

Our Reference: CC180469\BAK:pm

Your Reference:

4 August 2021

(Revised and reissued 13 August 2021)

The General Manager
Northern Beaches Council
PO Box 82
MANLY NSW 1655

Dear Sir/Madam,

Re: STATEMENT OF MODIFICATION
Industrial Development – Section 4.55 Modification
Property: Lot 100 Meatworks Avenue, Oxford Falls
Council Reference: DA2011/0985

We refer to Development Consent reference DA2011/0985 dated 01/12/2011. We also refer to our recent discussions in relation to the stormwater system associated with this application with Mr Simon Gray.

Based on these discussions, the Applicant proposes to seek Council's approval for the modification of the following Consent Conditions. We note that the modification, in principle, seeks to modify the requirements for the on-site stormwater detention system and point of discharge.

In this regard we refer to Consent Conditions, 22, 23, 53 54 and 55 which state:

“22. Stormwater Management

Stormwater shall be disposed of in accordance with Council's “Stormwater Drainage: From Low Level Properties Policy PDS-POL 36”. The stormwater management system is to ensure that there is no increase in stormwater pollutant loads arising from the approved development.

Details demonstrating compliance are to be submitted to the Certifying Authority for approval prior to the issue of the Construction Certificate.

23. On-site Stormwater Detention

An On-site Stormwater Detention system must be designed and constructed in accordance with Council's current On-site Stormwater Detention Technical Specification, and generally in accordance with the concept drainage plans prepared by E2 civil and Structural Design, drawing number 11.226 SW1 to SW3, dated 1 August 2011.

Engineering details demonstrating compliance with this requirement must be certified by a hydraulic engineer and submitted to the Principal Certifying Authority for approval prior to the issue of the Construction Certificate. Hydraulic engineer is to be an Accredited Certifier and is to have C1 to C7, and C16 accreditations.

Suite 2.01, Level 2
4 Ilya Avenue
ERINA NSW 2250

PO Box 3772
Fountain Plaza
ERINA NSW 2250

T 02 4324 3499

ENGINEERS

MANAGERS

INFRASTRUCTURE
PLANNERS

DEVELOPMENT
CONSULTANTS

53. Restriction as to User for On-site Stormwater Detention

A restriction as to user shall be created on the title over the on-site stormwater detention system, restricting any alteration to the levels and/or any construction on the land. The terms of such restriction are to be prepared to council's standard requirements, (available from Warringah council), at the applicant's expense and endorsed by council prior to lodgement with the Department of Lands. Warringah Council shall be nominated as the party to release, vary or modify such restriction.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of any interim / final Occupation Certificate.

54. Stormwater Disposal

The stormwater drainage works shall be certified as compliant with all relevant Australian Standards and Codes by a suitably qualified person.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of any interim / final Occupation Certificate

(Note: The following Standards and Codes applied at the time of determination:

- a) Australian/New Zealand Standards AS/NZS 3500.3:2003 – Plumbing and drainage – Stormwater drainage.*
- b) Australian/New Zealand Standards AS/NZS 3500.3:2003/Amdt 1:2006 – Plumbing and drainage – Stormwater drainage.*
- c) National Plumbing and Drainage Code.)*

56. Positive Covenant for On-site Stormwater Detention

A positive covenant shall be created on the title of the land requiring the proprietor of the land to maintain the on-site stormwater detention structure in accordance with the standard requirements of Council. The terms of the positive covenant are to be prepared to Council's standard requirements, (available from Warringah Council), at the lodgement with the Department of Lands. Warringah Council shall be nominated as the party to release, vary or modify such covenant.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of any interim / final Occupation Certificate."

In support of the modification, we provide the following comments.

By way of history the Consent refers to the stormwater details depicted on the documents prepared by E2 Civil and Structural Design, drawing number 11.226, SW1 to SW3, dated 1 August 2011.

We have reviewed these documents and note that this stormwater design proposes a point of discharge which ultimately drains to the existing bushland. We note that this design methodology concentrates stormwater onto bushland. We further note that this design made no allowance for the flows generated by the upstream catchment.

An alternative stormwater system is proposed which combines the characteristics of the upstream catchment flow with the developed area stormwater system. This system is based on returning flows to the state of nature distribution. In support of this methodology, we have developed a DRAINS model and TUFLOW model to assess the stormwater behaviour.

