Prepared for:

Fitzwalter Group on behalf of Pasminco Cockle Creek Smelter Pty Ltd

PASMINCO COCKLE CREEK SITE

Stage 2 Rezoning

Site Trunk Services Strategy

Prepared by:

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Dated:

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Project No:

SY080685

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1. EXECUTIVE SUMMARY

Water

Advice has been received from Hunter Water to confirm that its system is able to deliver sufficient capacity and pressure to supply the anticipated future development of the site, however some upgrade/amplification works may be required.

The extent of Hunter Water upgrade/amplification works required continues to be under discussion with Hunter Water. To date, however, Hunter Water has advised that it plans to construct a new reservoir in the Munnibung Hills to supply high level development. The proposed reservoir will provide sufficient pressure to supply to approximately RL83m, which is well above the proposed PCCS site development limit. The final approval of the proposed reservoir is with Hunter Water, however this document has been prepared on the basis that the reservoir will be constructed at some time in the future.

All future trunk water mains will be located within the road reserves proposed for the road network.

Sewer

Based on current advice the total Hunter Water sewer system capacity available is adequate, however some connection points do not have adequate capacity to cater for the lots draining directly to them. To overcome this, sewer pump stations will be provided at certain locations to deliver sewer to connections points with available capacity.

The augmentation of the reticulation system, if required, will be confirmed as part of the sewer servicing strategy. This strategy will need to be prepared by a Hunter Water approved service provider following Council development consent for each precinct. This strategy is in the course of preparation.

Electrical

Energy Australia has been provided with sufficient technical information and calculated data to enable it to advise on major planning issues. Meetings with EA staff in January and February 2007 and more recently in 2009 have enabled a reticulation strategy to be determined.

Energy Australia has indicated that 11kV supply for the CWE area is likely to be available from the new Argenton zone sub- station. Preliminary design for a short term link from the Argenton zone sub-station to CWE is underway.

Consideration has been given to under-grounding of existing HV feeders within the site. It is anticipated that, in general, the existing 33kV feeders crossing the site will be under-grounded in the long term, likely as part of the construction of the necessary site road infrastructure. Existing 132kV overhead transmission lines will be retained in their existing locations.

New trunk Electrical mains proposed will be located within the road reserves proposed for the road network.

Communications

Communications supply to the proposed development will be provided by Telstra. All Telstra mains will be located within the road reserve. Preliminary discussions with Telstra have indicated that there should be no significant issues associated with communications supply.

Gas

At this stage Alinta have advised preliminary connection points and that final connection points will only be nominated once the land use for each precinct is confirmed. No significant issues are expected for supply of gas to the development.

2. INTRODUCTION

This report identifies the existing trunk services that supply the Pasminco Cockle Creek Smelter (PCCS) site and makes recommendations for the provision of Trunk Services for the proposed redevelopment of the PCCS site. The proposed redevelopment consists of number of precincts that, once remediated, will be rezoned for release and further future redevelopment. This report has been carried out subsequent to the Engineering Services Reports for rezoning (for development lots previously known as Lots 1, 3, 4, 5 and 7) prepared by Umwelt Environmental Consultants Pty Ltd.

The trunk services investigated in this report are: water, sewer, gas and electricity. A separate report entitled *Stormwater Management and Water Quality Concept Report* dated June 2009 deals with stormwater management on the site.

This report investigates the provision of trunk services to each precinct and the effect that different land use zonings will have on the servicing strategy for each precinct. The report identifies easements that will be required to allow the staging of the release of each precinct.

Representation has been made to the relevant service authorities with regard to the site. Recommendations provided in this issue of our report are preliminary only and will require review as the authorities' advice is received. Servicing requirements have been prepared based on information received by the consultant team and our experience of what is likely to be required.

Table 1.0 describes each precinct that is referred to in this report. The drawing included in Appendix A illustrates the site layout and precinct areas considered. The descriptions in Table 1.0 and the site layout in Appendix A are not the final layout as envisaged in the rezoning. It as developed early in the process as a descriptive tool for consultative and inquiry purposes. The development envisaged under the rezoning does not differ from the layout in Appendix A to such an extent as to alter the major conclusion of this report that all services are available or can be readily extended to meet the needs of the development.

Table 1.0 Proposed Precincts

Precinct	Anticipated Precinct Use
01	Employment
02	Residential (mixed low and medium density)
03	Employment
04	Residential (mixed low and medium density)
05	Residential (low density)
06	Residential (low density)
07	Industrial
08	Residential (mixed low and medium density)
09	Employment
10	Employment
PCC	Open space with potential minor industrial
Incitec	Residential (mixed low and medium density)

3. SITE EARTHWORKS STRATEGY

To provide advice with regard to the strategy for providing gravity services it is necessary to look at the topography of the site as a whole. The PCCS site requires extensive remediation to clean the site of environmental contaminants. To this end an approved remediation plan is currently being implemented on site. Remediation will ensure the resulting site is suitable for rezoning and redevelopment for the proposed land uses.

Remediation will require extensive earthworks to remove and treat all identified contaminants in an environmentally acceptable manner. The site will also require final shaping after remediation to suit the proposed land use. The final topography will have an effect on all gravity trunk services in determining which direction gravity services are directed.

An estimate of the earthworks required to carry out remediation is contained in Table 2.0 below. Parcel names shown in the table may not match current nomenclature for the site.

Table 2.0 Remediation Excavation Volumes

Parcel / Item	Area (m2)	Excavation Vol (inc 25%)	Comments
[1] Cardiff West Estate (Clay pits)	160,331	18,750	as per detailed plan - primarily 1 consolidated deep hotspot (average 2.5m)
[3] Triangle Paddock sth	72,687	37,500	as per detailed plan - primarily surface scrape with 1 major deep hotspot (1m)
[4] Main Entry Precinct & Tri Pad nth	132,142	45,381	as per detailed plan - primarily surface scrape with 1 major deep hotspot (1.5m)
[5] Railway Employment Zone	114,838	52,513	primarily from dams (~2.5m deep sediments) + surface scrape other areas
[6] Munibung Slopes Industrial Estate	45,266	11,317	surface scrape only - 0.2m deep across site
[7] Boolaroo Heights	101,335	25,334	surface scrape only - 0.2m deep across site
[8] Old Plant Area	122,215	170,598	varies - as per depth model plan - deep channel through middle
[9] Munibung Hill Residential	224,857	56,214	surface scrape only - 0.2m deep across site
[10] Mixed Use Zone	89,939	139,254	approx 1.5m deep across site - refer depth model plan
[11] Cell Surrounds	59,636	121,169	varies - as per depth model plan - dam seds @ ~ 2.5m deep
[12] Cell	170,591	N/A	no remediation excavations to be undertaken
Munibung Hill Undevelopable	535,135	N/A	no remediation excavations to be undertaken

ACOR Consultants have prepared a preliminary 3D topographical computer model of the post remediation site to enable earthworks quantities necessary to reshape the site for development to be calculated, budgets prepared and the earthworks strategy necessary for development be determined. The model will also used to determine the post development catchments for all gravity services.

The recommendations made in the following sections are based on a preliminary grading of the site to allow catchments to be determined only.

Detailed earthworks modelling will be carried out after the final post-remediation surface is known. Generally an earthworks balance will be achieved to avoid importing or exporting large amounts of materials from the site.

A drawing of the preliminary bulk earthworks contours for determination of post development catchments is included in Appendix B.

4. EXISTING SERVICES

A full services search has been carried out to the areas surrounding the site to identify connection points and confirm that the current information prepared in reports prepared by Umwelt Pty Ltd are still current.

The results of this services search is represented diagrammatically on Drawing CK01 included in Appendix C.

A full scanned copy of all services information received from the authorities has been prepared and is available.

5. WATER, SEWER AND GAS SERVICES

The PCCS site is generally bounded by the Great Northern Railway Line to the north and north west, T.C. Frith Avenue to the west, the Cardiff Industrial Estate to the north east, existing residential housing to the south, existing undeveloped land to the south east adjoining the Macquarie Hills residential estate and existing undeveloped land to the east of the residential areas of Boolaroo.

It is proposed to rezone the land holdings within this area for a variety of purposes including residential and light industrial. As part of this process ACOR Consultants are investigating the availability of hydraulic services to ensure there is a flexibility of land use if required and the existing services have adequate capacity to accept the additional loadings.

The hydraulic services are under the control of Hunter Water (Potable Water and Waste Water) and Alinta (formerly AGL/ Agility) (Natural Gas)

5.1 Hunter Water and Alinta Correspondence

Advice has been received by the consultant team from Hunter Water and AGL between 2004 and 2008. It should be noted that the advice from Hunter Water dated 23 December 2004 did not relate to the total site but only to the following areas:

- Extension to the Cardiff Industrial Area to the north east (18.9 Hectares)
- The development of Precinct 5 to the east of Boolaroo for residential purposes (14.85 Hectares)
- The area nominated as the Triangular Paddock (Precincts 2 and 4) for residential purposes. This area is generally bounded by T.C. Frith Avenue, Main Road and the existing Boolaroo residential area to the south (6.68 Hectares)

Copies of correspondence from Hunter Water and Alinta are included in Appendix D.

Hunter Water was requested to provide their indicative requirements for servicing the site based on the proposed land use as shown in Table 1. A copy of the letter dated 5 January 2007 is included in Appendix D. It should be noted that the advice from Hunter Water is indicative only and will be subject to the approval of a water and sewer servicing strategy for the development and the provision of the Section 50 Certificate. The certificate will confirm all details, requirements and developer contributions. The preparation of a water and sewer servicing strategy is underway.

5.2 Existing Site Hydraulic Services

5.2.1 Hunter Water

Based on information provided by Hunter Water, it is evident that water mains exist on the site. On the other hand, no sewer mains are present. The water mains are one (1) 300mm diameter and two (2) 500mm diameter Cast Iron Cement Lined (CICL) water mains along Main Road. It should be noted that the southern section of the 500mm diameter main is shown within the

Pasminco site. The exact location will need to be confirmed in the detailed planning phases.

5.2.2 Alinta

Based on details provided by Agility, a Secondary High Pressure Gas Main (150mm Diameter Nylon) crosses the Great Northern Railway Line at Margaret Street at which it point it turns and follows the railway alignment along an easement to the railway overbridge at Main Road. At this location the main continues along the eastern road reserve of Main Road to a supply point to the PCCS site (approximately at the bend in Main Road). From this point it reduces to a 110mm diameter nylon main to the First Street intersection at which point it branches into three short sections of 32mm and 50mm diameter lines.

5.3 Proposed Trunk Water Supply Layout

Water to the site will be provided from existing mains surrounding the site including:

- the extension of the existing water main on Munibung Road within the Cardiff Industrial Estate;
- the existing 300mm main in Main Road and the existing 375mm main at the intersection of TC Frith Avenue and First Street.
- depending on available pressures there may be a lead in from the existing 500 mm trunk main at the corner of Elizabeth and Margaret Street but will be constrained by the requirement to construct under the Great Northern Railway Line.

Trunk mains will be reticulated throughout the site. In addition there will be likely tie ins to nearby water supply networks such as at Munibung Hills Estate and Boolaroo.

5.3.3 Important Issues

The following issues should also be noted in respect of water servicing:

- The piped system is to be designed with a minimal number of dead ends.
- Where possible looped piped systems to be used to ensure losses are minimized.
- Easements will be required over existing and new trunk mains where they are not located within road reserves.
- Parallel reticulation mains will be required for property connections where the lead in main is greater than 300mm in diameter.
- Extension of mains under the Great Northern Railway line will require extensive negotiation with the rail authority and should be commenced as soon as practical.
- Depending on the timing of the construction of the Macquarie Hills Reservoir to serve areas above RL50m AHD, booster water supply pumping stations may be required.
- Developer funded lead in water mains may be required to the existing main in Delaware Drive Macquarie Hills

5.4 Proposed Trunk Sewer Supply

Table 5.0 below indicates the available capacity of the existing system via the preferred connection points. The trunk sewer layout is based on industrial lots generating flows equivalent to 10 ET/Ha, low density residential lots generating flows of 10 ET/Ha and medium density residential lots generating flows of 24 ET/Ha. The total load for the development based on the above is 1,534ET, which is less than the Hunter Water nominated spare capacity at the Edgewater Waste Water Treatment Plant. The nominated flow rate is based on the design guidelines provided in the Hunter Water design manual, the relevant schedule for estimating flows is included in Appendix E. This schedule is used when the exact land use and lot layout has not been finalized.

An ET (Equivalent Tenement) is defined as a residential house with an average of 3.5 residents.

Table 5 illustrates to what connection point each precinct will connect.

Table 5. Proposed Connection points for each precinct*

Connection Point	Capacity (ET)	Connecting Lots and (ET)	Total ET connected at each point.
A	339	Precinct 2(134ET) Precinct 4(79ET) Precinct 8(126ET)	339
B	120	Part Incitec (97ET) Part Precinct 8 (21ET)	118
C	339	Precinct 5 (112ET) Part Precinct 6(111ET) Part Incitec (110ET)	333
D	120	Part Precinct 1(50ET)	50
E	180	Part Precinct 1(104ET)	104
F	221	Precinct 7(52ET) Precinct 9 (71ET) Part Precinct 6 (91ET)	214
G	162	Precinct 3 (61ET) Precinct 10 (69ET) PCC(25ET)	155
H	221	Part Precinct 4 (94ET) Part Precinct 8 (127ET)	221
TOTAL	**1702 ET**		**1534 ET**

*These figures are based on Hunter Water design guide for Low Density Residential, Medium Density Residential and Light Industrial as per the proposed land use shown in the master plan.

Note that the above proposed sewerage drainage arrangement may be significantly modified if augmentation works allow for a significant increase in Connection Point capacity. These options will be examined during the future Sewer and Water Servicing Strategy process. The Sewer and Water Servicing Strategy would be prepared by a Hunter Water approved service provider.

