

22 May 2020

Warren Duarte
Iris Capital

Sent via email: warren@iriscapital.com.au

Dear Warren,

Re: 167-183 HUME HIGHWAY, GREENACRE - ESTIMATE OF OPERATIONAL IMPACTS

Thank you for inviting Atlas Urban Economics Pty Ltd (Atlas) to provide this Economic Impact Assessment of the proposed Iris Capital development at 167-183 Hume Highway. This letter outlines the impact estimates and underlying methodology applied.

The Proposal

The Proposal envisages the Site is redeveloped to include a diverse range of uses which include residential units and associated food and beverage, retail and commercial uses. The Proposal will retain the existing B6 zone but seek to increase FSR and building height limits, specifically to:

- Increase FSR from 1:1 to 1.25:1 with minimum 0.25:1 commercial uses.
- Increase maximum building height from 11m to part 11m to part 18m and part 14m.

The proposed changes will result in a GFA of 14,680 sqm, with 129 residential apartments and 2,936 sqm retained for non-residential uses. The proposed non-residential uses (the Proposed Uses) include the existing bistro (280 sqm of GFA) and sports bar/gaming area on the site (250 sqm of GFA) and additional commercial/retail space (2,406 sqm GFA).

Economic Impacts

This section provides an estimate of economic activity which could be supported by the Proposal. Economic impacts were modelled using Atlas's proprietary Input-Output model and assessed at the Canterbury-Bankstown LGA level.

Input-Output modelling describes economic activity through the examination of four types of impacts described in Table 1. Refer to Schedule 1 for details of Input-Output modelling methodology and key modelling assumptions.

Table 1: Economic Indicators

Indicator	Description
Output	The gross value of goods and services transacted, including the cost of goods and services used in the development and provision of the final product. Care should be taken when using output as an indicator of economic activity as it counts all goods and services used in one stage of production as an input to later stages of production, thus overstating economic activity.
Gross Product	The value of output after deducting the cost of goods and services inputs in the production process. Gross product (e.g. Gross Regional Product (GRP)) defines a net contribution to economic activity.
Incomes	The wages and salaries paid to employees as a result of the Project either directly or indirectly.
Employment	Employment positions generated by the Project (either full time or part time, directly or indirectly). Employment is reported in terms of Full-time Equivalent (FTE) positions or person-years.

Source: Atlas

Input-Output modelling estimates show the impacts of direct spending in a particular industry as well as from Production-induced impacts (Type I) or Consumption-induced impacts (Type II).

- **Production-induced impacts (Type I)** show the effects of industrial support effects of additional activities undertaken by supply chain industries increasing their production in response to direct spending.
- **Consumption-induced impacts (Type II)** estimate the re-circulation of labour income earned as a result of the initial spending through other industry impacts (or impacts from increased household consumption).

The estimates of economic impacts consider production and consumption-induced flow-on impacts. Type II impacts are commonly considered to overstate economic activity and therefore the types of flow-on impacts are reported separately.

Modelling Scenarios

The following scenarios are modelled to compare economic impacts:

- Base Case: Existing bistro and sports bar/gaming area.
- Proposal Case: Retention of the existing sports bar/gaming area and additional 2,406 sqm of retail/commercial space and 129 additional dwellings.

The Site is expected to generate ongoing economic/ operational activity through the following:

- **Direct turnover** generated by the retail/commercial operational activities on-site (proposal and base case).
- Economic activity that would not otherwise occur in the Canterbury-Bankstown LGA as a result of employment activity from '**dispersed jobs**', i.e. residents who work from home (only in the Proposal Case).
- Economic activity that would not otherwise occur in the Canterbury-Bankstown LGA as a result of **direct expenditure of new households**, i.e. households who live in the new dwellings (only in the Proposal Case).

Refer to Schedule 1 for detailed analysis of the underlying modelling assumptions for each of these economic activity drivers.

Economic Impacts

Economic impacts under the Base and Proposal cases are presented in Table 2.

Table 2: Estimated Economic Impacts

Indicator	Output (\$M)	GRP (\$M)	Incomes (\$M)	Employment (FTE)
Base Case (Hotel and Bistro)				
Direct	\$3.6	\$1.5	\$0.9	16
Flow-on Type I (Production-induced)	\$2.4	\$1.1	\$0.6	7
Flow-on Type II (Consumption-induced)	\$2.5	\$1.4	\$0.6	8
Total	\$8.5	\$4.0	\$2.2	31
Additional Operational Impacts and Dispersed Jobs (Proposal Case)				
Direct	\$19.2	\$9.8	\$6.8	79
Flow-on Type I (Production-induced)	\$11.4	\$5.5	\$2.9	31
Flow-on Type II (Consumption-induced)	\$15.3	\$8.5	\$3.8	49
Total	\$45.9	\$23.8	\$13.4	159
Additional Household Expenditure (Proposal Case)				
Direct	\$6.3	\$3.6	\$2.0	33
Flow-on Type I (Production-induced)	\$3.0	\$1.4	\$0.8	9
Flow-on Type II (Consumption-induced)	\$4.3	\$2.4	\$1.1	14
Total	\$13.6	\$7.5	\$3.8	56

In addition to retaining the existing bistro and sports bar gaming operations, the Proposal Case is estimated to generate additional annual impacts through retail/commercial operations and dispersed jobs in new residential units:

- \$49.5 million in output (\$19.2 million directly).
- \$23.8 million contribution to GRP (\$9.8 million directly).
- \$13.4 million in incomes and salaries (\$6.8 million directly).
- 159 FTE jobs (79 direct FTE).

