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lr5639cy050217North Cooranbong Servicing.doc

JW Planning
PO Box 3252
Valentine NSW
NSW 2280

17 February 2005

Attention: Mr Jason Wasiak

Dear Sir

NORTH COORANBONG BULK WATER SUPPLY AND WASTEWATER SERVICING

Please find detailed below a brief assessment of water and wastewater servicing issues relating to the North Cooranbong proposal. Patterson Britton and Partners are currently preparing a bulk water supply and wastewater transport options study for the site which will be available mid March. The study examines servicing issues, in particular in relation to the early stages of the development.

Consultation with Hunter Water

Consultation with Hunter Water Corporation (HWC) has to date been reasonably involved and has included several meetings and two formal servicing advice letters, dated 21 April 2004 and 20 October 2004 (attached). HWC has indicated no objection to the development, and has identified connection points to existing water and sewer assets.

HWC, PBP, and Avondale Developments (the proponent) agree that as with all large developments of the size of North Cooranbong (approximately 2300 lots), staging over time would allow the development to be serviced in harmony with future HWC upgrades to existing infrastructure. Hunter Water is currently putting in place strategies to amplify existing infrastructure in the Cooranbong Area, and is making allowance for the North Cooranbong proposal.

Servicing issues are further discussed below:

Water Supply

Connection points have been nominated by HWC as:

- Connection to the Dora Creek Reservoir (approximately 3 km) for development below 30 m, and,



Principals

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- Connection to the junction of dual 375 mm water mains at Dora Creek (4.4 km) for development above this level.

It is noted that very little of the development will lie below the 30 m contour, and early stages may require the construction of a water reservoir/tower on the North Cooranbong development site. Ultimately it is expected that the development would be serviced as part of the wider HWC Cooranbong servicing strategy. HWC is currently preparing this regional servicing strategy which will be available mid to late 2005.

Wastewater Treatment

There is currently insufficient capacity in the Dora Creek Waste Water Treatment Works (WWTW) to accommodate the ultimate development. Currently the WWTW has capacity for early stages of the development (approximately 200 lots), however this amount could be increased in a relatively short timeframe following a capacity review of the WWTW. HWC have instigated such a review, the results of which are expected to be made available mid 2005. HWC have indicated that additional capacity may be available at the plant in 2008/2009.

Connection to the Dora Creek WWTW

HWC has suggested two options for connection to the Dora Creek Waste Water Treatment Works (WWTW).

- Construction of a new waste water transfer pump station and rising main connecting directly to the Dora Creek WWTW via Newport Rd, or,
- Connection to existing Cooranbong WWPS No. 7 with significant upgrades of both this station and downstream infrastructure connecting to the Dora Creek WWTW.

Of these two options the most cost effective in the long term is likely to be a direct connection to the Dora Creek WWTW. HWC have indicated support for this strategy, and this connection is likely to be required to allow early stages of the development to proceed.

Summary

PBP would consider the servicing constraints indicated above to be not uncommon for a development of this size and addressable through planned staging of the development in harmony with HWC upgrades, in particular the Dora Creek WWTW. Early stages of the development will require some upfront water and wastewater capital works most likely including construction of a water reservoir and booster water pump station on the site with a piped connection to Dora Creek, and a pumped wastewater connection to Dora Creek Wastewater Treatment Plant.



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community and the
environment*

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21 April 2004

Ref: C5/26330

→ Chris Yates - for att'n.

Patterson Britton & Partners Pty Ltd
PO Box 668
NEWCASTLE 2300

Patterson Britton
& Partners Pty Ltd
Newcastle

27 APR 2004

RECEIVED

Dear Sir/Madam

RE WATER & SEWER ENQUIRY - OLD COORANBONG AIRPORT SITE

I refer to your letter of 9th December 2003 regarding the provision of water and sewerage facilities to the development of approx 2000 lots at the old Cooranbong Airport site and offer the following comments:

Water Distribution

A preliminary review of the proposed development area indicates that land below RL 20m should be able to connect to the Dora Creek Reservoir water supply system allowing for augmentation of regional bulk distribution assets and lead-in water mains.