Subject to the outcomes of this strategy, there may be a need for augmentation of the down stream reaches or installation of pumping stations.

5.5 Natural Gas

Alinta have advised verbally that preliminary connection points can only be nominated and that final connection points will only be nominated once the land use for each lot is confirmed.

It is envisaged that a lead in secondary (high pressure) gas main will be required from the Cardiff Industrial Estate to the north east.

The existing secondary gas main supply point in Main Road to the existing site will be maintained.

Subject to Alinta requirements a connection point is proposed off the existing secondary high pressure main at the intersection of Main Road and TC Frith Avenue.

Mains pipelines will be derived from these tie-in points to service the site in accordance with Alinta requirements.

It should be noted that the existing secondary gas main along Main Road will need to remain in its current location within the existing road reserve. This will require an easement (nominally 3 to 5 metres in width) in favour of Alinta for access and maintenance purposes. This will need to be taken into account in the layout planning phase. The existing easement for gas along the south eastern boundary of the Main Northern Railway to Main Road will need to be maintained.

In terms of individual lot servicing, the supply of gas will be the same as that provided for potable water.

6. ELECTRICAL SERVICES

Electrical demand load estimates have been carried out based on the latest site development strategy. The final rezoning proposal may result in some changes in land use the overall impact of the development proposal would not substantially alter the assumptions/assessments carried out for the preliminary development scheme.

6.1 Discussions/correspondence with Energy Australia

Continuing discussions have been held with Energy Australia (Newcastle). Mr Keith Carmody is dealing with planning/engineering issues associated with the project.

Discussions with Energy Australia have indicated the following issues related to the supply of electricity to the site:

- The prime electricity supply to the site will be derived from the new Argenton Zone Substation adjacent to Kindyerra Park. Whilst Energy Australia has indicated that no allowance was made in the design planning of the Argenton Zone Substation for a development of the magnitude now proposed for the PCCS site, Energy Australia is currently evaluating the total supply strategy to ascertain if any supply redistribution arrangements are possible to enable supply to be made available to the whole of the proposed development directly from the new substation.
- One proposal put forward by Energy Australia would be to supply a portion of the development at 11kV directly from Argenton Zone Substation. At this time is has been indicated that this arrangements would include Precincts 1 and 2. Some or all of Precincts 4 & 7 may also be supplied through this means. The above proposal by Energy Australia ensures a viable supply arrangement for the current programme of land development and release.
- Energy Australia has indicated that any further development load (in addition to that nominated above) may need to be supplied by a 33/11kV zone substation located within the PCCS site. That substation would derive 33kV supply from Argenton Zone Substation via duplex underground feeders. The establishment of an on-site zone substation is likely to take 2-3 years to implement (design-construction-commissioning) but this time element may be acceptable in view of the time frame for land developments and release.
- Energy Australia have indicated that the most suitable means of supplying the site with 11kV and possibly 33kV would be via a number of feeders exiting Argenton Zone Substation and passing below the Great Northern Rail Line. There are some significant difficulties however in gaining cable access to the eastern side of Argenton Zone Substation and Energy Australia are currently evaluating alternative means of gaining cable access without the need for a rail crossing in the immediate vicinity of Argenton Zone Substation.

6.2 Site Issues

There are a number of 11kV and 33kV overhead transmission lines on the site. The 11kV lines appear to be part of the PCCS activities and presumably these

will be removed as part of the demolition works. The overhead lines feed the Incitec site as well as a number of adjoining residential areas.

Consideration may need to be given to the replacement of some or all of these lines with underground cabling particularly in residential development areas. There is a perception in the public mind that overhead high voltage transmission lines may be linked to the incidence of cancer in children whilst underground cables do not give rise to such concerns. Any costs involved in the undergrounding of existing Energy Australia assets would be at the Developers cost.

We understand that the PCCS site and INCITEC were originally supplied at 11kV from Boolaroo Zone Sub Station via duplex 11kV underground feeders to a private sub station at the southern end of the site. At some time in the past INCITEC site supply has been isolated from the PCCS network.

The supply to the site at the time of preparation of this report is via a single 11kV underground feeder from Boolaroo Zone Sub Station.

Tariff metering of the supply is located within Boolaroo Zone Sub Station.

There are a number of 11kV/433V sub stations on the site at present supplied in a radial distribution system.

A number of system and element failures have occurred over recent times and PCCS are currently reviewing the supply to loads that need to be maintained during the land remediation, effluent treatment and metal recovery operations that will continue for the several years.

The most likely outcome of considerations will be for the existing 11kV supply system from Boolaroo Zone Sub Station to be de-commissioned including all on-site 11kV cabling and sub stations.

Site work is currently being carried out to enable a new overhead 11kV supply to be derived from T.C. Frith Avenue with a kiosk sub station located in the vicinity of the existing site Guard House and electricity supply taken at low voltage. Private overhead LV reticulation will be installed to required load centres on this site and the existing sub stations and 11kV underground cabling de-commissioned.

In the long term these provisional measures will become redundant although the kiosk sub station may be able to be used as part of the final distribution system.

6.3 Easements

There are a number of easements on the PCCS in favour of Energy Australia including the following:

- Nominal 45m wide easement for 132kV transmission line at northern end of site encroaching on Precincts 1 and 9
- Nominal 20m wide easement for 33kV transmission running in north-south direction from Boolaroo Zone Sub Station supplying Glendale Shopping Centre and adjoining residential load via INCITEC site

- Nominal 44m wide easement for 33kV transmission running in easterly direction from Boolaroo Zone Sub Station supplying Macquarie Park residential area
- Nominal 16m wide easement for 33kV transmission running in easterly direction from Boolaroo Zone Sub Station

Energy Australia had previously indicated that it may require additional easements over the site for future transmission feeders from Argenton Zone Sub Station, however meetings with Energy Australia in early 2007 have indicated that this will no longer be the case.

Refer to ACOR letter dated 01/03/07 to Energy Australia incorporated as Appendix G in this report confirming discussions regarding this issue.

Energy Australia have indicated that they have a RIGHT OF WAY access to their communications tower which is located at the top of Munibung Hill. The access road is located close to the southern most site boundary and access to the access road is gained from the end of First Street. Maintenance of the RIGHT OF WAY is considered necessary although the point of entry may be varied through consultation with Energy Australia Real Estate (PROPERTIES) section at the time of development of Precinct 5.

6.4 Reticulation Strategy

It is most unlikely that any load on the site, other than street lighting can be supplied from the existing infrastructure in Munibung Road.

All loads of any magnitude will have as their point of supply the new Argenton Zone Sub Station.

Detailed reticulation and street lighting design for Cardiff West is currently with Energy Australia for approval.

Loads of minor magnitude 1 – 1.15MVA may be able to be connected to existing 11kV reticulation in Main Road or T.C. Frith Avenue following establishment of Argenton Zone Sub Station and alterations to Energy Australia existing infrastructure.

All 11kV cabling will be in the form of ring main feeders as is current Energy Australia planning policy. There will be a number of feeders depending on the final development mix.

Sub stations will generally be of the pad mount (kiosk) type strategically located around the site to suit load distribution.

Chamber type sub stations containing more than one transformer may be necessary in certain locations due to load concentration i.e. bulky goods/homewares/commercial.

All 11kV distribution will be by means of underground cables laid within dedicated (shared trench) zones within foot paths/road reserves.

Specific planning will be required for any 33kV underground cabling.

7. COMMUNICATIONS

Contact has been made with Telstra regarding the development. Telstra has advised that it expects no significant issues associated with supply of telecommunications services to the site. Supply of network infrastructure and any associated upgrading of exchange line capacity would be a matter for Telstra or other service providers to carry out at their cost.

8. REFERENCES

Umwelt Environmental Consultants, *Preliminary report for the Engineering Services Report for the Future planning of the Pasminco Cockle Creek Smelter Site*. (March 2004.)

Umwelt Environmental Consultants, *Engineering Services Report for Proposed Rezoning of Lot 21, DP 251322 for Residential Development*. (January 2005.)

Umwelt Environmental Consultants, *Engineering Services Report for Proposed Industrial Subdivision Development and Road on Lot 201 DP 805914*. (January 2005.)

Umwelt Environmental Consultants, *Engineering Services Report for Proposed Residential Subdivision Development and Rezoning application on Triangular Paddock Lot 201 DP 251322 & Main Entry Lot 201 DP805914*. (March 2006.)

Umwelt Environmental Consultants, *Engineering Services Report for Proposed Industrial Subdivision Development, rezoning application and Road on Lot 201 DP 805914 Rail Employment Zone*. (March 2006.)

Hunter Water, *Edgeworth East –Sewerage Transportation System Developer Servicing Plan S2.01* dated 1 July 2006

Hunter Water, *South Wallsend – Water System Developer System Servicing Plan W1.15* dated 1 July 2006

Lake Macquarie City Council, *Engineering Guidelines: Part 1 Design Specifications Stormwater Drainage Design – 2003.*

Lake Macquarie City Council, *Water Cycle Management Guidelines – Jan 2006.*

9. APPENDICES

Appendix A – Site Plan Showing Proposed Development Areas

Appendix B – Bulk Earthworks Strategy -Preliminary Drawing

Appendix C – Existing Services Drawing

Appendix D – Correspondence from Hunter Water and Alinta

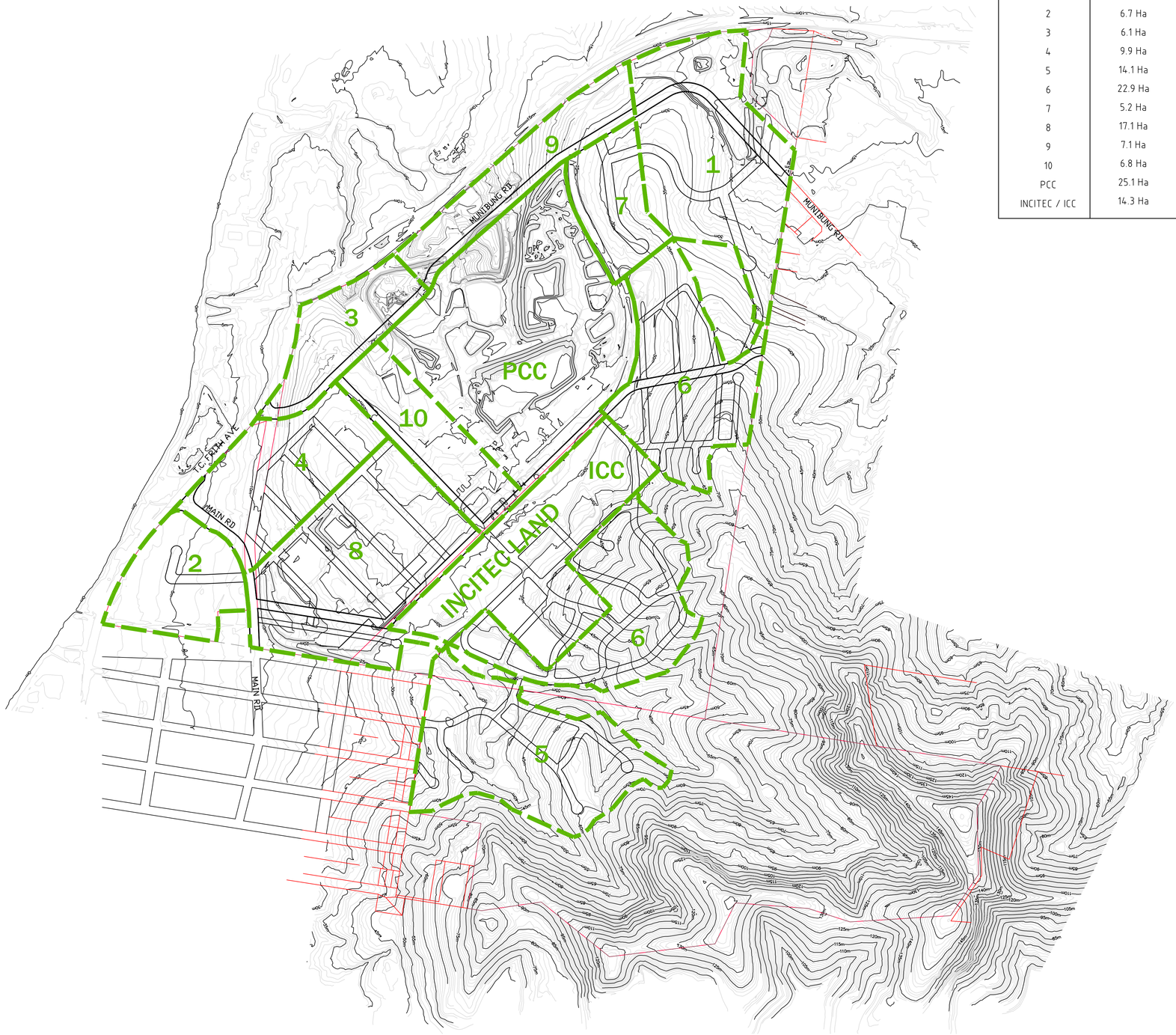
Appendix E – Extract from the Hunter Water Design Manual – "Equivalent Tenements and Storm Allowance"

Appendix F – Extract from the Hunter Water Development Servicing Plan – Edgeworth East Transportation Plan.

