



Government of Western Australia
Department of Planning

Your ref: Quartz Estate
Our ref: 33-17414
Enquiries: Phil Woodward
Telephone: (08) 6551 9353

Mr Ian Hill
Acting Chief Executive Officer
Town of Port Hedland
PO Box 41
PORT HEDLAND WA 6721

Could I please have the file for
scheme amendment 52?



Document #: IPA29299
Date: 19.07.2012
Officer: LEONARD LONG
File: 154410G

2012/12 \$

Dear Mr Hill

Receipt of Representations under Section 76 of the Planning and Development Act 2005 - Amendment Request Lot 226 Greenfield Street, Boodarie

This letter has been prepared by the Department of Planning (DoP) on behalf of the Minister for Planning, the Hon John Day MLA.

On 25 May 2012, a representation was received under section 76 of the *Planning and Development Act 2005* to the effect that the Town of Port Hedland has failed to take the requisite steps for having a satisfactory local planning scheme or an amendment to a local planning scheme prepared and approved in a case where a local planning scheme or an amendment to a local planning scheme ought to be made.

A formal section 76 order has the legal result of allowing the Minister to direct a local government, within such time as is specified in the order, to prepare and submit for the approval of the Minister a local planning scheme or an amendment to a local planning scheme, or to adopt a local planning scheme or an amendment to a local planning scheme, or to consent to the modifications or conditions imposed.

The Department of Planning (DoP) has undertaken a preliminary assessment of this request and believes it is not vexatious and *prima facie*, may have some merit. To this end, the Minister has given preliminary approval for DoP to prepare a draft section 76 order for his further consideration. From the DoP's preliminary assessment, it appears the Minister 'ought' to intervene.

However, please note that the Minister is still yet to decide whether to exercise his discretion in issuing a formal section 76 order. The Minister's final decision will be determined against any further submissions or explanations you may be able to provide.

It is further noted that the Minister is not indicating his support or otherwise to the proposal, but considers that it is worthy of detailed assessment and consideration by Council and the broader community through the formal scheme amendment process.

To this end, the DoP now requests a response to this matter, which will be considered by the Minister. Please find enclosed the applicant's representation under section 76 and a Planning Bulletin on section 76 is also attached for your convenience.

The DoP acknowledges that the subject land has drainage and flood implications and contacted the Department of Water once the section 76 request arrived. The Department of Water's Natalie Leach (telephone contact 9144 0212) advised that an Urban Water Management Plan (UWMP) be prepared to support this rezoning request. This rezoning request should also identify the capacity of the land to sustain the proposed land uses and any management responses for the UWMP.

Although within the applicant's section 76 request there are various copies of the subdivision concept plan with 65 lot sizes below the minimum Residential R2.5 requirement, within Appendix 3 titled Scheme Amendment Request there is a revised subdivision concept plan with all lot sizes a minimum of 4000m² (attached).

If you wish to provide a response, the DoP requires you do so by no later than **5pm, 27 August 2012**. Your comments will be forwarded to the Minister for further consideration resulting in a formal decision.

Please direct any submissions or further comments to Mr Philip Woodward, Director, Northern Regions, who can be contacted on 65519353 or at philip.woodward@planning.wa.gov.au

Yours sincerely



Neil Thomson
Acting Director General

12 / 07 / 2012

Att

1. Introduction

As part of the Government's commitment to streamlining and improving the planning approvals process in Western Australia, the WA Parliament passed *Approvals and Related Reforms (No. 4) (Planning) Act 2010* (the '2010 Amendment Act'). The 2010 Amendment Act contained a number of amendments to the *Planning and Development Act 2005* (the 'PD Act') that are designed to improve the planning system.

The previous provisions under section 76 allowed the Minister to direct a local government to prepare or adopt a local planning scheme. The 2010 Amendment Act clarifies that the Minister can also direct a local government to prepare or adopt an *amendment* to a local planning scheme.

The amendments under section 76 substantially commenced on 22 November 2010¹.

2. Purpose

The purpose of this planning bulletin is to provide a general background as to the purpose and operation of an order made by the Minister for Planning (the 'Minister') under section 76 of the PD Act.

3. What is a section 76 order?

The new section 76 provision, as amended by the 2010 Amendment Act, states as follows:

76. Minister may order local government to prepare or adopt local planning scheme or amendment

- (1) If the Minister is satisfied on any representation that a local government —
- (a) has **failed** to take the **requisite steps** for having a **satisfactory** local planning scheme or

an amendment to a local planning scheme prepared and approved in a case where a local planning scheme or an amendment to a local planning scheme **ought to be made**; or

- (b) has **failed** to adopt a local planning scheme or an amendment to a local planning scheme proposed by owners of any land, in a case where a local planning scheme or an amendment to a local planning scheme **ought to be adopted**; or
- (c) has refused to consent to any modifications or conditions imposed by the Minister,

the Minister may order the local government, within such time as is specified in the order, to prepare and submit for the approval of the Minister a local planning scheme or an amendment to a local planning scheme, or to adopt a local planning scheme or an amendment to a local planning scheme, or to consent to the modifications or conditions imposed.

- (2) If the representation under subsection (1) is that a local government has failed to adopt a local planning scheme or an amendment to a local planning scheme, the Minister, in lieu of making an order to adopt the local planning scheme or an amendment to the local planning scheme, may approve of the proposed scheme or amendment subject to such modifications and conditions, if any, as the Minister thinks fit.
- (3) A local planning scheme or an amendment approved under subsection (2) has effect as if it had been adopted by the local government and approved by the Minister under this Part.
- (4) The Minister must, as soon as is practicable after an order is given to the local government under subsection (1), cause a copy of the order to be laid before each House of Parliament or dealt with under section 268A. (**emphasis added**)

4. Background and history

It has been the State's longstanding intention to delegate many planning matters to the control of local government through the establishment of local planning schemes. However, the State has always retained the prerogative to intervene in a local planning matter, to a varying extent, where such intervention is deemed necessary. Section 76, together with its equivalent under previous statutes, has been in operation for some time and reflects this longstanding position.

Section 76, as introduced in the 2005 PD Act, allowed the Minister to order local governments to prepare and submit a new local planning scheme, or to adopt a new local planning scheme. However, the PD Act was silent on the issue of scheme amendments. The 2010 Amendment Act remedies this situation, by clarifying that the Minister is able to give an order to local government to prepare or adopt an *amendment* to a local planning scheme.

5. What is the legal effect of a section 76 order signed by the Minister?

When a local government receives a signed order under section 76, it will be required to take steps to:

- prepare and submit for the approval of the Minister a local planning scheme or an amendment to a local planning scheme;
- adopt a local planning scheme or an amendment to a local planning scheme;
- consent to the modifications or conditions imposed, within such time as is specified in the order.

The usual practicable effect of a section 76 order is that it requires a relevant local government to complete all the requisite steps set out in Part 5 of the PD Act, and submit a prepared or adopted scheme or amendment for the Minister's final consideration under section 87 of the PD Act.

¹The commencement of s.76(4) will occur upon a minor amendment being effected to correct a clerical error. If the Minister issues an order prior to s.76(4) coming into effect, the Government intends to table any such order and the reasons for the order.

- b. An applicant has not yet submitted a proposed scheme or amendment to local government for due consideration:

Furthermore, a section 76 order is unlikely to be granted where an applicant has not yet submitted a proposed scheme or amendment to local government for due consideration. Section 76 requires an applicant make a representation demonstrating how local government has purportedly 'failed' to take requisite steps for having a satisfactory local planning scheme or amendment, or has failed to adopt a local planning scheme.

As such, where an applicant has not yet submitted a proposed scheme or amendment to local government for due consideration, arguably it is not possible to demonstrate how local government has 'failed'. In these circumstances, any section 76 application is likely to be rejected as premature and not a case where the Minister 'ought' to intervene.

- c. An applicant has proposed a scheme or amendment to local government, but where local government has not yet had a reasonable opportunity to consider the proposal and make a resolution whether to initiate that scheme or amendment:

Similarly, a section 76 order is unlikely to be issued where an applicant has submitted a proposed scheme or amendment to local government, but where local government has not yet had a reasonable opportunity to consider that proposal and make a resolution whether to initiate that scheme or amendment.

Where an applicant contends that a local government has been given a *reasonable opportunity* to make a resolution whether to initiate a proposed scheme or amendment, and that local government has refused or omitted to pass a formal resolution, such matters must be considered on the evidence. In most cases, where an applicant cannot demonstrate multiple communications to have the matter formally considered by Council, the application is unlikely to be supported.

- d. An applicant's proposed scheme or amendment effectively amounts to an attempt at ad hoc spot re-zoning:

Finally, a section 76 order is not likely to be issued where it effectively amounts to an *ad hoc* attempt at spot re-zoning. Spot re-zoning is generally not supported, given it sets an undesirable precedent for fragmented development of an area otherwise requiring comprehensive and coordinated planning.

8. What relevant criteria will the Minister consider when reviewing a section 76 representation?

When considering a section 76 representation, the Minister is likely to take special note, but is not limited to, the following relevant criteria:

1. The applicant's representations, and in particular, whether these are supported by documentary evidence or other material.
2. Any response or explanation by local government as to why a proposed scheme or amendment was not prepared, considered or adopted.
3. Relevant statutory instruments, including but not limited to any relevant:
 - a. Regulations (such as deemed provisions under the *Planning and Development (General Provisions for Local Planning Schemes) Regulations 2010* and *Planning and Development (Local Planning Schemes) Regulations 2010*, or the historic *Model Scheme Text* where applicable);
 - b. Region Planning Scheme; and
 - c. Local Planning Scheme.
4. Relevant policies, including but not limited to any relevant:
 - a. State Planning Policy;
 - b. Region Strategy;
 - c. Local Planning Strategy;
 - d. Development Control Policy;
 - e. Planning Bulletin; and
 - f. other 'operational policy' endorsed by the WAPC or Government.

5. Any relevant instruments and plans, including but not limited to any:

- a. regional or local structure plan; and
- b. detailed area plan.

6. Any further considerations, including:

- a. Any other *submissions* made by any relevant person;
- b. the *credibility* of the applicant's claim, and in particular whether there is any evidence or documentation to support such claims;
- c. the level of *consultation* the applicant has carried out with local government, and the extent to which:
 - i. the representation attempts to abrogate the local government's role as the *primary and preliminary decision-maker*;
 - ii. whether the applicant has or has not yet submitted a proposed scheme or amendment to local government for due consideration; and
 - iii. whether the local government has:
 - o *considered* the applicant's proposal;
 - o *resolved* not to initiate the proposed scheme or amendment; or
 - o after a *reasonable opportunity*, refused or omitted to consider the proposal by passing a formal resolution whether to initiate the proposed scheme or amendment.
- d. the extent to which the representation is in effect an attempt to bypass *prescribed statutory processes* set out in Part 5 of the PD Act, including but not limited to any likely impact on:
 - i. communication or developmental requirements with related government agencies, and in particular, environmental referral and review; and
 - ii. procedural fairness or natural justice rights of

14. Does the Minister have a discretion whether to commence enforcement action under section 212 for non-compliance with a section 76 order?

Yes, the Minister contains a discretion whether to issue a section 212 notice. In some cases, there may be valid reasons why a local government has not complied with the section 76 order within the time specified in the order. In particular, there may be unavoidable delays associated with completing the remaining procedural steps set out in Part 5 of the PD Act. Therefore, before proceeding directly to taking action under section 212, discussions should be held with the local government to establish whether there are any particular reasons for non-compliance.

Finally, in relation to this issue, it is relevant to note that the preparation of a local planning scheme or amendment which, once begun by a local government, cannot be stopped by that local government. Once the scheme or amendment is advertised a local government can only pass a resolution under regulation 17(2)(b) TPR that it does not wish to proceed with the scheme. However, from that point on, the decision ultimately rests with the WAPC and the Minister whether to refuse or approve the scheme or amendment.

15. Is there a form for applicants to use when making a section 76 representation?

Yes – see Appendix A attached.

16. Further information

For further information, please contact the Department for Planning at:

Albert Facey House
469 Wellington Street
Perth 6000
Western Australia

Tel: (08) 9264 7777
Fax: (08) 9264 7566
TTY: (08) 9264 7535

As part of its continuing improvements to its service to clients and the public, the Western Australian Planning Commission has an internet site at the following address:

www.planning.wa.gov.au

The site contains a range of information concerning the WAPC, including planning bulletins.

17. Glossary

In this planning bulletin:

applicant means any person making a representation under section 76 of the PD Act.

DoP or the department means the Department of Planning.

initiate a scheme or amendment means a local government resolution to:

- prepare a scheme (under regulation 4 of TPR);
- proceed with a scheme (under regulation 13 of the TPR);
- prepare a scheme amendment (under regulations 13 and 25 of the TPR); or
- otherwise prepare, adopt or proceed with a scheme or amendment, in accordance with any equivalent statutory procedure that might be amended in any regulations from time-to-time.

Minister means the Minister for Planning.

PD Act means the *Planning and Development Act 2005*.

section 76 order means an order of the Minister made under the newly amended section 76 of the PD Act, requiring a local government to, within such time as is specified in the order, to prepare and submit for the approval of the Minister a local planning scheme or an amendment to a local planning scheme, or to adopt a local planning scheme or an amendment to a local planning scheme, or to consent to the modifications or conditions imposed.

section 76 request, section 76 application or section 76 representation means a representation to the Minister from an applicant, made under section 76 of the PD Act.

TPR means the *Town Planning Regulations (1967)*, including the *Model Scheme Text*, and its equivalent as amended from time-to-time.

Appendix A

- Section 76 request form (for applicants)

Applicants should note that this form may change from time-to-time. Please refer to the Department of Planning's website at www.planning.wa.gov.au for the latest version.

Example of the form is attached.

Disclaimer

This planning bulletin is intended as a guide only. It is not intended to be comprehensive or to cover particular circumstances.

Readers are advised to refer to the legislation, which is available from the State Law Publisher, and to seek professional legal advice should they have specific legal questions in relation to their particular circumstances.

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website: www.planning.wa.gov.au
email: corporate@planning.wa.gov.au

tel: 08 9264 7777
fax: 08 9264 7566
TTY: 08 9264 7535
infoline: 1800 626 477

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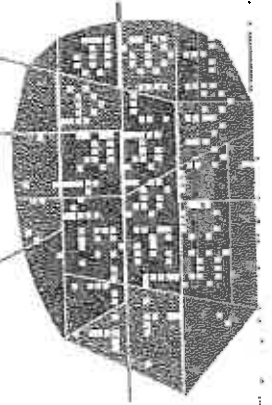


Our Ref: 10/012 LM:ct
25 May 2012



Taylor Burrell Barnett Town Planning & Design

187 Roberts Road Subiaco PO Box 8186 Subiaco East Western Australia 6008



Toddville Prospecting Pty Ltd ABN 74 831 437 975

Attention: Honourable John Day BSc BDSc MLA, Minister for Planning

Minister for Planning
13th Floor, Dumas House, 2 Havelock Street
PERTH WA 6005

Dear Sir

QUARTZ ESTATE – PT LOCATION 226, SOUTH HEDLAND – REQUEST TO MINISTER FOR PLANNING UNDER SECTION 76 OF THE PLANNING AND DEVELOPMENT ACT 2005

Taylor Burrell Barnett, on behalf of the registered proprietors of Pt Location 226, South Hedland – Quartz Estate (subject site), has prepared the following request to the Minister for Planning under Section 76 of the Planning and Development Act 2005. This request seeks the Minister to direct the Town of Port Hedland to amend its Town Planning Scheme No. 5 (TPS 5) to accommodate the site's subdivision for Special Residential purposes. Specifically, it is requested that:

under Section 76 of the Act the Minister orders the Town of Port Hedland to amend TPS 5 to rezone the majority of the land from 'Rural Residential' to 'Residential' with an R2.5 density code to accommodate Special Residential development.

In support of this request, we will demonstrate that under Clause 76(1) (b) of the Act the Town of Port Hedland has:

"failed to adopt a local planning scheme or an amendment to a local planning scheme proposed by owners of any land, in a case where a local planning scheme or an amendment to a local planning scheme ought to be adopted."

In support of this request, please find the following enclosed:

1. Completed Section 76 request form (for applicants).
2. Three (3) copies of the Town Planning report and appendices which provide planning rationale for this request and document the background.

The proposal is justified in the context of the principles laid out in Planning Bulletin 102/2010, namely: *"orderly and proper planning; the triple-bottom line (social economic and environmental considerations); efficient and effective land use; and the promotion of sustainable use and development in the State."* It is on these bases the Minister ought to intervene to accommodate the site's development for Special Residential purposes.

We look forward to receiving receipt of this request and working with the Minister's Office, Department of Planning and the Town of Port Hedland to progress the amendment to the Town of Port Hedland's Town Planning Scheme.

Should you have any queries please do not hesitate to contact the undersigned or Luke Montgomery on 9382 2911.

Yours faithfully
TAYLOR BURRELL BARNETT

BILL BURRELL
DIRECTOR

CC: Barry Pound

Quartz Estate Section 76 Request to Minister for Planning

May 2012

Prepared for
The Registered Proprietor



DOCUMENT HISTORY AND STATUS

Quartz Estate		10/012	Revision	Reviewer	Date Issued
Prepared By:	Taylor Burrell Barnett Town Planning and Design 187 Roberts Road SUBIACO WA 6008 Phone: 9382 2911 Fax: 9382 4586 admin@tbbplanning.com.au		0	LM	10.05.12
			1	LM	25.05.12

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Appendix 2: Quartz Estate Development Plan – 11 August 2011
Appendix 3: Scheme Amendment request – letter dated 28 November 2011
Appendix 4: Concept Development Plan proposal – letter dated 28 February 2011
Appendix 5: Advice from Town’s Manager Planning dated 28 October 2011
Appendix 6: Officer Report to Council meeting dated 14 December 2011
Appendix 7: Minute from Council meeting dated 14 December 2011
Appendix 8: Officer Report to Council meeting dated 25 January 2012
Appendix 9: Minute from Council meeting dated 25 January 2012
Appendix 10: Letter from Minister for Lands dated 7 March 2012

EXECUTIVE SUMMARY

The proponent has been progressing with the design and planning for the development of Quartz Estate to a more efficient density than that permitted under a current subdivision approval, in order to achieve a more efficient use of land, to assist in ameliorating the impacts of the well documented housing and accommodation crisis in the Town of Port Hedland. There has been extensive consideration given in the design to natural features on the site and potential impacts on existing residents within Bosna Estate, which adjoins the site.

Two proposals have been presented to the Town of Port Hedland for approval including a Development Plan and a request to rezone the land to 'Residential' with an applicable density code of R2.5 in accordance with the advice of the Town's technical officers, which the proponent supported. Both proposals were presented to accommodate development for Special Residential purposes. The Development Plan has not been considered by Council; however the Scheme Amendment has and was refused by the Council.

It is submitted that there is sufficient justification in accordance with Section 76 of the Planning and Development Act 2005 and Planning Bulletin 102/2010 for the Minister to:

order the Town of Port Hedland to submit, for the approval of the Minister, an amendment to the Town of Port Hedland Town Planning Scheme No. 5 to rezone the land at Quartz Estate to 'Residential' with an applicable density code of R2.5 to accommodate Special Residential subdivision and development.

The 'Residential' zone was considered the most appropriate zone by the Town's technical officers when the proposal was being prepared, as it is currently available under the Scheme and could sufficiently control Special Residential development to a minimum lot size of 4,000m². There are other zoning options available, including the 'Urban Development' zone, which is already contemplated under the Scheme, or the introduction of the 'Special Residential' zone, as a new zone under the Scheme.

This request is made to the Minister for Planning under Section 76 of the Planning and Development Act 2005. It is requested that the Minister intervenes and orders the Town of Port Hedland to amend the Town Planning Scheme to accommodate the site's subdivision and development for Special Residential purposes. It is contended that the Town of Port Hedland has failed in its deliberations to initiate an amendment to the Town Planning Scheme to rezone the land 'Residential' to accommodate 'Special Residential' subdivision and development, when it ought to have.

The proposal is justified in the context of the principles laid out in Planning Bulletin 102/2010, namely: *"orderly and proper planning; the triple-bottom line (social economic and environmental considerations); efficient and effective land use; and the promotion of sustainable use and development in the State."* It is on these bases the Minister ought to intervene to accommodate the site's development as proposed.

It is submitted that the Council, in its multiple considerations of the Scheme Amendment, has unfairly and unreasonably refused to initiate the proposed amendment and, in the process, failed to provide valid planning reasons for its refusal.

The proposal has been prepared, presented to the public, negotiated with the Town's technical officers and developed in accordance with the principles of orderly and proper planning. In this regard, extensive consultation has been undertaken with the public and the Town's technical officers on several occasions; and the proposal includes a number of technical provisions in order to control the use and development of the land, to limit any detrimental impacts on existing topographical features, the environment, in particular flooding, and local residents within Bosna Estate.

1 INTRODUCTION

Taylor Burrell Barnett has been instructed by the registered proprietors of Lot 226 Greenfield Street, Boodarie (subject site) to prepare this request to the Minister for Planning under Section 76 of the Planning and Development 2005 (the Act), to accommodate the site's development for Special Residential purposes under the 'Residential' zone. Our Office has been involved in the planning of the subject site for the development of a Special Residential lifestyle estate, for a number of years. Several proposals have been presented to the Town of Port Hedland for approval with the latest culminating in the Council's refusal to amend its Town Planning Scheme No. 5 to accommodate the proposed development.

1.1 REQUEST AND PURPOSE

This request seeks the Minister to direct the Town of Port Hedland to amend its Town Planning Scheme No. 5 (TPS 5) to accommodate the site's subdivision for Special Residential purposes as depicted on the proposed Development Plan. Specifically, it is requested that:

under Section 76 of the Act the Minister orders the Town of Port Hedland to amend TPS 5 to rezone the majority of the land from 'Rural Residential' to 'Residential' with a density code of R2.5, to accommodate Special Residential development.

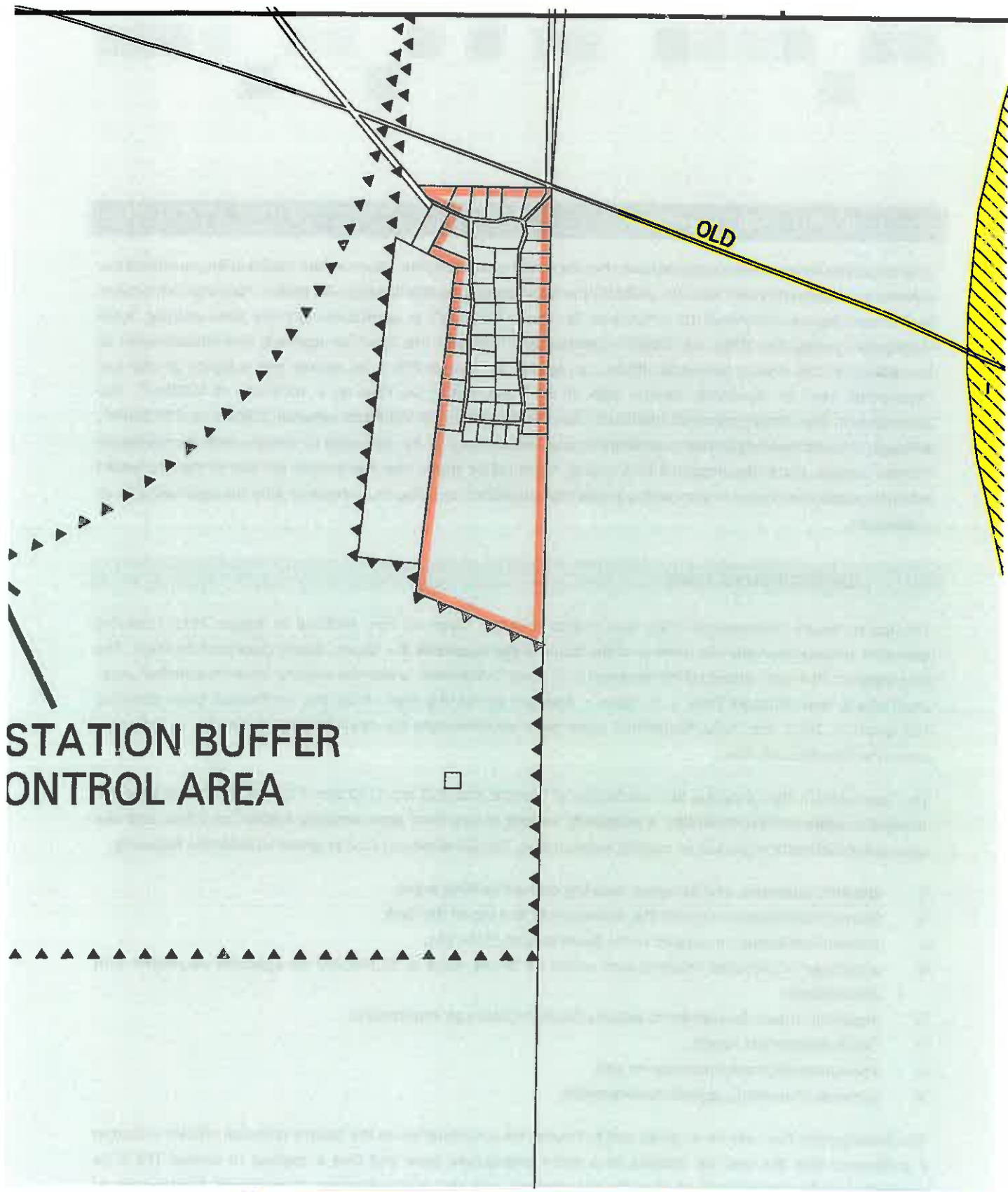
In support of this request, this report will demonstrate that under Clause 76(1) (b) of the Act the Town of Port Hedland has:

"failed to adopt a local planning scheme or an amendment to a local planning scheme proposed by owners of any land, in a case where a local planning scheme or an amendment to a local planning scheme ought to be adopted."

The following documentation is attached in support of this request:

- Appendix 1: Duly completed Section 76 Request Form
- Appendix 2: Quartz Estate Development Plan – 11 August 2011
- Appendix 3: Scheme Amendment request – letter dated 28 November 2011
- Appendix 4: Concept Development Plan proposal – letter dated 28 February 2011
- Appendix 5: Advice from Town's Manager Planning dated 28 October 2011
- Appendix 6: Officer Report to Council meeting dated 14 December 2011
- Appendix 7: Minute from Council meeting dated 14 December 2011
- Appendix 8: Officer Report to Council meeting dated 25 January 2012
- Appendix 9: Minute from Council meeting dated 25 January 2012
- Appendix 10: Letter from Minister for Lands dated 7 March 2012





LEGEND

- | | | |
|--|---|--|
| <p>LOCAL SCHEME RESERVES</p> <p> OTHER PURPOSES DENOTED AS FOLLOWS: INFRASTRUCTURE</p> | <p>ZONES</p> <p> RURAL RESIDENTIAL</p> <p> RURAL</p> | <p>OTHER</p> <p> SPECIAL CONTROL AREAS</p> |
|--|---|--|

3.2 SCHEME AMENDMENT

As mentioned above, the Town’s technical officers advised to submit a request to amend the zoning of the land to ‘Residential’, with a density code of R2.5, to accommodate the site’s subdivision generally in accordance with the proposed Development Plan. A request to amend TPS 5 was subsequently lodged with the Town under our letter of 28 November 2011 (refer **Appendix 3** – Scheme Amendment request – letter dated 28 November 2011).