However, areas above RL 20m would be required to connect to a new high level water supply system. This may involve construction of reservoirs, pump stations and trunk water mains. Those areas of the proposed development known to be above RL 20m are shown on Exhibit 1.

A water supply Servicing Strategy Study is currently in progress for the Morisset area, which is anticipated to be completed by late 2004. This study will consider this development area and propose strategies to service the subject development area. At that time the Corporation would be in a better position to comment on works required to service the development area. If the developer wishes to proceed with the development of this land prior to the completion of this study, the developer would be required to undertake an independent servicing strategy to determine the appropriate method of water supply to the development in accordance with the Corporations Design Manual.

Wastewater Transportation

A preliminary assessment of the proposed development and the services in its vicinity have identified two possible alternatives for the provision of a suitable connection:

1. Construction of a new rising main directly to the Dora Creek Wastewater Treatment Plant.
2. Connection to the Cooranbong No. 7 WWPS, requiring the upgrade of Cooranbong No. 7 WWPS and also all WWPS leading to the Dora Creek WWTW, along with gravity system upgrades to cater for the flows in each of the receiving catchments.

Consideration of connection to the vacuum system in Dora Creek, which is closest to the proposed development was considered, however this system does not have sufficient capacity to allow the proposed development to discharge to it and the Corporation will not

consider further expansion of the vacuum system.

Wastewater Treatment

Currently the Dora Creek WWTW has spare capacity for approximately 200 ET. If this development proceeds, the developer will be required to provide significant lead times to ensure sufficient time is provided to undertake any required upgrade works to the WWTW to cater for the additional loading.

Hunter Water will be undertaking a capacity review of the Dora Creek WWTW commencing in late 2004 with a view to determining augmentation works required at the plant and the timing needs of these works.

Based on the outcomes of the study Hunter Water would then move into a design phase during 2005.

Yours faithfully



Brett Lewis
Developer Services Engineering Manager
Business & Urban Development

Enquiries: Steve Goulding
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PAID TO SUPPLYING

20 October 2004

am



C5/26330 22 OCTOBER -

Patterson Britton & Partners Pty Ltd
PO Box 668
NEWCASTLE 2300

Attention: Chris Yates *X*

Dear Sir,

**RE: NORTH COORANBONG (COORANBONG AIRPORT) WATER & SEWER
SERVICING**

I refer to your letter of 19th September 2004 regarding the preparation of a preliminary water and sewer servicing plan and offer the following advice:

Water Supply

- The water supply servicing strategy currently being prepared for the Morisset area includes this development site.
- The water servicing strategy is now scheduled for completion in early 2005.
- The connection points for the development would be the Dora Creek reservoir and the junction of the dual 375mm diameter watermain at Dora Creek (refer to attached plan).

Please note that the estimated water demands calculated shown in your letter are incorrect and will need to be revised in accordance with Hunter Water's Design Manual.

Wastewater Transportation

Cooranbong No. 7 WWPS currently has spare capacity for an additional 120 ET, however this is likely to diminish over time. Beyond this loading, significant upgrading works would need to be undertaken to provide additional capacity through the existing system configuration. Therefore, initial stages of the development may be able to connect to the existing system without the need for upgrading works.

However, due to the significant size of the development (2500 ET) and the lack of capacity in the transportation system in the Cooranbong area (120 ET), your servicing strategy will need to assume that Dora Creek Wastewater Treatment Works is the connection point for the overall development. Any surrounding land parcels that are appropriately zoned are to be included in the servicing strategy.

Wastewater Treatment

Hunter Water notes your proposed development is subject to rezoning and development approvals. Depending on the timeframe to complete these processes and your staging strategy Hunter Water may have capacity available at its Dora Creek Wastewater Treatment Plant for the initial stages of your development.

Hunter Water will be undertaking a capacity review of the Dora Creek WWTW commencing in late 2004 with a view to determining augmentation works required at the plant and the timing needs of these works.

Based on the outcomes of the study Hunter Water would then move into a design phase during 2005 with additional capacity at the plant likely in 2008/2009.