Appendix G – Correspondence with Energy Australia

Appendix A – Site Plan Showing Proposed Development Areas

PRECINCT	APPROXIMATE AREA	ANTICIPATED LAND USE
1	15.4 Ha	INDUSTRIAL
2	6.7 Ha	MED DENS RES 80%, OPEN SPACE 20%
3	6.1 Ha	INDUSTRIAL
4	9.9 Ha	MED DENS RES 50%, LOW DENS RES 50%
5	14.1 Ha	LOW DENS RES 80%, OPEN SPACE 20%
6	22.9 Ha	LOW DENS RES 90%, OPEN SPACE 10%
7	5.2 Ha	INDUSTRIAL
8	17.1 Ha	LOW DENS RES 60%, MED DENS RES 40%
9	7.1 Ha	INDUSTRIAL
10	6.8 Ha	INDUSTRIAL/COMMERCIAL
PCC	25.1 Ha	OPEN SPACE 90%, INDUSTRIAL 10%
INCITEC / ICC	14.3 Ha	LOW DENS RES 70%, MED DENS RES 30%



NOT FOR CONSTRUCTION

Issue	Description	Date	Drawn	Chkd

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North

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INFRASTRUCTURE WORKS
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Drawing Title

PRECINCT BOUNDARIES AND PRELIMINARY ROAD LAYOUT

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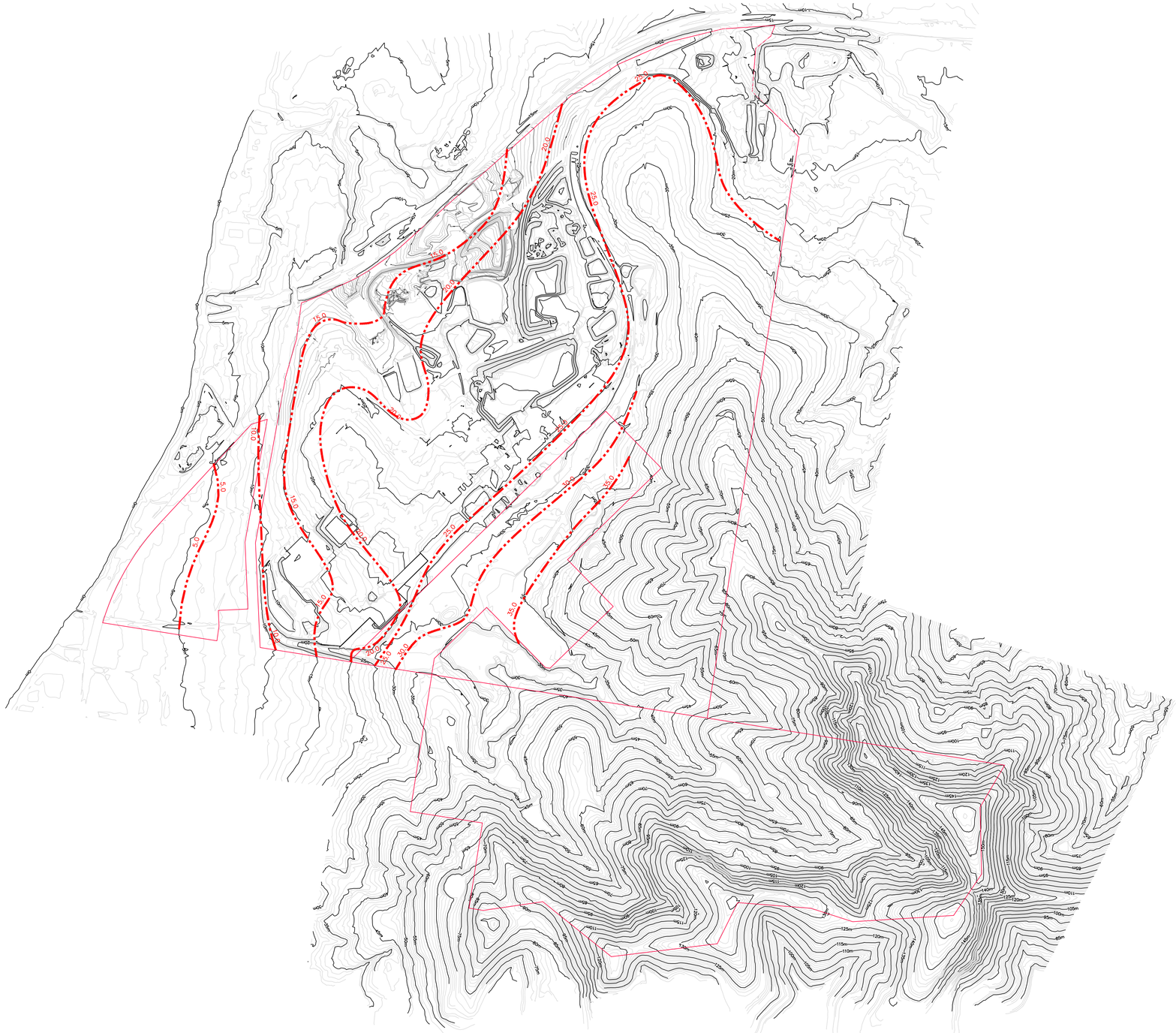
Appendix B – Bulk Earthworks Strategy -Preliminary Drawing

LEGEND

15.0 — APPROX. CONTOUR POST-DEVELOPMENT

15.0 — EXISTING CONTOUR PRE-REMEDIATION



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Project

PASMINCO REDEVELOPMENT
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Drawing Title

BULK EARTHWORKS
CONCEPT PLAN

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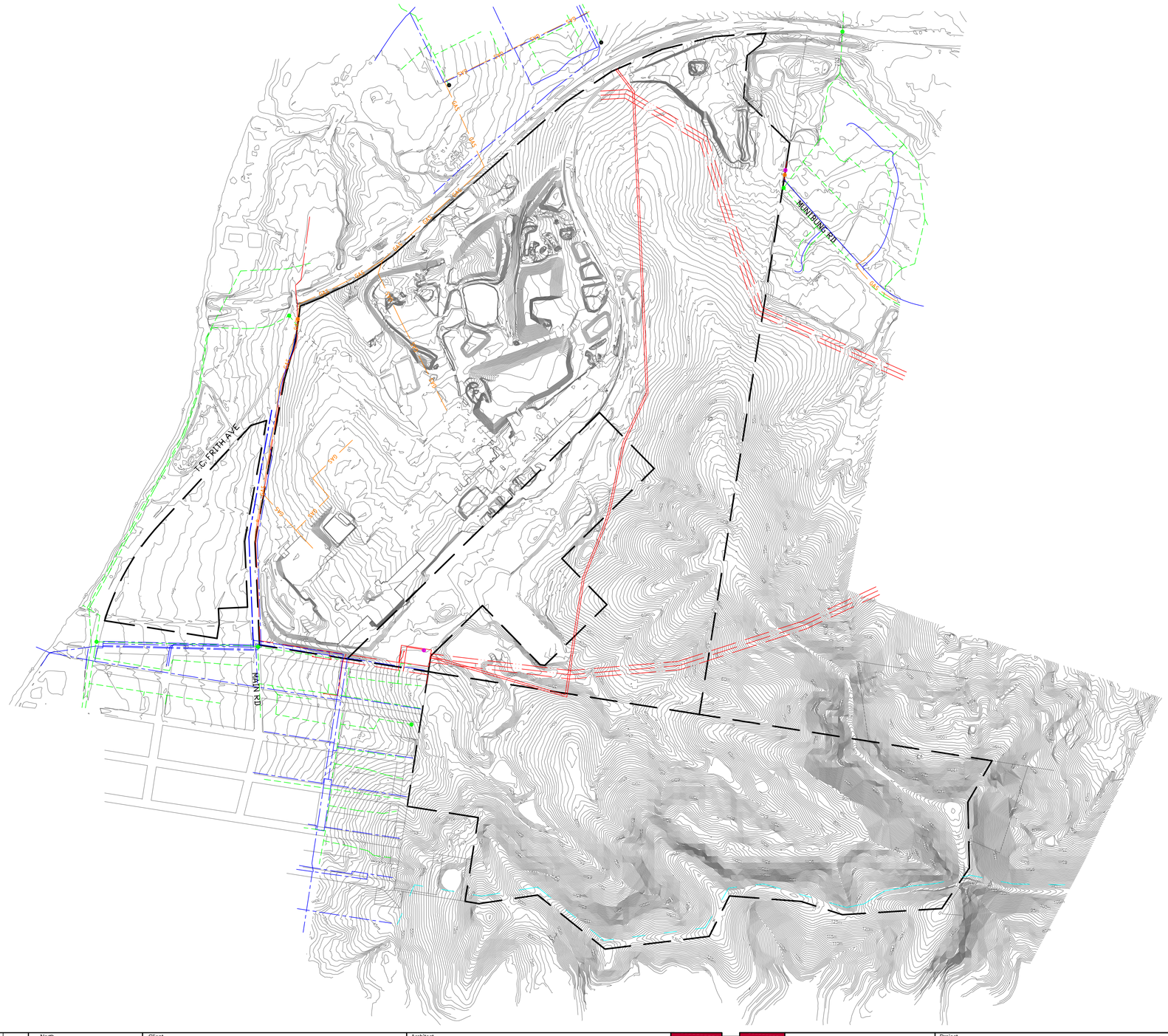
Appendix C – Existing Services Drawing

LEGEND

- EXISTING COMMUNICATION SERVICE
- EXISTING ELECTRICAL SERVICE
- GAS — EXISTING GAS MAIN
- EXISTING SEWER MAIN
- EXISTING HUNTER WATER TRUNK MAIN



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Drawing Title
EXISTING SERVICES
INFRASTRUCTURE PLAN

Drawn	Date	Scale A1	Q.A. Check	Date
H.I.H	MAR 2008	1:5000		
Checked	Project No.		Dwg. No.	Issue
B.H.J	SY07.0396		CK00	-

Appendix D – Correspondence from Hunter Water and Alinta

Jensen, Bjorn - ACOR

From: Withers Malcolm [malcolm.withers@hunterwater.com.au]
Sent: Thursday, 29 November 2007 3:54 PM
To: Jensen, Bjorn - ACOR
Subject: Pasminco Cockle Creek Redevelopment - Water supply to high level lots (Our Ref: 2006-1244)

Good afternoon Bjorn,

Thank you for your enquiry regarding the Pasminco site. I apologise for the delay in our response.

At this stage, the expected TWL of the proposed Macquarie Hills Reservoir is 107m and it would be fair to assume that a minimum operating level of around 103m would apply. For the purpose of making some preliminary head loss calculations, the proposed reservoir will be located close to the intersection of Lawson Rd and Fitzwilliam Cct.

I would like to reiterate that this reservoir has yet to be approved by the Board so you should factor this into any studies you are preparing.

If you have any questions, please do not hesitate to contact me.

Regards

Malcolm Withers

development services engineer | sales & business development | hunter water corporation
p: 02 4979 9545 | **f:** 02 4979 9711 | **e:** malcolm.withers@hunterwater.com.au

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From: Jensen, Bjorn - ACOR [mailto:bjensen@acor.com.au]
Sent: Wednesday, 7 November 2007 11:30 AM
To: Withers Malcolm
Cc: Karikios, John - ACOR
Subject: Pasminco Cockle Creek Redevelopment - Water supply to high level lots

Hi Malcolm

Further to our discussion, I've turned up an advisory letter from Hunter Water dated 5 January 2007 (Ref: 2006-1244). Thanks for that!

Section 2(ii) of the letter refers to higher areas of the site (above approximately RL50) being supplied from a proposed new "Munibung Hills Reservoir". Is it possible to request details of this reservoir's (proposed) maximum supply RL? The purpose of this is to allow the site Master Plan and feasibility study to be completed with the latest information. The developer wishes to determine whether it is feasible to develop the higher lots, and the cost of water supply may be a significant part of this.

Thanks for your help

Bjorn Jensen
Senior Civil Engineer

ACOR Consultants Pty Ltd
Level 1, 24 Falcon Street
PO Box 822
Crows Nest NSW 2065

Ph (02) 9438 5098
Fax (02) 9438 5398
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ENGINEERS
MANAGERS
INFRASTRUCTURE
PLANNERS

HUNTER WATER CORPORATION . PO BOX 5171 HRMC NSW 2310 . TEL 1300 657 657
36 HONEYSUCKLE DRIVE NEWCASTLE . ABN 46 228 513 446 . HUNTERWATER.COM.AU

05 January 2007

Ref:2006-1244

Pasminco Pty Ltd
C/- Acor Consultant Pty Ltd
P O Box 822
Crows Nest NSW 2065

SY06.0409

Dear Sir/Madam

RE INDICATIVE REQUIREMENTS FOR PROPOSED DEVELOPMENT PASMINCO COCKLE CREEK SITE - LOT 21 DP 251322, LOT 201 DP 805914 & LOT 1 DP 225730, MAIN ROAD, BOOLAROO

Hunter Water has considered your request for our requirements for the provision of water and sewer services to your proposed development of Lot 21 in DP 251322, Lot 201 in DP 805914 and Lot 1 in DP 225730 Main Road, Boolaroo.

As the development is subject to rezoning and approval by Lake Macquarie City Council, the information offered by Hunter Water at this point is indicative only and maybe subject to significant change prior to your development proceeding.

General information on water and sewer issues relevant to the proposal is included in this correspondence. These indicative requirements are not commitments by Hunter Water.

The information is based on Hunter Water's knowledge of its system performance and other potential development in the area at the present time. As you will appreciate, there may be significant changes that occur by the time the development proceeds to the lodging of a Development Application and therefore these indicative requirements may be different to the **Notice of Formal Requirements** provided in the future.

Once rezoning has been approved and the decision is made to proceed with the development application you will need to lodge a further Application with Hunter Water to then determine the formal requirements that shall apply. Hunter Water will then issue a **Notice of Formal Requirements.** You will need to comply with each of the requirements in this Notice for the issue of a Section 50 Compliance Certificate for the specific development.

In this instance, Hunter Water's indicative requirements are:

1 **Applicable developer charges**

The indicative developer charges based on the combined water and sewer charges for development in the Boolaroo area would depend on the option being taken by the developer to undertake a combination of residential, commercial and industrial development or industrial development only (refer to page 5 of the attached guide), as detailed on the following page:

OPTION 1 – Residential, Commercial and Industrial Development

- Residential - the developer charge would be in the order of $3,679 per additional sewer ET.

