

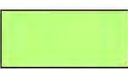

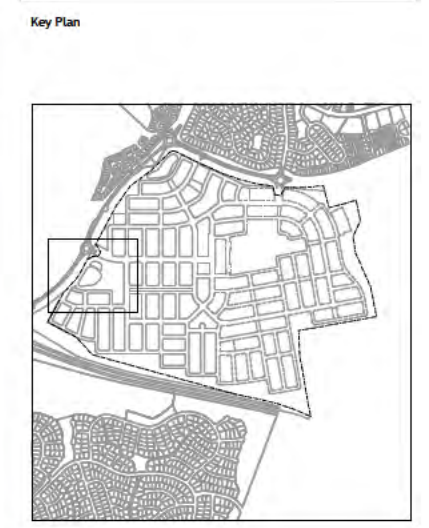
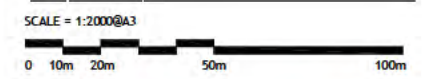


LEGEND

-  HOLDING LEASE BOUNDARY
-  STAGE BOUNDARY
- 1 2 BLOCK NUMBER
- EA SECTION NUMBER
-  FILL
-  CUT



Issue	Date	Amendment
00	29/10/10	Draft First Submission
01	18/02/10	Draft Second Submission
02	15/04/11	DA Submission



Joint Venture Partners

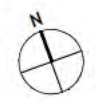
Tatebrook
 Joint venture managed by CIC Craco Pty Ltd
 Project Consultants

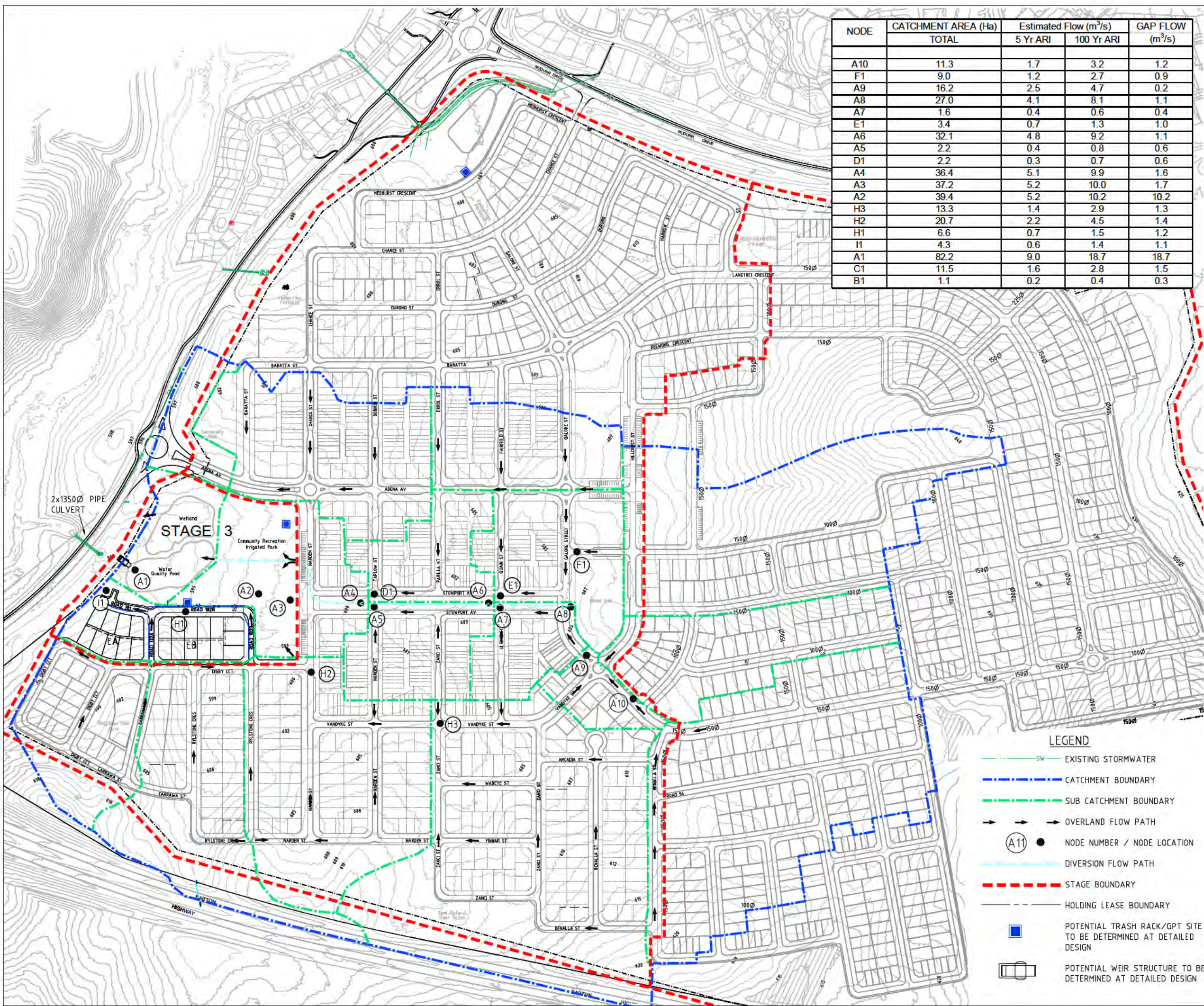
INESCO

Project
CRACE STAGE 3
ESTATE DEVELOPMENT PLAN

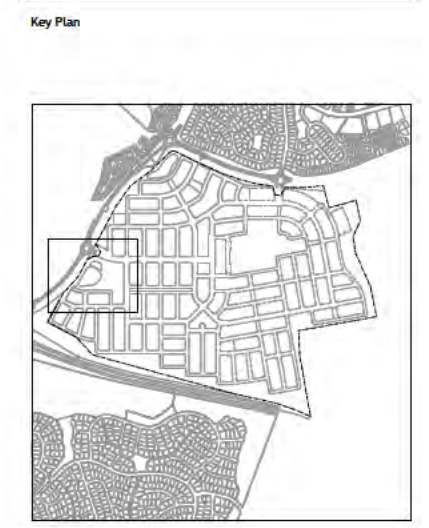
Drawing Title
Fill Plan

Scale	1:2000
Drawn	GC
Checked	HR
Approved	VL
Job No	4431
Drawing Number	EDP3-ENG-FP-28.1
Plan No.	28.1 Issue 02

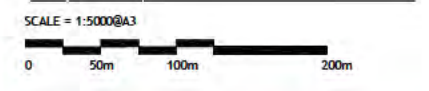




NODE	CATCHMENT AREA (Ha)		Estimated Flow (m ³ /s)		GAP FLOW (m ³ /s)
	TOTAL		5 Yr ARI	100 Yr ARI	
A10	11.3		1.7	3.2	1.2
F1	9.0		1.2	2.7	0.9
A9	16.2		2.5	4.7	0.2
A8	27.0		4.1	8.1	1.1
A7	1.6		0.4	0.6	0.4
E1	3.4		0.7	1.3	1.0
A6	32.1		4.8	9.2	1.1
A5	2.2		0.4	0.8	0.6
D1	2.2		0.3	0.7	0.6
A4	36.4		5.1	9.9	1.6
A3	37.2		5.2	10.0	1.7
A2	39.4		5.2	10.2	10.2
H3	13.3		1.4	2.9	1.3
H2	20.7		2.2	4.5	1.4
H1	6.6		0.7	1.5	1.2
I1	4.3		0.6	1.4	1.1
A1	82.2		9.0	18.7	18.7
C1	11.5		1.6	2.8	1.5
B1	1.1		0.2	0.4	0.3



Issue	Date	Amendment
00	29/10/10	Draft First Submission
01	18/02/10	Draft Second Submission
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Joint Venture Partners

Tatebrook
Joint venture managed by CIC Craco Pty Ltd
Project Consultants

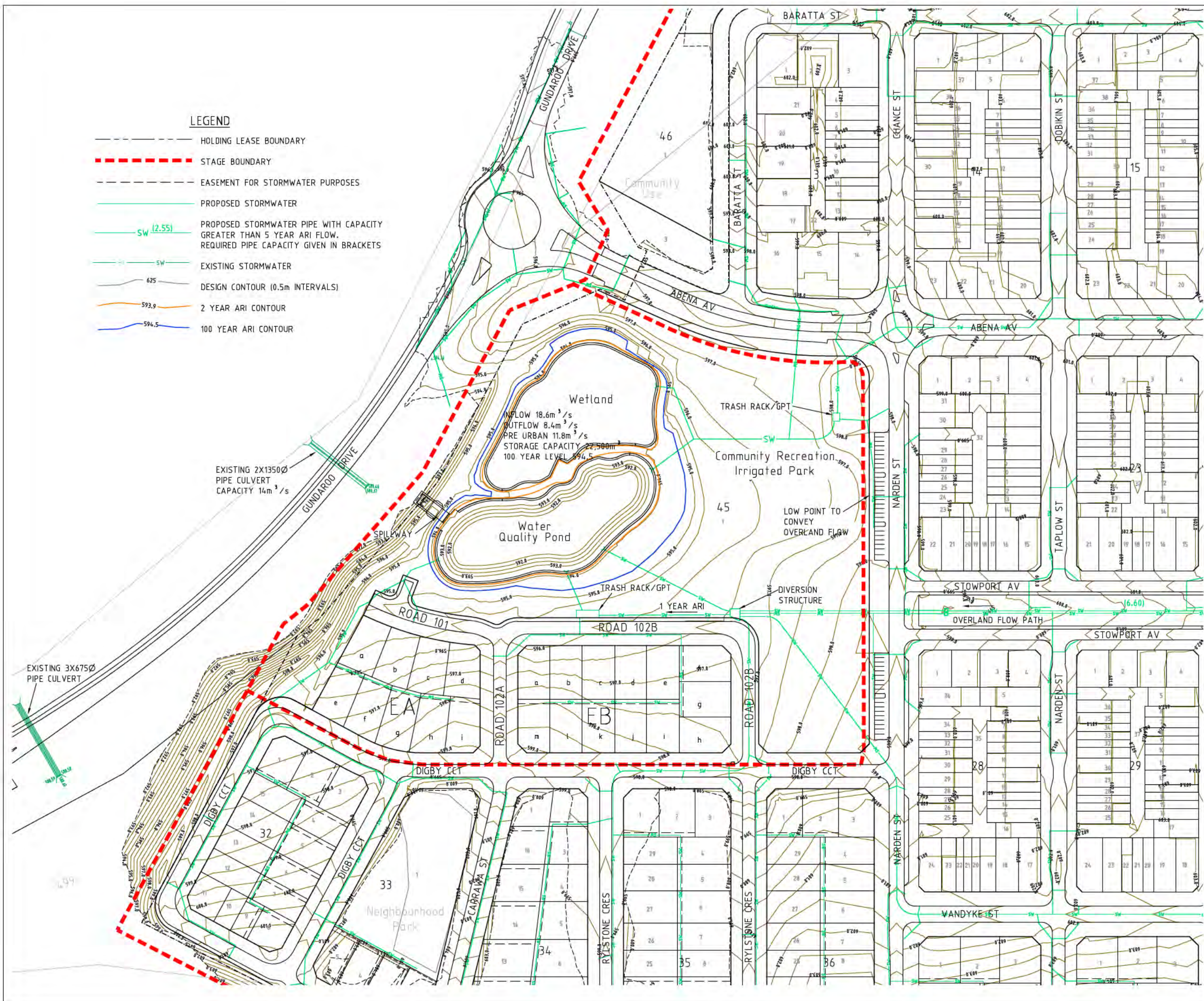


Project
**CRACE STAGE 3
ESTATE DEVELOPMENT PLAN**

Drawing Title
**Stormwater Master Plan
CATCHMENT LAYOUT**

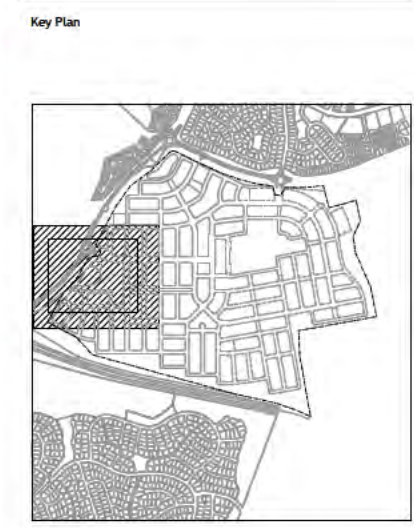
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Drawn	HR
Checked	HR
Approved	VL
Job No	4431
Drawing Number	EDP3-ENG-SWMP-9.2
Plan No.	9.2 Issue 02

