

Chief Executive Officer
Shire of Boddington
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Our Ref: T012/Ltr71

12 March 2010

ATT: Mr Steve Thompson

Dear Sir,

RE: MODIFIED STRUCTURE PLAN. LOT 8016
BANNISTER MARRADONG ROAD.

On behalf of Barenco Pty Ltd and Stone Developments Pty Ltd, the owners of Lot 8016 Bannister Marradong Road and Lot 9501 River Road Boddington respectively, please find enclosed a modified structure plan for the above property.

The existing Structure Plan was endorsed by the Western Australian Planning Commission in March 2008.

Since the endorsement of the Structure Plan a number of issues have been identified, particularly in relation to servicing, which require revisions to the Structure Plan as demonstrated by the enclosed modified Structure Plan and discussed hereunder.

High Level Water Tank.

The Water Corporation's existing reticulated water service limit is currently 265m AHD. In discussions with the Water Corporation to determine a strategy for providing a reticulated water service to lots/building sites above the 265 metre service limit it became apparent that the Water Corporation had not responded to the advertising of the Structure Plan, and did not support the creation of lots above this limit, despite the Structure Plan providing for rural residential lots above the 265 metre contour.

However, on 28 August 2008, the Water Corporation agreed to a strategy for the provision of reticulated water to lots above the 265 metre contour (correspondence enclosed).

This strategy includes the provision of a "High Level Water Tank" to provide adequate mains pressure to consumers. The existing Structure Plan does not provide for such infrastructure.

The Water Corporation has also advised that a site of 1 hectare will be required. It has further advised that it will not support an elevated water tank and that this infrastructure will not be capable of providing an adequate service to lots/dwellings within 15 metres below the bottom level of the tank.

Accordingly, the modified Structure Plan allocates an appropriate site for the location of a high level water tank and associated 1 hectare site.

The preclusion of the option to elevate the water tank, effectively means that a relatively small, but significant portion of the site will not have reticulated water available to it.

The location of the tank on the elevated plateau in the central northern portion of the Site was considered but deemed undesirable as the proposed lots immediately adjacent to it cannot be serviced from it, the 1 hectare site requirement would have a deleterious effect on the lot yield proposed for the plateau and that an alternate, albeit lower, site would achieve very similar outcomes in terms of the provision of reticulated water to the majority of the proposed lots.

The proposed high level water tank location is situated at approximately 310m, which, allowing for earthworks and other variables, will ensure that all lots/building sites at or below 290m AHD will have a reticulated water service. It is estimated that only around 15 rural residential lots will not have access to reticulated water under this scenario.

Even if the high level water tank was to be located in the highest portion of the Site (the elevated plateau), approximately 7 lots/building sites would not be able to be serviced with reticulated water, including those on the elevated plateau itself.

Accordingly, in addition to the High Level Water Tank and associated site being nominated on the modified Structure Plan, Development Provision 5.5 has been modified to reflect the above.

It should also be noted that the Shire of Boddington has recently adopted its Planning Policy No. 4 – *Rural Residential Lots and water Supplies*. This policy recognises the Water Corporation's 265 metre service limit for reticulated water and provides the opportunity for on-site water supplies to lots/building sites above this limit; viz,

6.5 The Council will only consider supporting on-site water provision where a proponent addresses the following to the satisfaction of Council:

a) the site, including the majority of proposed lots, is located above the 265 metres contour;

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- b) demonstration that the provision of reticulated water is not practical and reasonable which includes a feasibility analysis;*
 - c) the subject land and future house sites are well screened from Bannister-Marradong Road and/or Crossman Road;*
 - d) the site is capable and suitable of accommodating the proposed density of subdivision/development including addressing relevant planning, environmental and servicing requirements;*
 - e) the submission of a Fire Management Plan, prepared by a competent professional;*
 - f) the proponent, or a competent professional, demonstrates to the satisfaction of the Council and relevant agencies in the opinion of Council, that future households will have sufficient potable and nonpotable water. In particular, to confirm what minimum size roof catchment and minimum water storage capacity are required for an average household based on anticipated rainfall for Boddington; and*
 - g) the proponent agrees to include a notification on each Certificate of Title advising landowners in perpetuity that reticulated water is not available to the lot and that a minimum roof catchment and water storage capacity (detailed as a result of investigations set out in "f") are required to be provided by the landowner prior to occupation.*

The proposal to service lots/building sites above the 290 metre contour with on-site water supplies is also consistent with the Western Australian Planning Commission Development Control Policy 3.4 "Subdivision of Rural Land", which states;

When approving lots for rural-residential development (1-4ha) the WAPC will generally require connection to a reticulated water supply where it is practical and reasonable to do so. Where it is not practical or reasonable for lots to connect to a reticulated water supply the WAPC may consider an alternative water supply. In determining whether provision of a reticulated water supply is reasonable, the WAPC may consider the cost differential between a reticulated and alternative water supply, and the reliability of an alternative water supply. The reliability of alternative water supplies in different localities needs to be confirmed by available models.