Only the portions of the site to be subdivided below 1ha were proposed to be zoned ‘Residential’. The Scheme Amendment request included the following:

- Proposed Zoning Plan; and
- Subdivision Concept Plan (which fundamentally proposed the same subdivision layout as the Development Plan).

Whilst a Development Plan would not have been a necessity for subdivision under the ‘Residential’ zone, the detail contained within the Development Plan proposal was requested to be considered by Council to provide the necessary supporting justification.

In using the original Development Plan to support the rezoning, the proponents have acknowledged that the Plan shows some lots at below the 4,000m² minimum lot size that would not be permitted by the R2.5 coding, and have confirmed that the concept would be modified to comply with the minimum requirement if this coding is implemented.

3.3 TIMELINE OF EVENTS

The following table documents the history relating to the planning process to obtain approval for the purposes of a Special Residential lifestyle estate over the site.

DATE	ACTION	DETAILS
11 March 2010	Meeting with Town’s technical officers.	Present development options.
22 July 2010	Meeting with Town’s technical officers.	Present refined option.
October 2010	Community Consultation.	Facilitated by Creating Communities. Information open day with invitation to residents of Bosna Estate, Councillors and Town’s staff. People who attended generally positive towards the proposed development. Information sheets, plans and questionnaires provided to the public. Stakeholder consultation undertaken via separate meetings, including meetings with the Town’s technical officers and Chief Executive Officer.
November 2010	Preparation of Community Consultation Report.	Documents outcomes from community consultation.
January 2011	Present Concept Development Plan at Councillor Briefing Session.	No objection to Concept Development Plan.



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4 CONSULTATION WITH THE TOWN OF PORT HEDLAND AND PUBLIC

The table provided under Section 3.3 outlines the extent of consultation with the Town of Port Hedland and the public. Significant liaison has been undertaken with the Town's technical officers with meetings occurring at various stages during the preparatory and monitoring phases. Significant representation has been made to the Council of the Town of Port Hedland on various occasions through attendances at Councillor briefing sessions. The public has been engaged during the preparatory and monitoring phases and have been offered the opportunity to comment on the proposal on two occasions. The proposal was modified to take into consideration the public's views (e.g. the originally proposed Village Centre was removed).

The consultation undertaken with the public was outside of the statutory approvals process and initiated by the proponent as a precursory step in consultation with the Town. It was expected that the public would have the opportunity to provide further comment during the statutory approvals process, whether this had been undertaken during the Development Plan or Scheme Amendment processes.

The Town of Port Hedland has considered the proposed Scheme Amendment on two occasions as will be detailed under Section 5 of this report.

Refer to **Appendix 2** (Section 3) which outlined the community consultation undertaken and presentation to Councillors at the January 2011 briefing session.



Quartz Estate

The Council then voted 4/3 in support of the recommendation to refuse to initiate the amendment. It is once again not clear the reasons why Council refused the amendment, other than a line provided under the decision which stated that 'Council followed the Officer's Recommendation and good planning principles'. Yet the officer's report provided no sound basis to refuse the application. Indeed it would be reasonable to expect that the proposal met the intent of "good planning principles" in order to gain a favourable recommendation from Council's planners in the first instance (refer **Appendix 9** – Minute from Council meeting dated 25 January 2012).

A transcript of events provided by our Client, who was present at the meeting, outlines that when officer recommendation 1B was considered it was moved to lay on the table to be discussed by Councillor Jacob (and subsequently seconded). Councillor Jacob then started to discuss the true merits of the application, such as the Town having housing shortage problems and that the Council should be supporting developers wanting to build houses in the Local Authority, especially when the technical components of a proposal are true to the recommendations of the Town's growth objectives.

Councillor Carter then called a "point of order" announcing to the Mayor that Council had previously voted on the matter at the December 2011 meeting and that Council should not be wasting time on any further debate.

Standing orders were suspended to allow the CEO and his staff recess for half an hour to deliberate the merits of the point of order.

Following resumption of the standing orders, the CEO suspended any further debate, duly apologised to Councillor Jacob for misguiding her on previous advice given by him prior to the meeting, and called for a vote on officer recommendation 1A, which was lost 4/3. Consequently, this disallowed the initiation of the amendment to be discussed any further. The meeting minutes note the following:

"Chief Executive Officer advised the Mayor that because Council has not resolved Officer's Recommendation 1a and therefore indicated that it does not want to reconsider the matter, then the only option available for Councillors is to consider Officer's Recommendation 2. If Councillors had agreed to consider Officer's Recommendation 1a that would be a time to consider whether to lay the item on the table or go with the Officer's Recommendation 1b.

Chief Executive Officer also said that Councillor GA Jacob had approached him before the meeting to ask if it would be possible to lay this matter on the table. However upon review of the Standing Orders, which are silent on the matter, the Chief Executive Officer stated that the advice given to Councillor Jacob earlier was not clear enough in relation to Council's consideration of Officer's Recommendation 1a. The Chief Executive Officer passed on his apologies to Councillor GA Jacob accordingly. The Chief Executive Officer reiterated that the motion to lay the item on the table cannot be accepted because Council has indicated that it does not want to reconsider the matter and the only option is to consider Officer's Recommendation 2."

Officer recommendation 2 was voted on and carried 4/3, which states:

"That Council refuses to initiate an amendment to the Town of Port Hedland Town Planning Scheme No. 5, to recode portion of Lot 226 Forrest Location (Lot 226 South Hedland Rural Estate) South Hedland from "Rural Residential" to "Residential – R2.5."

The Director of Planning and Development then requested confirmation from Council of the planning reasons why the proposal was not supported. Councillor Stan Martin (who is a resident within Bosna Estate, hence questioning whether there was a conflict of interest in him voting on the matter) replied and advised that officer recommendation 2 was considered and supported and, therefore, no planning reasons for refusal are required.

The above-described process that led to the refusal of the amendment request, in particular:

6 MERITS OF THE REQUEST

The Bulletin indicates that demonstrating the Local Government's failure to adopt the Scheme Amendment and request for the Minister's intervention must be assessed on the principles of proper and orderly planning, the triple bottom-line (social, economic and environmental considerations), efficient and effective land use, and the promotion of sustainable use and development in the State. The proposal is discussed below in relation to these principles.

6.1 ORDERLY AND PROPER PLANNING

Orderly and proper planning are fundamental tenants of urban planning theory and practice. Orderly planning is based on procedural planning theory on planning process and how proposals are made. In particular, orderly planning deals with the method by which a proposal is progressed through the development control system. This includes the way in which policy and scheme amendments are made, and how development is assessed and the consistency of decisions.

6.1.1 ORDERLY PLANNING

Relevant considerations for orderly planning include how proposals and policies were formulated (such as what studies were undertaken, how a proposal was developed in relation to its site and context), what steps were undertaken by the regulatory authority evaluating a proposal, and what exposure the proposal had to public scrutiny during its formulation.

Orderly planning leads to a singular construction in planning practice and law – has the proposal been properly made?

In the context of Quartz Estate and in further detail to Sections 3.3 and 4.0 of this report, the following stages in the planning process have been addressed to date:

1. Legal advice has been provided (refer Appendix 2) which supports the development of the site as a 'Rural Settlement' (use defined under TPS 5 which the proposal falls within), under the existing 'Rural Residential' zone of TPS 5. The preparation of a Development Plan provided a proactive approach to structure planning the site to accommodate the development of a Rural Settlement and subdivision for Special Residential purposes. The background research, design and preparatory phases of the Development Plan mimicked those of a standard structure planning process for a greenfield development in a metropolitan setting.
2. Sections 3.3 and 4.0 of this report detail the extensive consultations undertaken as part of the formulation and presentation of the Development Plan and Scheme Amendment submissions. These consultations were undertaken on the initiative of the proponent, outside of the statutory process. If the opportunity arose for a statutory process to be commenced either in the form of a Development Plan being advertised or a Scheme Amendment being initiated, the public would have further opportunity to comment and this would only add to and compliment an already comprehensive set of consultations that have been undertaken.

Feedback obtained at various stages of the planning process has been incorporated into the design and documentation provided to support the proposals. Examples of this include:

- Redefining and then excluding the Village Centre which was part of the original concept.



Quartz Estate

With regard to the first consideration, and in particular point a) above, the Development Plan provides extensive justification in support of Special Residential development being satisfactory in the locality (refer **Appendix 2**). Further detail is provided under Sections 7.0 and 7.1 of this report.

In particular, the existing town planning framework contemplates a 'Rural Settlement' within the 'Rural Residential' zone. In support of this, the Town's technical officers in both reports to Council state:

'Council's Officers are of the opinion that lot sizes of 4,000m² plus, will be compatible with the existing "Rural Residential" lots of between 10000m² and 20000m². This provides the residential market with additional residential choices, for those looking for a rural residential life style but not the large lots that are often costly and difficult to maintain.'

For the reasons outlined in the Development Plan and by the Town's technical officers, to reduce the minimum lot size from 10,000m² to 4,000m² is not a significant difference in potential impacts on the amenity of the locality.

The existing strategic planning framework associated with the site is limited. The Town of Port Hedland has advertised its draft Pilbara Port City Growth Plan; however this is yet to receive final adoption by the Council and endorsement by the Western Australian Planning Commission. The key theme of the Growth Plan relevant to Quartz Estate is:

"Housing Diversity & Land Supply Capacity – providing an orderly and adequate supply of land along with an increased choice in housing products and tenure options to cater for a diverse and permanent population."

In addition to this, the Growth Plan states that a 'pipeline of land supply' is required for growth beyond 50,000 people within the Town of Port Hedland.

Quartz Estate is contained within Precinct 14 under the Growth Plan, which is identified as 'South Hedland rural residential estate expansion'. This land use recommendation is contemplated by the Town's technical officers in both reports to Council and on the basis of the supportive recommendation to initiate the amendment to zone the land 'Residential', the proposed development is considered to be consistent with the recommendations of the Growth Plan.

With regard to the second consideration referred to above, the main concerns raised by the public and / or the Council, during consideration of the different proposals presented, were hydrological, relating to flooding, and traffic implications. Detailed justification has been provided in the Development Plan report and in the Officer report to Council in January 2012 explaining that offsite impacts of the development for these and other issues are negligible, if any.

As detailed on the Development Plan, significant technical provisions have been incorporated to control subdivision and development. These could be included specifically within the Scheme Amendment or be enforced by the Council through the adoption of the Development Plan concurrent to the Scheme Amendment. Consequently, the existing or proposed planning framework can suitably control the development of the land as proposed without detrimental impact on the surrounding locality.



Quartz Estate

The development will, nevertheless, provide opportunities to complement creating diversity of housing types within the Town; as there are limited opportunities for lifestyle lots. High quality housing will be provided in order to accommodate a sense of identity and character for the subdivision and to build upon the existing rural lifestyle character created at Bosna Estate.

A more efficient density at Quartz Estate will better utilise land resources and existing transport infrastructure.

As demonstrated throughout this report, extensive community consultation has been undertaken as part of this proposal.

3. **Economy:** The approval of the development for an increase in the number of lots to 130 as opposed to 72 lots depicted on the approved Plan of Subdivision, will accommodate the developer offering affordable house and land packages at a total cost of less than \$1,000,000, which is below the Port Hedland Average Annual Median house sale price for 2010/11. Consequently, this will provide a significant boost to the housing market within Hedland providing an opportunity for additional permanent residential occupancy.

As mentioned under point 1, dwellings will be constructed based on sustainable development principles. Extensive local trades will be required as part of subdivision and dwelling construction, which will assist further stimulating the local economy.

4. **Infrastructure:** The subdivision of Quartz Estate will allow existing infrastructure such as roads, power and water to be utilised through simple extension and upgrades. The developer is also prepared to undertake additional infrastructure upgrade works outside of Quartz Estate to improve existing infrastructure deficiencies, generally associated with Bosna Estate. The site is located in close proximity (i.e. 3.5 km) to the South Hedland Town Centre with easy access by the existing road network.
5. **Regional Development:** The subdivision of the subject site will provide critical housing opportunities for Port Hedland, which is located in Australia's most important mining region, where existing opportunities for the development of large greenfield sites for residential subdivision in the short term, are minimal. It is well documented that the Pilbara has a shortage of housing supply which needs to be resolved in order for towns such as Port Hedland and Karratha to expand to support the mining boom in accordance with the Pilbara Cities initiative. In this regard, Honourable Brendon Grylls MLA Minister for Lands has been made aware of our Client's predicament regarding the subdivision of the subject site and has advised that he will discuss this matter personally with the Minister for Planning (refer **Appendix 10** – Letter from Minister for Lands dated 7 March 2012).

As mentioned above, the development of Quartz Estate with high quality housing will provide large lot lifestyle opportunities that are currently limited in the Pilbara. This will assist with diversifying lifestyle opportunities in the Pilbara as is provided in other areas of the state (i.e. the south west).

6.3 EFFICIENT AND EFFECTIVE LAND USE

The Productivity Commission in its report *Performance Benchmarking of Australian Business Regulation: Planning, Zoning and Development Assessments*, 16 May 2011 concluded that *'at the centre, the land planning system seeks to establish the conditions needed to maintain and increase the efficiency and effectiveness of the urban environment'*.

7 PROPER PLANNING GROUNDS

The detail contained within the Development Plan provides justification in support of the development of Quartz Estate (refer to **Appendix 2**). As outlined in Section 3.1 of this report, the Development Plan contains reference to the necessary studies which have been undertaken to support the development of the site. These studies are critical in the structure planning process to demonstrate:

- 📄 the land is physically capable of development;
- 📄 the subdivision takes into consideration surrounding existing development and land use;
- 📄 potential impacts of existing residents are mitigated through appropriate planning controls;
- 📄 the subdivision is sensitive to the existing environment;
- 📄 the subdivision is an efficient use of land;
- 📄 the subdivision offers the potential to increase housing diversity; and
- 📄 dwelling construction is sustainable.

In addition to the above, particular aspects relating to flooding, traffic and infrastructure implications have been appropriately addressed as part of the supporting technical documentation. These demonstrate that the development of Quartz Estate as proposed offers a more efficient density in comparison to what is currently approved for the site.

Furthermore, it is important to appreciate that the more efficient density proposed has been designed in a site-responsive manner. A large portion of the site is proposed to retain its current 'large lot' Rural Residential approved use and subdivision; which consists of 30 lots in the eastern portion of the site. It is appropriate to maintain this subdivision layout and form based on the offsite flooding implications, to maintain predevelopment flows through the site with no detrimental impact on the new dwellings. Consequently, the more efficient density is constrained to the central and western portions of the site, on less constrained land, and away from existing residences.

To accommodate lots of 10,000m² on 'Rural Residential' zoned land, the land must be connected to a reticulated water supply. The lots created from this proposal will be connected via an extension and upgrade of the existing reticulated water system. Road upgrades will be undertaken in accordance with the package of works proposed by the proponent and will improve the existing road infrastructure outside of Quartz Estate. The physical servicing and construction of the land is not compromised based on a more efficient density. Consequently, the questions arising from a more efficient density either relate to amenity or physical land use implications.

In this regard, the more efficient density:

- 📄 is based on site-responsive design;
- 📄 will only accommodate an additional 58 lots from that approved (less than double);
- 📄 will have only a negligible impact, if any, on the amenity of existing residents within Bosna Estate for the following reasons:
 - Quartz Estate is located to the south of Bosna Estate and away from the South Hedland town centre and major access routes. Therefore, existing residents will not have to pass through Quartz Estate.
 - New dwellings will be located away from existing dwellings within Bosna Estate. Many existing dwellings may not even have views to the new dwellings.



Quartz Estate

3.2.3 The site will be connected to reticulated underground water, power and telecommunications services. The site can be appropriately serviced by onsite effluent disposal systems for the treatment of effluent. A watercourse is proposed to be located in open space in order to protect this natural feature on the site. In this regard, the site has been designed to locate large lots in areas where offsite flood implications are evident and small lots on less constrained land. The subdivision has been designed to maximise amenity. The traffic impact assessment indicates the design of the subdivision and resultant traffic generated are appropriate in the context of the existing land use and road network.

Based on the above; the well documented shortage of housing and accommodation within the Town of Port Hedland; and the location of the site, a more efficient density at Quartz Estate is appropriate, achieving proper planning outcomes.

9 CONCLUSION

This request has demonstrated the proponent's actions during the preparatory, submission and consideration phases to accommodate the development of the site in accordance with the Development Plan are consistent with the well understood themes of orderly and proper planning; triple bottom line and broader principles of sustainability. It has been clearly demonstrated that the use and development of the site in accordance with the Development Plan is a more efficient and effective use of land in order to assist with ameliorating the impacts of the housing and accommodation crisis in the Town of Port Hedland, than can be achieved under current approvals.

Development of the site as proposed can be controlled through Town Planning Scheme provisions in order to limit any impact on natural features of the site and the existing residents within Bosna Estate. Furthermore, additional opportunity for comment will be provided through the approval process, to supplement the consultation undertaken with the public and Town of Port Hedland to date.

Based on it being demonstrated that the Town of Port Hedland has failed to adopt an amendment to Town Planning Scheme No. 5 to accommodate subdivision and development in accordance with the proposed Development Plan, the Minister is respectfully requested to intervene and order the Town of Port Hedland to submit for the Minister's approval an amendment to zone the land 'Residential' with a density code of R2.5, to accommodate the development of Quartz Estate for Special Residential purposes.



Quartz Estate

APPENDIX 1
DULY COMPLETED SECTION 76 REQUEST FORM

Section 76 request form (for applicants)

Section 1 - Applicant's details

Name: Taylor Burrell Barnett
Address: 187 Roberts Road, Subiaco WA 6008
Phone: 9382 2911 Email: luke@tbbplanning.com.au

Section 2 - Local government to which this relates

Name of relevant local government: Town of Port Hedland
Name of relevant local planning scheme: Town Planning Scheme No. 5

Section 3 - Summary of representation

Please provide a brief summary, in 250 words or less, why you say the relevant local government —

- (a) has failed to take the requisite steps for having a satisfactory local planning scheme or an amendment to a local planning scheme prepared and approved in a case where a local planning scheme or an amendment to a local planning scheme ought to be made; or
- (b) has failed to adopt a local planning scheme or an amendment to a local planning scheme proposed by owners of any land, in a case where a local planning scheme or an amendment to a local planning scheme ought to be adopted; or
- (c) has refused to consent to any modifications or conditions imposed by the Minister:

It is submitted that the Town of Port Hedland has failed to adopt a request by the landowner to amend Town Planning Scheme No. 5 to rezone the subject site to 'Residential' with a density coding of R2.5, to accommodate Special Residential development, where it ought to have adopted it; for the following reasons:

1. The technical officer's report was supportive of the proposal.
2. The Council has provided no valid planning reasons for refusing to initiate the proposed Amendment on two occasions.
3. The proposal is consistent with *orderly and proper planning; the triple-bottom line (social economic and environmental considerations); efficient and effective land use; and the promotion of sustainable use and development in the State*. In particular:
 - a. the proponent has made every effort to follow the process of orderly planning throughout all phases of the Development Plan and Scheme Amendment proposals.
 - b. the proposal to reduce the minimum lot size from 10,000m² to 4,000m² is not a significant difference in potential impacts on the amenity of the locality.
 - c. the existing and proposed planning framework can suitably control the subdivision and development of the land without detrimental impact on the surrounding locality.
 - d. extensive environmental assessment has been undertaken which will allow elements worthy of environmental consideration to be protected on site.
 - e. the traffic impact assessment indicates the design of the subdivision and resultant traffic generated are appropriate in the context of the existing land use and road network.
 - f. Hydrologic Impact Assessment undertaken indicates that the offsite impacts of the development from flooding are negligible, if any.
 - g. The proposal offers an opportunity to create diversity of living choices within South Hedland; as there are limited opportunities for lifestyle lots at present.
 - h. existing infrastructure such as roads, power and water to be utilised through simple extension and upgrades. In this regard, it is less costly to establish road networks and utilities in developments which are established, and more efficient development in these areas means better utilisation of infrastructure facilities.
 - i. the more efficient density will provide a more immediate supply of land and housing to respond to the well documented housing and accommodation crisis in Port Hedland.
4. It has been demonstrated in the attached report that:
 - a. the land is physically capable of development;
 - b. the subdivision takes into consideration surrounding existing development and land use;
 - c. potential impacts of existing residents are mitigated through appropriate planning controls;
 - d. the subdivision is sensitive to the existing environment;
 - e. the subdivision is an efficient use of land;
 - f. the subdivision offers the potential to increase housing diversity; and
 - g. dwelling construction is sustainable.
5. It has also been demonstrated that the proposal satisfies the criteria of the Western Australian Planning Commission detailed in Development Control Policy No. 2.5 - Special Residential Zones.

Section 6 – Ministerial action sought

Please provide a brief summary, in 250 words or less, what action you now seek the Minister to carry out. In particular, where you request the Minister issue an order under section 76 of the *Planning and Development Act 2005*, please provide a brief description of what terms you consider appropriate and necessary:

This request seeks the Minister to direct the Town of Port Hedland to amend its Town Planning Scheme No. 5 to accommodate the site's subdivision for Special Residential purposes as depicted on the proposed Development Plan. Specifically, it is requested that:

- under Section 76 of the Act the Minister orders the Town of Port Hedland to amend TPS 5 to rezone the majority of the land from 'Rural Residential' to 'Residential' with a density code of R2.5, to accommodate Special Residential development.

Section 7 – Other information attached

Please attach all other information, including more detailed written submissions, reasons and documentary evidence.

Refer Section 5.

Where to send this form once completed?

Please send this form, once completed and containing all relevant attachments, to the following address:

Minister for Planning
13th Floor, Dumas House, 2 Havelock Street,
WEST PERTH WA 6005
Fax: (08) 9213 6601
Ref: Section 76 Application



Quartz Estate



**APPENDIX 2
QUARTZ ESTATE DEVELOPMENT PLAN**

Quartz Estate Development Plan

August 2011

Prepared for
Barry Pound and Paul Summers



APPENDICES

APPENDIX 1	ORIGINAL DEPOSITED PLANS
APPENDIX 2	LETTER OF 23 FEBRUARY 2011
APPENDIX 3	EVAN JONES' ADVICE
APPENDIX 4	VDM CONSULTING HYDRAULIC IMPACT ASSESSMENT – ISSUE 8
APPENDIX 5	VDM CONSULTING HYDRAULIC IMPACT ASSESSMENT SUMMARY DOCUMENT
APPENDIX 6	VDM CONSULTING LETTER DATED 10 AUGUST 2011
APPENDIX 7	DRAINAGE CHANNEL FLOW PATH PLAN
APPENDIX 8	VDM CONSULTING TRAFFIC ASSESSMENT

FIGURES

FIGURE 1	DISTRICT CONTEXT PLAN
FIGURE 2	LOCAL CONTEXT PLAN
FIGURE 3	APPROVED SUBDIVISION PLAN
FIGURE 4	APPROVED SUBDIVISION CONTEXT PLAN
FIGURE 5	TOWN OF PORT HEDLAND TOWN PLANNING SCHEME ZONING PLAN
FIGURE 6	QUARTZ ESTATE DEVELOPMENT PLAN
FIGURE 7	DRAFT SUBDIVISION CONCEPT PLAN
FIGURE 8	QUARTZ ESTATE MASTERPLAN

2.1 LEGAL DESCRIPTION

This Development Plan applies to the subject site described as Lots 61 and 226 South Hedland Rural Estate, Boodarie, located at the southern end of Greenfield Street. The Development Plan area comprises approximately 95.66 ha with the title particulars consisting of the following:

Lot Number	Plan Number	Volume/Folio	Landowner
226	191411	2178/597	Famsum Pty Ltd Simsilk Pty Ltd Pound, Jennifer Margaret Pound, Barry Malcolm Summers, Paul John Dorosz
61	23735	2178/574	Quartz South Hedland Pty Ltd

At the time of preparing this report, both of these titles were 'subject to dealings', as a consequence, the title information provided above may be subject to change. A copy of the original Deposited Plans are contained within **Appendix 1 – Original Deposited Plans**.

2.2 SITE DESCRIPTION AND LOCATION

The site is located 18 km south of Port Hedland, and 3 km south of South Hedland. Quartz Estate is the only known privately held site of this type and size in Port Hedland (refer **Figure 1 – District Context Plan**).

The subject site is vacant land, and was formerly part of the South Hedland Rural Estate (Bosna Estate) to the north, which was developed approximately 10 years ago (refer **Figure 2 – Local Context Plan**).



