
1.6 Appendix 6 – Economic Impact Assessment

PROPOSED REZONING OF LAND IN EMU PLAINS

STATEMENT OF ECONOMIC BENEFITS

Prepared for
Virtus Group

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SYDNEY CANBERRA

QUALITY ASSURANCE

This document is for discussion purposes only unless signed and dated by a Principal of Hill PDA.

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CONTENTS

1. EXECUTIVE SUMMARY.....	4
2. INTRODUCTION.....	5
2.1 Study Brief.....	5
2.2 Site Description.....	5
2.3 The Proposal	5
2.4 Zoning.....	5
3. ECONOMIC MULTIPLIERS.....	6
4. EMPLOYMENT GENERATION.....	7
4.1 Employment Generation from Construction	7
4.2 Multiplier Impacts.....	7
4.3 Operations Generated Employment.....	8
5. RATES UPLIFT	9
6. OTHER QUANTIFIED BENEFITS	10
6.1 Open Space Access and Embellishment.....	10
7. UNQUANTIFIED BENEFITS	11
7.1 Local Employment and ESD	11
7.2 Browse Plantation	11

1. EXECUTIVE SUMMARY

Virtus Group, acting for the land owner is seeking the rezoning of 1(d) land on the northeast corner of Old Bathurst Street and Russell Street to Industrial. Rezoning and development of the land into smaller industrial parcels will provide the following benefits to the locality.

Economic Multipliers

Construction has strong multiplier impacts in the national economy. The estimated \$110m cost for land development cost and construction of industrial buildings will add a further \$99m activity in production induced effects and \$106m in consumption induced effects.

Employment Generation

Development will provide 690 job years (one full time job over one year) directly in construction of roads, drainage, services and buildings. Multiplier impacts will provide a further 538 job years in production induced effects and 1,607 job years in consumption induced effects. Total job years generated by construction will equal 2,835.

Based on an estimated 75sqm of floor space per worker, it is estimated that there will be 1,300 full-time workers on-site post-construction.

Rates Uplift

The rates uplift is estimated at \$350,000 per annum – equivalent to \$4.4m in present value when amortised over 25 years at 7%.

Other Quantified Benefit

The land owner has agreed to provide access to the open space area on the western side of the site and meet some cost in embellishment and provision of playing fields. We have allowed in this assessment 300m of roadway (12.5m wide) plus 3 hectares of embellishment, change rooms and toilets and car parking at a cost of \$1m.

Unquantified Benefits

Other economic and social benefits include:

- More local jobs and reduced travel times and costs;
- Taronga Zoo tree harvesting at the rear of the land;
- Work experience for persons in the correctional facility in managing the tree harvest.

2. INTRODUCTION

2.1 Study Brief

Hill PDA Land Economists was commissioned by Virtus Group to undertake a partial independent Economic Appraisal of the proposed rezoning of land in Emu Plains for industrial development.

The purpose of the report is to assess the level of benefit to the government sector from rezoning and development.

2.2 Site Description

The subject property is located on the north-eastern corner of Old Bathurst Street and Russell Street, Emu Plains. The land is approximately 23 to 24 hectares in size of which the rear 3 or 4 hectares will be preserved for tree plantation. This leaves 20 hectares of developable land.

The land is bounded by Old Bathurst Street to the south, the Correctional Centre to the east and Russell Street and Emu Green parkland to the west.

2.3 The Proposal

The proposal is to rezone the site for industrial use to enable subdivision of the land into small to medium sized industrial lots. An suggested plan of subdivision has been prepared showing an internal loop road with 40 lots and a further 3 lots fronting Old Bathurst Street.

2.4 Zoning

The land is currently zoned Rural 1(d) but there is a considerable amount of industrial zoned land in the locality and adjacent to the site. To the south on the other side of Old Bathurst Road the land is zoned Industrial 4(a). The Correction Centre is zoned 5(a) and land to the north adjoining the site is zoned Industrial 4(b).

3. ECONOMIC MULTIPLIERS

This section outlines the broader economic multipliers from construction as measured in dollar terms. Multipliers refer to the level of additional economic activity generated by a source industry.