The features of the pre and post developed scenarios have been represented in a one-dimensional DRAINS model and a two-dimensional TUFLOW model. The catchment based models include three sub-catchments which are represented on the DRAINS catchment plan (copy enclosed). The developed 100 Year ARI overland flow distribution is identified on Figure 1, titled Catchment Wide 1% AEP Flood Depth and Level Plan (copy enclosed).

The site specific 1% AEP overland flow distribution is depicted on plan Reference CC180469, Sheet F1, Revision A (copy enclosed). Based on the foregoing we have determined the following:

The results are attached with a catchment plan. In summary total peak flowrates downstream of the site are as tabled following:

Storm Event (Years)	Pre-developed State of Nature Flowrate L/s	Pre-developed Existing Conditions Flowrate L/s	Post developed Flowrate L/s
5	3393	3500	3300
100	6010	6107	5900

Based on the foregoing we are of the view that the proposed stormwater system will result is a reduction of post developed flows when compared to corresponding pre-developed conditions. In this regard we refer to the proposed stormwater system depicted on our documents reference CC180469, Sheets G1 – G5 revision B (copies enclosed).

In relation to the lawful point of discharge we have sought advice from Crown's Land. In this situation Crown lands have referred us to the following legislation.

LOCAL GOVERNMENT ACT 1993 - SECT 59A

Ownership of water supply, sewerage and stormwater drainage works

59A Ownership of water supply, sewerage and stormwater drainage works

(1) Subject to this Division, a council is the owner of all works of water supply, sewerage and stormwater drainage installed in or on land by the council (whether or not the land is owned by the council).

(2) A council may operate, repair, replace, maintain, remove, extend, expand, connect, disconnect, improve or do any other things that are necessary or appropriate to any of its works to ensure that, in the opinion of the council, the works are used in an efficient manner for the purposes for which the works were installed.

(3) The provisions of this section have effect despite anything contained in [section 42](#) of the [Real Property Act 1900](#).

We refer to this legislation and note Council are the consenting authority for the disposal of stormwater discharge on Crown Land.

Based on the foregoing, we seek Council approval for the stormwater system depicted on plans reference CC180469, Sheets G1 – G5 revision B.

Yours faithfully

ACOR Consultants (CC) Pty Ltd

Per: 

Encl: Figure 1 - Catchment Wide 1% AEP Flood Depth and Level Plan
Figure 2 - Drains Catchment Plan
ACOR (CC) Consultants Plans Reference CC180469, Sheets G1 – G5, Revision B.

