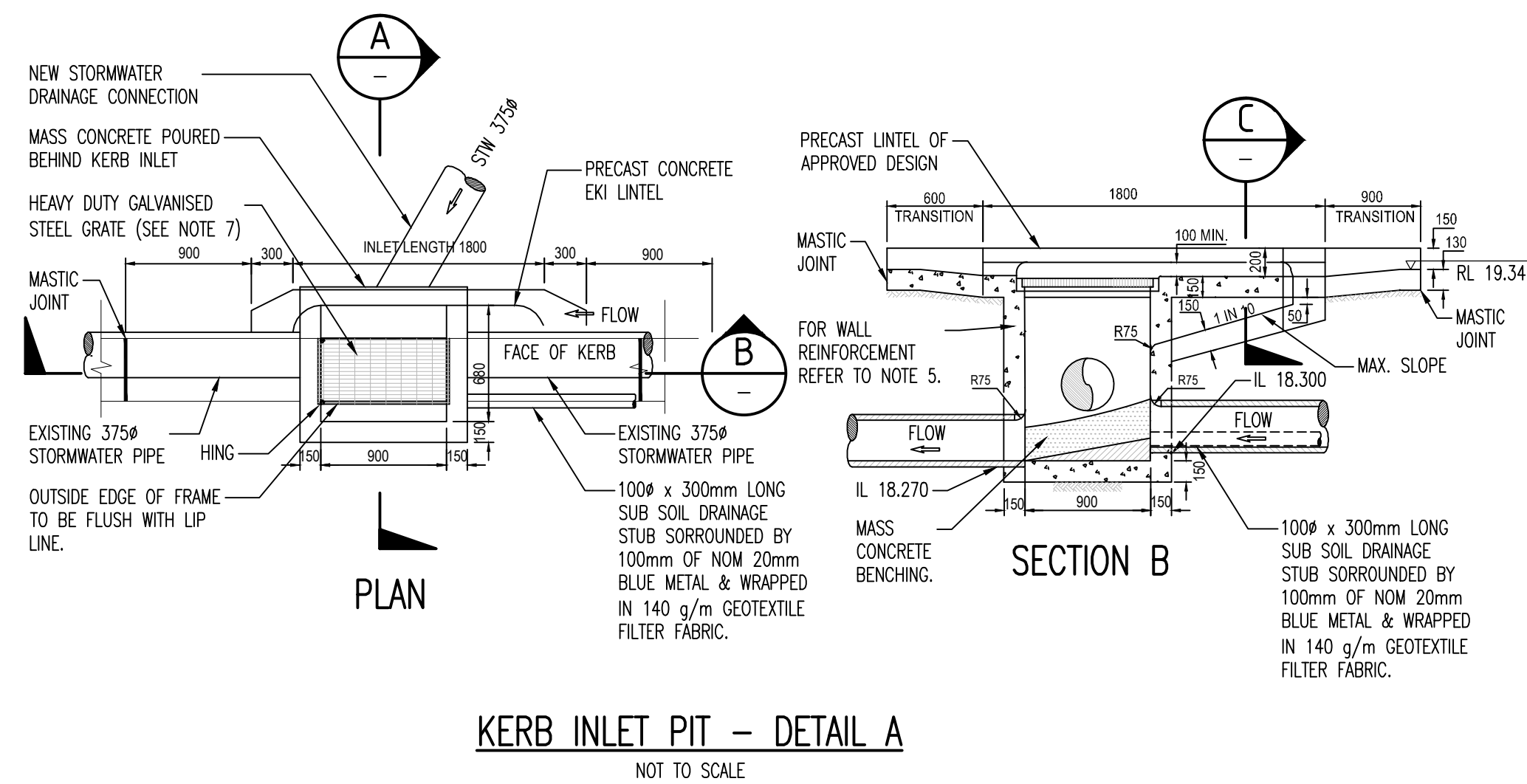
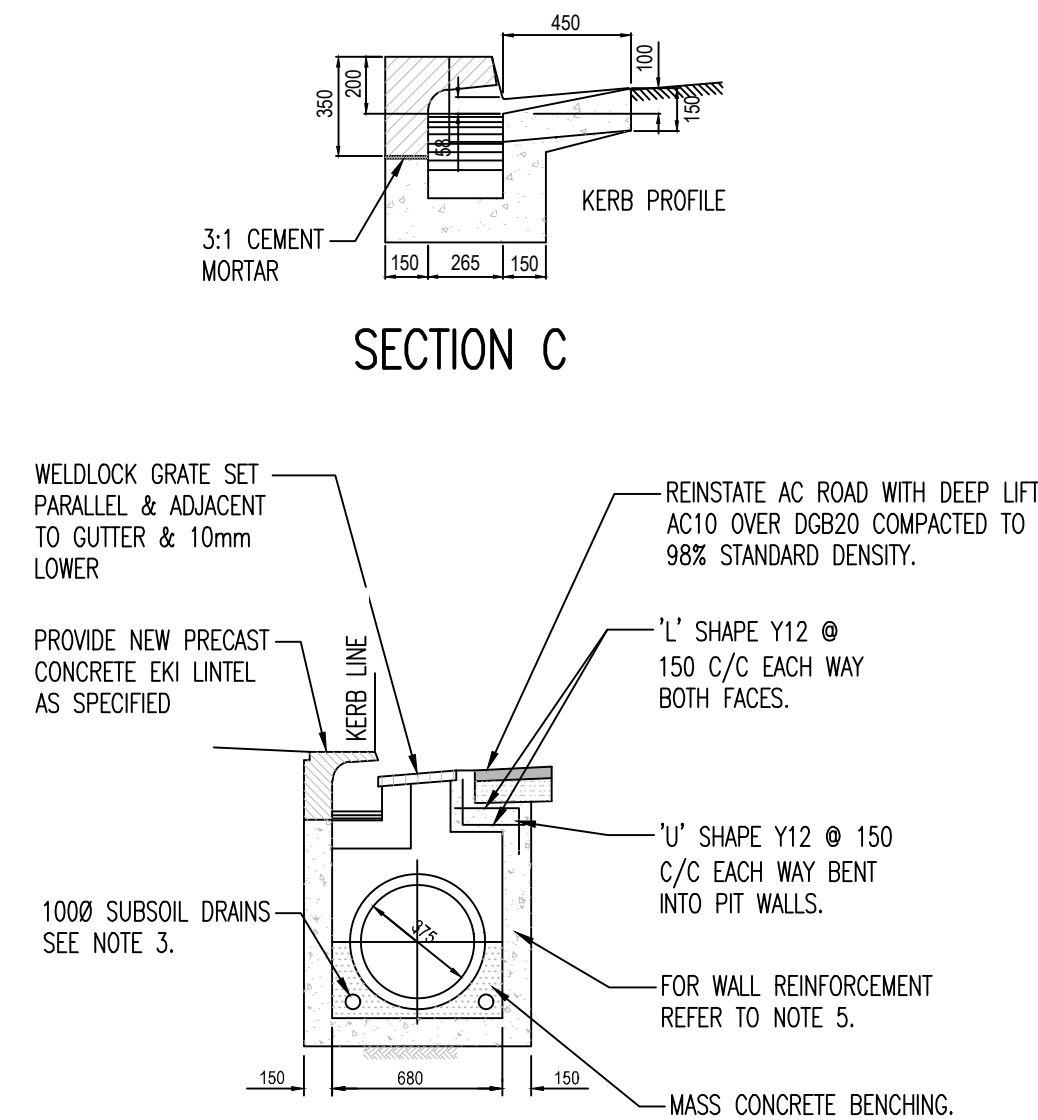
