



PORT MACQUARIE BASE HOSPITAL Fourth Pod Expansion Project

**HYDRAULIC AND FIRE PROTECTION SERVICES
ENVIRONMENTALLY SUSTAINABLE DESIGN INITIATIVES**

Prepared by:

**ACOR Consultants Pty Limited
Level 1, 24 Falcon Street,
Crows Nest, NSW. 2065
Tel: 02 94385098
Fax: 02 94385398**

ACOR CONSULTANTS QUALITY ASSURANCE			
Issue	A	Initials	Date
Revision	001		
Internal Check		GP	21.12.2011
Approval Issue		RRG	22.12.2011
Progress Issue			

**DECEMBER 2011
Acor Project Number SY010- 0479**

HYDRAULIC AND FIRE PROTECTION SERVICES ENVIRONMENT SUSTAINABLE DESIGN INITIATIVES

Water Conservation.

	ITEM	DESCRIPTION	Design Status
HW1	Sanitary Fixtures and Tapware	Minimum 4 Star W.E.L.S rating for basins, water closets, urinals, tea sinks. Minimum 3 star W.E.L.S rating for showers. To locally supplied where possible	Proposed sanitary fixture and tapware selections included in current scheme design report for final acceptance by Health Infrastructure and Hospital engineers. Final selection to be based on:- <ul style="list-style-type: none">• Cost• Functionality• Quality• Maintenance• Longevity.
HW2	Rain water re-use	Roof to collect rain water for storage and non potable re-use,	Rain water re-use system design to be completed during the design development phase and based on:- <ul style="list-style-type: none">• Available roof area• Non potable usage estimations• Water balance calculations based on historical rainfall data for the area.• Plant area• Maintenance• Life cycle costing
HW3	Water flow monitoring	Water flow monitoring of the main water meter and sub meters to monitor excessive wastage or leakage. These meters are to be pulse type meters wired back to the Building Management System	Included in scheme design report.
HW4	Fire hydrant test water re-use	Fire hydrant annual flow test water to be captured and collected within roof rainwater re-use system.	Fire test water to discharge onto roof and discharge to rainwater storage tanks via roof water downpipes.
HWD	Minimize Hot water "dead legs"	Minimize pipe length of hot water branch lines to fixtures from main hot water flow piping, so as to minimize water wastage.	Included in scheme design report and standard industry practice.

Energy Conservation.

	ITEM	DESCRIPTION	Design Status
HE1	Pumping equipment	Pumping equipment for water services to incorporate variable speed drivers to reduce electrical energy consumption.	Included in scheme design report
HE2	Domestic hot water	High efficiency LP Gas fired plant	Included in scheme design report
HE3	Solar pre heat for domestic hot water	“Evacuated” tubes mounted on roof to preheat water using solar radiation to pre-heat water prior to gas fired plant to reduce gas usage.	Solar pre heat hot water system design to be completed during the design development phase and based on:- <ul style="list-style-type: none">• Available roof area for panels• Solar contribution calculations• Plant area• Maintenance• Life cycle costing
HE4	Chilled Boiling Water Units	To incorporate time clocks to allow automatic switch off during “out of hours” period.	Included in scheme design report