TAXI SERVICES COMMISSION

Regulatory Impact Statement

Transport (Compliance and Miscellaneous) Act 1983
Declaration of Taxi Zones

February 2014

This Regulatory Impact Statement has been prepared in accordance with the requirements of the Subordinate Legislation Act 1994. Its purpose is to inform interested parties regarding a proposal to make new regulations.
Comments are invited and should be addressed to the Taxi Services Commission by email to taxireform@taxi.vic.gov.au and must be received no later than 15 April 2014.

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Summary

The Victorian Government is implementing a comprehensive program of taxi industry reform in response to the recommendations of the Taxi Industry Inquiry (TII) conducted during 2011 and 2012. The key objective of the reform package is to improve customer service by providing for greater competition in the industry. Underpinning the reform are also the objectives of equity and efficiency.

The reform seeks to improve the position of taxi drivers by ensuring that they receive a larger proportion of industry revenue and limit the size of the losses borne by the owners of existing perpetual taxi cab licences to prevent economic hardship—enabling a more orderly transition to a more open and competitive taxi industry.

The *Transport Legislation Amendment (Foundation Taxi and Hire Car Reforms) Act 2013 (the Foundation Act)* gives effect to important elements of the reform program.
Section 11 establishes four taxi zones:

- Melbourne Metropolitan
- Urban and Large Regional
- Regional
- Country

Licensed taxis will be able to operate anywhere within the zone to which they have been allocated. This represents a major change to existing arrangements under which non-metropolitan taxis are restricted to operating within a small geographical area which is usually based on a single town and its surrounds.

The Foundation Act empowers the Taxi Services Commission (TSC) to establish the boundaries of these four zones via a notice to be published in the Government Gazette. This task has three elements:

I. allocate each of the more than 100 existing taxi service areas to one of the four zones created under the reform legislation
II. establish the specific boundaries of the newly created zones
III. assess the impact on the hire car zone boundaries.

The Foundation Act also states that:

> *in determining the boundaries of the Urban and Large Regional Zone, the licensing authority must include within those boundaries the existing:*
>
> *a) Outer Suburban Taxi-Cab Zone*
>
> b) *Port Philip Taxi-Cab Zone*.

This Regulatory Impact Statement (RIS) analyses the expected impacts of three options in respect of setting the allocation of existing taxi services. It analyses ways of setting new zone boundaries, and the impact of the taxi zone allocation options on hire car zone boundaries.

I. ALLOCATING EACH OF THE EXISTING TAXI SERVICE AREAS TO ONE OF THE FOUR ZONES

The objectives of the reform legislation generally, and the order that is the subject of this RIS specifically, involve both equity and efficiency. This means that it is not possible to quantify all the benefits and costs involved. In accordance with the requirements of the Victorian Guide to Regulation, a Multi-Criteria Analysis (MCA) must be used to assess the three options identified. Assessment criteria have been identified and used to assign a score for each option.

a. Ability of the option to enhance economic efficiency and customer service

This is an efficiency criterion and directly reflects the fundamental objectives of the taxi industry reform process. As documented by the TII, restrictions on the supply of taxi licences have substantial economic efficiency costs. Given this, options that favour a greater degree of entry are scored more highly on this criterion, since greater entry implies a larger reduction in the extent of the economic distortions that arise due to the existing constraints on taxi supply, thus enhancing economic welfare to a greater extent.

b. Equity among incumbent licence-owners

This is an equity criterion, where an equitable outcome involves licence holders in different areas/zones experiencing similar proportionate changes in licence value. That is, standard concepts of equity suggest that (as far as possible) all members of a given group (in this case incumbent licence holders) should contribute proportion of to the adjustment costs that arise as a necessary corollary of the regulatory reform process.

c. Equity among consumers

This criterion is scored on the basis of a standard concept of equity, which proposes that that all consumers should benefit from reform (in this context, implying improved levels of taxi availability), as far as possible, and that consumers should receive similar levels of taxi service (i.e. the availability of taxis should be similar across taxi markets). This is particularly significant given the above discussion indicating that the move to a simplified zone structure has the potential to yield outcomes involving a significant deterioration in the quality of taxi services in particular markets under certain zone allocation models.

The RIS identifies three options for the allocation of existing taxi service areas to the four zones:

- **Option 1**: implements the zone allocations recommended by the TII in its Final Report September 2012 (p 87).
- **Option 2**: reallocates all of the regional towns and cities allocated to the Urban and Large Regional zone under Option 1 to the Regional zone as well as reallocating five towns from the Regional zone to the Country zone.

- **Option 3:** retains the three major regional cities that currently comprise the Urban zone (i.e. Ballarat, Bendigo and Geelong) in the Urban and Large Regional zone. The allocation of existing taxi areas to the new zones under each option is set out in detail in Appendix 1.

NB: The Outer Suburban and Port Philip Zones will form part of the Urban and Large Regional Zone under each option, as this status has already been legislated for these zones.

Option 1 and 2 take account of the fact that the legislation adopts some key reform recommendations in amended form. In particular, the legislated annual licence fees payable in respect of newly issued taxi licences are higher than recommended by the TII (particularly in the case of the Urban and Large Regional zone) and are indexed for inflation. These changes have major implications for the outcomes expected to follow from the adoption of the original TII recommendations and substantially reduce the benefits of Option 1.

The TII recommendations for zone allocation were reached on the basis of the following three criteria:

- **Pre-reform licence values**
    - grouping areas with broadly similar pre-reform licence values within particular zones, both to minimise the risk of substantial movement of existing licences (leading to potential reductions in taxi service quality in some areas) and to achieve an equitable outcome, in terms of the extent of the decline in pre-reform licence values likely to be experienced by licence owners in different areas.
- **Population**
    - data on pre-reform licence values was limited so the TII adopted rules of thumb whereby centres with fewer than 10,000 inhabitants would be allocated to a country zone and those with more than 10,000 inhabitants would be allocated to the regional zone.
- **Proximity**
    - existence of larger, adjacent taxi markets can have significant implications in some taxi areas so consideration should be given to these issues of geographical proximity. In particular, the TII recommended that the new Urban and Large Regional zone should incorporate taxi service areas adjacent to the Metropolitan Melbourne zone.

The TII recognised that a key implication of the move to a four zone structure (with free mobility within each zone)is that many existing taxi licences are likely to relocate to areas characterised by higher demand (hence, higher potential returns). This movement means that some areas will experience a reduction in taxi numbers—and therefore service standards—unless new taxi licences are leased from government and located in these areas, offsetting the initial loss of taxis.

This will only occur if it is possible for an operator to earn a positive return after paying the required annual licence fee to the government. Moreover, a new operator will only apply for a new licence if its effective cost is less than or equal to the cost of purchasing or leasing an existing licence. This means that the annual fee payable to government for a new licence must be less than or equal to the cost of lease payments in respect of an existing licence[1].

ALLOCATION INTO FOUR ZONES OPTION ANALYSIS

The analysis of the three options yields the following results:

Option 1

- Adopting the TII recommendations without amendment as the basis for the required order would provide little or no incentive for applications to be made for new licences in the nine areas that would be allocated to the Urban and Large Regional zone (Ballarat, Bendigo, Geelong area, the Valley, Melton/Bacchus Marsh, the Sunbury area, the Mornington Peninsula, and the Wallan area), since the annual licence fee would be far higher than the cost of leasing existing licences.
- Given the widely varying pre-reform licence prices across these areas, significant relocations of existing taxi licences could be expected. Without new licence issues, several areas would be expected to suffer significant deteriorations in taxi service quality.

Option 2

- Reallocating all of the above areas to the Regional zone and limiting the Urban and Large Regional zone to the current Outer suburban zone and the current Port Phillip zone (as required by the legislation) would mean that there is far greater incentive for the issue of new licences in the nine areas. There would be a greater increase in taxi numbers and little likelihood that individual towns would suffer a decline in taxi service standards.
- Option 2 would also make a limited number of reallocations of areas as between the Regional and Country zone in order to address the same issue of ensuring that the quality of taxi services in these areas does not decline.

Table S1: Summary Option 2 proposed reallocations between Regional and Urban and Large Regional zones

Area	Option 1 (TII rec.)	Option 2	Comment/rationale
Benalla	Country	Regional	Current estimated licence value of circa $190,000 is above Regional licence value threshold and implies a loss of 65–70 per cent for incumbents if allocated to country zone. Population is very near the 10,000 threshold level used by TII as a criterion for inclusion in Regional area.
Castlemaine	Regional	Country	Most recent licence price of $42,857 (2006) is below country licence threshold value. Population of 8,965 is also below the Regional threshold. Regional allocation would allow for zero entry

[1] Or, alternatively, the equivalent capital value of a new licence must be less than or equal to the purchase price of an existing licence.

			over an extended period and may lead to a major loss of existing services.
Horsham	Regional	Country	Licence value of $94,000 (2009) would not allow for new entry for some time. Moreover, relocation of existing licences to Bendigo, Ballarat etc. could lead to significant declines in service quality. Regional allocation by TII apparently based only on population size (15,000).
Korumburra	Regional	Country	No licence value data but population is well below the Regional threshold at 3,271.
Leongatha	Regional	Country	Licence value unknown, but population of 4,697 is less than half threshold figure for Regional allocation. If Leongatha is allocated to the Regional zone, the risk of movement of licences to Moe/Yallourn/Traralgon exists.
Swan Hill	Regional	Country	Recorded licence value of $20,000 (while relating to 2002) is over 85 per cent lower than the equivalent capital cost of a Regional licence. Population of 9,897 is slightly below the TII threshold of 10,000. Strong risk of licence relocation to other towns (e.g. Mildura with licence value of circa $275,000) if classified as Regional.

Option 3

- Differs from Option 2 in that the three largest non-metropolitan population centres (i.e. Ballarat, Bendigo, Geelong) would be allocated to the Urban and Large Regional zone as per the TII recommendation. These three areas currently form the entirety of the Urban zone under the current regulatory arrangements so would formally retain this zone allocation under Option 3.
- Option 3 would be likely to lead to a lesser degree of transfer of licences within the Regional zone than would Option 2 since three large population centres with particularly high pre-reform licence values would be removed from the zone. This would mean that there would be no ‘demand pull’ of licences toward these centres.
- However, there would be limited entry to the taxi markets of Ballarat, Bendigo or Geelong under Option 3 since the value of existing licences would be likely to fall short of the equivalent capital cost of new licences for which annual fees are payable. By contrast, under Option 2, significant entry could be expected in these areas as the value of a Regional licence is significantly lower than the pre-reform values of licences in the three regional cities.

No other feasible options have been identified in the RIS. Although it is theoretically possible to create a very large number of potential mappings of the more than 100 existing taxi licence areas to the three new non-metropolitan taxi zones, no specific options have been identified that passed the test of feasibility. No other options have been identified that achieve the identified objectives of the order at least as well as the three options already identified above.

ASSESSING THE OPTIONS FOR THE NEW FOUR ZONES

Weighting the MCA criteria

The MCA assessment criteria reflects the significant importance of both equity and efficiency considerations in the current reform context. It is believed that these two considerations should be given an equal weighting as the reform recommendations reflect a desire to balance the achievement of efficiency benefits through enhanced entry to the industry with an equity-based concerned to preserve, in part, the position of incumbent licence holders.

The MCA identifies one efficiency criterion and two equity criteria—therefore the former has been given twice the weight accorded to the two latter criteria. Each of the three options is scored on a scale of -10 to +10 against each criterion. Where an option would produce a less preferred result than a continuation of current arrangements, it receives a negative score on that criterion and, conversely, where it would achieve a better outcome, it receives a positive score.

Scoring the three zone options

a. Ability of the option to enhance economic efficiency and customer service

All three of the zone options considered would result in some expansion in the supply of taxis services in non-metropolitan Victoria. Hence, all receive a positive score on this criterion. However, the supply increase would, in all cases, be very substantially smaller than would be achieved if all supply restrictions were removed and taxi licences made available at a price which simply recover the administrative cost incurred by regulators. This means that all options score significantly less than the maximum score of +10.

The size of the expected increase in supply varies significantly between options. Option 1 receives the lowest score as analysis has indicated that there would be virtually no entry in the substantial part of the non-metropolitan taxi market that would be allocated to the Urban and Large Regional zone under this option. Thus, Option 1 scores +2.

Option 2 would yield the largest degree of entry among the three options considered— with entry being likely to occur in the great majority of non-metropolitan towns and cities. It scores +5 on this criterion.

Option 3 (similar to Option 2) would yield somewhat less entry overall due to the allocation of the three Regional cities that form the current Urban zone to the new Urban and Large Regional zone, rather than Regional. Option 3 scores +4 on this criterion.

b. Equity among incumbent licence-owners

The move to a simplified zone structure necessarily means that there will be a significant degree of variation in the impacts of the regulatory reforms on different licence holders. Measured against a base case of the continuation of the current arrangements, all options must receive a negative score against this criterion. However, all scores are significantly less than the maximum of -10, since all licence holders will retain majority of their pre-reform licence value under all options.

Option 1 would see the largest degree of variation in the size of the impacts on different licence holders. Some licence holders, particularly those in areas allocated to the Urban and Large Regional zone, would achieve substantial increases in their pre-reform licence values by selling their licences or relocating their taxi service. Yet others would see significant declines in licence values. Option 1 receives the largest negative score of -5.

Option 3 minimises the degree of variation the impacts size between licence holders and scores - 2. Option 2 would imply a somewhat larger degree of variation since it implies the potential for very large losses in licence value to occur in the major regional centres of Geelong, Ballarat and Bendigo. This option scores -4, given the substantial proportion of the total number of non-metropolitan taxis that are located in the centres.

c. Equity among consumers

The TSC believes that in the current context, the concept of equity among consumers can be taken as implying that all consumers should benefit from reform (in this context, that taxi availability should be improved), and that consumers should receive similar levels of taxi availability.

The combination of the consolidation of taxi zones and the availability of new taxi licences gives rise to a dynamic in which movements of licences within zones, combined with new licence issue, will tend to equalise taxi licence prices in the medium term within each zone[2]. Licence prices reflect relative scarcity i.e. the degree of imbalance between demand and supply. This implies a reduced level of inequality in service standards within taxi zones than at present[3]. This is an important equity gain that implies that all of the options under consideration should score positively against this criterion.

However, the three options differ significantly on the question of whether all consumers will benefit from improved taxi services. In particular, the tendency toward equalisation of licence values within zones created by the above dynamic would be significantly frustrated in practice under Option 1. The allocation of many towns to zones with high licence-issue prices would prevent sufficient new licence issue occurring to ensure that equalisation of licence values within each zone would be achieved in practice.

This means that consumers in different areas would see very different results in terms of the change in taxi availability than they would experience post-reform implementation. In areas with relatively low demand (hence, lower pre-reform licence prices), the loss of taxi services due to relocation of existing licences to other areas will not necessarily be offset by new licence issue because these areas will in many cases be allocated to a zone where the implicit value of a new licence remains above the post-reform market value. This implies that Option 1 must score significantly lower than Options 2 and 3.

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[2] This may not occur in smaller towns in the country zone, where post-reform licence values may remain below the equivalent capital value of a new licence.

[3] That is, there should be less divergence in the availability of taxi services across different areas. In this context, the concept of service standards is primarily related to the availability of taxis and, hence, average waiting times and service reliability.

Options 2 and 3 are generally similar overall and therefore score similarly on this criterion. However, Option 3 scores slightly higher than Option 2 because the allocation of the three largest regional cities to the Urban and Large Regional zone will tend to reduce the extent of migration of existing taxi services within the Regional zone.

Option 3 will reduce the likelihood and extent of any reduction in taxi availability in individual markets due to the combination of migration of existing licences and lack of new entry. Option 3 scores +5 while Option 2 scores + 4.

Table S.2: Summary of MCA scores - taxi zone allocation options

Criterion	**Option 1**	**Option 2**	**Option 3**
Economic efficiency/customer service	+2 x 50% = +1	+5 x 50% = +2.5	+4 x 50% = + 2
Equity among incumbent licence-holders	-5 x 25% = -1.25	-4 x 25% = - 1	-2 x 25% = - 0.5
Equity among consumers	+1 x 25% = +0.25	+4 x 25% = + 1	+5 x 25% = +1.25
Total	**0**	**+2.5**	**+2.75**

The Table S.2 shows that Options 2 and 3 are clearly preferred to Option 1 (with the latter scoring 0 and therefore not being clearly preferable to the maintenance of the status quo). Option 3 scores slightly higher than Option 2 (2.75 points against 2.5 points). This reflects its superior performance on the two equity criteria.

Until the TSC can gather further data and more information becomes available, the TSC proposes to proceed with Option 3 as the basis for the required order on zone allocations.

II. SETTING ZONE BOUNDARIES

Historically, taxi zone boundaries have been set in one of two ways:

- as a circle describing a specific radius from the principal post office of a particular town (or occasionally, towns)
- as another geometric shape formed via specification of numerous roadways (and, on occasion) other geographical features.

The boundaries have not been set consistently. The current Metropolitan and Outer Suburban taxi zones are specified according to the second mechanism. Among the three regional cities that are allocated to the current Urban zone, the boundaries of Geelong are set by the second mechanism, while the boundaries of the Ballarat and Bendigo taxi zones are set by the first mechanism.

The boundaries of the great majority of Country taxi zones are set as a radius from a particular principal post office. However, the radii in question vary widely from 3.2

kilometres to 50 kilometres. In 33 of the 74 cases, an 8 kilometre radius is used, while in a further fourteen cases, a 5 kilometre radius has been used. In a further seven cases, the radius lies between 12 and 16 kilometres. In one exceptional case, the radius is 50 kilometres. Other anomalies also exist including six cases in which different zone boundaries are established for different taxi services within the same area.

Little information is available as to the criteria initially adopted in the determination of zone boundaries—with the great majority having apparently been in place for several decades. These boundaries were probably set in order to approximate existing town boundaries. In many cases, town growth and change over time means that in many cases, there is now little apparent correlation between the zone boundary and the town boundary. This is evident in the lack of correlation between zone sizes and town populations.

