



C241WSEA – EXPERT REPORT – DR MARCUS SPILLER

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1. BACKGROUND & INSTRUCTIONS

1.1 Introduction

1. I, Marcus Spiller, have been instructed, by Harwood Andrews on behalf of the VPA, to provide an independent expert opinion on the employment land provisions of the Shenstone Park PSP.
2. My instructions are included in Appendix A.

1.2 Experience & qualifications

3. I am a Principal and Partner at SGS Economics & Planning Pty Ltd (SGS). I have held this position since the inception of the firm, some 30 years ago.
4. I hold the following formal qualifications:
 - Bachelor of Town & Regional Planning, University of Melbourne, 1978
 - Master of Commerce (Economics), University of Melbourne, 1986
 - PhD, RMIT University, 2009
5. I have been working in the field of urban economics, including economic development planning, for more than 40 years.
6. Some of the evidence included in this report has been prepared under my instructions by others in SGS. This relates specifically to the generation of employment projections for Shenstone Park.

1.3 Background

7. Shenstone Park PSP (PSP1069) is located in the City of Whittlesea. It comprises 628 hectares immediately to the south of the Donnybrook Woodstock PSP.
8. The precinct is currently used for rural and extractive industry purposes. Under the exhibited PSP, Shenstone Park is envisaged as residential and industrial / commercial precinct of about 600 ha, with the balance of the land assigned to conservation.
9. The exhibited PSP made provision for 131 net developable hectares to be applied to a variety of commercial, industrial, warehousing and logistics uses in the area surrounding the existing Woody Hill Quarry, which lies in the western half of the Precinct.
10. Of these 131 hectares, 34 lie within the 'blast buffer' of the Woody Hill Quarry and, as such, are expected to be available for development only in the long term.
11. Overall, the exhibited PSP anticipated a long term outcome of approximately 11,000 residents and 4,500 jobs.
12. The VPA's recommended post-exhibition adjustments to the PSP include redesignation of land in the western segment of the site from 'utility' use (by Yarra Valley Water) to industrial use. This would see a total of 171 net developable hectares dedicated to commercial and industrial uses. This land is expected to accommodate around 5,150 jobs.

1.4 Employment land issues

13. My opinion has been sought on the appropriateness of the employment land provisions of the PSP taking into account projected demand for commercial and

industrial uses in the area and the strategic economic development requirements of the district, the North Growth Corridor and metropolitan Melbourne generally.

14. In my review of the exhibited PSP and accompanying planning studies, I see a threefold justification for the designation of 131 hectares for employment uses, including:
 1. Protection of the Woody Hill Quarry as a strategic economic asset
 2. Provision of sufficient land to provide for projected demand for commercial, industrial, warehousing and logistics and particular forms of retail found in quasi industrial locations (such as Bulky Goods), and
 3. Achieving consistency with the economic vision for the host region, as reflected in the North Growth Corridor Plan and Metropolitan Industrial and Commercial Land Use Plan (MICLUP)
15. I address each of these matters in turn in the next section of this report.

2. ASSESSMENT & FINDINGS

2.1 Protection of the Woody Hill Quarry

16. The Woody Hill Quarry is confirmed in Government policy as a strategic economic resource.
17. The Resources Branch of the Department of Jobs Precincts & Regions (DJPR) has identified continued operation of the Woody Hill Quarry as essential to the “supply of affordable construction materials to meet current and future housing and infrastructure needs for Victoria, particularly in proximity to major growth areas”.
18. DJPR notes that “demand for extractive resources is expected to more than double between 2015 and 2050”. The proposed PSP coincides with areas of strategic importance for the supply of extractive resources for the long term, being the existing Extractive Industry Interest Area 884011 (EIIA884011). The Department further observes that “more than 90 percent of EIIA884011 is either no longer available (sterilised) for extractive resource industries or is at significant risk of sterilisation due to competing land uses”.
19. I understand that the land affected by the various buffers required to protect continuing resource extraction from the Woody Hill Quarry, both within its current confines and within its potentially expanded footprint, broadly aligns with that designated for commercial and industrial uses in the PSP.