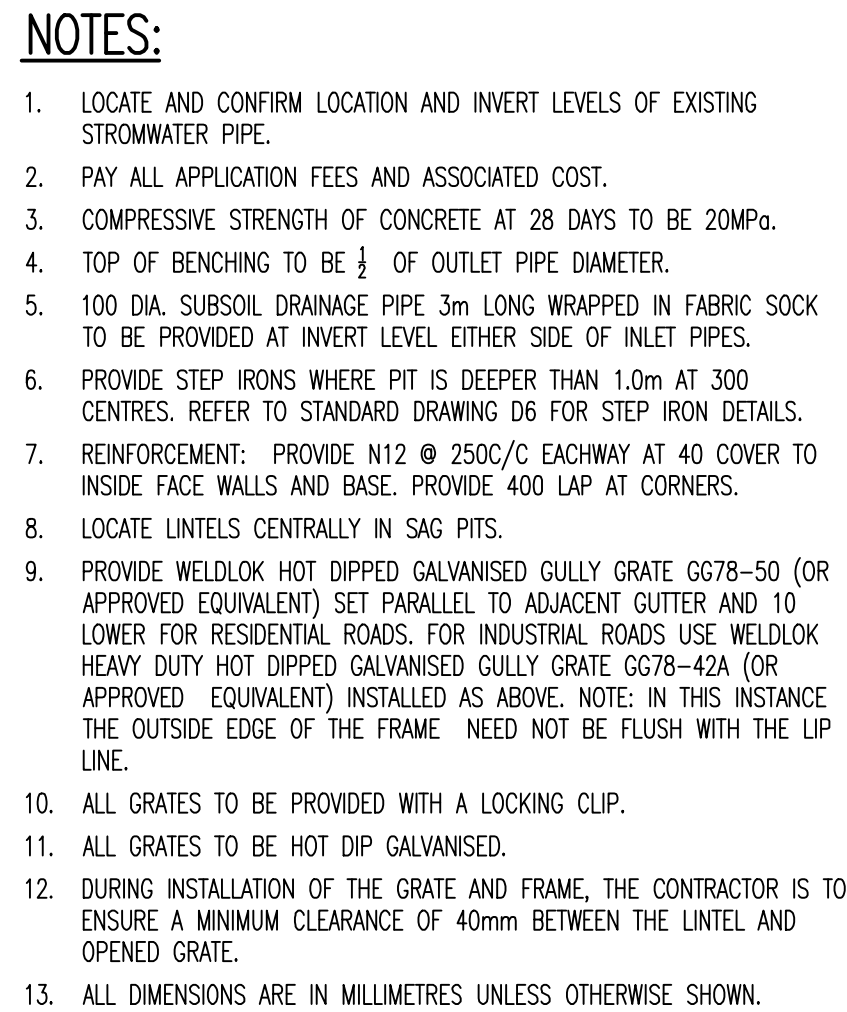
The First Macquarie Town