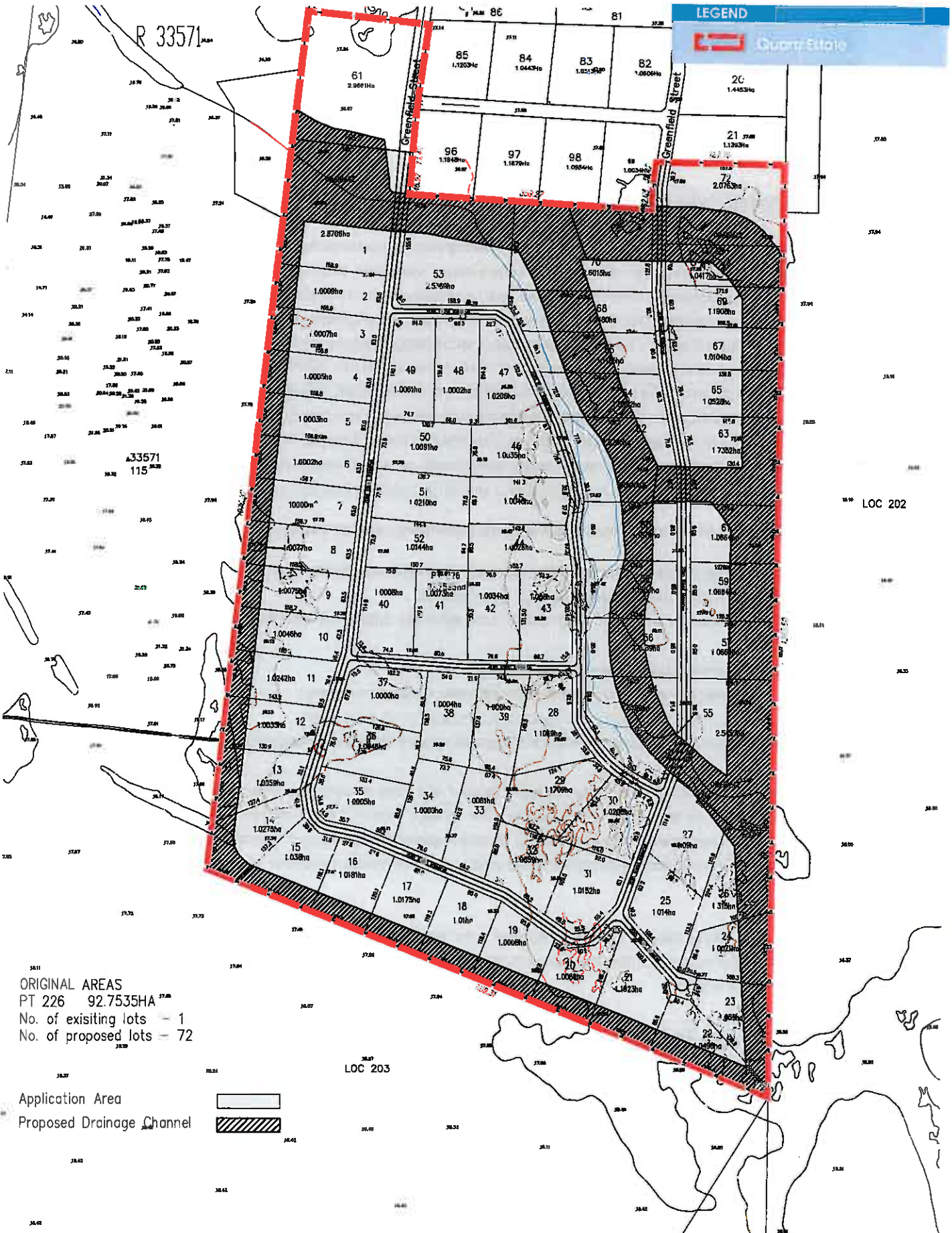
LEGEND

 Quartz Estate

Bosna
Estate

LOCAL CONTEXT PLAN
Quartz Estate Development Plan


1:1850000 A4
01 AUGUST 11
10/012



ORIGINAL AREAS
 PT 226 92.7535HA
 No. of existing lots = 1
 No. of proposed lots = 72

Application Area
 Proposed Drainage Channel

LEGEND

Quartz Estate

SOURCE | MASTERPLAN 15/09/2010

APPROVED SUBDIVISION PLAN
 (WAPC REF: 140935)
 Quartz Estate Development Plan

100%
 11/10/2012

figure
03

As part of the presentation at the Councillor Briefing session, a request was made for the Town's advertising of the Concept Development Plan to landowners within Bosna Estate, in order to obtain more feedback than that undertaken by Creating Communities on the proposed development and to inform the landowner in making a decision on which form of development to proceed with.

3.4 ADVERTISING OF THE CONCEPT DEVELOPMENT PLAN

Despite no formal decision of the Council for agreement to advertise the Concept Development Plan at the Councillor briefing session, the Town's technical officers agreed to coordinate advertising of the plan at the proponent's expense. The Concept Development Plan was advertised for in excess of 21 days through a notice in the Northwest Telegraph and letters to landowners. A total of 11 submissions were received, of which 9 submissions were in support and two submissions objected to the Concept Development Plan.

The main reasons outlined by the two objections related to the development detrimentally impacting the 'rural' amenity of the area (in part expected to be caused by the 'Village Centre') and whether existing servicing infrastructure could cope with an increase in dwellings (e.g. reticulated water pressure being lost). In response to the concerns raised, the Development Plan and associated Technical Provisions have been designed to reduce any potential detrimental impacts on the amenity of the locality by:

1. Applying a rural theme through the use of wide streets, open drainage and rural housing being incorporated into the subdivision.
2. Special Residential sized lots being incorporated into the subdivision, to enable large setbacks from boundaries and the street.
3. A commitment from the proponent to construct all dwellings, which will be designed in accordance with approved Building Design Guidelines.
4. Traffic and transport study which supports an increase in dwellings and associated vehicle trips per day.
5. A commitment by the proponent to improve the existing road system.
6. Retention of Rural Residential sized lots in accordance with the approved subdivision, over the eastern portion of the site.

A commitment has been made by the proponent to investigate the extent of infrastructure servicing upgrades required to support subdivision in accordance with the Development Plan. In addition, all necessary approvals will be obtained as part of the subdivision process from the Water Corporation and Western Power for infrastructure extensions and upgrades without decreasing service levels to existing dwellings in the locality.

3.5 DECISION TO INCREASE THE NUMBER OF LOTS

In this regard, an extensive amount of consultation with local residents and the Town of Port Hedland's Councillors and senior staff has been undertaken to inform the landowner's decision on the Development Plan design, over the last two years. Our Client concluded that:

- in light of market conditions and the shortfall of housing in the Pilbara; and
- the detailed technical investigation which has been undertaken as detailed in this report,

4.1 STATUTORY PLANNING FRAMEWORK

4.1.1 ZONING

The subject site and abutting Bosna Estate is zoned 'Rural Residential' under TPS 5. Surrounding lands are zoned 'Rural' (refer Figure 5 – Town of Port Hedland Town Planning Scheme Zoning Plan). The subject site abuts a Special Control Area to the south for the purpose of 'Boodarie Industrial Buffer', however, the TPS provisions relating to this Special Control Area do not impact the subject site, as the site is outside of it.

Under Clause 5.2.1 of TPS 5, Council may prepare, or require the preparation of, a Development Plan within the 'Rural Residential' zone. In this regard, development of 'Rural Residential' zoned land shall generally be consistent with the requirements of an endorsed Development Plan.

Clause 6.8.2 of TPS 5 allows a Development Plan to be prepared within the 'Rural Residential' zone to accommodate a 'Rural Settlement' development. The proposed Development Plan has been prepared to accommodate the subdivision of the site as a 'Rural Settlement' for composite Special Residential (lot sizes generally between approximately 3,500m² and 6,000m²) and Rural Residential lots (lot sizes a minimum of 1 ha). A 'Rural Settlement' is defined by TPS 5 as:

'a collection of two or more dwellings in proximity and located in a rural zone and may include other commercial or community development as approved by Council.'

The Development Plan has been prepared in accordance with the definition of 'Rural Settlement' under TPS 5. Specific provisions which control lot size, building locations etc, have been addressed as part of this comprehensive Development Plan proposal. It is envisaged that Council will amend TPS 5 to reflect the 'Rural Settlement' development following approval of the Development Plan, in accordance with Clause 5.2.11.

Supplementary town planning and legal advice has been provided by Evan Jones, Director of Responsive Environments based on advice from L. A. Stein Barrister regarding the legal approvals framework for a 'Rural Settlement' development, as contemplated on the Development Plan (refer Appendix 3 – Evan Jones' advice on this matter).

The supplementary advice confirms that the established town planning framework under TPS 5 can accommodate the development of the site, as proposed, under an adopted Development Plan.

A thorough assessment of TPS 5 was undertaken in view of the most appropriate form of development for the site. It was concluded it should be taken into consideration that TPS 5 does not include a Special Residential zone, which accommodates lot sizes between 1,000m² and 1 ha, as provided for within most Town Planning Schemes. Based on the limited availability of land suitable for residential development within the Town of Port Hedland, Special Residential sized lots are best accommodated under the definition of 'Rural Settlement' in TPS 5.

In accordance with Clause 6.8.4 of TPS 5 all lots will be connected to scheme water.

4.1.2 RURAL RESIDENTIAL CONSIDERATIONS

In addition to the 'standard' matters to be addressed by Development Plans under TPS 5, this Development Plan considers the following for 'Rural Residential' zoned land, as outlined in Appendix 6:

- (i) *The impact of the proposal on the local settlement and the rural land use patterns in the Scheme Area.*

As identified earlier in this section, Special Residential zoned land is not provided for within TPS 5, and therefore, land zoned 'Rural Residential' provides the most economical means for the development of a 'Rural Settlement', to accommodate Special Residential sized lots. The subject site represents the only remaining broad-acre, 'Rural Residential' zoned parcel of land, suitable for subdivision of Special Residential sized lots. Other 'Rural Residential' zoned land within the Town consists of smaller parcels, likely to be under fragmented land ownership, and therefore, unsuitable for Special Residential subdivision. Therefore, the subject site represents the best opportunity for the creation of Special Residential sized lots, which will offer diversity of housing within the Town, which is primarily constrained to single, low density, residential dwellings.

The lot sizes proposed (i.e. which range in size from approximately 3,000m² to 2.5ha) are not expected to detract from the existing rural amenity in the area, particularly for Bosna Estate residents, as the subject site is located to the south, or at the end of the existing subdivision. Suitable built form controls will be implemented through the Development Plan and the Building Design Guidelines to be prepared prior to dwelling construction. As a consequence, dwellings will be constructed to be cognisant of the existing rural amenity and large lot sizes proposed.

This matter has also been addressed through extensive studies such as the traffic and transport study prepared as part of the Development Plan, which indicates that the existing road network is satisfactory to accommodate the increase in traffic generated from the Development Plan. Whilst it is acknowledged that there will be an increase in vehicle movements given the findings of the traffic and transport study, the existing rural amenity is not expected to be degraded as a result of an increase in dwellings.

On the basis of the above, the subject site presents an opportunity to supply Special Residential sized lots, and additional Rural Residential lots, in an area which is unlikely to conflict with other land use opportunities. In this regard, the site is surrounded by extensive areas of rural zoned land. The overall increase in yield compared to the approved subdivision is less than doubled, with negligible impacts on transport and amenity expected.










- (ii) *The demand for commercial and community facilities, including schools, generated by the proposal and implications for the provision of these within the development area or elsewhere.*

It has been established through the community consultation process, and in liaison with the Town's senior staff, that community facilities proposed as part of the Development Plan are not supported. An area of open space, on the north western portion of the site will be provided for drainage purposes, however, other than this, each dwelling will be provided with abundant private open space based on the large lot sizes proposed.

The Development Plan will facilitate the subdivision of the subject site into 133 lots, ranging in size from approximately 3,000m² to 2.5ha, and one open space lot which will also be utilised for drainage (refer **Figure 6 – Quartz Estate Development Plan** and **Figure 7 – Draft Subdivision Concept Plan**). The main elements of the Development Plan are outlined below.

5.1 PRINCIPLES

The Development Plan has been designed based on the following principles:

-  Composite Special Residential and Rural Residential development offering a range of lifestyle opportunities, through maintaining a rural theme.
-  Recognition of adjoining existing development.
-  A range of dwelling types and sizes.
-  Acknowledgement of external flood implications by applying restricted development areas and associated protection from floodways.
-  Generous setbacks to accommodate building areas with increased seclusion; creating an appropriate rural streetscape; and maximising outdoor living areas which will allow active and passive, private recreation areas on each lot.
-  Local amenity provided in the form of an open space reserve which will accommodate passive recreation; retention of vegetation; and flood protection.
-  Notional building areas and guaranteed house construction under Building Design Guidelines.
-  Accommodating a suitable design and lot yield, which will ensure house and land packages are affordable in the context of the Pilbara housing market.
-  Sustainable house construction, featuring 7-star energy design standards.

Refer **Figure 8 – Quartz Estate Masterplan**, which details various design elements and features incorporated into the Development Plan.

5.2 KEY ELEMENTS / FEATURES

The Quartz Estate Development Plan proposal is the culmination of extensive work by the project team. The subdivision of the subject site as depicted on the Development Plan will provide a number of benefits in comparison to the development of the site in accordance with the approved subdivision plan. Local residents and community, residents of Bosna Estate, and the Town of Port Hedland will benefit from the subject site being developed in accordance with the Development Plan, as follows:

1. **Guaranteed house construction.** Approval of the Development Plan will allow the proponent to construct dwellings for all lots as part of house and land packages. Building Design Guidelines will be prepared to control the built form, to achieve high quality design elements, such as solar orientation and 7-star energy efficiency standards.



DRAFT SUBDIVISION CONCEPT PLAN
 Quartz Estate Development Plan



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Quartz Estate Development Plan

2. **Affordable.** Developing an increased number of lots on the subject site will allow the proponent to sell the house and land packages at a significantly lower rate than under the existing Subdivision Approval (no houses to be constructed under this scenario). It is expected that house and land packages could range between \$650,000 and \$950,000 (average), which is considered affordable based on current house and land package prices in the Pilbara.
3. **Sustainable.** The extent of developable land within the Pilbara is constrained by various elements (e.g. native title, flooding, servicing etc). An increased number of lots will better utilise scarce land resources and take advantage of existing service infrastructure within the locality. Dwellings will also be constructed based on sustainable development principles.
4. **Lifestyle opportunities.** Rural Residential lifestyle opportunities are limited within the Town of Port Hedland. The Development Plan will accommodate a range of lifestyle opportunities based on lot size and type. A rural theme will be maintained consistent with Bosna Estate, as a minimum.
5. **Flood protection.** As detailed in this report, flood protection will be provided by a series of floodways. Development of the site, in accordance with the Development Plan, will not increase flooding on adjoining land.
6. **Immediate start.** Our Client is committed to commencing subdivision works as soon as possible (subject to approvals). In this regard, all necessary approvals are in place to undertake subdivision of Stage 1, in accordance with the WAPC's approval. It is our Client's intention to accommodate the immediate delivery of sustainable and affordable housing into the undersupplied Pilbara housing market.
7. **Infrastructure upgrade works package.** As detailed in this report, the proponent will commit to infrastructure upgrade works up to a value of \$2,500,000, subject to the Town's approval of the Development Plan.

5.3 ROAD LAYOUT

The road layout depicted on the Development Plan assists in accommodating the proposed rural theme by:

- 📍 Extension from Bosna Estate based on a permeable road layout.
- 📍 Extension of the road system to the west, for future extension of the subdivision (if required) and for emergency access.
- 📍 Wide road reserves (generally 18m to 20m) to accommodate the construction of rural roads, street planting and drainage.
- 📍 Wide road reserves which will accommodate the 'meandering' of the road pavement within the road reserve, in order to protect existing vegetation and key natural, landform elements.

5.4 LOT LAYOUT

The composite Special Residential and Rural Residential lots depicted on the Development Plan have been carefully designed to support a rural theme. The composite lot layout consists of the following:



Quartz Estate Development Plan

- Construct remedial works within Bosna Estate to protect fire hydrants and install appropriate signage and lighting to address 'safety' and 'flood risk'.
- Upgrading of Quartz Quarry Road by grading and sealing to a 'rural' standard.
- Construction of unfinished sections of Councillor Road to match the adjacent Councillor Road pavement.
- Providing flood modelling reports for Bosna Estate to the Town, to enable flood level information to be issued to residents of each lot, as required (for house construction purposes).

In order to formalise our Client's commitment to undertaking these works, our Client will enter into a Memorandum of Understanding with the Town, following Council's consent to advertise the Development Plan, to ensure implementation of these works following approval of the Development Plan.

5.7 DEVELOPMENT PLAN TECHNICAL PROVISIONS

In order to implement a successful development based on the Development Plan, the following Technical Provisions have been prepared to control development. Clause 5.2.2 of TPS 5 requires the Council to include endorsed Development Plans within the Town's Local Planning Policy Manual as a policy statement. Therefore, the Technical Provisions included within this report and on the endorsed Development Plan, will have the same status as an approved Council policy.

GENERAL

1. All Flood Protection Areas (Floodways) to be excluded from development (with the exception of driveway access, firebreaks, and open rural style fencing).
2. All dwellings, ancillary structures (e.g. outbuildings) and effluent disposal systems to be constructed 500mm above 1:100yr flood level, as depicted.
3. Unless located above minimum flood levels, all fencing is to be open, rural style fencing (e.g. post and rail).
4. Dwellings to be constructed in locations generally in accordance with the depicted Notional Building Location.
5. All front setbacks to be a minimum of 10m, unless otherwise approved by Council.
6. All structures ancillary to the dwelling to be constructed behind the front of the dwelling, unless otherwise approved by Council.
7. Building Design Guidelines to be prepared and approved by Council prior to issuance of building licences.
8. Ancillary structures to be constructed in materials and colours similar to the primary dwelling on the lot.
9. Only one crossover per lot shall be permitted, unless otherwise approved by Council.
10. Subdivision shall generally be in accordance with the Development Plan. Minor modifications may be undertaken at the time of subdivision subject to the support of the Town and approval of the WAPC.

6 OTHER CONSIDERATIONS

6.1 DRAINAGE AND FLOODING

Throughout the preparatory phases of the Quartz Estate Development Plan, careful consideration has been given to the flood and drainage implications of developing the site. The current subdivision approval (WAPC Ref No. 140935) for 72 Rural Residential lots and Development Approval (ToPH Ref No. 2009/229.02) granted by the Town of Port Hedland to construct the associated earthworks and drainage channels, were approved on the basis of the VDM Consulting Hydraulic Report (Issue 7, March 2010). The Hydraulic Report was independently reviewed by SKM Pty Ltd at the request of the Town, prior to final lodgement with the WAPC and the Town. This report has since been refined following public consultation and input from other authorities, and was re-issued to the Town on 11 January 2011 (refer **Appendix 4 – VDM Consulting Hydraulic Impact Assessment – Issue 8**). A summary document has been prepared by VDM Consulting outlining the main considerations of the Hydraulic Impact Assessment (refer to **Appendix 5 – VDM Consulting Hydraulic Impact Assessment Summary Document**).

The hydraulic report dated January 2011 still remains valid with respect to the proposed Development Plan, which depicts the subdivision of the site for 133 lots (refer **Appendix 6 – VDM Consulting letter dated 10 August 2011**). Based on the advice from VDM Consulting, the increased lot yield depicted on the Development Plan will not contribute to any additional flooding to the area than that approved by the WAPC and the Town for the subdivision of the site into 72 lots. VDM Consulting's flood advice is on the basis of flood risk relating to the 'off-site' catchment and not the number of lots and associated internal impervious areas. Whilst the overall design has changed since the letter of February 2011, and has resulted in a further decrease in the number of lots, the same principle still applies, as the increase in density will not have an effect on flood risk for the Estate.

All dwellings will be required to be constructed a minimum of 500mm above the 1:100 year flood level. Each lot has a minimum building pad level depicted on the Development Plan to enforce this requirement. All roads will be constructed to not flood by more than 300mm, as advised by VDM Consulting. **Appendix 7 – Drainage Channel Flow Path Plan** prepared by VDM Consulting, depicts a typical section through the road level and house pad level, and also depicts the flow paths through the site which will run generally in a southeast to northwest direction. It is considered that on this basis the proposed Development Plan and ultimate development achieves the Town's hydrological requirements.

6.2 TRAFFIC

VDM Consulting has assessed traffic implications for the subdivision depicted on the Development Plan. The traffic and transport assessment was to specifically determine any potential impacts, both internally and externally to the site, as a result of an increase in the number of lots (compared to that approved for the site). VDM Consulting's Traffic Assessment covers the following scope (it should be noted this report was based on a slightly higher yield, as a result it is expected that the proposed Development Plan will have a lesser impact) (refer **Appendix 8 – VDM Consulting Traffic Assessment**):

- ☐ Identifying existing traffic demands on the surrounding road network.
- ☐ Identifying net traffic generation and distribution of the approved use.
- ☐ Identifying net traffic generation and distribution of the proposed use.
- ☐ Quantifying the net change in traffic generation.
- ☐ Assessing the capacity of the Greenfield Street / Quartz Quarry Road and Greenfield Street / Yarrie Road intersections.

6.3.1 VEGETATION AND FLORA

An onsite vegetation survey has been undertaken. All vascular plants were identified and their condition and cover recorded. Natural Area Initial Assessment forms were completed for each quadrant. Particular attention was focused on areas containing native vegetation along the waterways and habitats associated with Declared Rare and Threatened Flora and Fauna.

Fauna was identified through onsite identification and observations of scats, scratching, burrows and vocalisations. Habitat quality was also assessed throughout the survey areas.

The vegetation onsite is characterised as Low Open Woodland of *Eucalyptus victrix* along the waterways and Hummock grassland with *Acacia* shrub steppe on the sand plains.

The vegetation surveyed onsite ranges from pristine to excellent condition and is comprised of 30% low open woodland and 70% hummock grassland and shrub steppe. The site has had little disturbance except for the track network throughout the site.

A search of the Department of Environment and Conservation's Threatened Ecological Communities Database was undertaken, revealing no known occurrences of threatened ecological communities recorded within the subject site. The survey confirmed that there are no threatened ecological communities present on the site.

The site consists of low species diversity. A total of 17 taxa from 13 genera and 8 vascular plant families were recorded from the site survey. The most common families were Mimosaceae, Protoceae and Poaceae.

A search of the Department of Environment and Conservation and the Western Australian Herbarium's databases for declared rare fauna was undertaken, revealing no results.

6.3.2 FAUNA

A search of the Department of Environment and Conservation's database for threatened fauna was undertaken. From the results, only two of the fauna, *Aspidities ramsayi* (Woma) and *Ardeotis australis* (Australian Bustard), are expected to occur within the habitat on the site.

From the survey no Threatened Fauna pursuant to the Wildlife Conservation Act (1999) were recorded at the site.

6.3.3 HERITAGE

The Department of Indigenous Affairs and the Heritage Council of Western Australia have confirmed that there are no registered heritage sites within the subject site.

6.3.4 GEOLOGY

The subject site is located within the Pilbara Craton with granite-greenstone terrain and the physiographic range De Grey Lowlands which typically flood and deltaic plains with granitic and limestone lowlands, scattered with metamorphic rocks. The land system is colluviums and alluvial sandy plains. Surface geology is predominantly alluvium red shallow sands on granite. The risk of erosion is low for this soil sub-group.

7 IMPLEMENTATION

7.1 DEVELOPMENT PLAN APPROVAL

TPS 5 requires the preparation and adoption of a Development Plan for all land zoned 'Rural Residential' or for 'Rural Settlement' developments prior to any subdivision or development. The fundamental objective of a Development Plan is to demonstrate how an area can be developed in an orderly, coordinated and integrated manner to meet sound planning principles.

This Development Plan is submitted to the Town of Port Hedland for its approval. Following adoption, the Development Plan will guide subdivision and development.

TPS 5 specifies that the Council shall request the Development Plan to be advertised seeking public submissions, prior to approval by the WAPC.

7.2 SUBDIVISION AND DEVELOPMENT

Subdivision and development will be in accordance with the Development Plan shown in **Figure 6**. At an appropriate time nearing or after completion of the approvals process for the Development Plan, a subdivision application will be lodged with the WAPC for determination.

7.3 SCHEME AMENDMENT

In accordance with Clause 5.2.11 of TPS 5 the Council may amend the Scheme to indicate particular zones when it is considered that the subdivision has proceeded to the extent that detailed zones should be defined. Our Client would not object to an amendment to the Scheme which will zone the land to the satisfaction of the Town of Port Hedland, provided delays are not encountered during the Development Plan and subdivision application approvals processes.



**APPENDIX 1
ORIGINAL DEPOSITED PLANS**

LAND DESCRIPTION	ON	CERTIFICATE OF TITLE	FIELD BOOK	TOTAL AREA
PART FORREST LOCATION 226	PLAN DIAGRAM C.S. 91411 INDEX PUBLIC Part Hedland 100,000	VOLUME 2016 FOUR 640	79939 80551	45 5622 ha.

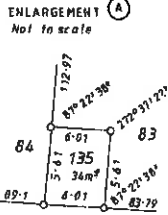
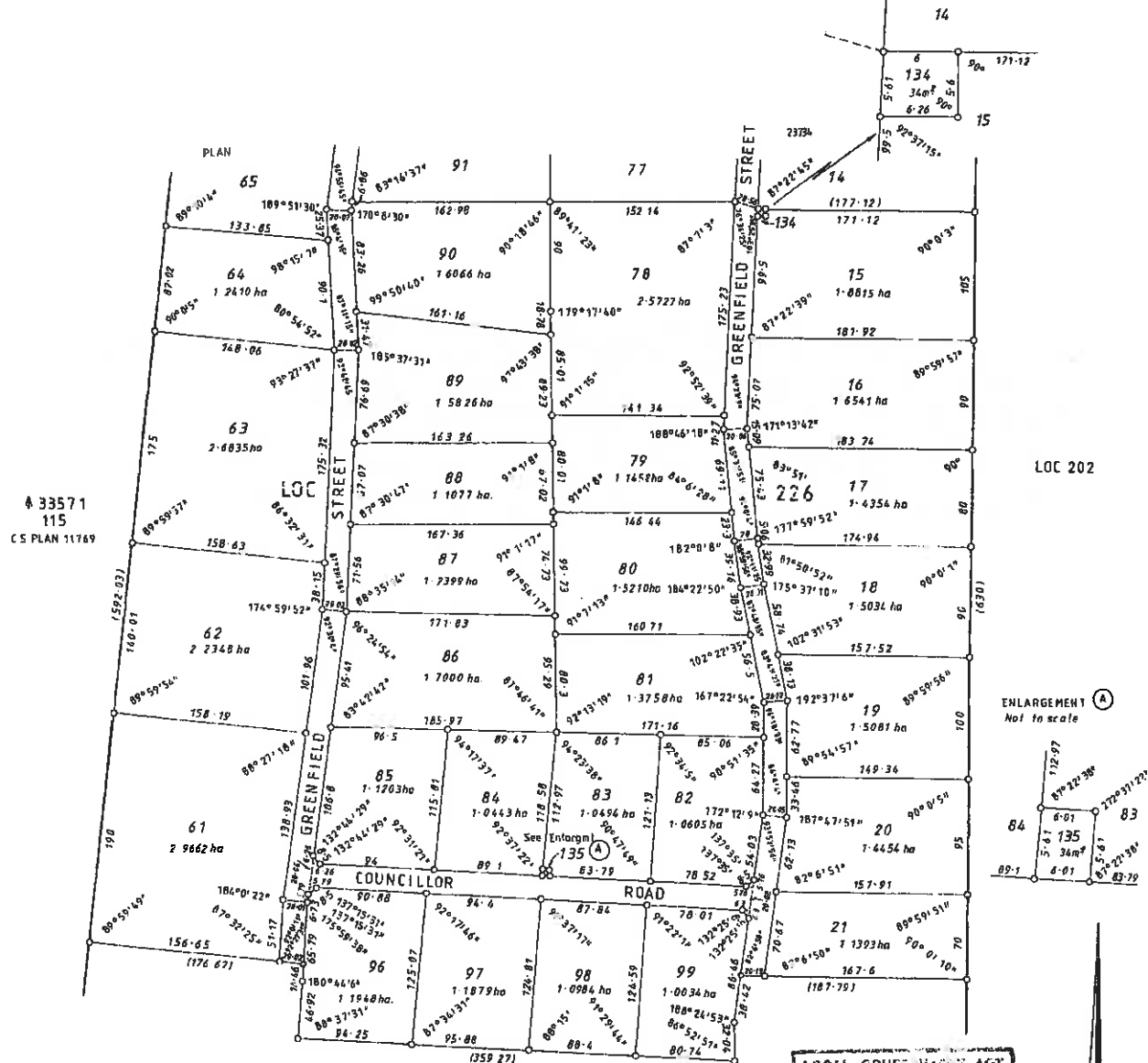
PLAN 23735



LOCAL AUTHORITY Town of Port Hedland
LOCALITY Beedarra

LIMITED IN DEPTH TO 12 19 METRES

ENLARGEMENT
Not to scale



SUBDIVISION BY EARLY ISSUE PROCESS

PT LOCATION 226
C.S. DIA 91411

LOCAL GOVERNMENT ACT
APPLICABLE WITHIN THE GREEN
ZONE UNLESS OTHERWISE SPECIFIED.