This suggests that there is a need to revisit the setting of zone boundaries, both to ensure that they are established on the basis of clear criteria and to ensure that they reflect current market realities. The discussion in Section 3.3 outlines the principles of how the zone boundaries should be set in ways to reflect patterns of taxi demand and, as a result, be reflective of geographically distinct taxi markets. This is consistent with the need to ensure that all geographical areas receive an adequate level of taxi services (i.e. that taxi availability is similar across all areas), and that taxi licence owners who have paid higher licence fees for the right to operate in zones with higher demand are protected from unfair competition.

The experience of taxi regulators to date suggests that there are significant difficulties in identifying patterns of taxi demand and the geographical extent of particular taxi markets. This implies that there would be significant benefits in setting boundaries in ways that would increase the availability of relevant data to assist in future decision-making.

Given these factors, the following criteria have been used to determine an appropriate approach to setting taxi zone boundaries:

- boundaries should (as far as possible) reflect the geographical extent of taxi markets
- boundaries should be set using a consistent approach
- boundaries should facilitate the collection of further data to support better regulatory decision-making.

For the purpose of developing the RIS zone options, the following options were identified for setting zone boundaries:

- retention of the existing zone boundaries in the short term, pending the accumulation of experience with the operation of the new four zone structure in the context of the other key reform elements
- rationalisation of the existing zone boundaries using a simplified system of four different zone radii with the size of each zone radius being a function of town populations
- adoption of a new approach to zone boundaries based on the adoption of the Australian Bureau of Statistics' new Australian Statistical Geography Standard (ASGS).

The ASGS was developed by the ABS for the collection and dissemination of geographic statistics, and is a hierarchically structured classification with a number of spatial units to satisfy different statistical purposes. The ASGS units represent areas with clear social and economic linkages. In particular, the SA2 boundaries define 'functional zones of social and economic links,' and take geographical factors into consideration.

Thus, there is likely to be a good correlation between boundaries set on the basis of these boundaries and patterns of taxi market operation. Importantly, setting taxi zone boundaries on the basis of the ABS determined units would substantially increase the amount of data available to the TSC and other regulatory agencies. It would also be able to be analysed in order to better inform future regulatory choices.

Consequently, the TSC believes that moving to adopt taxi zone boundaries based on the ABS ASGS is preferable to the other two options. Assessed in terms of the three criteria highlighted above, this approach is expected to:

- maximise the degree of consistency between taxi zone boundaries and the geographical extent of taxi markets, given the use of area boundaries set on the basis of a range of social and economic criteria
- substantially enhance the degree of consistency of approach in setting boundaries, compared with current arrangements
- maximise the ability of the TSC to match taxi-related data that it expects to collect in future with relevant ABS data to support better regulatory decision-making.

The TSC will monitor the operation of the new boundary structure with a view to determining whether any significant boundary issues arise in practice. It will stand ready to amend these boundaries should practical experience indicate that this would improve the ability of the regulatory structure to meet the objectives of the reform agenda.

Improving the TSC's capacity to obtain and analyse taxi industry data is a fundamental objective of the post-TII reform project. The TSC expects its capacity to gather and analyse the relevant data to grow considerably over the next three to five years. This data will provide a greatly improved evidence base to support future zone determinations, and a wide range of the TSC's other regulatory activities.. The *next* determination of Victorian taxi zones will be informed by a better understanding of:

- where taxi use occurs, and how much revenue is generated by the taxi industry in each area of Victoria
- where taxi journeys frequently cross zone boundaries
- where new entry into the taxi industry has occurred, and where taxi services have relocated or been concentrated
- relationships between taxi pricing and geographic spread of demand
- where latent demand for taxi services may exist, and
- where the competition objectives of the reform have been achieved, where they have not been achieved, and why.

It is anticipated that an evaluation and review of the zone boundaries will occur within the next three to five years.

III. HIRE CAR ZONE BOUNDARIES

The taxi zone allocation option will also affect the hire car sector as the size of the hire car zones will be determined by the decisions made regarding the taxi zone allocations. There are only two hire car zones—the Metropolitan and the Country zones. The Foundation Act requires that the Metropolitan hire car zone be extended to include the entirety of the Metropolitan and the Urban and Large Regional taxi zones, while the Country hire car zone includes the whole of the Regional and Country taxi zones.

Analysis

The impact of taxi zone allocations on the hire car sector is relatively limited—the major impact of zone allocations in the taxi sector relates to rank and hail operations. Hire cars are prohibited from operating in this market sector. Country hire cars are also prohibited from accepting trips in cases where both the origin and destination are within the Metropolitan zone.

Under the new legislation, any Country hire cars with operational addresses in areas that are included in the Metropolitan hire car zone will be reclassified as Metropolitan hire cars. Option 2 would reclassify eight country hire cars currently based in the Port Phillip taxi zone in this manner. Reclassification amounts to the removal of existing regulatory restrictions, which supports of the objectives of the reform project. Under Option 3, a further twenty country hire cars (based in Geelong, Ballarat and Bendigo) will be reclassified, resulting in a total of twenty-eight reclassified vehicles. With Option 1, an additional three hire car licences would be reclassified, creating a total of thirty-one licences.

Metropolitan hire cars that currently operate from addresses outside the proposed metropolitan hire car zone will retain their current operating rights. An unintended consequence of the legislation creates a risk that hire cars in this circumstance could be reclassified as country hire cars upon transition to the new zone system; however, the TSC will implement an administrative solution to ensure that the legislation is complied with, and that no metropolitan hire car licences are adversely affected.

The hire car zone boundaries cannot be determined independently of the taxi zone boundaries so the choice of zone allocation option necessarily affects both sectors. However, the zone options have largely been based on the impact on the taxi sector rather than the hire car sector, for the following reasons.

- a much larger reform of the current taxi zone structure is being adopted making it essential to ensure that zone allocations support the desired outcomes of this larger reform

- zone allocations are generally more significant factors in taxi operations than those of hire cars
- the market significance of the non-metropolitan taxi sector is substantially greater than the equivalent hire car sector with almost 10 times as many licences on issue and a significantly higher average revenue.

The implications of Option 3 for the hire car sector have been assessed and found to be generally consistent with the objectives of the larger reform package. The key impact of adopting this option would be that hire cars operating in Ballarat, Bendigo and Geelong would become Metropolitan hire cars (rather than Country hire cars as at present). Under Option 3, 28 country hire car licences (35 per cent of the total) will be reclassified in this way. This will increase the value of these licences and simultaneously increase the price of entry to the industry in these towns from $20,000 to $40,000, however, the $40,000 licence product provides much broader (and potentially more lucrative) operating rights.

A secondary impact is that hire cars operating in surrounding areas would not be able to undertake work wholly within the boundaries of these three cities. Theoretically, this would reduce the availability of hire car services in these areas in the short term, and reduce the potential earning opportunities for the operators of these hire cars. The TSC believes that the impact of this restriction on their operations would be very limited in practice.

SUMMARY

The *Transport Legislation Amendment (Foundation Taxi and Hire Car Reforms) Act 2013 (the Foundation Act)* gives effect to important elements of the taxi and hire car industry reform program. Section 11 establishes four taxi zones:

- Melbourne Metropolitan
- Urban and Large Regional
- Regional
- Country

The Regulatory Impact Statement sets out the options for the allocation of existing taxi services to the four new zones. It analyses ways of setting new zone boundaries, and the impact of the zone allocation options on hire car zones.

- The preferred option for the allocation of existing taxi services to four new zones is Option 3.

Timing

Consultation starts Monday 17 February and finishes Tuesday 15 April 2014.
Information on consultation dates will be published in local media outlets and distributed through government, industry and community channels.

Consultation Process

The Taxi Services Commission will engage with the Victorian Community on the options identified in the RIS to seek feedback and input on the zone analysis, alternatives and preferred option.
Consultation will occur across Victoria through a series of public and industry forums.
The TSC is also engaging online. Interested parties can review the RIS and submit feedback via the TSC website: <www.taxi.vic.gov.au>

Contents

1. Background

1.1. Context

The Victorian government is implementing a comprehensive program of reform of taxi regulation in response to the recommendations of the Taxi Industry Inquiry (TII) conducted during 2011 and 2012[4]. The key objective of the reform program is to improve customer service by providing for greater competition in the industry. Additional objectives are to improve the position of taxi drivers, by ensuring that they receive a larger proportion of industry revenue, and to limit the size of the losses borne by the owners of existing perpetual taxi cab licences, thus enabling a more orderly transition to a more open and competitive taxi industry. Thus, the objectives of the reform program relate to both economic efficiency and equity.

The *Transport Legislation Amendment (Foundation Taxi and Hire Car Reforms) Act 2013* implements important elements of the reform program and authorises regulations and other instruments to be adopted to give effect to additional reforms. Section 11 of the Act[5] establishes four taxi zones, as follows:

- Metropolitan;
- urban and large regional;
- regional; and
- country.

It also empowers the Taxi Services Commission, as the licensing authority, to establish the boundaries of these zones via a notice to be published in the Government Gazette. This Regulatory Impact Statement (RIS) analyses the expected impacts of three options for zone allocations, as well as the boundaries proposed to be adopted.

1.2. Taxi zones

Victoria is currently divided into over 100 taxi areas[6]. A taxi may only accept a 'rank or hail' hiring within its home area, and is generally prevented from conducting pre-booked journeys wholly within other areas. Therefore, the existing taxi zone structure largely restricts taxis to operating within a relatively small area - usually the environs of a single town, or a small number of adjacent towns. By contrast, the move to a structure in which all non-metropolitan areas of Victoria are divided into only three zones will substantially expand the potential area of operation of most non-metropolitan taxis. In doing so, it will

[4] For detail on the inquiry, including copies of its draft and final reports to the government, see: http://www.taxiindustryinquiry.vic.gov.au/
[5] This section inserts a new section 143B into the *Transport (Compliance and Miscellaneous) Act 1983*.
[6] For a list of current taxi zones, see page 73 of the draft report of the taxi industry inquiry.

substantially reduce the existing barriers to competition between taxis based in different areas, thus creating the potential for a significant increase in competition.

2. Objective

The objective of the proposed Order is to contribute to the achievement of the overall objectives of the Victorian government's taxi reform program, as set out above, insofar as they relate to the nonmetropolitan areas of Victoria. This is to be achieved by:

- Allocating existing taxi zones to the three new non-metropolitan zones in a manner that will allow for increased competition and consequent improvements in customer service;
- within this context, ensuring that equity is achieved for holders of perpetual licences, by ensuring that the losses of licence value in nonmetropolitan areas are broadly consistent in relative size with those arising from the adoption of the reform package in the Melbourne metropolitan area; and
- ensure that consumers in all areas obtain the benefits of reform in terms of improved taxi services.

3. Nature and extent of the problem

The change from the existing taxi zone structure, comprising over 100 small geographical zones, to the new four zone structure, has already been legislated. The issue to be addressed in respect of the proposed order is that the allocation of each of the current non-metropolitan taxi zones to one of the three newly created non-metropolitan zones.

In addressing this problem, the overall objectives of the taxi industry regulatory reform program are of fundamental importance. As noted above, the key objectives are to increase competition in the industry, thereby improving customer service, while also limiting the extent of the adjustment costs imposed on industry incumbents.

A closely related issue is that of setting appropriate boundaries for each zone. As discussed below, the current zone boundaries appear to have been set several decades ago and to have limited correlation with current patterns of taxi demand. Setting boundaries that are, as far as possible, consistent with the extent of geographical taxi markets is important to ensure that the taxi zone system works effectively and efficiently.

3.1. Impact of zone allocations

The fundamental reform being adopted via legislation is that applications for new taxi licences that conform to the relevant regulatory requirements will now be required to be granted by the licensing authority in most cases[7]. However the new taxi licences differ significantly from existing perpetual taxi licences in that:

- Licence holders must pay an annual licence fee; and
- licences are not able to be assigned.

The annual licence fee payable has already been legislated, and will initially be $22,000 in the metropolitan and urban/large regional zones, $11,000 in the regional zone and $3,400 in the country zone.

These new arrangements broadly reflect the desire of the TII to enable new entry to the industry, while limiting the rate of entry in such a way as to limit the loss of licence value that will be suffered by existing licence holders. Setting large annual licence fees necessarily reduces the rate of entry, compared with what would be expected if a zero or minimal fee were charged, since it significantly increases the cost of operating a taxi service. This, in turn, means that existing licences will continue to have significant scarcity value.

[7] The licensing authority is required to consider the impact of issuing a new licence on existing and future users of taxi services, including whether there would be a significant impact on the financial viability of existing licence holders, before granting an application for a new licence in either the regional or the zones. In addition, the legislation allows the licensing authority to suspend the issue of licences in the metropolitan or the urban/large regional zone if it believes that the issue further licences would have negative impact on existing and future users of taxi services in that zone. See Section 143(1) and Section 143AA of the Transport (Compliance And Miscellaneous) Act 1983.

The annual licence fees adopted in legislation are somewhat higher than those recommended in the TII's final report, meaning that expected entry levels will be lower than would otherwise have been the case. In addition, the legislation establishes an indexation arrangement for the annual licence fees at a rate of (CPI - 0.5%), contrary to the TII recommendation.

Impact of moving to a simplified zone structure

As noted above, the fact that only three nonmetropolitan taxi zones have been established and that taxis will be able to operate anywhere within the zone to which they are allocated, means that nonmetropolitan taxi licence holders will enjoy much greater opportunity for geographical mobility. This mobility has important implications for market dynamics.

Appendix 1 sets out the average licence transfer prices in each of the existing nonmetropolitan taxi zones over the period 2001 – 2013. The data are grouped according to the taxi industry inquiry's recommendations for the allocation of existing taxi zones to zones within the new three zone structure[8].

Box 1: Estimating taxi licence values

Accurate estimation of the pre-reform value of nonmetropolitan taxi licences poses difficulties, as there are relatively few taxi licences operating in many areas and relatively small numbers of licence transfers occur each year. Given some volatility in licence values over time and the potential for individual trades to occur at prices that do not directly reflect market values, the TSC has calculated average licence transfer prices for each area over the period 2001 – 2013 and these averages have been used as the core dataset in developing the following analysis. However, recognising that there have been significant increases in licence values in recent years in some markets, more recent data are also used where these are available; particularly, in relation to large regional cities.

Appendix 1 shows that the average licence values vary widely, both within the TII-proposed zones and between them. This variation reflects the fact that there is a greater imbalance between the demand for, and supply of, taxi services in some areas than in others.

Under the new regulatory arrangements, taxi licence holders will be able to move to other towns or areas within the same taxi zone. Significant movement from low demand areas to higher demand areas within each zone can be expected to occur, with two dynamics being important:

[8] This is "option 1" within the context of the current RIS.

- Some licence-owners will sell their licences, particularly where purchasers offer higher than "pre-reform" prices in order to move the licence to more profitable locations within a given zone[9]; and
- Some licence-owners may choose to relocate themselves and/or their taxi service to higher-demand areas within the zone in pursuit of higher revenues and profits.

Box 2: Example of incentives to move within zones

Appendix 1 shows that the average price at which a Ballarat taxi licence was sold in the 12 years to 2013 was $318,909, whereas the average price of a Wallan area licence over the same period was $44,150. Under the zoning arrangements proposed under Option 1 and Option 2, owners of licences based in Wallan would be free to move their taxi service to Ballarat, or to sell the licence(s) to an operator who can use them in Ballarat, since these two areas will be part of the same zone. There will be a strong incentive for this to occur, since a Ballarat operator will be prepared to pay a much higher price than the historical value of the Wallan licence.

This movement can be expected to improve customer service, in some cases significantly, in areas within a given taxi zone that have high relative demand. That is, there may be a significant increase in the number of taxis in these areas due to the relocation of existing taxi licences. However, an offsetting reduction in service standards can be expected in areas with lower demand. Such a reduction in service standards can only be avoided if enough new licences are issued to serve these latter areas, replacing those taxi services that have moved to other geographical locations. However, there will only be demand for new licence issue if the annual licence fee payable is low enough to enable new entrants to earn an adequate rate of return on their investments. Importantly, new entrants will only seek to obtain new licences from the government if they are less expensive (or, at least, no more expensive) the alternative of purchasing or leasing the existing licences. If existing licence values are lower, it will be cheaper for a new entrant to lease or purchase an existing licence. Therefore, a fundamental consideration in determining taxi zone allocations is that increased competition and improved customer services can only occur where existing taxi zones are allocated to new zones where the equivalent perpetual licence value is lower than the pre-reform average transfer value of a taxi licence.

Box 3.1: The equivalent capital cost of a new licence

[9] This dynamic may be particularly important in respect of older taxi licence holders, who may wish to take the opportunity to realise this higher licence value in order to provide a retirement income.

New taxi licences are to be available from government subject to the payment of an annual fee. To determine whether there will be demand for new licences, and hence the potential for overall service improvements to occur, in particular circumstances it is necessary to compare the cost to an intending taxi operator of exercising the two options of purchasing (or leasing) an existing licence or obtaining a new licence from government.

While it is possible to compare annual assignment prices for existing licences with the annual licence fees for new licences set by government, there is limited data on assignment prices, particularly in non-metropolitan areas. Thus, the alternative is to determine the equivalent capital cost of a new licence and to compare this with the value of an existing licence.

The equivalent capital value of a new licence is calculated by determining the present value of the stream of future annual licence payments that must be made to retain the licence in the long term. This calculation must take into account the legislated indexation of the value of these annual licence fee payments and apply an appropriate discount rate. The calculations below follow the methodology adopted by the TII, but adjust for the changes made to initially recommended licence values.

To determine whether there will be a demand for new licences in any given taxi area, it is necessary to compare existing perpetual licences and the new licences on an equivalent basis. The TII undertook this task by determining the equivalent capital cost of a new licence in each zone, based on its recommended annual licence fees[10]. These values are reported in Appendix 4, along with a re-calculation of the costs involved to take account of the fact that the legislation passed included higher annual licence fees than those originally recommended by the TII and also incorporated an indexation of licence fees, in contrast to the TII recommendations. Table 3.1., below, sets out the equivalent capital cost over the long term of leasing a new taxi licence from the government at the legislated annual fees.