Development Provision 5.5 currently reads;

All lots shall be connected to a reticulated water service. However, in the elevated north-eastern portion of the site, the Commission may be prepared to consider the provision of on-site water supply for rural residential lots, if it can be adequately demonstrated that the provision of a reticulated water supply in that area would be an unreasonable requirement.

Given that, irrespective of the location of the high level water tank, rural residential lots in the northern central, and possibly the north eastern portions of the property, will not be able to be serviced with reticulated water, and to provide clarity as to which areas will require an on-site water supply, it is proposed to reword this provision as follows;

All lots with building sites below the 290 metre contour shall be connected to a reticulated water service. In the elevated portions of the site, above the 290 metre contour, the Commission will consider the provision of on-site water supply for rural residential lots, in accordance with the Shire of Boddington Planning Policy No. 4 – Rural Residential Lots and Water Supplies.

The negotiations with the Water Corporation for a reticulated water supply above the 265 metre service limit resulted in an agreement that those areas of the site below the 265 metre service limit would be subdivided prior to those areas above the 265 metre contour and that the first stage of subdivision above the 265 metre contour would comprise no less than 50 lots.

To formalise this agreement it is proposed to introduce two new Development Provisions on the Structure Plan; viz,

- 8. Subdivision applications proposing lots above 265m AHD that will require a reticulated water service will not be approved by the Western Australian Planning Commission until such time that all of the residential land below 265m AHD west of the ridge has been approved for subdivision and subdivisional works have been substantially commenced, unless an alternative strategy, acceptable to both the Water Corporation and the Developer, is shown to be viable to enable earlier subdivision and development above 265m AHD.*

- 9. The first stage of subdivision for lots above 265m AHD, and which require a reticulated water service, will comprise a minimum 1st stage of 50 lots, subject to a pressure reduction valve being installed at any link from the high level system (that is required to service the lots above 265m AHD) into the low level reticulation system to reduce pressures to those which already exist in the low level system.*

The modified Structure Plan also illustrates both the 290 metre and 265 metre contours.

On-site Effluent Disposal - Proposed Special Residential Lots.

The approved Structure Plan (Development Provision 4.7) requires the provision of a reticulated sewerage system to the Special Residential lots, located in the central and central eastern portion of the site.

Discussions with the Water Corporation regarding the installation of this infrastructure, lead to the investigation of the possibility of on-site effluent disposal in this area.

Whilst reticulated sewer was originally considered feasible, its provision is cost prohibitive, the Water Corporation has expressed reluctance in accepting the ongoing maintenance of this infrastructure (this area is currently outside of the Water Corporation's licence area) and the proposed lots will meet statutory and policy requirements for on-site effluent disposal.

In particular, Part 5 of the draft Country Sewerage Policy states that onsite effluent disposal can be considered for large lot subdivision;

"if they do not involve the creation of lots less than 2000m², or density development greater than R5, provided the statutory authority, after considering the advice of consultative authorities, is satisfied that there is no opportunity within the area covered by the proposal for further subdivision without sewerage".

Accordingly, the Shire's Health Officer assessed the Special Residential area to determine its capacity for on-site effluent disposal (enclosed). The Shire's assessment involved the inspection and analysis of 15 test holes across the Special Residential area to a depth of approximately 1.5 metres.

The Assessment concludes;

"From my observation of the conditions on the site parts of the area concerned are suitable for conventional septic tank systems. The conditions

imposed on the installation of conventional systems may vary over the site and would be investigated at the time of building once the location of the system is known.

The Lots proposed near the creek line would require an alternative waste water treatment unit to be installed to Health Department requirements for wet blocks. These alternative waste water treatment units may include aerobic treatment units or the Ecomax system. This condition would apply to the lots immediately adjacent to the creekline. The conditions applied to use these units would depend on the location of the unit and the conditions of the individual site".