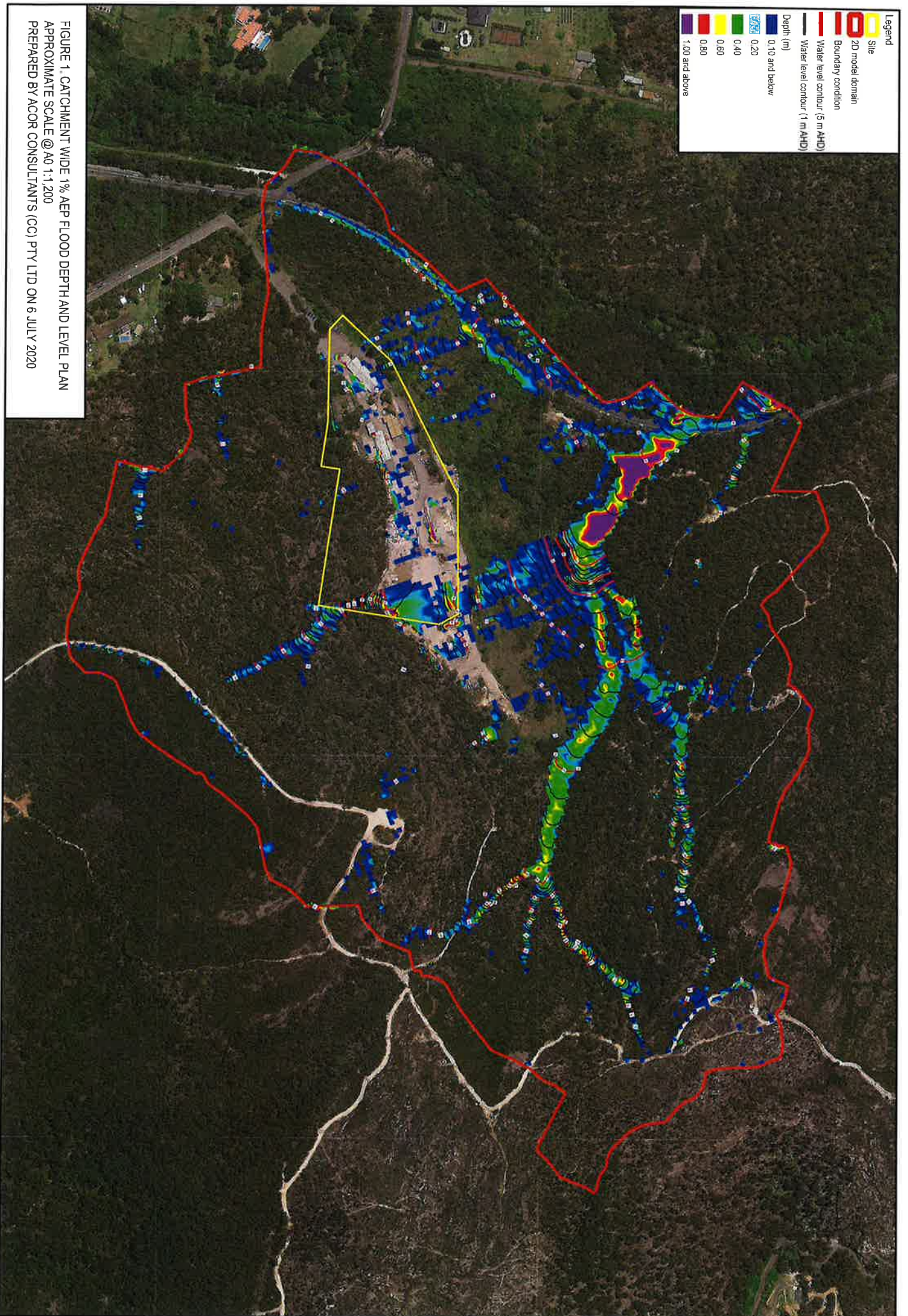


FIGURE 1. CATCHMENT WIDE 1% AEP FLOOD DEPTH AND LEVEL PLAN
APPROXIMATE SCALE @ A0 1:1,200
PREPARED BY ACOR CONSULTANTS (CC) PTY LTD ON 6 JULY 2020

Legend

Site

DRAINS catchments

ALS contour (5 m AHD)