- LEGEND**
- EXISTING STORMWATER
 - CATCHMENT BOUNDARY
 - SUB CATCHMENT BOUNDARY
 - OVERLAND FLOW PATH
 - NODE NUMBER / NODE LOCATION
 - DIVERSION FLOW PATH
 - STAGE BOUNDARY
 - HOLDING LEASE BOUNDARY
 - POTENTIAL TRASH RACK/GPT SITE TO BE DETERMINED AT DETAILED DESIGN
 - POTENTIAL WEIR STRUCTURE TO BE DETERMINED AT DETAILED DESIGN

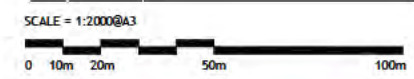


LEGEND

- HOLDING LEASE BOUNDARY
- STAGE BOUNDARY
- EASEMENT FOR STORMWATER PURPOSES
- PROPOSED STORMWATER
- PROPOSED STORMWATER PIPE WITH CAPACITY GREATER THAN 5 YEAR ARI FLOW. REQUIRED PIPE CAPACITY GIVEN IN BRACKETS
- EXISTING STORMWATER
- 625 DESIGN CONTOUR (0.5m INTERVALS)
- 593.9 2 YEAR ARI CONTOUR
- 594.5 100 YEAR ARI CONTOUR



Issue	Date	Amendment
00	29/10/10	Draft First Submission
01	18/02/10	Draft Second Submission
02	15/04/11	DA Submission



Joint Venture Partners

Tatebrook

Joint venture managed by CIC Craco Pty Ltd
Project Consultants

Project
**CRACE STAGE 3
ESTATE DEVELOPMENT PLAN**

Drawing Title
**Stormwater Master Plan
LAYOUT PLAN**

Scale	1:2000
Drawn	GC
Checked	HR
Approved	VL
Job No	4431
Drawing Number	EDP3-ENG-SWMP-9.1
Plan No.	9.1 Issue 02

From: Schilg, Cassie
Sent: Monday, 25 July 2011 1:17 PM
To: ACTPLA Customer Services
Subject: COMM-EPA-201120037-39/1 CRACE-01

Thank you for the opportunity to comment on DA201120037. Please see comments below from the Environment Protection Authority (EPA):

Erosion and Sediment Control:

It is the EPA' understanding that water quality ponds are to be used as sediment control ponds for the other stages of Crace. The sediment control pond should not be developed into a water quality pond until the catchment upslope, including the Crace stages, are stabilised to 80%.

Construction and development works to be in accordance with "Environment Protection Guidelines for Construction and Land Development, 2007". As the site is greater than 0.3 hectares the proposed construction is an activity listed in Schedule 1 of the *Environment Protection Act 1997* as a Class B activity. Therefore, the contractor/builder proposing to develop the site must enter into an Environment Protection Agreement with the EPA in respect of that activity prior to works commencing.

As part of this Agreement erosion and sediment control plan is to be endorsed by the EPA prior to works commencing. Two copies of the plan are required to be submitted,

Noise:

All homes must be constructed as advised in the noise report titled;
Crace Noise Assessment,
Prepared for CIC Crace Pty Ltd
Prepared by AECOM Australia Pty Ltd
Dated 25 November 2010

Waterway Work Licence:

This work will create disturbance to a defined waterway under the Water Resources Act 2007. Works that affect a waterway require a waterway works licence. Waterway means:

(a) river, creek, stream or other natural channel in which water flows (whether continuously or intermittently); or
(b) the stormwater system or any other channel formed (whether completely or partly) by altering or relocating a waterway mentioned in paragraph (a); or

(c) a lake, pond, lagoon or marsh (whether formed by geomorphic processes or by works) in which water collects (whether continuously or intermittently);

and includes

(d) the bed that the water in the waterway normally flows over or is covered by; and

(e) the banks that the water in the waterway normally flows between or is contained by;

but does not include land normally not part of the waterway that may be covered from time to time by floodwaters from the waterway

Works that affect a waterway must not commence unless the applicant holds an authorised Waterway Work Licence. The applicant will therefore be required to submit a Waterway Works Licence application for this project. Contact Environment Protection Authority (Water Resources Unit) for more information.

Non-potable water for long-term use

Should the proponent or their client(s) be involved in plans to take non-potable water for on-going purposes (e.g. ponds, groundwater etc), we encourage the proponent or their client(s) to contact the Environment Protection Authority to discuss 'Water Access Entitlement' and 'Licence to take water' requirements of the Water Resources

Act 2007. No water may be taken without an EPA approved Licence to take water. Contact Environment Protection Authority (Water Resources Unit) for more information.

Regards,

Cassie Schilg | EPA Liaison Officer

☎ Phone: 02 6207 6251 | 📠 Fax: 02 6207 6084 | ✉ Email: cassie.schilg@act.gov.au
Environment Protection Unit | [Environment and Sustainable Development Directorate](#) | ACT Government
Level 3 Annex Macarthur House | 📧 GPO Box 158 Canberra ACT 2601 | www.act.gov.au

From: ACTPLA Customer Services
Sent: Tuesday, 5 July 2011 11:14 AM
To: McKeown, Helen; Schilg, Cassie
Subject: REFERRAL-EPA-201120037-39/1 CRACE-01

MANDATORY REFERRAL

DEVELOPMENT APPLICATION NO: 201120037
BLOCK: 39 SECTION: 1 DIVISION: CRACE

Description - ESTATE DEVELOPMENT PLAN - CRACE STAGE 3 - 23 NEW BLOCKS.
Proposed subdivision to create 23 new blocks comprising of 22 residential blocks and 4.5HA block for public open space; Includes development of associated infrastructure and services.

Pursuant to Section 148(1) of the Planning and Development Act 2007 the ACT Planning and Land Authority requests that you consider the abovementioned development application and provide any written advice no later than 15 working days after the date of this notice **(26/7/2011)**.

In accordance with Section 150 of the Planning and Development Act 2007 If advice is not received within the prescribed time it will be taken that you have supported the application.

Please forward any written advice via email to the Applications Secretariat app.sec@act.gov.au

Please use the following format in the subject line of the email when providing advice:

COMM-Agency Name-20080XXXX-Block XX Section XX SuburbXXXXX-01
Example: COMM-Heritage-200801234-Block 10 Section 10 Dickson-01

Kind Regards

Katherine Breitkopf |

Phone 02 6207 1923

Client Services Branch | Environment and Sustainable Development | **ACT Government**

Dame Pattie Menzies House, Challis Street, Dickson | GPO Box 1908 Canberra

ACT 2601 | www.actpla.act.gov.au



Form

Internal Referral Brief for MPRG

SUBMISSION TO MAJOR PROJECT REVIEW GROUP

AGENDA ITEM NO.	2
DATE OF MEETING	11 AUGUST 2011
SUBJECT	DA 201120037 – BLOCK 39 SECTION 1 CRACE
BRANCH	PLANNING DELIVERY UNIT
PRESENTED BY	LINDA REN

This proposal has been referred to the Major Project Review Group because it is an Estate Development Plan in the impact track.

Purpose

- To brief the Major Project Review Group on a development proposal for an Estate Development Plan for a residential housing subdivision including:
 - 23 blocks comprising of 22 single residential blocks and one 4.5Ha block for public open space; and
 - infrastructure works including roads, utilities and services (Attachment A).
- To seek MPRG advice on the development proposal.

Background

The Crace Stage 3 estate was originally part of Crace Stage 2. Due to unresolved issues around consistency in the Concept Plan, this area was excised from Stage 2. The development triggered an EIS under section 4.3 item 3(a), clearing of native vegetation, Schedule 4 of the *Planning and Development Act 2007*. A S.211 exemption was granted on 12 October 2010 (Attachment B). There is no notifiable instrument required for this S211.

The subject site is surrounded by the existing Crace Stage 1 to the East, North and South. It adjoins Gundaroo Drive to the West. Crace Stage 3 DAs prescribed timeframe for the application ends on 1 September 2011.

Crace Stage 1 was approved in accordance with Territory Plan 2002 under the *Land (Planning and Environment) Act 1991*. Lease and development conditions apply to the development within that stage of the estate. Stage 2 was approved in accordance with Territory Plan 2008 and Crace Concept Plan under the *Planning and Development Act 2007*.

Leasing

The development is subject of a holding lease managed by Deed Management in accordance with the Executed Deed of Agreement.

Issues identified for discussion:

- The Community Recreation Irrigated Parkland (CRIP)

The Crace Concept Plan identified the need for a neighbourhood playing field. Although the CRIP was requested by TAMS, there were some concerns regarding consistency with the Crace Concept Plan requirements of a neighbourhood playing field. The proposed CRIP is not a commonly used term of neighbourhood playing field, the more commonly used term being unfenced oval.

A Territory Plan Technical Amendment (TA) (2011-11) was approved and commenced on 8 July 2011 which clarified the original intent of playing field. Under the new definition, the proposed CRIP can be classified as a "playing field".

The CRIP will provide an attractive and versatile community parkland by combining structured sporting facilities and unstructured spaces. Sport and Recreation confirmed in their email on the draft proposal on 21 Dec 2010 that the area proposed for the CRIP is sufficient.

- Crace Concept Plan/Precinct Code Important Planning Requirements

The development is not inconsistent with the intentions and desired outcomes of the Crace Concept Plan/Precinct Code. This Code originally identified an indicative subdivision across Crace that includes 1200 dwellings with a dwelling density of 13 dwellings/ha. The indicative yield has been increased to 1800 dwellings through TA No. 2010-31 and the estate design has achieved a neighbourhood density of approximately 15.5 dwellings/ha. The Stage 3 EDP does not exceed 1800 dwellings. While the development does not reflect the design envisaged by the indicative subdivision in Crace Concept Plan, this Stage is consistent with the Concept Plan/Precinct Code requirements for the location of playing field.

Ongoing planning controls

- i. Noise: Specific controls for all proposed blocks where the traffic noise is likely to be exceeded have been noted on the Planning Control Plan.
- ii. Bushfire: A bushfire risk assessment has been completed with the recommendations incorporated in the Planning Control Plan.
- iii. Fencing: specific controls for fencing on corner blocks, north facing blocks and blocks adjoining open space have been noted on the Planning Control Plan to reflect the Territory Plan Technical Amendment (2011-11).