It is therefore considered that the Special Residential lots can be serviced by on-site effluent disposal units, such as conventional septic tanks and alternative effluent disposal units.

Accordingly it is proposed to replace Development Provision 4.7 (which requires reticulated sewer to the Special Residential lots) with the following;

4.7 On site effluent disposal systems shall be provided to the satisfaction of the Shire at the time of house construction.

In recognition that the Special Residential (R5) area is not to be provided with reticulated sewer, the sewer pump station located at the eastern extremity of the Site on the approved Structure Plan is relocated just to the east of the residential area on the modified Structure Plan.

Other Modifications.

The modified Structure Plan incorporates the following minor changes;

Deletion of the “Existing Drainage Line” and “Existing dams to be retained” text from the Legend, as these are not represented on the actual plan of the approved Structure Plan.

A “Road Connection” symbol has also been introduced on the southern boundary of the Site, which is not shown on the approved Structure Plan.

A new Provision 3.6 has been included to require that dual use and footpaths are provided by the subdivider in accordance with Liveable Neighbourhoods.

A notional location of a public viewing platform has been included on the modified Structure Plan and the legend updated accordingly.

A new Provision 7 has been included requiring the subdivider to prepare, or have prepared, Building and Landscape Guidelines as a condition of subdivision.

Road Connection to Lot 28.

By way of an email dated 17 February, 2010, the Shire Planner requested that the Modified Structure Plan be changed to include a road and dual use path connection to Lot 28, immediately to the south of Lot 8016.

This matter has previously been addressed and resolved. During the approval and adoption process of the approved Structure Plan this issue was the subject of a site meeting with Shire and Department for Planning and Infrastructure (now Department of Planning). At this meeting it was agreed that such a connection was not practical, given the topography that the road connection would have to traverse (approximately a 1:4 slope), and that the connection was not particularly critical in providing for an efficient connection to places of interest and activity, such as the Boddington Town Centre.

Accordingly, this connection has not been incorporated on the modified Structure Plan.

Summary.

The modified Structure plan introduces the following changes;

1. Identification of a High Level Water Tank and associated 1 hectare site in the central portion of the site.
2. Modified Development Provision 5.5 to reflect and clarify the proposed provision of reticulated and on-site water supply arrangements.
3. New Development Provisions 8 and 9 to formalise the agreement for reticulated water above the 265 metre contour between the Water Corporation and the developer/owner of the Site.
4. Replacement of Development Provision 4.7 to facilitate the servicing of the Special Residential area with on-site effluent disposal.

-
5. Relocation of the sewer pump station site from the eastern extremity of the site to the area immediately east of the residential area.
 6. Deletion of the "Existing Drainage Line" and "Existing dams to be retained" text from the legend.
 7. Inclusion of a "Road Connection" symbol on the southern boundary of the Site.
 8. A new Provision 3.6 has been included to require that dual use and footpaths are provided by the subdivider in accordance with Liveable Neighbourhoods.
 9. A notional location of a public viewing platform has been included on the modified Structure Plan and the legend updated accordingly.
 10. A new Provision 7 has been included requiring the subdivider to prepare, or have prepared, Building and Landscape Guidelines as a condition of subdivision.

The proposed changes mainly represent the outcomes of ongoing investigations and, in many circumstances, negotiations with respect to the most efficient and effective servicing of the Site.

We trust the modifications are acceptable to the Shire of Boddington and look forward to the modified Structure Plan's endorsement.

However, should you have any queries, or require further information, please do not hesitate to contact the undersigned.

Should you require further information, or have any queries, please do not hesitate to contact the undersigned.

Yours sincerely

A handwritten signature in black ink, appearing to read 'M Richards', written over a large, stylized, light-colored scribble or background mark.

Martin Richards

Principal

Cc Client.

Enc. Structure Plan Dwg No. T012/SP/Mod/01
Impact Urban Design Correspondence to Water Corporation dated 26 August 2008.
Water Corporation correspondence to Impact Urban Design dated 28 August 2008.
Shire of Boddington Land Capability Analysis

Water Corporation
Po Box 915
Albany WA 6331

Our Ref: T012/Ltr038

26 August 2008

Att: Mr David Juers



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ABN: 69 142 676 030

Dear Sir,

**RE: LOT 8016 BANNISTER-MARRADONG ROAD,
BODDINGTON. WATER SUPPLY ABOVE 265m AHD.**

Further to our meeting at the Water Corporation on 7 August 2008 we seek the Water Corporation's confirmation that it will accept and operate a reticulated water service as part of the subdivision and development of Lot 8016 Bannister-Marradong Road above the existing 265m AHD service limit provided certain staging criteria is met.