In addition, annual household expenditure supported through the new dwellings is estimated to support:

- \$13.6 million output (\$6.3 million directly).
- \$7.5 million contribution to GRP (\$3.6 million directly).
- \$3.8 million in incomes and salaries (\$2.0 million directly).
- 56 FTE jobs (33 direct FTE).

On completion the Proposal will contribute to the Canterbury-Bankstown LGA through increased economic activity which will support local employment, direct and induced.

Annual household expenditure by new residents will additionally support retail and other local service businesses in the Canterbury-Bankstown LGA, contributing to their economic vitality and sustainability.

Please contact the undersigned should you require further clarification.

Yours sincerely,

Esther Cheong

Director

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References

ABS (2017a). *Census of Population and Housing, 2016*. Cat. No. 2008.0. ABS, Canberra.

ABS (2017b). *Household Expenditure Survey, Australia: Summary of Results*. Cat. No. 6530.0. ABS, Canberra.

ABS (2019). *Australian National Accounts: Input-Output Tables, 2016-17*. Cat. No. 5209.0.55.001. ABS, Canberra.

Kronenberg, T. (2009). *Construction of Regional Input-Output Tables Using Nonsurvey Methods: The Role of Cross-Hauling*. *International Regional Science Review*, 32(1), 40–64.

Schedule 1: Input-Output Methodology

Input-Output models are a method to describe and analyse forward and backward economic linkages between industries based on a matrix of monetary transactions. The model estimates how products sold (outputs) from one industry are purchased (inputs) in the production process by other industries.

The analysis of these industry linkages enables estimation of the overall economic impact within a catchment area due to a change in demand levels within a specific sector or sectors.

Impacts are traced through the economy via:

- Direct impacts, which are the first round of effects from direct operational expenditure on goods and services.
- Flow-on impacts, which comprise the second and subsequent round effects of increased purchases by suppliers in response to increased sales. Flow-on impacts can be disaggregated to:
 - Industry Support Effects (Type I) derived from open Input-Output models. Type I impacts represent the production induced support activity as a result of additional expenditure by the industry experiencing the stimulus on goods and services, and subsequent round effects of increased purchases by suppliers in response to increased sales.
 - Household Consumption Effects (Type II) derived from closed Input-Output Models. Type II impacts represent the consumption induced activity from additional household expenditure on goods and services resulting from additional wages and salaries being paid within the catchment economy.

Economic analysis considers the following four types of impacts.

Table S1-1: Economic Activity Indicators

Indicator	Description
Output	The gross value of goods and services transacted, including the cost of goods and services used in the development and provision of the final product. Care should be taken when using output as an indicator of economic activity as it counts all goods and services used in one stage of production as an input to later stages of production, thus overstating economic activity.
Gross Product	The value of output after deducting the cost of goods and services inputs in the production process. Gross product (e.g. Gross Regional Product (GRP)) defines a net contribution to economic activity.
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Source: Atlas

REGIONAL MODEL DEVELOPMENT

Multipliers used in this assessment have been created using a regionalised Input-Output model derived from the 2016-17 Australian transaction table (ABS, 2019).

Estimates of gross industry production in the catchment area were developed based on the share of employment (by place of work) of the Catchment Area within the Australian economy (ABS, 2017a) using the Flegg Location Quotient and Cross Hauling Adjusted Regionalisation Method (CHARM). See Norbert (2015) and Kronenberg (2009) for further details.

MODELLING LIMITATIONS AND ASSUMPTIONS

Input-Output modelling is subject to a number of key assumptions and limitations (ABS, 2019):