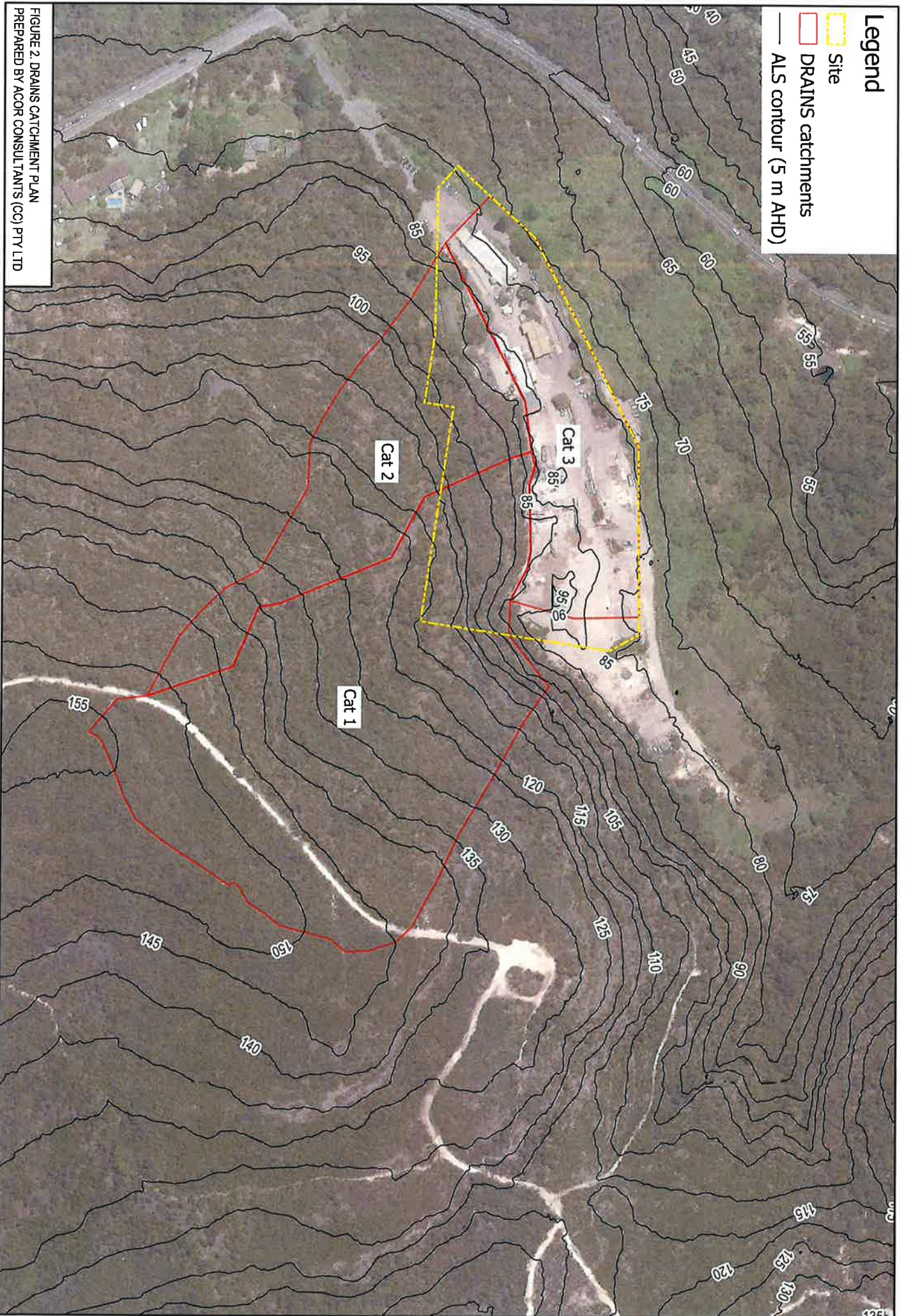
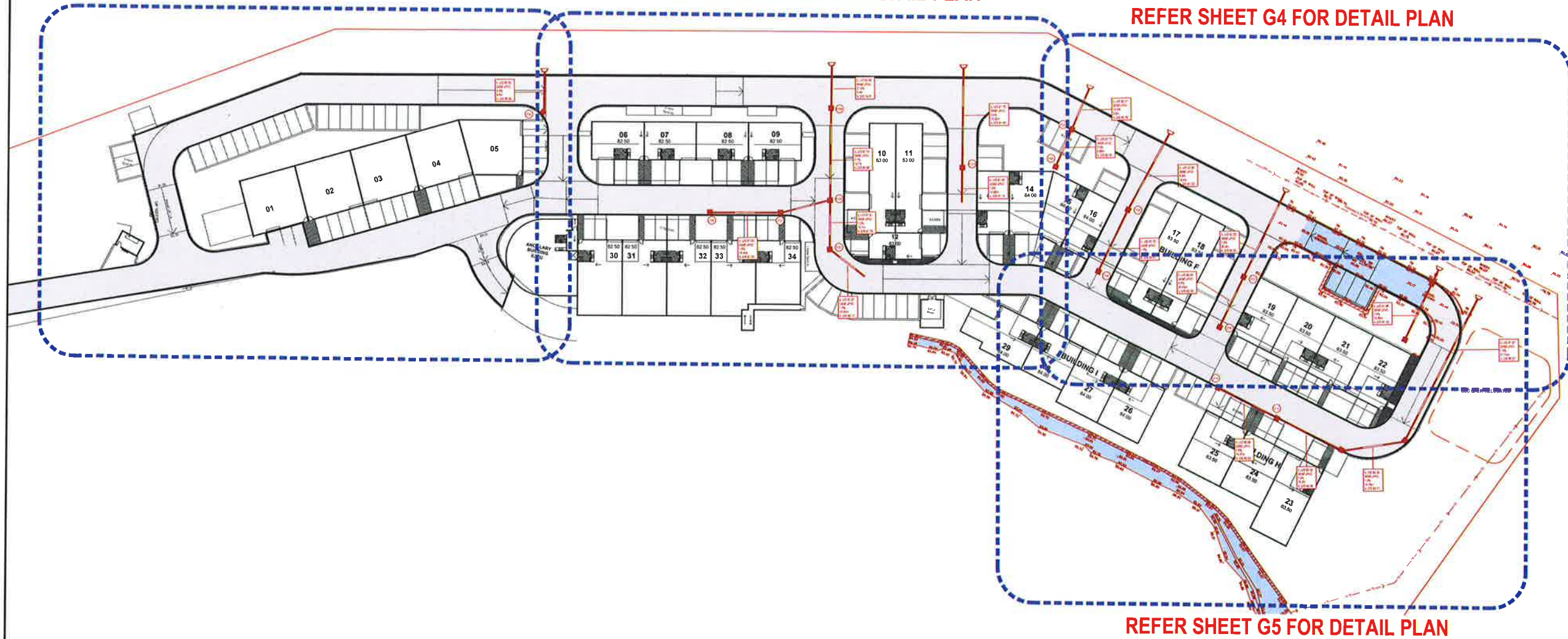