2.2 Projected demand for commercial & industrial uses

20. Table 1 reproduces information from the exhibited and VPA adjusted PSPs regarding the areas and employment capacity of the land designated for commercial and industrial uses in Shenstone Park, excluding land in the local town centre and local convenience centres.
21. Based on a generic jobs per hectare ratio of 30:1, the land in question could accommodate up to 5,150 jobs, under the adjusted PSP. Approximately 3,600 jobs could be located on those parts of the employment designated land which are situated outside the current blast buffer for the Woody Hill Quarry, noting that land within this buffer will not be available for development other than in the long term.

TABLE 1: SHENSTONE PARK INDUSTRIAL LAND SUPPLY

Land use	Jobs per hectare		Estimated jobs		Industrial land (ha)	
	Part A	Exhibited	Part A	Exhibited	Part A	Exhibited
Employment Area - Business	30	30	691	704	23.02	23.50
Employment Area - Light Industry	30	30	1,937	1,204	64.56	40.10
Employment Area - Industry (outside blast buffer)	30	30	990	1,005	32.99	33.50
Employment Area - Industry (within blast buffer)	30	30	1,526	1,026	50.85	34.20
Total industrial/commercial land			5,144	3,939	171.42	131.30

Source: VPA, Exhibited Shenstone Park PSP (page 17)

22. SGS has prepared estimates of growth in jobs by industry sector to 2051 for Shenstone Park and its host regions using the firm's Small Area Land Use Projections (SALUP) model.
23. The SALUP model was created by SGS at the behest of the State Government and, amongst other things, is used by Government agencies for transport planning purposes.
24. SALUP takes, as its base, forecasts of jobs and population at the State and metropolitan levels from ABS, Treasury and other official sources. The model progressively breaks these down into constituent districts and small areas based on development capacity and infrastructure availability as reflected in adopted planning strategies at the metro, regional and local levels.
25. SALUP projections should be treated with increasing caution as the level of spatial disaggregation increases. That is to say, the projections will be more reliable at the regional, LGA and district levels compared to estimates of future jobs at the local neighbourhood level, such as Shenstone Park.
26. More specifically, SALUP allocations of jobs at the granular level are guided mainly by planning documents rather than the particular competitive strengths of individual parcels or segments of land. Thus, a forecast aggregate job pool for a district will typically be distributed across constituent parcels/neighbourhoods based on relative shares of the aggregate area reserved for employment.
27. SALUP assigns around 350 'industry' jobs to Shenstone Park as at 2051 (Table 2). These comprise jobs in the following sectors:
 - Agriculture, Forestry and Fishing
 - Mining
 - Manufacturing
 - Electricity, Gas, Water and Waste Services
 - Wholesale Trade
 - Transport, Postal and Warehousing

TABLE 2: INDUSTRIAL JOBS PROJECTION

Industrial jobs	2021	2051	Growth 2021 - 2051	Share of industrial job growth in Greater Melbourne 2021 - 2051
Shenstone Park	7	352	345	0.3%
Northern Growth Corridor	747	9,685	8,937	7.1%
Northern Region	94,567	121,413	26,846	21.4%
Greater Melbourne	686,747	812,477	125,730	100.0%

Source: SALUP model - SGS Economics and Planning

28. As noted, the employment land in Shenstone Park has an aggregate capacity for around 3,600 jobs in parcels outside the quarry blast zone according to the adjusted PSP. SALUP projections for industry jobs indicates that around 10% of this capacity will be taken up over the next 30 years.
29. This, however, represents a narrow interpretation of projected demand for industrial and commercial land in Shenstone Park. The areas in question could reasonably be expected to accommodate a range industry compatible land uses, including Bulky Goods retailing, as well as commercial uses.

30. The SALUP model allocations indicate that by 2051, Shenstone Park could accommodate around 790 jobs in all sectors in locations outside the planned town centre (Table 3). For the most part, these jobs would be located in the industrial and commercially designated land in the western half of the PSP.
31. Hosting around 790 jobs by 2051 would represent about 22% of the planned capacity of the Shenstone Park employment land, excluding the area inside the Woody Hill Quarry blast zone.

