

Appendix 15
Quantity Surveyor Report



**‘Capital Investment Value’
Construction Cost Estimate**

For

**Proposed Extension of Waste &
Recycling Facility**

Located at

Glenfield NSW

9 December 2014

Tuesday, 9 December 2014

Attention: Jeff Burns

Environmental Property Services
9 Yacaaba Street
Nelson Bay NSW 2315

Re – Proposed Extension of Waste & Recycling Facility – Glenfield NSW

Dear Jeff,

Please find attached our Elemental Estimate prepared following plans and information supplied by Environmental Property Services.

The report has been prepared by Quanto Pty Ltd under instruction from the Environmental Property Services and not in any other capacity.

This provides the costs estimated to complete the new extension to the waste & recycling facility in a broad sense at this stage of the design process to determine the 'Capital Investment Value' as per the *Environmental Planning and Assessment Regulation 2000* and certain state Environmental Planning Policies.

Furthermore, this report includes for the proposed full time employment opportunities available in the construction and ongoing operation of the waste & recycling facility as a whole.

We note that in our capacity as quantity surveyors, we have determined an elemental estimate of costs generally from the Schedule of Information nominated in Appendix 1 of this report.

Further to the above, we draw your attention to the Schedule of Exclusions indicated within Appendix 2 of this report.

1.0 General Overview

Glenfield Waste Services (GWS) is proposing to develop a Materials Recycling Facility on land owned by the GWS Group within the bounds of the existing current landfill site at Glenfield NSW.

The developed facility is to have the capacity to process the recycling of 450,000 tonnes per annum of non-putrescible waste for reuse in secondary markets. The proposal will be located across approximately 5 hectares in four differentiated but contiguous areas and positioned to avoid existing landfill areas. Site entry and egress for transport of material will utilise existing site access locations along Cambridge Avenue and Railway Parade respectively.

1.1 Site Development

Site upgrades and provision of additional facilities will be required to assist in the development proposal. These works include:

- Clearing & grading of the site to provide a level working area for the storage of materials and operation of machinery;
- Installation of stormwater management systems;
- Upgrade of existing water retention and distribution systems for onsite dust management;
- Provision of other utility services (electricity, communications, etc) as required;
- Installation of operational fixtures including site office;
- Construction of internal one-way road and parking area;
- Sealing of part of an existing internal road;
- Construction of material storage bays; and
- Landscaping, fencing & signage.

1.2 Site Operation & Layout

1.2.1 Materials Received

The materials recycling facility intends to recycle and process waste produced by the construction and demolition, and commercial and industrial sectors to produce goods for resale to the construction markets. Strict quality controls will be used to ensure the quality of the incoming materials, and this in turn will underpin the quality of the final saleable product.

Based upon the current experience of GWS, the quality of waste generated by the proposed facility that cannot be reused or recycled is considered to be minimal. This is due to the fact that all impurities are removed in the crushing process and are sorted and

redistributed to the appropriate recycling section of the facility. Anticipated waste classifications which are to be accepted and processed on site are:

- C & I waste (typically paper/cardboard, plasterboard, ceramics, natural and manufactured timbers, metal, green waste, plastics and glass);
- C & D waste (asphalt, concrete, brick, crushed concrete, concrete plant washout, concrete waste from batching plants);
- Foundry sand;
- Virgin Excavated Natural Material (VENM) – including sandstone; and
- Excavated Natural Material (ENM).

In line with the current process adopted by GWS, the Recycling Facility will not accept hazardous materials such as asbestos and chemical waste. Additionally all personnel will be required to undertake asbestos awareness training as part of the site induction process and ongoing training program.

1.2.2 Materials Produced

Recycled products produced on site and sold back into the construction markets are to include:

- Recycled Aggregates – for landscaping, concrete products, pipes, asphalt products, road applications, backfill, concrete blocks and the like;
- Recycled Pipe Bedding – for bedding sand and fill under slabs and the like;
- VENM/ENM – Engineered & non engineered fill applications for subgrade, reinforced earth wall fill and the like;
- Recycled General Fill – Filter material, selected fill and the like;
- Road Base - Engineered & non engineered applications for roads, hardstand and the like;
- Timber Mulch – for landscaping, agricultural use, council use and the like; and
- Green Waste – for erosion control, landscaping, composting and the like.

1.2.3 Capacity

In total, the facility is to process a maximum volume in the order of 450,000 tonnes of material per annum, distributed across the four designated areas of the site.

1.2.4 Facility Layout

A copy of the site layout design is attached to Appendix 4 of this report.

The materials recycling facility is divided into four separate, with each area receiving and processing different waste streams.