As you are aware, the current Structure Plan, which has been adopted by both the local and state governments, includes a large number of lots (approximately 300) above the 265m AHD contour. The implementation of the Structure Plan is reliant upon the servicing of these lots with both reticulated water and sewer.

We confirm your advice that the existing service limit for reticulated water is 265m AHD. The supply of reticulated water to lots above this level will require additional infrastructure such as in-line boosters and a high level water tank. This has been factored into the servicing strategy for the project.

However, it is understood that the Water Corporation is concerned that water quality standards may be difficult to maintain if this additional infrastructure only services a small number of lots.

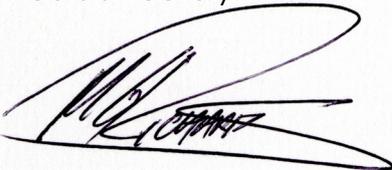
Accordingly, the following strategy is proposed;

1. The developer agrees that all development requiring a reticulated water service capable of being serviced under the existing 265m AHD service limit will be developed prior to the creation and release of lots above the existing service limit, unless an alternative strategy, acceptable to both the Water Corporation and the Developer, is shown to be viable to enable earlier development above the existing 265m AHD service limit.
2. The first stage of development requiring a reticulated water service above the 265m AHD service limit will be for a minimum number of lots. This threshold is to be calculated by the project engineers and agreed by the Water Corporation.
3. A notation to the effect of 1 and 2 above is to be imposed on the Structure Plan.

It would be appreciated if the Water Corporation could confirm the above as soon as possible.

Should you have any queries, or require further information, please do not hesitate to contact the undersigned.

Yours sincerely



Martin Richards

Principal

Your Ref: T012/Ltr038
Our Ref: Grange 1907708
Enquiries: David Juers
Telephone: 9842 4272

28 August 2008

Mr Martin Richards
Impact Urban Design
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DUNSBOROUGH W A 6281

Great Southern Regional Office
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ALBANY WA 6330

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Tel (08) 9842 4211
Fax (08) 9842 4255

www.watercorporation.com.au

Dear Martin

RE: Lot 8016 Boddington Water Supply above 265m AHD

Thank you for your letter of the 26th August 2008 outlining a strategy for servicing the land above 265m AHD being considered for development.

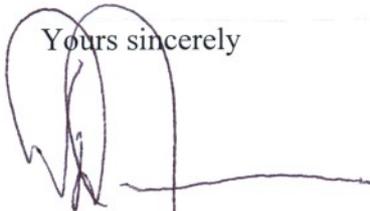
The Corporation supports the strategy you have outlined in items 1. & 2. of your letter.

We also support the proposal to make a notation on the structure plan limiting development above AHD as outlined in items 1 & 2. In addition to this a notation of the same should be placed on the certificate of title for the balance of Lot 8016.

As you are aware we provided some general advice by email on the 27th August 2008 in relation to this development. Please advise us if you would like a more formal response on any of those matters.

Please do not hesitate to contact me if you have any further queries.

Yours sincerely



David Juers
Manager Business Services



Special Residential Sub Division – Lot 8016

On 8 September 2009 I inspected the above mentioned site in company of Mr Andy Reid.

The purpose of the inspection was to ascertain the suitability of the site for effluent disposal purposes. To do so a number of test holes to a 1.5 metre depth were dug over the site in question. The location of the test pits are outlined in Appendix I attached to this report.

Photographs of selected test holes were taken and are included in this report.