Table 3.1: Annual licence fees and equivalent capital costs - including indexation

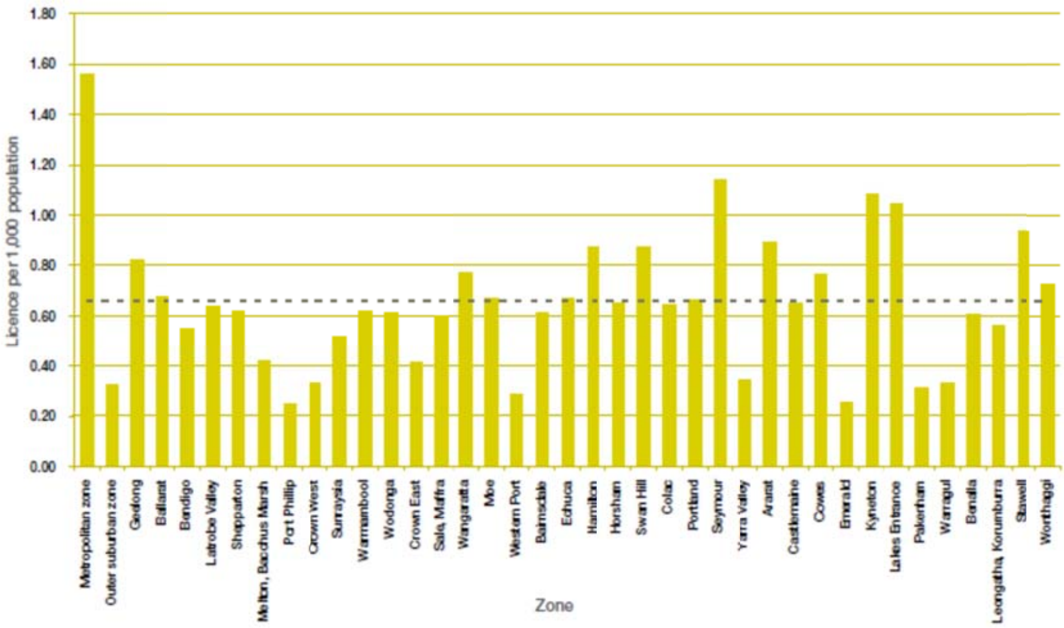
Annual Licence Fee	Equivalent capital cost
Urban Zone ($22,000)	$354,175
Regional Zone ($11,000)	$177,088
Country Zone ($3,400)	$54,736

Note: Values assume 3% per annum CPI

[10] This approach involves calculating the present value of a stream of future licence payments over 30 years, with the current annual fee being increased by 2.5% per annum and a 7% discount rate used. As noted, this was the approach taken by the inquiry. It is conceptually equally possible to compare the annual licence fee with the assignment fees payable in each area. However, data on assignment fees is much more limited, so that a comparison of equivalent capital values is more practically feasible.

The importance of ensuring that there are clear incentives for new entry is highlighted by graph 3.1, below. The inquiry noted that the rate of increase in nonmetropolitan taxi licence numbers in recent decades has been significantly less than that of metropolitan Melbourne taxi licence numbers. As a result, many nonmetropolitan areas now have substantially fewer taxis per person than does the Melbourne metropolitan area.

Graph 3.1: Taxis per 1,000 population by Zone[11]



Source: VTD, Inquiry analysis

Graph 3.1 shows that all of the zones included have substantially lower ratios of taxis per 1000 population than does metropolitan Melbourne. Indeed, the average for the nonmetropolitan zones (dotted line) is less than half that of metropolitan Melbourne, while several zones have taxi densities that are significantly below this average. The data highlights the importance of ensuring that allocations of areas among the three nonmetropolitan taxi zones support new entry.

The impact of zone allocations on licence values

The impact of the allocation of areas to different taxi zones is asymmetrical in nature. That is, if an area is allocated to a zone with a relatively low annual licence fee, the value of the existing perpetual licences is likely to fall, in some cases substantially, as new licences are applied for and issued by government. However, allocating an area to a zone with a high annual licence fee *cannot serve to increase existing licence values.* This is because licence

[11] Reproduced from the Taxi Industry Inquiry Draft Report, p 74.

values reflect the balance between supply and demand in a particular area, and the allocation of an area to a particular zone does not affect this balance, at least in the short term. However, as noted above, allocating an area to a zone with an annual licence fee that is high relative to existing perpetual licence values will dissuade entrants from applying for new licences.

Economic impacts vs transfers

It is important to distinguish between the real economic benefits and costs arising from the reform of taxi industry and transfers between parties. Where the supply of taxi licences is restricted, monopoly profits are earned, which are reflected in the value of the licence. The existence of monopoly profits also implies a loss of economic welfare, since fewer services are provided than would be the case in a competitive market. Where new entry occurs and monopoly profits fall (as reflected in falling licence values) there is an economic welfare gain from society's viewpoint. In addition, because new entry to taxi industry gives rise to greater competition and higher service quality, there will be increased demand for taxi services. The taxi industry will, as a result, better response to consumer needs and further economic benefits result.

The proposed reforms will also give rise transfers between the parties. Thus, drivers will receive a higher proportion of taxi revenues. However, this increase in driver income is offset by a reduction in operator revenue in the first instance (i.e. the operator will obtain only 45% of the farebox, rather than 50% as at present). Lower assignment prices will be reflected in lower licence values. Hence, increased driver incomes largely represent a transfer from licence owners to taxi drivers.

This dynamic implies that *a major reason for the expected decline in taxi licence values following the implementation of the reforms lies in the legislated transfer of income to drivers* at the ultimate expensive licence owners. This decline in value will occur regardless of the zone allocation decisions made. This dynamic is explained further in Section 3.4.

The allocation of existing taxi areas to the new taxi zones will clearly have an impact on both the size of the resulting economic benefits and costs and the size of the transfers that occur. These impacts are discussed in the following sections.

3.2. Data issues

A number of data limitations significantly limit the extent of the analysis of the implications of different zone allocations that can be undertaken. These are summarised briefly below.

Licence value data

Data on the prices paid when licences have been transferred and on assignment prices were obtained from the Victorian Taxi Directorate by the TII and were used as the basis for much of the analysis contained in its reports. This data has been obtained by the taxi services commission (TSC) and further analysed during the development of the proposed zone allocation.

However, while this data provides a clear picture of the evolution in the value of metropolitan taxi licences at different times prior to the commencement of the TII, it is less satisfactory as a source of data on the value of nonmetropolitan taxi licences. This reflects the fact that nonmetropolitan taxis are authorised to operate only within a specific area (usually a particular town and its surrounds) and, as a result, the number of taxi licences within a specific area is limited. This, in turn, means that the number of licence transfers that occur over any given period is generally also small.

Given the small number of licence transfers in many or most nonmetropolitan taxi areas, the basic data relied upon in the following analysis is the average licence transfer price recorded over the period 2001 – 2013. Taking an average over this period potentially allows a more representative value figure to be obtained, with the influence of any one atypical licence transfer price being minimised.

On the other hand, to the extent that there has been significant growth in licence values over this period, the use of an average figure could serve to underestimate the value of a taxi licence in a particular area in the period immediately preceding the announcement of the TII. In order to assess the extent of this particular concern, a second set of average licence values was calculated, covering the years 2007 – 2013. The overall difference between the average values for the former period and the latter period averaged 4.0%, suggesting that the use of the longer term average figure does not significantly underestimate recent licence values in most cases, whereas it does increase data availability to some extent[12]. Comparison of the average licence value figures for individual taxi areas shows that the maximum difference recorded was approximately 17.3%.

While average licence transfer values have been used as fundamental dataset, more recent transfer prices have also been taken into account in certain contexts, particularly in relation to the larger taxi areas, corresponding to major Victorian regional cities/towns, where a larger data set is available. In some cases, the highest transfer prices recorded in recent years have been found to be significantly higher than the long-term averages. That said, transfer prices recorded over the last two years have, in many cases, being significantly lower than the previous peak values.

In relation to many smaller taxi areas, however, even where licence transfer data is available, the most recent transfers occurred several years ago. This means that there is uncertainty as to the extent of any subsequent increase in the licence value and, conversely, size of any declines in value occurring since the announcement of the TII.

[12] In a significant number of areas, no licence transfers were recorded in the 2007 – 2013 period. In fact, in many smaller taxi areas, no licence transfer data are available over the entire 13 year period. However, some data are available for many more taxi areas if the longer time period is used.

Impact of licence transfers within zones

As discussed above, it is anticipated that the move to consolidate existing taxi areas into only three non-metropolitan zones will lead to significant movement of existing taxi licences within the new zones. This movement will necessarily change the taxi/population ratio in various towns within the zones, in some cases by a substantial amount. This, in turn, will affect the value of taxi licences since, as the TII has demonstrated, there is a strong correlation between the number of taxis per head of population and the value of a taxi licence. However, it is not possible to estimate quantitative coefficients that describe his relationship, since other factors, notably including the absolute size of the population involved, also appear to be significant.

This means that is not possible to estimate the extent of the movement in existing taxi licences that would be expected under each option, before an equilibrium position is reached. However, in general terms:

- If the pre-reform licence value in most or all towns allocated to a particular zone is higher than the equivalent capital cost of a new licence, the final (i.e. equilibrium) licence values in that zone will fall until they reach the equivalent capital cost of a new licence.

- If pre-reform licence values are lower than the equivalent capital cost of a newly issued license in much of a given zone, the above data limitations mean that it is not possible to determine an equilibrium licence value for that particular zone. It follows that it is also impossible to determine likely extent of movements of taxi licences within the zone.

3.3. Taxi zone boundaries[13]

3.3.1. Significance of taxi zone boundaries

Taxi zones are not currently set out in legislation or in a legislative instrument. Rather, they are established via the licence conditions applicable to each individual taxi[14]. A full list of current taxi zones found in licence conditions is attached as Appendix 2.

Operationally, the zone boundaries restrict where a taxi can accept hirings from a taxi rank, or be hailed from the street, and where a taxi can perform a pre-booked hiring. The zone boundaries affect these two different types of hiring in quite different ways, as shown in the table below.

[13] A detailed description of each of the current taxi zones can be found in Appendix 2.
[14] These licence conditions are made pursuant to section 144(2)(a) of the *Transport (Compliance and Miscellaneous) Act 1983*.

Table 3.2: Current zoning restrictions

Vehicle type	May accept a rank or hail hiring -	May conduct a pre-booked hiring -
Metropolitan taxi	only within the metropolitan zone	to or from any place in Victoria, with the exception of any journey wholly within the outer suburban zone
Outer suburban taxi	only within the outer suburban zone	to or from any place in Victoria, with the exception of any journey wholly within the metropolitan zone
Urban (Geelong/Ballarat/ Bendigo) taxi	only within the relevant city's urban zone	to or from any place in Victoria, with the exception of any journey wholly within the metropolitan zone or the outer suburban zone
Country taxi (allocated to a specific town/service area)	only within a specified radius of the town's post office, or only within the defined service area	to or from any place in Victoria, with the exception of any journey wholly within the metropolitan zone, the outer suburban zone, or any urban zone.

The restrictions on rank and hail hirings affect only the origin, not the destination, of the journey. The legislation establishing the new zone structure essentially retains these restrictions, with slight variations. Table 3.3 summarises the zoning related operational restrictions that are established via the reform legislation.

Table 3.3: Summary of revised zoning restrictions

Vehicle type	May accept a rank or hail hiring -	May conduct a pre-booked hiring -
Metropolitan taxi	only within the metropolitan zone	to or from any place in Victoria
Urban taxi	only within the urban zone	to or from any place in Victoria, with the exception of any journey wholly within the metropolitan zone
Regional taxi	only within the regional zone	to or from any place in Victoria, with the exception of any journey wholly within the metropolitan or urban zones
Country taxi	only within the country zone	to or from any place in Victoria, with the exception of any journey wholly within the metropolitan, urban, or regional

		zones

The establishment of taxi zones, and the allocation of each taxi licence to a particular zone, therefore have the effect of limiting the geographical area of operation of each taxi and, as a result, of limiting competition between taxis. In practice, these restrictions create largely separate and distinct taxi markets, with competition being possible only among taxis within each market. This, in turn, means that market conditions can vary significantly between markets. As a result, the value of a taxi licence may also vary widely between markets. Conversely, within a given market, the value of each taxi licence will essentially be identical.

The following section describes the existing taxi zone boundaries across Victoria. However, little information is available as to the specific criteria underlying the setting of these taxi zone boundaries. This reflects the fact that the great majority of these boundaries have been in existence and remained essentially unchanged for a number of decades.

In theory, however, taxi zone boundaries should reflect the patterns of consumer travel in different areas and reflect the particular geographical markets within the industry. As discussed elsewhere, in a context in which the supply of taxis is limited, it is necessary to act to ensure that taxis are constrained from moving to service more lucrative markets, at the expense of leaving other markets either unserviced or underserviced.

3.3.2. Historical practice in setting zone boundaries

Taxi zone boundaries have, almost without exception, been set in one of two ways:

- either as a circle describing a specific radius from the principal post office of a particular town (or, occasionally, towns); or
- as another geometric shape formed via specification of numerous roadways and, on occasion, other geographical features, as boundaries.

The Metropolitan and outer suburban zones are specified according to the second mechanism. Among the three regional cities that are allocated to the urban zone, the boundaries of Geelong are set by the second mechanism, while the boundaries of the Ballarat and Bendigo taxi zones are set by the first mechanism. The relevant distances are 11 km from the principal post office, in the case of Ballarat, and 13 km from the principal post office, in the case of Bendigo.

The boundaries of three of the country taxi zones are also set via the second mechanism. However, the boundaries of the great majority of country taxi zones are set by the first mechanism. A total of 74 country zones have their boundaries set as a radius from a particular principal post office. However, the radii in question vary widely, from 3.2 km to 50 km. Appendix 2 shows the these radii for each of the country taxi zones in question. Table 3.4, below, summarises the distribution of the distances.

Table 3.4: radii of 74 country taxi zones from a single, principal post office

	3.2km	4km	4.8km	5km	8km	9km	10km	12km	13km	15km	16km	50km
Towns	5	2	6	14	33	3	3	1	3	1	2	1

Source: Taxi Services Commission

Table 3.4 shows that, in 33 of the 74 cases, the extent of the zone is given by an 8 km radius from the principal post office, while a in a further 14 cases, a 5 km radius is used. However, in a further seven cases, the relevant radius lies between 12 km and 16 km, while in one exceptional case, the radius is 50 km.

In eight zones, zone boundaries are set with reference to the distance from more than one principal post office or geographical feature, or incorporate an exclusion of a particular area. Thus, for example, the extent of the Creswick taxi zone is specified as:

> *The area within a radius of 10 km of the principal Post Office in Creswick, excluding places within a radius of 11 km of the principal Post Office in Ballarat.*

In the case of six taxi zones, there is no single zone boundary. Rather, the extent of the zone is specified in the licence conditions of each individual taxi, with different zone boundaries being set for different taxis[15].

As noted above, limited information is available as to the criteria initially adopted in the determination of zone boundaries. Review of the specific radii used to establish many of the boundaries suggest that many may have been established prior to Australia's adoption of metric measurement in the 1970s, since radii of 3.2, 4.8 and 8 km equate to 2, 3 and 5 miles, respectively. It can be speculated that these radii were set on the basis of an attempt to approximate the then town boundaries and, consequently, be consistent with broad patterns of taxi demand. However, subsequent growth is likely to have rendered these boundaries largely arbitrary in the current environment. Review of the relationship between the size of the zone boundaries and the current populations of each town tends to support this proposition; that is, it suggests that there is little correlation between zone size and town population. Thus, for example:

[15] Note that all zone boundaries are currently adopted as conditions on the relevant taxi licences. However, in all but these six cases, the same licence conditions in relation to geographical scope of operation are applied to all taxis within the given zone.

- Wodonga, with a population of 31,605 has a zone radius of only 3.2km, while Wangaratta, with little more than half the population (17,377) has a similar zone radius of 3km. Conversely,
- Colac (11,415) and Benalla (9,328), with substantially smaller populations than either of the above towns, each have much larger zone radii of 8km; and
- Shepparton, with a population more than four times that of Benalla (42,741) has the same zone radius of 8km.

This suggests that there is a need to revisit the setting of zone boundaries, both to ensure that they are established on the basis of clear criteria and to ensure that they reflect current market realities. This issue is discussed further in Section 7.

3.3.3. Avalon Airport

The inquiry also recognised a specific issue of concern in relation to Avalon airport.

Currently, Avalon Airport is located in the Geelong urban taxi zone. Metropolitan taxis frequently carry passengers from Melbourne to Avalon Airport, but as metropolitan taxis are not permitted to accept a hiring from a rank in an urban zone (including the rank at Avalon Airport), metropolitan taxis are forced to return empty to Melbourne. The same problem affects Geelong taxis in reverse – frequently, a Geelong taxi accepting a hiring at the Avalon Airport rank will be required to carry that passenger to Melbourne, and is then required to return empty to Geelong.

Consequently, the TII recommended that:

> *"A shared Metropolitan and Urban zone should be defined at Avalon Airport to allow Metropolitan zoned taxis (and, potentially, other Urban zoned taxis) to service the airport for customers who are bound for Melbourne. Separate Melbourne (or other destination) and Geelong ranks will need to be established at the airport to support this shared zone."* (TII Final Report, p 18. Recommendation 1.7).

All zone options proposed in this RIS adopt this approach (except that, since Option 2 allocates Geelong to the regional zone, that Option proposes that Avalon Airport forms an area of metropolitan/regional zone overlap).

3.4. Other changes impacting on zone allocation

Two other elements of the reform program being adopted can be identified as having significant implications for decision-making in relation to zone allocation. These are the legislation of revenue sharing arrangements between drivers and taxi operators and the adoption of price notification arrangements, in place of regulated pricing, in the regional and country zones. These issues are discussed in turn below.