- **Lack of supply-side constraints:** The most significant limitation of economic impact analysis using multipliers is the implicit assumption that the economy has no supply-side constraints. That is, it is assumed that extra output can be produced in one area without taking resources away from other activities, thus overstating economic impacts. The actual impact is likely to be dependent on the extent to which the economy is operating at or near capacity.
- **Fixed prices:** Constraints on the availability of inputs, such as skilled labour, require prices to act as a rationing device. In assessments using multipliers, where factors of production are assumed to be limitless, this rationing response is assumed not to occur. Prices are assumed to be unaffected by policy and any crowding out effects are not captured.
- **Fixed ratios for intermediate inputs and production:** Economic impact analysis using multipliers implicitly assumes that there is a fixed input structure in each industry and fixed ratios for production. As such, impact analysis using multipliers can be seen to describe average effects, not marginal effects. For example, increased demand for a product is assumed to imply an equal increase in production for that product. In reality, however, it may be more efficient to increase imports or divert some exports to local consumption rather than increasing local production by the full amount;
- **No allowance for purchasers' marginal responses to change:** Economic impact analysis using multipliers assumes that households consume goods and services in exact proportions to their initial budget shares. For example, the household budget share of some goods might increase as household income increases. This equally applies to industrial consumption of intermediate inputs and factors of production.
- **Absence of budget constraints:** Assessments of economic impacts using multipliers that consider consumption induced effects (type two multipliers) implicitly assume that household and government consumption is not subject to budget constraints.

Despite these notable limitations, Input-Output techniques provide a solid approach for assessing the direct and flow on economic impacts of a project or policy that does not result in a significant change in the overall economic structure.

Drivers of Economic Impact

In order to model the economic impacts, operational employment levels for the economic activity were categorised into the ANZSIC industries which Atlas considered most appropriate. Employment by industry estimates were converted to an output value using a multiplier based on the national transaction table (ABS, 2019). The resultant estimates of output were modelled as the direct activity.

Table S1-2: Operational FTE Allocation

Use	Jobs (FTE)	Direct Output (\$M)	ANZSIC Allocation (% of FTE)
Base and Proposal Case			
Bistro	9	\$1.3	Food and Beverage Services (100%)
Sports Bar	7	\$2.3	Gambling (50%), Food and Beverage Services (50%)
Proposal Case Only			
Retail/Commercial	69	\$15.8	Retail Trade (50%), Food and Beverage Services (20%), Professional, Scientific and Technical Services (10%), Rental, Hiring and Real Estate Services (10%), Administrative and Support Services (10%)
Dispersed Jobs	10	\$3.5	Split as per Canterbury-Bankstown LGA's existing industry mix (ABS, 2016)

Note: Totals may not sum due to rounding.

Source: Atlas

Household Expenditure Supported

This section outlines the household expenditure that would be associated with the new dwellings proposed as part of the Proposal Case, and potential economic activity supported.

The household expenditure activity supported should not be combined with the impacts in the section above, as some of these impacts are likely to have already been captured in the assessment (e.g. some expenditure on retail and food and beverages by households is likely to be spent at the retail and food and beverage outlets locating onsite).

This section is to understand specific economic activity supported in Canterbury-Bankstown LGA through household expenditure as its own separate analysis.

The ABS Household Expenditure Survey (ABS, 2017b) was used to identify the proportion of weekly household incomes that is spent across expenditure items in the Canterbury-Bankstown LGA. The third quintile of NSW residents was used to best represent the expenditure patterns of residents in the Canterbury-Bankstown LGA.

The household survey only contains household expenditure data, and individual residents must be converted to an equivalent number of households. This was achieved by applying the estimated number of dwellings (129), a vacancy rate of 2% (representative of Parramatta's current rental market) resulting in 126 equivalent households residing within the development. This data was converted to 2020 values, annualised and allocated into their respective ANZSIC industries. The breakdown to ANZSIC industries was developed based on assumptions by Atlas regarding the most appropriate ANZSIC industries for each activity.

Table S1-3 shows the household expenditure estimates for the Canterbury-Bankstown LGA should the Site be redeveloped to accommodate 126 households.

Table S1-3: Estimated Household Expenditure Supported, Proposal Case

ANZSIC	Total Annual Spend (\$M)	% Spent in LGA	Local Spend (\$M)
Ownership of Dwellings	\$2.0	50%	\$1.0
Retail Trade	\$1.9	75%	\$1.4
Food and Beverage Services	\$1.0	75%	\$0.8
Personal Services	\$0.5	75%	\$0.4
Other Services	\$0.6	75%	\$0.4
Telecommunication Services	\$0.3	25%	\$0.1
Road Transport	\$0.7	50%	\$0.4
Rail Transport	\$0.4	50%	\$0.2
Air and Space Transport	\$0.3	0%	\$0.0
Sports and Recreation	\$0.9	75%	\$0.7
Primary and Secondary Education Services	\$0.1	75%	\$0.1
Technical, Vocational and Tertiary Education Services	\$0.1	60%	\$0.1
Arts, Sports, Adult and Other Education Services	\$0.0	60%	\$0.0
Health Care Services	\$0.6	75%	\$0.5
Heritage Creative and Performing Arts	\$0.4	75%	\$0.3
Electricity Transmission, Distribution, On Selling and Electricity Market Operation	\$0.1	25%	\$0.0
Total	\$10.1	62%	\$6.3

Note: Totals may not sum due to rounding.

Source: ABS (2017b), Atlas