RESTRICTIVE COVENANT UNDER SECTION 134D OF THE T.L.A.
EXPIRING ON 1 JANUARY 2004 OR UPON GAZETTING OF THE TOWN OF
PORT HEDLAND TOWN PLANNING SCHEME NO 5 OR WHICH EVER IS THE
SOONER.

HMT Perth
Telephone (08) 9285 4230 Facsimile (08) 9285 4213
Postal Address PO Box 254 Coll. St WA 6014
Port Hedland
Telephone/Facsimile (08) 9140 2282
To 61 Address PO Box 2055 South Hedland WA 6722
Maxwell Drive
Telephone/Facsimile (08) 9258 7004
4105 Drive 11 Highway Magnet Street WA 6215

RE-CERTIFIED CORRECT
(Numbered to Ser. 134D (Surveyors))
J. J. J. J.
Lic. No. 99
Lic. Inspector of P.L. & Surveyors Dept

DOCUMENT	BURDEN	BENEFIT
N 220666	ALL LOTS HEREON SAVE AND EXCEPT LOTS 134 AND 135.	TOWN OF PORT HEDLAND AND ALL LOTS HEREON SAVE AND EXCEPT LOTS 134 AND 135.

SURVEYOR'S CERTIFICATE
I hereby certify that
(a) this plan of survey is a correct and accurate representation of the survey carried out by me personally / under my own personal supervision, inspection and field check, and recorded in field books lodged for the purposes of this plan of survey;
(b) the measurements are in strict accordance with the Licensed Surveyors (Practice of Surveyors) Regulations 1981 and in particular regulations (2) and (4) of those regulations; and
(c) the survey and the plan of survey are in strict accordance with the requirements of the Licensed Surveyors (Practice of Surveyors) Regulations 1981 and the relevant law in relation to which it is lodged.
Licensor's Surveyor: *John J. J. J.* Date: 24.11.1999
I hereby certify that
(a) this plan is correct and was prepared under my supervision and to the credit of calculations from measurements made by me personally / under my own personal supervision, inspection and field check as recorded in the field books lodged for the purposes of this plan;
(b) the measurements are in strict accordance with the Licensed Surveyors (Practice of Surveyors) Regulations 1981 and in particular regulations 20 and 24 of those regulations; and
(c) this plan of survey conforms with the relevant law in relation to which it is lodged.
Licensor's Surveyor: *John J. J. J.* Date: 24.11.1999

APPROVED BY **STATE PLANNING COMMISSION**
FILE 106492
DATE 24.11.1999
LODGED
EARLY ISSUE YES
DATE 21.8.99
FEE PAID \$ 1513
ASSESSMENT NO 245572

SCALE 1 : 2500
ALL DISTANCES ARE IN METRES

IN ORDER FOR DEALINGS
SUBJECT TO BEING APPROVED BY
PLAN 23735, FOR THE PURPOSES OF
SECTION 134D OF THE T.L.A.
FOR INSPECTION BY PUBLIC SURVEYORS
DATE

DOLA
Department of Lands and Planning

OFFICE OF TITLES PLAN
23735

APPROVED 26-11-99
DATE
APPROVED
INSPECTOR OF PLANS & MAPS

Our Ref: 10/012 LM:ct

23 February 2011

Attention: «Title»

Chief Executive Officer
Town of Port Hedland
PO Box 41
PORT HEDLAND WA 6721

Dear «Name»

QUARTZ ESTATE – PROPOSED CONCEPT DEVELOPMENT PLAN – UPDATE

We refer to the Councillor briefing session, held on 19 January 2011, attended by our Mr Bill Burrell and Mr Cory Johnson of VDM Group, where the proposed Concept Development Plan for Quartz Estate, South Hedland was presented. The purpose of this correspondence is to update Councillors on the progress of the Concept Development Plan; to confirm VDM Group's intentions and to respond to some of the queries raised by the Councillors at the briefing session.

We take this opportunity to thank the Council for the opportunity to present the Quartz Estate Concept Development Plan and to provide an insight into the key elements of the proposal. We have attached a copy of our power point presentation from the Councillor briefing session. We reiterate some of the benefits of the Concept Development Plan, in comparison with the approved subdivision for 72 lots which would be constructed to provide vacant lots only, as:

- affordability and sustainability;
- guaranteed house construction;
- better use of the land;
- improvements to Bosna Estate;
- satisfying demand and need;
- flood protection;
- range of lifestyle opportunities; and
- an upgrade works package of \$2,500,000 to assist with remedying infrastructure problems associated with Bosna Estate.

VDM Group is proceeding with the preparation of the Quartz Estate Concept Development Plan for lodgement with the Town by the end of February. As part of the proposal, a request will be made for Council to consider the Concept Development Plan for consent to advertise. A series of technical reports will be provided which address matters including hydrology / drainage, traffic, environmental and town planning.

A particular query was raised at the briefing session relating to flooding / drainage management. We advise that the current Subdivision Approval (WAPC Ref. No. 140935) for 72 rural residential lots and Development Approval (ToPH Ref No. 2009/229.02) to construct the associated earthworks and drainage channels, were both approved on the basis of the VDM hydraulic report (Issue 7, March 2010). This report was independently reviewed by SKM Pty Ltd at the request of the Town, prior to final lodgement with the Western Australian Planning Commission (WAPC) and the Town. This report has since been refined following public consultation and input from other authorities, and was re-issued to the Town on 11 January 2011.



Our Ref: QE070557/1602/VDM Perth
Enquiries to: Philip Bell

21st February 2011

VDM Consulting
310 Selby Street North
OSBORNE PARK WA 6017

Level 6 Australia Fair Tower
40 Mann Pavaon
SOUTHPORT QLD 4215
PO Box 3788 Australia Fair
Southport Qld 4215
+61 7 5509 6100
+61 7 5509 5411
goldcoast@vdmgroup.com.au
www.vdmconsulting.com.au

Attention: Ray Ferguson and Cory Johnson

Dear Sirs

Re: **QUARTZ PRIVATE ESTATE SOUTH HEDLAND – REVISED LAYOUT (143 LOTS)
REVIEW OF HYDROLOGY CRITERIA**

I refer to the subdivisional plan produced by Taylor Burrell Barnett identified as 10/012/001 and dated 6/7/2010 offering an alternative layout plan to the one utilized in the detailed hydraulic modelling performed and reported in our Hydraulic Impact assessment (HIA) issue 8 dated 11th January 2011.

We have compared this new plan with the footprint previously modelled and confirm that as the flood channel widths and depths represented on fig 5.5 (attached) in the HIA issue 8 are retained in the revised plan then the findings of the afore-mentioned HIA will still apply.

As outlined in the HIA Section 6.2 (Design Pad Levels) and Section 8 (Conclusions) the building pad levels are designed at 500 mm above the 100 year flood level & the roads are designed 300 mm below the 100 year flood level.

Yours faithfully

Philip Bell
Principal Water Engineer
VDM Consulting

Enc: Revised Plan
Fig 5.5

c.c: Brad Comley

CONSULTING ENGINEERS AND SCIENTISTS

■ AUSTRALIA

Western Australia
Victoria
New South Wales
Queensland
Northern Territory

■ INTERNATIONAL

Abu Dhabi, UAE
Dubai, UAE
Hanoi, Vietnam

■ QUEENSLAND

Gold Coast
Brisbane
Sunshine Coast
Hervey Bay
Bundaberg

Gladstone
Mackay
Aldershot
Cairns



VDM
GROUP



Post Development Key Model Features

Figure 5.5

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RURAL SETTLEMENTS AND THE TOWN OF PORT HEDLAND PLANNING SCHEME

Purpose of This Report

1. A Rural Settlement is a unique feature of the Town of Port Hedland Town Planning Scheme No.5 (TPS No.5). Rural Settlement provisions have precedent in that they are similar to the operation of Development Zones throughout Western Australia wherein scheme provisions for an area are set by Council through a Development Plan.
2. This report sets what a rural settlement is, and how a rural settlement is provided for in TPS No.5, and how TPS No.5 allows a Rural Settlement to vary minimum lot sizes in a Rural Residential Zones. It is based on commercial-in-confidence from advice by L.A. Stein Barrister regarding the legal framework for the development of a Rural Settlement of residential lots with recreational and service facilities on the Quartz Quarry Estate, Port Hedland.

What is a Rural Settlement?

3. A Rural Settlement is defined in Appendix 1 of as:

“a collection of two or more dwellings in proximity and located in a rural zone and may include other commercial or community development as approved by council”.
4. Clause 3.2.5 provides that where a development is included in a definition of development in Appendix 1, it is deemed to be excluded from the definition of any other development which may include it by more general reference. By this clause a “Rural Settlement” is therefore something other than:
 - a “single house”
 - a “grouped dwelling”
 - a “residential building”
5. Accordingly, a Rural Settlement is not a single house on a single lot or simply two or more houses on the same lot. A Rural Settlement is of a different character by its definition. That character arises by a clustering of dwellings in proximity together with commercial or community development. This indicates a complete settlement with its own facilities and a higher density than that of a single house on a single lot in Rural or Rural Residential Zone.
6. The definition of Rural Settlement is also different from that of Rural Residential. The phrase “Rural Residential” is defined in Appendix 1 as:

5.2.11 Council may, when it considers subdivision and development in an area the subject of a development plan has proceeded to an extent where detailed zones and reservations should be defined, amend the Scheme to indicate these zones and reservations.

13. The effect of clause 5.2.10 is that it is provided expressly in the Scheme that a Development Plan (which is specifically applicable to proposals for a Rural Settlement) can indicate different “development categories” than those in the Scheme. The reference to “development categories” is to the designation of uses as permitted, discretionary, etc so a development category which is, say, prohibited, can be made permitted or AA or otherwise in the Development Plan.
14. This provision clearly contemplates that a Development Plan can override the designation of types of development in a Rural Residential Zone. What is important is that the changes in the categories become operative upon approval of a final Development Plan, not requiring a rezoning at that stage or amendment to the Scheme.
15. This type of provision that allows a Development Plan to effectively amend a Scheme is commonplace in Western Australia though Development Zones and development Plans. The *Western Australian Planning and Development Act 2005* is unique in Australia in that a Scheme is “as if enacted” in the Act by virtue of section 87(4). This makes its provisions very powerful as they operate as legislative provisions, amending the Scheme as subordinate legislation.
16. Clause 5.2.11 is the follow up to clause 5.2.10 and says that as the Development Plan progresses in implementation, the Scheme should be amended to carry forward the Development Plan changes.
17. The reference in clause 5.2.11 is for a Scheme amendment “where detailed zones and reservations should be defined.” This a reference to rezoning and not just change in use classes in clause 5.2.10. Read in this way, it contemplates that the change in uses allowed in a zone can change its character and require a rezoning from Rural Residential, for example, to Residential, which would then remove the minimum lot size requirements of the Scheme.

How Can Rural Residential Lot Sizes Be Varied by A Rural Settlement?

18. TPS No.5 provides in clause 6.8.4 that “Lots connected to reticulated water and located in the Rural Residential Zone shall be no less than 1 hectare and lots not connected ... shall be no less than 2 hectares.”
19. The Scheme provides a method of varying these lot sizes for a Rural Settlement. As discussed above, the scheme enables Council to allow variation of scheme provisions through a

Conclusion

- 25. The Scheme considers Rural Settlement a category of development that is different from rural residential and envisages that a Development Plan for a Rural Settlement will vary the Scheme and its strictures, making a closer form of development beyond the current approval legally feasible.**
- 26. There is a clear distinction between rural residential development of a single house on a single lot and rural settlement development. This is because Rural Settlement development is other than a single house by definition and the Scheme specifically makes Rural Settlement development, as opposed to rural residential development, subject to a Development Plan.**
- 27. There is a direct realisation in the Scheme that a Rural Settlement Development Plan will vary the provisions of the Scheme as, once it is endorsed, no planning approval is necessary. This exemption from planning approval does not exist for any other form of development, again highlighting the uniqueness of rural settlement development.**
- 28. The Scheme in clause 5.2.10 specifically envisages that a Development Plan can alter the development categories and clause 6.8.5 indicates that additional zones and Scheme provisions should reflect the Development Plan.**
- 29. A Development Plan should be submitted setting out appropriate planning controls and minimum lot size requirements for the Rural Settlement. Once the Development Plan is approved by the Council and endorsed by the Planning Commission, provisions can then be included by amendment to this Scheme.**

**Evan Jones
Director, Responsive Environments
MPIA
28 January 2011**



QUARTZ PRIVATE ESTATE

Stage 2

HYDRAULIC IMPACT ASSESSMENT
ISSUE 8

PT226 QUARTZ PRIVATE ESTATE
SOUTH HEDLAND, WA

VDM DEVELOPMENTS PTY LTD

JANUARY 2011

QE070557

Airlie Beach Mackay Gladstone Bundaberg Harvey Bay Sunshine Coast Brisbane Beenleigh Gold Coast

VDM Consulting
Level 3, Australia Fair, 42 Marine Parade,
Southport, Qld 4215
PO Box 3766 Australia Fair QLD 4215

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Quartz Private Estate, South Hedland

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Executive Summary

VDM Group has been engaged by VDM Developments Pty Ltd to prepare a Hydraulic Impact Assessment (HIA) for the proposed rural estate for stage 2 on PT226, Quartz Quarry Road, South Hedland, Western Australia.

The previous version of this report, Issue 7 investigates Stage 2 - Quartz Quarry Estate individually. Additional survey of the existing pads/finished floor levels (FFL) of the existing lots within stage 1 has been included in the modelling. Also the majority of the existing trees which are located within stage 2 have been retained which lie within the proposed channel.

The latest version of this report, Issue 8 investigates Stage 2 - Quartz Quarry Estate individually with minor change of the channel bottom level at the southeast of the subject site. Additionally, another diversion bund also has been used in the eastern channel.

The conceptual runoff-routing model RORBWin (Laurenson & Mein, 2006) was used to derive discharge hydrographs for contributing catchments.

In order to calibrate the RORBWin hydrology model and Pilbara Regional Flood Frequency Procedure the revised index flood method was adopted. A comparison of the flows was conducted at an appropriate location throughout the catchment and is presented in the following Table.

Event (ARI 1 in x)	Pilbara Reg FFP (m ³ /s)	RORBWin (m ³ /s)	Difference (%)
100	2339.2	2339.2	0

The unsteady state, 2D/1D hydrodynamic model TUFLOW was adopted to analyse regional flooding through the subject site.

The key features of the pre development scenario have been presented in Figure 5.1 and are noted below:

- Stage 1, (existing Bosna Estate) detailed survey of the existing building/house pads and finished floor levels (note, that some existing lots are vacant);
- Existing trees have been included within stage 2 (as per a recent survey, carried out by Land Surveys);
- The FMG Railway;
- The Newman Railway; and
- The FMG Railway culverts, 20 x 2400 mm RCP's.

The key features of the post development model include the above existing features plus proposed flood mitigation measures itemised below:

- Proposed building pads and roads for the development within Stage 2;
- Proposed essential internal drainage channels ranging from approximately 30m to 80 m wide and approximately 1m deep to convey water through the site (only within stage 2).
- The majority of the larger existing trees within the proposed drainage channels were kept and erosion protection measures were implemented around the root system for each larger tree;
- Four (4) proposed culvert bridge crossings on the loop road around Stage 2 development. This road also connects Stage 2 to the existing northern Stage 1 Bosna Estate development; and
- The top of three (3) proposed diversion bunds located within the very eastern channel to divert flows in specific locations have been set at 18.5m, 18.25 m & 18.0 m AHD for the southern to northern bunds respectively.

1. Introduction

VDM Group has been engaged by VDM Developments Pty Ltd to prepare a Hydraulic Impact Assessment (HIA) for the proposed rural estate for Stage 2 on PT226, Quartz Quarry Road, South Hedland, Western Australia.

1.1. Background

Approximately 10 years ago, shortly after completion of Stage 1 (Bosna) of the Quartz Private Estate it was affected by flooding. In order for the proposed Stage 2 layout to proceed any further, flood mitigation options are required.

Issue 1 of this report assessed the proposed Stage 2 of the Quartz Private Estate. That study involved the creation of a hydraulic model to assess the Stage 2 layout and the potential flood impacts

Issue 2 of this report, redefined the hydrological model to calibrate to known flows from the Greater Port Hedland Storm Surge Study (GPHSSS), expanded the extents of the hydraulic model and included mitigation options to alleviate the flooding within the existing Bosna Estate (Stage 1)

Issue 3, further revises the hydrology and hydraulics of the site and its surrounds, based on the review performed by Sinclair Knight Merz (SKM). This revised study calibrates the hydrology to the Revised Index Flood Method, and includes the FMG railway in both the hydrology and hydraulic models.

Issue 4 includes some adjustments to the topographic information being presented during the existing and post developed scenario.

Issue 5 of this report dealt with Stage 2 – Quartz Quarry Estate only.

Issue 6 includes a revised hydraulic investigation analysing Stage 1 (Bosna Estate) and Stage 2 (Quartz Quarry Estate). Additional survey of the existing pads/finished floor levels (FFL) of the existing lots within stage 1 has been included in the modelling. Also the majority of the existing trees within stage 2 have been retained which lie within the proposed channel.

The previous version of this report, Issue 7 investigates Stage 2 – Quartz Quarry Estate individually

The latest version of this report, Issue 8 investigates Stage 2 – Quartz Quarry Estate individually with minor change of the channel bottom level at the southeast of the subject site. Additionally, another diversion bund also has been used at the eastern channel.

This report has been prepared in accordance with *Australian Rainfall & Runoff (AR&R)*, the *Western Australia Planning Commission Planning Scheme* and the *Floodplain Management in Australia. Best Practice Principles and Guidelines (CSIRO, 2000)*.

1.2. Objectives

The objectives of this study have been as follows:

1. Undertake further analysis of the mitigation options to alleviate flooding on Stage 2 (Quartz Private Estate) without impacting on the eastern property

1.3. Scope

The general approach and methodology employed to achieve the study objectives involved

- Site inspection,

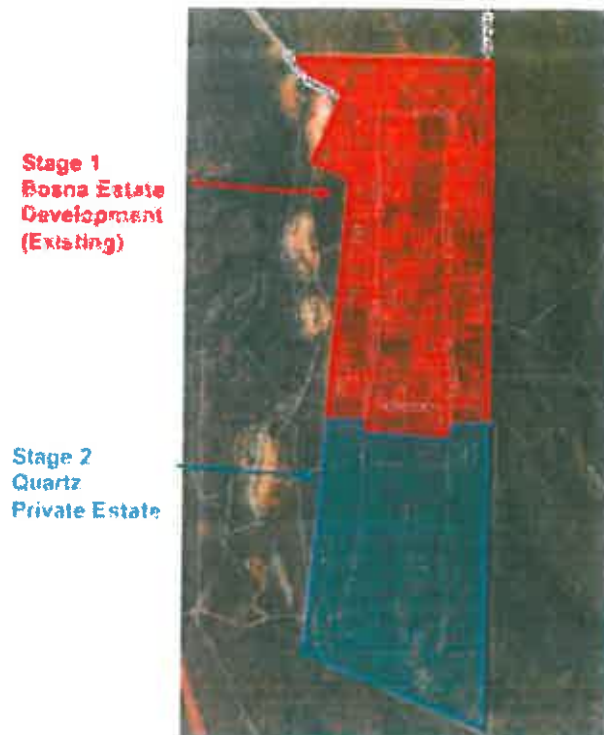


Figure 1.2 – Staging Plan

1.4.2. Land Use and Vegetation

The site is relatively undisturbed consisting of low open native vegetation and clay pans. The site is situated in the semi-arid Roeburne subregion comprising Quarternary alluvial and older colluvial coastal and sub-coastal plains, with a grass savanna of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia translucens* or *A.pyrifolia* and *A.inequilateral*. Surrounding land is predominately unoccupied native vegetation with a few quarries to the south approximately 5km away.

1.4.3. Topography & Stormwater Conveyance

A large external catchment is located to the south of the subject site and conveys a large wide flow towards the property boundary. Several well defined waterways pass through or by the subject site to convey smaller flows. In large events, floodwaters cross the property on the southern and eastern boundaries as a wide shallow flood and effectively inundate the entire property.

The elevation of the terrain generally decreases from the southeast to the northwest ranging from elevations of 18.6 m AHD to 15 m AHD respectively across the subject site. Greater elevations to 30m AHD were noted on the localised peaks on and adjacent to the site.

1.5. Description of Development

The Quartz Private Estate is the second stage of this development and consists of 72 semi-rural residential lots as shown in Figure 1.3 (Version 13.4 - 1st November 2010 LS-563252).

2. Data Collection

Data from a number of sources was collected and used as part of the Hydraulic Impact Assessment. Originally Issue 1 of the HIA used the following sources of data:

- Design rainfall data for the site from ARR, IEAust, 1987;
- Site specific survey (Stage 1 & 2) provided by Hawker Moss Surveyors & Land Surveys;
- Western Australia Planning Commission Planning Scheme, 2003; and
- Aerial Photography.

Issue 2 of the HIA collated more detailed information, including:

- The Greater Port Hedland Storm Surge - Final Report to WA Ministry for Planning and Port Hedland Town Council (GEMS 2000).
- As-Constructed survey data of Yarrie Rd and Greenfield St provided by Hawker Moss Surveyors; and
- External aerial survey supplied by Land Gate WA.

Issue 3 of the HIA has obtained additional information, including:

- FMG Railway topography data & culvert information provided by the Fortescue Metal Group Ltd.
- Stage 2 site specific survey, supplied by Hawker Moss Surveyors; and
- The Pilbara Regional Flood Frequency Procedure by David Flavell Pty Ltd.

Note, Issue 4 and Issue 5 have adopted the topographic information used up to Issue 3.

The previous Issue 6 and 7 and current Issue 8 of the HIA has obtained additional information (supplied by Land Surveys), including:

- Existing tree survey within stage 2.

2.1. Topographic Information

At the commencement of the Hydraulic Impact Assessment, all available topographical information was collated and reviewed. The review found that the topographical data included:

- Existing site specific survey for Stage 1 and 2;
- As-Constructed survey data of Yarrie and Greenfield St; and
- External aerial survey at 10 m grds supplied by Landgate WA.

Site specific survey data with the as-constructed road information was spliced with the external information and used to create a Digital Terrain Model (DTM) of the site for subsequent hydraulic analysis. The DTM was created by Belleng VDM utilising the sources noted above.

LIMITATIONS OF DTM – The data collected from various sources was found to have slight inconsistencies in elevation at the bounds of the site specific survey. The main inconsistency was the aerial survey information provided by Landgate WA, was higher by 0.2 m past the southern boundary of the site and lower by 0.5m past the northern boundary of the site respectively. Belleng VDM have made every reasonable effort to homogenise the different data sets, but the accuracy of the model results are governed by the accuracy of the underlying DTM provided.

4. Hydrologic Analysis

4.1. General

Hydrologic analysis was performed using a runoff routing model RORBWin for South West Creek (contributing catchment to the subject site).

4.1.1 Hydrologic Analysis - Methodology

The conceptual runoff-routing model RORBWin (Laurenson & Mein, 2006) was used to derive discharge hydrographs for contributing catchments. Additionally, runoff routing models enable determination of discharge hydrographs from all contributing sub catchments. This section provides a summary of the RORBWin model formulation. The steps taken in constructing the hydrologic models include:

- Catchment delineation;
- Model construction;
- Parameter derivation;
- Simulation of design rainfall events to define critical duration; and
- Definition of design flood flows.

4.2. Catchment Delineation

Based on the recommendations of the SKM report, the contributing catchment to the site was revised, to include the affects of the FMG railway. The revised total catchment area was obtained from various sources of information, mainly being aerial photography, aerial contours and the FMG rail alignment and has been extended to the downstream end of the site.

The overall contributing catchment is approximately 322 km² (32,223 ha) and was divided into eight (8) sub-catchments for use within the RORBWin hydrology model. Table 4.1 lists the sub-catchment and associated areas and percentage impervious, while Figure 4.1 presents a graphical representation of the sub-catchment delineation.

Table 4.1 – Sub-catchment Details

Sub-catchment	Area (km ²)	Percentage Impervious (%)
A	60.72	0
B	12.56	0
C	29.34	0
D	30.54	0
E	35.12	0
F	52.52	0
G	49.08	0
H	52.34	0

4.3. Revised Index Flood Method

In order to calibrate the RORBWin hydrology model, the revised index flood method was adopted. Book IV Section 1.4.7 of Australian Rainfall and Runoff, outlines a suitable regional flood frequency procedure for the Pilbara (North West) region of Western Australia. This stream flow modelling procedure has further been updated several times by David Flavell Pty Ltd, which has been approved by the Water and Rivers Commission of WA (now Department of Water).

"The design flood estimates obtained by the regional flood frequency procedure proposed by David Flavell Pty Ltd should be more reliable than the methods described in the third edition of Australia Rainfall and Runoff" - Dr Bryson Bates CSIRO.

The latest revision of the Pilbara Regional Flood Frequency Procedure performed by David Flavell Pty Ltd was September 2005. This revision has been adopted for this study and methodology and calculations have been provided in Appendix A. Adopted parameters for this regional flood frequency assessment are as follows:

Area of Catchment, A =	322.23 km ²
Equivalent Slope of Catchment, Se =	1.44 m/km
Centroid of Catchment - Lat =	20.608°
Long =	118.667°
Length of Flowpath =	44.595 km
(L ² /A) =	6.17

The revised procedure also updated the flood frequency factors for standard catchment sizes. Using log-log interpolation, the flood frequency factors for this study were extracted. Table 4.2 presents the calculated flood frequency factors used within the regional flood frequency analysis.

Table 4.2 - Flood Frequency Factors

Frequency Factor	Catchment Area (km ²)		
	100	322.23	1000
(Q ₅₀ /Q ₂₀)	1.83	1.86	1.88
(Q ₁₀₀ /Q ₂₀)	2.87	2.95	3.03

Table 4.3 presents the results of the Pilbara Regional Flood Frequency Procedure.

Table 4.3 - Pilbara Regional Flood Frequency Results

Event	Q ₁₀	Q ₂₀	Q ₅₀	Q ₁₀₀
Peak Discharge (m ³ /s)	444.56	792.95	1474.89	2339.2

Initial Loss, IL = 0mm/hr;

Volumetric Runoff Coefficient, RC = 0.94;

This hydrologic analysis adopted the following:

Initial Loss, IL = 0mm/hr;

Volumetric Runoff Coefficient, RC = 0.97.

It is noted that this analysis modified the volumetric runoff coefficient to aid in the calibration of the RORBWin hydrology model. The calculated discharge using this method was 2339.2 m³/s (see below).

After Issue 3 report the hydrology for the site was not altered and remained the same up to this issue.

4.4.1 Design Rainfall

Design rainfall for the subject catchment was derived in accordance with the Intensity Duration Frequency (IDF) procedures outlined in Book 2 of Australian Rainfall & Runoff (ARR, IEAust, 1987). Design rainfall can be expressed in terms of Average Recurrence Interval (ARI), the chance of a rainfall event of particular intensity occurring in any one year. Rainfall intensities are conventionally expressed in millimetres per hour (mm/hr).

