

# DA REPORT



**Norman  
Disney &  
Young**

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**ELECTRICAL, ICT, SECURITY & LIFT SERVICES**

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**Wollongong Hospital – IESS, ED & AC (Option O)  
NSW Health Infrastructure**

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CONFIDENTIAL

Revision: 3.0 – 3rd Issue  
Issued: 28 August 2011

# NORMAN DISNEY & YOUNG

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Editor: Shayne Blazley



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## INTRODUCTION

### PURPOSE

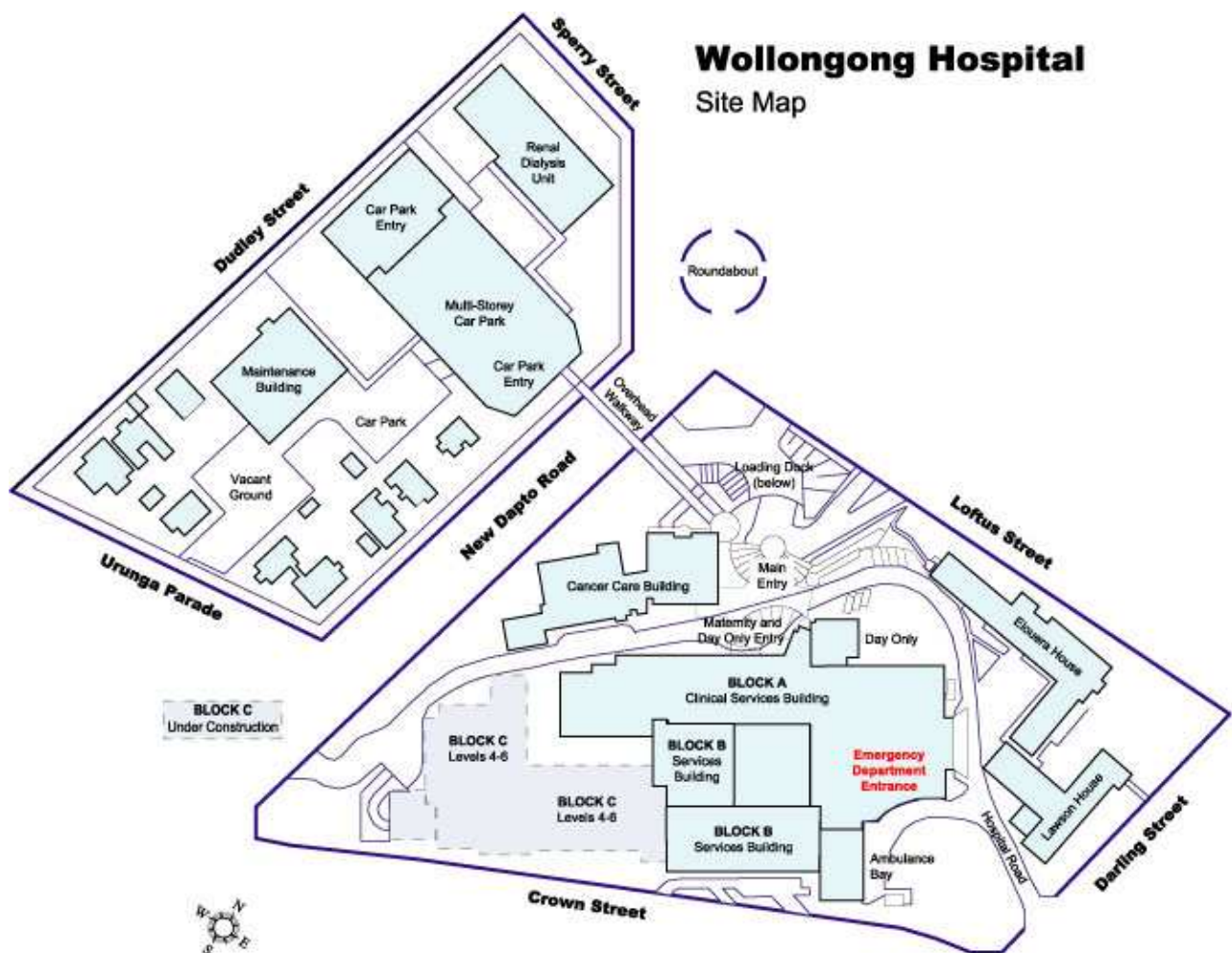
The purpose of this report is to outline the electrical and ICT utilities for the IESS / ED / AC project (Option O).