- Heritage

There is no heritage issue on the subject site. An unanticipated discovery plan has been prepared for the entire Crace Estate and approved by ACT Heritage Council.

- Trees - There are no regulated trees on the site.

- Entity comments

TAMS, EPA, ESA, and ACT Health have provided comments. These have been addressed through conditions of approval or advice.

- Representations

Three representations have been submitted during the public notification period which ended on 29 July 2011. The representations raised concerns about the location of the public toilet in the proposed CRIP. Although the detailed design for the CRIP, including the public toilets and the multi use court, were included in the submitted Landscape Master Plan, they are not part of this approval. A separate process will occur for the approval of these features. Under Division 1.3.6, Schedule 1 of the *Planning and Development Regulation 2008*, many of these items will be exempt from requiring development approval. Copies of these representations will be provided to TAMS for consideration.

Communications

No known media interest.

Options

The options for progressing this matter are as follows:

- A) That the DA is approved subject to conditions listed in the attached draft NOD and the plans withheld until the decision takes effect; or
- B) That the DA is not approved.

Recommendation

That the MPRG supports option A).

Linda Ren
Case Officer
3 August 2011

Minutes

Chair: Ben Ponton

Minute Taker: Clinton Cashen

Present: Aaron

Oshyer, Karen Wilden, Chris Gell

Decision by Major Project Review Group: Support the recommendation to approve the EDP with conditions.

The Chair requested advice on the TA 2010 – 31 as discussed in the brief. Since the meeting, it has been confirmed this technical amendment was withdrawn. It is requested the paragraph discussing TA 2010-31 be disregarded.

Date this decision was Approved in Objective by Chair of MPRG meeting:

Is additional referral required? (If YES, highlight selection below)

Decision Assurance Panel

Major Project Review Group (re-submission)

Executive Policy Committee

Other - specify

Date referred to Communications Unit:



Form

Territory Plan Code Requirements Impact Track

ASSESSMENT REPORT

Crace Concept Plan

ASSESSMENT OFFICER: Linda Ren
APPLICATION NUMBER: 201120037
BLOCK: 39 SECTION: 1
DIVISION: Crace

Territory Plan Code Requirements

This document provides analysis of a development proposal in relation to the relevant codes contained in the Territory Plan. The proposed development is in the Crace Concept Plan. The proposal meets all planning requirements that are relevant to the development with the exception of those listed in the tables below.

1. Assessment of Compliance with Crace Concept Plan

The Crace Concept Plan is a Precent Code relevant to this proposal. The comments for the planning requirements identified in the tables below are provided where it is considered warranted to clarify why a particular criterion or rule is either met or not met.

Part 6 Important Planning Requirements

Sub-Element: 6.1 Housing Policies (Small Scale Blocks)

Not applicable as no small scale blocks proposed.

Sub-Element: 6.2 Housing Mix

The indicative subdivision in the Crace Concept Plan identifies 1200 dwellings with a dwelling density of approximately 13 dwellings/ha. The concept plan is a guideline for the development of Crace and there is no mandatory requirement. Crace Stage 1 and 2 did not reflect the exact layout envisaged by the indicative subdivision and the approved 1839 (1065 for stage 1 and 774 for stage 2) dwellings are much more than the identified 1200 dwellings. However, they have been considered consistent with the desired dwelling density and subdivision character envisaged by the concept plan.

Crace Stage 3 has a net residential density of approximately 13 dwellings/ha based on a development area of approximately 1.8ha and 22 dwellings. Consequently, Crace Stage 3 is consistent with the desired dwelling density. Considering the small number of proposed dwellings, it is unlikely that Stage 3 will significantly change the dwelling yield and density of the whole estate. Mixed housing have been provided during stage 1 and 2.

Sub-Element: 6.3 Commercial centres
--

Not applicable as commercial centre has been provided during stage 1 and 2.

Sub-Element: 6.4 Community facilities
--

Not applicable as community facilities have been provided during stage 1 and 2 at the location identified by the concept plan.
--

Sub-Element: 6.5 Open Space Provision

Not complies because the Concept Plan identified the need for a neighbourhood playing field which normally refers to an oval.

Although the Community Recreation Irrigated Parkland (CRIP), a water quality pond, wetland and other community facilities proposed by the proponent are not a common terminology (unfenced oval), it is considered a kind of Playing Field.

In addition, the proposed open space framework provides more variety groups-oriented facilities for the community. The proposed CRIP is more functionally suitable the community than the standard requirements for the supply of 'neighbourhood Ovals' as several ovals have been provided for other neighbourhood suburbs and the CRIP would supply multiple and varied recreation and leisure experiences to a wide range of user groups. By combining structured sporting facilities and unstructured spaces, the CRIP will provide an attractive and versatile community parkland. Besides, Sport and Recreation confirmed that the area proposed for the CRIP is sufficient In their email of 21 Dec 2010. The ACTPLA Design Policy team also supports this proposed CRIP.

Currently, a technical amendment of the Territory Plan is being undertaken to clarify the meaning of 'playing field' to read as "playing field means the use of land for the conduct of sports, athletics and games and includes facilities with such land for the enjoyment or convenience of the public such as kiosks, car parks, changing facilities, pavilions and the like. It has unrestricted public access". The proposed CRIP will be a kind of playing field.

Sub-Element: 6.6 Environment

Not applicable as a detailed tree survey assessment was undertaken during stage 1 & 2 and there are no trees located within stage 3.

Sub-Element: 6.7 Heritage

Not applicable as no heritage issue in Stage 3 area.

Sub-Element: 6.8 Contamination Assessment

Not applicable.

Sub-Element: 6.9 Bushfire Risk Assessment

Complies as a Bushfire Risk Assessment Review and a Bushfire Plan were submitted by the proponent and entities support the plan.

Sub-Element: 6.10 Road Network/ Hierarchy

Complies because three access streets proposed in Stage 3 and 90% of dwellings are within 400m of a proposed bus stop within stage 1.

The intersections in the Stage 3 are Local Access Streets and no assessment required due to low traffic volume.

Sub-Element: 6.11 Pedestrian and Bicycle Network

Complies as a major path connection from Stage 3 via Stage1 to the south will be provided onto Barton Highway and no road cycling is provided in Stage 3.

In addition, footpaths are provided for streets and off road cyclist facilities are provided for street A.

Sub-Element: 6.12 Public transport

Complies. There are no proposed bus routes through stage 3. However, 95% of all housing are within 400m of a proposed bus stop on Abena Ave in stage 1.

Territory Plan Code Requirements – Merit Track

DA No.201120037

Sub-Element: 6.13 Noise Assessment
The acoustic studies undertaken by Bassett Acoustics stated that several dwellings where the traffic noise planning criterion value is likely to be exceeded. A condition of approval is required to ensure the noise protection measures in the acoustic study to be applied during construction.
Sub-Element: 6.14 Section Planning—6.14.1 Access
Not applicable.
Sub-Element: 6.14 Section Planning—6.14.2 Block Orientation and Sizes
Complies.
Sub-Element: 6.14 Section Planning—6.14.3 Car Parking/ Car Courts
Not applicable.
Sub-Element: 6.15 Urban Edge Treatment
Complies as the proposal has been referred to entities and TAMS and ESA supported the project.
Sub-Element: 6.16 Indicative Development Staging
Complies.
Sub-Element: 6.17 Engineering Services Master Planning
Complies as the proposal has been referred to entities and TAMS and Actew AGL supported the project
Sub-Element: 6.17 Engineering Services Master Planning---6.17.1 Water Supply
Complies as this has been addressed in Stage 1 & 2 and Actew AGL endorsed the water supply master plan.
Sub-Element: 6.17 Engineering Services Master Planning—6.17.2 Sewer Management
Addressed in Stage 1 & 2. Complies as Actew AGL endorsed the Sewer master plan.
Sub-Element: 6.17 Engineering Services Master Planning—6.17.3 Stormwater Management
Complies as Actew AGL and TaMS supported the stormwater plan.
Sub-Element: 6.17 Engineering Services Master Planning—6.17.4 Other Infrastructure
Complies as the proposal has been referred to entities and the entities supported the proposal.
Sub-Element: 6.18 Works Associated with Development
Not applicable.
Sub-Element: 6.19 Summary of Further Investigations
Not applicable as investigations have been done during stages 1 & 2.



ACT
Government

Environment and
Sustainable Development

Notice of decision

Under Part 7 of the *Planning and Development Act 2007*

Impact track

DA NO: 201120037		DATE LODGED: 28 June 2011
DATE OF DECISION: 24 August 2011		
BLOCK: 39	SECTION: 1	SUBURB: CRACE
STREET NO AND NAME: Gundaroo Drive		
APPLICANT: CIC Crace Pty Ltd		
LESSEE: unleased territory land		

THE DECISION

This application was lodged in the impact track. Pursuant to section 113(2) of the *Planning and Development Act 2007*, the application must be assessed according to the provisions relevant to impact track applications.

I, Clinton Cashen, delegate of the ACT Planning and Land Authority, pursuant to section 162 of the Act, hereby **approve subject to conditions** the proposal for:

- the subdivision of land to create 23 blocks comprising of 22 residential blocks and a 4.5HA block for public open space, and
- associated infrastructure works including roads, utilities and services

in accordance with the plans, drawings and other documents and items submitted with the application and endorsed as forming part of this approval.

This decision is subject to the conditions of approval at **PART 1** being satisfied.

PART 2 sets out the Reasons for the Decision

PART 3 is the Consultation and Entity Referral Report.

PART 4 contains administrative information relating to the determination.

DELEGATE

Clinton Cashen
Delegate of the ACT Planning and Land Authority
24th August 2011

CONTACT OFFICER

Linda Ren
Phone: (02) 6205 3343
Email: linda.ren@act.gov.au

PART 1 CONDITIONS OF APPROVAL

This application is approved subject to the following conditions being satisfied. Some conditions of approval will require attention before work commences or before the completion of building work.

A PRIOR TO CONSTRUCTION

Environment Protection Authority

- A1. That prior to the commencement of construction works on site, the following requirements be submitted to and approved by the Environment Protection Authority (EPA):
- (a) A Waterway Works licence under the provision of the *Water Resources Act 2007* for any diversion of or any works within a natural waterway.
 - (b) Environment Protection Agreement or Environmental Authorisation with the EPA for any activity on the site which is listed under Schedule 1 as a Class B activity of the *Environment Protection Act 1997*; and
 - (c) Two copies of an erosion and sediment control plan, submitted as part of the above Agreement/Authorisation.

NOTE: Contact the Water Resources Unit, Environment Protection Authority, ESDD for more information on a Waterway Works licence or the Environment Protection Unit, ESDD for Environmental Authorisation/Agreement details (132 281).

Erosion and Sediment Control Pond

- A2. Where the water quality pond to be used as sediment control ponds for the other stages of Crace, the sediment control pond should not be developed into a water quality pond until the catchment upslope is stabilised to 80%.

Recreational Facilities Irrigation

- A3. That prior to the commissioning of the pond and associated irrigation system, the following requirements be submitted to and approved by ACT Health Directorate:
- (a) A management plan to address the requirements for operation, maintenance and monitoring of the recreational facilities. The management plan must comply with section 3.4 of the "*Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2) Stormwater Harvesting and Reuse*" July 2009.