3.4.1. Change in regulated revenue shares

The TII recommended (see recommendations 5.11 and 5.12) that a mandatory Driver Agreement should be adopted, in recognition of the fact that operators that drivers do not have equal bargaining power. This mandatory driver agreement should set out a range of minimum conditions for drivers, including a requirement that all drivers receive a minimum 55% share of fare box revenue. The government responded to these recommendations, inter alia, by adding Section 162L to the Transport (Compliance and Miscellaneous) Act 1983. This section empowers the Taxi Services Commission (TSC) to make an Order by publication in the Government Gazette implying certain conditions to be included in every driver agreement. The section also adopts the requirement that at least 55% of the gross fares received during a shift must be retained by the driver.

This requirement is expected to increase driver revenues significantly. At present, a 50% farebox share is the most common means of remunerating drivers. Thus, for drivers in this category, there is likely to be an approximate 10% increase in remuneration (i.e. from 50% of fares to 55%)[16]. This increase in driver remuneration necessarily comes at the expense of taxi operators. As the TII documents in its reports, the reduction in the revenue that operators receive from exploiting the taxi licence can be expected to reduce the amount that they are prepared to pay to licence owners in assignment fees. This reduction in assignment fee income will, in turn, necessarily reduce the value of taxi licences. This reflects the fact that taxi licence values essentially reflect the capitalised value of the risk adjusted stream of returns from licence assignment fees.

As shown in Table 3.1, above, the equivalent capital value of a new taxi licence leased from government at the required annual licence fee (initially $22,000 and then subject to indexation) is around $354,175. By contrast, the pre-reform value of a metropolitan taxi licence was estimated by the TII as being around $475,000. This represents a decline in value of around 25% due to the already legislated shift in revenue shares.

The implications of this shift in revenue shares are likely to be smaller in size in many non-metropolitan contexts in which the licence owner also operates the licence and drives the taxi at least some of the time, since the owner/operator also receives some of the driver's revenue share in such circumstances. However, it is important to note that all licence owners other than those who do not employ other drivers will suffer declines in licence value as a result of the legislated redistribution of fare income in favour of drivers. This shift, which will be in the vicinity of 25% in most cases, constitutes a key point of context for the following discussion of options for zone allocations. That is, when considering the equilibrium "post-reform" licence value in each zone, it is necessary to compare these values not only with the pre-reform licence values of various taxi licences, but also with valuations that take account of this, already legislated, shift in revenue.

[16] The specific treatment of certain surcharges remains under consideration and will affect the final size of the revenue shift. However, for simplicity, the following discussion assumes that a 10% shift in favour of drivers will occur.

The analysis of zone boundaries in this RIS is based on available data on pre-reform licence values which do not factor in the potential reductions resulting from the legislated shift in revenue. As suggested in 3.1, lower perpetual licence values relative to the equivalent capital cost of new licences would tend to soften the incentives for new entry. This is one limitation of the analysis.

3.4.2. Price notification

A significant change in the operating environment for regional and country zone taxis[17] expected to be adopted as part of the taxi and hire car reform program is that the new regulatory system will adopt a "light handed" approach to fare regulation, under which the current, regulated fare system will be replaced by a system of price notification. This will, in effect, mean that taxi operators in these zones will be free to set their own fares, subject only to the requirement that they notify any changes in fares in advance to the TSC.

Recommendation 12.6 of the TII Final Report was that:

> *In Regional and Country zones, where pre-booked services predominate, the Taxi Services Commission should be empowered to replace formal maximum fare regulation with a price notification and publication system, following the adoption of the licensing reforms proposed by the Taxi Industry Inquiry.*

The TII made the case for this recommendation in the following terms:

> *The inquiry found that the arguments for removing controls on fare setting in country and regional service areas are compelling. In these markets, work is mostly pre-booked and operators rely on repeat business. If barriers to entry (such as licensing) can be reduced in these areas, there could be significant gains from allowing operators to adjust fares to local conditions as they see fit (while still being subject to a requirement to notify the regulator and publish their fares).* (Final Report, p 196).

While this aspect of the TII recommendations has not yet been legislated, it is anticipated that legislative changes to implement it will take effect prior to the commencement of the new zone structure arrangements on 1 July 2014.

This change will have potential impacts in relation to the dynamics of potential movement of taxi services within zones, discussed above, as well as the level of demand for new taxi licences within the regional and country zones. However, the size and nature of these impacts are subject to much uncertainty. In general terms, the following dynamics can be identified:

- Where there is excess demand for taxi services in a particular area and this demand is relatively inelastic (i.e. it is reduced by only a small amount as prices rise) there

[17] Note that maximum fares will continue to be regulated in the Metropolitan and Urban zones.

will be an incentive for operators to increase prices in order to increase revenues and profit. This, in turn, will encourage taxis to relocate from other areas in the zone that may have weaker demand conditions, to take advantage of greater income earning possibilities. Similarly, this will tend to encourage a higher level of demand for new taxi licences;
- Conversely, this additional entry to the market will increase competition and will, over time, tend to reduce fares toward their previous levels;
- In towns where demand for taxis is relatively low and elastic in nature (i.e. highly price sensitive), there will be incentives for taxi operators to offer reduced fares in order to increase demand and revenue.

Overall, the move toward flexible fares in the regional and country zones can be expected to speed the adjustment toward a new equilibrium position. That is, the availability of price signals in the form of higher or lower fares will mean that relocations of taxis between towns within a zone are likely to occur more rapidly, while it may also increase the rate of issue of new licences in some circumstances.

In the medium term, the level of fares in the regional and country zones will be determined to a significant extent by the elasticity (i.e. price sensitivity) of demand in different towns. That is, where demand is relatively insensitive to price, prices will tend to rise and, conversely, where it is sensitive to price, fares may fall. A key determinant of price sensitivity is the availability of alternative forms of transport. Thus, it might be expected that taxi demand would be more price sensitive in large towns where buses or other forms of public transport are more widely available.

However, an additional factors will be significant in determining fare outcomes. Where pre-reform licence values are below the effective value of a new licence, there will be potential for fare increases to occur, and to yield increased profits to operators, without prompting new entry. Conversely, where pre-reform prices are above the effective value of a new licence, new entry will substantially reduce the potential for fare increases.

4. Option 1: Adopt the Taxi Industry Inquiry's Recommendations

4.1. Description of the option

The taxi industry inquiry included, at page 87 of its final report, a proposed allocation of the existing non-metropolitan taxi zones among the three non-metropolitan zones in the new zone structure. While the inquiry initially argued, in its draft report, for zone allocations to be based solely on pre-reform licence values, the recommendations contained in the final report were the result of a modified approach, in which population and geographical proximity were also taken into account. This modified approach recognised that data limitations mean that historical licence prices in many nonmetropolitan areas constitute an imperfect indicator of market value and that other data may therefore need to be relied upon to assist in driving allocation decisions.

The full set of recommended allocations is reproduced as appendix 1. The inquiry described the logic of its proposed zone allocations in the following terms:

- *"An urban zone, incorporating the existing outer suburban zone, Ballarat, Bendigo, Geelong and other service areas adjacent to the metropolitan Melbourne zone;*
- *a regional zone, which includes larger service areas with a population of more than 10,000;*
- *a country zone, which includes all service areas not covered under the other zones (service areas with less than 10,000 people)."* (p 86).

The metropolitan zone

Each of the three zoning options considered by this regulatory impact statement propose the same metropolitan taxi zone boundary.

Deriving the metropolitan boundary from ABS statistical areas

The new metropolitan taxi zone has been constructed using whole SA2 units as minimum ‘building block’. In a number of cases, whole SA3s and SA4s are formed, due to the inclusion of the relevant SA2 components. To minimise transition impacts, the TSC has ensured that the boundary created by the collection of SA2 units is a close to the existing metropolitan taxi boundary as possible.

The only exception, where whole SA2 units could not be used, is along the interface between the existing metropolitan and outer suburban zones, where some units extend into the area specified in the legislation as area which must be included in the new urban zone. The Belgrave-Selby, Lysterfield, Mulgrave, Clayton[18], and Dingley Village SA2 units are

[18] The Mulgrave and Clayton SA2s are included in the draft order’s reference to the Monash SA3.

affected in this way. The draft order classifies each of these SA2s as being in the metropolitan zone, excluding any area within the area referred to in section 143B(3) of the *Transport (Compliance and Miscellaneous) Act 1983*. This ensures that the legislation is complied with and the existing boundary between the metropolitan and current outer suburban (proposed urban) zone is maintained.

Deviations from the existing metropolitan zone

For the most part, the new metropolitan zone boundary aligns quite closely with the existing metropolitan boundary. In some areas in the west and in the north east, the boundaries form an exact match.

However, due to the use of the ABS statistical areas in devising the new boundary, there are some small areas at the fringes of the current metropolitan taxi zone have been included in the new metropolitan taxi zone. The ABS developed the SA2 boundaries to contain 'urban area(s), any immediately associated semi urban development and likely growth in the next 10 to 20 years. This is to ensure that the SA2 boundaries remain stable of several Population Censuses'[19]. It is also important that the metropolitan taxi boundary is determined in a manner that adequately covers this growth.

The Urban Growth Boundary

The Taxi Industry Inquiry recommended that the metropolitan zone boundary should be 'largely consistent with the Melbourne Urban Growth Boundary' (UGB). While the current metropolitan taxi-cab zone is already generally consistent with the UGB, the boundary derived from the statistical area boundaries provides an even better fit, particularly in including recent housing development in Melbourne's north and north-west.

In a few cases, the UGB is not an ideal fit for the metropolitan taxi zone boundary, (for instance, where the UGB includes areas that are required by legislation to be included in the urban zone, or where the UGB excludes Melbourne Airport, which must be included in the metropolitan taxi zone).

4.2. Expected benefits and costs of the option

As noted above, the TII saw that there would be significant potential for intra-zonal movement in taxi licences where taxi markets with very different demand and supply conditions (as reflected in widely differing licence prices) were allocated to the same zone. This has significant potential to reduce taxi availability and, hence, service quality in some areas unless sufficient new entry occurs to offset these movements. This, in turn, is dependent on the relationship between the fees payable for newly issued licences and the pre-reform value of existing licences.

[19] ABS, Australian Statistical Geography Standard (ASGS): Volume 1, p22

The recommendations in relation to zone allocations contained in the TII Final Report were based on a recommended annual licence fee for the urban zone of $16,000. However, the fee adopted in legislation is now $22,000. *This has significant implications for the likelihood of new entry occurring in these areas, were they to be allocated to the urban zone*.

As appendix 1 shows, a total of 27 towns were identified as recommended inclusions in the urban zone. However, a number of these are geographically proximate and can be considered as operating within the same taxi market. Consolidating these towns accordingly yields nine taxi service areas that would be allocated to the urban taxi zone under this option . These are set out in table 4.1, below, along with estimates of pre-reform values of taxi licences in each area.

The data on pre-reform values includes a number of different estimates. The basic data set calculates average licence transfer prices over the period 2001 – 2013. This averaging has been undertaken in order to remove volatility and attempt to provide more reliable estimates of licence value, particularly in relation to areas in which licence transfers occur only infrequently. A potential drawback of using these longer-term averages is that it may underestimate current licence values in areas where there have been significant recent increases in value. However, comparison of these averages with a shorter term average over the period 2007 – 2013 shows that the difference between the two figures averages only 4.0% across the nonmetropolitan areas of Victoria, while the maximum difference in any one taxi zone is 17.3%. Thus, the size of this impact appears to be relatively small in most cases.

Notwithstanding this, table 1 also includes two additional data points for each zone: the most recent licence transfer price and the highest licence transfer price observed to date, together with the year in which the highest transfer price occurred. These data points must necessarily be treated with some caution, however, since they relate to only a single transaction in each case, which may have been concluded at an atypical value for various reasons.

As discussed above, the equivalent capital cost of a new taxi licence issued in the urban zone is estimated at $354,175. The licence transfer values set out in table 4.1 must be compared with this value. There will only be demand for new taxi licences to be issued in a particular area where the pre-reform licence values exceed this figure. This is because, were existing licence values can be leased or purchase at a lower price, intending entrants will necessarily take this option and there will be no increase in the number of taxis serving the area.

Table 4.1: Proposed inclusions in the urban zone

Area	No. of taxi licences	Average Licence Transfer	% by which Equivalent capital cost	Most recent licence	Highest transfer price (year)

	on issue	Value 2001 – 2013	of an Urban Licence exceeds Average Transfer Value	transfer price	
Ballarat	57	$318,919	11.1%	$369,000	$424,422 (2011)
Mornington Peninsula LGA	32	$249,688	41.8%	$348,000	$348,000 (2010)
Sunbury area (incl. Gisborne, Macedon, Romsey, Riddell's Creek, Woodend	22	$235,280	50.5%	$330,000	$152,500 (2009)
Bendigo	45	$223,681	58.3%	$255,000	$330,000 (2011)
Geelong urban zone (incl. Lara, Leopold)	135	$218,852	61.8%	$370,000	$368,000 (2011)
Yarra Valley (incl. Healesville, Warburton, Yarra Glen, Seville)	7	$118,500	198.9%	$139,000	$139,000 (2010)
Pakenham	9	$106,000	234.1%	$165,000	$165,000 (2005)
Wallan area (incl. Kilmore, Wandong, Broadford, Whittlesea)	11	$44,150	702.2%	$80,000	$80,000 (2004)
Melton/Bacchus Marsh	25	NA (approx $100,000)[20]	NA		$100,000 (2011)

Short-term impacts

Table 4.1 shows that the average licence transfer values for of all of the areas that would be allocated to the Urban Zone under the TII recommendations are below the equivalent capital cost of a new urban zone licence. Moreover, the highest transfer price recorded significantly exceeds the equivalent capital cost of a new licence in only one case; that of Ballarat.

Box 3: Post-reform value of non-metropolitan licences

As discussed above, the expected value of a metropolitan taxi licence, calculated according to the TII's method and adjusted to take account of the legislated annual licence prices is expected to decline by about 25% compared with its pre-reform value. As the inquiry report makes clear, these declines in value will largely be the result of the legislated requirement that drivers receive a higher proportion (i.e. 55%) of farebox revenue, with an associated reduction in revenue accruing to the operator and, by implication, the price that operators are prepared to pay to lease licences. Lower returns to licence owners will reduce capital values.

However, from the perspective of an owner – driver, this regulated change to the distribution of farebox revenue has a lesser impact, since the owner driver receives the total revenue during periods in which they are driving the taxi. Thus, they will suffer a decline in revenue only the extent that they

[20] No licence transfer prices information is available, however, based on an observation of a $6,804 annual assignment fee, the implicit value of the licence would be around $100,000, using an estimated 7% rate of return.

employ other drivers to cover additional shifts. At the extreme, where the only driver of the taxi is the licence owner, this change will have no impact on revenue.

TSC analysis shows that, while 82% of assignable metropolitan taxi licences are assigned (i.e. leased), this falls to 55% in the outer suburban zone, 55% in the urban zone (i.e. Geelong, Ballarat and Bendigo), and only 16% in the current country zone. This, substantially lower, assignment rate suggests that there will be a significantly higher proportion of owner-drivers in the non-metropolitan zone, albeit that the fact that a licence is not assigned does not necessarily indicate that its owner also drives the taxi to which it is attached.

Given these factors, it is likely that the extent of the post-reform decline in taxi licences due to the regulated change in revenue distribution will be somewhat lower in the non-metropolitan zones than in the metropolitan zones. Nonetheless, the regulated redistribution of revenue in favour of drivers can still be expected to have an important impact on licence values in the non-metropolitan zone.

In addition, as the discussion in Box 3 shows, actual licence values can be expected to be lower than these reported pre-reform values, as a result of the regulated shift in revenue in favour of drivers and that will occur as part of the reform programme.

Given these factors, the adoption of the TII's recommended zone allocations would imply that there would be no demand for new taxi licences in most of the areas allocated to the urban zone, with the main exceptions being some limited demand in the Geelong area and slightly greater demand in Ballarat. This, in turn, implies that there would be little change in the taxi markets of these towns in the short term, and no discernible improvement in service quality.

From the point of view of existing licence holders, this implies that declines in the market value of their licences would be limited, in the short term, to that occasioned by the legislated change in revenue shares, discussed above. That is, because there is little or no demand for new taxi licences, the existing supply/demand balance would not immediately change. Thus, the regulated change in revenue shares would be only driver in declines in licence values in the short term.

Medium term impacts

However, as table 4.1 shows, there are large differences in pre-reform value of taxi licences in the different towns that would be allocated to the urban zone under this option. Such significant differences provide strong incentives for existing taxi services to relocate to the towns with the highest licence values, since higher rates of return can be expected in these areas.

Table 4.1 shows that the highest observed licence values in the Yarra Valley, Pakenham, the Wallan area and Melton/Bacchus Marsh are all significantly below $200,000. Moreover, while there are no recent licence transfer prices obligations in either Wallan or Pakenham:

- In Wallan, latest observed transfer price, of $80,000 in 2004 is so low as to suggest that the current values are also unlikely to exceed $200,000 in the post reform environment; and
- In Pakenham, the average value of licences traded in 2005 was $106,000. Thus, notwithstanding the strong recent growth in this area, still doubtful that current licence prices would significantly exceed $200,000.

Conversely, the table shows that recent licence transfer prices in Bendigo, the Geelong area, the Mornington Peninsula and Ballarat are well above $300,000. Thus, there would be clear incentives for taxis to move from the Yarra Valley, Pakenham, Wallan and Melton/Bacchus Marsh to Geelong, Ballarat and Bendigo. Taxi licence owners operating in Bacchus Marsh, for example, could potentially sell their licences to Ballarat operators for double or even triple their pre-reform, or could relocate to these towns, operate the licence themselves and substantially increase their expected revenues.

Such movement would necessarily improve the quality of taxi services in towns and cities with the highest pre-reform licence values. However in the absence of new entry, the impact on the overall quality of taxi services is necessarily a "zero sum" game. That is, service improvements in some towns will be offset by declining service quality in those towns which now are served by a reduced number of taxis.

Consideration of the current number of taxis operating in each of these areas highlights the extent of this issue. There are only 52 taxi licences in total within the group of towns and cities with historical licence values less than $200,000. By contrast, there are 291 taxi licences - more than five times as many - within the group towns and cities with historical licence values above $200,000. This means that licence values in the latter group of towns would remain high, even were a high proportion of existing taxi licences to be relocated from the former group of towns. Thus, there would be continued incentives for further relocation of taxi licences.