The materials recycling facility will be accessed via a one way internal road, to ensure all traffic movements for the area avoid entering the landfill facility and also provides separate access areas for the existing EPA licences. Access to all designated areas are via gated entries with no unsupervised direct access to customers from the one way road.

1.2.4 Plant & Equipment

The following mobile machinery is proposed to be stored on site to carry out the processing of materials:

- 1 off Front End Loader (CAT972 or similar)

We note that the GWS existing site already has other front end loaders, wheel loaders, excavators, water cart, crushers, screens and shredders. This existing machinery is to be also utilised for the new expansion area of the facility.

All machinery will be stored in designated and secured zones.

1.3 Project Particulars

Traffic access will use the existing main southern entry of the GWS site. Trucks will be entering via Cambridge Avenue to an inspection point and then proceed to a receival area. A one way internal road is to be constructed to guide traffic along the perimeter of the facility before joining the existing GWS internal road network to facilitate site traffic egress at Railway Parade.

The total cost includes the design, site preparation, and construction of waste facilities as a whole.

2.0 Capital Investment Value Construction Cost Estimate

Quanto Pty Ltd has been provided with the location and design as provided by Environmental Property Services. We believe the independent estimated construction

cost for the complete construction of the new proposed extension of the waste & recycling facility to total \$2,330,000 exclusive of GST.

We have based this cost estimate of works upon the definition of Capital Investment Value which includes 'all costs necessary to establish and operate the project, including the design and construction of the development including structures, associated infrastructure and fixed or mobile plant and equipment'.

We have excluded costs for land, costs for any separate approvals and Good and Services Tax (GST).

We certify that the information provided is accurate at the date of preparation of this report.

2.1 Basis of Estimate

We have based the estimate upon the capital cost estimate on the supplied details, including material and labour take-off estimates.

2.1.1 Qualifications

We understand that no geotechnical investigations have been completed to date;

2.1.2 Assumptions

This estimate has been based upon the following assumptions;

- Australian Work Place Agreements are in place;
- Professional & Consultants Fees;
- Statutory Permits are in place prior to construction;
- Manual labour is to be sourced locally;
- Current provisions for site security are sufficient for construction activities;

2.1.3 Exclusions

- No provision for delay costs with regard to permitting beyond what would be reasonably expected;
- No provision for delay costs associated with obtaining statutory approvals;
- Land acquisition costs;
- Environmental testing and remediation of contaminants (if required);

- Influence of Market Forces such as concurrent projects and resource/commodity prices on labour and material costs;

2.2 Quantity and Cost Basis

2.2.1 Quantities General

The majority of quantities used have been based upon material take-offs and drawings supplied.

2.2.2 Pricing General

All costs to complete are in Australian dollars.

2.2.3 Manual Labour Rates

The rate is based upon a nominal 40 hour work week and excludes escalation.

2.2.4 Freight

No formal logistics study has been completed. An allowance has been included for freight of bulk materials and other equipment.

2.2.5 Escalation Assessment

No allowances have been made for escalation.

Please refer to the Elemental Trade Breakup Estimate and Detailed Cost Report indicated within Appendix 3 of this report to total \$2,330,000 exclusive of GST.

3.0 Development Job Creation

Quanto Pty Ltd has been provided with information in regard to jobs creation in both the process of construction and the operational phase of the development.

The GWS site is currently approved to operate from 6:30am to 4:30pm with no restrictions recorded for days of operation. Consistent with current hours, the recycling facility is proposed to operate between the hours of 6:30am to 4:30pm Monday to Friday and 8am to 4pm on Saturdays. Access until 6pm Monday to Friday will be required for maintenance. Occasional out of hours access will be required to cater for night road works and similar operations. It is expected that any such out of hours works will be infrequent and unobtrusive. The facility will operate within the approved hours nominated

by the regulating authority. The operating hours will be clearly displayed at the entry to the site.

The proposed recycling facility is anticipated to employ 20 staff during the operational stage of the development. In addition, during the construction period, approximately 5 full time equivalent jobs will be created over and above sub-contracted workers on site.

We also believe that the above estimates for job creation are a conservative estimate whereby depending upon the actual output within growth production, further employment opportunities may arise.

4.0 Disclaimer

Quanto Pty Ltd have prepared this report in part on the basis of information supplied in the ordinary course of business by Environmental Property Services. Whilst all professional care and skill have been exercised to validate its accuracy and authenticity, Quanto Pty Ltd is unable to provide and guarantee in that regard, and will not be liable to any party for loss arising as a result of any such information subsequently being found to be inaccurate or lacking authenticity.

Quanto Pty Ltd have provided this report on designs of the current proposed development provided.