Notice of Commencement of Construction

- A4. That a Notice of Commencement of Construction be submitted to the Manager, Asset Acceptance, Operational Support, Directorate Services of Territory and Municipal Services Directorate (TAMSD), one week prior to the commencement of construction works on site. Notice shall also include the confirmation of any protective measures installed in accordance with the approved *Landscape Management Protection Plan* and programmed implementation of the *Temporary Traffic Management Plan*.

Works on Territory Land

- A5. That in accordance with the *Roads and Public Places Act 1937* no work is to be undertaken on road verges and other unleased Territory Land without the approval of the

Manager, Asset Acceptance, Operational Support, Directorate Services, TAMSD. The approval is to be obtained prior to the commencement of any works on site.

Design Acceptance

- A6. That a Certificate of Design Acceptance be obtained from the Manager, Asset Acceptance Operational Support, Directorate Services, TAMSD. In order to obtain this certificate the following shall be submitted to and approved by the Manager, Asset Acceptance, Operational Support, Directorate Services, TAMSD prior to the commencement of construction works on site:
- (a) Fully detailed drawings (civil, landscape) prepared by suitably qualified persons for all off-site works including roads, driveways, footpaths, street lighting, storm water, landscaping (and any other issues that may be found by audit of the plans) and a design report in accordance with Ref No 06: "*Requirements for Design Acceptance Submissions*", must be certified by a Chartered Engineer/Landscape Architect and submitted to the Senior Manager, Asset Acceptance;
 - (b) A Waste Management Plan be prepared which addresses demolition, construction and operational phases and is in accordance with the *Development Control Code for Best Practice Waste Management in the ACT*; and
 - (c) Any other issues that may be found by audit of the plans.

Traffic Control Devices

- A7. That Traffic Control Device drawings for all new and amended works be submitted to Asset Acceptance, Operational Support, Directorate Services, TAMSD for approval prior to the installation of such devices.

Traffic Management Plan

- A8. A Temporary Traffic Management (TTM) Plan shall be prepared by a suitably qualified person and approved by the Manager, Asset Acceptance, Operational Support, Directorate Services, TAMSD, prior to commencement of any work on the site.

The TTM Plan shall include other measures to be employed during construction to manage all traffic, including construction traffic, in and around the site, provision of safe pedestrian movement around the site, the provision of parking for construction workers, and associated traffic control devices.

Landscape Management Protection Plan (LMPP)

- A9. Prior to the commencement of construction, a LMPP in accordance with *City Management Guidelines for the Protection of Public Landscape Assets Adjacent to Development Works-REF-04* is submitted to and approved by the Manager, Asset Acceptance, Operational Support, Directorate Services, TAMSD. This plan is to be implemented before the commencement of works, including the demolition/earthworks on the site.

B. DURING CONSTRUCTION

Landscape

- B1. Plantings within mulched beds are to be setback adequately from pathways to accommodate mature canopies of shrubs and groundcovers.

Heritage

- B2. That this development must be carried out in accordance with the existing Unanticipated Discovery Plan for this area.

Asset acceptance and Works on Unleased Territory Land

- B3. That during any work undertaken on the site the following requirements must be initiated and maintained for the duration of construction:
- (a) At all times prior to completion of works on site, any work being undertaken on the site and surrounds must be managed in accordance with the plans required under condition A6 & A8; and
 - (b) All existing vegetation (trees, shrubs and grass) located on the verge and unleased Territory land immediately adjacent to the development be managed, protected and maintained in accordance with the LMPP approved in accordance with Condition A9.

Street Furniture, Landscaping and Tree Planting

- B4. The ACT Fire Brigade requested that the following should be adhered to:
- (a) Access to hydrants, other water supplies and services must not be impeded by trees, street furniture or landscaping;
 - (b) Overhanging trees must not impede the progress of emergency service vehicles attending the facility. The minimum height clearance for ACT Fire Brigade vehicles is 4.5 metres;
 - (c) Street trees species to be selected for low bark flammability characteristics;
 - (d) Street furniture and future landscaping must not impede the progress of emergency service vehicles attending the facility.

C ADVISORY NOTES

This application is approved with the following advisory notes. It is recommended that careful consideration be given to advisory notes prior to commencing work.

Non-potable Water for Long-term Use

- C1. Should the proponent or their client(s) be involved in plans to take non-potable water for on-going purposes (e.g. ponds, groundwater etc), we encourage the proponent or their client(s) to contact the Environment Protection Authority to discuss 'Water Access Entitlement' and 'Licence to take water' requirements of the Water Resources Act 2007. No water may be taken without an EPA approved Licence to take water. Contact Environment Protection Authority (Water Resources) for more information: Telephone 132281, or GPO Box 158, Canberra ACT 2601.

Non-potable Water for Short-term Construction

- C2. If the proponent intends on sourcing non-potable water for construction activities they must hold an authorised Licence or Exemption issued by the Environment Protection Authority prior to works commencing. Contact EPA (Water Resources) for more information: Telephone 132281, GPO Box 158, Canberra ACT 2601.

Dust Suppression

C3. Contractor should seek alternatives to water for dust suppression which could include but are not limited to:

- Staging of works to minimise areas of disturbance at any one time before working on other areas;
- The use of temporary grassing;
- The use of bitumen straw mulching;
- The use of bitumen spraying;
- The use of hydromulching and seeding; and
- Ceasing work in dry and windy conditions.

Clearance from Substation to Playground

C4. Changes to the substation earthing to comply with the minimum requirements so that the playground could be installed within 100m from the substation shall be borne by the developer.

Notification of Interruption

C5. Notification of interruption to water supply or traffic access to the area due to the development should be sent to ACT Emergency Services Agency (ESA), ACTFB Comcen (02) 62078333.

Sales Documents

C6. The proponent should include the following advice from ACTPLA in any sales documents forwarded to prospective purchasers:

The lessee should note:

- Where a party/shared wall is to be constructed, the party/shared wall is to be constructed in accordance with section 28 of the *Common Boundaries Act 1981*; and
- Where zero setbacks are permitted, no encroachment will be permitted. It is the lessee's responsibility to confirm construction details via a detailed survey.

PART 2 REASONS FOR THE DECISION

The application satisfactorily meets the requirements for approval. The application was approved because, based on the documentation and in the form modified by the imposed conditions, it was considered to meet the relevant code, being:

- the Crace Concept Plan; and
- the Residential Subdivision Development Code.

The key issues identified in the assessment are:

- Noise protection
- Water harvesting from the pond

Conditions have been imposed to address the key issues and ensure that the proposal is consistent with the Territory Plan and the *Planning and Development Act 2007*.

In particular, the Environment Protection Authority requested that the recommendations in the acoustic studies undertaken for CIS Crace Pty Ltd by AECOM Australia Pty Ltd dated 29 April 2011 in terms of acoustic treatments must be implemented during the construction of any dwellings on these blocks. The specific controls for all proposed blocks where the traffic noise planning criterion value is likely to be exceeded have been noted on the Planning Control Plan which will be uplifted to the relevant precinct code. These provisions will be mandatory to ensure a high level of amenity in development for these blocks.

ACT Health Directorate advised their concerns in relation to harvesting of stormwater from the ponds in the recreational area. A condition has been imposed to ensure a management plan be submitted to and approved by ACT Health Directorate prior to the commissioning of the pond and associated irrigation system.

EVIDENCE

Application No. DA201120037

File No. 1-2011/07600

The Territory Plan zone – FUA: Future Urban Areas

The Development Codes – Residential Subdivision Development Code

The Precinct Codes – Crace Concept Plan

Current Crown Lease – unleased territory land

Representations – three

Entity advice – ActewAGL (water and electrical division), Territory and Municipal Services Directorate, Environment Protection Authority, ACT Emergency Services Agency, ACT Health Directorate, ACT Heritage Council, ESDD Infrastructure Policy

PART 3 PUBLIC NOTIFICATION AND ENTITY ADVICE

PUBLIC NOTIFICATION

Pursuant to Division 7.3.4 of the Act, the application was publicly notified from 8 July 2011 to 29 July 2011. Three written representations were received during public notification.

The representations raised concerns about the potential impact of the public toilet in the proposed Community Recreation Irrigated Park (CRIP) to the visual outlook and the value of their property opposite the proposed toilet. This approval is only for the subdivision of land to create 22 residential blocks, one open space block and the associated infrastructure works. Although the detailed design for the CRIP, including the public toilets and the multi use court were included in the submitted Landscape Master Plan, these elements are not part of this approval. Visual impact, passive surveillance and public safety will be considered during a separate process for these features. Therefore, no action is required at this stage for these representations.

ENTITY ADVICE

Pursuant to Division 7.3.3 of the Act, the application was referred to entities and advice was received. The referral entities' comments are as follows. A response to the advice is provided as appropriate.

TERRITORY AND MUNICIPAL SERVICES DIRECTORATE

On 27 July 2011 advice was received from Territory and Municipal Services in relation to the proposal. The advice states that the development application has been assessed and it is supported.

ACTPLA Comment: No further action is required in relation to this advice.

ActewAGL (water division)

On 12 July 2011 advice was received from ActewAGL water division in relation to the proposal. The advice states that the application has been assessed and complies with the water and sewerage requirements.

ACTPLA Comment: No further action is required in relation to this advice. The plans stamped by ActewAGL together with the statement of compliance will be dispatched with this Notice of Decision.

ActewAGL (electricity division)

On 27 July 2011 advice was received from ActewAGL electricity division in relation to the proposal. The advice states that their comment remains the same as their comment for the second pre-EDP circulation dated 5 March 2011. The comment for the second pre-EDP circulation states that changes to the substation earthing to comply with the minimum requirements so that the playground could be installed within 100m from the substation shall be borne by the developer.

ACTPLA Comment: Matters raised have been incorporated as advice.

ACT Health Directorate

On 27 July 2011 advice was received from ACT Health in relation to the proposal. The advice raised concern in relation to harvesting of stormwater from the ponds in the recreational area.

ACTPLA Comment: Matters raised have been incorporated as conditions of approval.

ESDD Infrastructure Policy

On 8 July 2011 advice was received from Infrastructure Policy in relation to the proposal. The advice states that there is no issue from a water sensitive urban design perspective.

ACTPLA Comment: No further action is required in relation to this advice.

Emergency Services Agency (ESA)

On 26 July 2011 advice was received from ESA in relation to the proposal. The advice states that the application has been assessed and the ESA has requirements in relation to street furniture, future landscaping, existing trees and tree planting that should be adhered to.

ACTPLA Comment: Matters raised have been incorporated as either conditions of approval or advice.

Environment Protection Authority (EPA)

On 26 July 2011 advice was received from the EPA in relation to the proposal. The advice states that the application has been assessed and raised the following issues:

- Non-potable water usage requirements
- Waterway work licence
- Erosion and Sediment Control requirements

ACTPLA Comment: Matters raised have been incorporated as either conditions of approval or advice.

ACT Heritage Council

On 26 July 2011 advice was received from ACT Heritage Council in relation to the proposal. The advice states that there are no perceived heritage issues with this application but an Unanticipated Discovery Plan is in effect for this area and must be adhered to.

ACTPLA Comment: Matter raised has been incorporated as a condition of approval.