### AUTHORITY

Authority to undertake this report was provided by NSW Health Infrastructure.

### HOSPITAL CAMPUS

The Wollongong Hospital site is located at Loftus St, Wollongong. A site map is included below for reference.



### OUTLINE OF PROJECT

This report covers the following projects which are proposed for the Wollongong Hospital site.

- IESS (Illawarra Elective Surgical Services)
- ED (Emergency Department)
- AC (Ambulatory Care)



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## INFORMATION SOURCES

Norman Disney & Young have compiled this report based on the following information sources:

- Site Inspection on 21<sup>st</sup> September 2010
- Latest plans provided by Hassell
- Schedule of Accommodation received from Hassell
- DBYD information

## REVISION HISTORY

	Date Issued	Comment
1.0	13 <sup>th</sup> July 2011	1 <sup>st</sup> Issue
2.0	25 <sup>th</sup> August 2011	2 <sup>nd</sup> Issue
3.0	28 <sup>th</sup> August 2011	3 <sup>rd</sup> Issue



## ELECTRICAL INFRASTRUCTURE

### GENERAL

The following outlines the electrical infrastructure for this project.

### ELECTRICAL SERVICES - EXISTING

#### Substation

Power to the Hospital site is currently provided via two substations. On the 28<sup>th</sup> October 2010, Integral Energy advised the following load that is connected to these two substations.

Sub 21348 – Block C

- Transformer 1 - 472.5 / 1000kVA
- Transformer 2 - 877.5 / 1000kVA

Sub 43189 – Cancer Care

- Transformer 1 - 532.5 / 1000kVA
- Transformer 2 – 820 / 1000kVA
- Transformer 3 - 562.5 / 1000kVA

The majority of the hospital load is fed via a three (3) transformer substation which is located under the Cancer Care Building. These transformers provide three independent feeds to the three Hospital Main Switch Boards. The Main Switchboards provide power to the whole precinct with the exception of Block C and the residential type dwellings that front Dudley St, Urunga Parade and New Dapto Rd.

### ELECTRICAL SERVICES - NEW

An application for connection of new load has been submitted to Integral Energy for the IESS project. However, it is proposed that a new 2 x 1500kVA chamber substation be provided for the new development. The current planning of the development allows for this substation to be located on Level 1 on the Loftus Street frontage of the building. Level 1 is the street frontage of the development on Loftus Street.

We have not received official response on this application to date.

In addition to the proposed chamber substation for the IESS we are also proposing to install a new padmount substation on Loftus Street to feed the existing Elouera and Lawson Houses. Elouera and Lawson House are currently fed from the existing substation 43189. By re-feeding these buildings from a new substation we will reduce the load on the existing substation.

See the attached sketches for the proposed location of the substations.



## INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)

### GENERAL

The following outlines the ICT infrastructure for this project.

### ICT SERVICES - EXISTING

#### Voice

The main Voice frame is located within Block A, Level 0 within the PABX Room.

This room houses a remote Telstra Exchange, fed by Optical Fibre services, breaking out to copper services which are terminated to a single sided wall mounted frame.

Expansion of the frame at present is not considered possible. If the voice frame is to remain contiguous, this will require relocation of the Commercial PABX, and recabling of its ties back to the voice frame. This will enable approximately 3 new 500 pair verticals to be installed which would be considered sufficient for the extent of planned projects.

An existing internal Analogue Ericsson PABX is currently in use. This PABX is supported by its own Battery system.

A separate Siemens PABX is also present, which is supported separately and provided for Commercial Patient Bedside Services. The Siemens PABX is supported by its own battery system.

#### Data

The Central point of the Data network is centred on the PABX Room in the Clinical Services Building.