FIGURE 2. DRAINS CATCHMENT PLAN
PREPARED BY ACOR CONSULTANTS (CC) PTY LTD

REFER SHEET G2 FOR DETAIL PLAN

REFER SHEET G3 FOR DETAIL PLAN

REFER SHEET G4 FOR DETAIL PLAN



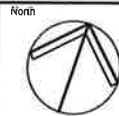
REFER SHEET G5 FOR DETAIL PLAN

WORK AS EXECUTED GENERAL PLAN
SCALE - 1:300/A1, 1:600/A3

© COPYRIGHT of this design and plan is the property of ACOR Consultants (CC) Pty Ltd, ACN 127 012 104 ATF The ACOR (CC) Unit Trust ABN 81 392 991 647, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants (CC) Pty Ltd. ACOR Consultants is a trademark licensed to ACOR Consultants (CC) Pty Ltd by ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by: MR MICHAEL GOODWIN MIEAust CPEng NER

Issue	Description	Date	Drawn	Approved
B	WORK AS EXECUTED	05.05.21	SJ	BK
A	WORK AS EXECUTED OVERLAY	26.03.21	SJ	BK



Client
MR W. EDWARDS

Architect
GELDER



ACOR Consultants (CC) Pty Ltd
Platinum Building, Suite 2.01, 4 Ilya Avenue
ERINA NSW 2250, Australia
T +61 2 4324 3499



Project
PROPOSED INDUSTRIAL DEVELOPMENT
LOT 100 D.P. 1023183
MEATWORKS AVENUE
OXFORD FALLS

Drawing Title WORK AS EXECUTED GENERAL PLAN			
Drawn	Date	Scale	A1
SJ	26.03.21	AS NOTED	-
Designed	Project No.	Dwg. No.	Issue
BK	CC180469	G1	B

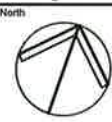


WORK AS EXECUTED DETAIL PLAN
SCALE - 1:150/A1, 1:300/A3

©COPYRIGHT of this design and plan is the property of ACOR Consultants (CC) Pty Ltd, ACN 127 012 104 ATF The ACOR (CC) Unit Trust ABN 81 392 991 647, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants (CC) Pty Ltd. ACOR Consultants is a trademark licensed to ACOR Consultants (CC) Pty Ltd by ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by: MR MICHAEL GOODWIN MIEAust CPEng NER

B		WORK AS EXECUTED	05.05.21	SJ	BK
A		WORK AS EXECUTED OVERLAY	26.03.21	SJ	BK
Issue		Description	Date	Drawn	Approved