PART 4 ADMINISTRATIVE INFORMATION

DATE THAT THIS APPROVAL TAKES EFFECT

This approval takes effect 20 working days after the day this notice of decision is given to every person who made a representation on the application. The effective date for development applications approved subject conditions could be adjusted if the approval is reconsidered by the ACT Planning and Land Authority or if an application is made to the ACT Civil and Administrative Tribunal.

Pursuant to section 184 of the Act, this approval will expire if:

- the development or any stage of the development is not started within two years after the day the approval takes effect;
- the development is not finished two years after the day the development begins; or
- the development approval relates to land comprised in a lease that requires the development to be completed on a stated date – the date stated in the lease for completion of the development, or the approval is revoked under section 189 of the Act.

Under section 184 of the Act, the applicant may apply to the ACT Planning and Land Authority to extend the prescribed period to finish the development, but such an application must be made within the original period specified for completion.

A development approval, to which section 184 of the Act applies, continues unless the approval ends under sections 184, 185, 186 or 187 of the Act.

INSPECTION OF THE APPLICATION AND DECISION

A copy of the application and the decision are available on the public register. The register can be inspected between 8:30am and 4:30pm weekdays at the ACT Planning and Land Authority Dickson Customer Service Centre at 16 Challis Street, Dickson, ACT.

RECONSIDERATION OF THE DECISION

If the applicant is not satisfied with the decision to approve the application subject to conditions, they are entitled to apply to the ACT Planning and Land Authority for reconsideration within 20 working days of being told of this decision or within any longer period allowed by the ACT Planning and Land Authority.

Application forms and further information about reconsideration are available from the ACT Planning and Land Authority's website and Customer Service Centres. The delegate of the Authority reconsidering the decision must be different from, and senior to, the original decision maker. An application for reconsideration does not prevent an application for a review of the same decision being made to the ACT Civil and Administrative Tribunal.

REVIEW BY THE ACT CIVIL AND ADMINISTRATIVE TRIBUNAL (ACAT)

Decisions that are reviewable by the ACAT are identified in Schedule 1 of the *Planning and Development Act 2007*, except for those precluded under Schedule 3 of the *Planning and Development Regulation 2008* – Matters exempt from third-party ACAT review.

This Notice of decision has also been sent to all people who made representations in relation to the proposal.

APPENDIX 1

CONTACT DETAILS OF RELEVANT AGENCIES

ACT Health Directorate - health protection	Website: www.health.act.gov.au Telephone: (02) 6205 1700
Environment and Sustainable Development Directorate <i>ACT Planning and Land Authority</i> - list of certifiers for building approval - demolition information - asbestos information <i>Environment Protection Authority</i> - environment protection - water resources	Website: www.actpla.act.gov.au Telephone: (02) 6207 1923 or (02) 6207 1687 Website: www.environment.act.gov.au Telephone: (02) 62076251
Territory and Municipal Services Directorate - tree damaging activity approval - heritage - use of verges or other unleased Territory land - works on unleased Territory land - design acceptance - damage to public assets - threatened species/wildlife management	Website: www.tams.act.gov.au Telephone: 132 281 Telephone for asset acceptance: (02) 6207 6594 Research and Planning (02) 62071911
Utilities - Telstra (networks) - TransACT (networks) - ActewAGL - Electricity reticulation	Telephone: (02) 9397 2090 Telephone: (02) 6229 8000 Telephone: 1100 Telephone: (02) 6293 5738

ADVICE TO APPLICANT

SUBMISSION OF REVISED DRAWINGS AND DOCUMENTATION

If a condition of approval requires the applicant to lodge revised drawings and/or documentation with the ACT Planning and Land Authority for approval under section 165 of the *Planning and Development Act 2007* the submission shall be made with a completed application Form 1E for Section 144 & 197 Amendments and Satisfying Conditions of Approval (S.165).

FURTHER APPROVALS FOR CONSTRUCTION

The Notice of Decision grants development approval, but does not cover building approval or approvals which may be required during construction, which commonly include the following.

BUILDING APPROVAL

Most building work requires building approval to ensure it complies with building laws such as the Building Code of Australia. If this applies to this proposal, the lessee should engage a private building certifier to assess and approve the building plans before construction begins. A list of licensed certifiers and information about building approval is available from the ACT Planning and Land Authority's website and Customer Service Centres.

PERMITTED VARIATIONS TO APPROVED DEVELOPMENT

Under section 35 of the *Planning and Development Regulation 2008* the development as built

may vary from the approved development in accordance with section 35 and the permitted construction tolerances and other permitted variations identified in Schedule 1A of that regulation.

Note 1 The development may still need building approval, or further building approval, under the *Building Act 2004*

Note 2 The development must also comply with the lease for the land on which it is carried out.

“TREE DAMAGING ACTIVITY” APPROVAL

A Tree Management Plan under the *Tree Protection Act 2005* is required for approval where it is proposed to undertake groundwork within the tree protection zone of a protected tree or likely to cause damage to, or remove, any trees defined as protected trees by that Act. More information is available from the Territory and Municipal Services Directorate.

USE OF VERGES OR OTHER UNLEASED TERRITORY LAND

In accordance with the *Roads and Public Places Act 1937*, road verges and other unleased Territory land must not be used for the carrying out of works, including the storage of materials or waste, without prior approval of the Territory. Approval can be obtained from the Territory and Municipal Services Directorate.

WORKS ON UNLEASED TERRITORY LAND – DESIGN AND OPERATIONAL ACCEPTANCE

In accordance with the *Roads and Public Places Act 1937*, no work can be undertaken on unleased Territory land without the approval of the Territory. Such approval must be obtained from the Manager, Asset Acceptance, Operational Support, Directorate Services, TAMSD by way of:

1. a certificate of design acceptance prior to the commencement of any work and
2. a certificate of operational acceptance on completion of all works to be handed over to TAMSD

Works on unleased Territory land may include the construction or upgrading of driveway verge crossings, public footpaths, roads, street lighting, stormwater works, waste collection amenities, street signs and line marking, road furniture and landscaping.

A certificate of compliance under s296 of the *Planning and Development Act 2007*, may not be issued unless a certificate of design acceptance **AND** a certificate of operational acceptance have both been obtained from TAMS.

CONSTRUCTION REQUIREMENTS

The following information are some key requirements that apply to building work in the Territory. Other requirements may apply to this development.

DEMOLITION AND ASBESTOS MANAGEMENT

Demolition and asbestos management must be undertaken in accordance with the *Building Act 2004* (including the Building Code of Australia) and the *Dangerous Substances Act 2004*. Information about demolition and asbestos management is available from the ACT Planning and Land Authority’s web site and Customer Service Centres.

ENVIRONMENT PROTECTION

All construction and development work must be undertaken in accordance with the *Environment Protection Act 1997*, particularly but not exclusively in relation to noise and pollution control. More information is available from the Environment Protection Authority, ESDD.

REPAIR OF DAMAGE TO PUBLIC ASSETS

The applicant/lessee is held responsible for all damage to ACT Government assets (including footpaths) caused by the development and they must properly repair any damage to those assets. Before work commences, they should notify the Territory and Municipal Services Directorate of any existing damage to public facilities.

UTILITY ASSETS RETENTION

The lessee should obtain a plant location advice from ActewAGL to avoid conflict with existing plant or electrical easements. The lessee will be responsible for the costs associated with the relocation of assets, if necessary. The lessee is to ensure that the water service and water meter are retained in position and in good condition. ActewAGL water meters are accountable items and must not be removed from the site or otherwise disposed of.

WATER RESTRICTIONS AND FILLING OF NEW POOLS, PONDS AND FOUNTAINS

Water restrictions or permanent water conservation measures may be in force in the ACT and may prohibit or affect the filling of new pools, ponds and fountains using potable (tap) water drawn from ACTEW Corporation Limited's potable water supply system. Applicants wishing to use water drawn from the potable water supply system to fill a new pool, pond or fountain are advised to first contact ACTEW 's Water conservation office on (02) 62483131. Where water restrictions or permanent water conservation measures would otherwise prevent or affect the filling of a new pool, pond or fountain, it might be possible to obtain an exemption to fill the pool, pond or fountain using potable water.

DRAINAGE

The Building Code of Australia contains provisions affecting surface drainage and the height of finished floor levels. These may apply to this proposal.

REVIEW OF THE DECISION

The following notes are provided in accordance with regulation 7 of the *ACT Civil and Administrative Tribunal Regulation 2009*. Refer to the Review by the ACT Civil and Administrative Tribunal (ACAT) section of the Notice of Decision for information about its relevance to this development application.

CONTACT DETAILS

The review authority is the ACT Civil and Administrative Tribunal (ACAT).

Location	Contact details
ACT Civil and Administrative Tribunal Level 4, 1 Moore Street CANBERRA CITY ACT 2601	Website: www.courts.act.gov.au Email: tribunal@act.gov.au Telephone: (02) 6207 1740 Facsimile: (02) 6205 4855 Post: GPO Box 370, CANBERRA, ACT, 2601 Document exchange: DX 5691

POWERS OF THE ACAT

The ACAT is an independent body. It can review on their merits a large number of decisions made by ACT Government ministers, officials and statutory authorities. The ACAT can agree with, change or reject the original decision, substitute its own decision or send the matter back to the decision maker for reconsideration in accordance with ACAT recommendations.

APPLICATIONS TO THE ACAT

To apply for a review, obtain an application form from the ACAT. If you are applying on behalf of an organisation or association of persons, whether incorporated or not, the Tribunal in deciding whether to support this application will consider the effect of the decision being reviewed on the interests of the organisation or association in terms of its objects or purposes. A copy of the relevant documents will be required to be lodged with the Tribunal.

TIME LIMITS FOR APPLICATIONS

The time limit to make a request for a review is 28 days from the date of this Notice of decision. The time limit can be extended in some circumstances (refer to sections 10 (2), 10(3), 25(1)(e) and 25(2) of the *ACT Civil & Administrative Tribunal Act 2008*; section 7 of the *ACT Civil and Administrative Tribunal Procedure Rules 2009 (No 2)*; and section 409 of the *Planning and Development Act 2007*).

FEES

Applications to the ACAT, including an application to be joined as a party to a proceeding, require payment of a fee of not less than \$178 (the Tribunal Registry will advise of the current fee), unless you are receiving legal or financial assistance from the ACT Attorney-General. You can apply to have the fee waived on the grounds of hardship, subject to approval (refer to section 22T of the *ACT Civil and Administrative Tribunal Act 2008*). Decisions to grant assistance are made on the grounds of hardship and that it is reasonable, in all the circumstances, for the assistance to be granted. Write to: The Chief Executive, ACT Department of Justice and Community Safety, GPO Box 158, CANBERRA ACT 2601. Ask the ACAT for more details.

TIME LIMITS FOR REVIEWS OF DECISIONS

The ACAT is required to decide appeals in land and planning and tree protection cases within 120 days after the lodging of the appeal, unless that period is extended by the ACAT upon it being satisfied that it is in the interests of justice to do so.

FORMS OF LEGAL, FINANCIAL AND OTHER ADVICE AND ASSISTANCE

The following organisations can provide advice and assistance if you are eligible:

- ACT Attorney-General, write to The Chief Executive, ACT Department of Justice and Community Safety, GPO Box 158, CANBERRA, ACT, 2601;
- the ACT Legal Aid Office, telephone 1300 654314;
- Legal Advice Bureau, telephone (02) 6247 5700;
- ACT Council of the Ageing, telephone (02) 6282 3777;
- Welfare Rights and Legal Centre, telephone (02) 6247 2177; and
- Environmental Defender's Office (ACT), telephone (02) 6247 9420.