Rainfall data from the centroid of the contributing catchment for Port Hedland was adopted in the analysis.

4.4.2 Design Storm Events

Design floods are hypothetical floods defined by probability of occurrence and are used for planning and flood management investigations. They represent a flood, which has an average (or expected) chance of occurring over a given duration. Applying design rainfall events to the RORB model derived design flood hydrographs for the subject site catchments. Design rainfall and temporal patterns for the site were derived in accordance with Australian Rainfall & Runoff, 2001.

To determine the design flood flows for this study, it was necessary to define the critical storm for the total contributing catchment. This was completed by applying the design rainfall of events with ARI of 1 in 100 for a range of standard durations to the RORBWin model. Resultant peak discharges at the subject site for various storm durations have been presented in Table 4.4.

Table 4.4 – Critical Duration Event Determination

Storm Duration (hrs)	Peak Discharge (m ³ /s)
12	2203.1
18	2219.3
24	2339.2
30	2077
36	2077.2

The critical event duration is 24 hour and yields a peak discharge of 2339.2m³/s at the downstream boundary of the site and is presented in Figure 4.2.

5. Hydraulic Analysis

TUFLOW, a GIS based 2D/1D hydrodynamic model was set up and used to investigate flooding at the subject site for the existing and post-development scenarios.

5.1. Model Setup

The unsteady state, 2D/1D hydrodynamic model TUFLOW was adopted to analyse regional flooding through the subject site.

Unsteady state hydraulic models simulate dynamic flooding behaviour through waterways and floodplains of the site. The rate of travel and attenuation (dampening) of a flood wave is dependent on the shape, size, elevation and vegetation or surface characteristics of the streams, river and floodplains. For example, the larger the floodplain the greater the flood wave attenuation, and the "rougher" the surface and denser the vegetation, the slower the rate of travel.

The 2D/1D hydrodynamic model TUFLOW represents a river system as a series of interconnected branches surrounded by floodplain. Rivers and creeks are represented by a series of cross sections while flood plains are represented as a series of grid points. Dynamic linking between river channels and floodplains allows flow in excess of channel capacity to breakout and continue along the floodplain, as the topography would dictate. Similarly, as flooding recedes, flows not trapped in floodplain depressions or conveyed from the area return to the waterways.

Hydraulic structures including bridges, weirs, culverts and sub surface drainage systems can be included in TUFLOW modelled systems.

Flood levels, discharge and velocity can be extracted from the model as functions of time at required locations.

The hydraulic model developed for this study incorporates the subject site and its surrounds. This model was developed to investigate the existing flooding regime of the subject site and determine the impacts of the proposed development. In particular, special attention was paid to evaluating potential impacts of the proposal on the FMG Railway and the adjacent residential development.

Setting up the hydraulic model involved:

- Creating a DTM of the floodplain and adjacent areas;
- Allocation of model boundaries;
- Detailing existing drainage infrastructure; and
- Application of appropriate flow resistance (Manning's Coefficient of Roughness).

Figure 5.1 presents the extent of the TUFLOW hydraulic model, inflow locations and key hydraulic features of the existing scenario.

5.1.1 Digital Terrain Model (DTM)

In this hydraulic model, it was required to use topographical data to represent the 2D aspect of the TUFLOW model.

A DTM was formed by collating available survey data for the study area. These include:

- The subject site;
- The surrounding floodplain of the subject site;
- The FMG Railway, and
- The Newman Railway.

Available survey data included:

- Existing site specific survey for Stage 1 and 2;
- Additional survey of pad and finished floor levels for stage 1;
- Additional tree survey for stage 2 only;
- As-Constructed survey data of Yarrle and Greenfield St; and
- External aerial survey at 10 m grids supplied by Land Gate WA.

5.1.2 Manning Coefficient

Based on recommendations from: Chow, V. T. (1959) Open Channel Hydraulics, Main Roads Drainage Design Manual (1999), orthographic photographs, and site inspection the following Manning Coefficients were applied:

- Floodplain/creeks/surrounding areas: 0.045; and
- Claypans: 0.030.

5.1.3 Upstream Boundary Condition

One (1) upstream boundary condition was specified along the south-eastern boundary of the model. The application of this wide inflow boundary mimics the current wide flow path of the floodplain surrounding the subject site. The design flood hydrograph derived with RORBWin is presented in Figure 4.2 and was applied along the area as indicated in Figure 5.1.

5.1.4 Downstream Boundary Condition

Three (3) separate discharge-level (QH) relationships were used in applying the downstream boundary to the subject site. TUFLOW automatically generates a QH relationship based on the models' topography data, based on a slope and the Manning's "n" at that location. 0.75% slope was used for this analysis.

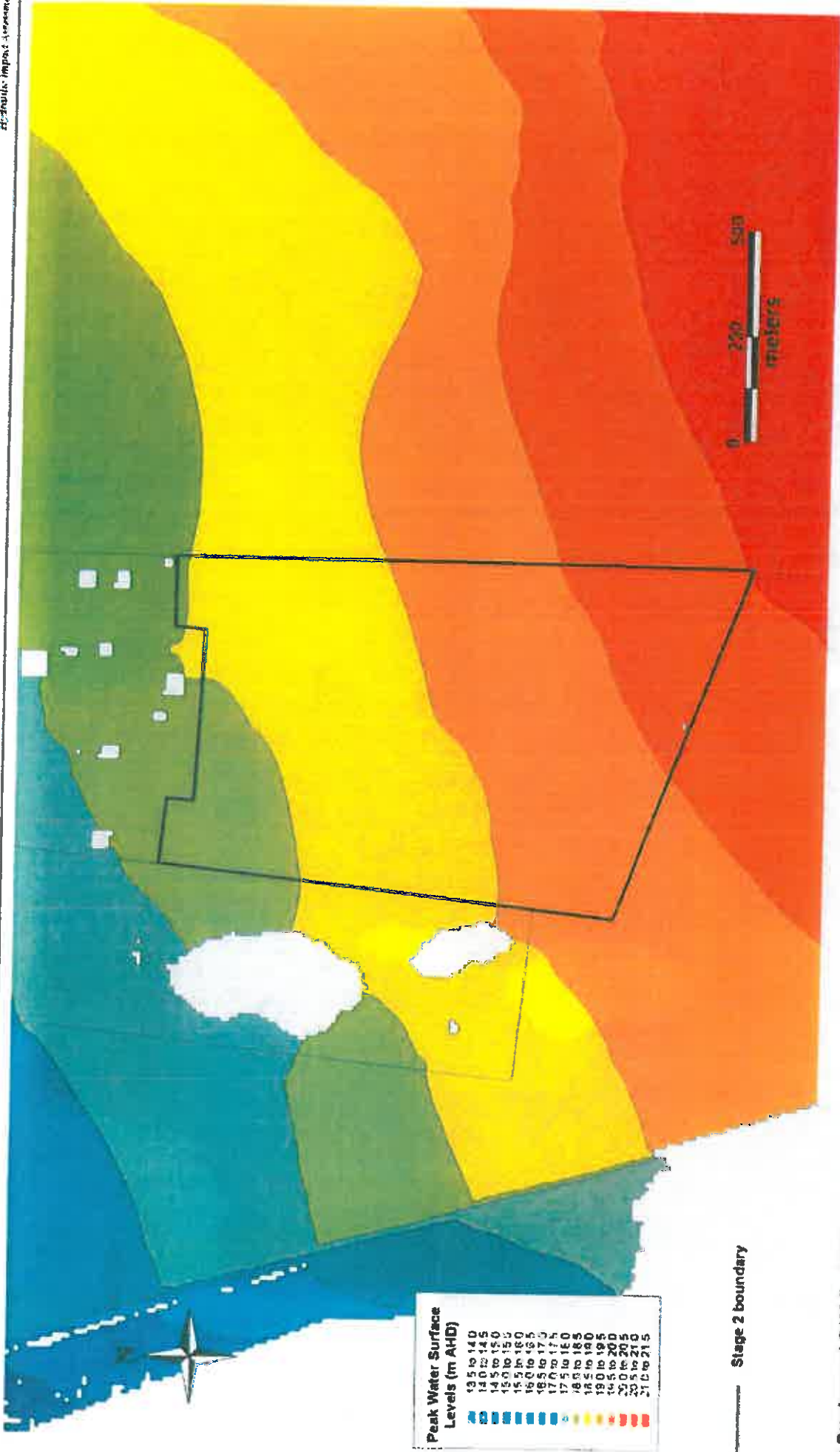
5.1.5 Hydraulic Model Simulation

Simulations investigating the existing and post development flooding scenarios were conducted for an event with an ARI of 1 in 100 year.

Comparison of peak flood levels and velocities between the pre and post development scenarios allowed quantification of flow behaviours at key points through the site. Of particular interest in this investigation are variations at the property boundaries due to development.

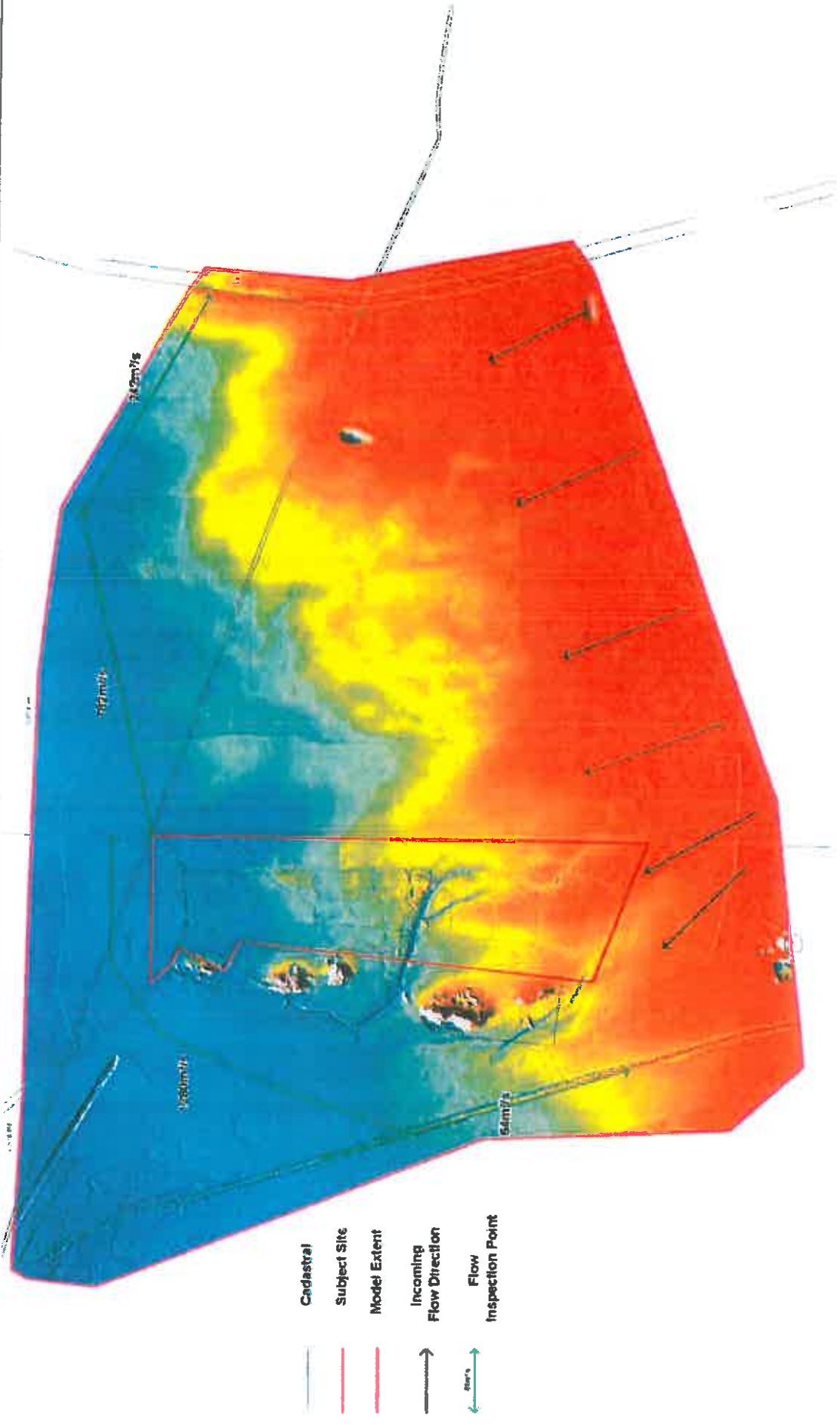
Peak flood levels determined for the post developed analysis of the 100 year event will be used to set preliminary levels for the pads upon which residential areas would be constructed.

Key model outputs describing flood behaviour include peak flood levels, flows and velocities. Results of hydraulic analysis have been presented in the following sections.



Pre Development Q100 Peak Water Surface Levels

Scale of map: 1:50,000
Projection: UTM, Zone 52S, Datum: GDA94

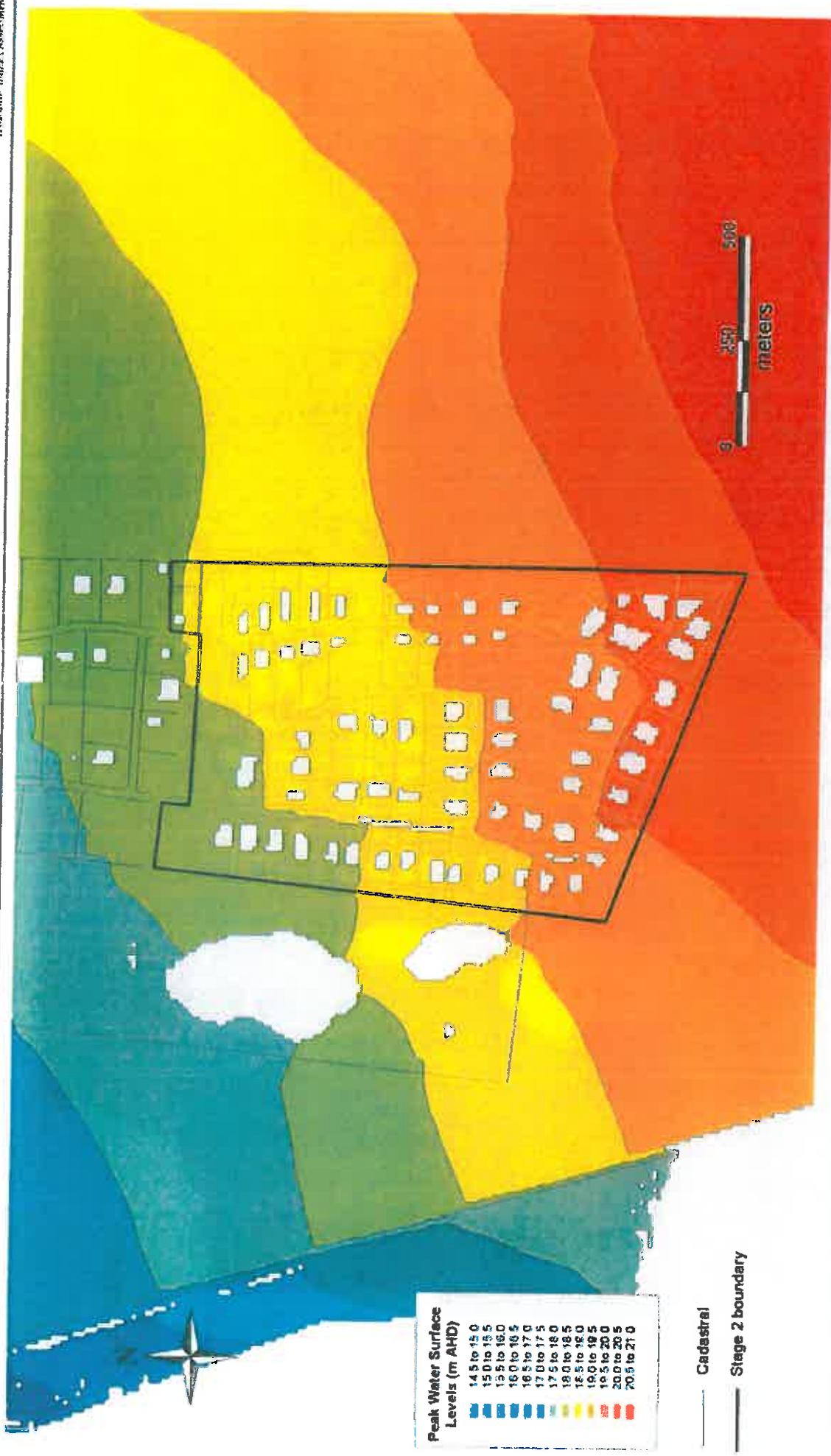


Existing Q100 Flow Distribution

Scale: 1:1000
Date: 15/08/2023

Results of the post developed scenario are presented as follows:

- Figure 5.5 presents the key model features for the post development scenario;
- Figure 5.6 presents the post developed peak Q_{100} water surface levels for Stage 2; and
- Figure 5.7 presents the post developed peak Q_{100} flood depths for Stage 2



Post Development Q100 Peak Water Surface Levels

17526 Quays Quarry, Poole

6. Analysis of Hydraulic Results

6.1. Quartz Quarry Estate – Proposed Stage 2 Channel

Based on hydraulic analysis of the existing flooding regime, the subject site (Stage 2) is fully inundated by the Q_{100} flood extent. In order to achieve development on-site, major flood drainage channels were required to be designed to ensure that the development did not cause any real actionable damage on neighbouring properties and infrastructure.

Figure 6.1 presents the preliminary design criteria for the proposed channels and the resulting development. As stated previously the channels vary from approximately 30 to 80 m in width, average 1 m deep and are to be constructed at minimum grade. The channels are designed to invite flows from the eastern and southern boundaries, through the development, to ensure that no adverse impacts were experienced on neighbouring properties. A 30 m channel is proposed on the western boundary to divert major flows away from Bosna Estate and eastern neighbouring properties.

Due to the minimum grade of the channel, at the Operational Works phase consideration into the drainage of low-flows will need to be assessed, to ensure that the channel is completely drained.

Note that the existing creek within Stage 1, as presented in Figure 5.5 (thick dotted black line along the boundary between stage 1 & 2) will be maintained. The Stage 2 channel has been designed to direct a portion of the flow to run down the existing creek with the remaining portion of the flow to continue west through the proposed channel. This will ensure that there is no environmental impact on the creek caused by the construction of a diversion channel.

Recent survey has picked up the existing trees within the proposed drainage channels within stage 2. The majority of these trees lie within the proposed channel. From site visits, liaison with existing residents and survey investigation these trees consist mainly of gums ranging from 0.5m high to over 4m high, some of which are quite mature. It has been decided that the majority of these trees (ie. the larger more mature ones) are to be retained during the post development condition. These trees have been incorporated within the hydraulic model. The trees and root systems will be protected by rock pitching and other protective materials. However, as the velocities within the proposed channels are minor it is anticipated that there will be no soil erosion at these locations.

6.2. Design Pad Levels – Stage 2

VDM provided the locations of each building pad within each property. Within the hydraulic model, these areas were lifted above the flood event, in order to acquire a post development flood level on which to plan the finished surface levels for these areas. Town of South Hedland Council require that building pad levels are set to 500mm freeboard above the Q_{100} flood level.

In order to maintain the flood storage capacity of the site, material from the cutting of the drainage channels will be used to fill the building pads, if the material is suitable.

Preliminary finished surface levels for the building pads can be obtained by adding 800 mm to the road levels as presented in Figure 6.1 (ie. Roads are 300mm below Q_{100} , building pads 500mm above Q_{100}).

An access road is proposed to loop around the Stage 2 development and provide an access road for all lots. This proposed road has been designed to be inundated by up to 300 mm of flood depth during the Q_{100} event.

7. Impact Assessment

Spatial mapping was performed to determine the impacts of the proposed development. Flood level afflux, flood velocity afflux and flood risk afflux mapping was performed and are discussed in the following sections.

7.1. Flood Level Afflux

Spatial mapping was performed to determine where an increase in flood level occurs, if any, outside of the subject site. This mapping makes it easier to assess the impacts of the proposed development. Figure 7.1 presents the spatial map for the flood level afflux, which indicates that there are some areas of flood level increase inside and outside the subject site. The following impacts have been recorded:

- There is no increase in peak flood level on the eastern property due to the proposed development (afflux < 0 mm);
- A maximum increase of 45 mm on the FMG railway;
- There is no increase on the Newman Railway;
- A maximum of 115 mm increase in peak flood level occurs along the southern boundary, the 115 mm increase dissipates to 45 mm in approximately 350 m (to the west) when it reaches the FMG railway; and
- A maximum of 50 mm increase in peak flood level occurs along the western boundary, this 50 mm increase dissipates to 20 mm in 250 m from the western boundary (to the west).

7.1.1 Impact on the FMG Railway

As stated in above sections, a maximum increase of 45 mm has been recorded on the FMG railway as a result of the proposed development.

It is important to note that although there is an increase in peak flood depth on the FMG Railway, it has only increased the overtopping width very marginally. In conjunction with this, the duration of flooding over the railway has not increased in the post development scenario.

The existing depth on the railway is approximately 220mm (on average), and thus an increase in peak flood level of 45mm is less than 20% of the existing depth.

This impact on the FMG Railway will therefore cause no real actionable damage, will not affect the effective operation or maintenance of the line and is therefore negligible and deemed acceptable.

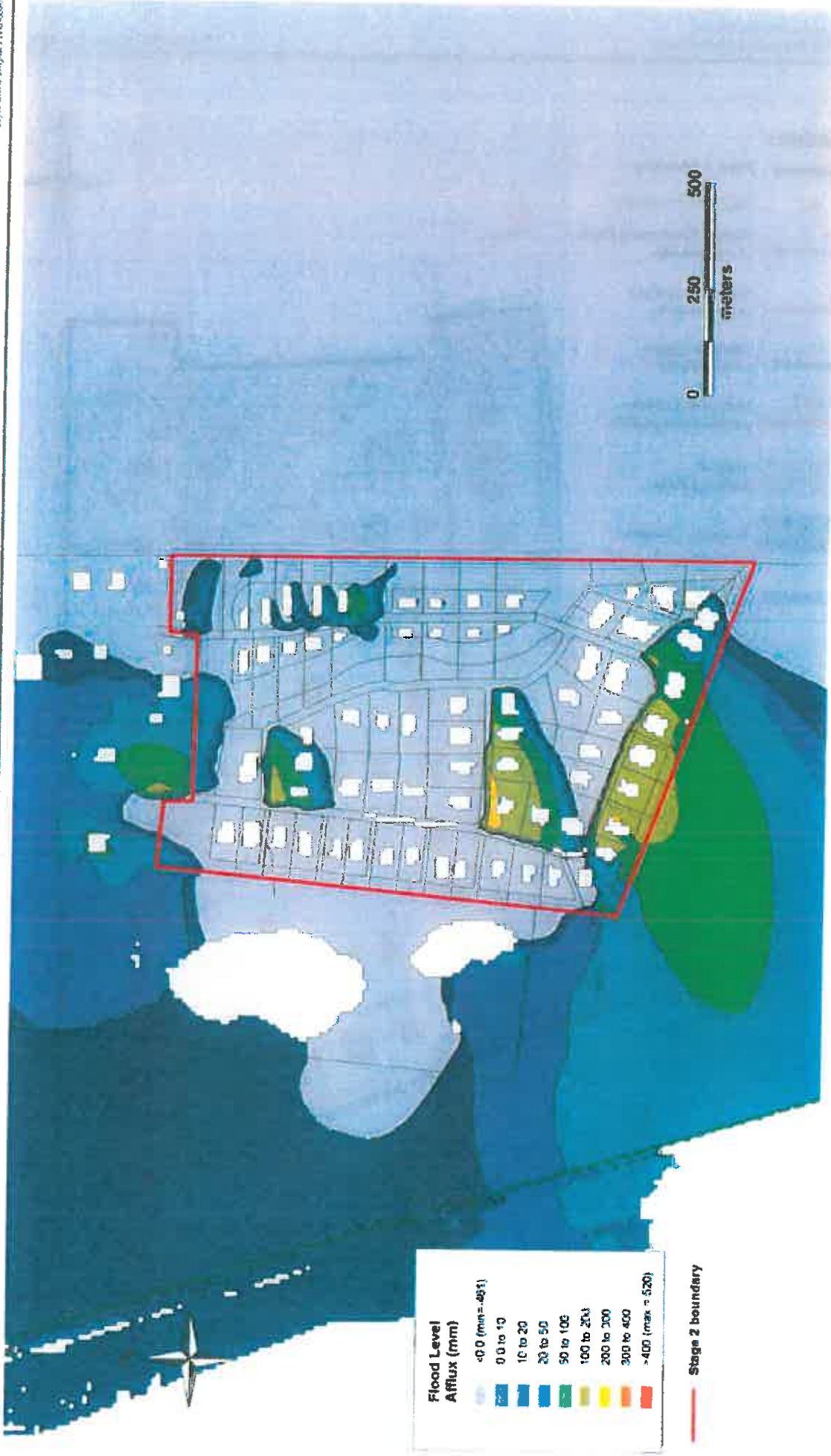
7.2. Flood Velocity Afflux

Spatial mapping of the flood velocities pre and post development indicated that the proposed development does not worsen flooding conditions to neighbouring properties. Figure 7.2 plots the velocity afflux, across the study area resulting from the proposed development.

Figure 7.2 indicates that over the majority of the study area, there is minimal change in peak velocity (<0.05 m/s). This is especially relevant to the FMG Railway, where although there is the minor increase in peak flood level and discharge across the railway, there is no increase in peak velocity.

Velocity increases are occurring around the immediate vicinity of the proposed development. These increases are minor and the maximum increase external to the site is 0.2 m/s, with very small areas of increases up to 0.5 m/s.

The velocity afflux as presented in Figure 7.3 demonstrates that the proposed development will not result in any real actionable damage on neighbouring properties.



Impact Plot - Q100 Flood Level Afflux

17250 Quarte du Parc Road, 17250 Quarte du Parc Road



Impact Plot - Q100 Flood Velocity Afflux

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8. Conclusions

This Hydraulic Impact Assessment (Issue 8) has investigated the flooding behaviour of the subject site, PT226 Quartz Quarry Road, South Hedland, WA and the potential impact of the proposed rural estate on the existing flooding regime for a flood event of ARI 1 in 100 yr.

Note the following key points from this investigation:

- Building pads for stage 2 will be constructed at 500mm above Q100 flood level;
- Roads in stage 2 will be elevated so that there is no more than 300mm of flood water over the road during the Q100 event;
- No increase in peak flood level occurs on the adjacent property to the East;
- The Newman Railway is unaffected by the proposed mitigation measures of the proposed Stage 2 development;
- The FMG Railway experiences an increase of 40 mm in peak flood level;
- Although the FMG Railway is impacted by the proposed development, analysis of the results indicated that the magnitude of the increase will not cause any real actionable damage on the railway, due to this increase being under 20% of the existing flood depth on the railway.
- Post development Stage 2 building pads will have flood immunity and the proposed roads will be subject to a low degree of flood hazard, respectively; and
- As part of the proposed development in Stage 2 the existing access and egress between stage 1 roads (entrance to the site) and the Quartz Quarry Estate has not changed.