5.0 Conclusion

Should you have any queries or require further clarification, please do not hesitate to contact Bob Macansh of Quanto Pty Ltd.

Yours Sincerely

A handwritten signature in black ink, appearing to be 'Bob Macansh', is written over a light purple rectangular background.

Bob Macansh (AAIQS, JP)
Director
Quanto Pty Ltd

Appendix 1

Schedule of Information

Schedule of Information

The following is a schedule of information used in preparation of the cost plan:

- Report of site location layout, set up design and existing operations explanation as prepared by Environmental Property Services Pty Ltd.

Appendix 2

Schedule of Exclusions

Schedule of Exclusions

- Land and Legal Costs;
- Delay Costs;
- Finance Costs;
- Rise and fall;
- Council & Authority Fees;
- Holding costs and interest charges;
- Removal of hazardous materials and contaminated soil;
- Goods & Services Tax;
- Staging, phasing or delay costs; and
- Cost increases beyond December 2014.

Appendix 3

Elemental Trade Estimate and Detailed Cost Report

Full Estimate Summary

Job Name : 13387 GLENFIELD
Client's Name: Environmental Property Service

Job Description
 Cost estimate for 'Capital Investment Value' of
 proposed addition of waste & recycling facility
 located at Glenfield NSW

Trd No.	Trade Description	Trade %	Cost/m2	Sub Total	Mark Up %	Trade Total
	Preliminary Costs	9.07		211,396		211,396
	Site Clear & Levelling	17.80		414,800		414,800
	Road Works, Pedestrian Pathways, Site Base & Bunding	43.83		1,021,248		1,021,248
	Site Drainage	1.04		24,260		24,260
	Fencing	3.89		90,670		90,670
	Sheds & Buildings	3.70		86,175		86,175
	Power & Communications Services	1.35		31,400		31,400
	Water Suppression	3.82		89,010		89,010
	Weighbridge	6.22		145,000		145,000
	Signage	0.52		12,041		12,041
	Machinery	6.87		160,000		160,000
	Fuel Tanks & Oil Storage	1.89		44,000		44,000
	Total - Excluding GST					<u>2,330,000</u>
		100.00		2,330,000		2,330,000
Final Total : \$						2,330,000

Trade Breakup

Job Name :	13387 GLENFIELD	Job Description
Client's Name:	Environmental Property Service	Cost estimate for 'Capital Investment Value' of proposed addition of waste & recycling facility located at Glenfield NSW

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 1 <u>Preliminary Costs</u></i>						
1	Allowance for preliminary costs including but not limited to site storage & sheds, insurances, security, silt fencing, site mangement, materials handling, etc at 10%	1.00	Item	211,396.00		211,396.00
<u>Preliminary Costs</u>						Total : 211,396.00
<i>Trade : 2 <u>Site Clear & Levelling</u></i>						
1	Cut & remove sparse medium cover of Eucalyptus molaccana including removal of stumps & roots complete	900.00	No.	147.00		132,300.00
2	Allowance for site levelling to new site are complete	50,000.00	m2	5.65		282,500.00
<u>Site Clear & Levelling</u>						Total : 414,800.00
<i>Trade : 3 <u>Road Works, Pedestrian Pathways, Site Base & Bunding</u></i>						
<u>Bunding</u>						
1	Allowance for bunding mound walls to 500 high to south east perimeter complete	700.00	m	46.00		32,200.00
<u>Site Base & Sealing</u>						
2	Allowance for site base course compacted & ready for site sealing (average 200 thick)	50,000.00	m2	12.40		620,000.00
3	Allowance for prime and sprayed sealing complete	50,000.00	m2	4.60		230,000.00
<u>Road Works</u>						
4	Allowance for road base course crushed rock compacted complete (200 thick)	2,800.00	m2	21.00		58,800.00
5	Allowance for hot mix 40 thick bitumen surface seal complete	2,800.00	m2	24.70		69,160.00
<u>Pathways</u>						
6	Allowance for concrete pathways as indicated complete	144.00	m2	77.00		11,088.00
<u>Road Works, Pedestrian Pathways, Site Base & Bunding</u>						Total : 1,021,248.00
<i>Trade : 4 <u>Site Drainage</u></i>						
1	Allowance for graded & blade cut open dish drain adjacent to roadway complete	630.00	m	32.00		20,160.00
2	Allowance for drainage pipe to under access road complete	10.00	m	410.00		4,100.00
<u>Site Drainage</u>						Total : 24,260.00
<i>Trade : 5 <u>Fencing</u></i>						