AWARDING OF COSTS

You will have to pay any costs involved in preparing or presenting your case. The ACAT also has the power to award costs against a party if the party contravenes a direction of the ACAT and the ACAT considers it in the interests of justice to make such an order. This power is in addition to the power of the ACAT to strike out a party and to dismiss an application for failure to comply with the ACAT's directions.

ACCESS TO DOCUMENTS ABOUT THE DECISION

You may apply for access to any documents you consider relevant to this decision under the ACT Freedom of Information Act 1989. Information about Freedom of information requests is available on the ACT Planning and Land Authority's web site or by contacting us by phone on (02) 6207 1923.

PROCEDURES OF THE ACAT

The procedures of the ACAT are outlined on the ACAT's website, including in the Guide to the Land and Planning Division and the Guide to the Hearing. Contact the ACAT for alternative ways to access information about the ACAT's procedures.

TRANSLATION AND INTERPRETER SERVICES

The ACT Government's translation and interpreter service runs 24 hours a day, every day of the week. Telephone 131 450.

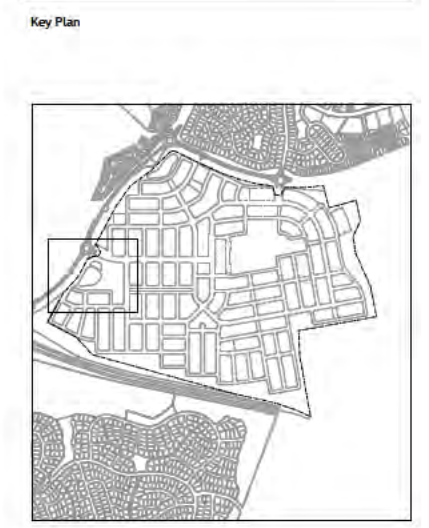
ENGLISH	If you need interpreting help, telephone:
ARABIC	: إذا احتجت لمساعدة في الترجمة الشفوية ، إتصل برقم الهاتف :
CHINESE	如果你需要传译员的帮助，请打电话：
CROATIAN	Ako trebate pomoć tumača telefonirajte:
GREEK	Αν χρειάζεστε διερμηνέα τηλεφωνήσετε στο
ITALIAN	Se avete bisogno di un interprete, telefonate al numero:
MALTESE	Jekk għandek bżonn l-għajnuna t'interpretu, ċempel:
PERSIAN	: اگر به ترجمه شفاهی احتیاج دارید به این شماره تلفن کنید:
PORTUGUESE	Se você precisar da ajuda de um intérprete, telefone:
SERBIAN	Ako vam je potrebna pomoć prevodioca telefoniрајте:
SPANISH	Si necesita la asistencia de un intérprete, llame al:
TURKISH	Tercümana ihtiyacımız varsa lütfen telefon ediniz:
VIETNAMESE	Nếu bạn cần một người thông-ngôn hãy gọi điện-thoại:

TRANSLATING AND INTERPRETING SERVICE**131 450**

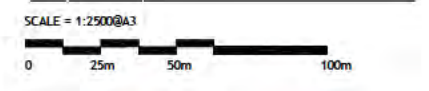
Canberra and District - 24 hours a day, seven days a week



- LEGEND**
- HOLDING LEASE BOUNDARY
 - STAGE BOUNDARY
 - RESIDENTIAL BLOCKS
 - PUBLIC OPEN SPACE
 - SERVICE EASEMENT
 - PATH (1.5m WIDE)
 - PATH (2.0m WIDE)
 - PATH (2.5m WIDE)
 - EXISTING PATH
 - EXISTING CONTOURS (1m INTERVAL)
 - LOCAL PLAYGROUND
 - PROPOSED RETARDATION POND
 - 2 YEAR ARI CONTOUR
 - 100 YEAR ARI CONTOUR
 - 4m RFS ACCESS



Issue	Date	Amendment
00	29/10/10	Draft First Submission
01	18/02/10	Draft Second Submission
02	15/04/11	DA Submission
03	10/06/11	RFS Hatch Added, scale changed -DA Submission



Joint Venture Partners

Tatebrook
Joint venture managed by CIC Craco Pty Ltd
Project Consultants

INESCO

Project
CRACE STAGE 3
ESTATE DEVELOPMENT PLAN

Drawing Title
Estate Development Plan

This approval includes the creation of the open space block, the landscape design and the Water Sensitive Urban Design (WSUD) components of the Community Recreation Irrigated Park (CRIP). However, the other elements of the CRIP such as the playground, sports courts, or toilets are not part of this approval. These will be considered through a separate process.

PLANNING AND DEVELOPMENT ACT 2007
APPROVAL GRANTED
SUBJECT TO THE CONDITIONS SET OUT IN THE
NOTICE OF DECISION
PURSUANT TO SECTION 162

Delegate name **CLINTON CASHEN**
Date **14/10/2011**

Scale	1:1500
Drawn	GC
Checked	HR
Approved	VL
Job No	4431
Drawing Number	EDP3-ENG-EDP-2.1
Plan No.	2.1 Issue 03

OVERVIEW OF WSUD STRATEGY

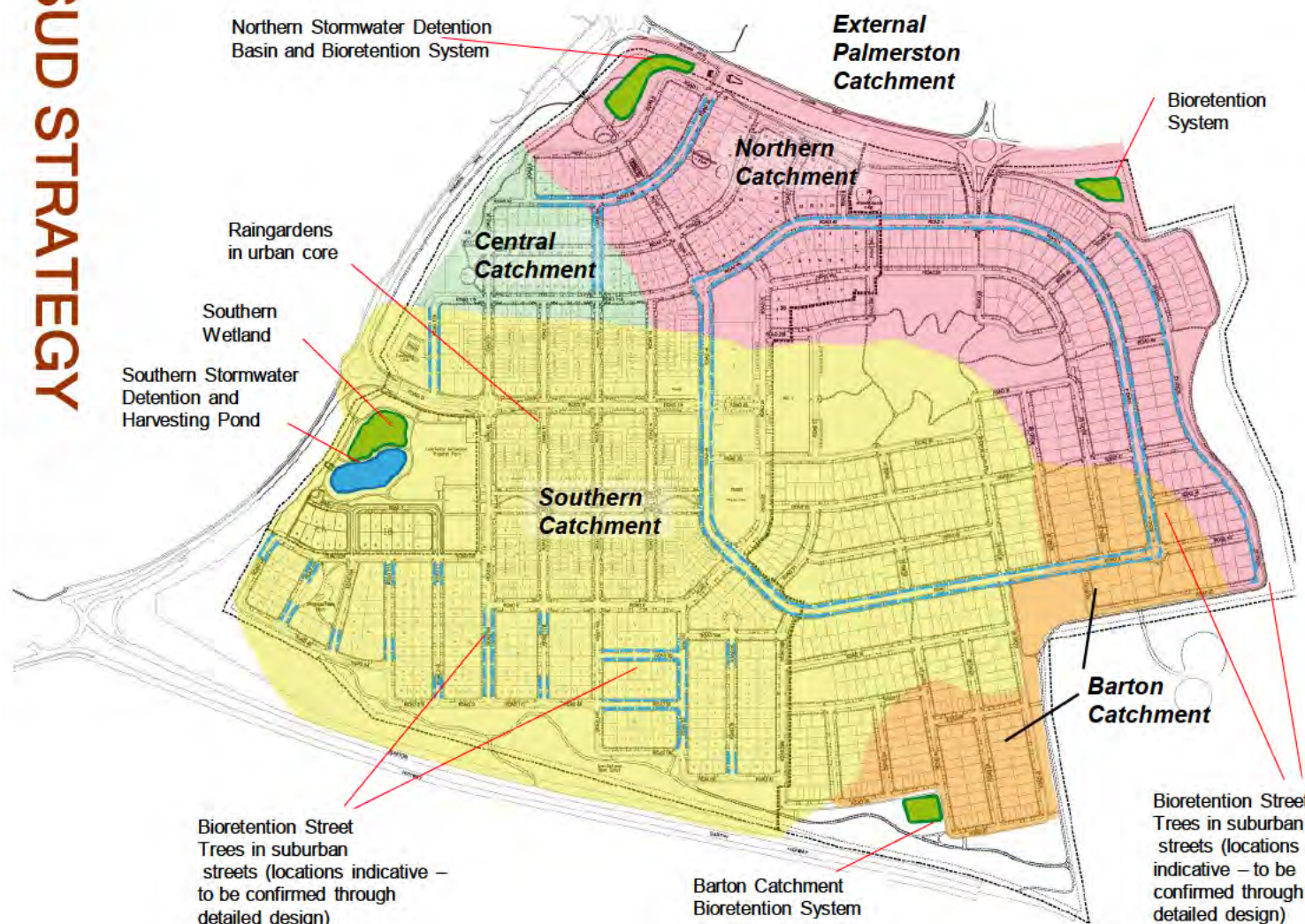
Water Sensitive Urban Design

The Water Sensitive Urban Design (WSUD) strategy for the CRIP (Community Recreation Irrigated Park) and for Stage 2 of the Crace development is consistent with the approach being delivered within Stage 1 of the development.

The water management strategy for the Crace Development is underpinned by the principles of sustainability and incorporates WSUD into the development to improve the amenity and aesthetic of the streetscape, conserve drinking water reserves and protect receiving waters from stormwater and wastewater discharge.

The strategy incorporates WSUD principles within the Crace streetscape and open spaces to provide a high quality public domain and street character within the proposed suburb.

Stormwater catchments of the Crace Development include Northern, Southern and Barton catchments.



Plan View: Crace Estate, ACT

Crace Development WSUD Strategy

The WSUD strategy is underpinned by the following principles:

1. Demand for potable mains water to be reduced within the development through water efficient fixtures and appliances, and using alternative sources of water based on matching water quality to uses on a "fit-for-purpose" basis.
2. Wastewater export from the site to be minimised through a combination of potable mains water demand management initiatives, and water efficiency.
3. Urban stormwater to be treated to meet national stormwater quality objectives for reuse and/or discharge from the site.
4. Stormwater detention to meet objectives for waterway protection and flood management.
5. Stormwater to be used within the urban landscape to maximise visual and recreational amenity, improve recreational access and where appropriate influence the micro-climate of the area.

The Crace Development has the opportunity to be a flagship for environmental protection and the conservation of precious water resources by establishing infrastructure and development controls that will set new sustainability standards for residential projects.

The key components of the Crace WSUD strategy include:

1. Bioretention Street Trees
2. Bioretention Systems
3. Constructed Wetlands
4. Stormwater Detention Areas

Demand management is achieved with the use of water efficient fixtures and rainwater tanks. Stormwater harvesting and reuse for irrigation will further reduced potable demands for the site.



Issue	Date	Amendment
00	29/10/10	Draft EDP Submission
01	19/04/11	DA Submission

PLANNING AND DEVELOPMENT ACT 2007
APPROVAL GRANTED
 SUBJECT TO THE CONDITIONS SET OUT IN THE NOTICE OF DECISION PURSUANT TO SECTION 162
 Delegate name **CLINTON CASHEN**
 Date **14/10/2011**

Joint Venture Partners

A joint venture managed by CIC Crace Pty Ltd.