Client
MR W. EDWARDS

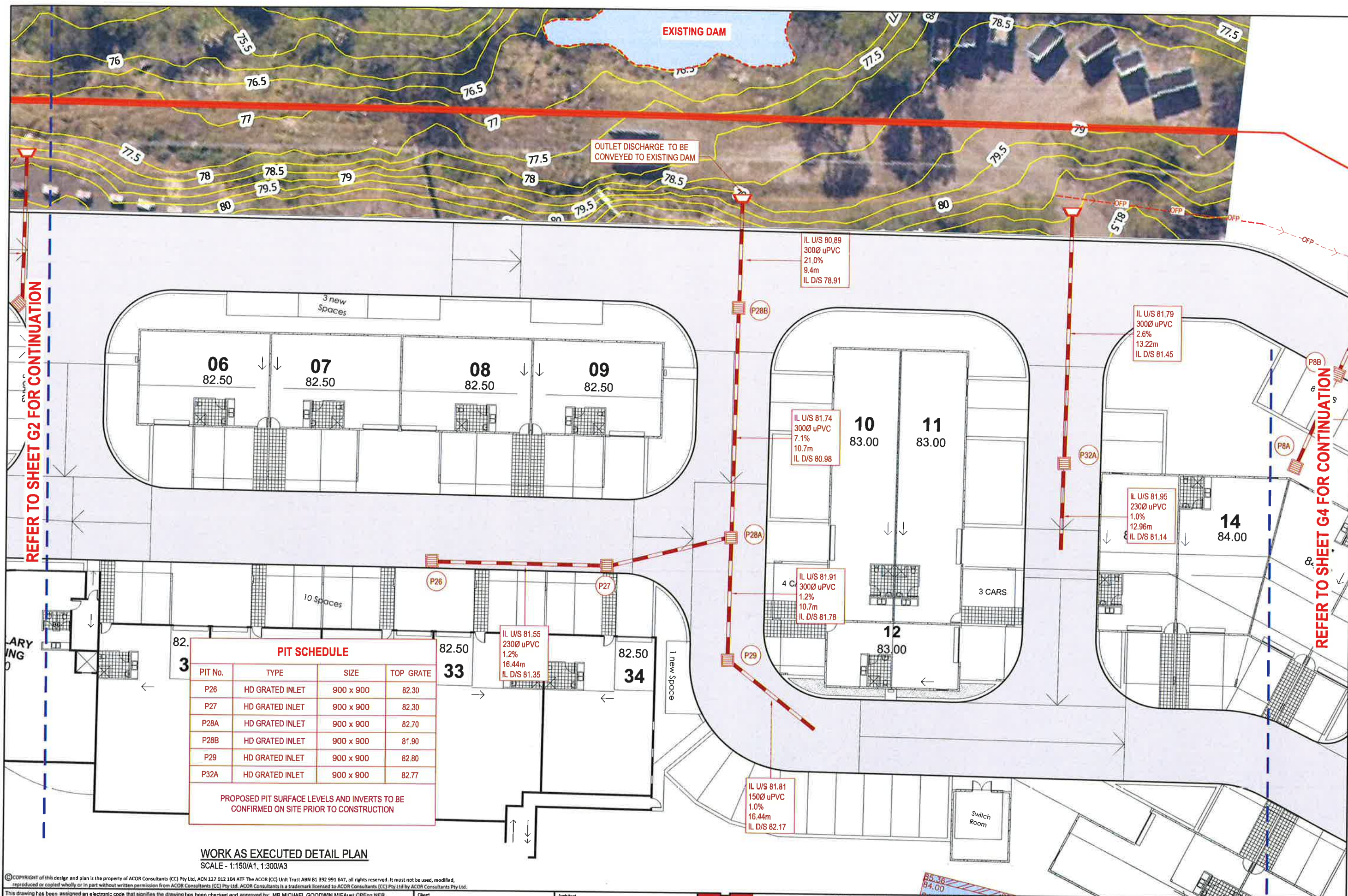
Architect
GELDER



ACOR Consultants (CC) Pty Ltd
Platinum Building, Suite 2.01, 4 Ilya Avenue
ERINA NSW 2250, Australia
T +61 2 4324 3499

Project
PROPOSED INDUSTRIAL DEVELOPMENT
LOT 100 D.P 1023183
MEATWORKS AVENUE
OXFORD FALLS

Drawing Title WORK AS EXECUTED DETAIL PLAN				
SHEET 1 OF 4				
Drawn SJ	Date 26.03.21	Scale AS NOTED	AT -	Q.A. Check -
Designed BK	Project No. CC180469	Dwg. No. G2	Issue B	



© COPYRIGHT of this design and plan is the property of ACOR Consultants (CC) Pty Ltd, ACN 127 012 104 ATF The ACOR (CC) Unit Trust AIN 81 392 991 647, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants (CC) Pty Ltd. ACOR Consultants is a trademark licensed to ACOR Consultants (CC) Pty Ltd by ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by: MR MICHAEL GOODWIN MIEAust CPENG NER

Issue	Description	Date	Drawn	Approved
B	WORK AS EXECUTED	05.05.21	SJ	BK
A	WORK AS EXECUTED OVERLAY	26.03.21	SJ	BK