Administration Centre 1 Hoxton Park Road, Liverpool NSW 2170, DX 5030 Liverpool
Customer Service Centre Liverpool City Library, 170 George Street, Liverpool NSW 2170
All correspondence to The General Manager, Locked Bag 7064 Liverpool BC NSW 1871 Call Centre 1300 36 2170
Fax 9821 9333 Email lcc@liverpool.nsw.gov.au Web www.liverpool.nsw.gov.au TTY 9821 8800 ABN 84 181 182 471

2.3 Appendix C

Stormwater Concept Plan STW 001

Status FOR APPROVAL	
Sheet No. 1 of 2	



2.4 Appendix D

Sediment and Erosion Control Plan

Status	FOR APPROVAL	
	Sheet No. 2 of 2	

1. THIS PLAN WAS DEVELOPED AS A GUIDE TO DEMONSTRATE THE POSSIBLE DEVICES REQUIRED UNDER A SOIL & WATER MANAGEMENT PLAN (SWMP). THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEVELOPMENT, APPROVAL AND ON-GOING OPERATION OF THE SWMP IN ACCORDANCE WITH NSW HOUSING'S "MANAGING URBAN STORMWATER" 3rd EDITION (BLUE BOOK).
2. SEDIMENT BASINS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL CONFIRM SIZE AND LOCATION IN RELATION TO THEIR FINAL LOCATION AND COORDINATION WITH THE EXCAVATION SEQUENCING.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED PRIOR TO SITE DISTURBANCE.
4. STRIPPING OF GRASS AND VEGETATION ETC. FROM SITE SHALL BE KEPT TO A MINIMUM.
5. TOPSOIL FROM ALL AREAS THAT WILL BE DISTURBED TO BE STRIPPED AND STOCKPILED.
6. ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED AFTER EACH RAINFALL EVENT FOR STRUCTURAL DAMAGE AND ALL TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED SOIL STOCKPILE SITE.