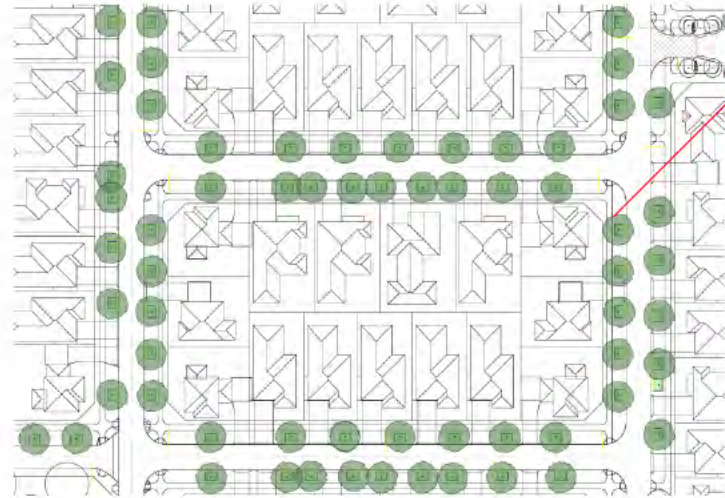
Project Consultants

Project
CRACE ESTATE DEVELOPMENT PLAN DEVELOPMENT APPLICATION

Drawing Title
WSUD
 SHEET 1 OF 5
 Overview of WSUD Strategy

Scale 1:2000
 Drawn EJ
 Checked
 Approved
 Job No C10001
 Drawing Number **EDP3-END-WSUD-10.1**
 Plan No. 10.1 Issue 01

BIORETENTION STREET TREES



Typical Layout of Bioretention Street Trees in suburban areas

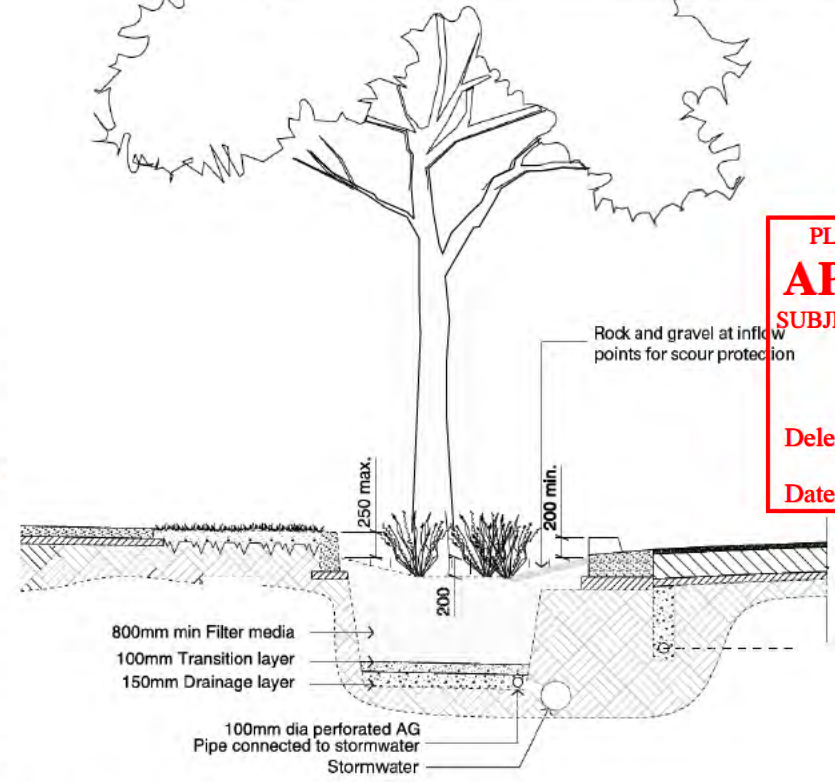
Plan View: Bioretention Street Trees, Crace

Bioretention street trees provide shade and aesthetic qualities to the urban development, while treating the stormwater. The street trees are passively irrigated by the stormwater runoff from the impervious surfaces within the catchment. For best practice stormwater pollutant reductions the size of the street tree pit is approximately 2% of the impervious area draining to the tree. The size is thus dependent on the depth of the allotment, the width of the road pavement and the tree spacing but typically equates to a pit size of 2.8m x 2.5m. Where the treatment area is limited within the urban streets, further treatment will occur in downstream water quality systems.

Stormwater runoff from streets and lots will be conveyed to street trees where the filter media within the tree pit encourages rapid infiltration into the root zone. When the infiltration capacity of the soil is exceeded water will pond within the tree planters to a maximum of 200-300 mm above which stormwater will overflow into the underlying stormwater drainage network. This is expected to occur on average 4 times a year (ie. approximately the 3-month ARI event for a given storm duration). Overflow levels are set to ensure ponding over driveways and footpaths is prevented. Pondered water within the tree pits will typically take 2 to 3 hours after the end of a storm event to drain into the soil

KEY DESIGN PARAMETERS

- Extended detention depth = 0.2-0.3 m
- Filter depth = 0.8 m
- Vegetation selected to match filter depth
- Filter median particle diameter = 0.25-2.0 mm
- Saturated hydraulic conductivity = 50-200 mm/hr



Typical Bioretention Street Tree Section

Key Plan

Issue	Date	Amendment
00	29/10/10	Draft EDP Submission
01	19/04/11	DA Submission

PLANNING AND DEVELOPMENT ACT 2007

APPROVAL GRANTED

SUBJECT TO THE CONDITIONS SET OUT IN THE NOTICE OF DECISION PURSUANT TO SECTION 162

Delegate name **CLINTON CASHEN**

Date **14/10/2011**

Joint Venture Partners

A joint venture managed by CIC Crace Pty Ltd.

Project Consultants



Project
CRACE
 ESTATE DEVELOPMENT PLAN
 DEVELOPMENT APPLICATION

Drawing Title
WSUD
 SHEET 2 OF 5
 Bioretention Street Trees



BIORETENTION STREET TREE, CRACE, ACT



BIORETENTION RAINGARDEN, CRACE, ACT



BIORETENTION RAINGARDEN IN WET WEATHER, CRACE, ACT

Scale	1:2000
Drawn	EJ
Checked	
Approved	
Job No	C10001
Drawing Number	EDP3-END-WSUD-10.2
Plan No.	10.2 Issue 01

APPROVAL GRANTED
 SUBJECT TO THE CONDITIONS SET OUT IN THE
 NOTICE OF DECISION
 PURSUANT TO SECTION 162

Diagrams and PLAN CASHEN

Date 14/10/2011

BIORETENTION SYSTEMS

Bioretention Systems

Bioretention systems will be included in the northern park / stormwater detention basin, in the Barton Catchment detention basin and in a landscaped area in the north east corner of the site. These larger bioretention systems will be integrated into landscape areas to provide best practice stormwater pollutant reduction for the Crace development.

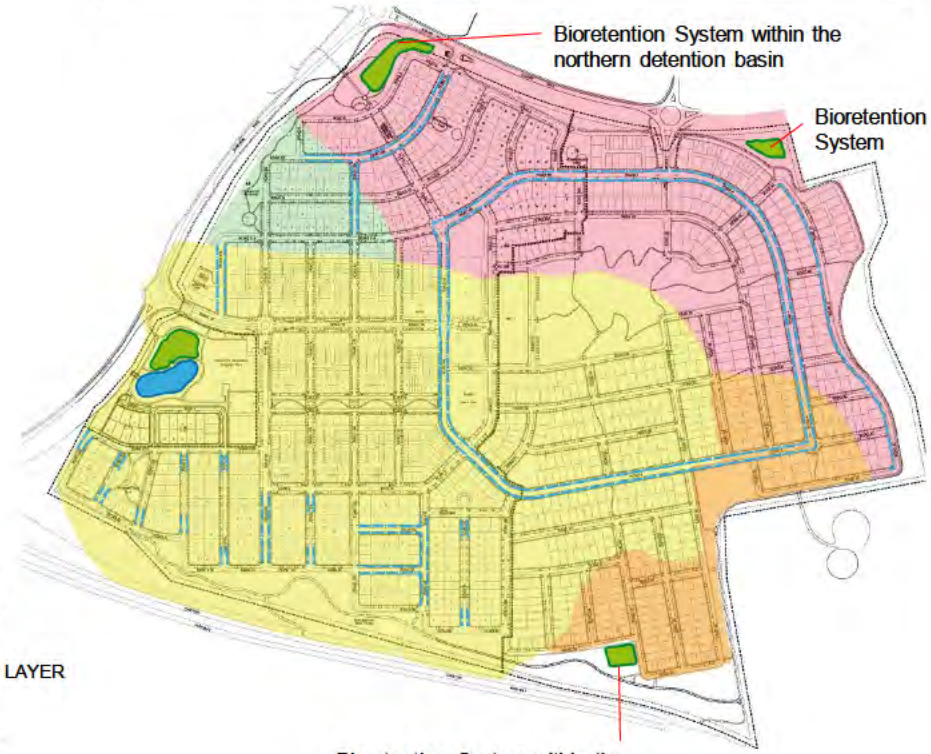
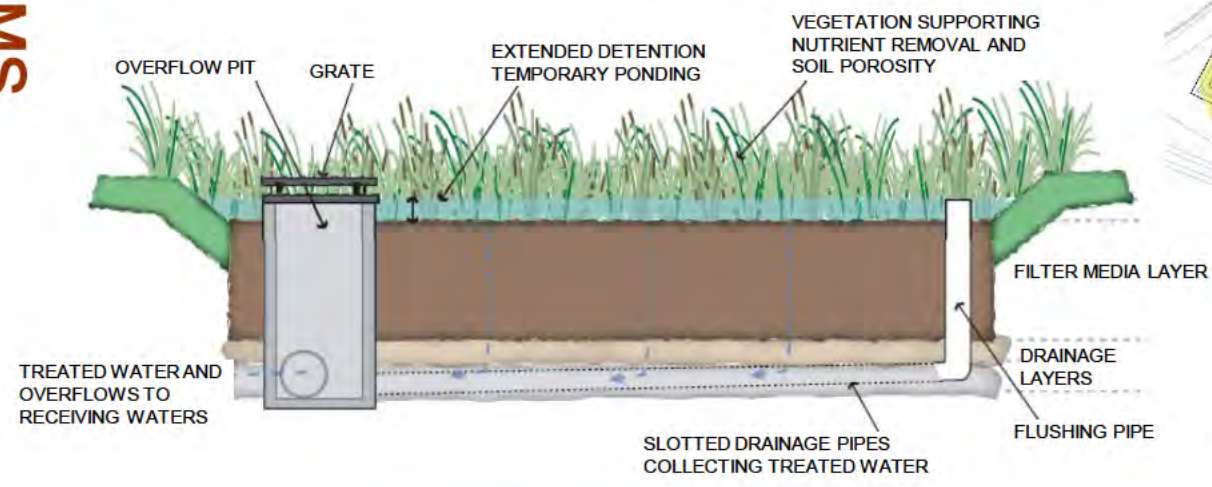
Once established, appropriately selected vegetation in the bioretention systems will be self sustaining and thriving during typical Canberra climatic conditions. Bioretention systems have an aesthetic and stormwater management role as well as having a cooling effect on the microclimate of the suburban Crace area. The bioretention footprint required to meet best practice stormwater pollutant reduction targets is up to 2% of the impervious catchment area draining to the bioretention system. The treatment area required is reduced through the use of rainwater tanks which remove stormwater pollutants through reuse of the water. A typical bioretention system section is shown below. A saturated zone system may be used for enhanced pollutant removal and survival of vegetation through dry periods.