- Commercial/Industrial – the developer charge would be in the order of $4,566 per additional sewer ET.

OPTION 2 – Industrial Development Only

- The developer charge would be in the order of $4,566 per additional sewer ET.

Developer charges are subject to annual CPI adjustments and a formal review once each five-year period; and

At the time a Section 50 application is lodged, Hunter Water would apply a credit for water supply based on the annual average usage over the five year period prior to the application; and

2 **Construct Major Works**, (refer to page 7 of the attached guide) on behalf of Hunter Water, to connect each of the lots to the existing water and sewer system(s) of Hunter Water. These works are further described in the following points on Water Supply and Wastewater Transportation.

A Major Works assessment/administration fee of $2,003 should be paid when designs are submitted.

Water Supply
To supply water services to the site, the developer will be required to undertake the following works:

(i) A connection is to be made to trunk mains in Main Road to service areas of the site up to approximately RL 50m AHD. Trunk main augmentation from Argenton to Teralba Water Pumping Stations may be required to cater for ultimate development of these areas.

(ii) It is anticipated that higher areas of the site above RL 50m AHD (generally the area shown as the "Munibung Residential Estate" on the application plans) would most likely be serviced by a proposed new Macquarie Hills Reservoir. This will require developer funded watermain extensions to connect to the DN150 watermains in Delaware Drive, Macquarie Hills.

Please note that for security of supply purposes, the development will require two water supply connections for each of the areas described above.

The developer will need to prepare a water servicing strategy based on the proposed development scenarios to:

- Estimate loads from this development and any surrounding developments that can connect to the future water and recycle water distribution infrastructure to be designed to service this development.

- Identify staging of the development and of the upgrade works.
- Present preliminary design and costing of water and recycled water distribution infrastructure to service this development in line with the regional strategy.
- Present capital, operational and life cycle costs (NPV (7%) – 30 years), if more than one servicing option is considered.
- Assess failure scenarios and ensure security of supply.

The Strategy is to be prepared by a suitably qualified consultant and in accordance with the attached guidelines for the preparation of Strategy Studies. A Strategy Review assessment fee of $530 should be paid upon lodgment of the strategy.

Recycled Water
Hunter Water is currently reviewing recycled water opportunities in its area of operation and this site has been identified for possible supply of recycled water. Given the sites close proximity to Edgeworth WWTW and high demands, there is a potential for non potable reuse applications within the development. Further discussions should be held with Hunter Water regarding this issue to assess the feasibility and determine appropriate design requirements. The servicing strategy for the site should also consider the supply of recycled water to the site, including the need for trunk mains, and size and location of storage reservoirs, if required.

Wastewater Transportation
There will be two connection points for wastewater transportation. The majority of the site drains to Boolaroo 1 WWPS. Based on the site contours and the developer's preliminary plans, it is anticipated that the "Cardiff West Industrial Area" will drain to the Cardiff 1 WWPS catchment. Depending on the loading breakup between Boolaroo and Cardiff WWPS catchments, downstream upgrades may be required to the wastewater system (including the Boolaroo 1 WWPS) by the developer for ultimate development of the site.

The developer will need to prepare a wastewater servicing strategy based on the proposed development scenarios to:

- Estimate loads from this development and any surrounding developments that can potentially transfer flows to the future wastewater transport infrastructure associated with the subject development.
- Identify subcatchments and how the full development area is to be serviced (e.g. number of WWPS's).
- Identify staging of the development and issues such as self cleansing and odour control in the interim before full development in realised.
- Present preliminary design and costing of wastewater transport infrastructure proposed to service this development.
- Investigate options to get flows to the two proposed connection points.Flag options to upgrade Boolaroo 1 WWPS, if required, to service the development.
- Present capital, operational and life cycle costs (NPV (7%) – 30 years), if more than one servicing option is considered.

The Strategy is to be prepared by a suitably qualified consultant and in accordance with the attached guidelines for the preparation of Strategy Studies. A Strategy Review assessment fee of $530 should be paid upon lodgment of the strategy.

3 Your proposed industrial/commercial development has been identified as having the potential to discharge trade waste into Hunter Water's sewerage system. You are therefore required to contact Hunter Water's Trade Waste Section on 4979 9596 and make the necessary application for a Trade Waste Permit and pay the prescribed fees (at the appropriate time). The discharge of trade waste to the sewer will not be permitted without a permit authorising that discharge; and

4 The extension of water and/or sewer services may require entry to an adjoining party property. It is the responsibility of the developer to arrange for entry with the affected landowner and have evidence of consent by way of a signed Entry Permit. The Permit is to be submitted prior to release of the signed contract; and

5 Please note that Hunter Water requires 3 copies of the final plan of subdivision and a DXF file of the subdivision showing only lot numbers and boundaries directly on the MGA grid. The lot boundaries should be produced directly from your calculation software, should be all edge matched and unbroken, and should also match as near as possible the final deposited plan of the subdivision. This information should be emailed to plan.check@hunterwater.com.au; and

6 Prior to providing final approval of designs, Hunter Water will require a Review of Environmental Factors (REF) to be submitted (refer Section 1 of Hunter Water's Water and Sewer Design Manual). A REF considers the likely impacts a development may have on the environment. At all times, methods for preventing or reducing adverse environmental impacts should be considered and where appropriate, incorporated into the project design. Hunter Water, where appropriate, may make a determination in accordance with the EP& A Act 1979.

Should you require further clarification or assistance, please contact the Enquiries Officer nominated below.

Yours faithfully

Brett Lewis
Manager Development Services

Enquiries: Peter Smith
Tel: 1300-657-657
Fax: (02) 4979-9711

GUIDELINES FOR THE PREPARATION OF STRATEGY STUDIES

Hunter Water operates an extensive network of pipelines, pump stations, reservoirs & treatment plants for providing water and wastewater services to the community. To allow for growth and the integration of these systems, Hunter Water prepares regional water supply distribution and wastewater transportation strategies. These strategies generally look from the broader regional perspective and identify major works required that form the backbone of the system.

Hunter Water's regional strategies do not necessarily address servicing issues for specific development lands or pockets of unserviced lands that maybe of interest to developers. In most cases water and sewerage services can be provided by the extension of mains utilising existing assets such as pump stations and carriermains etc.

In situations where this is not possible or not clearly evident the developer is required to investigate the *optimal* servicing arrangement for that particular site. These studies are called ***local servicing strategies***. They need to address an established criteria, follow a set procedure and be approved by Hunter Water.

Developer initiated *servicing strategies* generally arise under the following circumstances:

- Land elevated above the existing supply limits where new water booster stations and/or local high level storages are necessary.
- Land within sub-catchments that require a new wastewater pump station to transport flows into an adjoining sewerage system.
- Large developments with high water and sewerage loadings that require new and/or augmented transportation systems, pump stations and storages.
- Unserviced fringe areas where alternative sewerage systems may be available (pressure lines, gravity mains etc).

Hunter Water's Design Manual, available on our website, sets out the objectives for a study and details the structure and scope of reports submitted for Hunter Water's approval. An approved strategy needs to be in place prior to any detail design work or commencement of construction of water and wastewater systems.

As a guide the following elements are to be included and reported in strategy study investigations:

- Study area to include the natural catchment boundaries and include adjoining lands that have the potential for development. It is desirable that agreement be reached with Hunter Water prior to proceeding past this stage. A meeting may be helpful
- Topographical, environmental, third-party land entry, flora and fauna conservation, archaeological etc constraints to be identified and addressed within the study. A REF (Review of Environmental Factors) may be necessary at this stage.
- Details of zonings and negotiations with Councils and references to LEP's, Settlement Strategies, land zonings and associated planning instruments to be documented.
- Assessment of the catchment development profile over a 5 – 10 year planning threshold along with land release projections is to be discussed and water and sewer loadings are to be tabulated.
- Development site layout and concept water and sewermain reticulation design to accompany the report. Interconnection to existing systems to be discussed.
- Alternative sewer transportation systems including pump stations, rising and carriermains, water booster stations and local storages etc to be identified and costed where applicable.
- Where alternative transportation/supply systems are considered 'whole of life' (NPV) cost analysis is to take account of both capital and ongoing operating costs over a 30 year period.
- The report is to discuss the relative merits and difficulties of the systems evaluated, the assumptions made in their evaluation and the logic behind the recommendations made.
- Full plan documentation including cadastral, zoning, topographical, development layout, concept design etc, to be included in the study.

Comprehensive consideration of the above elements with reference to Hunter Water's Design Manual and submission of a complete and well set out report will assist in completing the approval process. Ongoing consultation with the Business & Urban Development section is available.

MORE INFORMATION:

GENERAL ENQUIRIES:
4979 9716 or 4979 9718

DEVELOPER CHARGES:
PROCESS COORDINATOR
4979 9724

CONSTRUCTION OF WORKS:
ENGINEERING MANAGER
4979 9717

MAILING ADDRESS:
PO BOX 5171 HRMC 2310
DX 7858 NEWCASTLE WEST
FACSIMILE 4979 9711

HUNTER WATER CORPORATION
ABN 46 228 513 446

HEAD OFFICE:
36 HONEYSUCKLE DRIVE
NEWCASTLE NSW 2300
MON-FRI 9AM-5PM

PORT STEPHENS:
ADELAIDE STREET
RAYMOND TERRACE
IN COUNCIL OFFICE

MAITLAND
285 HIGH STREET
MAITLAND
IN COUNCIL OFFICE

LAKE MACQUARIE
143 MAIN ROAD
BOOLAROO
OPPOSITE COUNCIL

ACCOUNT & GENERAL ENQUIRIES

1300 657 657

24 HOUR EMERGENCY & SERVICE FAULTS

1300 657 000

VISIT OUR WEBSITE AT

www.hunterwater.com.au

DIRECT EMAIL ENQUIRIES TO

enquiries@hunterwater.com.au

F9.46 REVISION B FEBRUARY 2006

HUNTER WATER

NOTICE OF REQUIREMENTS FOR DEVELOPMENT APPLICATIONS

BUSINESS & URBAN DEVELOPMENT

BACKGROUND INFORMATION

Hunter Water's dealings with the business community drive growth through the extension of water and sewer systems and through the acquisition of new customers.

The interests of both Hunter Water and the development community are closely linked with the environment.

Hunter Water extracts water from the environment for treatment and delivery to our customers through the water supply system.

Grahamstown Dam, our largest source, holds about 131,000 Megalitres

All water is treated to the standards set by the National Health & Medical Research Council. The delivery of safe water to our customers involves thousands of kilometres of pipe infrastructure and scores of reservoirs and pumping stations.

The wastewater arising out of various activities of our residential, commercial and industrial customers is removed by the sewerage transportation system and treated to a high standard at one of Hunter Water's wastewater treatment plants, before being returned to the environment.

To provide this service, Hunter Water operates a network of reticulation and carrier sewers along with hundreds of waste water pumping stations.

Clear, treated effluent is discharged to waterways, or reused where it is economical to do so with real environmental benefits to the community.

Environmental standards are an important consideration when providing extra capacity to meet the needs of new customers. The community contributes to these costs, which are passed on in the purchase price of property developments.

The objective of this Guide is to detail the conditions under which water and sewer facilities are available to new customers.

It should be with the Notice of Requirements letter, which details additional requirements specific to your development.

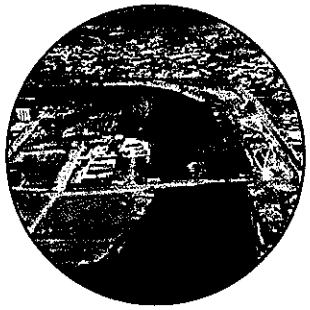
TABLE OF CONTENTS

THE PROCESS

The process focuses on the requirements of customers who are owners of land or real property connected to a watermain or a sewermain owned by Hunter Water.

New customers (apart from changes in ownership of existing properties) are obtained in either one of the following two ways.

First, where property owners apply for a watermain or sewermain extension to the existing property.



Industrial growth increases demand.

Second, where property owners obtain Council approval to develop their properties and apply to Hunter Water for a Certificate to the effect that the development complies with the requirements of Section 50 of the Hunter Water Act 1991.

Under the Act, such property owners are referred to as developers and the Section 50 Certificate is required as part of the application process.

The process is driven by the 'user-pays' principle and begins with an application that results in either a Section 50 Certificate being issued (if there are no requirements) or Notice Letter being forwarded detailing Hunter Water's requirements.

Each proposed development is a unique mix of development type and location, and requires an 'investigation' by Hunter Water to determine:

> the contribution towards the cost of additional capacity in the existing water and sewer systems, which is required to serve the proposed development, through payment of a developer charge by the developer; and

> the works required to provide a watermain, to which each separately owned property will be able to connect through a separate metered water service, and sewer points of connection to each separately owned property through the construction by the developer of new reticulation systems and lead-in mains to serve the development.

A Section 50 Certificate will be issued when the requirements detailed in the Notice have been met.

DEVELOPER CHARGES

Additional capacity, above that needed to serve existing customers, is required in water and sewer systems to provide for new customers.

Developer charges represent a contribution toward the capital cost of providing additional capacity in Hunter Water's systems to service growth. These systems include dams, reservoirs, water mains, pumping stations, sewer mains and wastewater treatment plants.

The additional capacity needed for a 100 home subdivision in a new area is greater than the capacity needed for a new duplex in an established suburb - so the developer charges will vary.

Charges also vary between geographical locations as it costs more to service areas distant from the source and treatment assets.

Developer charges are based on Development Servicing Plans (DSPs) for water and sewer in different geographical areas in our area of operations.

These plans outline the existing infrastructure available for growth (water mains, pumping stations) for the area as well as plans for new works to accommodate future growth and their expected cost.

The DSPs also explain how to calculate the developer charge for different types of development in the area, eg single residential, multi-residential, commercial-industrial, etc.

You can see individual DSPs at:
www.hunterwater.com.au/dsp.asp

New homes raise system loads.