This suggests that, under this option, there would likely be a significant deterioration in taxi service standards in several of the areas allocated to the urban zone. Such a reduction in the number of taxi licences operating in these areas would tend to increase the returns to each licence remaining and, hence, its implicit value. However, even in the medium term, this increase would be unlikely to be sufficient as to generate the entry of new taxi services, given the high cost of obtaining an urban zone licence from the TSC.

While this dynamic of licence relocation has been described above as a "medium term" impact, it is more accurately described as a second round effect in economic terms. That is, it constitutes a behavioural response to changes in significant variables in the taxi market.

This is an important clarification, in that it is possible that a significant number of licence relocations could occur within quite a short period of the reforms coming into effect.

Regional and country zone allocations

Table 4.2 sets out the allocation of the remaining taxi zones as between the proposed regional and country zones under Option 1. It also shows the average transfer price of a taxi licence in each zone over the period 2001 – 2013 and the population served by each taxi zone. The latter statistic is included because the inquiry indicated in its final report that it had used population numbers as an additional criterion in determining zone allocations.

Table 4.2: allocations to the regional and country zones

Town/Region	Population	Ave. Licence Price	TII Allocation	No. of Licences
Wodonga	31,605	$295,000	Regional	15
Mildura	31,361	$273,286	Regional	20
Wangaratta	17,377	$263,844	Regional	12
Warrnambool	29,284	$251,666	Regional	19
Traralgon	24,590	$236,000	Regional	15
Bairnsdale	11,727	$224,500	Regional	9
Shepparton-Mooroopna	42,741	$215,690	Regional	24
Colac	11,247	$186,000	Regional	8
Warragul	12,966	$185,000	Regional	7
Equivalent capital cost of a new Regional zone licence		**$177,088**		
Echuca	12,596	$171,648	Regional	9
Sale-Maffra	16713	$167,222	Regional	12
Morwell	13,505	$145,417	Regional	12
Hamilton	9,309	$145,100	Regional	9
Portland	9,705	$134,750	Regional	8
Moe-Yallourn	14,896	$114,522	Regional	10
Horsham	15,129	$94,500	Regional	9
Castlemaine	8,965	$42,857	Regional	7
Swan Hill	9,897	2$0,000[21]	Regional	9
Bellarine Peninsula	34,607	NA	Regional	11
Torquay	12,886	NA	Regional	3
Drouin	9,108	NA	Regional	2
Leongatha	4,697	NA	Regional	3
Korumburra	3,271	NA	Regional	3
Yarram	1,697	$120,000	Country	1
Heathcote	1,655	$115,000	Country	2
Numurkah	3,745	$95,000	Country	2
Lakes Entrance	6,137	$88,900	Country	7

[21] Data for 2002.

Anglesea	2,414	$84,500	Country	2
Kyneton	4,349	$82,857	Country	2
Wonthaggi	7,252	$75,000	Country	6
Grantville Area	2157	$71,500	Country	2
Timboon	690	$70,000	Country	1
Rochester	2,551	$67,500	Country	3
Creswick	2,582	$61,500	Country	2
Kerang	3,530	$60,333	Country	2
Kyabram	5,477	$60,000	Country	3
Neerim South	704	$60,000	Country	1
Equivalent capital cost of a new country zone licence		**$54,736**		
Beechworth	2,795	$52,000	Country	2
Ararat	6,906	$50,000	Country	7
Port Fairy	2,893	$50,000	Country	3
Euroa	2,668	$43,100	Country	3
Apollo Bay	1,123	$42,500	Country	1
Winchelsea	1,534	$40,000	Country	2
Yackandandah	928	$40,000	Country	1
St Arnaud	2,146	$38,700	Country	3
Alexandra	2,245	$30,000	Country	2
Wahgunyah	868	$30,000	Country	1
Stawell	5,655	$28,000	Country	6
Camperdown Area	6300	$26,320	Country	5
Yarrawonga	6,824	$25,250	Country	5
Daylesford	3,294	$20,000	Country	6
Bannockburn	3,429	$10,000	Country	2
Halls Gap	505	$4,255	Country	1

Impacts within the regional zone

Table 4.2 shows that of the 23 areas allocated to the regional zone under this option, nine have average pre-reform licence transfer prices above the equivalent capital cost of a new regional zone licence, nine have pre-reform prices below this value and, in five cases, no historical data on licence transfer prices is available. In two cases in which the pre-reform transfer prices are below the benchmark value, they are very near to it.

The table also shows that there is wide variation in historical licence transfer prices within the group of towns that would be allocated to the regional zone, with a highest value of almost $300,000 (Wodonga) and three values below $100,000. Given these pre-reform licence values, there would be incentives for new entry in only around half of the 23 areas allocated to the regional zone. That is, in most of the remaining areas, pre-reform licence prices are well below the equivalent capital cost of a new licence.

As with the Urban zone, this means that potential entrants to the industry will be better off purchasing existing licences from operators in towns with low pre-reform licence values and relocating them to towns with higher demand. This would be a lower-cost option than seeking new licences from government.

One significant difference between the regional and urban zones is that the number of existing taxi licences located in towns with licence values below the benchmark price is broadly similar to the number of licences in towns with values above the benchmark (107 vs 129). This suggests that the extent of the movement between towns that would be expected under this option would be smaller than in the urban zone. This implies that the negative impacts on existing service quality in towns with low licence values would be less significant than in the urban zone.

Table 4.2 suggests that pre-reform licence values would fall by more than the 25% expected in the metropolitan zone in only 4 of the 23 towns allocated to the regional zone under this option. The greatest loss of value around 40% would occur in Wodonga. However, as discussed above, a significant part of this loss of value would occur due to the regulated change in revenue shares, regardless of the zone allocations made.

Impacts within the country zone

Table 4.2 also sets out pre-reform licence values within the country zone, where available, as well as the equivalent capital cost of a new country zone licence[22]. Licence value data are available for only 30 of 66 towns allocated to this zone. No licence value data are available for a 36 towns, ranging in size from Benalla (population 9,077) and Maryborough (7,138) to Wedderburn (703) and Dunnolly (664).

Table 4.2 shows that, of 30 towns allocated to the country region for which data are available, 14 have pre-reform licence values that are above the benchmark value of $54,736 and 16 have values below this level. In terms of the number of taxis, the 14 towns with high licence values have a total of 38 taxis and the 16 towns with lower recorded values have 50 taxis.

The expected market dynamics in the country zone are therefore similar to those identified above for the regional zone. That is, there will be some incentive for applications to be made for new licences in several towns, but stronger incentives for taxis to move between towns[23]. For potential entrants to the taxi market in the towns with higher values, the preferred option would be to seek to purchase one of these existing licences and move it to a higher value location, rather than seeking a new licence from the government. However, if

[22] i.e. The equivalent capital value of a new licence subject to annual payments of $3,400 per annum, indexed at (CPI - 0.5%).
[23] Note that there are 28 licences located in towns where the pre-reform licence value is $30,000 or less - or around half the benchmark licence value. This means there are significant potential capital gains available to licence owners who sell these to operators in larger towns.

the availability of licences is limited, this option may not be a feasible one. In smaller country towns, in which there tend to be only a small number of taxis and owners have operated a taxi service for long periods in many cases, it is likely that relatively few will be made available for sale, despite the financial incentives noted above. the fact that no licence value data are available for more than half (i.e. 36 of 66) of the towns allocated to the country zone by the TII underlines this point, as it suggests that no licences have been transferred in these towns for over a decade.

4.3. Conclusion

The adoption of the TII's recommended zone allocations would imply that there would be very limited demand for new licences, particularly in the urban area. This means that there would be very limited progress toward the objective of increasing competition in the taxi market and overall service quality throughout Victoria. While some towns would see significant increases in taxi availability, this would largely occur at the expense of other towns within the same region, which would experience declines in taxi availability and, hence, service quality. This implies that significant equity problems would result from the adoption of this option, as consumers in some areas would be substantially worse off, while those in other areas would be better off.

These negative implications of the TII's recommended zone allocations largely flow from the fact that the annual licences fees adopted in legislation are higher than those initially recommended by the inquiry, particularly in the urban zone.

5. Option 2: Allocate all non-metropolitan zones to the regional and country zones

5.1. Description of the option

Option 2 broadly adopts the underlying logic of option one, as set out by the TII in its reports. That is, these criteria used to allocate areas to the new taxi zones are those of pre-reform licence value, population and geographical proximity. However, it differs from Option 1 in that the allocations contained in option 1 have been reviewed and revised to take account of the higher annual licence fees actually established in the foundation taxi and hire car reform legislation.

Moreover, in line with the inquiry's fundamental objective of improving customer service in the taxi industry by enhancing competition, zone allocations have been made with a view to ensuring that there incentives for new entry to the industry exist in as many areas as possible.

Specific zone allocations

Given this approach, it follows that none of the existing nonmetropolitan taxi areas have been allocated to the urban zone, with the exception of those specifically allocated to this zone via the foundation reform legislation[24]. Instead, all of the areas that would be allocated to the urban zone under option 1 are allocated to the regional zone option 2.

Conversely, those towns allocated to the regional and country zones under option 1 would have the same allocation under Option 2 in all but six cases. Table 5.1 sets out these changes, together with a summary comment providing the basic rationale for reallocating these towns to different zones..

<u>Table 5.1: proposed changes to TII recommendations – regional and country zones</u>

Area	Option 1 (TII rec.)	Option 2	Comment
Benalla	Country	Regional	Current estimated licence value of circa $190,000 is above regional licence value threshold & implies a loss of 65-70% for incumbents if allocated to country zone. Population is very near the 10,000 threshold level used by TII as a criterion for inclusion in regional area.
Castlemaine	Regional	Country	Most recent licence price of $42,857 (2006) is below country licence threshold value. Population of 8,965 is below the regional threshold also. Regional allocation would allow

[24] i.e. The Outer Suburban zone and the Port Phillip zone.

			for zero entry over an extended period & may lead to a major loss of existing services.
Horsham	Regional	Country	Licence value of $94,000 (2009) would not allow for new entry for some time. Moreover, relocation of existing licences to Bendigo, Ballarat, etc could lead to significant declines in service quality. Regional allocation by TII apparently based only on population size (15,000), as the other identified criteria are not met.
Korumburra	Regional	Country	No licence value data, but population is well below the "regional" threshold, at 3,271.
Leongatha	Regional	Country	Licence value unknown, but population of 4,697 is less than half threshold figure for regional allocation. The risk of movement of licences to Moe/Yallourn/Traralgon exists if Leongatha is allocated to the regional zone.
Swan Hill	Regional	Country	Recorded licence value of $20,000, while relating to 2002, is over 85% lower than the equivalent capital cost of a regional licence. Population of 9,897 is slightly below the TII threshold of 10,000. Strong risk of licence relocation to other towns (e.g. Mildura, with licence value of circa $275,000) if classified as regional.

Table 5.1 shows that five of the six changes involve moving a town from the regional zone to the country zone, while in the sixth case (Benalla), the converse change would occur.

5.2. Expected benefits and costs of the option

Option 2 would lead to a significant degree of entry to taxi industry in many non-metropolitan areas. This reflects the fact that the licence price criterion has been applied in such a way as to provide incentives for such entry wherever feasible. At the same time, regard has been had to the general intention of the TII that the reform program should be relatively gradual in nature, so that reductions in the value of existing taxi licences are not unduly large. The expected reduction in metropolitan licence values of around 25% under the TII recommendations can be seen as a benchmark in this regard.

Table 5.2 compares average pre-reform licence transfer values with the equivalent capital cost of a new regional licence for the areas that would be allocated to the urban zone under option 1, but are instead allocated to the regional zone under option 2.

Table 5.2: Pre-reform licence values and the equivalent capital cost of a regional licence

Area	Average Licence	Most	Equivalent	Implicit loss of

	Transfer Value 2001 – 2013	recent licence transfer price	capital cost of a regional licence[25]	licence value (Ave. value vs equivalent capital cost)
Ballarat	$318,919	$369,000	$177,087	44.5%
Mornington Peninsula LGA	$249,688	$348,000	$177,087	29.1%
Sunbury area	$235,280	$330,000	$177,087	24.7%
Bendigo	$223,681	$255,000	$177,087	20.8%
Geelong urban zone	$218,852	$370,000	$177,087	19.1%
Yarra Valley	$118,500	$139,000	$177,087	0%
Pakenham	$106,000	$165,000[26]	$177,087	0%
Melton/Bacchus Marsh	NA (approx $100,000)[27]	$100,000 approx	$177,087	0%
Wallan area	$44,150	$80,000	$177,087	0%

Table 5.2 shows that, based on the average licence transfer values, only in Ballarat would existing licence holders be likely to experience initial losses in the value of their taxi licences amounting to substantially more that the benchmark 25%. Conversely, if the equivalent capital cost of a new regional licence is compared with the most recent licence transfer prices recorded, losses of substantially more than 25% would also occur in Geelong and on the Mornington Peninsula.

This zone allocation result in significant improvement in taxi service standards. In contrast to the position under option 1, obtaining a new licence from government would be cheaper than purchasing an existing licence in Ballarat, Bendigo, the Sunbury area, the Geelong urban zone, the Mornington Peninsula and, possibly, in Pakenham. The likelihood of significant numbers of new licences being issued to serve these markets would tend to reduce the extent of any transfer of the existing taxi licences from the remaining areas (Melton/Bacchus Marsh and Wallan) and, as a result, the risk of any negative impacts on service quality in those towns.

Table 5.3 provides data on the remaining Victorian towns.

<u>Table 5.3: Other regional & country zone allocations under Option 2</u>

Town/Region	Population	Ave. Licence Price	Option 2 zone Allocation	No. of Licences
Wodonga	31,605	$295,000	Regional	15
Mildura	31,361	$273,286	Regional	20

[25] Given an annual licence fee of $11,000, or half that applicable to urban licences, the implicit value of a regional licence, at equilibrium, is equal to 50% of the implicit value of an urban licence.
[26] Based on a 2005 transfer.
[27] Based on an observation of a $6,804 annual assignment fee, the implicit value of the licence would be around $100,000, using an estimated 7% rate of return.

Wangaratta	17,377	$263,844	Regional	12
Warrnambool	29,284	$251,666	Regional	19
Traralgon	24,590	$236,000	Regional	15
Bairnsdale	11,727	$224,500	Regional	9
Shepparton-Mooroopna	42,741	$215,690	Regional	24
Colac	11,247	$186,000	Regional	8
Warragul	12,966	$185,000	Regional	7
Equivalent capital cost of a new Regional zone licence		**$177,088**		
Echuca	12,596	$171,648	Regional	9
Sale-Maffra	16713	$167,222	Regional	12
Morwell	13,505	$145,417	Regional	12
Hamilton	9,309	$145,100	Regional	9
Benalla	9,077	$136,760[28]	Regional	6
Portland	9,705	$134,750	Regional	8
Moe-Yallourn	14,896	$114,522[29]	Regional	10
Bellarine Peninsula	34,607	NA	Regional	11
Torquay	12,886	NA	Regional	3
Drouin	9,108	NA	Regional	2
Yarram	1,697	$120,000	Country	1
Heathcote	1,655	$115,000	Country	2
Numurkah	3,745	$95,000	Country	2
Horsham	15,129	$94,500	Country	9
Lakes Entrance	6,137	$88,900	Country	7
Anglesea	2,414	$84,500	Country	2
Kyneton	4,349	$82,857	Country	2
Wonthaggi	7,252	$75,000	Country	6
Grantville Area	2157	$71,500	Country	2
Timboon	690	$70,000	Country	1
Rochester	2,551	$67,500	Country	3
Creswick	2,582	$61,500	Country	2
Kerang	3,530	$60,333	Country	2
Kyabram	5,477	$60,000	Country	3
Neerim South	704	$60,000	Country	1
Equivalent capital cost of a new country zone licence		**$54,736**		
Beechworth	2,795	$52,000	Country	2
Ararat	6,906	$50,000	Country	7
Port Fairy	2,893	$50,000	Country	3
Euroa	2,668	$43,100	Country	3
Castlemaine	8,965	$42,857	Country	7
Apollo Bay	1,123	$42,500	Country	1

[28] Estimate, based on a 7% return on average assignment price data. The most recent assignment price suggests an licence value equivalent to almost $190,000.

[29] Highest transfer price of $138,500 recorded in 2006.

Winchelsea	1,534	$40,000	Country	2
Yackandandah	928	$40,000	Country	1
St Arnaud	2,146	$38,700	Country	3
Alexandra	2,245	$30,000	Country	2
Wahgunyah	868	$30,000	Country	1
Stawell	5,655	$28,000	Country	6
Camperdown Area	6300	$26,320	Country	5
Yarrawonga	6,824	$25,250	Country	5
Swan Hill	9,897	20,000[30]	Regional	9
Daylesford	3,294	$20,000	Country	6
Bannockburn	3,429	$10,000	Country	2
Halls Gap	505	$4,255	Country	1
Leongatha	4,697	NA	Country	3
Korumburra	3,271	NA	Country	3

Table 5.3 shows that only five towns allocated to the regional zone under this option have average pre-reform licence values significantly below the equivalent capital cost of a new regional licence (Morwell, Hamilton, Benalla, Portland and Moe/Yallourn)[31]. Licence value data are unavailable for three more towns.

This means that there would be incentives for new entry across a substantial majority of the towns allocated to the regional zone under this option. Moreover, average transfer prices in those towns with pre-reform values below the benchmark level are relatively close to the benchmark, suggesting that it is unlikely that there would be significant movement of taxis away from these towns and toward areas with higher demand.

Review of the data for towns allocated to the country zone under this option shows that seven have pre-reform licence values that would mean that licence owners would suffer declines in licence values that are significantly more than the 25% benchmark (Yarram, Heathcote, Numurkah, Horsham, Lakes Entrance, Anglesea, Kyneton). However, in each case, pre-reform licence values are substantially below the equivalent capital cost of a new regional taxi licence. Moreover, in three cases, the population of each town is less than 2,000 - a figure far below the threshold level of 10,000 adopted by the TII. Thus, there is little realistic alternative to allocating these towns to the country zone.