Record drawings indicate the following services from the PABX Room:

- Hickman House – 6 Core Multimode + 4 x 100 pair Category 3 to the MDF
- Lawson House Data Centre – 6 core Multimode to Hickman House
- Microwave link to Port Kembla via a Microwave minilink located on Hickman House – cabled back to the PABX Room
- Cancer Care – 6 Core multimode fibre
- Engineering and Maintenance Building – 6 core multimode fibre + 200 pair category 3

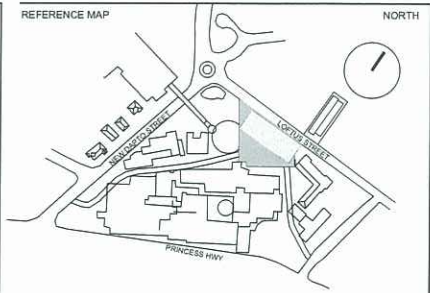
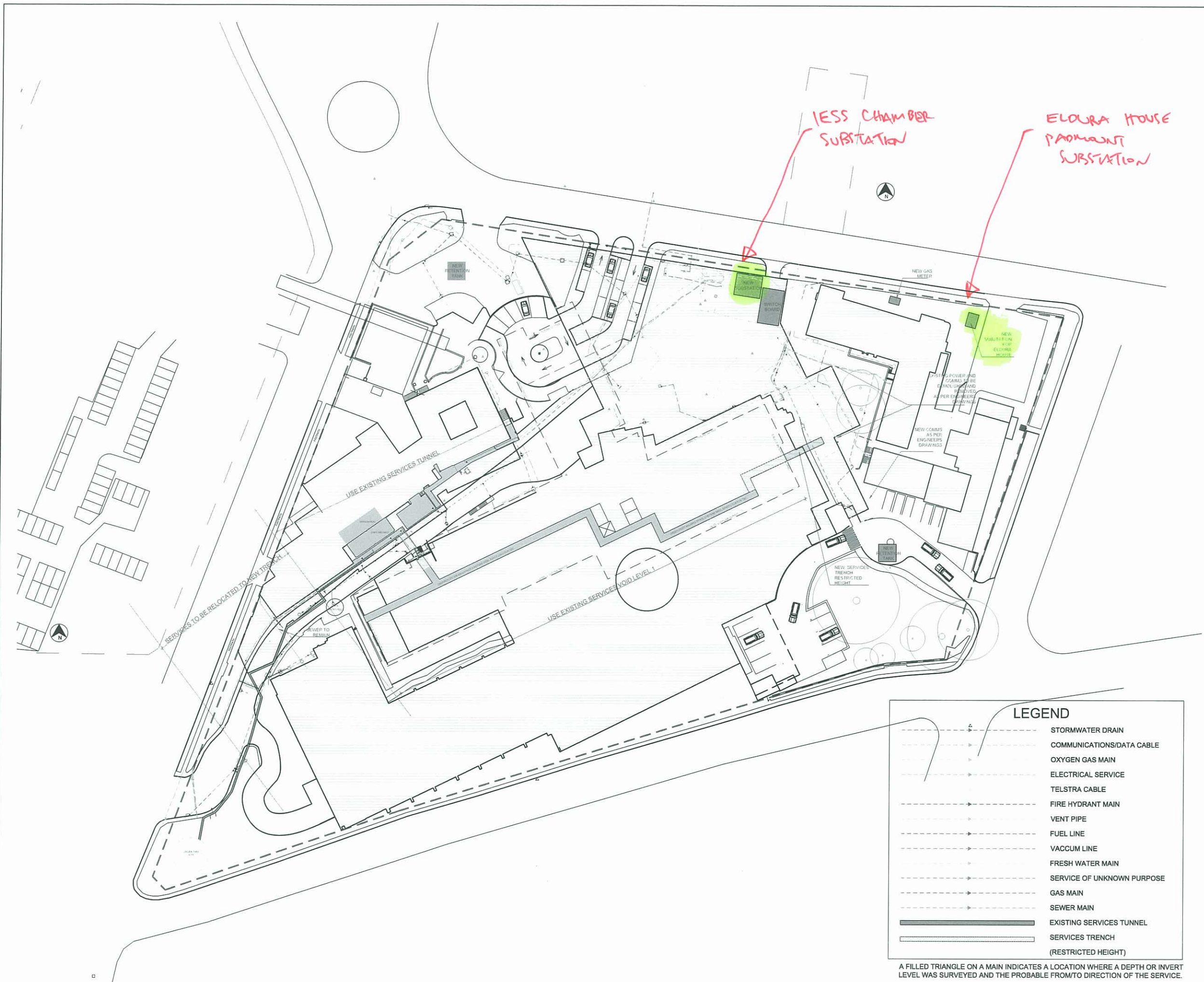
### ICT SERVICES – NEW

It is proposed that the existing ICT infrastructure for the site be utilised for the new development and therefore no additional services are required from a telecommunications provider.