The methodology employed to calculate the developer charge is regulated by the NSW Independent Pricing & Regulatory Tribunal (IPART). The IPART Act also provides a dispute resolution process:

1 Review by Manager, Business and Urban Development

2 Review by Managing Director

3 Seek independent arbitration (Section 31 of the IPART Act)

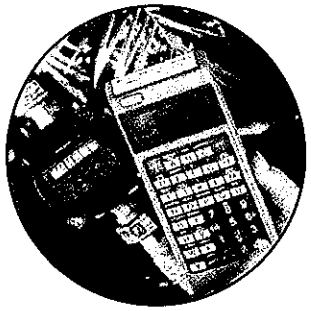
To obtain further information contact the Business and Urban Development Process Coordinator (02) 4979 9724.

SERVICE STRATEGIES

Works constructed need to be consistent with Hunter Water's regional servicing strategies. Major developments may require the preparation of a servicing concept report.

These reports, usually prepared by an accredited consultant, identify water supply and sewerage loadings and various transportation options (including the need for pump station boosters etc).

As part of this process, Hunter Water nominates appropriate points of connection to the existing system.



Meters measure water consumption.

It is the developer's responsibility to arrange for any investigation and report and obtain Hunter Water's concurrence prior to any detailed design work being carried out.

Early contact should be made with the Business & Urban Development Engineering Manager on (02) 4979 9717 to confirm arrangements.

CONSTRUCTION OF MINOR WORKS

For developments requiring minor extensions of water and/or sewer mains, or sewermain protection work in the case of site redevelopment, the property owner may be offered the opportunity to have the works built under a Minor Works Agreement.

The owner must engage an approved design consultant to design the works. HWC will provide plans of the existing infrastructure and possible connection points.

Following acceptance of designs and execution of the Agreement, Hunter Water's inspector must be given three days notice of intention to begin work.

A licensed plumber may complete works detailed in the Minor Works Agreement.

Please note that the provisions of Clause 10 (Insurance) must be complied with and the work under the Agreement must be completed within 12 months from the date of signing and payment of the fee.

CONSTRUCTION OF MAJOR WORKS

More extensive projects will require detailed survey/design; in these cases developers must use an approved consultant to design the works & approved contractor to construct the works. Details of approved designers & contractors can be obtained on our website: **www.hunterwater.com.au/services**

Following design acceptance by Hunter Water, execution of the Agreement and payment of the fee covering inspection, work-as-executed etc, the works can commence. Hunter Water's Inspector requires 3 days notice of intention to commence work. Note: at least 5 days notice is required where a watermain shutdown is required.

FUTURE SUBDIVISION OF A DEVELOPMENT

If an application is lodged for any form of development (eg a duplex) which is to be subdivided at a later date, developers should note that HWC requires separate water and sewer connections for each parcel of land.

It can be more cost effective for the property owner to undertake this work at the original building stage, and it may also be possible to combine the building and subdivision proposals in the one application.

Discuss this as early as possible with the Business & Urban Development Process Coordinator,, telephone (02) 4979 9724, to combine the building and subdivision proposals in one application.

REQUIREMENTS FOR 32mm WATER SERVICES & LARGER

Hunter Water requires that water services be sized in accordance with the Plumbing Code standards.

Where a water service of 32mm or greater is required, a hydraulic design and a large meter request must be submitted to Business & Urban Development.

This will enable early assessment of metering, trade waste and other technical requirements (such as detector check for metering and backflow prevention) and thus avoid possible delays in the application process.

Hunter Water approves hydraulic designs in principle in relation to it's assets and the environment.

The plumbing design is the responsibility of the hydraulic consultant. Hunter Water accepts no responsibility for the design, operation, performance, and adequacy of flow or failure of any installation.

ARLY RELEASE OF THE ECTION 50 CERTIFICATE

nter Water may, at its own retion, permit the developer obtain a Certificate by lodging sonable security to cover all the tstanding construction work costs d by complying with all other ecified requirements.

ually, the lodging of reasonable curity will only be permitted for ger scale works, but only after signs have been completed and cepted by Hunter Water, and rks have commenced. A bond sessment & lodgement fee is yable on application.

ASEMENTS

some cases Hunter Water may rmit property owners to provide ints of connection to new stomers via easements. However, these situations strict criteria will ply. Where an easement is to be ated for the provision of water sewer services, the following quirements apply:

The easement must be shown on the final plan of subdivision and three copies of that plan forwarded to Hunter Water.

The easement must be created under section 88B of the Conveyancing Act of 1919 and a copy of the instrument of dedication forwarded to Hunter Water.

PUBLIC HEALTH

The Department of Health requires sewerage facilities be provided to subdivisions with: lots less than 1 hectare in size; serviced by water facilities; and less than 2 kilometres from a sewermain unless exceptional circumstances exist. The Council responsible for approving the subdivision will determine if exceptional circumstances apply.

BUILD OVER SEWER

If your development is to be constructed over Hunter Water's sewermain, you will be required to protect the sewermain. This could involve replacement of rigid pipes with flexible uPVC sewer pipe or diversion of the sewer clear of the development.

The actual work required is detailed in the Notice of Requirements letter. It is assessed using drawings submitted with the Section 50 application and compared with HWC's sewerage detail sheets using scaling methods.

Discrepancies can influence the assessment outcome; it is the developer's responsibility to establish on site the position of proposed buildings relative to Hunter Water's sewermain. Sewermain replacements are to extend at least 1 metre clear of footings for buildings.

PREVIOUSLY LAID WATER AND/ OR SEWERMAINS

Where watermains and/or sewermains are already available to a proposed development, the mains may have been built and paid for by a previous developer.

If this is the case a payment towards the cost of the mains will be collected from the developer and refunded to the original developer.

UNDRAINABLE AREAS

It is the owner's responsibility to determine whether it is practicable to discharge wastewater from all parts of the property to existing Hunter Water services.

Any hatching on an attached sewer plan indicates an area which will not drain by gravity to Hunter Water's sewermains on natural ground levels.

Sewer connection may require the placement of fill on the land, raising the floor level of any proposed building or the installation of a privately owned pump-out system.

ALTERATIONS TO ROADS & SURFACE LEVELS

In some developments, because of construction of new roads or alteration of existing roads or footways, Hunter Water may require the adjustment of its existing water or sewer mains.

If nominated site surface levels are altered, it may be necessary to adjust new or existing sewermain maintenance holes.

The developer must contribute all associated costs should either of these situations arise.

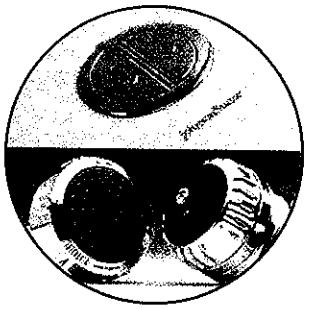
Laying a new watermains service pipe.

PUMP TO SEWER SYSTEMS

If a pump to sewer system is proposed for the development, a positive covenant on the title of the lots with pump connections is required. These statements are also required on title deeds:

> On the construction of a building on the land which requires connection to a sewer of the Hunter Water Corporation ('the Corporation') the proprietor must install a pressure sewage waste disposal system ("the system") of a type or design approved by the Corporation.

> At the cost of the proprietor the system shall be maintained, operated & modified to the Corporation's requirements .



Water efficient devices reduce usage.

Special conditions apply for the connection of these lots and future owners are advised they will have to make an application at one of Hunter Water's Customer Centres to connect

COMMUNITY TITLE SUBDIVISIONS

Subdivisions carried out under the Community Land Development Act 1989 can be serviced by either of the following arrangements:

A: INTERNAL HUNTER WATER MAINS

Each lot within the subdivision is provided with its own Hunter Water sewer and water connection. Hunter Water serves accounts on each lot owner as an individual customer.

The acceptance of this servicing arrangement requires internal road/access designs to meet Hunter Water's standards.

Formed grassed footways, kerb and gutter, building setbacks etc, need to comply with the acceptance criteria.

The water and sewer mains will be protected by line easements. Hunter Water's Dealing No E476715, which has been specifically registered to deal with Community Title subdivisions, covers these easements, and must be listed in the Management Statement for the development.

For further details of acceptance criteria contact the Business & Urban Development Engineering Manager on 4979 9717.

B: INTERNAL COMMUNITY ASSOCIATION MAINS

Design of some developments may not be compatible with Hunter Water's requirements.

For example, the desired layout of buildings and driveways may not leave sufficient open space to provide access under Dealing No E476715.

In these cases, the Developer has the option of providing only 1 water and 1 sewer point of connection to the lot owned by the Community Association.

In this case the Community Association is Hunter Water's customer and, as the owner of the internal water and sewer services, it is responsible for the provision and maintenance of water and sewer services to each of the individually owned lots in the subdivision.

POINTS OF CONNECTION

Hunter Water requires that each newly created lot be provided with separate water and sewer points of connection.

If a subdivision results in the need to relocate existing water services and/ or sewer house drains to the new points of connection it is the owner's responsibility to ensure that this is done.

WATER PRESSURE

Hunter Water's Operating Licence requires the supply of water to a minimum head of 20 metres at street level.

This is the reason why developers are required to provide water facilities to this minimum standard.

However, land and buildings which are elevated relative to the watermain could suffer reduced pressure during periods of high demand.

Landowners should make some assessment of these factors and where necessary install pressure booster systems at their expense.

RATING SYSTEM

When Hunter Water is advised that a subdivision has been registered each lot in that subdivision will attract a separate charge in the Corporation's rating system.

The charge will apply from the date the plan is registered. In addition, any outstanding rates and charges (excluding the charges related to a Section 50 application) will be allocated to one of the lots created by the subdivision.

All rating enquires should be directed to our Customer Services section. The contact number is 1300 657 657.

HUNTER WATER

caring for our community and the environment

HUNTER WATER CORPORATION
PO BOX 5171 HRMC NSW 2310
426-432 KING STREET NEWCASTLE WEST
TEL: 1300 657 657 ABN: 46 228 513 446
www.hunterwater.com.au

23 December 2004

Ref: C5/26335

Umwelt (Australia) Pty Ltd
PO Box 838
TORONTO NSW 2283

Attn: Mr Antony Lenehan

Dear Mr Lenehan,

RE: PROPOSED REDEVELOPMENT OF FORMER PASMINCO COCKLE CREEK SMELTER - BOOLAROO

Reference is made to your facsimile dated 29th November 2004 regarding water and wastewater servicing information to assist in investigation of the proposed development of 55 light industrial lots and up to 173 residential lots in three separate areas of the former Pasminco Cockle Creek Smelter at Boolaroo.

The proposal comprises the extension of the Cardiff Industrial Area (55 light industrial lots), residential development known as Boolaroo Heights (109 residential lots) and residential development known as Triangle Paddock (likely to be 64 residential lots). Hunter Water has reviewed your submission, and offers the following comments.

Water

Extension to Cardiff Industrial Area

The minimum HGL in Munibung Road on the existing 200mm watermain is 72m, indicating that the maximum elevation that could be supplied without augmentation of the trunkmains would be RL 52m. Therefore, the preferred connection point for this section of the development is the 200mm watermain in Munibung Road. It should be noted that the development of the remaining part of the Pasminco site to the west should be considered when sizing the trunkmains through this development. Refer to Attachment 1.

Boolaroo Heights

The preferred connection point for this section of the development is the 300mm watermain in Lake View Street. The minimum HGL in Lake View Street on the existing 300mm watermain is 69m, indicating that only properties below RL 49m can be serviced by the existing system (maximum RL in proposed development area is 80m). Hunter Water is currently undertaking a regional strategy to service the higher elevation areas around Mt Munibung. This strategy is expected to be complete by early 2006. If you wish to proceed before this strategy is finished, you will need to undertake a broader strategy to identify the most cost effective method of servicing all existing and possible future high elevation properties in the area (including further redevelopment of the Pasminco site). Refer to Attachment 2.

Triangle Paddock

The minimum HGL in Main Road on the existing 300mm watermain is 71m, indicating that the maximum elevation that could be supplied would be RL 51m. As the maximum elevation in this area is RL 8m, the preferred connection point for this section of the development is the 300mm watermain in Main Road. A secondary connection to the 375mm watermain at the intersection of T C Frith Avenue and First Street would also be required. Refer to Attachment 3.

Wastewater

The servicing strategy recently completed for the Edgeworth Wastewater Treatment Works (WWTW) catchment area transportation system did not include any of the areas included in your enquiry.

All Areas

The preferred connection point for the proposed 18 ha industrial area (estimated to yield peak wet weather flows (PWWF) in the order of 16 L/s) would be MH B6249A, which eventually drains to Cardiff No. 1 WWPS. Refer to Attachment 4.

The Boolaroo Heights (109 lots) and Triangle Paddock (64 lots) sections of the development area are assumed to yield PWWFs of 10.2 L/s and 6.2 L/s respectively. As previously advised in our letter dated 2 April 2004, there is spare capacity at the preferred connection points A, B, E, F and H. Refer to Attachments 5 and 6. There is also 30 L/s spare capacity at the DE in Third Street (shown as connection point J on Attachment 5).

However, as advised previously, you will need to undertake a wastewater servicing strategy for all three identified areas and the possible redevelopment of the remainder of the Pasminco site to determine the most cost effective method of servicing all future areas that will drain to the Cardiff No. 1 and Boolaroo No. 1 WWPS catchments in this area. As previously indicated, there is approximately 180 L/s and 136 L/s spare capacity at Cardiff No. 1 WWPS and Boolaroo No.1 WWPS respectively.

Wastewater Treatment

The proposed development drains to Edgeworth WWTW. It is considered that sufficient capacity is available to cater for the proposed development.

Developer Charges

Current developer charges for various types of development on the subject site are available on Hunter Water's website (www.hunterwater.com.au). The applicable Developer Servicing Plans are *W1.15 South Wallsend* (water) and *S2.01 Edgeworth East* (wastewater). Please be aware that these current developer charges will be subject to review in 2005.