The construction industry is a significant component of the economy accounting for 6.6% of GDP and employing almost 14.6% of the workforce at March 2003. The industry has strong linkages with other sectors, so its impacts on the economy go further than the direct contribution of construction.

There are two types of multipliers:

- Production induced: which is made up of:
 - first round effect: which is all outputs and employment required to produce the inputs for construction; and
 - an industrial support effect which is the induced extra output and employment from all industries to support the production of the first round effect; and
- Consumption induced: which relates to the demand for additional goods and services due to increased spending by the wage and salary earners across all industries arising from employment

The source of the multipliers adopted in this report is ABS and Australian National Accounts: Input-Output Tables 1996-97 (ABS Catalogue 5209.0). These tables identify first round effects, industrial support effects and consumption induced multiplier effects at rates of \$0.466, \$0.438 and \$0.962 respectively to every dollar of construction.

Table 1 - Economic Multipliers from Construction

	Initial Effects	Production Induced Effects		Consumption Induced Effects	Total
		First Round Effects	Industrial Support Effects		
Output multipliers	1	0.466	0.438	0.962	2.866
Land Development*	\$6.0	\$2.8	\$2.6	\$5.8	\$17.2
Building Construction*	\$104.0	\$48.5	\$45.6	\$100.0	\$298.1
Land and Building	\$110.0	\$51.3	\$48.2	\$105.8	\$315.3

* Refer to Appendix A for preliminary cost estimate

Data Sources: Australian National Accounts: Input-Output Tables 1996-97 (5209.0), Price Index of the Output of the Building Industry - Producer Price Indexes (6427.0), CPI All Groups - RBA Bulletin (Table G2)

Therefore the \$6m land development cost and \$105m in building construction translates to a further \$99m activity in production induced effects and \$106m in consumption induced effects. Total economic activity generated is equivalent to \$315m.

4. EMPLOYMENT GENERATION

This section quantifies employment generated by construction of the total development and generated by operations of the commercial components of the development.

4.1 Employment Generation from Construction

The proposed development will generate employment in two ways – in construction and in business operations.

It is estimated that one full time construction position for 12 months is created for every \$159,468 of construction work undertaken¹. Based on an estimated cost of \$110m construction will therefore directly generate 690 job years.

4.2 Multiplier Impacts

The 1996-97 ANA Input-Output Tables identified employment multipliers for first round, industrial support and consumption induced effect of 0.33, 0.45 and 2.33 respectively for every job year in direct construction. We adjusted these multipliers to March 2005 using the building price index and these are provided in the following table. For every \$1 million in construction cost, a total of 25.8 job years could be generated in the economy and the proposed development as a whole will generate 2,835 job years during construction.

Table 2 - Construction Multiplier Effect

	Initial Effects	Production Induced Effects		Consumption Induced Effects	Total
		First Round Effects	Industrial Support Effects		
Employment No. per \$million adjusted to Mar-05 dollars	6.3	2.1	2.8	14.6	25.8
Total job years generated	690	228	310	1,607	2,835

Data Sources: Australian National Accounts: Input-Output Tables 1996-97 (5209.0), Price Index of the Output of the Building Industry - Producer Price Indexes (6427.0), CPI All Groups - RBA Bulletin (Table G2)

Note that the multiplier effects are national, and not necessarily local. The ABS notes that “care is needed in interpreting multiplier effects; their theoretical basis produces estimates which somewhat overstate the actual impacts in terms of output and employment. Nevertheless, the estimates illustrate the high flow-on effects of construction activity to the rest of the economy. Clearly, through its multipliers, construction activity has a high impact on the economy.”

¹ Source: ABS Australian National Accounts: Input-Output Tables 1996-1997 (ABS Pub: 5209.0). Shows 9 construction industry jobs directly created for every \$1 million of construction output. This equates to 1 employee for every \$111,111 of construction output in non inflated terms. Inflated to March 2005 dollars based on the Price Index of the Output of the Building Industry (ABS Pub: 6427.0 Table 15), this equates to \$159,468 per direct construction employee.

4.3 Operations Generated Employment

Forecasting the number of full-time jobs on site post-construction is difficult due to the considerable variation in employment rates (floor area per worker) between industry types. Office workers typically occupy around 20sqm whereas warehousing may have as few as one worker per 200sqm. For the purpose of this assessment we adopted 75sqm per worker, which is typical of many manufacturing firms.