TABLE 3: SHENSTONE PARK EMPLOYMENT (EXCLUDING TOWN CENTRE) 2051

Industry	Employment in Shenstone Park industrial land 2051
Agriculture, Forestry and Fishing	2
Mining	0
Manufacturing	109
Electricity, Gas, Water and Waste Services	0
Construction	61
Wholesale Trade	88
Retail Trade	38
Accommodation and Food Services	29
Transport, Postal and Warehousing	149
Information Media and Telecommunications	0
Financial and Insurance Services	31
Rental, Hiring and Real Estate Services	16
Professional, Scientific and Technical Services	117
Administrative and Support Services	32
Public Administration and Safety	33
Education and Training	31
Health Care and Social Assistance	34
Arts and Recreation Services	13
Other Services	7
Total employment outside town centre	791

Source: SGS Economics and Planning

32. These projections show that there is a significant difference between the capacity of the land reserved for industrial and commercial purposes in the Shenstone Park PSP and demand over the next 20 to 30 years. A large difference would apply regardless of the treatment of land which, in the exhibited PSP, was shown as set aside for utility purposes (Yarra Valley Water) and which, under the VPA's suggested post exhibition changes, would be set aside for industrial uses.
33. In my opinion, these job projections do not necessarily signify an 'over-provision' of land for employment uses in Shenstone Park. A number of other factors need to be taken into account:
- As noted, the SALUP model does not reflect the competitive strengths and amenity attributes of all constituent areas vying for a given local pool of projected development. Rather, projected development is largely assigned on a pro-rata basis when granular allocations are made. In this context, the market

could well deliver more jobs to Shenstone Park over the next 30 years compared to current SALUP projections given the particular advantages of the areas in question. These include good access to public transport (Donnybrook Station) and good exposure to arterial roads (Donnybrook Road) and the freeway network.

- A tight fit between projected demand and supply is not advisable for industrial land. Freeboard is required to enable customised developer responses to particular end user / investor needs.
- Freeboard is also advised to potentially accommodate a range of non-traditional industrial uses which may be drawn to industrial areas, as observed by Ethos Urban in its background economics report for the PSP. To quote Ethos Urban *“While historically these areas typically accommodated a range of warehouses, factories and service-related industry (e.g. car servicing), they are now attracting a wider range of uses that include recreational, cultural and entertainment uses. For example, ‘non-industrial’ uses that are now being attracted to such areas include recreational uses such as trampoline centres (e.g. Bounce), high-ropes and rock climbing centres (e.g. Clip’n’Climb), places of worship, dance studios, karate dojos, micro-breweries with bar and food catering, etc”*¹ p 41.
- Further freeboard is required to accommodate prospective structural shifts in the regional economy, as discussed below.

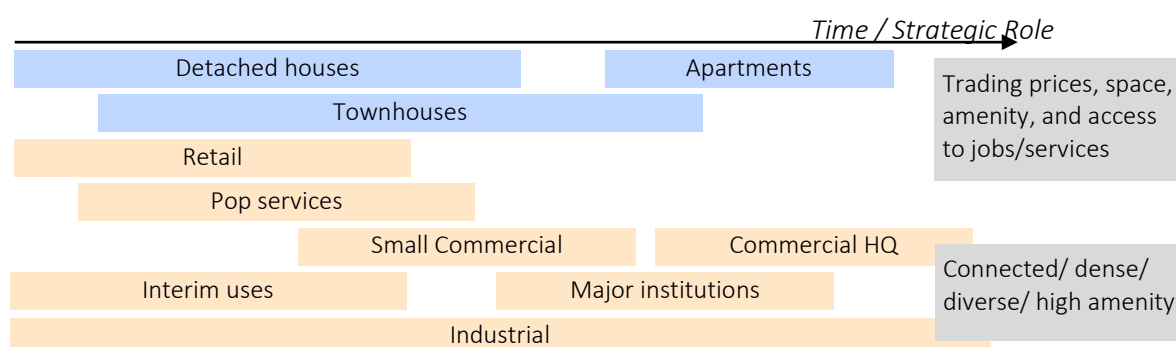
2.3 Economic development vision for the North Growth Corridor