However, based on the current figures, developer charges for the proposed development would be in the order of $1.43M. These charges do not include any credit offset for previous usage on the site. Hunter Water policy for applying credits is to assess the average annual usage over the 5 year period preceding approval to develop. You should note the longer the site is not utilised the available credit will be diminishing.

Please note the capacities advised in this letter are subject to other growth occurring in the interim and therefore, at your time of application you may find that there are capacity shortfalls. An updated assessment of the water and wastewater servicing requirements for the proposed development would be undertaken by Hunter Water at the time of your formal application for a Section 50 certificate.

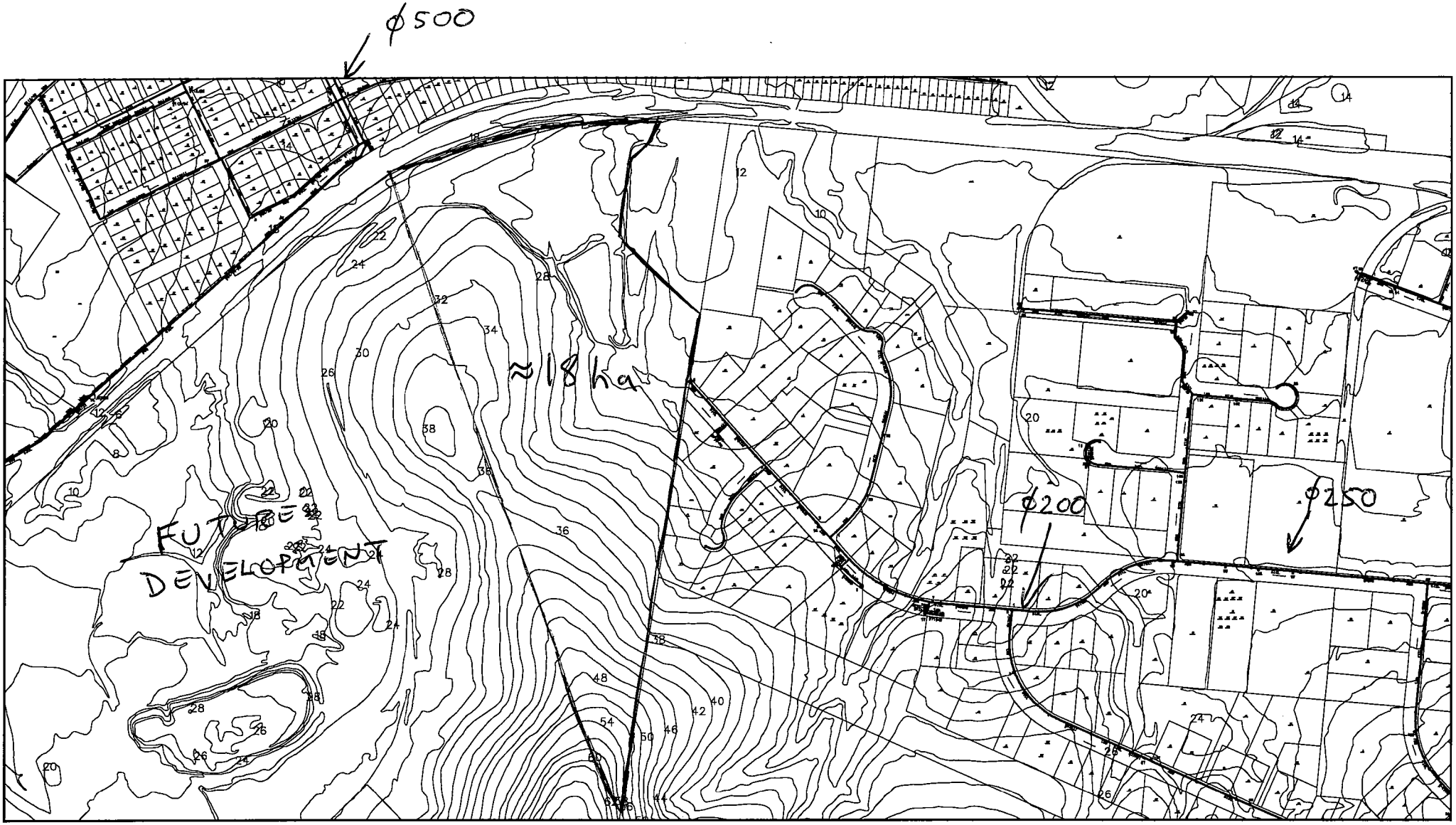
If you have any further queries regarding this matter, please do not hesitate to contact Kirby Morrison on telephone (02) 4979 9545.

Yours faithfully

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

Enquiries: Kirby Morrison
Tel: 02 4979 9545
Fax: 02 4979 9711

Attached: Plans (6): Attachments 1-6



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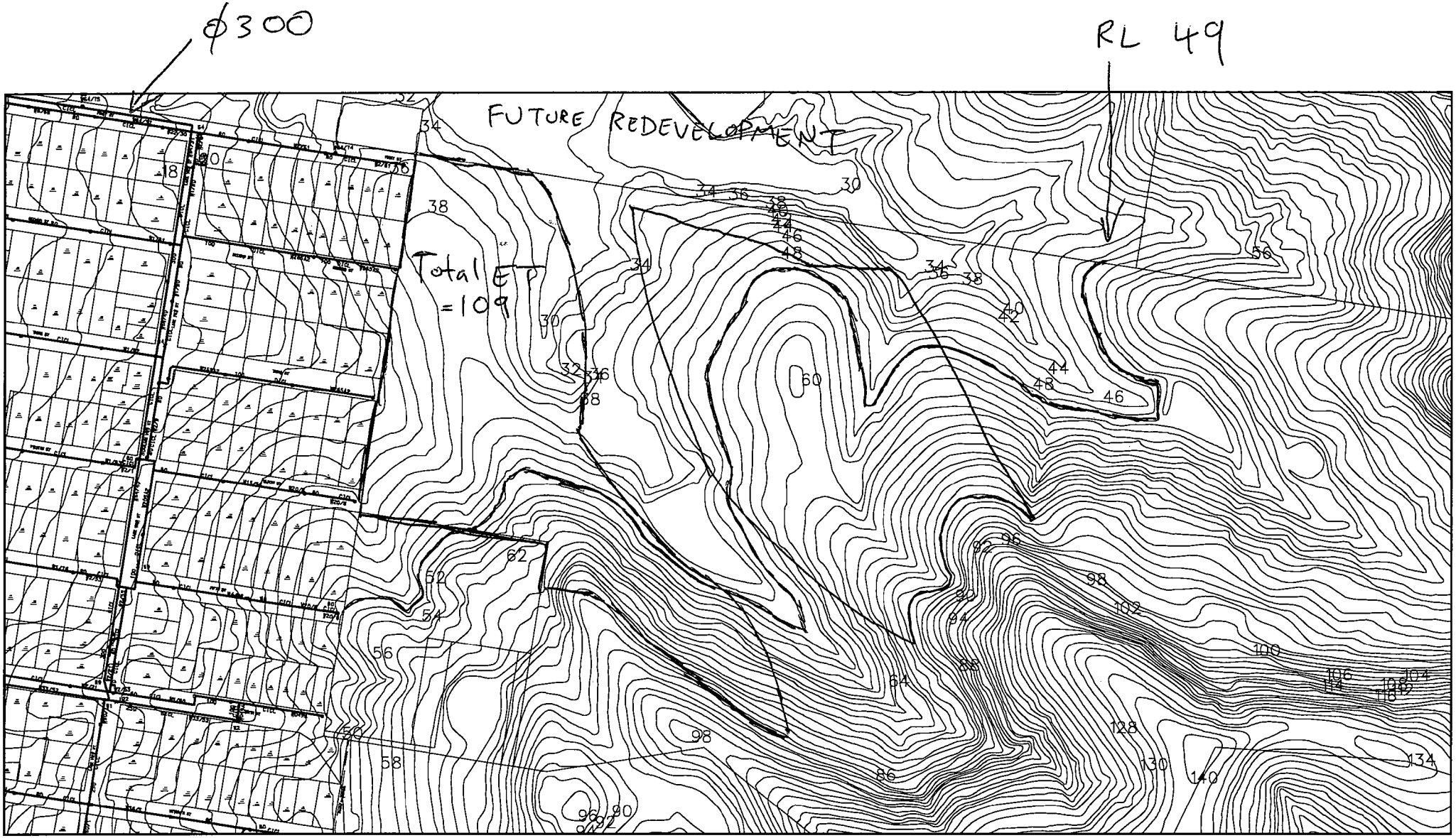
Notes: Attachment 1
HWC



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Notes: Attachment 2

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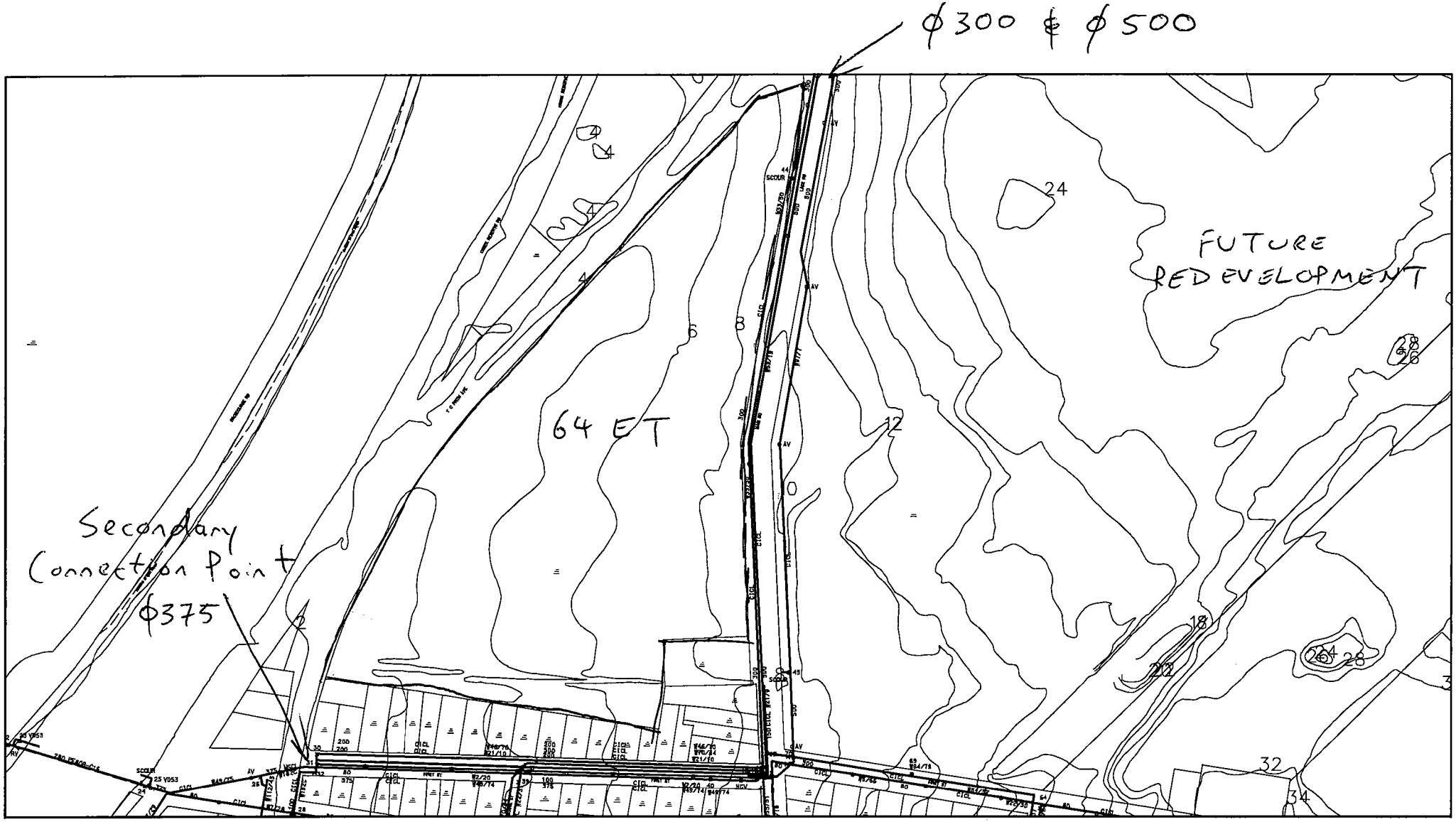