5.3. Conclusion

Option 2 would allow for new entry in a far wider range of areas than option 1 and would, as a result, mean that many more towns would experience significant service improvements, while the risk of substantial declines in taxi service quality in various non-metropolitan areas

[30] Data for 2002.2

[31] Note also that, for two of these, (Portland and Benalla) the most recent licence data suggests values at or above the benchmark, with a sale at $172,000 recorded in Portland in 2009 and a recent assignment in Benalla that would be consistent with a licence value of around $190,000.

would be much lower. Conversely, the expected decline in the value of existing taxi licences will be higher in many areas.

6. Option 3: Allocate only the existing Urban Zone areas to the new Urban zone

6.1 Description of the option

Option 3 is similar to Option 2, and differs only in that it would allocate Geelong, Ballarat and Bendigo to the Urban zone, rather than the regional zone. The rationale for this approach lies in the fact that these three centres collectively make up the urban zone under the current regulatory arrangements. Hence, option 3 would continue to accord these regional cities separate status. It can also be noted that these three towns have among the highest pre-reform licence values.

6.2. Expected benefits and costs of the option

Table 6.1 compares historical licence transfer prices in the three regional cities that currently constitute the urban zone with the benchmark price for an urban licence, of $354,175. It compares the benchmark price against both the average licence transfer price and against the highest recorded transfer price.

Table 6.1: urban zone transfer prices and the benchmark Urban licence value

Area	**No. of taxi licences on issue**	**Average Licence Transfer Value 2001 – 2013**	**% by which Equivalent capital cost of an Urban Licence exceeds Average Transfer Value**	**Highest transfer price (year)**	**% by which highest transfer price exceeds benchmark urban licence price**
Ballarat	57	$318,919	11.1%	$424,422 (2011)	19.8%
Bendigo	45	$223,681	58.3%	$330,000 (2011)	- 6.8%
Geelong urban zone (incl. Lara, Leopold)	135	$218,852	61.8%	$368,000 (2011)	3.9%

As discussed in section 4, the average licence transfer price since 2001 is lower than the equivalent capital cost of a new urban licence in all three cases and, in both Bendigo and Geelong, this price gap is very substantial. However, comparison of the cost of a new licence with the *highest recorded* transfer prices reveals a quite different picture.

In the case Ballarat, the highest recorded transfer price is almost 20% higher than the benchmark value, while Geelong's highest recorded transfer price is also marginally (3.9%) higher than the benchmark. Only Bendigo has not recorded a transfer price higher than the benchmark figure, but in this case the highest recorded price is only marginally (6.8%) lower than the benchmark. The highest recorded transfer prices were recorded in 2011 in all cases, that is, immediately prior to the establishment of the TII. This fact, plus the relatively high number of recent recorded transactions - at broadly similar prices - means that it is possible to have a relatively high level of confidence that that these values are broadly accurate reflections of the then-current values of licences in these areas[32].

The allocation of these three cities to the urban zone would imply that the size of any reduction in existing licence values would be minimised[33], since it would not be possible in this case for taxis located in the regional zone to move to service these cities. It follows, however, that little or no improvement in the quality of taxi services could be expected in these three cities, since there would be little or no incentive to apply for new licences.

While option 3 differs from option 2 only in the allocation of three cities to a different zone, this can be expected to result in a significant change to the market dynamics that would operate in the regional zone. This is because the total number of taxis currently serving the three cities of Ballarat, Bendigo and Geelong (and surrounding area) is high relative to the total number of taxis that would be allocated to the regional zone under option two. Thus, a total of 549 taxis would be allocated to the regional zone under option 2, but 237 of these would be allocated to the urban zone under option 3, leaving only 312 taxis to be allocated to the regional zone. Thus, the number of taxis on the regional zone would be 43% lower under option 3, compared with option 2.

This suggests that the potential for significant movement of existing taxi licences would be significantly reduced under this option, since three of the cities with the highest historical licence values would be removed from the regional zone. This would imply a lesser likelihood of declines in the quality of taxi services those towns allocated to the regional zone with the lowest historical licence transfer values; typically (although not exclusively) the smallest towns.

The implications of option 3 within the country zone would be identical to those of option 2.

6.3. Conclusion

Option 3 would continue the present urban zone classification of Ballarat, Bendigo and the Geelong area, but would otherwise be identical to option 2. However, this change affects a significant proportion of the non-metropolitan taxi market, as discussed above. While it could improve outcomes in many regional towns and cities, it would prevent any significant improvement in service standards occurring in Ballarat, Bendigo or the Geelong area, in contrast to Option 2.

[32] Conversely, in most smaller towns, very limited number of transfers creates difficulties in this regard.
[33] Although reductions due to the legislated change in revenue distribution discussed above would still be expected, as in all areas.

Importantly, option 3 would effectively serve to preserve the position of existing licence holders in these three cities, in a context in which the implementation of the reform agenda will lead to a significant loss in licence values in most parts of the Victorian taxi industry.

7. Setting zone boundaries

7.1. Overview

As discussed in section 1, section 143B of the *Transport (Compliance and Miscellaneous) Act 1983* authorises both the allocation of existing taxi zones to zones within the new, simplified zone structure and the setting of zone boundaries.

Section 3.3 discusses the basis on which the existing zone boundaries have been set, noting that most country zones have had their boundaries set as a radius from the principal post office of that town and that the remaining zones (including the Metropolitan and Outer Suburban zones) have largely had their boundaries set with reference to a range of major roads and, in some cases, other geographical landmarks. Section 3.3 also highlights the fact that the existing zone boundaries have been in place for an extended period and that little information is available as to the basis for the decisions taken at the time of their establishment.

The complex arrangements currently in place, in which nine different specific radii around town centres are used to establish zone boundaries, inconsistencies exist as to the zone boundaries set out in different taxi licences within the same zone and specific streets and roads are used as boundaries suggest a system that has evolved in an *ad hoc* manner over time and raises the question of whether the proposed Order should incorporate revised zone boundaries which are clearly consistent with relevant criteria.

As discussed in Section 3.3, boundaries should, in principle, be set in ways that reflect patterns of taxi demand and, as a result, be reflective of geographically distinct taxi markets. This is consistent with the need to ensure that all geographical areas receive an adequate level of taxi services (i.e. that taxi availability is similar across all areas) and that taxi licence owners who have paid higher licence fees for the right to operate in zones with higher demand are protected from unfair competition.

However, the experience of taxi regulators to date suggests that there are significant difficulties in identifying patterns of taxi demand and the geographical extent of particular taxi markets. This implies that there would be significant benefits in setting boundaries in ways that would increase the availability of relevant data to assist in future decision-making.

Given these factors, the following criteria are used in considering the appropriate approach to setting zone boundaries:

- That boundaries should, as far as possible, reflect the geographical extent of taxi markets;
- That a consistent approach to setting boundaries should be taken; and
- That boundary setting should facilitate the collection of further data to support better regulatory decision-making.

7.2. Zone boundary options considered

Three broad options were identified and considered in relation to zone boundaries. These are:

- Retaining the existing zone boundaries;
- Rationalising the existing zone boundaries while retaining the existing means of specifying boundaries; and
- Adopting a new mechanism for specifying zone boundaries.

Retaining existing boundaries

The major rationale for retaining the existing boundaries is that the dynamics of the non-metropolitan taxi markets will change substantially due to the major consolidation of taxi zones established in the reform legislation and that it is arguably prudent to delay any change to specific zone boundaries until experience with the operation of the new zone structure has been accumulated and appropriate analysis undertaken.

Conversely, the above-noted deficiencies in the existing structure of zone boundaries are arguably so apparent and significant as to indicate a likelihood of boundary change leading to a significantly more logical and functional system, even if this change is adopted in advance of the implementation of the new zone boundary system. The fact that there is no clearly documented rationale for the existing boundaries and that they have remained essentially unchanged over a lengthy period also supports this viewpoint.

Rationalising the existing zone structure

A second option considered was to revise and simplify the current system whereby most zone boundaries are established as radii from the centre of a given town. Such a revision could improve the current system by:

- Reducing/rationalising the number of different radii used to determine boundaries; and
- Revising the radii used in individual towns to better reflect current town boundaries and patterns of taxi demand.

Thus, a starting point for setting zone boundaries under this option would be to determine three or four radii from town centres (e.g. 3km, 5km, 8km, 12km) and determine which radius would apply to a given town as a function of its population. Thus, there would be a clear correlation between zone size and town population, in contrast to the current position. This approach could subsequently be modified in response to any anomalies identified.

Adopting this approach would be likely to achieve a better correlation between town boundaries and zone boundaries and, as a result, better align with actual patterns of taxi use. At the same time, it would be seen by most as being more equitable, since taxis operating in similar contexts would be able to serve zone areas of similar size.

Adoption of an alternative criterion for assessing zone boundaries

While adoption of the above rationalisation would be expected to yield substantive benefits, it would fall short of establishing a clear and consistent set of criteria for setting zone boundaries. While town boundaries and population sizes would be expected to be reasonably well correlated, the approach of continuing with a "geographical radius" based approach does not directly identify the extent of various socio-economically linked geographical areas. Thus, it remains a highly imperfect proxy for the conceptual goal of identifying the extent of different taxi markets.

This issue is particularly important given that the TSC intends to increase significantly the extent of the data collection and analysis activities it undertakes, *vis-a-vis* those historically undertaken by the taxi industry regulator, in order to monitor effectively the implementation of the current reform package and be able to advise government appropriately on any further reforms that may be desirable. In this context, the option of re-orienting taxi zone boundaries in a way that would make them congruent with boundaries adopted for broader statistical purpose gives rise to significant potential benefits. The above options would not achieve this aim.

However, the Australian Bureau of Statistics has recently implemented a major overhaul of the geographical classifications used for collecting statistical information. The Australian Statistical Geography Standard (ASGS) was developed by the ABS for the collection and dissemination of geographic statistics and is a hierarchically structured classification with a number of spatial units to satisfy different statistical purposes[34]. The TSC has reviewed the new ASGS and has determined that two elements of this classification - Statistical Areas Levels 2 and 3 - are appropriate blocks on which to build taxi zone boundaries. The ABS describes these elements of its classification as follows:

> ***Statistical Area Level 2 (SA2)***
>
> *The Statistical Area Level 2 (SA2) is an area defined in the Australian Statistical Geography Standard (ASGS), and consists of one or more whole Statistical Areas Level 1 (SA1s). Wherever possible, SA2s are based on officially gazetted State suburbs and localities. In urban areas SA2s largely conform to whole suburbs and*

[34] See: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2901.0Chapter23102011

combinations of whole suburbs, while in rural areas they define functional zones of social and economic links. Geography is also taken into account in SA2 design.

SA2s cover, in aggregate, the whole of Australia without gaps or overlaps.

Statistical Area Level 3 (SA3)

Statistical Areas Level 3 (SA3s) are built from aggregations of whole Statistical Area Level 2 (SA2) boundaries to represent regions of between approximately 30,000 people and 130,000 people to cover the whole of Australia. These boundaries reflect a combination of widely recognised informal regions as well as existing administrative regions such as State Government Regions in rural areas and local Government Areas in urban areas. SA3 boundaries fit within whole Statistical Area Level 4 (SA4) boundaries.[35]

As noted above, in non-metropolitan areas, the SA2 boundaries define "functional zones of social and economic links" and take geographical factors into consideration. Thus, there is likely to be a good correlation between boundaries set on the basis of these boundaries and patterns of taxi market operation.

The TSC has therefore mapped the proposed zones in terms of the ASGS boundaries. Initial mapping revealed that an approach based solely on the use of the SA2 and SA3 units, while generally usable, yielded some anomalies. Thus, it was decided to adopt the smallest ASGS statistical unit – the SA1 – as a supplementary tool to address these anomalies.

Expressing some regional towns as groups of SA1s

Broadly speaking, SA2 boundaries are considered to be the preferred way to define taxi zone boundaries, particularly in the regional context. The key factors in this regard are that:

- they have been developed according to population, functional and growth criteria which are highly relevant to the criteria for zone determination, and
- they deliver important benefits for future data capture and analysis, by enabling ABS data and taxi industry data to be mapped together.

in most cases the SA2 boundaries also:

- cover similar areas to the existing taxi zone boundaries (which is important, given the policy objective of maintaining a broad consistency (where possible) with existing boundaries), and
- effectively include the urbanised/developed areas of the town allocated to the regional zone, (where regional taxis are likely to be accepting rank and hail hirings) and exclude the more remote rural land around the town.

[35] Ibid.

However, in a few cases, the boundaries of the SA2 units do not provide a good match to either the existing taxi boundaries, or to the extent of urbanised/developed areas of the town in question. This is usually because that particular SA2 unit also includes a large amount of sparsely populated rural land. In these cases, the TSC has faced a trade-off between the benefits of consistently using SA2 derived boundaries, and using a boundary that creates a smaller area with a 'tighter fit' on the regional town.

Thus, in a small number of areas, where the area defined by the SA2 boundary is much greater than the area of the defined by the existing boundary, the TSC has taken the view that a departure from the use of pure SA2 based boundaries is warranted. Key examples are:

- Benalla (SA2 boundary 56.9% greater than the existing boundary);
- Wangaratta (103.8% greater);
- Traralgon (106.8% greater); and
- Wodonga (1245% greater).

In these four cases, the regional zone around these towns is defined as a collection of SA1 units. SA1 units that form components of the relevant SA2 unit but contain only sparsely populated land remote from the relevant town were allocated to the country zone, until the remaining SA1 units – those that provided an adequate coverage of the town's urbanised/developed areas – form the required area of regional zone.

SA1s have also been used for three towns in Gippsland (Drouin, Maffra and Churchill) that are included in within the existing taxi zone boundaries of taxis that are allocated to the regional zone (Warragul taxis currently serve Drouin, Sale taxis currently serve Maffra, and Traralgon and Morwell taxis currently serve Churchill). To minimize impacts on the taxi services that operate in these areas, and the communities they serve, the TSC has determined that the arrangements set out in current licence conditions should be retained where possible.

These towns would be separated from the larger neighbouring towns if the regional boundaries were drawn strictly according to SA2 boundaries. Alternatively, if the whole SA2s containing these towns were allocated to the regional zone, country taxis would be excluded from very large areas of south-eastern Victoria without adequate justification. While (as noted above) the TSC's strong preference is to use SA2 boundaries as much as is feasible, in this case the preservation of existing licensing arrangements requires the use of finer-grain geographic units.

Table 7.1, below, summarises the effect on zone areas of moving from the existing zone boundaries to the proposed ASGS based boundaries for a group of 17 large regional towns. These towns collectively constitute the proposed regional zone under option 3.

Table 7.1: Comparison of existing and proposed zone areas – selected towns

Town	Current Radius (km)	Current Area (km2)	SA3/SA2 Area (km2)	Adjusted area (km2)	Difference
Ballarat	11	379.9	448.3	448.3	18.0%
Bendigo	13	530.7	287.4	287.4	-45.8%
Bairnsdale	12	452.2	115.0	115.0	-74.6%
Benalla	8	201.0	315.3	146.9	-26.9%
Colac	8	201.0	54.7	54.7	-72.8%
Echuca	8	201.0	183.8	183.8	-8.5%
Hamilton	8	201.0	198.3	198.3	-1.3%
Mildura	Not defined by radius		266.2	266.2	NA
Moe	4.8	72.3	105.3	105.3	45.5%
Morwell	4.8	72.3	85.5	85.5	18.2%
Portland	13	530.7	64.0	64.0	-87.9%
Sale	8	201.0	45.6	45.6	-77.3%
Shepparton	8	201.0	248.8	248.8	23.8%
Traralgon	4.8	72.3	149.6	62.9	-13.1%
Wangaratta	3	28.3	57.6	41.3	46.1%
Warragul	9	254.3	353.3	353.3	38.9%
Warrnambool	10	314.0	182.6	182.6	-41.8%
Wodonga	3.2	32.2	432.7	36.5	13.5%
Maffra	8	201.0	172.1	172.1	-14.3%
Drouin	9	254.3	55.7	55.7	-78.1%
Churchill	4.8	72.3	55.4	55.4	-23.4%
Total		**4472.6**		**3209.7**	**-28.2%**

Note: Adjustments are that Benalla SA2 has had SA1 2106322 excluded, Traralgon SA2 has had SA1 2109730 excluded, Wangaratta SA2 has had SA1 2106608 and SA1 2106633 excluded, West Wodonga SA2 has had SA1 2107318 and SA1 2107319 excluded, Wodonga SA2 has had SA1 2107401, SA1 2107402, SA1 2107403, SA1 2107404, SA1 2107405, SA1 2107406, SA1 2107408, SA1 2107410, SA1 2107443, SA1 2107454 and SA1 2017455 excluded. Maffra, Drouin and Churchill areas are each defined by SA1 blocks.

Table 7.1 shows that, on average, the size of the areas specified across the 20 towns for which comparisons are included will shrink by 28.2% if the proposed changes are adopted. Changes in the size of the boundaries around individual towns occur in both directions, with some areas shrinking substantially (e.g. Sale – 77.3%, Drouin – 78.1%, Portland – 87.9%), while others will increase significantly in size (e.g. Wangaratta 46.1%, Moe 45.5%). However, these changes are the result of the proposed move from a set of boundaries specified some decades in the past, on the basis of unclear criteria, to boundaries set on the basis of a detailed delineation of socio-economic boundaries by the ABS.

Section 3.3, above, set out the impact of zone boundaries on taxi operations, with the two major restrictions being that:

- A taxi cannot pick up a passenger from a rank, or respond to a street hail, outside its boundary; and
- An urban taxi cannot perform a pre-booked hiring wholly within the metropolitan zone, a regional taxi cannot perform a pre-booked hiring wholly within the metropolitan or urban zones, and a country taxi cannot perform a pre-booked hiring wholly within the metropolitan, urban or regional zones.

Given this, the overall shrinkage in the areas defined within the regional and urban zones, as set out above, implies that there will be a net pro-competitive impact on the industry, since smaller areas will be placed outside the range of country area taxis. The increase in the boundary area surrounding some towns could potentially reduce competition in the first instance; however, new entry to the regional zone would be expected to more than offset any such impact. Importantly, the move to adopt zone boundaries based on ABS research would substantially assist the TSC in gathering and analysing a wider range of data on which to base future policy decisions in respect of the taxi industry, since the boundaries of the taxi zone areas would be consistent with those adopted by the ABS for a wide range of statistical analysis.