34. It is evident that the quantum of land designated for employment uses in Shenstone Park exceeds requirements for projected employment growth over the next three decades. However, meeting projected demand based on *current* paradigms shaping the economy of the region is but one function of this land. It must also contribute to the inherent capacity of the region to develop *new* economic drivers which can deliver greater employment self-containment in the longer term.
35. Bearing in mind that land use designations have a legacy that could well last into the hundreds of years, there is only one practical opportunity in time to ‘bake’ economic resilience and adaptability into the urban fabric of the North Growth Corridor. Once land is designated for the default ‘residential’ use in city building, it is very difficult to reclaim it for employment uses when this becomes necessary or when the opportunity arises.
36. Near term management of the land resources in the North Growth Corridor and its constituent parts must be undertaken in the context of the adopted planning vision for the corridor. This extends to a transformed and more self-contained economy.
37. In my reading, this vision is embedded in the North Growth Corridor strategy and the MICLUP, both of which are adopted Government policy. They set the frame for subsidiary planning at the Precinct level.
38. In my opinion, the PSP process is not the place to re-litigate long term economic and planning visions for the corridor.
39. As it matures, the North Growth Corridor may generate, hitherto unheralded, opportunities for expanded or new (inter-regional) export related business which can reshape the economy in line with the vision set for it. Its urban fabric should enable and facilitate such responses rather than placing the economy in a straitjacket that embeds its current (substantially) population serving nature.

¹ <https://vpa-web.s3.amazonaws.com/wp-content/uploads/2019/10/Economic-Assessment-Ethos-Urban-September-2019-1.pdf>

40. The following chart illustrates how new opportunities become possible as a metropolitan growth region matures and achieves critical mass.

FIGURE 1 URBAN ECONOMIC DEVELOPMENT LIFECYCLE OF A NEW COMMUNITY



Source: SGS Economics and Planning

2.4 Net community benefit

41. All submitters, with two exceptions – DJV and Satterley – appear to indicate broad support for the quantum and disposition of land uses in the Shenstone Park PSP.
42. DJV takes issue with the strategic justification for the amount of employment land set aside in the Plan. The relevant passages of the DJV submission are quoted below:

“The exhibited amendment material and supporting background reports do not provide any strategic justification for the industrial land use designation, other than to provide a buffer to the Woody Hill Quarry and the proposed quarry expansion area”.

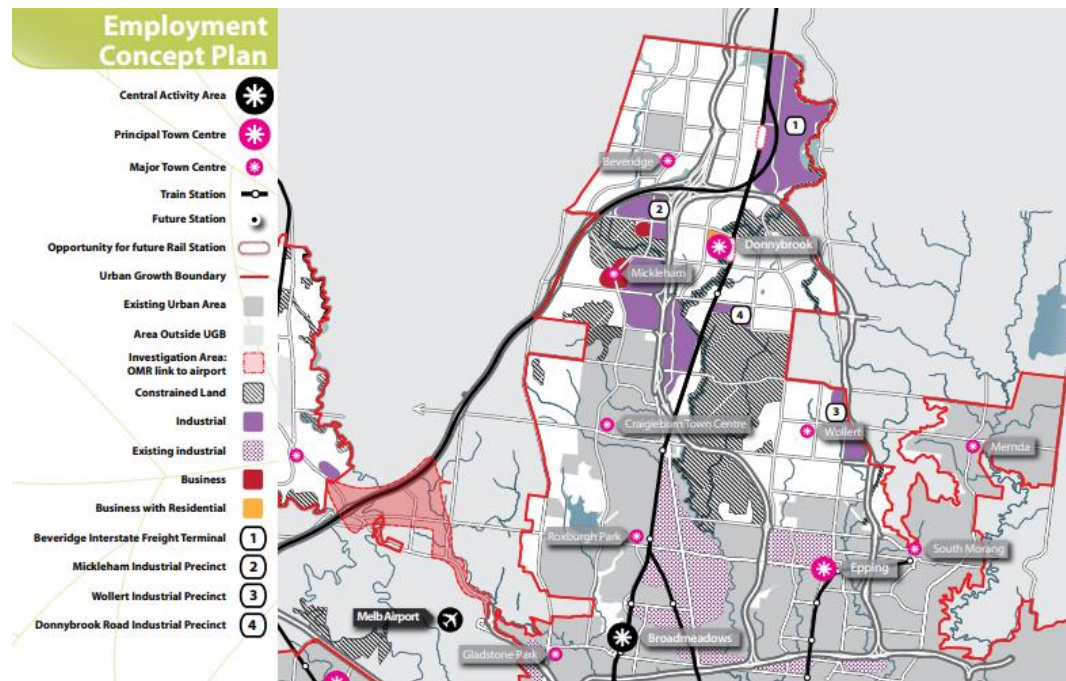
Further, DJV reports advice (from Urbis) that:

- *There is already sufficient industrial land supply to meet 40+ years demand.*
- *The background report informing the designation of employment land within the exhibited PSP does not set out any strategic justification for the amount of land that should be set aside.*
- *There is already a significant supply of industrial land at more superior locations in the surrounding area.*
- *The proposed industrial land would face significant competition from other planned industrial areas.*

43. As I have outlined, the strategic justification for the designation of the industrial land at Shenstone Park flows from an overarching economic vision for the full development of the North Growth Corridor (Figure 2). This vision identified 4 hubs of employment activity, in part, to preserve the Corridor’s status as *“one of the most important industrial regions in Australia, with good road and rail links to metropolitan markets and to New South Wales, in particular, via the Sydney rail line and the Hume Freeway, and ... proximity to Melbourne Airport²”.*

² MPA (now VPA) The North Growth Corridor Plan P69, <https://vpa.vic.gov.au/wp-content/Assets/Files/GCP%20-%20Chapter%206%20South-East%20Corridor%20Plan.pdf>

FIGURE 2 VISION FOR THE ECONOMY OF THE NORTH GROWTH CORRIDOR



Source: MPA/VPA North Growth Corridor Plan

44. Key objectives in designating these four employment hubs and providing *additional* industrial land supply were to build on the Corridor's distinctive industrial potential, to help maintain Melbourne North's good job to dwelling ratio, and to improve the range and diversity of jobs in the employment market (p 69).
45. There is, therefore, a clear strategic context for the industrial land designations in Shenstone Park situated in higher order plans which have a broader and longer term perspective. Moreover, these have been adopted as formal policy after due process. As a matter of sound town planning practice, detailed planning at the PSP level is not, as I have noted, the appropriate place to re-litigate higher order policy frameworks.
46. The land use allocations made in the North Growth Corridor Plan represent deliberate strategic decisions which can be justifiably assumed to have taken into account the resource trade-offs in question. That is, the opportunity cost of reserving land for long term industry and employment development as opposed to allowing it to be applied to default uses like housing development, can be assumed to have been factored into the strategic planning process. These trade-offs have been affirmed and embedded in the MICLUP which has only recently been adopted by Government.
47. In introducing the role and purpose of MICLUP, DELWP explains that..

"The Victorian Government is committed to ensuring policies and strategies are in place to improve Victoria's economic performance and productivity.

Ensuring enough well-priced industrial and commercial land is available in the right locations, will support and strengthen industry and support our expected population growth.

The Melbourne Industrial and Commercial Land Use Plan builds on the relevant policies and actions of Plan Melbourne 2017-2050 and its associated Plan Melbourne 2017-2050 Five-Year Implementation Plan.

*(The Plan) provides an overview of current and future needs for industrial and commercial land across metropolitan Melbourne and **puts in place a planning framework to support state and local government to more effectively plan for future employment and industry needs, and better inform future strategic directions***

*The plan will play an important role in supporting Melbourne's industrial and commercial areas to thrive and **will help to facilitate a more diverse industrial and commercial base, while also providing long-term business and employment opportunities***³.. (emphasis added)

48. MICLUP's underlying principles further emphasise the need to reserve strategic stocks of industrial (and commercial) land to give Melbourne's economy, and those of its constituent regions, a continuing competitive edge and capacity for adaptability.