Client
MR W. EDWARDS

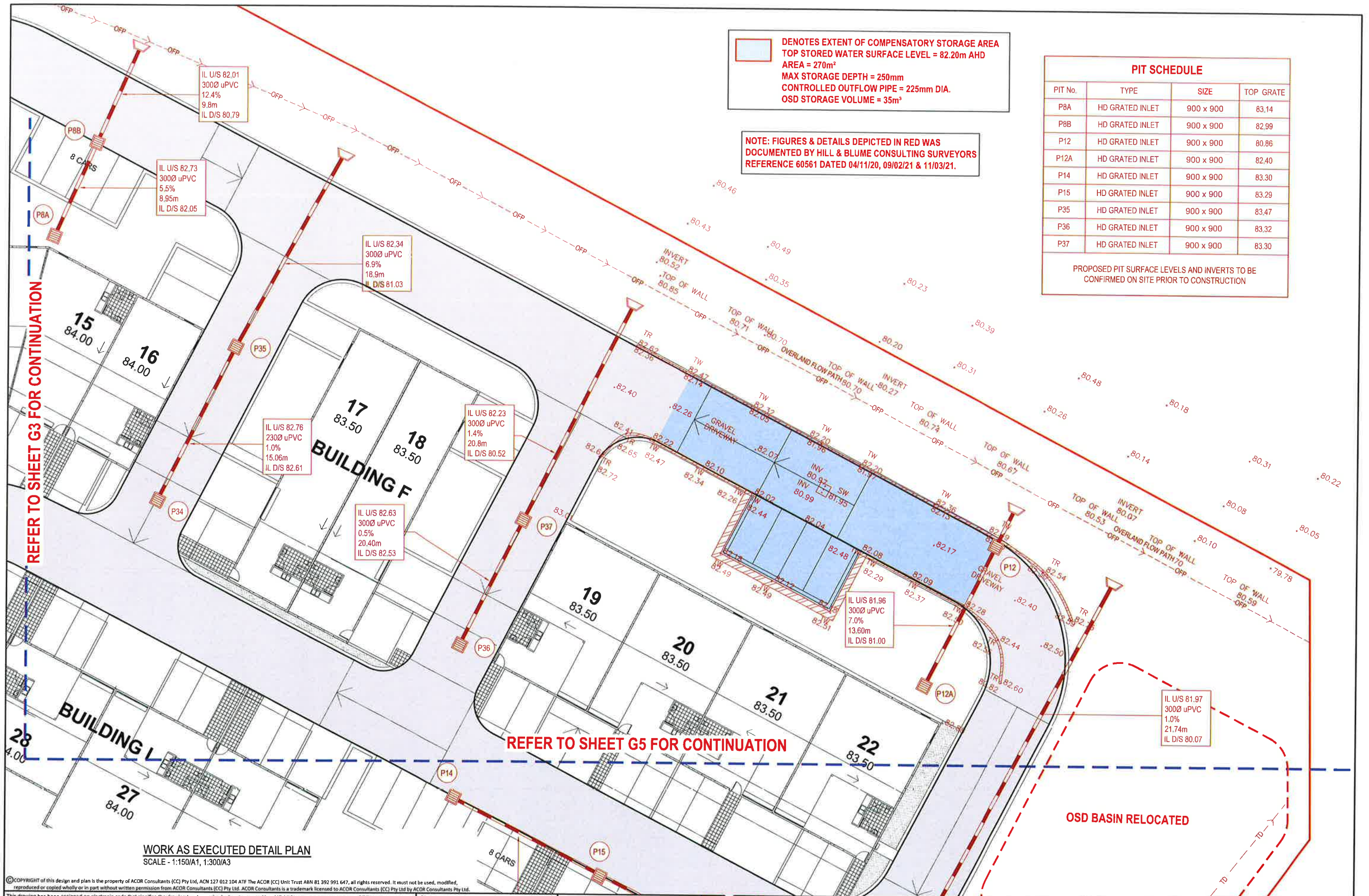
Architect
GELDER



ACOR Consultants (CC) Pty Ltd
Platinum Building, Suite 2.01, 4 Ilya Avenue
ERINA NSW 2250, Australia
T +61 2 4324 3499

Project
PROPOSED INDUSTRIAL DEVELOPMENT
LOT 100 D.P. 1023183
MEATWORKS AVENUE
OXFORD FALLS

Drawing Title WORK AS EXECUTED DETAIL PLAN SHEET 2 OF 4			
Drawn	Date	Scale	Q.A. Check
SJ	26.03.21	AS NOTED	-
Designed	Project No.	Dwg. No.	Issue
BK	CC180469	G3	B



■ DENOTES EXTENT OF COMPENSATORY STORAGE AREA
TOP STORED WATER SURFACE LEVEL = 82.20m AHD
AREA = 270m²
MAX STORAGE DEPTH = 250mm
CONTROLLED OUTFLOW PIPE = 225mm DIA.
OSD STORAGE VOLUME = 35m³

NOTE: FIGURES & DETAILS DEPICTED IN RED WAS DOCUMENTED BY HILL & BLUME CONSULTING SURVEYORS REFERENCE 60561 DATED 04/11/20, 09/02/21 & 11/03/21.