Trade Breakup

Job Name :	13387 GLENFIELD	Job Description
Client's Name:	Environmental Property Service	Cost estimate for 'Capital Investment Value' of proposed addition of waste & recycling facility located at Glenfield NSW

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 5 Fencing</i>						
1	1800 high cyclone fencing with 3 rows of barbed wire to top installed complete	1,400.00	m	59.00		82,600.00
2	4500 x 1800 high cyclone fencing gates installed complete	6.00	No.	780.00		4,680.00
3	2 x 4500 x 1800 high cyclone fencing gates installed complete (double gates)	3.00	No.	1,130.00		3,390.00
Fencing						Total : 90,670.00
<i>Trade : 6 Sheds & Buildings</i>						
Entry Shed Area 1						
1	Allowance for demountable gatehouse - steel frame, colourbond clad on concrete piers complete	20.00	m2	580.00		11,600.00
Exit Shed Area 1						
2	Allowance for steel framed, colourbond clad garage style, gable roof on concrete slab floor complete	35.00	m2	655.00		22,925.00
Shed 1 Area 2						
3	Allowance for steel framed, colourbond clad garage style, gable roof on concrete slab floor complete	35.00	m2	655.00		22,925.00
Shed 2 Area 2						
4	Allowance for steel framed, colourbond clad garage style, gable roof on concrete slab floor complete	35.00	m2	655.00		22,925.00
Gatehouse Area 3						
5	Allowance for single room gatehouse - demountable on concrete piers complete	10.00	m2	580.00		5,800.00
Sheds & Buildings						Total : 86,175.00
<i>Trade : 7 Power & Communications Services</i>						
Power						
1	Allowance for connection to existing mains	1.00	Item	6,800.00		6,800.00
2	Allowance for power cabling & conduit from existing office to buildings 10 & 14	300.00	m	45.00		13,500.00
Telecommunications						
3	Allowance for telecommunications cabling & conduit from existing office to buildings 10 & 14	300.00	m	37.00		11,100.00
Power & Communications Services						Total : 31,400.00
<i>Trade : 8 Water Suppression</i>						

Trade Breakup

Job Name :	13387 GLENFIELD	Job Description
Client's Name:	Environmental Property Service	Cost estimate for 'Capital Investment Value' of proposed addition of waste & recycling facility located at Glenfield NSW

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 8 <u>Water Suppression</u></i>						
1	Use existing water cart only		Note			EXCL
2	Allowance for excavation of new Water Quality Control Ponds (WQCP) complete (Ponds not to be lined)	1,935.00	m3	46.00		89,010.00
<u>Water Suppression</u>						Total : 89,010.00
<i>Trade : 9 <u>Weighbridge</u></i>						
1	Allowance for supply & install new weighbridge installed complete	1.00	Item	120,000.00		120,000.00
2	Allowance for weighbridge drive control unit complete	1.00	Item	25,000.00		25,000.00
<u>Weighbridge</u>						Total : 145,000.00
<i>Trade : 10 <u>Signage</u></i>						
<u>Road Signage</u>						
1	Allowance for various non flexible powder coated sign post and reflective sign including concrete base complete	25.00	No.	380.00		9,500.00
<u>Painted Signs</u>						
2	Allowance for painted direction signs complete	11.00	No.	210.00		2,310.00
3	Allowance for car parki delneation signage	64.00	m	3.60		230.40
<u>Signage</u>						Total : 12,040.40
<i>Trade : 11 <u>Machinery</u></i>						
1	Allowance for new front end loader (972 CAT or similar) complete	1.00	Item	160,000.00		160,000.00
2	Other machinery to be used already exists on site including but not limited to water carts, loaders, pulverisers, crushers & shredders		Note			EXCL
<u>Machinery</u>						Total : 160,000.00
<i>Trade : 12 <u>Fuel Tanks & Oil Storage</u></i>						
1	Allowance for self contained oil storage area complete	1.00	Item	8,000.00		8,000.00
2	Allowance for 20,000 litre self bunded above ground fuel tank complete	1.00	Item	36,000.00		36,000.00
<u>Fuel Tanks & Oil Storage</u>						Total : 44,000.00

Trade Breakup

Job Name :	13387 GLENFIELD	Job Description
Client's Name:	Environmental Property Service	Cost estimate for 'Capital Investment Value' of proposed addition of waste & recycling facility located at Glenfield NSW

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade :</i> 13 <u>Total - Excluding GST</u>						
<u>Total - Excluding GST</u>						Total :