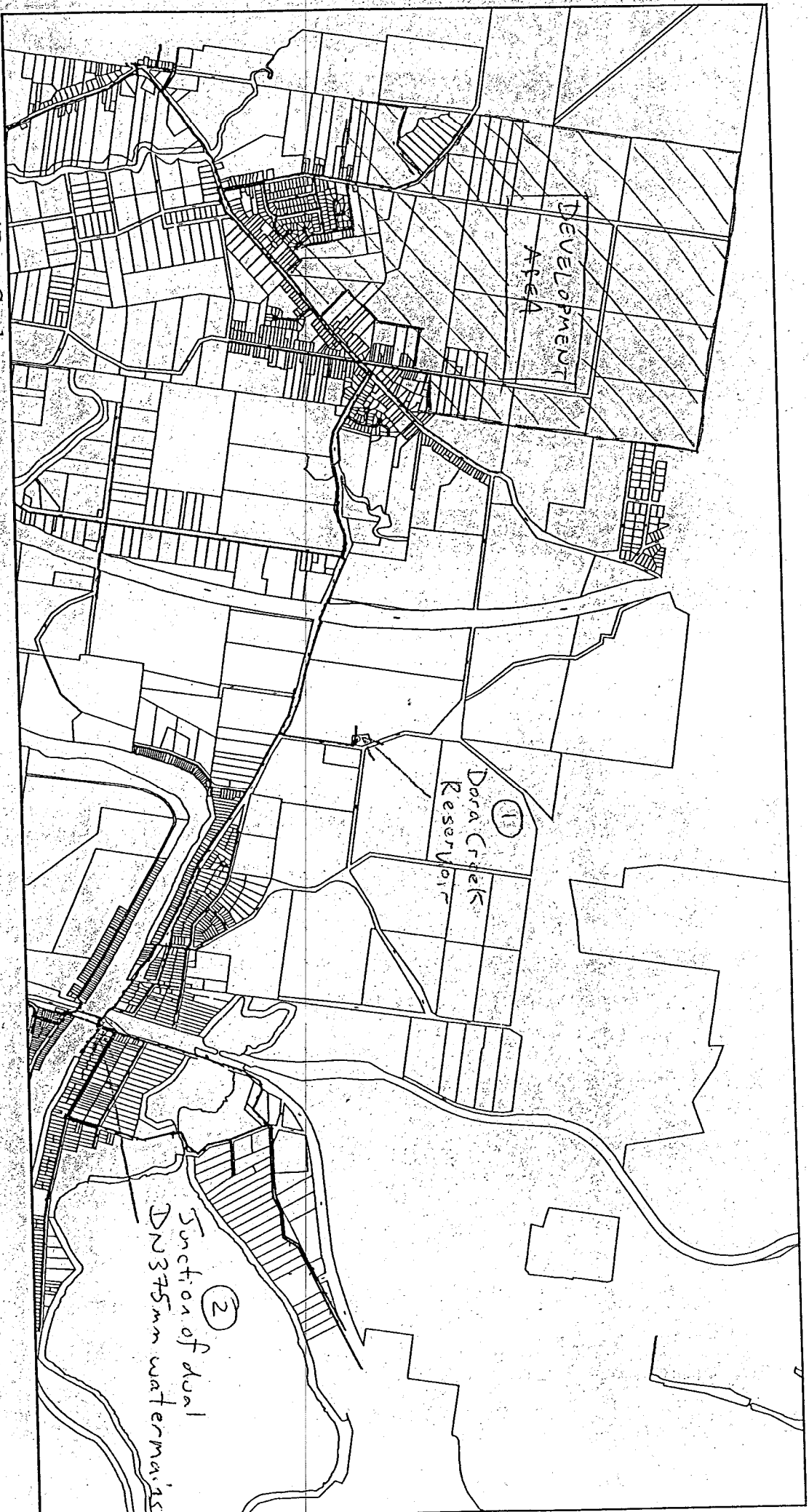
Should you require any additional information or clarification of the information provided, please contact Steve Goulding on the number listed below.

Yours faithfully



Brett Lewis
Developer Services & Trade Waste
Engineering Manager
Business & Urban Development

Enquiries: Steve Goulding
Tel: 02 4979 9726
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Notes: Cooranbong / Dora Creek area
FRAMME Web View