Test Hole 1

Gravel sand to a depth of 700mm

700mm to depth – Clay. Water infiltration at 1100mm

Test Hole 2

Sandy gravel to 800mm depth

800mm – 1500mm clay. No water infiltration



Test Hole 3

Gravel sand mix to 900mm

900mm – depth clay

Test Hole 4

Gray sand to 400mm

400mm- 1000mm yellow gray sand (very wet) water at 1000mm depth

Test Hole 5

Orange sandy clay to 800mm

Clay 800mm – 1600mm



Test Hole 6

Gray sand (very wet) water at 850mm

Test Hole 7

Gravel/sand/clay mix to 700mm

Clay from 700mm to depth

Test Hole 8

Gravel sand to 1000mm

1000mm rock



Test Hole 9

Loamy gravel to 550mm

550mm to depth clay (dry)

Test Hole 10

Loam/ sand/gravel mix to 200mm

Clay to depth (dry)

Test Hole 11

Loam/gravel/clay mix to 600mm

Clay to depth (dry) Location close to the edge of the creek



Test Hole 12

Topsoil to 150mm

150mm to 500mm sandy clay

500mm to depth Clay

Water at 1300mm

Test Hole 13

Loam/Clay to 400mm (wet)

400mm to depth Clay

Water at 1400mm



Test Hole 14

Yellow brown sand to 1200mm (no water)



Test Hole 15

Gravelly sand to 1300mm

Conclusion and Recommendations

From my observation of the conditions on the site parts of the area concerned are suitable for conventional septic tank systems. The conditions imposed on the installation of conventional systems may vary over the site and would be investigated at the time of building once the location of the system is known.

The Lots proposed near the creek line would require an alternative waste water treatment unit to be installed to Health department requirements for wet blocks. These alternative waste water treatment units may include aerobic treatment units or the ecomax system. This condition would apply to the Lots immediately adjacent to the creek line. The conditions applied to use these units would depend on the location of the unit and the conditions of the individual site.