Based on the available survey data compiled to this point and the layout, proposed works for the subject site would have no real actionable damage on existing infrastructure and neighbouring properties surrounding the site.

Appendices

Appendix A – Pilbara Regional Flood Frequency Procedure

PILBARA REGIONAL FLOOD FREQUENCY PROCEDURE

Note if $L^2/A < 10$
use A/L^2

The procedure is:

$$Q_2 = 1.72 \times 10^{-32} (AS_c^{0.5})^{0.80} LAT^{-12.17} LONG^{38.77} (L^2/A)^{1.05} \quad (1)$$

$$Q_5 = 7.47 \times 10^{-46} (AS_c^{0.5})^{0.81} LAT^{14.62} LONG^{31.46} (L^2/A)^{0.65} \quad (2)$$

$$Q_{10} = 2.36 \times 10^{-30} (AS_c^{0.5})^{0.81} LAT^{-15.24} LONG^{26.28} (L^2/A)^{0.39} \quad (3)$$

Q_{20} should be taken as the larger flow given by either of the following equations.

$$Q_{20} = 1.98 \times 10^{-23} (AS_c^{0.5})^{0.70} LAT^{-15.08} LONG^{20.91} \quad (4)$$

or

$$Q_{20} = Q_{10} (13.21A^{0.61}) / (8.74A^{0.60}) \quad (5)$$

Q_{50} and Q_{100} should be determined as follows:

$$Q_{50} = Q_{20} \times \text{frequency factor } (Q_{50}/Q_{20}) \quad (6)$$

$$Q_{100} = Q_{20} \times \text{frequency factor } (Q_{100}/Q_{20}) \quad (7)$$

Frequency factors (Q_{50}/Q_{20}) and (Q_{100}/Q_{20}) are given in Table 1. Frequency factors for areas other than those given in Table 1 should be obtained by log log interpolation.

Frequency Factor	Catchment Area (km ²)						
	0.1	1.0	10	100	1 000	10 000	100 000
(Q_{50}/Q_{20})	1.66	1.72	1.78	1.83	1.88	1.93	2.00
(Q_{100}/Q_{20})	2.44	2.61	2.75	2.87	3.03	3.20	3.42

Table 1 - Q_{50}/Q_{20} and Q_{100}/Q_{20} Frequency Factors

Where, A = catchment area (km²)

L = mainstream length (km)

S_c = equivalent uniform slope (m/km)

LAT = latitude (degrees) of catchment centroid

LONG = longitude (degrees) of catchment centroid.

Q_y = y year flood estimate (m³/sec)

David Flavell


September 7 2005

**APPENDIX 5
VDM CONSULTING HYDRAULIC IMPACT
ASSESSMENT
SUMMARY DOCUMENT**

- As part of the proposed development in Quartz Private Estate the existing access and egress between Bosna roads (entrance to the site) and the Quartz Private Estate has not changed.

Please let me know if you have any queries or require any additional information.

Yours faithfully



RAY FERGUSON
Senior Civil Designer
VDM Consulting – WA Civi



Our Ref: QE070557/1602/VDM Perth
Enquiries to: Philip Bell

10th August 2011

VDM Consulting
310 Selby Street North
OSBORNE PARK WA 6017

Level 8 Australia Fair Tower
42 Marine Parade
SOUTHPORT QLD 4215
Mail PO Box 3766 Australia Fair
Southport Qld 4215
P: +61 7 5509 6400
F: +61 7 5509 6411
E: goldcoast@vdmgroup.com.au
W: www.vdmconsulting.com.au

Attention: Ray Ferguson

Dear Sirs

**Re: QUARTZ PRIVATE ESTATE SOUTH HEDLAND – REVISED LAYOUT (133 LOTS)
REVIEW OF HYDROLOGY CRITERIA**

I refer to the subdivisional plan produced by Taylor Burrell Barnet identified as figure 07 and dated 6/7/2010 offering an alternative layout plan to the one utilized in the detailed hydraulic modelling performed and reported in our Hydraulic Impact assessment (HIA) issue 8 dated 11th January 2011.

We have compared this new plan with the footprint previously modelled and confirm that as the flood channel widths and depths represented on fig 5.5 (attached) in the HIA Issue 8 are retained in the revised plan then the findings of the afore-mentioned HIA will still apply.

As outlined in the HIA Section 6.2 (Design Pad Levels) and Section 8 (Conclusions) the building pad levels are designed at 500 mm above the 100 year flood level & the roads are designed 300 mm below the 100 year flood level.

Yours faithfully

Philip Bell
Principal Water Engineer
VDM Consulting

Enc: Revised Plan
Fig 5.5

cc: Brad Comley

CONSULTING ENGINEERS AND SCIENTISTS

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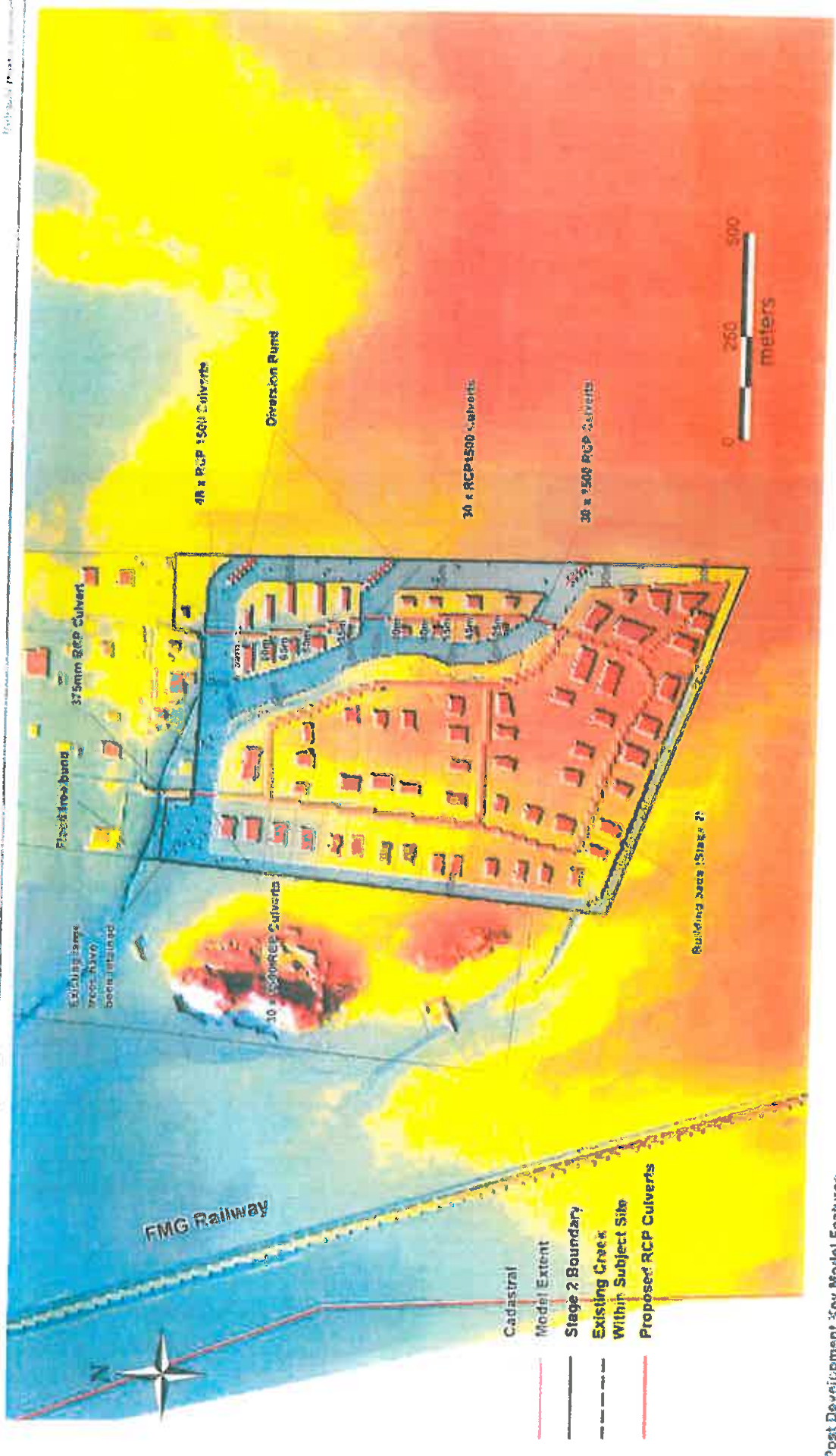
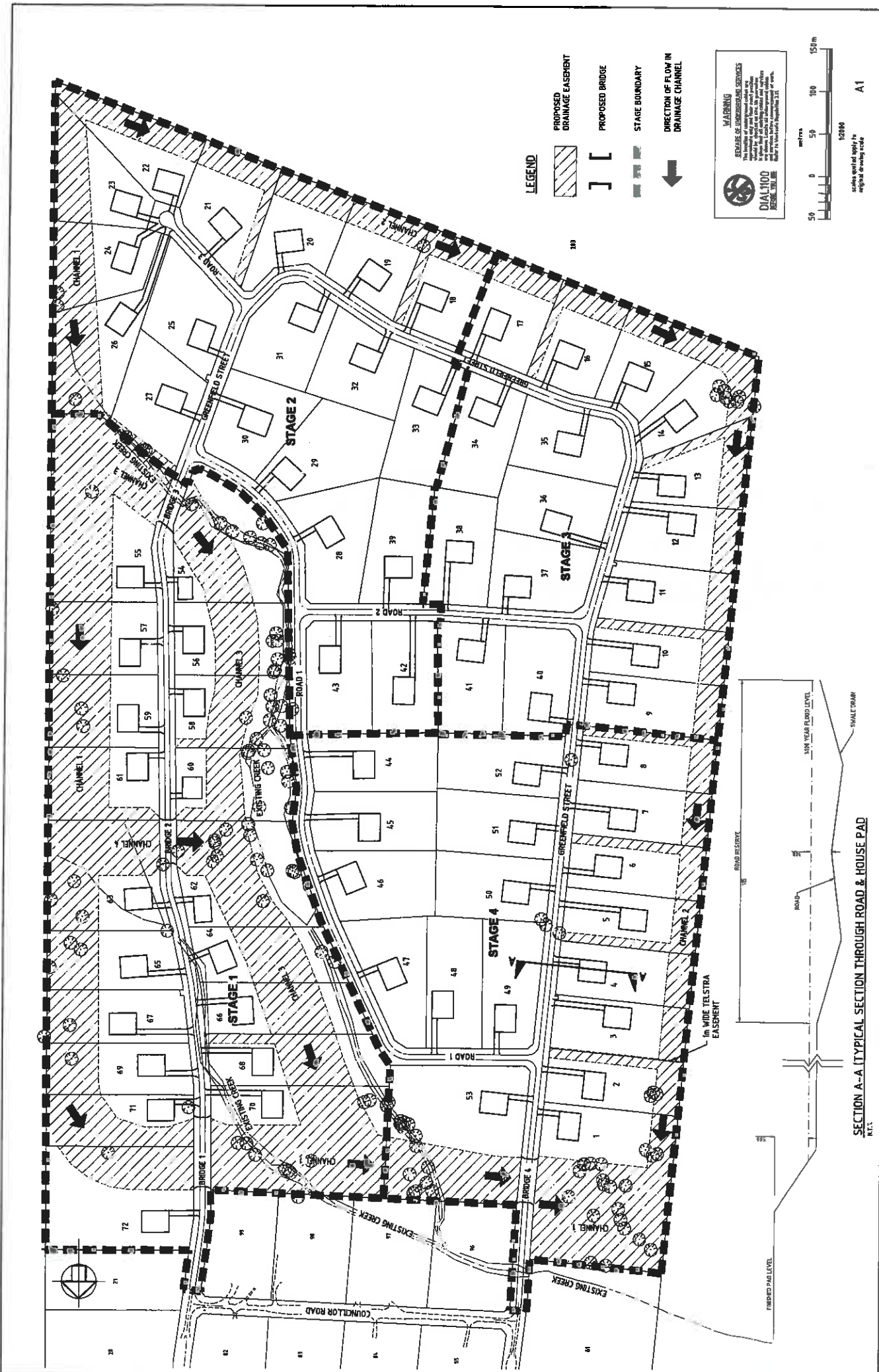


Figure 5.5

Post Development Key Model Features



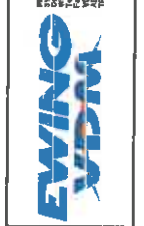
100 South Street, Suite 100, Perth, Western Australia 6000
Tel: +61 8 9442 2222 Fax: +61 8 9442 2223
www.vdmconsulting.com.au



SECTION A-A (TYPICAL SECTION THROUGH ROAD & HOUSE PAD)
N.T.S.

PREPARED BY: DATE:	CHECKED BY: DATE:	APPROVED BY: DATE:		CLIENT: VDM DEVELOPMENTS PTY. LTD.	PROJECT: QUARTZ PRIVATE ESTATE SUBDIVISION DRAINAGE CHANNEL FLOW PATH	SCALE: 1:2000 DRAWN: JAS CHECKED: JAS DATE: 14/03/15	SHEET NO.: 2962-SK07 SHEETS: 2962-SK07
						PROJECT NO.: 2962-SK07 DRAWING NO.: 2962-SK07	

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VDM DEVELOPMENTS PTY. LTD.
 QUARTZ PRIVATE ESTATE SUBDIVISION
 DRAINAGE CHANNEL FLOW PATH

PROJECT NO.: 2962-SK07 DRAWING NO.: 2962-SK07	SCALE: 1:2000 DRAWN: JAS CHECKED: JAS DATE: 14/03/15	SHEET NO.: 2962-SK07 SHEETS: 2962-SK07
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Traffic Assessment

Quartz Private Estate

VDM Developments Pty Ltd

Project No: E0060666

**Project Name: Quartz Private Estate, South
Hedland**

Document No: E0060666-C0703-T-R-TA-01

Report Date: February 2011

CONSULTING ENGINEERS AND SCIENTISTS

Offices:

Western Australia
Queensland
Northern Territory

New South Wales
Victoria
Hanoi, Vietnam

VDM
GROUP
member

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2 Existing Conditions

2.1 Subject Site

The subject site, known as Quartz Private Estate, is located at Lot 226 on DP191411 at Greenfield Street, Port Hedland, Western Australia. The site is located to the south of the existing Bosna Estate and is accessed via Greenfield Street. The location of the subject site and the surrounding road network is presented in Figure 2.1.

The Bosna Estate is currently the only other traffic catchment contributing to the traffic on Greenfield Street, Quartz Quarry Road and Yarrie Road.

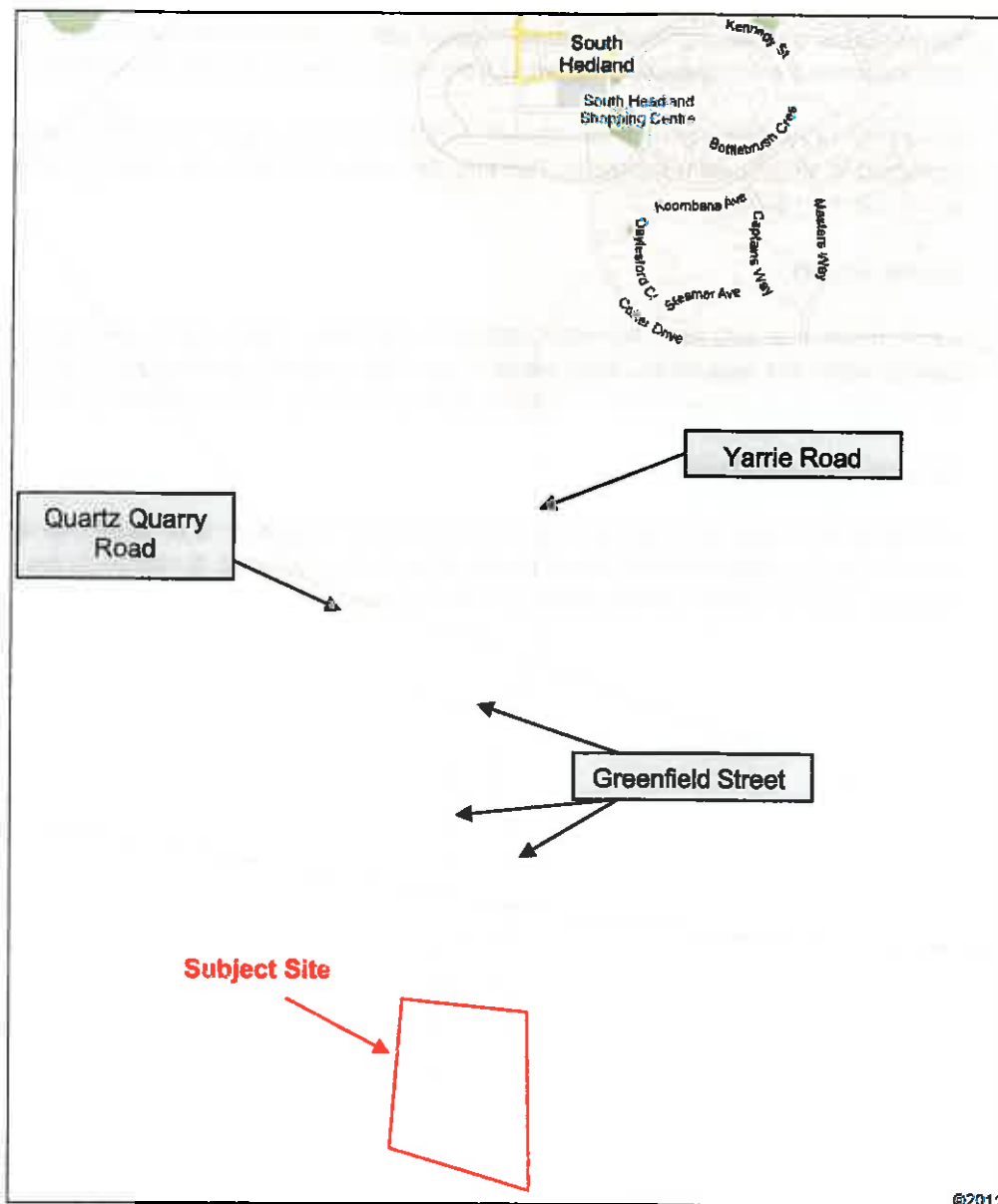


Figure 2.1 Subject Site Location (Google Extract)

3 Proposed Development

The proposed development is to increase the density of the residential land use on the subject site. The proposal adds an up to 71 lots to the WAPC Conditional Approval for the Quartz Private Estate, therefore totalling a maximum of 143 residential allotments. The approved and proposed site layouts are shown in Figure 3.1. Both layouts are accessed via Greenfield Street.

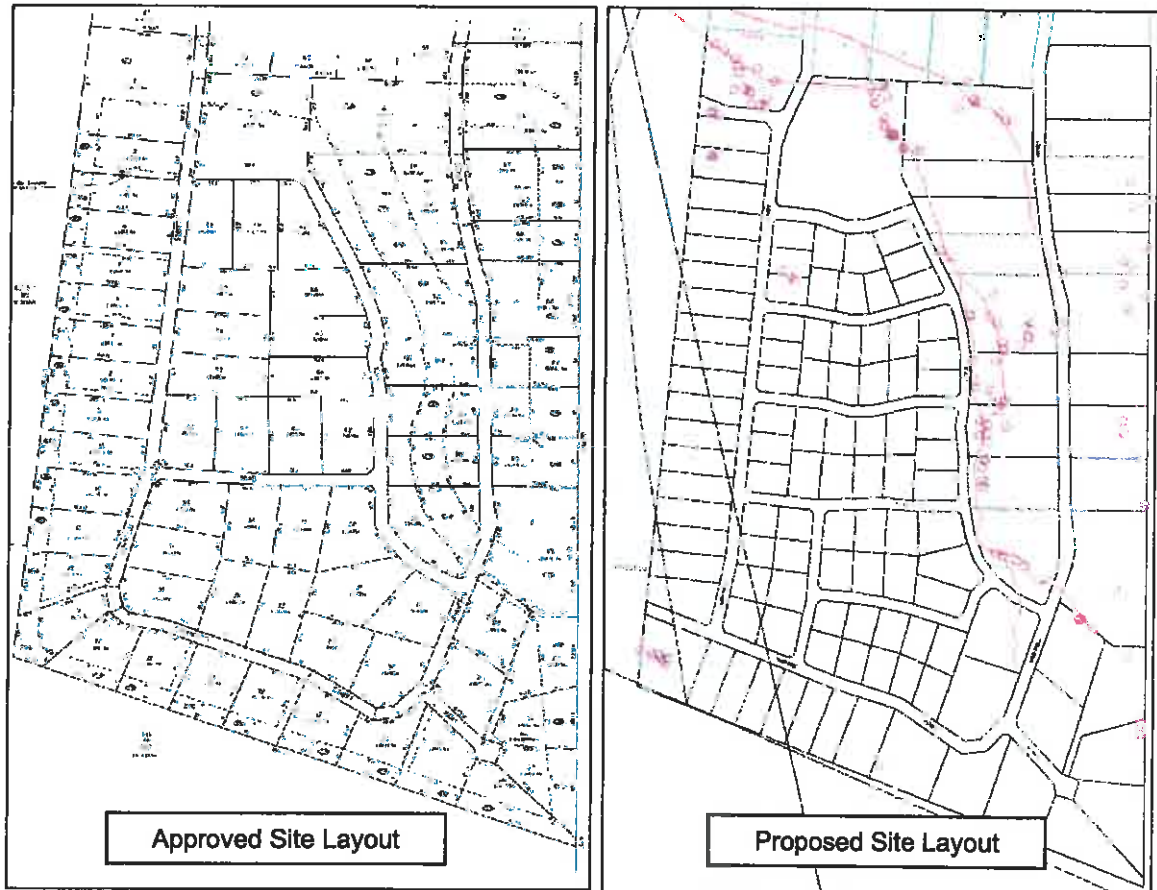


Figure 3.1 Approved and Proposed Site Layouts

added to the Approved Subdivision Plan traffic to give the Alternate Higher Density Subdivision Plan Traffic. The resulting traffic demands are shown in Figure 4.2 and Figure 4.4 for the morning and evening peak hour periods respectively.

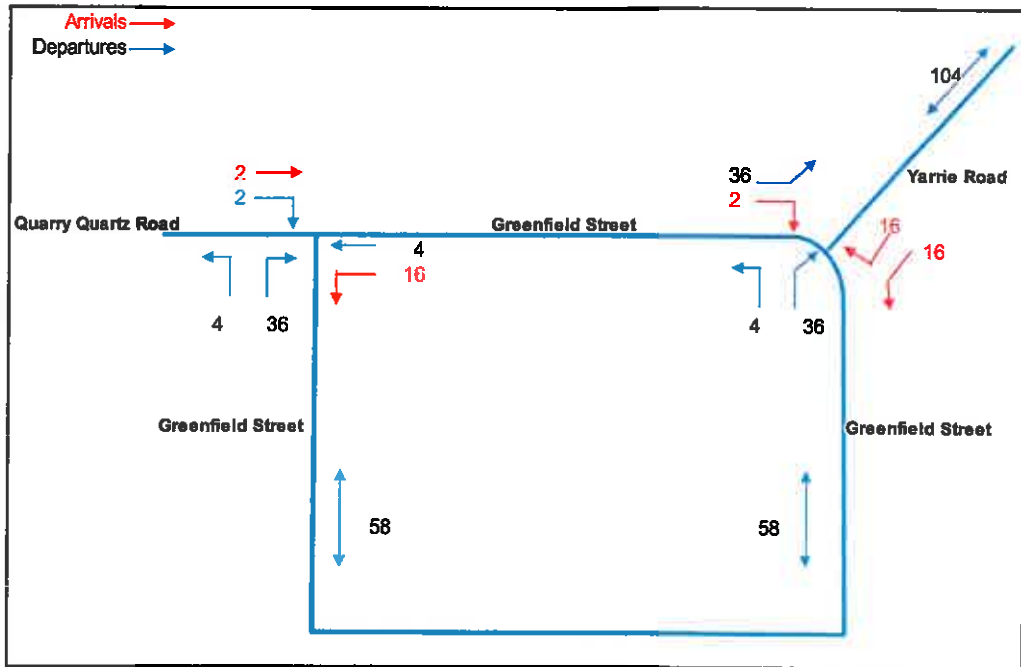


Figure 4.1 Approved Subdivision Scenario Traffic – Morning Peak

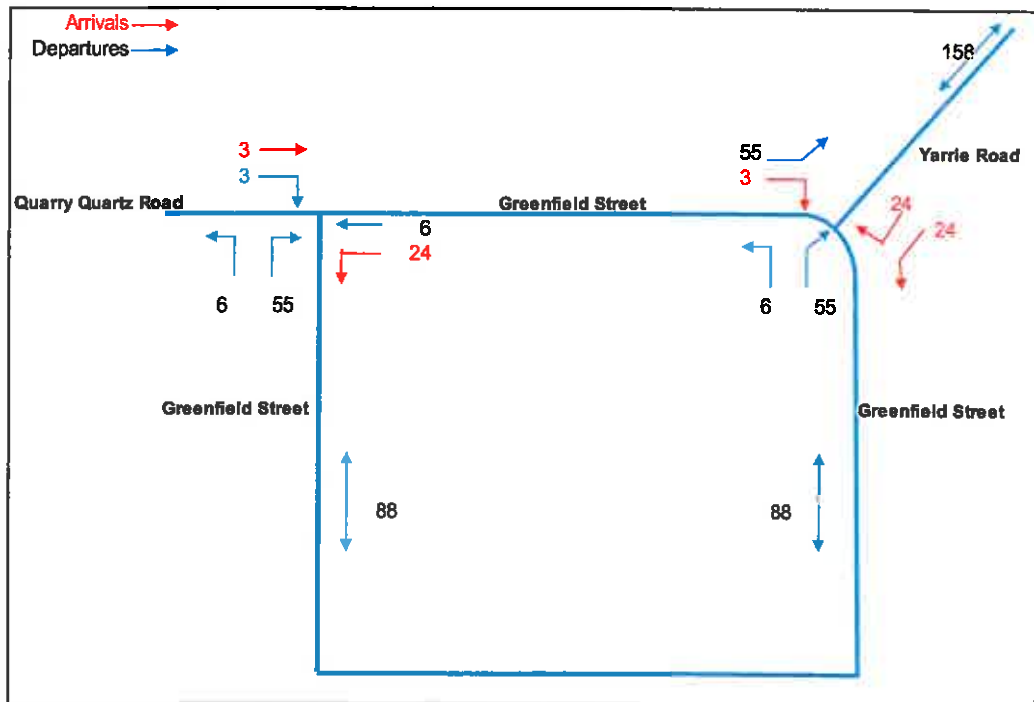


Figure 4.2 Alternate Higher Density Subdivision Scenario Traffic – Morning Peak

5 Capacity Assessment

5.1 Intersection Assessment

The traffic demands associated with the development have been used to quantify the relative impact of the development at the following intersections:

- Greenfield Street / Quartz Quarry Road; and
- Greenfield Street / Yarrie Street.