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Notes: Attachment 3
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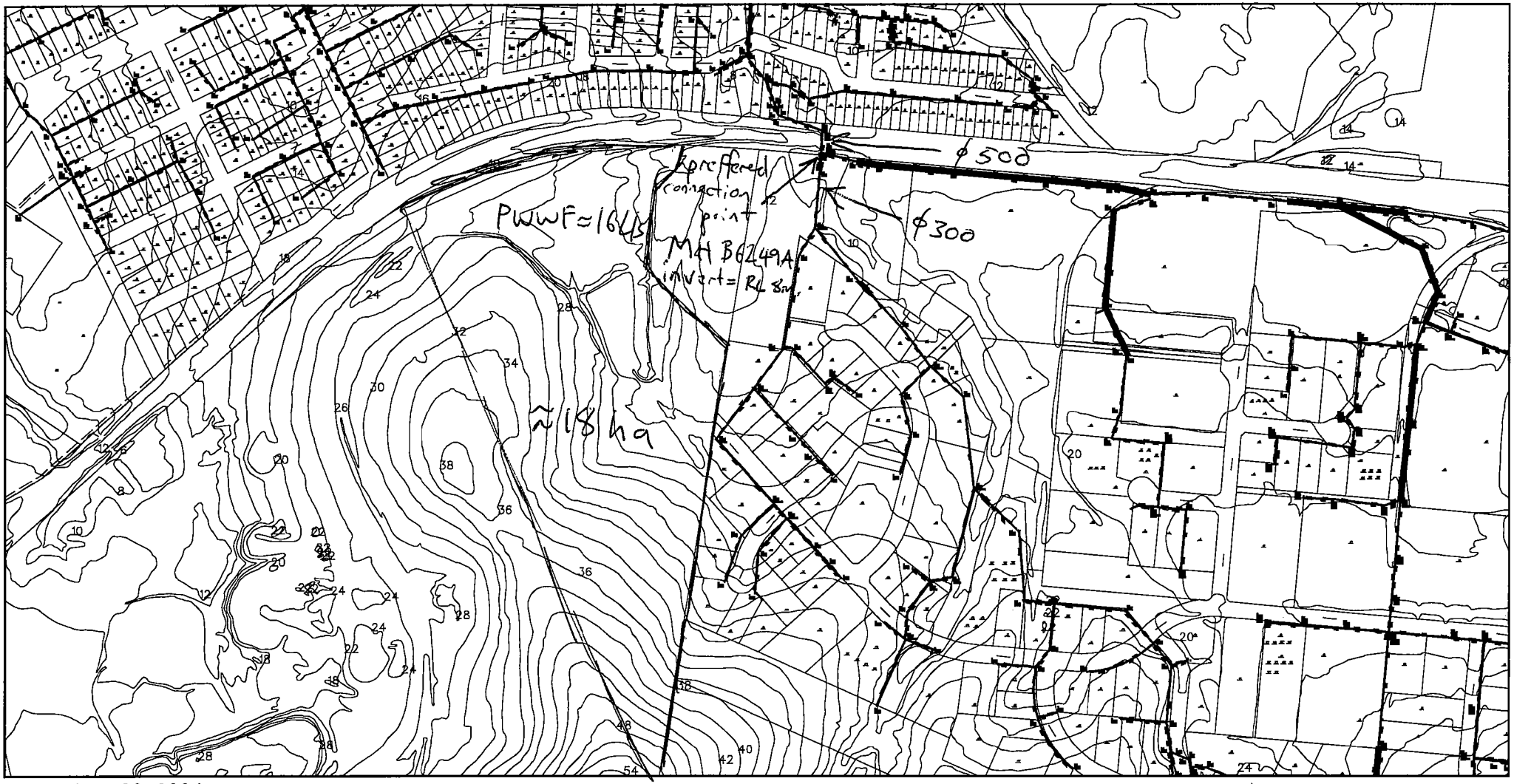

Date: Dec 20, 2004

Notes: Attachment 4

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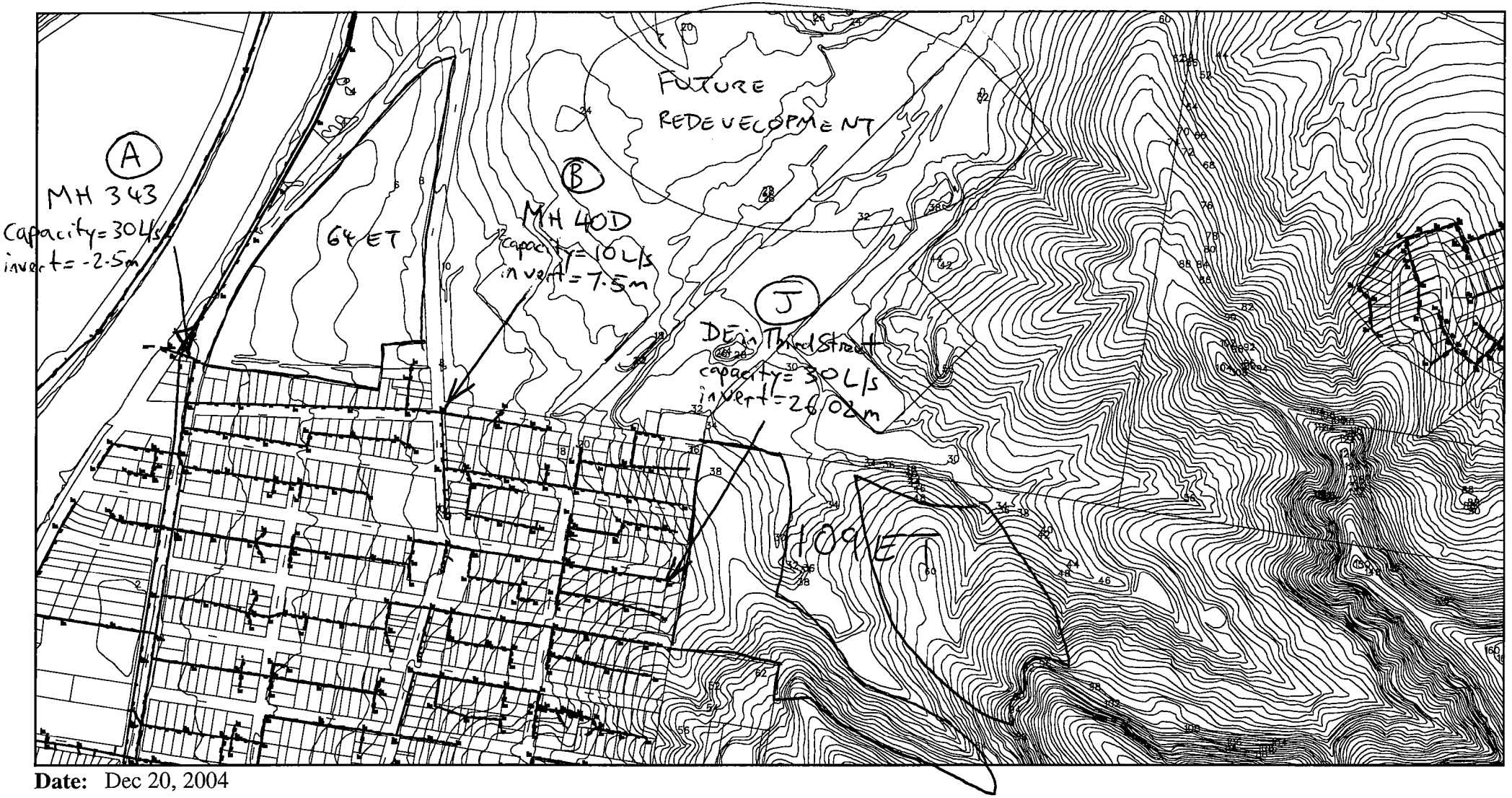

Date: Dec 20, 2004
Notes: Attachment 5
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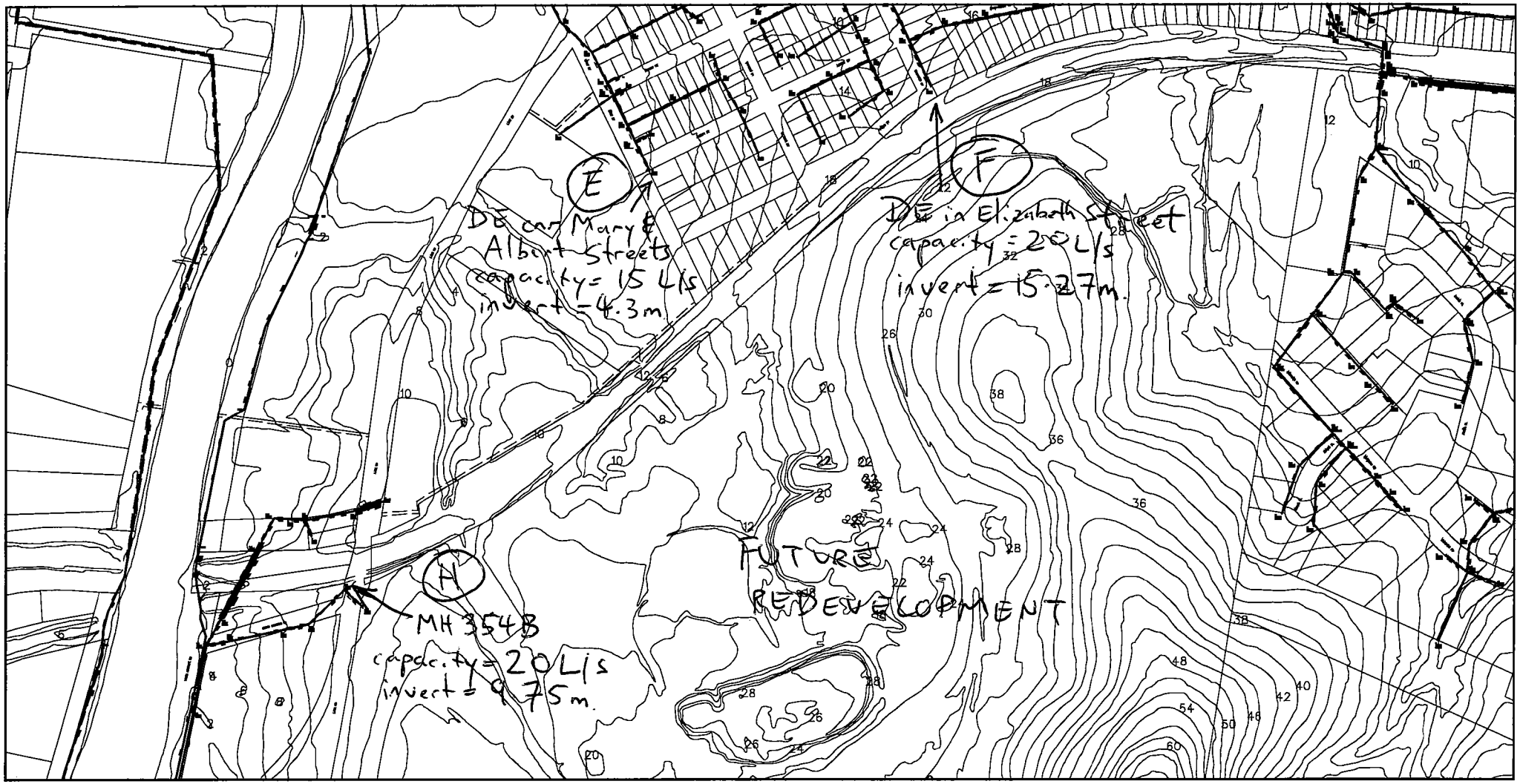

Date: Dec 20, 2004

Notes: Attachment 6

HWC

HUNTER WATER

caring for our community and the environment

HUNTER WATER CORPORATION
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426-432 KING STREET NEWCASTLE WEST
TEL: 1300 657 657 ABN: 46 228 513 446
www.hunterwater.com.au

RECEIVED
- 5 APR 2004

2 April 2004

Ref: C5/26335

Umwelt (Australia) Pty Ltd
PO Box 838
TORONTO NSW 2283

Attn: Mr Scott Day

Dear Mr Day,

RE: PROPOSED REDEVELOPMENT OF FORMER PASMINCO COCKLE CREEK SMELTER - BOOLAROO

Reference is made to your letter dated 19th February 2004 regarding water and wastewater servicing information to assist in investigation of suitable redevelopment oppurtunities for the former Pasminco Cockle Creek Smelter at Boolaroo. Hunter Water has reviewed your request, and offers the following comments.

Water

The development site is within the South Wallsend water supply system. The Corporation is currently undertaking a water servicing strategy for the South Wallsend water supply system, however this re-development of the Cockle Creek Smelter has not been considered as part of this servicing strategy.

Preliminary PIPES++ modelling of the water supply system was undertaken for current peak day demand. The existing HGL levels determined at the potential connection points nominated in your correspondence are shown in the *Table 1* below. Please note that this analysis excludes any allowance for development of the former Pasminco Cockle Creek Smelter site. A water servicing strategy will need to be conducted for this development when you have more certainty regarding the likely scale and type of development on the site.

Table 1: Existing HGL Levels at Points A-H

Point	Connection Point Location	HGL (m)
A	375mm main off TC Firth Ave	74
B	300mm main in First St	77
C	100mm main Third St	76
D	200mm main Munibung Rd	75
E	500mm main Mary St	81
F	500mm main Elizabeth St	81
G	500mm main Lake Rd	78
H	Nil	-

Wastewater

The development site is located on the border of the Boolaroo No.1 and Cardiff No.1 Wastewater Pumping Station (WWPS) catchments, which are both within the Edgeworth Wastewater Treatment Works (WWTW) catchment. A servicing strategy was recently completed for the Edgeworth WWTW catchment, however the closure of the Cockle Creek

Smelter and possible redevelopment of the site was not considered as part of this servicing strategy. Based on a site area of 190 Ha and an approximate development yield of 10 ET/Ha, the theoretical peak wet weather flow (PWWF) from the development may be in the order of 155 L/s.

The capacity of Boolaroo No.1 WWPS is approximately 272 L/s, and currently accepts only gravity flows. Based on the current theoretical PWWF loading estimated to be in the order of 136 L/s, it is estimated that there is approximately 136 L/s of spare capacity at this station.

Cardiff No.1 WWPS currently accepts pumped flows from Boolaroo No.1 WWPS in addition to gravity flows. The total theoretical PWWF to this station is in the order of 1,472 L/s. Based on this loading and a total station capacity of approximately 1,652 L/s, it is estimated that there is approximately 180 L/s of spare capacity at this station.

Regarding the potential points of connection you have identified, a preliminary review of the existing wastewater transportation system was undertaken and a summary of the findings of this review are provided in the table below. When you have determined the development profile for the site, a more detailed review could be undertaken. However, development above the levels shown in the table below would most likely result in the need for augmentations to the wastewater transportation system.