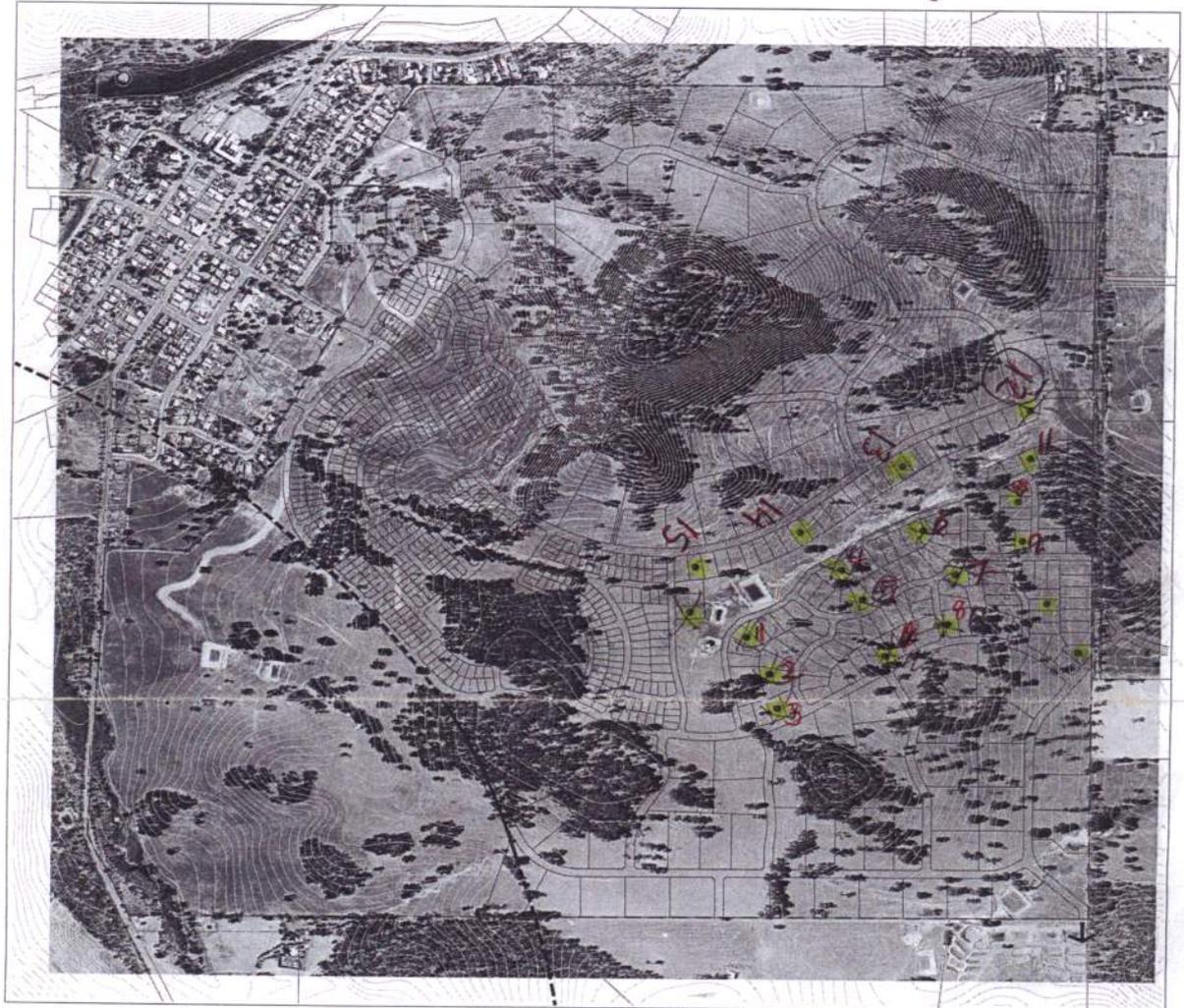
PJ Haas

Principal Environmental Health Officer/Building Surveyor

Shire of Boddington

22 September 2009

Appendix 1 Aerial Map Lot 8016 Holes dug numbered



Key

Application boundary	---	This Application:	
Approved Subdivision WAPC ref 138200	—	Public Open Space/Rehabilitation	[Pattern]
Boultie Mine Noise Buffer	- - - -	Rural Residential Lots	[Pattern]
Contours (AHD - 2m interval)	[Symbol]	Residential R5	[Pattern]
Test Pits	•	Industrial #20	[Pattern]
Future Subdivision	[Symbol]	Industrial #30	[Pattern]
Carriageways	[Symbol]	Industrial #40	[Pattern]

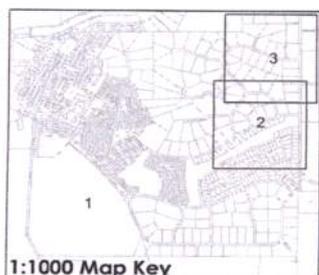
Notes

All areas and dimensions are subject to survey.

Road reserve alignments and widths are subject to engineering design, confirmation and approval.

Carriageway design and widths are subject to engineering design and confirmation.

This plan has not been approved by the WAPC. Subdivision design and lot yield is subject to WAPC approval and may change without notification.



Barenco Pty Ltd
Land Capability Test Pit Locations
 Lot 8016 Sarina-ar-Maradong Road, Boddington



Scale: 1:5000 @ A1

Client	Barenco Pty Ltd
Dwg No.	T012/TPU/02/06 - Sheet 1 - Aerial
Date	10 August 2009

Appendix 2 Aerial View Land Capacity Test Pit Locations



Key

	This Application:
Application boundary	
Approved Subdivision WAPC ref 138200	
Basalt Mine Noise Buffer	
Contours (AND - 2m Interval)	
Test Pits	
Future Subdivision	
Cartageways	

Notes

All areas and dimensions are subject to survey.

Road reserve alignments and widths are subject to engineering design, confirmation and approval.

Cartageway design and widths are subject to engineering design and confirmation.

This plan has not been approved by the WAPC. Subdivision design and lot yields is subject to WAPC approval and may change without notification.



