

06 August 2012

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For the attention of: - Dominic Clifton

Dear Dominic

**Wagga Wagga Base Hospital Redevelopment – Mental Health
Infrastructure Works Alterations Summary**

This report has been prepared to summarise the proposed amendments to the design of Wagga Wagga City Council's infrastructure surrounding the new Mental Health development at Wagga Wagga Base Hospital.

The information summarised in this report has been discussed with Council's Subdivision coordinator Colin Fough during enstruct's visit to the site on 20 July 2012.

Background

Currently the site and corresponding upstream catchments are drained by Council's in ground drainage infrastructure on Docker Street to the west and Edward Street to the north of the site. There is currently no in ground drainage infrastructure below the access roads through the hospital campus and all stormwater runoff is conveyed to Council's infrastructure as overland flow within Council's road corridors.

The main route for overland flow through the campus is north along Lewis Drive with all east to west roads feeding into this road. The overland flow then discharges from Lewis Drive onto Edward Street to the north of the site.

The proposed development of the Mental Health building will be located over the existing Lewis Drive corridor preventing the overland flow from discharging towards Edward Street

A new road is proposed to the east of the Mental Health development. This new road will be dedicated to Council and will form part of Council's local infrastructure.

Additional works are required to redirect the overland flow from Lewis Drive to ensure that the construction of the development does not have a detrimental effect on the existing upstream and downstream developments.

Previous Design Summary

The previous design looked to split the flows created by the upstream catchment at the new intersection with Yathong Street and the new Council road.

0.71Ha of the total 3.33Ha catchment was to be redirected west at the intersection between the existing Lewis Drive and Yathong Street. The overland flow would then be conveyed as overland flow through the hospital development towards Docker Street.

The remaining 2.62Ha catchment was to be directed north down the new Council road towards Yabtree Street.

An in ground stormwater drainage system was proposed below the new Council road to convey the 10 year design storm flows underground through the existing car park to the north of Yabtree Street, connecting into Council's in ground infrastructure below Edward Street.

Flows in excess of the design capacity of the in ground system would flow as overland flow north down the new road and through the existing car park, over the existing Edward Street footpath and onto Edward Street.

Refer to CV.MH.000.11 for detail on the flow paths.

Previous Design Constraints

The previous design imposed a number of constraints on the hospital campus and the ability to develop the site in the future. The main constraints being the easements required through the campus west from Yathong Street for the Docker Street overland flow path and north through the existing car park for the Edward Street overland flow path.

The design proposed to take overland flow from Council's road corridor and discharge it through the hospital campus. This resulted in the requirement from Council to impose easement restrictions through the campus. These easements cannot be built over in the future and also restrict the ability to park vehicles over the easement meaning that spaces would be lost in the existing car park.

The regrading works associated with the proposed redirection of the overland flow also clashed with the proposed future works for the development of the hospital as it directed large overland flows to the ambulance bay area of the future hospital. Given the importance of ensuring ambulances can access the hospital in times of emergency this created an unacceptable constraint on the site.

Proposed Design Summary

The proposed amendments to the infrastructure design follow a similar design philosophy but looks to retain the overland flows within Council's road reserves thus removing the easement constraints through the campus.

The proposed design involves regrading Lewis Drive, Yathong Street and Yabtree Street. Similar to the previous design a new road is proposed to the east of the Mental Health development with a 10 year in ground drainage system below it.

The in ground drainage system will connect into the Edward Street through the existing car park as it did previously. There will still be a requirement for a drainage easement however it will only be for maintenance and hence vehicles will be permitted to park over it.

The overland flow will not be split as it was previously but will be directed towards the intersection between Yathong Street and the new Council road where it will be conveyed north towards Yabtree Street.

Unlike the previous scheme the overland flow will not be discharged across the existing car park to the north of Yabtree Street but will be directed west along Yabtree Street where it will connect to Lewis Drive and discharge, as it currently does, north along Lewis Drive to Edward Street.

Refer to CV.MH.000.10 for the proposed overland flow paths.

Advantages of Proposed Design

The main advantages of the proposed design are the removal of the easement constraints on the site thus allowing greater flexibility for the future development of the hospital campus.

In addition to this the overland flow will be contained within Council's road corridor at all times as is common practise. The maintenance of the overland flow path will be Council's responsibility.

The incorporation of the 10 year in ground drainage along the new Council road will also assist in reducing the flows passing as overland flow down Yabtree Street and onto Lewis Drive. As this is the entrance to the current hospital building this reduction benefits the existing hospital.

Overland flow strategy sketches have been included with this report to indicate both the previous and proposed designs.

Summary

The previous design required the creation of drainage easements through the campus which restricted what could be developed in these areas as these easements could not be restricted by being built over or parked over.