Appendix 4

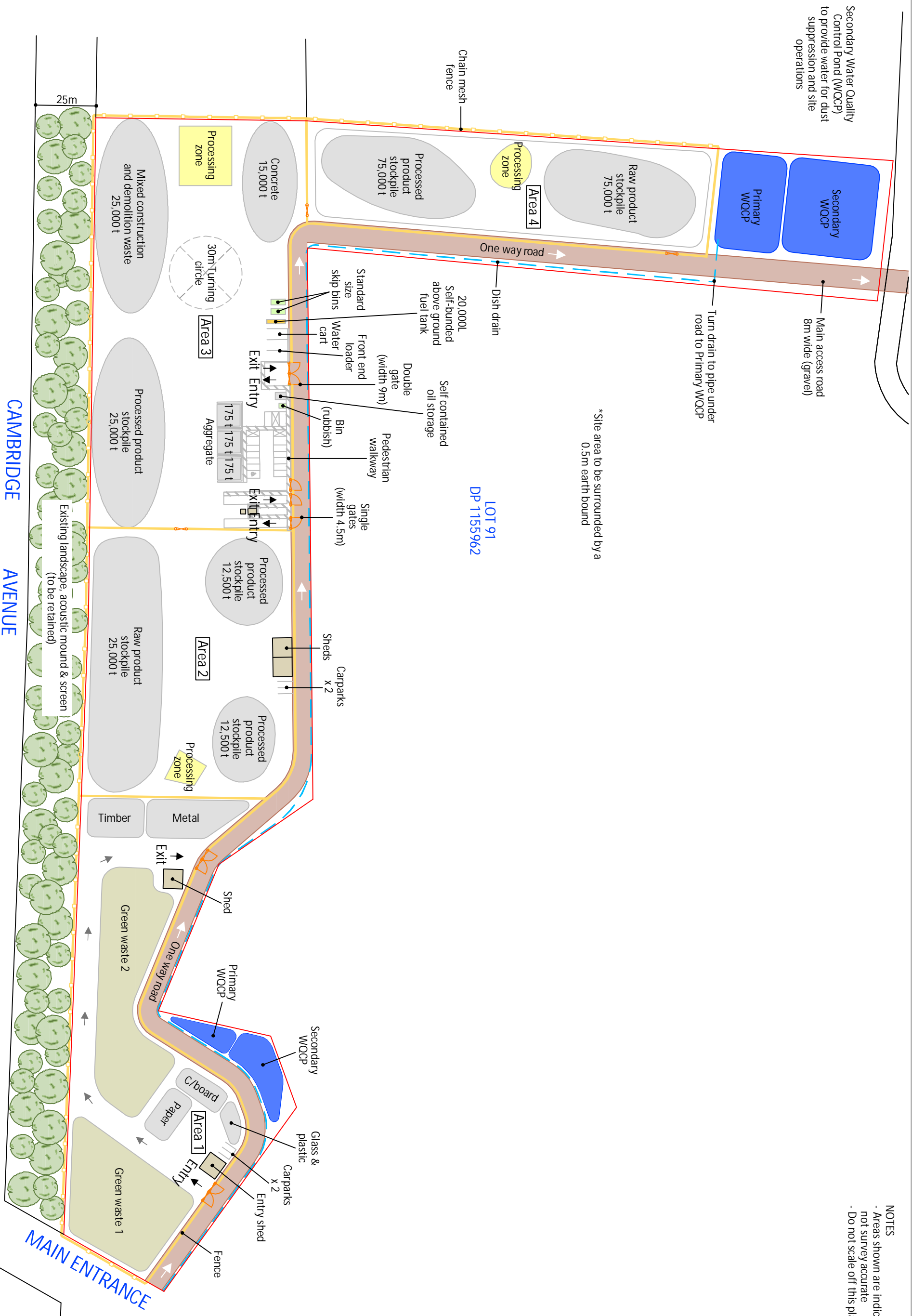
Site Layout Design

- Legend:**
- GWS Southern Portion Boundary
 - East Hills Rail
 - Georges River
 - Cadastre
 - Proposed Internal Access Road



Map Title:	Glenfield Proposed Materials Recycling Facility – Site Layout Context				Date:	4 July 2014	ENVIRONMENTAL PROPERTY SERVICES Level 33, 264 George St, Sydney NSW 2000 Level 1, 19 Stockton St, Nelson Bay NSW 2315 Telephone (Sydney): 02 9258 1985 Telephone (Hunter): 02 4981 1600 ABN: 17 143 490 537 Website: www.enviroproperty.com.au		
Location:	Glenfield, NSW Australia	Version No:	V01	Map/DWG No:	1 of 1	Job Ref:			

NOTES
- Areas shown are indicative only and are not survey accurate
- Do not scale off this plan



*Site area to be surrounded by a 0.5m earth bound

LOT 91
DP 1155962