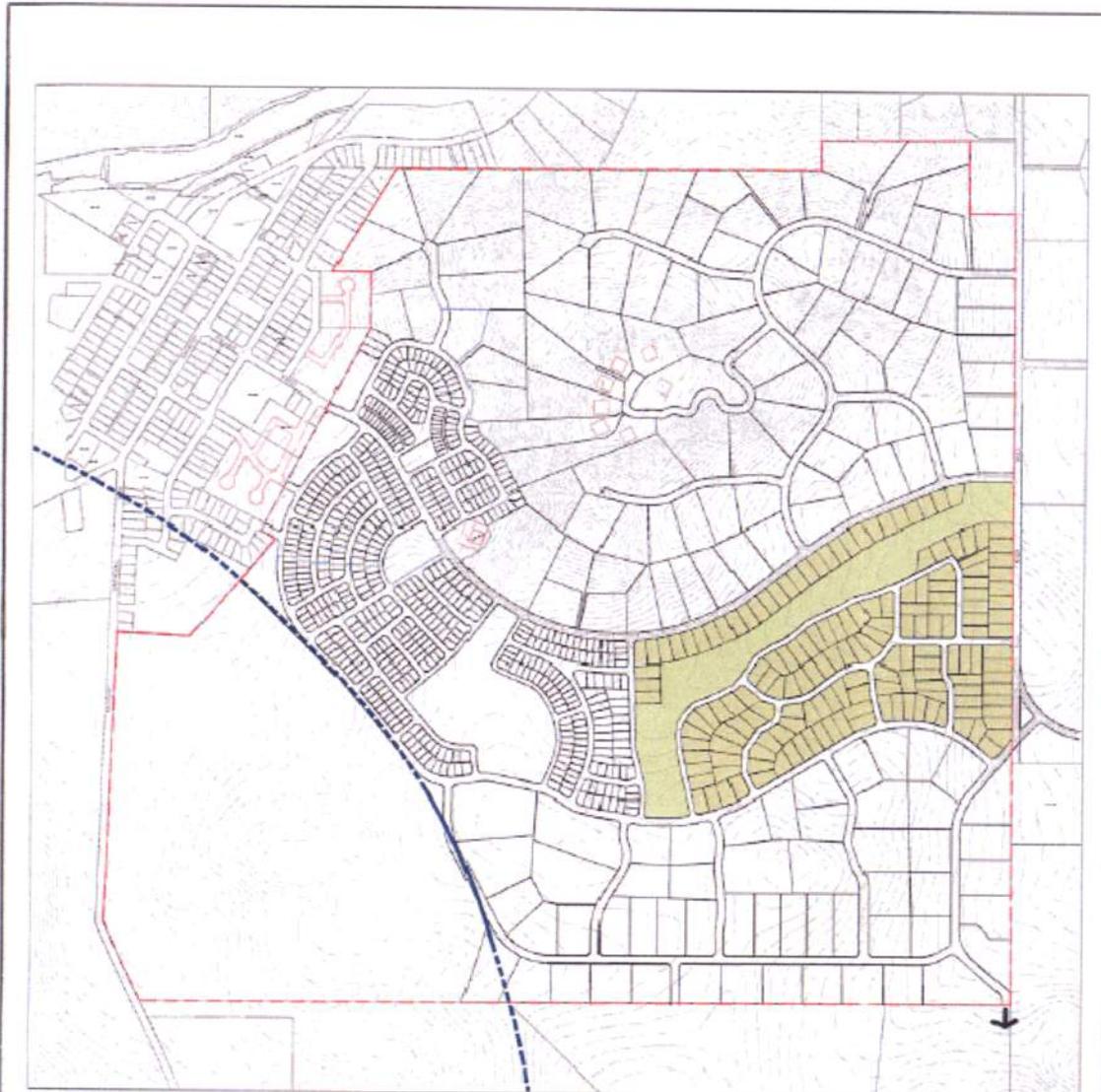
Barenco Pty Ltd
Land Capability Test Pit Locations
 Lot 8016 Bannister-Marradong Road, Boddington

IMPACT
 URBAN DESIGN

Scale: 1:5000
 @ A1

Client: Barenco Pty Ltd
 Dwg No.: T012/PLU/02/06 - Sheet 1 - Aerial
 Date: 10 August 2009

Appendix 3 DevX Subdivision



Key	
Application boundary	--- (Red dashed line)
Approved Subdivision WAPC ref 132002	--- (Black dashed line)
100m buffer	--- (Blue dashed line)
Contours (100 - 2m interval)	□ (White box)
100 metre AHD Contour	□ (White box with diagonal lines)
Water features	□ (White box with wavy lines)
Proposed	□ (White box with grid lines)

This Application:	
PAAC Open Space/Recreation	■ (Light Green)
Rural Residential Lots	■ (Light Yellow)
Special Residential (R1)	■ (Yellow)
Residential R20	■ (Light Green)
Residential R30	■ (Light Green)
Residential R40	■ (Light Green)

Notes

All areas and dimensions are subject to survey.

Road reserve alignments and widths are subject to engineering design, confirmation and approval.

Contingency design and widths are subject to engineering design and confirmation.

This plan has not been approved by the WAPC. Subdivision design and lot yield is subject to WAPC approval and may change without notification.



Sarsino Pty Ltd
Subdivision Application Plan
 Lot 8016 Sannister-Maradong Road, Boddington



Scale: 1:5000
 © PJ

Client: Sarsino Pty Ltd
 Draw No: 1
 Title: 13125A/03/06/07 - Sheet
 Date: 14 May 2009