PIT SCHEDULE			
PIT No.	TYPE	SIZE	TOP GRATE
P8A	HD GRATED INLET	900 x 900	83.14
P8B	HD GRATED INLET	900 x 900	82.99
P12	HD GRATED INLET	900 x 900	80.86
P12A	HD GRATED INLET	900 x 900	82.40
P14	HD GRATED INLET	900 x 900	83.30
P15	HD GRATED INLET	900 x 900	83.29
P35	HD GRATED INLET	900 x 900	83.47
P36	HD GRATED INLET	900 x 900	83.32
P37	HD GRATED INLET	900 x 900	83.30

PROPOSED PIT SURFACE LEVELS AND INVERTS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION

REFER TO SHEET G3 FOR CONTINUATION

REFER TO SHEET G5 FOR CONTINUATION

OSD BASIN RELOCATED

WORK AS EXECUTED DETAIL PLAN
SCALE - 1:150/A1, 1:300/A3

© COPYRIGHT of this design and plan is the property of ACOR Consultants (CC) Pty Ltd, ACN 127 012 104 ATF The ACOR (CC) Unit Trust ABN 81 392 991 647, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants (CC) Pty Ltd. ACOR Consultants is a trademark licensed to ACOR Consultants (CC) Pty Ltd by ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by: MR MICHAEL GOODWIN MIEAust CPEng NER			
Client			
MR W. EDWARDS			
Architect			
GELDER			
North			
B	WORK AS EXECUTED	05.05.21	SJ BK
A	WORK AS EXECUTED OVERLAY	26.03.21	SJ BK
Issue	Description	Date	Drawn Approved

MR W. EDWARDS

GELDER



ACOR Consultants (CC) Pty Ltd
Platinum Building, Suite 2.01, 4 Ilya Avenue
ERINA NSW 2250, Australia
T +61 2 4324 3499

Project
PROPOSED INDUSTRIAL DEVELOPMENT
LOT 100 D.P 1023183
MEATWORKS AVENUE
OXFORD FALLS

Drawing Title			
WORK AS EXECUTED DETAIL PLAN SHEET 3 OF 4			
Drawn	Date	Scale	QA Check
SJ	26.03.21	AS NOTED	-
Designed	Project No	Dep. No	Issue
BK	CC180469	G4	B

REFER TO SHEET G3 FOR CONTINUATION

REFER TO SHEET G4 FOR CONTINUATION

OSD BASIN RELOCATED

PIT SCHEDULE			
PIT No.	TYPE	SIZE	TOP GRATE
P12	HD GRATED INLET	900 x 900	80.86
P12A	HD GRATED INLET	900 x 900	82.40
P14	HD GRATED INLET	900 x 900	83.30
P15	HD GRATED INLET	900 x 900	83.29
P36	HD GRATED INLET	900 x 900	83.32
P37	HD GRATED INLET	900 x 900	83.30
PROPOSED PIT SURFACE LEVELS AND INVERTS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION			

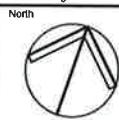
NOTE: FIGURES & DETAILS DEPICTED IN RED WAS
DOCUMENTED BY HILL & BLUME CONSULTING SURVEYORS
REFERENCE 60561 DATED 04/11/20, 09/02/21 & 11/03/21.

WORK AS EXECUTED DETAIL PLAN
SCALE - 1:150/A1, 1:300/A3

© COPYRIGHT of this design and plan is the property of ACOR Consultants (CC) Pty Ltd, ACN 127 012 104 ATF The ACOR (CC) Unit Trust ABN 81 392 991 647, all rights reserved. It must not be used, modified, reproduced or copied wholly or in part without written permission from ACOR Consultants (CC) Pty Ltd. ACOR Consultants is a trademark licensed to ACOR Consultants (CC) Pty Ltd by ACOR Consultants Pty Ltd.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by: MR MICHAEL GOODWIN MIEAust CPEng NER

Issue	Description	Date	Drawn	Approved
B	WORK AS EXECUTED	05.05.21	SJ	BK
A	WORK AS EXECUTED OVERLAY	26.03.21	SJ	BK



Client
MR W. EDWARDS

Architect
GELDER



ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

ACOR Consultants (CC) Pty Ltd
Platinum Building, Suite 2.01, 4 Ilya Avenue
ERINA NSW 2250, Australia
T +61 2 4324 3499

Project
PROPOSED INDUSTRIAL
DEVELOPMENT
LOT 100 D.P. 1023183
MEATWORKS AVENUE
OXFORD FALLS

Drawing Title
WORK AS EXECUTED DETAIL PLAN
SHEET 4 OF 4

Drawn	Date	Scale	AT	Q.A. Check	Date
SJ	26.03.21	AS NOTED	-	-	-
Designed	Project No.	Dwg. No.	Issue		
BK	CC180469	G5	B		