KEY DESIGN CONSIDERATIONS

- Extended detention depth = 0.2-0.3 m
- Filter depth = 0.4-0.8 m
- Vegetation selected to match filter depth
- Filter median particle diameter = 0.25-2.0 mm
- Saturated hydraulic conductivity = 50-200 mm/hr



Issue	Date	Amendment
00	29/10/10	Draft EDP Submission
01	19/04/11	DA Submission



Plan View: Bioretention systems for the Crace development

Joint Venture Partners

A joint venture managed by CIC Crace Pty Ltd.

Project Consultants



Project
CRACE
 ESTATE DEVELOPMENT PLAN
 DEVELOPMENT APPLICATION

Drawing Title
WSUD
 SHEET 3 OF 5
 Bioretention Systems

Scale	1:2000
Drawn	EJ
Checked	
Approved	
Job No	C10001
Drawing Number	EDP3-END-WSUD-10.3
Plan No.	10.3 Issue 01



ACOTT, PERTH



COOMERA WATERS, SOUTH EAST QUEENSLAND



SYDNEY UNIVERSITY, SYDNEY

CONSTRUCTED WETLANDS

Constructed Wetlands

For the southern catchment water quality is primarily addressed through bioretention street trees and raingardens. The stormwater network directs stormwater to the Southern Pond. Water in the Southern Pond will be recirculated through a constructed wetland to improve water quality, promote algal die off and help to maintain the health of the open water zone. Water quality is further enhanced within the southern constructed wetland.

The macrophyte zone of the wetland promotes nutrient removal and the open water zone provides UV disinfection. Outlet controls can be used to retain water within the wetland for extended periods or to drain the wetland for maintenance.

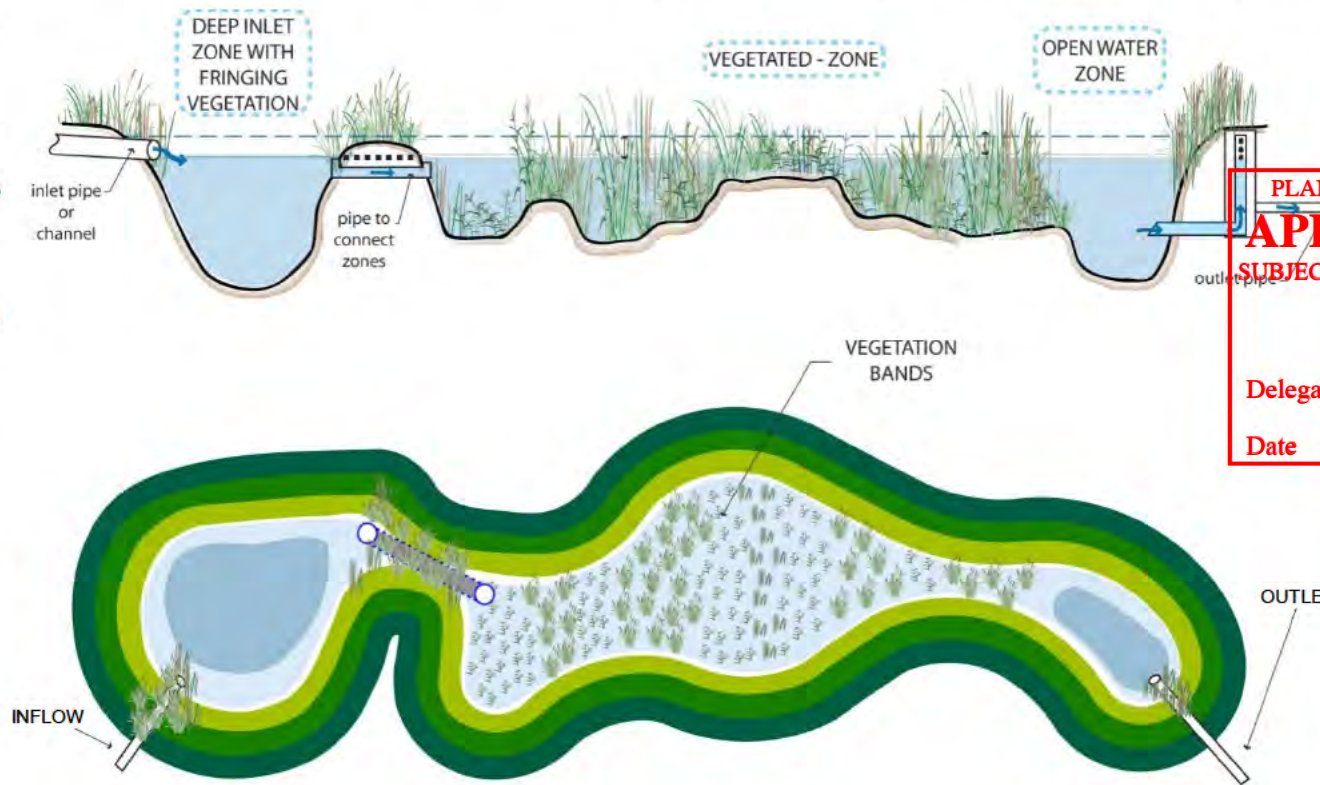
The pond and open water zones of the wetland will also serve as storages for stormwater harvesting to meet irrigation demands of key landscape areas within Crace. During dry periods, water from the ponds is recirculated through the wetland to promote algal die off to reduce the risk of algal blooms. The macrophytes and epiphytic biofilms within the wetland will compete with planktonic algae for nutrients and the dense wetland vegetation will also provide shading to inhibit algal growth. These processes play a critical role in managing algae blooms.

KEY WETLAND DESIGN CONSIDERATIONS

Average depth in wetland 0.35 - 0.5m
 Average depth of extended detention (temporary ponding) 0.2m
 Notional detention time = 72 hours for draw down of extended detention volume

Minimum Constructed Wetland size allows for recirculation of 80% of pond volume in 20 day period, with a notional detention time of 5 days.

Indicative section Constructed Wetland Planting Zones



WETLAND VEGETATION, *Eleocharis sphacelata*

WETLAND VEGETATION, *Juncus usitatus*

VICTORIA PARK, SYDNEY, NSW

Schoenoplectus validus



Issue	Date	Amendment
00	29/10/10	Draft EDP Submission
01	19/04/11	DA Submission

PLANNING AND DEVELOPMENT ACT 2007
APPROVAL GRANTED
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 NOTICE OF DECISION
 PURSUANT TO SECTION 162

Delegate name **CLINTON CASHEN**
 Date **14/10/2011**

Joint Venture Partners

Land Development Agency

CIC AUSTRALIA

che
 affordable housing

Defence Housing
 AUSTRALIA
 Tatebrook

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CRACE
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 DEVELOPMENT APPLICATION

Drawing Title
WSUD
 SHEET 4 OF 5
 Constructed Wetlands

Scale	1:2000
Drawn	EJ
Checked	-
Approved	-
Job No	C10001
Drawing Number	EDP3-END-WSUD-10.4
Plan No.	10.4 Issue 01

DETENTION - PEAK FLOWS



Plan View: Detention areas for Crace in the Northern, Southern and Barton Catchments

KEY DESIGN CONSIDERATIONS

- Attenuation of peak flows for large storm events (up to the 1 in 100 year ARI) for mitigation of flooding impacts downstream
- Attenuation of peak flows for 1 in 1.5 year ARI storm events for protection of downstream waterways from erosion
- Capacity of existing stormwater infrastructure
- Flood level controls downstream

Stormwater Detention Areas

Detention of stormwater runoff limits peak flows to predevelopment levels for critical storm events to protect downstream waterways from erosion and for flood protection.

Following storm events the water level in the systems will rise, with a slow release of water facilitated through outlet flow control. This enables the objectives for mitigating flooding impacts and waterway protection to be met.

WSUD elements for water quality improvement (bioretention or wetland systems) can be integrated within detention basins. Detention basins can include ponds, or be configured as dry basins.

In the northern catchment a bioretention system has been configured within the northern park / detention basin.

Peak flows from the southern catchment will be managed by the Southern Stormwater Detention and Harvesting Pond

In the Barton catchment two detention areas are provided to attenuate flows and reduce discharge to the southern catchment through the urban area. One of the detention areas will include a bioretention system for water quality improvement.

More information about detention areas can be found in Section 11.5 Water Quantity of the EDP Report.



Issue	Date	Amendment
00	29/10/10	Draft EDP Submission
01	19/04/11	DA Submission

PLANNING AND DEVELOPMENT ACT 2007
APPROVAL GRANTED
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 NOTICE OF DECISION
 PURSUANT TO SECTION 162

Delegate name **CLINTON CASHEN**
 Date **14/10/2011**

Joint Venture Partners

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Project Consultants

Project
CRACE
 ESTATE DEVELOPMENT PLAN
 DEVELOPMENT APPLICATION

Drawing Title
WSUD
 SHEET 5 OF 5
 Detention - Peak Flows

Scale	1:2000
Drawn	EJ
Checked	-
Approved	-
Job No	C10001
Drawing Number	EDP3-END-WSUD-10.5
Plan No.	10.5 Issue 01



BRIDGEWATER CREEK WETLAND, BRISBANE



DOCKLANDS PARK, MELBOURNE



VICTORIA PARK, SYDNEY



MASTERPLAN LEGEND

- Holding Lease Boundary
- Stage Boundary
- Dryland grassing
- Grass areas
- Groundcovers
- Filter wetland plants
- Water body
- Playground
- Sports court
- Gravel area
- Path
- Emergency Services / RFS Trafficable Zone 4.0m wide reinforced turf zone
- Wall
- Proposed Tree Planting Refer to Master Legend Dwg.No EDP3-LA-LMP-13.1 for tree species and locations
- Existing Tree retained
- High Value Tree
- Acoustic Mounding

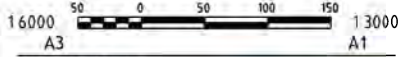
This approval includes the creation of the open space block, the landscape design and the Water Sensitive Urban Design (WSUD) components of the Community Recreation Irrigated Park (CRIP). However, the other elements of the CRIP such as the playground, sports courts, or toilets are not part of this approval. These will be considered through a separate process.

PLANNING AND DEVELOPMENT ACT 2007
APPROVAL GRANTED
 SUBJECT TO THE CONDITIONS SET OUT IN THE NOTICE OF DECISION PURSUANT TO SECTION 162
 Delegate name CLINTON CASHEN
 Date 14/10/2011

Refer Dwg.No EDP3-LA-LMP-13.2 for street tree species and locations
 Refer to Dwg.No EDP3-LA-OSCP-31.1 for concept plan

Key Plan

Issue	Date	Amendment
00	29.10.10	DRAFT EDP Submission
01	18.02.11	DRAFT EDP Second Submission
02	15.04.11	DA Submission



Joint Venture Partners

A joint venture managed by CIC Crace Pty Ltd.

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Project
**CRACE STAGE 3
 ESTATE DEVELOPMENT PLAN
 DEVELOPMENT APPLICATION**

Drawing Title
**Landscape Masterplan
 Sheet 3 of 6**

Scale	1:6000
Drawn	AF/CN
Checked	GG
Approved	GG
Job No	207010
Drawing Number	EDP3-LA-LMP-13.3
Plan No.	13.3

Issue 02