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## APPENDIX A – SUBSTATION LOCATIONS



- NOTES
1. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN.
  2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. HASSELL SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
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LEGEND	
	STORMWATER DRAIN
	COMMUNICATIONS/DATA CABLE
	OXYGEN GAS MAIN
	ELECTRICAL SERVICE
	TELSTRA CABLE
	FIRE HYDRANT MAIN
	VENT PIPE
	FUEL LINE
	VACCUM LINE
	FRESH WATER MAIN
	SERVICE OF UNKNOWN PURPOSE
	GAS MAIN
	SEWER MAIN
	EXISTING SERVICES TUNNEL
	SERVICES TRENCH (RESTRICTED HEIGHT)

A FILLED TRIANGLE ON A MAIN INDICATES A LOCATION WHERE A DEPTH OR INVERT LEVEL WAS SURVEYED AND THE PROBABLE FROM/TO DIRECTION OF THE SERVICE.

REV	DESCRIPTION	DATE

CONSULTANT  
HASSELL LIMITED ACN 007 711 435  
88 CUMBERLAND STREET  
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**HASSELL**

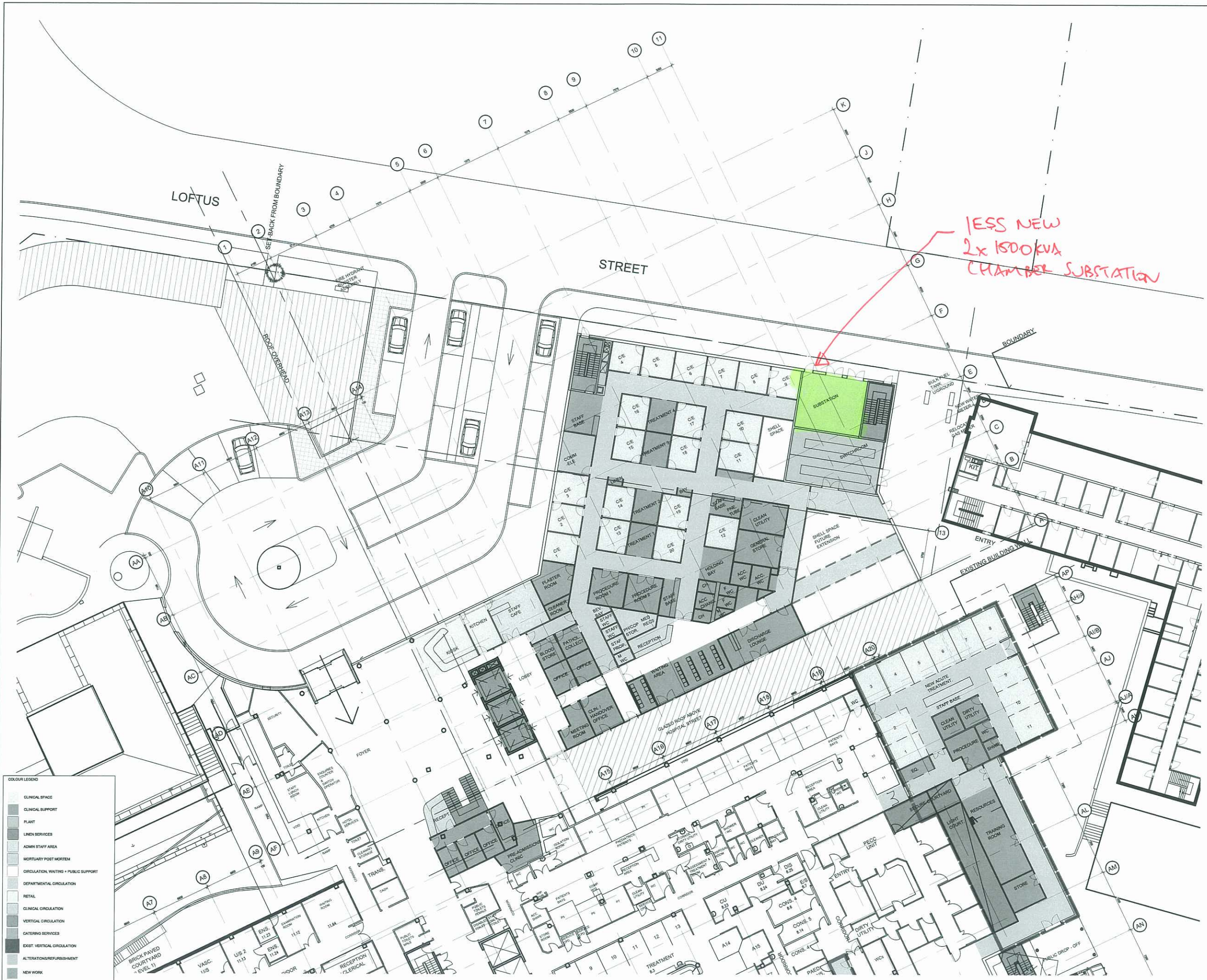
PROJECT  
ILLAWARRA ELECTIVE SURGERY  
WOLLONGONG HOSPITAL 2  
WOLLONGONG, NSW

DRAWING TITLE  
EARLY WORKS PROPOSED SERVICES

STATUS  
PLANNING APPROVAL SUBMISSION

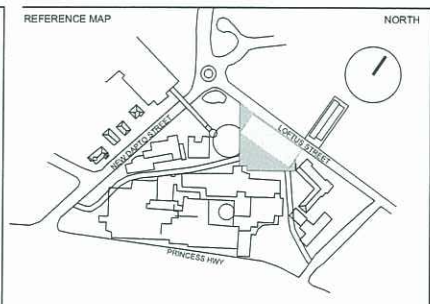
SCALE @ A1	DRAWN	CO-ORD	REVIEWED	APPROVED
1:500000	REF	EK	WS	WS