Principles to guide future planning for industrial and commercial land

Principle 1: Adequate long-term commercial and industrial land supply will be identified and set aside to support future industry and business growth.

Principle 2: Industrial and commercial areas that provide an ongoing economic, urban servicing or employment contribution to local communities, regions and the state will be recognised and retained as a critical economic resource.

Principle 3: Planning for industrial and commercial land will provide clarity and certainty about how and where industry and business can grow over time to support and guide long term investment and locational decisions.

Principle 4: Planning will support industry and business to innovate and grow in areas identified for these purposes.

Source: MICLUP

49. In terms of Regionally Significant Industrial Precincts (RSIP), such as those in Shenstone Park, MICLUP specifically identifies the need for these areas to retain adaptability to changing needs.

*"These areas need to be planned for and retained either as key industrial areas or **locations that can transition to a broader range of employment opportunities**" (p vi) emphasis added.*

50. The upshot is that the Victorian community as a whole – as reflected in adopted planning policy – is willing to absorb the opportunity cost of reserving relatively large areas of land for industrial and employment purposes in the North Growth Corridor because the long term options so created for a transformed economy are worth it.
51. In my view, this means that the Shenstone Park PSP in both its exhibited and adjusted forms, will deliver a net community benefit. I illustrate this in the following paragraphs using a schematic cost benefit analysis (CBA).
52. A CBA requires a 'base case', that is, what would be the counterfactual allocation of land uses in the PSP? While DJV critiqued what it sees as over provision of industrial land in the PSP, it did not include in its submission what a preferred designation of

³ <https://www.planning.vic.gov.au/policy-and-strategy/metropolitan-industrial-and-commercial-land-use-plan>

the relevant land parcels might be were the allocation to employment uses to be reduced in line with currently foreseeable demand.

53. However, in subsequent material circulated by DJV and shared with me on October 28, 2020, the Joint Venture put forward a 'preferred land use' structure which, by comparison with the adjusted PSP included in the VPA Part A statement, would see a 16.8% increase in net developable area assigned to residential use and an 18% reduction in NDA assigned to industrial, commercial and town centre uses. The main change proposed by DJV appears to be a westward expansion of residential designated land into land affected by the noise buffer to the Woody Hill Quarry.
54. For illustrative purposes, I shall treat this DJV preferred land use structure as a notional 'base case'. In this context, the VPA adjusted PSP would be deemed to deliver a net welfare gain for the community if the marginal benefits it generates versus the base case, when measured in present value terms, exceeds the marginal costs, also when measured in present value terms. This is the CBA discipline that Government routinely applies in regulatory impact assessments.
55. The table below shows what I consider to be the principal marginal costs and benefits associated with the PSP versus the notional base case.

Marginal costs	Marginal benefits
(A) Foregone residential development potential	<p>(A) Reduced pressure/uncertainty in respect of continued access to extractive resources</p> <p>(B) Retained option for a diversified and strengthened economic base for the North Corridor over the long term.</p>

56. Were they to be quantified and monetised, marginal cost (A) would be more than offset by marginal benefit (B). The net community benefit would therefore be given by the premium of marginal benefit (B) over marginal cost (A) plus the value of marginal benefit (A).
57. **Marginal cost (A)** - foregone residential development potential - would ordinarily be quantified and monetised as the difference between the residual value of the land for housing development and the residual value under commercial / industrial use. I expect that this difference would be significant. However, given that residential development may not become permissible for many years, pending resource extraction activity in the district, the difference between these values will be reduced when expressed in present value terms.
58. Also relevant in the quantification of this marginal cost is the overall stock of land available to accommodate housing growth across the North Corridor. The community as a whole, as distinct from current land owners, would only materially suffer a loss in welfare with the reservation of land for industrial purposes when all other residential development land that is reasonably substitutable with Shenstone Park is exhausted. Given the quantum of residential land available in the Corridor, this could be well into future. This would also have the effect of reducing the present value of marginal cost (A).
59. **Marginal benefit (B)** will, in part, be quantified using the same principles and methodology as marginal cost (A). That is, the value to the community of a retained option for a diversified and strengthened economic base will be at least equal to the foregone benefit from the next best use of the land. In addition, there will be a

premium to reflect the full substantive value of the option for a diversified economic base. This premium, though unquantified, is the logical outworking of the community's preference to reserve the land for industry as reflected in adopted policy at the metropolitan and growth corridor level.