Austrroads (2009, pg. 61, tab. 6.1) recommends that if intersection volumes are below the values given in Table 5.1, then capacity analysis is not required.

Type of road	Light cross and turning volumes maximum design hour volumes vehicles per hour (two way)		
Two-lane major road	400	500	650
Cross road	250	200	100
Four-lane major road	1000	1500	2000
Cross road	100	50	25

Table 5.1 Intersection Volumes Below Which Capacity Analysis is Unnecessary

The traffic demands presented in Section 4 of this report are below the volumes in the Table 5.1, therefore no further assessment is required on the Greenfield Street / Quartz Quarry Road and Greenfield Street / Yarrie Road intersections. Both intersections will continue to operate with ample capacity even with the addition of the proposed residential allotments.

5.2 Road Link Assessment

Assessment has been undertaken to quantify the relative impact of the proposed higher density subdivision on Greenfield Street and Yarrie Road. Road link assessment is based on daily traffic volumes. Peak hour volumes are generally 12 % of daily traffic volumes on suburban road links such as these (Austrroads, 2005, pg. 179). Therefore, using the traffic demand scenarios in Section 4 of this report, the maximum two-way traffic volumes on Greenfield Street and Yarrie Road for the Pre and Alternate Higher Density Subdivision Plan models are:

- Greenfield Street:
 - Approved Subdivision Scenario: 58 / 12% = 471 vpd
 - Alternate Higher Density Subdivision Scenario: 88 / 12% = 733 vpd

6 Conclusions and Recommendations

VDM Consulting have been engaged by the VDM Developments Pty Ltd to prepare a traffic assessment report to assess the relative impact of increasing the density of the Quartz Private Estate at Lot 226 on DP191411, Greenfield Street, Port Hedland.

The estate has an existing WAPC Conditional Approval for residential development comprising 72 lots. It is proposed to increase the density to a maximum of 143 lots in total. The subject site is south of the existing Bosna Estate and is serviced by Greenfield Street to the east, west and south.

A net increase of 60 trips during the peak hour would be attributable to the proposed higher density subdivision when compared to the approved development. Of these trips, 90 % are expected to travel to / from Yarrie Road and the remaining 10 % are expected to travel to / from Quartz Quarry Road. A 'Sensitivity Test' assigning all residential traffic from the catchment to travel along Yarrie Road has also been assessed. The conclusions remain the same.

The traffic volumes at the Greenfield Street / Quartz Quarry Road and the Greenfield Street / Yarrie Road intersections are not expected to trigger the need for capacity analysis (Austroads, 2009, tab. 6.1). Both intersections will operate with ample capacity even with the increased number of residential lots in the traffic catchment.

Greenfield Street and Yarrie Road are Local Distributor roads. These are expected to operate well within their traffic volume capacity even with the addition of development related trips where 90 % travel on Yarrie Road. The 'Sensitivity Test' has shown that if 100 % of traffic travels on Yarrie Road, the daily traffic volume remains well within capacity.

It is therefore concluded that there are no material traffic impacts associated with the proposed higher density subdivisional plan for the Quartz Private Estate.

APPENDIX 3
SCHEME AMENDMENT REQUEST

Our Ref: 10/012 LM:ct

28 November 2011

Attention: Mr Leonard Long, Manager Planning

Chief Executive Officer
Town of Port Hedland
PO Box 41
PORT HEDLAND WA 6721

Dear Sir

QUARTZ ESTATE – SCHEME AMENDMENT REQUEST

Taylor Burrell Barnett acts on behalf of Messrs Barry Pound and Paul Summers, landowners of Quartz Estate – Pt Location 226, South Hedland (subject site). We refer to recent discussions and agreements reached between Mr Barry Pound and the undersigned with your Mr Leonard Long regarding the approvals process for the Quartz Estate subdivision.

Our Office has lodged under our letter of 9 August 2011 a Development Plan with the Town of Port Hedland for the subdivision of the site into 133 lots of varying sizes, ranging from approximately 3,000m² to 2.5ha. Based on the Town's preliminary assessment and legal advice received from its solicitor, the Town's Technical Officers have recommended that a Scheme Amendment be pursued to zone the land to Residential R2.5, to accommodate subdivision generally in accordance with the Development Plan proposal. Whilst we maintain the position that approval could be granted by the Town for the Development Plan under the existing Rural Residential zone applicable to the site and thus permitting subdivision, our Client has agreed to request a Scheme Amendment (Residential R2.5) and accordingly withdraw the current Development Plan proposal from the Town's consideration. We understand the Town will not require the approval of a Development Plan as a prerequisite to subdivision.

In accordance with the Town's Technical Officers' advice, we respectfully request the Shire to amend Town Planning Scheme No. 5 (TPS 5) to zone the majority of the site Residential with an R2.5 density code. Those areas within the site not subject to this request will remain zoned Rural Residential (refer Figure 1 – Proposed Zoning Plan). In support of this request a Subdivision Concept Plan has been prepared to depict a possible subdivision layout for the site in accordance with the proposed zoning (refer Figure 2 – Subdivision Concept Plan). All lots less than 1ha are proposed to be zoned Residential R2.5, with those lots larger than 1ha on the eastern side of the site being retained as Rural Residential. All lots proposed to be zoned Residential on the Subdivision Concept Plan are greater than 4,000m² with a minimum road frontage of 40m, in accordance with the Residential Design Codes for the R2.5 density code. The studies and related documentation contained within the Development Plan proposal remain valid and should be taken into consideration as part of the Town's determination of this request.

As an alternative to amending the zoning for only portions of the site, it is suggested the Shire consider zoning the entire site Residential R2.5, which will ensure a consistent zoning across the site. A textual amendment could be undertaken to TPS 5 to include a provision which restricts the large lots (i.e. those over 1ha) that are constrained by floodway requirements from being further subdivided.

Taylor Burrell Barnett

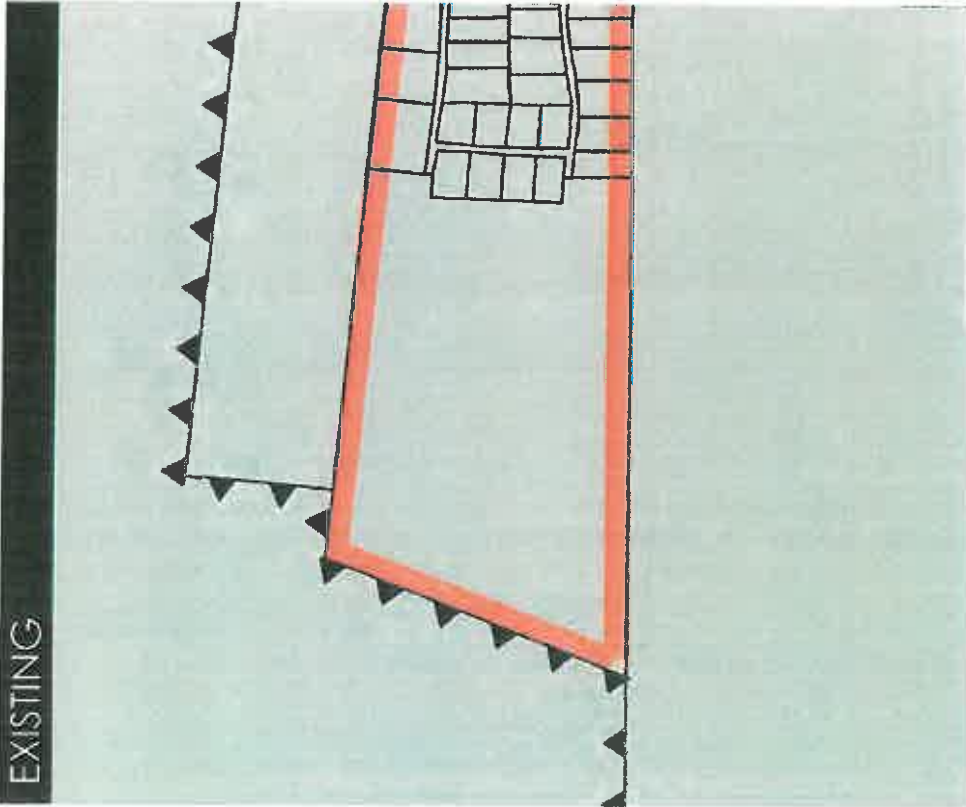


SCHEME AMENDMENT MAP

TOWN OF PORT HEDLAND

Town Planning Scheme No.5

Amendment No. XX



EXISTING

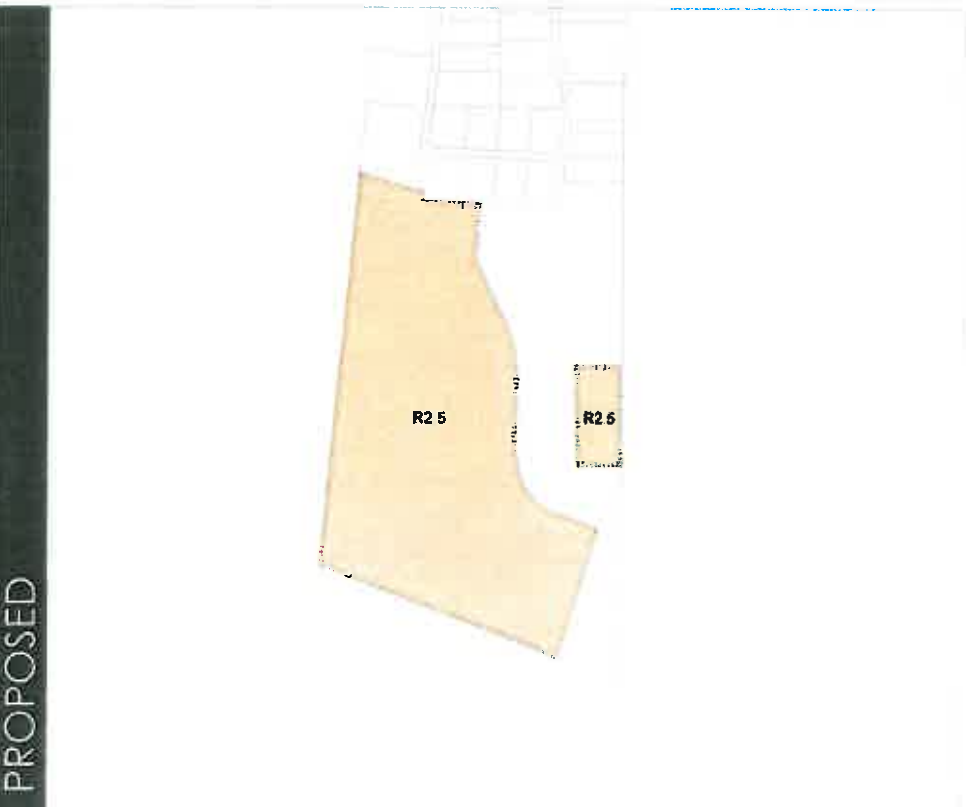
LEGEND

ZONES

- RURAL
- RURAL RESIDENTIAL

OTHER

- SPECIAL CONTROL AREAS



PROPOSED

LEGEND

ZONES

- RESIDENTIAL

OTHER

- R CODES



1:20000@A4
 10/012/003
 28/11/2011

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Quartz Estate

**APPENDIX 4
CONCEPT DEVELOPMENT PLAN PROPOSAL**

Taylor Burrell Barnett



Our Ref: 10/012 LM:LD

28 February 2011

Attention: Mr Eber Butron, Director Regulatory Services

Chief Executive Officer
Town of Port Hedland
PO Box 41
PORT HEDLAND WA 6721

Dear Sir

QUARTZ ESTATE – PROPOSED CONCEPT DEVELOPMENT PLAN – REQUEST FOR CONSENT TO ADVERTISE

Taylor Burrell Barnett acts on behalf of VDM Group, the majority landowner of Quartz Estate – Pt Location 226, South Hedland (subject site). We have been instructed by our Client to prepare and lodge the Quartz Estate Concept Development Plan for Council's consent to advertise. The Concept Development Plan has been prepared following technical investigation, detailed design, consultation with the local community, liaison with the Town of Port Hedland's Technical Officers and a presentation to the Council at the Councillor briefing session held in January 2011.

In support of the Concept Development Plan (3 copies attached), the following elements have been addressed:

1. Description of the Concept Development Plan.
2. Town planning considerations.
3. Legal approvals framework.
4. Hydrological study.
5. Traffic study.
6. Environmental study.
7. Letter from VDM Group committing to entering into a Memorandum of Understanding with the Town relating to infrastructure upgrade works.

As advised at the Councillor briefing session attended by our Mr Bill Burrell and Mr Cory Johnson from VDM Group, we request the Council's consent to advertise the Concept Development Plan.

BACKGROUND

Existing Subdivision Approval

Approval (WAPC Ref. No. 140935) was issued by the Western Australian Planning Commission (WAPC) on 30 April 2010 for the subdivision of the subject site into 72 lots, ranging in size from 1ha to 2.5ha. VDM Group has undertaken detailed engineering design and other relevant preparations (including hydrological studies) for the implementation of this approval. It is expected that subdivision works for stage 1 (eastern side – 30 lots) will commence in April 2011.



CONCEPT DEVELOPMENT PLAN

The Concept Development Plan proposes the subdivision of the subject site into 143 lots of varying sizes. A Village Centre with indicative community facilities is depicted, to provide the anchor for Family Village sized lots which are located opposite to the Village Centre. The main elements of the Concept Development Plan include the following:

- **Road layout:**
 - Extension from Bosna Estate based on a permeable road layout.
 - Points of access provided to the west for the future extension of the road system (if required).
 - Wide road reserves to accommodate the construction of rural roads, street planting and drainage.
- **Lot layout:**
 - Approximately 143 lots.
 - Eastern side is consistent with the approved plan of subdivision (72 lots).
 - Lots ranging in size from 3,500m² to 2.5ha.
 - Family Village sized lots of approximately 550m².
 - Variety of lots sizes consistent with a Rural Settlement.
 - Specifically designed dwelling locations.
 - Large lots to accommodate solar oriented dwelling design.
- **Village Centre:**
 - Community amenities (provision for possible club room / multipurpose building).
 - For use by Bosna residents.
 - Design to adapt to change.
 - Landscaped open space areas including 'kick-about' areas and provision for half court tennis and basketball.
- Flood protection provided in accordance with the approved hydrological studies.
- Serviced lots connected to reticulated power, water and telecommunications.
- Public open space (POS) areas incorporating drainage features and the protection of vegetation.

Associated Works and Dwelling Construction

Various infrastructure works and dwelling construction are proposed as part of a complete package of works to complement the Concept Development Plan, including:



3. **Sustainable.** The extent of developable land within the Pilbara is constrained by various elements (e.g. native title, flooding, servicing). An increased number of lots will better utilise scarce land resources and take advantage of existing service infrastructure within the locality. Dwellings will also be constructed based on sustainable development principles.
4. **Village Centre.** A Village Centre will provide the focal point for residents, including those residing in Bosna Estate. The Village Centre will provide:
 - a. community amenities (to be confirmed);
 - b. a design which can adapt to change;
 - c. landscaped open space areas including features such as half court tennis and basketball courts, playground equipment, shade etc.; and
 - d. Family Village lots which will provide affordable housing for families on smaller lots.
5. **Lifestyle Opportunities.** Rural Residential lifestyle opportunities are limited within the Town of Port Hedland. The Concept Development Plan will facilitate a range of lifestyle opportunities based on lot size and proximity to the Village Centre. A rural theme will be maintained consistent with Bosna Estate.
6. **Flood Protection.** As will be detailed below, flood protection will be provided by a series of floodways. Development of the site, in accordance with the Concept Development Plan, will not increase flooding on adjoining areas.
7. **Immediate Start.** VDM Group is committed to commencing subdivision works as soon as possible (subject to approvals). In this regard, VDM Group is finalising arrangements for the commencement of stage 1 (30 lots) as permitted under the current Subdivision Approval. It is VDM Group's intention to facilitate the immediate delivery of sustainable and affordable housing into the undersupplied Pilbara housing market.
8. **Infrastructure Upgrade Works Package.** As detailed above, VDM Group will commit to infrastructure upgrade works of \$2,500,000 subject to approval of the Development Plan.

TOWN PLANNING CONSIDERATIONS

The subject site is zoned Rural Residential and abuts land zoned Rural Residential and Rural under the Town of Port Hedland Town Planning Scheme No. 5 (TPS 5).

Clause 5.12 of TPS 5 allows a Development Plan to be prepared for the Rural Residential zone. The proposed Concept Development Plan has been prepared to facilitate the subdivision of the site as a 'Rural Settlement'. A 'Rural Settlement' is defined by TPS 5 as:

'a collection of two or more dwellings in proximity and located in a rural zone and may include other commercial or community development as approved by Council.'

The Concept Development Plan has been prepared in accordance with the definition of 'Rural Settlement' under TPS 5. Specific provisions which control matters such as lot size, building envelopes etc, will be addressed as part of a comprehensive Development Plan proposal following Council's consent for, and advertising of, the Concept Development Plan. It is envisaged that Council will amend TPS 5 to reflect the Rural Settlement development following approval of a Development Plan, in accordance with Clause 6.8.5.

.../7



Recommendations and Conclusions

- A net increase of 60 trips under the Concept Development Plan compared to the approved subdivision. Of these trips, 90% are expected to travel to / from Yarrie Road and the remaining 10% are expected to travel to / from Quartz Quarry Road.
- A 'Sensitivity Test' has been undertaken which assigned all residential traffic from the catchment to Yarrie Road, with the conclusions remaining unchanged.
- The expected traffic volumes at the Greenfield Street / Quartz Quarry Road and Greenfield Street / Yarrie Road intersections do not require a capacity analysis in accordance with Austroads' standards. Both intersections are expected to operate with ample capacity under the Concept Development Plan.
- Greenfield Street and Yarrie Road are defined as 'Local Distributor' roads and are expected to operate well within their traffic volume capacity under the Concept Development Plan. The 'Sensitivity Test' indicates that traffic volumes will remain within capacity for Yarrie Road.

Based on the above, VDM Consulting concludes that there are no material traffic impacts associated with the subdivision of the site as depicted on the Concept Development Plan.

ENVIRONMENTAL CONSIDERATIONS

Belleng VDM Pty Ltd has undertaken environmental due diligence for the subject site. The environmental due diligence covered the following:

- Assessment of potential contaminants and Acid Sulfate Soils.
- Review potential environmental impacts, including hydrogeological and topographic information relevant to the site setting, waste management, air quality/pollution/dust control during construction, stormwater quality and effluent management.
- Assessment of Aboriginal and European heritage.
- Identification of water quality issues, drainage and nutrient management.
- Description of vegetation condition and integrity, and development impacts on ecological values (significant flora and fauna).
- Assessment of visual impacts.
- Determination of implications for development of state and federal conservation legislation including relevant certificates, licenses and permits.
- Checklist for environmental approvals.
- Recommendations for environmental management to minimise impacts.

A summary of the main findings of the due diligence is provided below.

Vegetation and Flora

An onsite vegetation survey has been undertaken. All vascular plants were identified and their condition and cover recorded. Natural Area Initial Assessment forms were completed for each quadrat. Particular attention was focused on areas containing native vegetation along the waterways and habitats associated with Declared Rare and Threatened Flora and Fauna.

Fauna was identified through onsite identification and observations of scats, scratchings, burrows and vocalisations. Habitat quality was also assessed throughout the survey areas.

The vegetation onsite is characterised as Low Open Woodland of *Eucalyptus victrix* along the water ways and Hummock grassland with *Acacia* shrub steppe on the sand plains.



Recommendations

- Isolated mature trees are retained where possible in individual lots, landscaping and open space areas.
- Any clearing should be undertaken in the same direction to allow fauna movement off site.
- Any landscaping is undertaken with local and/or endemic species.
- Hollow logs, habitat for native fauna, are relocated to POS prior to and during construction;
- During development of the site disturbance of native vegetation is to be minimised and restricted to areas required for the installation of roads, house pads, sewerage etc.
- To avoid physical damage to vegetation being retained, including isolated individual trees, temporary fencing is to be provided.
- To prevent damage to roots and soil caused by heavy machinery, fencing is to be positioned along the drip-line (edge of crown cover) of the vegetation

SUMMARY

The Concept Development Plan is the first stage of a comprehensive proposal presented by VDM Group for the development of a Rural Settlement at Quartz Estate. Subject to the Council's consent for advertising, VDM Group will take the next step of preparing a comprehensive Development Plan proposal to be lodged with Council for final approval.

The commitment of VDM Group to developing a Rural Settlement, which will benefit a number of stakeholders, is demonstrated by the package of infrastructure upgrade works, construction of dwellings and development of a Village Centre.

The subject site has limited constraints with aspects such as flooding and drainage, traffic impact and environmental considerations addressed through technical reporting and careful design. The views of the local community have been taken into consideration through these works and the adaption of the plan over time.

For the reasons outlined above, we are pleased to present the Concept Development Plan to Council with a request for Council to consent to advertising the plan as the guide for future subdivision and development of a Rural Settlement at Quartz Estate. We look forward to the proposal being considered by the Council at the next available Council meeting. Should you require any clarification in the meantime, please do not hesitate to contact the undersigned or Mr Luke Montgomery from our Office.

Yours faithfully
TAYLOR BURRELL BARNETT

BILL BURRELL
DIRECTOR

CC: Jim Van Der Meer, VDM Group

APPENDIX 5
ADVICE FROM TOWN'S MANAGER PLANNING

From: [Long Leonard](mailto:Long.Leonard)
To: [Evan Jones](mailto:Evan.Jones)
Cc: bpound.admiral@ljh.com.au; luke.montgomery@ljb.com.au; [Butron Eber](mailto:Butron.Eber); [Carol Lufke](mailto:Carol.Lufke); [Phil Woodward](mailto:Phil.Woodward@shillio.woodward-cs.wa.gov.au); chillio.woodward@cs.wa.gov.au; [Ken Dawson](mailto:Ken.Dawson)
Subject: RE: South Hedland Rural Estate
Date: Friday, 28 October 2011 8:39:57 AM
Attachments: [image001.png](#)
[image003.png](#)
[image004.png](#)

Hi Evan,


I have discussed the matter with Eber Estron the Director of Planning and Development, at this stage we cannot see any benefit for such a meeting. The advice received from the Town's solicitors is clear in that the matter should be progressed through a scheme amendment rather than a development plan. In regard to the possibility of running a development plan and scheme amendment concurrently, we don't see the benefit in this, we will not be in a position to approve the development plan until the scheme amendment has been approved by the WAPC at which time the need for a development plan is questionable.

Please feel free to give me a call should you wish to discuss the matter further.

Regards


Leonard Long
Manager Planning | Town of Port Hedland | PO Box 41 Port Hedland WA 6721
Ph: (08) 9158 9342 | M: 04 2029 3656 | Fax: (08) 9158 9399
Email : mgrpl@porthedland.wa.gov.au
Web: www.porthedland.wa.gov.au

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From: Evan Jones [mailto:evan.jones@acuitus.com.au]
Sent: Wednesday, 26 October 2011 10:03 PM
To: Long Leonard
Cc: bpound.admiral@ljh.com.au; luke@tbplanning.com.au
Subject: South Hedland Rural Estate

Attention Leonard Long

Dear Leonard

I am writing to follow up from your recent phone conversation with Barry Pound regarding advice you have recently received from McLeods. As I understand it they would prefer that the development be progressed by way of town planning scheme amendment whilst we are seeking a more expeditious path.

Thanks for being open to discussing the matter further. In accordance with your conversation with Barry Pound, I have written to request a meeting with Phil Woodward and Ken Dawson of the Department of Planning with yourself from Council and a representative of McLeods plus myself and our consultants Taylor Burrell. Phil is away until Monday and I will follow him up then to get a meeting at a convenient time for you and him.

We hope that with the Department's support, Council may be open to an alternative such as a concurrent approach of progressing the rural settlement plan and initiating a concurrent rezoning.


I'll let you know as soon as I hear back from Phil Woodward and please call me if you have any queries.

Regards

Evan

Evan Jones
Director

Description: evan


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Quartz Estate

**APPENDIX 6
OFFICER REPORT TO COUNCIL MEETING DATED 14
DECEMBER 2011**

11.1.9 Proposed Scheme Amendment No. 52 to the Town of Port Hedland Town Planning Scheme No. 5 to recode portion of Lot 226 Forrest Location (Lot 226 South Hedland Rural Estate) South Hedland from "Rural Residential" to "Residential – R2.5" (File No. 18/09/0066)

Officer Leonard Long
Manager Planning Services

Date of Report 29 November 2011

Disclosure of Interest by Officer Nil

Summary

A request has been received from Taylor Burrell Barnett Town Planners on behalf of Barry Pound and Paul Summers, the owners of Lot 226 Forrest Location, (generally known as Lot 226 South Hedland Rural Estate and hereafter referred to as the site), to amend the Port Hedland Town Planning Scheme No. 5, by amending the zoning of a portion of Lot 226 Forrest Location from "Rural Residential" to "Residential R2.5".

The proposal is supported by Council Officers and Council is requested to approve the initiation request.

Background

Through the gazettal of Port Hedland Scheme No. 5 (TPS5), the entire Lot 226 Forrest Location was zoned "Rural Residential". This zoning was consistent with the subdivision application supported by Council in 1996, permitting the subdivision of the site into 131 lots.

Subsequently only 61 of the 131 lots had titles registered leaving the remaining portion of Lot 226 Forrest Location measuring 92.7 hectares undeveloped "Rural Residential" land.

In 2010, Council supported a request to subdivide the remaining portion of Lot 226 Forrest Location, into 71 "Rural Residential" lots, a request permitted in terms of clause 6.8.4 of TPS5.

Clause 6.8.4 (TPS5)

Lots connected to reticulated water and located in the Rural Residential zone shall be no less than 1 hectare and lots not connected to reticulated water and located within the Rural Residential zone shall be no less than 2 hectares.

The applicant has opted to explore the potential for a higher density subdivision that would create approximately 145 lots, consisting of 'family housing' on lots of 600m² and a 'Village Centre' comprising of community facilities, playground area, meeting places and a convenience store.

Policy Implications

Nil

Strategic Planning Implications

The following section of Council's Strategic Plan 2010-2015 is considered relevant to the proposal:

Key Result Area 4:	Economic Development
Goal 4:	Land Development Projects
Immediate Priority 1:	Fast track the release and development of commercial, industrial and residential land

The following sections of the draft "Pilbara Port City Growth Plan" are considered relevant to the proposal:

Section 5.7 12 Precinct 14:	Southern
Precinct Highlight:	South Hedland rural residential estate expansion

Budget Implications

The applicant has paid an application fee of \$7,556.20, as per the approved fees and charges.