Point	WWPS Catchment	Sewermain considered for connection	Estimated Capacity Available
A	Boolaroo No. 1	300mm main, MH 343, western side of TC Firth Ave	30 L/s
B	Boolaroo No. 1	150mm, MH 40D in First St	10 L/s
C	Boolaroo No. 1	150mm, DE, Second St	30 L/s
D	Cardiff No. 1	150mm, Munibung Rd	10 L/s
E	Cardiff No. 1	150mm, DE, Cnr Mary & Albert St (230m from boundary)	15 L/s
F	Cardiff No. 1	150mm, DE, Elizabeth St	20 L/s
G	Boolaroo No. 1	Nil	0 L/s
H	Boolaroo No. 1	225mm, MH 354B, Creek Reserve Road	20 L/s

A wastewater transportation servicing strategy will need to be conducted for the development site when you have greater certainty regarding the likely scale and type of development on the site.

With regard to wastewater treatment, a capacity review of Edgeworth WWTW is currently being carried out. Depending on the timing and scale of the proposed development, an upgrade of the treatment works may also be required.

General

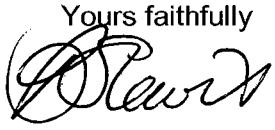
The unit rate of developer charges for connection to Hunter Water Corporation's water and wastewater services is dependent on the type of development proposed. Current developer charges for various types of development on the subject site are available on Hunter Water's website (www.hunterwater.com.au). The applicable Developer Servicing Plans are *W1.15 South Wallsend* (water) and *S2.01 Edgeworth East* (wastewater). Once the likely scale and type of development proposed for the site is known, Hunter Water can provide an indication of the applicable developer charges.

Please note the capacities advised here are subject to other growth occurring in the interim and therefore, at your time of application you may find that there are capacity shortfalls.

A more detailed assessment of the water and wastewater servicing requirements for the proposed development would be undertaken by Hunter Water at the time of your formal application for a Section 50 certificate.

If you have any further queries regarding this matter, please do not hesitate to contact Kirby Morrison on telephone (02) 4979 9545.

Yours faithfully



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

Enquiries: Kirby Morrison
Tel: 02 4979 9545
Fax: 02 4979 9711

Appendix E – Extract From the Hunter Water Design Manual – “Equivalent Tenements and Storm Allowance”

APPENDIX 3A EQUIVALENT TENEMENTS AND STORM ALLOWANCE

SHEET 1 of 3

CLASSIFICATION	MODULE	UNIT ADOPTED	ET/UNIT	STORM ALLOWANCE (L/s)
Residential (Unit Basis)	Single Cottage	Tenement	1	0.058/Unit
	Flat, Home Unit, Town House (Individual allotment thereof)	Flat	2/3	0.058/Module
Residential (Area Basis)	Single Dwelling Zone (30-50 persons/Ha)	Gross Ha	10	0.58/Unit
	Medium Density Zone (60-150 persons/Ha)	Gross Ha	25	0.58/Unit
	High Density Zone (150-250 persons/Ha)	Gross Ha	50	0.58/Unit
New Community	Hospital	Bed	1	0.58/Module
	Hostel	Bed	1/8	0.58/Module
	Day School	Pupil	1/25	0.58/Module
	Boarding School	Pupil	1/6	0.58/Module
	Hotel	Built-up Ha	100	0.058/Module
	Motel	Bed	1/8	0.058/Module
	Club (licensed)	Occupant	1/25	0.058/Module
	Public Toilets	W.C. or Urinal	1/2	0.058/Module
Commercial				
(i) Unit Basis	Shops etc.	Occupant	1/25	0.058/Module
(ii)Area Basis	High Density Zone	Built-up Ha (floor area for multi-storey)	10	0.58/Net Ha
Entertainment	Showground etc	Visitor	1/100	0.58/Module
	Caravan Park	Van lot	1/2	0.58/Module
	Swimming Pool	Complex	15-25	0.58/Module
Industrial (Area Basis)	Multi Purpose Future use unknown	Gross Ha	30-50	0.58/Unit
	Clean Dry Trades (no showers)	Gross Ha	2-4	0.58/Unit
	Dirty Dry Trades (with showers)	Gross Ha	4-10	0.58/Unit

Note: Ha = Hectare

Gross Hectare - total area of zone.

Built-up Hectare - floor area of building

Net Hectare - area of land not including that set aside as public road or park

CLASSIFICATION	MODULE	UNIT ADOPTED	ET/UNIT	STORM ALLOWANCE (L/s)
Dry Industrial (Unit Basis)	Clean Dry Trades (no showers)	Employee	1/25	0.58/Module
	Dirty Dry Trades (with showers)	Employee	1/10	0.58/Module
Wet Industrial				
(a) Meal Preparation	Restaurant) Cafeteria) Canteen) Caterers)	Built-up Ha	80	0.058/Module
(b) Food Manufacture				
(i) Dairy	Milk Cheese Ice-Cream	Built-up Ha	1400 850 350	0.58/Net Ha
(ii) Fruit and Vegetables	Cannery) Condiments) Sauces)	Built-up Ha	550	0.58/Net Ha
(iii) Meat	Abattoir Rendering Tallow Gelatine & Glue Poultry Small Goods	Built-up Ha	550 300 850 1100 550	0.58/Net Ha
(iii) Grain	Flour Milling Starch Edible Oils and Fats Cereals Bakery Biscuits and Cakes	Built-up Ha	15 850 1100 150 15 150	0.58/Net Ha
(iv) Beverages	Beer Soft Drinks	Built-up Ha	550 300	0.58/Net Ha
(vi) Others	Yeast Confectionary Salt	Built-up Ha	1100 80 300	0.58/Net Ha

CLASSIFICATION	MODULE	UNIT ADOPTED	ET/UNIT	STORM ALLOWANCE (L/s)
Wet Industrial (contd)				
(c) Textiles and Leather	Tannery and Hides	Built-up Ha	550	0.58/Net Ha
	Wool Scour		1100	
	Felt and Carpet		300	
	Wool Dyeing and Spinning		300	
	Cotton and Synthetic Dyeing and Spinning		550	
(d) Chemicals	Oil Refinery	Net Ha	15	0.58/Net Ha
	Pharmaceutical	Built-up Ha	150	0.58/Net Ha
	Organic Liquids		300	
	Resins, Polymers and Plastics		300	
	Adhesives		300	
	Soaps and Detergents		150	
	Paint Manufacturing		80	
(e) Metal Processing	Electroplating	Built-up Ha	300	0.58/Net Ha
	Anodising		300	
	Galvanising		300	
	Batteries		150	
(f) Non-metallic Manufacture	Paper	Built-up Ha	80	0.58/Net Ha
	Wood		80	
	Glass		80	
(g) Services	Laundry	Built-up Ha	2100	0.058/Module
	Laboratory		550	
	Film Processing		300	

Appendix F – Extract from the Hunter Water Development Servicing Plan – Edgeworth East Transportation Plan.

Overview

DSP Charges

The developer charges for the Edgeworth East Sewerage Transportation System DSP are detailed in Table 1:-

Table 1:- Developer Charges ($/ET)[1] for Edgeworth East Sewerage Transportation System DSP Area

	Single Residential	Multi Residential	Commercial / Industrial	Other
Transportation system	$1,584	$1,584	$1,584	$1,584
Operating Surplus	($2,034)	($1,601)	($792)	($610)
Total Applicable	**- $450[2]**	**-$16[2]**	**$792**	**$974**

Notes

[1] It should be noted that in addition to the Developer Charges, Administration Fees are applicable. The administration fees (which are determined by IPART) vary depending on the 'category' of the development. Refer to the Schedule of Fees at http://www.hunterwater.com.au/explanationofcharges.asp or at any of Hunter Water's offices.

In cases where a site is being redeveloped, a credit may be applied to the appropriate developer charge. The application of a credit reflects the notion that developer charges are only applied against increases in demand on Hunter Water's services for a specific site. Credits therefore, will reflect the past water and sewerage allowance for that site.

[2] Although the Sewerage Transport charge is negative, once the developer charges for the WWTW, relevant water system, transfer main and headworks are added, a developer charge greater than $0/ET will be charged.

The main cost components for the DSP Charge are:

- A high proportion of existing assets have capacity to service future growth and hence only relatively minor Hunter Water Corporation funded future works programmed
- High operating surplus

For purposes of this DSP the developer charge for one equivalent tenement compared with the previous charge is:-

Overview

DSP Charges

The developer charges for the South Wallsend Water Supply Delivery System DSP are detailed in Table 1:-

Table 1:- Developer Charges ($/ET)[1] for South Wallsend Water Supply Delivery System DSP Area

	Single Residential	Multi Residential	Commercial Industrial	Other
Water Delivery system	$970	$821	$448	$597
Total Applicable	$970	$821	$448	$597

Notes

[1] It should be noted that in addition to the Developer Charges, Administration Fees are applicable. The administration fees (which are determined by IPART) vary depending on the 'category' of the development. Refer to the Schedule of Fees at http://www.hunterwater.com.au/explanationofcharges.asp or at any of Hunter Water's offices.

In cases where a site is being redeveloped, a credit may be applied to the appropriate developer charge. The application of a credit reflects the notion that developer charges are only applied against increases in demand on Hunter Water's services for a specific site. Credits therefore, will reflect the past water and sewerage allowance for that site.

The main cost components for the DSP Charge are:

- Assets constructed between 1975 and 2005 that have capacity to service growth.

For purposes of this DSP the developer charge for one equivalent tenement compared with the previous charge is:-

Table 2:- Comparison of Developer Charges for the South Wallsend Water Supply Delivery System DSP Area

Category	DSP Charge (1 July 2006) ($/ET)	Previous DSP Charge (1 July 2006) ($/ET)
Residential	$948	$870
Multi residential	$802	$870
Commercial/ Industrial	$438	$475
Other	$584	$633

Appendix G – Correspondence with Energy Australia

SY060409

145 Newcastle Road
Wallsend NSW 2287

Address all mail to
PO Box 487 Newcastle
NSW 2300 Australia

Telephone (+61) 13 1525
Facsimile (02) 4951 9555

EnergyAustralia™ We're on it

22 November 2006

RECEIVED
27 NOV 2006
ACOR CONSULTANTS

Job Number: 57428
Contact: Keith Carmody
Telephone: 02 4951 9465
Facsimile: 02 49519459
email: kcarmody@energy.com.au

Mr Peter Flannigan
ACOR Consultants Pty Ltd
PO Box 822
CROWS NEST NSW 2065

Dear Peter,

Electricity Network Connection – Pasminco Site Redevelopment

I refer to your letter of 8 November 2006 concerning the overall concepts for the redevelopment of the Pasminco Smelter site at Boolaroo. Thank you for this preliminary advice. Until it arrived our Network Planning staff had no information available to factor into zone substation load forecasts. The following information may assist you to understand our position in relation to this site.

EnergyAustralia presently has a zone substation in First St Boolaroo. This substation supplied the Pasminco Smelter when it was operational and continues to supply minor loads on the site during the demolition and land rehabilitation works. We intend to retire this substation approximately two years from now. It will be replaced by a new substation located off Lake Road Argenton on land near Kindyerra Park. Civil works for the replacement substation recently commenced.

The replacement substation will take primary supply from the 132 kV tower line that crosses the Pasminco land. Secondary voltages will be 33 kV and 11 kV. New mains at both of the latter voltages will extend from the new substation to connect with existing mains that are presently connected to the Boolaroo Zone Substation. None of the new mains will affect the Pasminco land. However all 33 kV mains presently affecting the Pasminco site will remain in their present location unless arrangements are made to relocate or underground them.

In planning for the new substation any allowance made for developments on the Pasminco site was fairly nominal as there was little or no information then available about the future of the site. 11 kV distribution mains from the new substation have been planned to meet existing loads and expected incremental load growth. There are arrangements in hand to install 11 kV connections from the Argenton substation to existing feeders serving the general areas of Stages 2, 3, 4 and 8. However there may be a need for additional feeder capacity to service these areas.

The proposed industrial area in Stages 1 and 6 will be closer to the new Argenton substation than to Cardiff Zone Substation. The Cardiff substation is already heavily loaded and 11 kV feeders from Cardiff Zone Substation into the area near the eastern boundary of the Pasminco

Partner

site have very limited surplus capacity at peak load times. While it might be possible to supply some initial loads on the Pasminco site from Cardiff it is anticipated that we would eventually want to support this area from the Argenton substation.

When the Argenton substation was planned it was envisaged that, if the Pasminco site was later redeveloped, we would need to provide a number of feeders direct into the site via one or more bores under the railway corridor. We would need a certain amount of development work to have occurred in Stage 5, namely the construction of roads, before this could occur.

EnergyAustralia has concerns with the degree of contamination of the old smelter land. Before making any commitments to undertake or allow any cabling works on the site we would require full details of the levels of contamination and information about the rehabilitation processes that are being undertaken. It is to be noted in this regard that a deliberate decision was made, when planning the mains works for the new Argenton substation, to avoid any consideration of underground cable routes on Pasminco land. We would therefore want to be assured that any cable trenches for cables on the site were not in contaminated land.

Extension of the electricity distribution network to service proposed development would be contestable works and the provisions of our document ES10 – *Requirements for Electricity Connection to Developments* would apply. The allocation of costs for any works would be in accordance with ES8 - *Capital Contributions Guidelines.* Copies of both documents are available on our website at http://www.energy.com.au/energy/ea.nsf/Content/Network+Electrical+supply+standards.

Please contact me if you require additional information.

Yours faithfully

K.M. Carmody

Keith Carmody
Network- Customer Supply Hunter and Central Coast

01 March 2007

The Manager
EnergyAustralia
145 Newcastle Road
Wallsend NSW 2287

Attn: Ms J Pritchard
Re: Pasminco Cockle Creek Smelter Site (PCCS)
Electricity Easements

Dear Jenny

We wish to confirm your advice per telephone discussion of 16/02/07 with the undersigned that EnergyAustralia will not be requiring the establishment of any easements for HV transmission over the PCCS site other than those which exist at present.

Yours faithfully

R P FLANNIGAN
for ACOR Consultants Pty Ltd

ÂCOR CONSULTANTS PTY LTD

ENGINEERS

MANAGERS

INFRASTRUCTURE PLANNERS

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