60. **Marginal benefit (A)** presumes that the existence of residential designated land – albeit reserved for an indeterminate future time – would establish uncertainties and incentives which could hasten the closure of the quarries. Were relatively early closure to occur (compared to what would be the case under the VPA PSP), the impact in question would be measured by the bring forward costs in establishing alternative quarry supplies for the Corridor's development and that of metropolitan Melbourne generally.

61. In summary, the net community benefit (NCB) offered by the VPA adjusted PSP versus the DJV 'base case' can be expressed as follows:

$$NCB = (\text{marginal benefit (B)} + \text{marginal benefit (A)}) - \text{marginal cost (A)}$$

$$\text{where marginal benefit (B)} = \text{marginal cost (A)} + \text{option premium}$$

62. I conclude, therefore, that given the community at large sees value in preserving the option for a diversified and augmented Corridor and regional economy – as evidenced in adopted policy - a first principles cost benefit analysis would show the PSP would deliver a net welfare gain.

APPENDIX A: PLANNING PANELS

VICTORIA EXPERT WITNESS

DECLARATION

a) The name and address of the expert

Marcus Spiller

c/- SGS Economics & Planning Pty Ltd
14/222 Exhibition Street
Melbourne

b) The expert's qualifications and experience

BTRP University of Melbourne
Master of Commerce (Econ) University of Melbourne
PhD RMIT University
FPIA

c) The expert's area of expertise to make the report

I have more than 40 years' experience as a town planner and economist working in a variety of settings including local government, State Government, Commonwealth Government and consultancy.

I have a long professional history in economic development strategies and strategic planning more generally.

d) Other significant contributors to the report and where necessary outlining their expertise

The projections of future employment numbers in Shenstone Park were generated by my colleagues at SGS using the firm's Small Area Land Use Projections (SALUP) model. These projections were prepared under my supervision.

e) Instructions that define the scope of the report

My instructions, provided by Harwood Andrews on behalf the VPA, are reproduced below:

Instructions

We are now instructed to brief you to:

10. Review the exhibited amendment and background materials (as relevant);
11. Prepare an expert witness statement;
12. Appear at the panel hearing to provide expert evidence.

Your expert witness statement should, in addition to any other relevant matter, address the following issues:

13. Consider the strategic context for the amendment including that for surrounding land and the extent of provision of employment generating land within the PSP.
14. Consider whether if the PSP is approved with exhibited extent of employment generating land you consider there would, over the life of the PSP (approximately 30 years) be uptake of that land.
15. Consider whether your answer to the question above changes if the proposed Yarra Valley Water holding ponds in the south west of the PSP area do not proceed and that land is put to other employment generating activities.

- f) The identity of the person who carried out any tests or experiments upon which the expert relied in making this report and the qualifications of that person

The SALUP model was operated under my instructions by my SGS colleague Vivian Hung. Vivian's degrees include Master of Urban Planning and Bachelor of Foreign Language and Literature.

Vivian is a data scientist and urban planner. Prior to joining SGS in 2018, she accumulated extensive experience in demographics and housing data analysis as a spatial scientist at *.id the population experts*. This included preparing population forecasts for a number of Australian states and territories, extensive housing development analysis and research, Python programming, writing GIS plugins and SQL database management. At SGS, Vivian has developed expertise in an even wider range of data analytics including economic, social and transport issues.

- g) The facts, matters and all assumptions upon which the report proceeds

These are set out in my report.

- h) Reference to those documents and other materials the expert has been instructed to consider or take into account in preparing the report, and the literature or other material used in making the report

These are set out in my report.

- i) Provisional opinions that have not been fully researched for any reason (identifying the reason why such opinions have not been or cannot be fully researched)

These are set out in my report.

- j) Questions falling outside the expert's expertise and also a statement indicating whether the report is incomplete or inaccurate in any respect

These are noted in my report.

I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.

Name Marcus Spiller

Date Oct 28, 2020



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