The proposed design will decrease the overland flow discharging onto Edward Street at the Lewis Drive intersection. The in ground drainage is reducing this flow. The proposed overland flow will discharge from the campus at the same location as the current overland flow.

As discussed above the proposed design has the advantage of significantly increasing the potential for future development of the hospital campus whilst also achieving best engineering practises of containing upstream stormwater runoff within Council's road corridor.

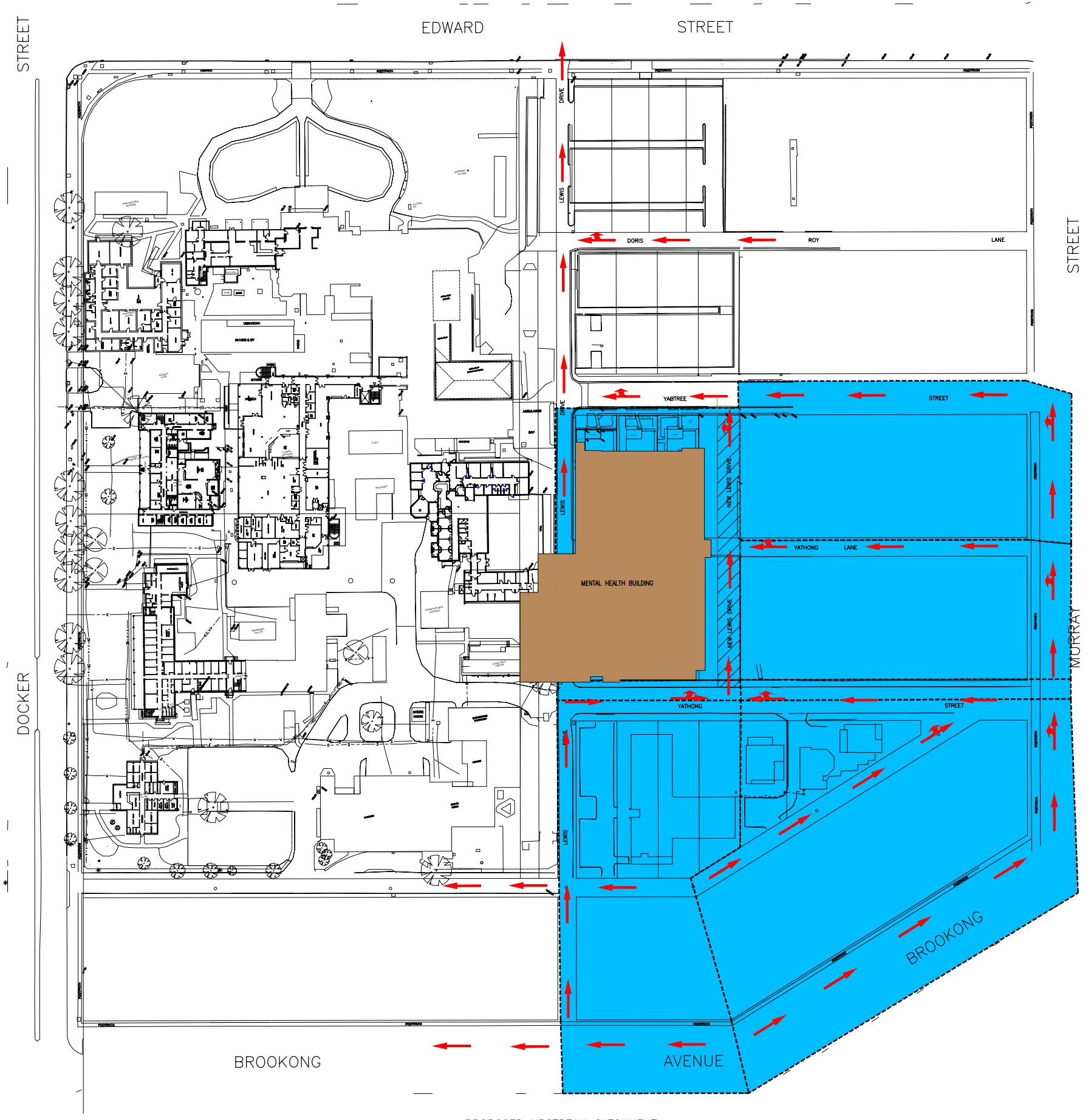
Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Ian Harris', with a large, stylized flourish above the name.

for
enstruct group pty ltd

Ian Harris
Associate

APPENDIX – CV.MH.000.10 – Proposed Upstream Catchment Analysis Plan
CV.MH.000.11 – Previous Upstream Catchment Analysis Plan



LEGEND

- PROPOSED STORMWATER CATCHMENT BOUNDARY
- PROPOSED OVERLAND FLOW PATH
- UPSTREAM CATCHMENT EXTENT (3.33Ha)
- MENTAL HEALTH DEVELOPMENT