Officer's Comment

Proper and Orderly Planning

Proper and orderly planning would dictate that the natural development pattern is from high density around town centres with a gradual decline in density the further removed there from.

While this is ideal planning principles, it is often not achievable due to historical planning decision and market forces. The overall design / layout of South Hedland present unique challenges, in that the South Hedland Rural Estate is located closer to the South Hedland Town Centre than existing medium density residential development, due in part to natural constraints.

To follow ideal planning principles and preferred development patterns the applicant should be required to include the existing 61 "Rural Residential" lots located to the north (existing South Hedland Rural Residential Estate) in the subject scheme amendment.

This option has been discussed with the applicant and it is agreed that this may result in a number of objections being received as a result of the residents not having a full understanding of the proposal (i.e. residents may assume that the approval may result in the decrease in the size of their lots). This would result in either a lengthy delay or the cancellation of the entire development.

In order for the developer to provide water and electrical infrastructure to the proposed development, upgrades to the existing network will be required. Should Council approve the initiation of the scheme amendment, comments will be sort from the relevant services providers, to ensure that the existing infrastructure is not negatively impacted upon.

Sewer:

The "Draft Country Sewer Policy", notes that proposals for large subdivision or density development can be considered if they do not involve the creation of lots less than 2000m², or a density of greater than R5.

The applicant has indicated that the proposed development will be serviced by onsite effluent disposal systems.

Stormwater and Flooding

Prior to Council and the WAPC approving the subdivision of the site into 72 lots in 2009, the applicant was required to do extensive flood modelling. With the increase of residential yield from 72 to 129 the applicant's consulting engineers have again modelled the potential flooding of the area.

As a result of the additional modelling the consulting engineers concluded that

"The revised layout showing 133 lots has no additional impact to the surrounding stakeholders when compared to hydraulic modelling previously carried out for the special rural development"

Note: modelling was done as per a draft subdivision plan of 133 lots, approval of the subject scheme amendment will result in a maximum yield of 129 lots.

Additional conditions will be imposed through the subdivision application requiring that a section 70A to be placed on every title, notifying potential purchasers that building pads are to be a minimum of 500mm above the 1:100 year flood line. Further the applicant will be required to provide the 1:100 year flood line for every lot as part of the subdivision.

Community Benefit

The developer acknowledges this concern and are willing to as part of their own development provide infrastructure works up to a value of \$1,500,000 for upgrades associated with the existing South Hedland Rural Estate. The infrastructure works proposed to be included are

- Flood crossing at Yarne Road to ensure road flooding does not occur during a reasonable storm event

Officer's Recommendation

That Council:

- 1 Initiate an amendment to the Town of Port Hedland Town Planning Scheme No. 5, by amending the zoning of a portion of Lot 226 Forrest Location from "Rural Residential" to "Residential R2.5"
- 2 Requests the applicant to prepare the formal amendment documentation to enable referral to the Environmental Protection Authority
- 3 Following approval from the EPA to advertise the amendment, Council advertises the proposed amendment in accordance with section 83 of the PDA to consult persons likely to be affected by the amendment, and also advertise the amendment for a minimum of 42 days pursuant to section 84 of the PDA.
- 4 Should there be no submission received during the statutory advertising period, Council formally adopts Scheme Amendment 51 in accordance with the provisions of the Planning and Development Act.
- 5 Delegates the Director Planning and Development to forward Town Planning Scheme Amendments to the Planning Commission for final approval in the case of:
 - i) The proposal being of an uncontroversial nature.
 - ii) The date of adoption of Council's final approval shall be the date of the next Council Ordinary Meeting following the closing date of the advertising period
- 6 Approves the use of the Common Seal on amendment documents subject to 4 above.
- 7 Requests the Chief Executive Officer to enter into a Memorandum of Understanding with the developer to formalise infrastructure upgrades on Yarrle and Quartz Roads and investigations into service infrastructure within South Hedland Rural Estate. The Memorandum of Understanding is to be finalised prior to points 4,5 and 6 above being undertaken.

NOTE: SIMPLE MAJORITY VOTE REQUIRED

ATTACHMENT 2 TO ITEM 11.1.9

ATTACHMENT 2

Our Ref: 10/017 IM:cc

26 November 2011

Attention: Mr Leonard Long, Manager Planning

Chief Executive Officer
Town of Port Hedland
PO Box 41
PORT HEDLAND WA 6721



Dear Sir

QUARTZ ESTATE – SCHEME AMENDMENT REQUEST

Taylor Burnett Barnett acts on behalf of Messrs Barry Pound and Paul Summers, the owners of Quartz Estate – Pt location 226, South Hedland (subject site). We refer to recent discussions and agreements reached between Mr Barry Pound and the undersigned with your Mr Leonard Long regarding the approval process for the Quartz Estate subdivision.

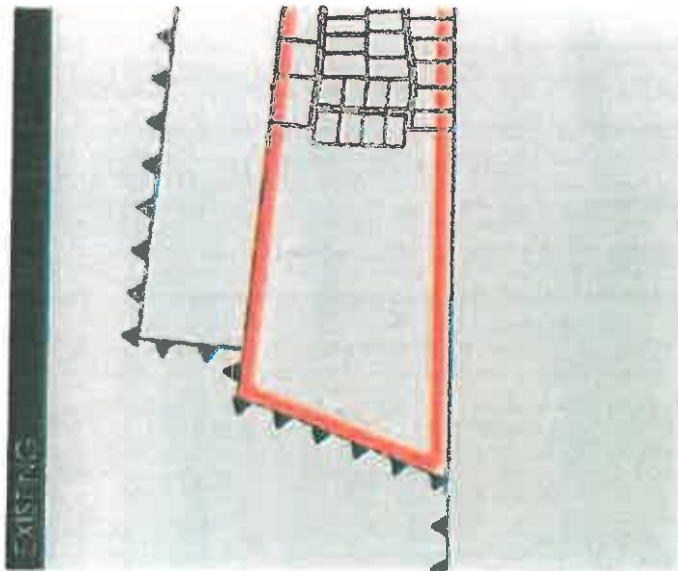
Our Office has lodged under our letter of 9 August 2011 a Development Plan with the Town of Port Hedland for the subdivision of the site into 132 lots of varying sizes, ranging from approximately 3,000m² to 2.5ha. Based on the Town's preliminary assessment and legal advice received from its solicitor, the Town's Technical Officers have recommended that a Scheme Amendment be pursued to zone the land to Residential R2.5, to accommodate subdivision generally in accordance with the Development Plan proposal. Whilst we maintain the position that approval could be granted by the Town for the Development Plan under the existing Rural Residential zone applicable to the site and thus permitting subdivision, our Client has agreed to request a Scheme Amendment (Residential R2.5) and accordingly withdraw the current Development Plan proposal from the Town's consideration. We understand the Town will not require the approval of a Development Plan as a prerequisite to subdivision.

In accordance with the Town's Technical Officers' advice, we respectfully request the Shire to amend Town Planning Scheme No. 5 (TPS 5) to zone the majority of the site Residential with an R2.5 density code. Those areas within the site not subject to this request will remain zoned Rural Residential (refer Figure 1 – Proposed Zoning Plan). In support of this request a Subdivision Concept Plan has been prepared to depict a possible subdivision layout for the site in accordance with the proposed zoning (refer Figure 2 – Subdivision Concept Plan). All lots less than 1ha are proposed to be zoned Residential R2.5, with those lots larger than 1ha on the eastern side of the site being retained as Rural Residential. All lots proposed to be zoned Residential on the Subdivision Concept Plan are greater than 4,000m² with a minimum road frontage of 40m, in accordance with the Residential Design Codes for the R2.5 density code. The studies and related documentation contained within the Development Plan proposal remain valid and should be taken into consideration as part of the Town's determination of this request.

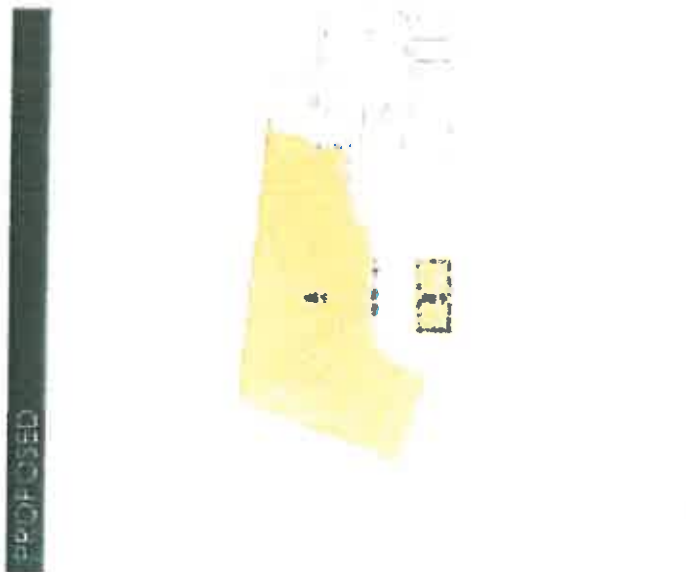
As an alternative to amending the zoning for only portions of the site, it is suggested the Shire consider zoning the entire site Residential R2.5, which will ensure a consistent zoning across the site. A textual amendment could be undertaken to TPS 5 to include a provision which restricts the large lots (i.e. those over 1ha) that are constrained by roadway requirements from being further subdivided.

Attachment 3

SCHEME AMENDMENT MAP
TOWN OF PORT HEDLAND
Town Planning Scheme No.5
Amendment No. XX



- ZONES**
- RURAL
 - RURAL RESIDENTIAL
- OTHER**
- SPECIAL CONTROL AREAS



- ZONES**
- RESIDENTIAL
- OTHER**
- R CODES



Prepared by: [illegible]
Date: [illegible]



Quartz Estate

APPENDIX 7
MINUTE FROM COUNCIL MEETING DATED 14
DECEMBER 2011

Council Motion

Moved: Cr D W Hooper

Seconded: Mayor K A Howlett

That Council:

- 1. Initiate an amendment to the Town of Port Hedland Town Planning Scheme No. 5, by amending the zoning of a portion of Lot 226 Forrest Location from "Rural Residential" to "Residential R2.5".**
- 2. Requests the applicant to prepare the formal amendment documentation to enable referral to the Environmental Protection Authority.**
- 3. Following approval from the EPA to advertise the amendment, Council advertises the proposed amendment in accordance with section 83 of the PDA to consult persons likely to be affected by the amendment, and also advertise the amendment for a minimum of 42 days pursuant to section 84 of the PDA.**
- 4. Request the Chief Executive Officer to investigate alternative access provisions to assist in traffic management in the area and to report back to Council on these findings after the public submission period.**

MOTION LOST 3/4

Record of Vote:

FOR	AGAINST
Mayor K A Howlett	Cr A A Carter
Cr G J Daccache	Cr J M Gillingham
Cr D W Hooper	Cr M B Dziombak
	Cr J E Hunt

APPENDIX 8
OFFICER REPORT TO COUNCIL MEETING DATED 25
JANUARY 2012

11.1.5 Proposed Scheme Amendment No. 52 to the Town of Port Hedland Town Planning Scheme No. 5 to recode portion of Lot 226 Forrest Location (Lot 226 South Hedland Rural Estate) South Hedland from "Rural Residential" to "Residential – R2.5" (File No. 18/09/0066)

Officer	Leonard Long Manager Planning Services
Date of Report	4 December 2012
Disclosure of Interest by Officer	Nil

Summary

This report requests that Council consider a request received from Taylor Burrell Barnett Town Planners on behalf of Barry Pound and Paul Summers, the owners of Lot 226 Forrest Location (generally known as Lot 226 South Hedland Rural Estate and hereafter referred to as the site), to amend the Port Hedland Town Planning Scheme No. 5, by amending the zoning of a portion of Lot 226 Forrest Location from "Rural Residential" to "Residential R2.5".

Background

NEW This report was presented to Council at the Ordinary Meeting of 14 December 2011, however, as no formal decision was taken, Officers are re-submitting their report for Council's consideration.

A request has been received from Taylor Burrell Barnett Town Planners on behalf of Barry Pound and Paul Summers, the owners of Lot 226 Forrest Location (generally known as Lot 226 South Hedland Rural Estate and hereafter referred to as the site), to amend the Port Hedland Town Planning Scheme No. 5, by amending the zoning of a portion of Lot 226 Forrest Location from "Rural Residential" to "Residential R2.5".

Through the gazettal of Port Hedland Scheme No. 5 (TPS5), the entire Lot 226 Forrest Location was zoned "Rural Residential". This zoning was consistent with the subdivision application supported by Council in 1998, permitting the subdivision of the site into 131 lots.

Subsequently only 61 of the 131 lots had titles registered leaving the remaining portion of Lot 226 Forrest Location measuring 92.7 hectares undeveloped "Rural Residential" land.

In 2010, Council supported a request to subdivide the remaining portion of Lot 226 Forrest Location, into 71 "Rural Residential" lots, a request permitted in terms of clause 6.8.4 of TPS5.

Consultation

Should Council resolve to initiate this amendment, the documentation is to be submitted to the Environmental Protection Authority (EPA) for consideration pursuant to section 81 of the Planning and Development Act 2005 (PDA) and then advertised for public comment.

Statutory Implications

The *Planning and Development Act 2005* and the *Town Planning Regulations 1967* provide Council the authority to amend its Local Planning Scheme and establish the procedure required to make this amendment.

Policy Implications

Nil

Strategic Planning Implications

The following section of Council's Strategic Plan 2010-2015 is considered relevant to the proposal:

Key Result Area 4:	Economic Development
Goal 4:	Land Development Projects
Immediate Priority 1:	Fast track the release and development of commercial, industrial and residential land.

The following sections of the draft "Pilbara Port City Growth Plan," are considered relevant to the proposal:

Section 5 7 12 Precinct 14:	Southern
Precinct Highlight:	South Hedland rural residential estate expansion.

Budget Implications

The applicant has paid an application fee of \$7556.20, as per the approved fees and charges.

Officer's Comment

Proper and Orderly Planning

Proper and orderly planning would dictate the natural development pattern is from high density around town centres with a gradual decline in density the further removed there from.

Traffic and Road Network

The applicant as part of the Development Plan submission included a traffic assessment prepared by VDM Consulting Engineers. The traffic assessment was prepared to consider the relative impact of increasing the density to provide a yield of 143 residential lots. The approval of the subject scheme amendment results in a lower density as to what was proposed in the Development Plan, providing the ability to subdivide the site into 129 lots, 14 lots less than what was considered in the traffic assessment.

At the Ordinary Council Meeting of 14 December 2011, the Elected Members raised concern over the potential impact the proposed density may have on the lifestyle of the area. In this regard it must be noted the subject site is currently totally undeveloped, any potential purchasers will be aware of the proposed lots sizes and will make the life style choice accordingly.

There may be perceived there will be a negative impact on the life style of the existing South Hedland Rural Estate due to an increase in traffic.

According to the Roads and Traffic Authority (2002) the multiplication factor associated this type of development is 0.85 per dwelling.

Using the above factor as a basic calculation the following traffic scenarios are applicable:

Existing Traffic Generation (South Hedland Rural Estate)	55 trips per peak hour
Existing Traffic Generation plus the approved 71 Lots (not developed)	55 + 61 116 trips per peak hour
Existing Traffic Generation + the proposed 143 lots (subject site)	55 + 122 177 trips per peak hour

Effectively the net increase in traffic from what is currently approved to what can be developed should the scheme amendment be successful would be 61 trips per peak hour. Council Officers are of the opinion this impact will be negligible.

VDM Consulting Engineers concluded that there are no material traffic impacts associated with the proposed density and subsequent subdivision of the site.

Water and Electricity

In order for the developer to provide water and electrical infrastructure to the proposed development, upgrades to the existing network will be required. Should Council approve the initiation of the scheme amendment, comments will be sort from the relevant services providers, to ensure that the existing infrastructure is not negatively impacted upon.

Additional conditions will be imposed through the subdivision application requiring a section 70A to be placed on every title, notifying potential purchasers that building pads are to be a minimum of 500mm above the 1:100 year flood line. Further the applicant will be required to provide the 1:100 year flood line height for every lot as part of the subdivision.

Community Benefit

The developer acknowledges this concern and are willing to as part of their own development provide infrastructure works up to a value of \$1,500,000 for upgrades associated with the existing South Hedland Rural Estate. The infrastructure works proposed to be included are:

- Flood crossing at Yarrie Road to ensure road flooding does not occur during a reasonable storm event.
- Investigation of upgrading of scheme water infrastructure to accommodate better pressure with, at a minimum, a booster pump station being constructed to improve water pressure within South Hedland Rural Estate, and to ensure dwellings are suitably serviced.
- Investigation of power supply issues (such as power spikes / surges) with advice issued to the Town of Port Hedland.
- Construct remedial works within South Hedland Rural Estate to protect fire hydrants and install appropriate signage and lighting to address "safety" and "flood risks".
- Upgrading of Quartz Quarry Road by grading and sealing to a "rural" standard.
- Construction of unfinished sections of Councillor Road to match the adjacent Councillor Road pavement.
- Providing flood modelling reports for South Hedland Rural Estates to the Town, to enable flood level information to be issued to residents of each lot, as required.

The developer has indicated their willingness to enter into a memorandum of understanding with the Town to formalise the above infrastructure works.

Options

Council has the following options when considering the proposal:

- 1 Initiate the Scheme Amendment as proposed

This would allow the site to be developed in a manner which does not conflict with the existing development of South Hedland Rural Estate.

- i) The proposal being of an uncontentious nature.
 - ii) The date of adoption of Council's final approval shall be the date of the next Council Ordinary Meeting following the closing date of the advertising period
6. Approves the use of the Common Seal on amendment documents subject to 4 above.
 7. Requests the Chief Executive Officer to enter into a Memorandum of Understanding with the developer to formalise infrastructure upgrades on Yarrie and Quartz Roads and investigations into service infrastructure within South Hedland Rural Estate. The Memorandum of Understanding is to be finalised prior to points 4,5 and 6 above being undertaken.

NOTE: SIMPLE MAJORITY VOTE REQUIRED

OR

Officer's Recommendation 2

That Council refuses to initiate an amendment to the Town of Port Hedland Town Planning Scheme No. 5, to recode portion of Lot 226 Forrest Location (Lot 226 South Hedland Rural Estate) South Hediand from "Rural Residential" to "Residential - R2.5"

NOTE: SIMPLE MAJORITY VOTE REQUIRED

ATTACHMENT 2 TO ITEM 11.1.5

ATTACHMENT 2

Our Ref: 102012 LM CL

28 November 2011

Attention: Mr Leonard Long, Manager Planning

Chief Executive Officer
Town of Port Hedland
PO Box 41
PORT HEDLAND WA 6721



Dear Sir

QUARTZ ESTATE – SCHEME AMENDMENT REQUEST

Taylor Burrell Barnett acts on behalf of Messrs Barry Poud and Paul Summers, landowners of Quartz Estate – Pt Location 226, South Hedland (subject site). We refer to recent discussions and agreements reached between Mr Barry Poud and the undersigned with your Mr Leonard Long regarding the approval process for the Quartz Estate subdivision.

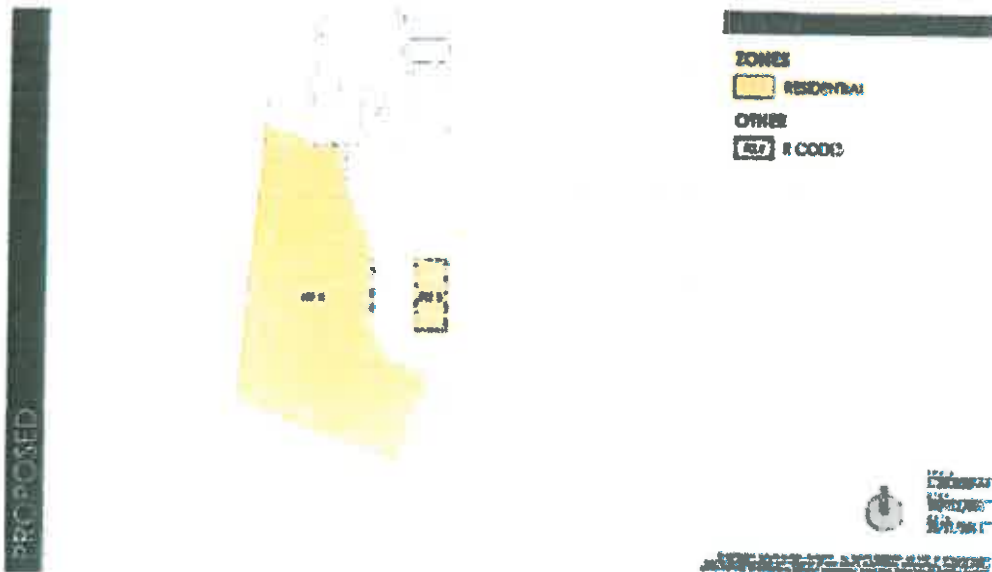
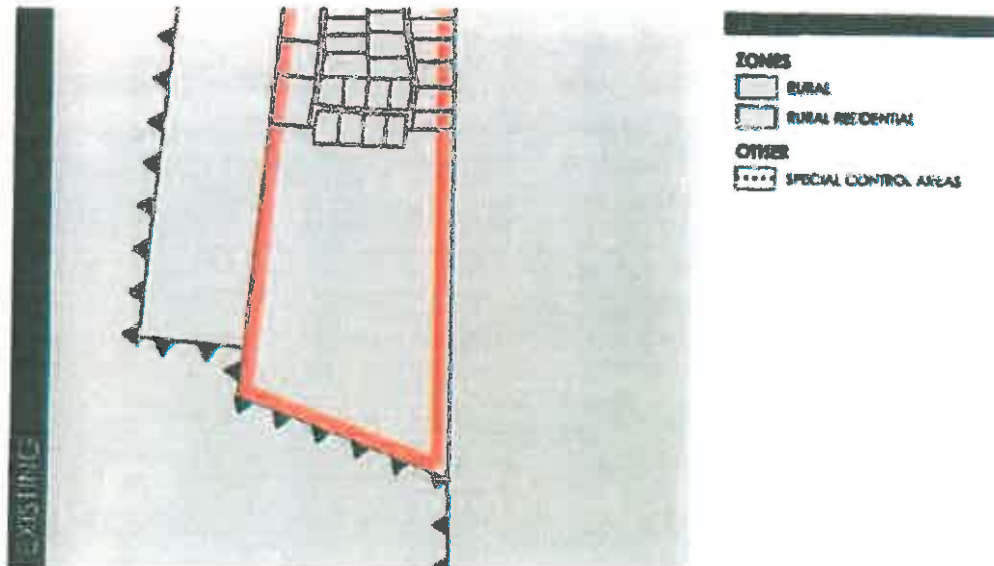
Our Office has lodged under our letter of 9 August 2011 a Development Plan with the Town of Port Hedland for the subdivision of the site into 133 lots of varying sizes, ranging from approximately 3,000m² to 2.5ha. Based on the Town's preliminary assessment and legal advice received from its solicitor, the Town's Technical Officers have recommended that a Scheme Amendment be pursued to turn the land to Residential R2.5, to accommodate subdivision generally in accordance with the Development Plan proposal. Whilst we maintain the position that approval could be granted by the Town for the Development Plan under the existing Rural Residential zone applicable to the site and thus permitting subdivision, our Client has agreed to request a Scheme Amendment (Residential R2.5) and accordingly withdraw the current Development Plan proposal from the Town's consideration. We understand the Town will not require the approval of a Development Plan as a prerequisite to subdivision.

In accordance with the Town's Technical Officers' advice, we respectfully request the Shire to amend Town Planning Scheme No. 5 (TPS 5) to zone the majority of the site Residential with an R2.5 density code. Those areas within the site not subject to this request will remain zoned Rural Residential (refer Figure 1 – Proposed Zoning Plan). In support of this request a Subdivision Concept Plan has been prepared to depict a possible subdivision layout for the site in accordance with the proposed zoning (refer Figure 2 – Subdivision Concept Plan). All lots less than 1ha are proposed to be zoned Residential R2.5, with those lots larger than 1ha on the eastern side of the site being retained as Rural Residential. All lots proposed to be zoned Residential on the Subdivision Concept Plan are greater than 4,000m² with a minimum road frontage of 60m, in accordance with the Residential Design Codes for the R2.5 density code. The studies and related documentation contained within the Development Plan proposal remain valid and should be taken into consideration as part of the Town's determination of this request.

As an alternative to amending the zoning for only portions of the site, it is suggested the Shire consider zoning the entire site Residential R2.5, which will ensure a consistent zoning across the site. A textamendment could be undertaken to TPS 5 to include a provision which restricts the large lots (i.e. those over 1ha) that are constrained by floodway requirements from being further subdivided.

Attachment 3

SCHEME AMENDMENT MAP
TOWN OF PORT HEDLAND
Town Planning Scheme No.5
Amendment No. XX



SEAL OF THE TOWN OF PORT HEDLAND

01



Quartz Estate

APPENDIX 9
MINUTE FROM COUNCIL MEETING DATED 25
JANUARY 2012

Council Motion

Moved: Cr G A Jacob

Seconded: Cr G J Daccache

That Council agrees to reconsider Officer's Recommendation 1b, presented at Ordinary Council meeting of 14 December 2011 and unresolved, pursuant to Standing Order Local Law section 18.2 'Negotiated Motions'.

MOTION LOST 3/4

Council Motion

Moved: Cr G A Jacob

Seconded: Cr G J Daccache

That Council lay this Item on the table.

NOTE: Before the above motion was put to the vote, Councillor A A Carter made a point of order.

201112/292 Council Decision

Moved: Cr A A Carter

Seconded: Cr G J Daccache

That this Ordinary Meeting of Council be adjourned while the Chief Executive Officer seeks counsel.

CARRIED 7/0

6:31pm Mayor advised elected members and the public gallery that the Meeting has been adjourned and will reconvene shortly.

201112/293 Council Decision

Moved: Cr A A Carter

Seconded: Cr G J Daccache

That this Ordinary Meeting of Council resume.

CARRIED 7/0

6:44pm The Mayor advised elected members and the public gallery that the Meeting has resumed.

Quartz Estate

**APPENDIX 10
LETTER FROM MINISTER FOR LANDS**



**Minister for Regional Development; Lands;
Minister Assisting the Minister for State Development**

Our ref: 27-18866/3

Mr Barry Pound
Director
LJ Hooker
Level 10, 68 St Georges Terrace
PERTH WA 6831

Dear Mr Pound

Freehold Land In South Hedland – Subdivision Proposals

Thank you for your email of 11 January 2012 regarding your proposed development of 129 dwellings in South Hedland.

I understand that the Town of Port Hedland Council refused to initiate your re-zoning application at their meeting on 25 January 2012 and that you are intending to appeal to the Minister for Planning for him to intervene using his powers under Section 76 of the *Planning and Development Act 2005*. As you will appreciate jurisdiction lies with the Minister for Planning and not myself.

Thank you for bringing the issue to my attention and I would be pleased to learn the outcome of your appeal.

Yours sincerely

 - I will speak with John Day on this B.
**HON BRENDON GRYLLES MLA
MINISTER FOR LANDS**

7 MAR 2012