Using this rate we would expect around 1,300 full-time workers on site.

5. RATES UPLIFT

Rezoning and subdivision will improve the rateable value of the land almost four fold. Land value will increase from a current level of approximately \$200,000 per hectare to somewhere between \$2.0m and \$3.5m per hectare when rezoned and serviced².

The uplift is shown in the table below.

Table 3 - Difference in Annual Rates between Rural and Industrial Land

	Rural	Industrial
Rateable Area (ha)	20.0	15.0
Value (\$/ha)*	200,000	2,500,000
Value (\$m)	4.0	37.5
Ad valorem rate**	0.004275	0.00999
Total Rates (\$/annum)	17,099	374,625

* Source: NSW Department of Lands Indicative Real Estate Values 1995 to 2005

** Source: Penrith City Council

Rates uplift is therefore equivalent to around \$350,000 per annum. This annuity difference equates to a present value of \$4.4m to Council when discounted at 7% per annum over 25 years.

2. NSW Department of Lands Indicative Real Estate Values 1995 to 2005

6. OTHER QUANTIFIED BENEFITS

6.1 Open Space Access and Embellishment

For Council the main quantifiable benefit of rezoning and developing the land for industrial purposes is the ability to gain access to the open space to the west and rear of the site. In this case the land owner has agreed to provide access and meet some cost of open space embellishment.

For the purpose of the assessment we have valued the betterment using a cost equivalent method. A roadway to the open space at 300m in length (and say 12.5m wide) would cost around \$375,000m - \$1,250 per metre including kerb, gutter and water reticulation.

We have assumed 3 hectares of open space is embellished at \$100,000 per hectare – which will provide for two ovals/football fields, fencing and some basic play equipment. Change rooms and toilets with seating above have been allowed for at a cost of \$160,000.

Total value is approximately \$1m as itemised below:

Table 4 - Value of Open Space Embellishment and Access Road

Playing Fields	3 ha @	\$100,000 /ha	\$300,000
Change Rooms, Toilets & Seats	90 sqm @	\$1,800 /sqm	\$162,000
Parking on bitumen	50 spaces	\$3,000 /space	\$150,000
Access Road (say 12.5m wide)	300 m @	\$1,250 /m	\$375,000
Total			\$987,000

7. UNQUANTIFIED BENEFITS

Unquantified benefits include the following:

7.1 Local Employment and ESD

- An increase in the number of local jobs (1,300) which will improve the ratio of jobs to working residents. This will further benefit by reducing commuting times and private vehicle travel costs.

7.2 Browse Plantation

- The Browse Plantation at the rear of the site will have an irrigation license and will be managed by Taronga Zoo. It will be used for tree harvesting and provide feed for the animals of the Zoo.
- The Taronga Zoo plantation will allow for additional rehabilitation activities associated with the Emu Plains Correctional Facility. This will provide benefits of work experience for persons completing their sentence within the prison.

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This report and its attached appendices are based on estimates, assumptions and information sourced and referenced by Hill PDA. We present these estimates and assumptions as a basis for the reader's interpretation and analysis. With respect to forecasts we do not present them as results that will actually be achieved. We rely upon the interpretation of the reader to judge for themselves the likelihood of whether these projections can be achieved or not.

APPENDIX A – PRELIMINARY COST ESTIMATE

Land Development Costs

Clearing and Earthworks	20	ha @	3,240	per ha	64,800
Roads	1,550	m @	2,200	per m	3,410,000
Water & Sewer Reticulation	1,550	m @	300	per m	465,000
Footpath	1,550	m @	60	per m	93,000
Power reticulation	20	ha @	50,000	per ha	1,000,000
Contingency @	15%				754,920
TOTAL					5,787,720

Building Costs

Cost of Building @	97,500	sqm @	1,000	/sqm	97.5	million
Site works, Parking & Landsc.	63,000	sqm @	100	/sqm	6.3	million
TOTAL					103.8	million

Based on:

Total Area of Parcels	15	ha
Assumed FSR	0.65	
Site Coverage	58%	