01	31.07.12	FOR INFORMATION	FX	IH
rev	date	description	drn	ch'k

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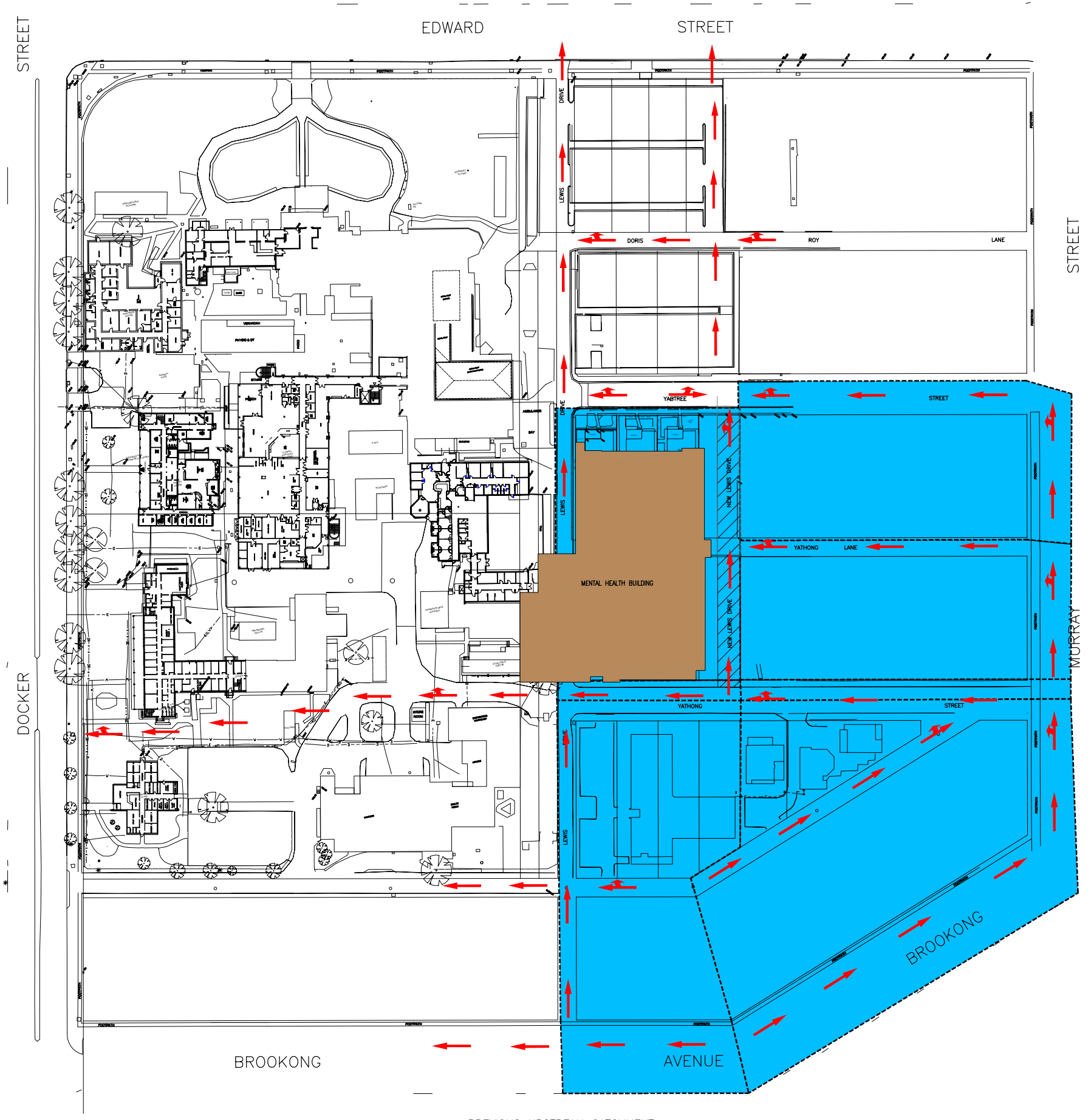


project
**WAGGA WAGGA HEALTH SERVICE
PHASE 1 MENTAL HEALTH
EDWARD STREET, WAGGA WAGGA**

drawing title
**PROPOSED UPSTREAM CATCHMENT
ANALYSIS PLAN**

status
FOR INFORMATION ONLY

scale at A1 1:750	drawn by FX	checked IH	date JULY 12
project no. 4469	drawing no. CV.MH.000.10	rev. 01	



LEGEND

- PROPOSED STORMWATER CATCHMENT BOUNDARY
- PROPOSED OVERLAND FLOW PATH
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PREVIOUS UPSTREAM CATCHMENT PLAN

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