Changes in SA boundaries

The use of a third party classification system (i.e. the ABS ASGS classifications) inevitably implies that circumstances can arise in which relevant AS boundaries could be altered by the ABS in future in ways that would have implications for taxi zone boundaries[36]. Given this, the TSC will necessarily monitor the situation and, in the event of any such changes, determine the most appropriate response.

Where minor changes are concerned, it is unlikely that there would be any consequent need to make changes to taxi zone boundaries and the key requirement will be for the TSC to ensure that taxis operating within that zone are informed of the boundary change. However, where more significant changes occur, consideration would in some cases need to be given by TSC to the question of whether changes to the particular set of SA units that define the zone area could be required. That said, given that the underlying logic of the ASGS system has been identified as being essentially similar to that of the taxi zone setting exercise, this situation is regarded as relatively unlikely to arise.

7.3. Hire Car boundaries

Hire Cars

Like taxis, hire cars are commercial passenger vehicles licensed under the *Transport (Compliance and Miscellaneous) Act 1983*. Unlike taxis, hire cars are licensed only to conduct

[36] The ABS has indicated its intent that the statistical area boundaries remain consistent for the next '10 to 20 years' (from 2011) and to 'ensure that the SA2 boundaries remain stable over several Population Censuses.' *Australian Statistical Geography Standard (ASGS): Volume 1*, p22

pre-booked hirings and not permitted to accept hirings from taxi ranks or by being hailed from the street. Until December 2013, hire cars were generally required to be 'luxury cars' – that is, cars with a manufacturer's recommended new car retail price that exceeded the Luxury Car Tax Threshold set by the Australian Tax Office. However, this restriction has now been removed as part of the reforms being implemented.

Hire cars are divided into metropolitan hire cars and country hire cars. Hire cars are subject to a simple zone system, comprising two zones – the metropolitan hire car zone and the country hire car zone. Currently, the metropolitan hire car zone is the combined area of the current metropolitan and outer suburban taxi zones, while the remainder of Victoria forms the country hire car zone. Table 7.2, below, sets out basic data in relation to metropolitan and country hire cars.

Table 7.2: Summary of metropolitan and country hire car arrangements

Vehicle type	May conduct a pre-booked hiring -	Licence issue price*	Number of current licences on issue
Metropolitan hire car	to or from any place in Victoria	$40,000	948
Country hire car	to or from any place in Victoria, with the exception of any journey wholly within the metropolitan hire car zone	$20,000	80

*** Note:** unlike the new taxi licences, which will be issued in exchange for an annual fee, hire car licences are (and will continue to be) issued for a single up-front issue fee.

The taxi zone determination and hire car boundaries

The new taxi zone determination will affect hire cars. The *Transport Legislation Amendment (Foundation Taxi and Hire Car Reforms) Act 2013* will establish new metropolitan and country hire car zones as follows:

- the metropolitan hire car zone comprises all areas covered by the metropolitan taxi zone and the urban taxi zone
- the country hire car zone comprises all areas covered by the regional taxi zone and the country taxi zone.

This means that the choice made among the three taxi zone options identified above will have implications for the position of existing hire car licence-holders, as well as potential new licensees in this sector. Specifically, because the zoning options differ in terms of the size of the urban and large regional zone they would establish, they would affect the allocation of existing hire car licences to the new metropolitan and country hire car zones.

Zone options and their effect on hire car boundaries

Adopting any of the three zone options considered in this regulatory impact statement would result in a larger metropolitan hire car zone than exists at present and, by implication, a smaller country hire car zone. The following summarises the extent of the change that would occur in each case.

Option 1:
The current metropolitan hire car zone (comprising the current metropolitan and outer suburban taxi zones) would be expanded to include:

- the Mornington Peninsula (the Port Phillip taxi zone and the Westernport taxi zone)
- Geelong
- Ballarat
- Bendigo
- Melton/Bacchus Marsh
- the Sunbury/Gisborne/Woodend area
- the Wallan/Whittlesea area
- the Yarra Valley
- Pakenham

Option 2:

The current metropolitan hire car zone (comprising the current metropolitan and outer suburban taxi zones) would be expanded to include:

- the Port Phillip taxi zone

Option 3:

The current metropolitan hire car zone (comprising the current metropolitan and outer suburban taxi zones) would be expanded to include:

- the Port Phillip taxi zone
- Geelong
- Ballarat
- Bendigo

Under the new legislation, any country hire cars with operational addresses in areas that are included in the metropolitan hire car zone will be reclassified as metropolitan hire cars. This reclassification will occur automatically and will not require any additional payment to be made by hire car licence-holders. As shown in table 7.2, there are 80 country hire car licences on issue at present across the whole of Victoria. Review of the current zoning of the hire car fleet, together with their operating addresses, indicates that the number of reclassifications that would be expected to occur under each option would be as follows:

- Under Option 1, 31 country hire cars (39% of the total) would be reclassified as metropolitan hire cars;
- Under Option 2, 8 country hire cars (10% of the total) would be reclassified as metropolitan hire cars; and
- Under Option 3, 28 country hire cars (35% of the total) would be reclassified as metropolitan hire cars.

The legislation also has the potential to give rise to the unintended consequence of reclassifying metropolitan hire cars with operating addresses outside the metropolitan hire car zone into country hire cars – meaning a loss of operating rights and licence value.[37] This would be contrary to Recommendation 2.2 of the TII's final report, which recommends that existing licences with 'full operating rights' should retain those rights under the new zoning system. To ensure that existing metropolitan hire cars retain the rights provided under their licences, the TSC expects to put transitional administrative arrangements in place. An administrative option the TSC could implement is requesting that affected licence holders nominate any address within the metropolitan zone (the TSC address would suffice) as their operating address for the 24hours prior to the commence of the new zone system, to ensure no breach of the legislation. This will have no material impact on the licence holders' operations. Following the transition, the original operating address would be administratively restored.

TSC estimates that 6 licences could be in this position under Option 1, 13 licences under Option 3 and 16 under Option 2.

Analysis

The impact of zone allocation decisions is of lesser significance in relation to the hire car sector than the taxi sector, for three reasons:

- zone boundaries *primarily* restrict where a taxi can accept 'rank and hail' hirings. However, this is not a relevant consideration for hire cars, which are prevented by regulation from accepting such hirings;
- the determination of taxi zones consolidates an existing system of over 100 taxi zones into four, with quite significant consequences in terms of potential intra-zonal mobility and subsequent changes in market dynamics. By contrast, the existing two-zone system for hire cars will remain; and

[37] The intent of this particular provision was to provide clarity in situations where there was ambiguity as to whether a licensed vehicle was a metropolitan hire car or a country hire car. There are no hire cars in this ambiguous position.

- there are only 80 country hire car licences on issue, little more than one tenth of the number of non-metropolitan taxi licences.

Given that hire cars cannot accept "rank and hail" hirings, the main impact of being classified as a country hire car is that it is not possible for a country hire car to take on a hire when the whole of the journey takes place within the metropolitan zone. Conversely, it is possible for a country hire car to undertake a journey where:

- The pickup occurs in the metropolitan hire car zone and the drop off occurs in the country zone;
- The pickup occurs in the country zone and the drop off in the metropolitan zone; or
- Both pick up and drop off occur within the metropolitan zone, but the car passes through part of the country zone during part of the journey (e.g. between Ballarat and Bendigo, under Options 1 or 3).

Competition is best served by maximising the area in which *both* metropolitan and country hire cars can operate – that is, by making the country hire car zone as large as possible and, by implication, the metropolitan zone as small as possible. Maximising the size of the country zone both maximises competition in the short term and favours the entry of new hire car operators by maximising the potential area of operation of new country hire-car licences, thus increasing potential revenue.

Option 2 performs strongest against this criterion, followed closely by Option 3 and then Option 1. As noted above, the practice difference between Options 2 and 3 in the short term is that an additional 20 country hire car licences would be reclassified as metropolitan licences. Thus, there would be a total of 72 country hire car licences under Option 2 but only 52 under option 3 and 49 under Option 1.

As noted above, Option 2 most closely reflects the status quo in terms of hire car zone allocations, while the remaining options would lead to 20 or 23 additional country hire cars being reclassified as metropolitan hire cars.

Under Option 3, In addition, a person intending to apply for a new hire car licence, to be based in Ballarat, Bendigo or Geelong would have to pay the metropolitan licence fee of $40,000 under Option 3, rather than the country licence fee, under Option 2. Under option 1, this requirement would also exist in relation to a wide range of other towns (see Section 5 or Appendix 1 for the relevant list of urban zone towns). This would, in theory, reduce the level of entry that would be expected to occur in these areas. However, it can be noted that the rate of growth in hire car numbers in the non-metropolitan area has been slow, even under the current arrangements. Moreover, it is important to note that the higher fee paid by an entrant in this context would also provide them with the ability to operate in the metropolitan area.

Another impact of the adoption of option 3 would be that country zone hire cars located adjacent to Ballarat, Bendigo or Geelong would no longer be able to undertake work wholly within the taxi zone boundaries around those towns. Similarly, this dynamic would extent to a wider range of towns under Option 1. This would, in theory, reduce the availability of hire car services in these areas in the short term, and reduce the potential earning opportunities for the operators of these hire cars. However, the low overall numbers of non-metropolitan hire cars suggests that the size of this impact would be small and that the impact on service availability of the expected changes in taxi regulation would be predominant.

Competition between taxis and hire cars

The fundamental regulatory difference between taxis and hire cars is that the former are able to accept "rank and hail" hires, where the latter cannot. In the metropolitan context, this difference is highly significant, as the TII estimated that around 70% of taxi work in the metropolitan area is rank and hail based. Conversely, the proportion of rank and hail work in total taxi operations decreases with the size of the town or city, so that the great majority of taxi work in small towns is believed to be based on telephone bookings. This means that there is theoretically a relatively high degree of substitutability between taxis and hire cars in the non-metropolitan context.

However, it appears that the actual degree of competition between these two types of vehicle has historically been quite limited and remains so in the present. The Essential Services Commission's 2004 review of hire car licence fees suggested that the main areas in which there is competition between the two sectors are the business passenger market and, to a smaller extent, some bulk contracts at negotiated prices for government clients (notably the Department of Veterans' Affairs). The TII Draft Report (p 53) highlighted research showing that 39% of hire car demand was for travel to the airport, while special occasions accounted for another 22% of total demand.

One important indicator of the historical lack of competition between the two sectors is the slow growth in hire car numbers over time, despite the fact that non-metropolitan hire cars can potentially service much of the non-metropolitan taxi market, while the licence price is very substantially lower than equivalent taxi licence prices in most cases. Moreover, while data on average hire car revenue is unavailable, the ESC previously concluded the average revenue appeared to be substantially below that of taxis. Thus, the difference in market share between the two sectors is almost certainly much greater than their relative licence numbers would suggest.

Given the major changes to the taxi zone structure being undertaken, with significant implications for the dynamics of the taxi market, together with the much larger size of the taxi market, the zone allocation decisions that underlie the proposed Order have essentially been based on consideration of the impacts of the options identified on the taxi industry. However, the likely impact of the options on the hire car sector has been assessed, as discussed above.

Future zoning decisions

Despite the above, it remains possible that the changes to the regulation of the taxi and hire car industry being adopted may lead to an increase in competition between the two sectors in the future. One consideration in this regard is the removal of the previous requirement that hire cars must be "luxury cars". This opens the possibility of hire car operators choosing to compete more directly with taxis, by operating a lower cost vehicle and offering lower prices as a result. Another is that technological changes, such as the increasing use of phone apps for booking purposes, may enable or encourage hire cars to operate as "virtual networks", thus enhancing their ability to compete with taxis in the market for bookings for immediate dispatch of the vehicle (as distinct from the "pre-booked" market).

The TSC will monitor the state of competition between the two sectors as part of its broader assessment of the practical impacts of the implementation of the reform package for the industry. Should significant changes occur, it could potentially give rise to the need to consider revising the hire car boundaries in future.

Conclusion

The determination of taxi zones provides the framework for the new system of taxi licence issue and pricing, and has consequences for the valuation of existing taxi licences. Conversely, hire car licences have been issued ‘as-of-right’ since 2004, and licence issue prices will remain the same before and after the new boundaries take effect.

Importantly, the new hire car zone boundaries cannot be determined separately from the new taxi zone boundaries. The legislation requires that the metropolitan and urban taxi zones form the metropolitan hire car zone, and that the regional and country taxi zones form the country hire car zone. Given the above considerations, the choice of zone allocation options has been made primarily with regard to the impact of the various options on the taxi industry. However, as discussed above, TSC believes that setting the taxi zone boundaries according to Option 3 provides a result for the hire car sector that is generally in accordance with the reform objectives.

7.4. Conclusion

The TSC believes that moving to adopt taxi zone boundaries based on the ABS ASGS is clearly preferable to the two options described above. Assessed in terms of the three criteria highlighted above, this approach is expected to:

- Maximise the degree of consistency between taxi zone boundaries and the geographical extent of taxi markets, given the use of area boundaries set on the basis of a range of social and economic criteria;
- Substantially enhance the degree of consistency of approach in setting boundaries, compared with current arrangements; and

- Maximise the ability of the TSC to match taxi-related data that it expects to collect in future with relevant ABS data to support better regulatory decision-making.

The TSC will monitor the operation of the new boundary structure with a view to determining whether any significant boundary issues arise in practice and will, necessarily, stand ready to amend these boundaries should practical experience indicate that this would improve the ability of the regulatory structure to meet the objectives of the reform agenda. TSC expects its capacity to gather and analyse the relevant data to grow considerably over the next three to five years, particularly given the intended adoption of the ABS-based area boundaries and consequent ability to match taxi-specific data with a range of ABS statistical data, thus providing the potential to generate a far more substantial evidence base to support any future zoning determinations.

8. Conclusion

8.1. Overview

The proposed Order is a key element in the program of reform of taxi regulation in Victoria. It will implement arrangements whereby a system in which taxis are restricted to operating in a small geographical area is replaced with one in which they can operate throughout the entirety of one of the four zones into which the State has been divided.

A key consequence of this change, fundamental in assessing the merits of the different zone allocation options, is that this freedom of movement will mean that taxi licences will relocate over time toward areas where unmet demand - and potential revenue - are greatest.

In theory, this movement of taxi licences within zones should continue until an equilibrium is reached, in which the net revenue from operating a taxi licence is equalised across all areas within the zone. In practice, some differences in licence values may endure over a significant period of time. Some reasons for this likely outcome are:

- Owner-operators of taxi licences may choose to continue to operate in a particular area for personal or other reasons, despite the loss of economic opportunities available from relocation;
- Similarly, owner-operators may choose to continue to operate the licence themselves, even where a superior return could be obtained from selling it at a higher price and investing the proceeds. Again, personal reasons are likely to be important in such decisions;
- There may be significant costs associated with relocation[38], which make it less attractive to do so.

These factors are likely to be of most significance in smaller towns, the great majority of which would be allocated to the country region under all the options considered. A related fact is that of the very small number of taxis in many towns: 47 towns currently have only 1 or 2 taxis, while a further 12 towns have only three taxis. Thus, any movement of taxi licences in these contexts would have substantial implications for service levels.

However, in the regional and urban zones, this dynamic of licence movements tending to equilibrate licence values across the zone over time can be expected to be a strong one. Given that the starting point for the operation of this new system is one in which there are substantial differences in taxi licence values within each of the three non-metropolitan zones, it is likely that significant movement of taxi licences within zones will occur under any allocation option.

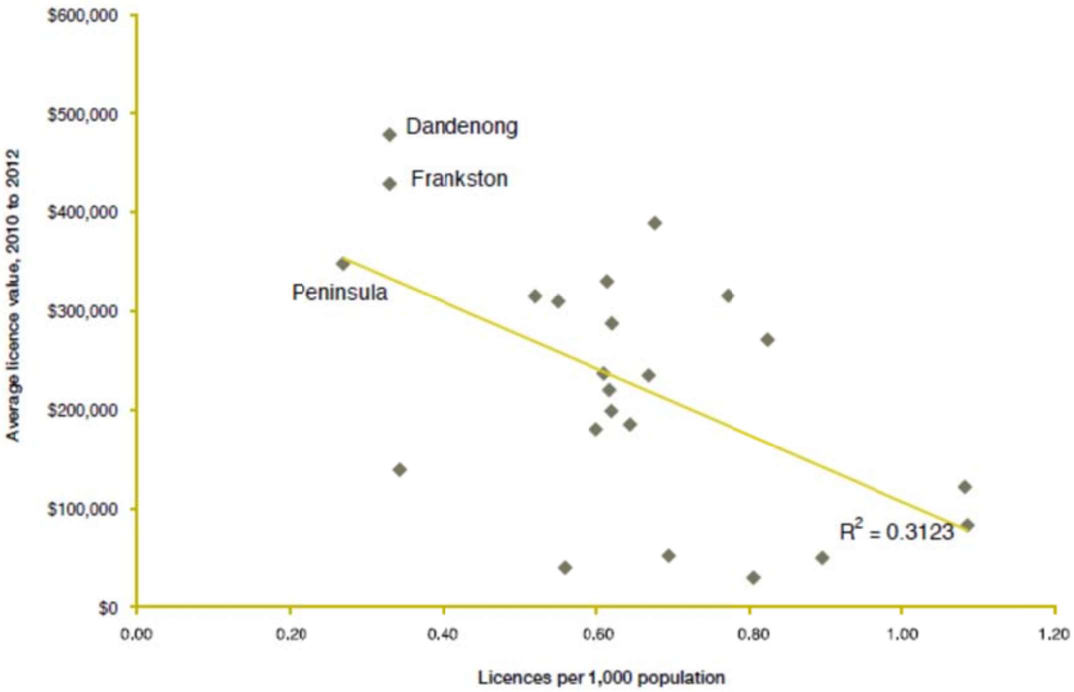
[38] These are known as "transactions costs" in economics and prevent markets from being fully efficient.