PROJECT NUMBER	DRAWING NUMBER	REV
AX003042	IESS - A051	A



**COLOUR LEGEND**

[Light Blue]	CLINICAL SPACE
[Medium Blue]	CLINICAL SUPPORT
[Dark Blue]	PLANT
[Light Green]	LINEN SERVICES
[Medium Green]	ADMIN STAFF AREA
[Dark Green]	MORTUARY POST MORTEM
[Light Grey]	CIRCULATION, WAITING + PUBLIC SUPPORT
[Medium Grey]	DEPARTMENTAL CIRCULATION
[Dark Grey]	RETAIL
[Light Purple]	CLINICAL CIRCULATION
[Medium Purple]	VERTICAL CIRCULATION
[Dark Purple]	CATERING SERVICES
[Light Yellow]	EXIST. VERTICAL CIRCULATION
[Medium Yellow]	ALTERATIONS/REFURBISHMENT
[Dark Yellow]	NEW WORK



- NOTES**
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REV	DESCRIPTION	DATE
G	Issue For Information	23/08/11
F	Issue For Information	11/08/11
E	Issue For Information	02/08/11
D	Issue For Information	11/07/11
C	Issue For Information	20/06/11
B	Concept Design	31/05/11
A	Issue For Information	18/05/11

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**HASSELL**  
PROJECT  
ILLAWARRA ELECTIVE SURGERY  
WOLLONGONG HOSPITAL 2  
WOLLONGONG, NSW

DRAWING TITLE  
SITE A - LEVEL 1  
GENERAL ARRANGEMENT PLAN

**STATUS**

PLANNING APPROVAL SUBMISSION

SCALE @ A1	DRAWN	CO-ORD	REVIEWED	APPROVED
1:200	CT	EK	WS	WS
PROJECT NUMBER	DRAWING NUMBER	REV		
AX003042	IESS - A101	G		