As noted by the TII, such movement gives rise to the risk that the availability of taxi services will decline in some areas, while the major means available for ameliorating this risk is to ensure that there are incentives for potential operators to apply for new taxi licences from the government. This, in turn, means that allocations of areas to zones should be made with a view to ensuring that the price of a new licence is attractive relative to the option of buying an existing licence.

The TII points out that there is is a strong inverse correlation between the number of taxi licences per 1,000 population and the value of a taxi licence. That is, if there are fewer taxis to serve a given population, excess demand is greater, monopoly profits are greater and licence values are, as a consequence, higher.

Graph 8.1 is reproduced from the TII Final Report and demonstrates this relationship.

Graph 8.1: Relationship between taxi supply and licence values



Source: TII analysis of VTD data

As the graph indicates, the R^2 value is 0.3123, which is regarded as indicating a significant effect size in the social sciences context[39]. That is, this statistical test demonstrates the high level of confidence that the relative scarcity of taxi licences is an important determinant of taxi licence value.

[39] Jacob Cohen, in ***Statistical Power Analysis for the Behavioral Sciences*** (1988) outlined criteria for gauging small, medium and large effect sizes, with the R^2 threshold for medium effect sizes being set at 0.30 (see pp 79-80). Cited in: http://www.polyu.edu.hk/mm/effectsizefaqs/thresholds_for_interpreting_effect_sizes2.html

Given this relationship, an important consideration in assessing the relative merits of the three options discussed above is that of the implications of each for the supply of taxis across each zone. Table 8.1 sets out these relationships under each option.

Table 8.1: Expected population and taxi numbers, by zone and option

Zones	Option 1	Option 2	Option 3
Urban zone Population[40]	666,333	0[41]	332,926
Urban zone taxis	343	0	237
Taxis/1,000 population - Urban	**0.51**	**0**	**0.71**
Regional zone population	345,441	978,892	645,966
Regional zone taxis	212	530	293
Taxis/1,000 population - Regional	**0.61**	**0.54**	**0.45**
Country zone population	194,131	227,013	227013
country zone taxis	167	192	192
Taxis/1,000 population - Country	**0.86**	**0.85**	**0.85**

Source: VTD data, analysed by the TSC

Table 8.1 shows that, under option 1, the largest cities and towns would have the smallest number of taxis per head of population, while the country zone – containing the smallest towns – would have the largest number of taxis per head. The size of this difference is substantial, with there being approximately 70% more taxis per person in the country zone than in the urban zone. Moreover, the high annual fees payable for new licences in the urban zone mean that little, if any, entry via applications for new licences is likely to occur. This suggests that the equilibrium licence price in this zone would be high and that the overall availability of taxi services would be unlikely to improve over time. Moreover, a number of towns would be likely to experience falling service standards.

Under option 2, the regional zone effectively combines the areas that would be allocated to both the urban zone and the regional zone under option 1, although a small number of towns are reallocated from the regional zone to the country zone. The major difference between options 1 and 2 is that there will be significant incentives for new entry via applications for new licences to occur across a large proportion of the regional zone under option 2. This means that the relative supply of taxis should substantially increase over time, significantly improving the supply of taxi services and minimising the risk of taxi service quality declining in areas with historically low licence prices.

Under option 3, the supply of taxis within the urban zone is somewhat greater than in option 1 (at 0.71 taxis per 1000 population), albeit that only three large regional cities are included in the urban zone. As with option 1, however, there is little incentive for significant new entry to this zone, so that future improvement in taxi supply is unlikely to be significant.

[40] Excludes the outer suburban area and Port Phillip, which are included in the Urban Zone by legislation.
[41] Note that, under Option 2, no areas would be allocated to the Urban Zone, other than the outer suburban and Port Philip areas. This explains the zero results reported in the table.

Moreover, initial taxi supply in the regional zone under this option is the lowest of any zone under any option, at only 0.45 taxis per 1000 population. This effectively demonstrates the extremely poor supply conditions currently obtaining in many medium to large sized regional towns across Victoria. It would be expected that supply conditions would improve significantly over time under this option, given that existing licence values in many of the towns that would fall within the regional zone under this option are above the benchmark value of a regional licence. However, significant concerns could arises in the short term.

All three options have similar implications in relation to the country zone. There would be incentives for the purchase of new licences in many of the larger towns in this zone, while smaller towns would be likely to notice little change in taxi supply in most cases.

8.2. Assessing the options

The implementation of the taxi reforms recommended by the TII will have important impacts in terms of economic efficiency, as well as significant transfer effects. The model of reform recommended by the TII and broadly accepted by the government is based on the concept of moderate or gradual reform, and seeks to balance:

- The need to create opportunities for new entry to the industry in order to enable improvements in customer service standards; and
- The desire to minimise any economic hardship among incumbent licence holders by limiting the size of the losses in licence values they will bear.

The TII summarised its view of the reform recommendations as follows:

> *"The inquiry could have gone much further in its approach to removing the restrictions on taxi and hire car licences. In effect, Victoria's taxi industry has operated for many years as a 'closed shop', with a small number of licence holders protected from the effects of competition at the direct expense of consumers, taxi operators and taxi drivers (who continue to experience low levels of remuneration, poor working conditions and a highly risky work environment). The inquiry found no public interest or other grounds for allowing this situation to continue. However, we have not endorsed an immediate move to an open market and are instead proposing a more moderate reform approach, recognising that substantial reductions in taxi licence values are likely to cause financial difficulties to some licence holders."* (TII Final Report, p 1).

Given the general direction of reform, as summarised above, the options presented above must be assessed in terms of both efficiency and equity criteria. Efficiency gains arise to the extent that the economic distortions imposed by current supply restrictions are reduced, the provision of taxi services increases and the industry therefore better responds to consumer demand. The concept of equity has a number of aspects. The TSC believes that, from the consumer perspective, an equitable outcome would be one that ensures that consumers in all taxi markets share in the benefits of improved taxi services or, at a minimum, that any significant reduction in taxi service quality in particular markets is avoided. From the perspective of licence owners, an equitable outcome would be one that ensures, as far as possible, that the extent of the loss of current licence value is equalised for owners across a range of geographical areas/zones across Victoria.

Given that both equity and efficiency considerations arise, it is not possible to undertake this assessment is solely in terms of benefit/cost analysis, even were it to be possible to quantify all of the relevant impacts. Therefore, a Multi-Criteria Analysis (MCA) has been adopted to assess the relative merits of the options.

8.3. Multi-Criteria Analysis

The three options identified have been compared against the base case of the continuation of the existing system of taxi zone regulation. The policy objectives identified above relate to both efficiency and equity, while significant aspects of the impacts of these options cannot be quantified precisely. Hence, a Multi-Criteria Analysis (MCA) has been adopted to compare the options. The MCA involves identifying relevant assessment criteria and allocating a score to each option in respect of each criterion.

8.3.1. The Base case

Regulatory impact assessment is, in most cases, conducted on an incremental basis. This generally means that, the benefits and costs of the policy options under consideration must be compared with the expected outcomes of a continuation of the current arrangements.

However, specification of a base case is complicated in the current context by the fact that the provisions of the *Transport Legislation Amendment (Foundation Taxi And Hire Car Reforms) Act 2012* will automatically come into effect no later than 1 July 2014 and that, if an Order specifying the allocation of existing taxi zones to new taxi zones is not made by the state, it appears to be the case that no taxis would be authorised to operate anywhere in Victoria. Thus, given that the new legislation cannot function without an Order being made, the three options identified are measured against a base case of the maintenance of the existing arrangements regarding taxi zones and associated rules.

8.3.2. Assessment criteria.

The objectives of the reform legislation generally, and the order that is the subject of this RIS specifically, involve both equity and efficiency. Consequently, the identified assessment criteria reflect both of these objectives. The following assessment criteria have been identified:

a. Ability of the option to enhance economic efficiency and customer service.

This is an efficiency criterion and directly reflects the fundamental objectives of the taxi industry reform process. As documented by the TII, restrictions on the supply of taxi licences have substantial economic efficiency costs. Given this, options that favour a greater degree of entry are scored more highly on this criterion, since greater entry implies a larger reduction in the extent of the economic distortions that arise due to the existing constraints on taxi supply, thus enhancing economic welfare to a greater extent.

b. Equity among incumbent licence-owners.

This is an equity criterion, where an equitable outcome involves licence holders in different areas/zones experiencing similar proportionate changes in licence value. That is, standard concepts of equity suggest that, as far as possible, all members of a given group (in this case, incumbent licence holders) should contribute in similar proportion to the adjustment costs that arise as a necessary corollary of the regulatory reform process.

c. Equity among consumers.

As with criterion b., above, this criterion is scored on the basis of a standard concept of equity, which proposes that that all consumers should benefit from reform (in this context, that taxi availability should improve), and that consumers should receive similar levels of taxi service (i.e. the availability of taxis should be similar across taxi markets). This is particularly significant given the above discussion indicating that the move to a simplified zone structure has the potential to yield outcomes involving a significant deterioration in the availability of taxi services in particular markets under certain zone allocation models.

8.3.3. Weighting of the criteria

The assessment criteria set out above reflects the fact that both efficiency and equity considerations are considered to be of significant importance in the current reform context. It is believed that these two considerations should be given an equal weighting, given the fact that the TII recommendations reflect a desire to balance the achievement of efficiency benefits through enhanced entry to the industry with an equity-based concerned to preserve, in part, the position of incumbent licence holders.

Given that there is identified one efficiency criterion and two identified equity criteria, the former has been given twice the weight accorded to the two latter criteria.

Each of the three options is scored against each criterion on a scale of -10 to + 10. Where an option would produce a less preferred result than a continuation of current arrangements it receives a negative score on that criterion and, conversely, where it would achieve a better outcome, it receives a positive score.

8.3.4. Scoring the options

a. Ability of the option to enhance economic efficiency and customer service.

All three of the options considered would result in some expansion in the supply of taxis services in non-metropolitan Victoria. Hence, all receive a positive score on this criterion. However, the supply increase would, in all cases, be very substantially smaller than would be achieved if all supply restrictions were removed and taxi licences made available at a price which simply recover the administrative cost incurred by regulators. This means that all options score significantly less than the maximum score of +10.

The size of the expected increase in supply varies greatly between options. Option one receives the lowest score, as the above analysis has indicated that there would be virtually no entry in the substantial part of the nonmetropolitan taxi market that would be allocated to the urban zone under this option. Thus, option 1 scores +2. Option 2 would yield the largest degree of entry among the three options considered, with entry being likely to occur in the great majority of nonmetropolitan towns and cities. It scores +5 on this criterion. Option 3 is similar to option 2, but would yield somewhat less entry overall, due to the allocation of the three regional cities that form the current urban zone to the new urban zone, rather than regional. Option 3 therefore scores +4 on this criterion.

b. Equity among incumbent licence-owners.

The concept of equity among licence holders can be taken as implying that major one-off losses of licence value should be avoided, consistent with the gradualist approach to reform recommended by the TII, and that the extent of losses in licence value should not vary widely in percentage terms. The fact that all incumbent licence holders will suffer a loss of pre-reform licence value suggests that all options must score negatively against this criterion. However, all scores are significantly less than the maximum of -10, since all licence holders will retain the majority of their pre-reform licence value under all options.

Option 1 would see the largest degree of variation in the proportionate size of the impacts on different licence holders, with some licence holders (particularly those in areas allocated to the zone) being able to achieve substantial increases in their pre-reform licence values by selling their licences or relocating their taxi service, while others would see significant declines in licence values. Thus, this option receives the largest negative score, of - 5. Option 3 minimises the degree of variation the impacts in proportionate size between licence holders and scores - 2. Option 2 would imply a somewhat larger degree of variation than Option 3, since it implies the potential for very large losses in licence value to occur in the major regional centres of Geelong, Ballarat and Bendigo. Given the substantial proportion of the total number of nonmetropolitan taxis that are located in the centres, this option scores -4.

c. Equity among consumers.

The TSC believes that, in the current context, the concept of equity among consumers can be taken as implying that all consumers should benefit from reform, as far as possible (in this context, implying that taxi availability should be improved), and that consumers should receive similar levels of taxi availability.

In relation to the second point, it was noted above that the combination of the consolidation of taxi zones and the availability of new taxi licences gives rise to a dynamic in which movements of licences within zones, combined with new licence issue, will tend to equalise taxi licence prices in the medium term within each zone[42]. Because licence prices reflect relative scarcity (i.e. the degree of imbalance between demand and supply), this implies a reduced level of inequality in taxi availability within taxi zones than at present[43]. This is an important equity gain that implies that all of the options under consideration should score positively against this criterion.

However, the three options differ significantly on the question of whether all consumers will benefit from improved taxi availability. In particular, the tendency toward equalisation of licence values within zones created by the above dynamic would be significantly frustrated in practice under Option 1. That is, the allocation of many towns to zones with high licence-issue prices would prevent sufficient new licence issue occurring to ensure that equalisation of licence values within each zone would be achieved in practice. This means that consumers in different areas would see very different results, in terms of the change in taxi availability they would experience post-reform implementation.

Specifically, while there would be expected to be some migration of taxi licences within the new zones, from areas of lower demand (indicated by lower pre-reform licence prices) to higher demand areas, under all options, there would in many cases be limited new entry under Option 1. Thus, the initial effect of these migrations, being to reduce taxi availability in areas existing operators have departed, would not necessarily be offset by new entry under Option 1. Thus, consumers in these areas would suffer reduced taxi availability. By contrast, both Options 2 and 3 allow for significantly higher levels of demand for new taxi license across many areas. This higher level of licence issue would be expected to ensure that few, if any, areas suffered any decline in taxi availability.

This implies that Option 1 must score significantly lower than Options 2 and 3.

As discussed above, Options 2 and 3 are generally similar overall and therefore score similarly on this criterion. However, Option 3 scores slightly higher than option 2, because the allocation of the three largest regional cities to the Urban zone will tend to reduce the extent of migration of existing taxi services within the regional zone and thereby reduce the

[42] This may not occur in smaller towns in the country zone, where post-reform licence values may remain below the equivalent capital value of a new licence.
[43] That is, there should be less divergence in the availability of taxi services across different areas. In this context, the availability of taxis will have a bearing on average waiting times and service reliability.

likelihood & extent of any reduction in taxi availability in individual markets due to the combination of migration of existing licences and lack of new entry. Thus, Option 3 scores +5, while Option 2 scores + 4.

8.3.5. Conclusion

Table 8.2 summarises the scores discussed in the above section.

Table 8.2: multi-criteria analysis of taxi zone allocation options

Criterion	Option 1	Option 2	Option 3
Economic efficiency/customer service	+2 x 50% = +1	+5 x 50% = +2.5	+4 x 50% = + 2
Equity among incumbent licence-holders	-5 x 25% = -1.25	-4 x 25% = - 1	-2 x 25% = - 0.5
Equity among consumers	+1 x 25% = +0.25	+4 x 25% = + 1	+5 x 25% = +1.25
Total	**0**	**+2.5**	**+2.75**

Table 8.2 shows that options 2 and 3 clearly preferred to option 1, with the latter scoring 0 and therefore not being clearly preferable to the maintenance of the status quo. Option 3 scores slightly higher than option 2, with option 3 scoring 2.75 points against 2.5 points for Option 2. This reflects its superior performance on the two equity criteria adopted.

Given these scores, it is proposed to proceed with option 3 as the basis for the required order on zone allocations.

9. Implementation and enforcement

Legislated rezoning of existing taxi licences

As noted above, the *Transport Legislation Amendment (Foundation Taxi and Hire Car Reforms) Act 2013* (the Amending Act) inserted a new section 143B in the *Transport (Compliance and Miscellaneous) Act 1983*, which establishes the new system of taxi zones. Subsections (7) to (12) of this section sets out the process by which existing taxi licences will be varied to give effect to the new zone system.

The licence conditions of all existing taxi licences specify an area in which the taxi operated under that licence may accept a 'rank or hail' hiring. Section 143B refers to this area as the *old taxi-cab zone*.

Under section 143B(8), on the commencement date of section 11 of the Amending Act, an existing taxi licence will have effect '*as if it specified the new taxi-cab zone within which the old taxi-cab zone falls, or if it falls within more than one taxi-cab zone, the new taxi cab zone within which more of that area falls than any other*.'

That is, once the new zone system commences, all existing taxi licences will in effect have a new taxi-cab zone specified for them automatically, by virtue of the operation of section 143B.

Identification of taxis according to zone

Currently, different categories of Victorian taxis are identifiable by the letter prefixes on their registration plates – M (for metropolitan), U (for urban) and C (for country). This practice will be retained for the new zone system, meaning a new series of R-prefixed registration plates (for regional taxis) will need to be introduced.

Depending on the determination of boundaries, it is likely that a number of vehicles will require new registration plates, which properly identify the taxi according to its new zone. The TSC will co-ordinate the issue of new registration plates with affected operators and VicRoads.

Enforcement

The TSC maintains an on-road presence with authorised officers who monitor the compliance of taxi and hire car industry participants with a wide range of regulatory requirements, including zoning arrangements.

The TSC is able to use GPS data provided through the MPTP system to monitor whether taxis are acting in accordance with zoning requirements. The TSC is further developing its capacity to receive and analyse GPS and other data for a range of compliance and performance reporting purposes.

Despite the complexity of the current zoning system, the taxi industry has historically been highly compliant with regard to zoning regulations. This is supported by a strong culture of self-enforcement within the industry, with taxi drivers and operators with operating rights within a particular zone being understandably responsive in reporting any unauthorised taxis operating that area.

The TSC expects this high standard of compliance to continue following the commencement of the new zone system, particularly given the increased simplicity of the system and the greater flexibility available to operators and drivers. If particular compliance issues emerge, the TSC will respond appropriately.

Monitoring and review

As discussed in Section 7, the TSC has determined to adopt units from the ABS Australian Statistical Geography Standard as the ‘building blocks’ for the new taxi zones. Aligning the taxi zones with ABS statistical areas will enable the TSC to analyse a vast amount of ABS demographic data by taxi zone.

Improving the TSC’s capacity to obtain and analyse taxi industry data is a fundamental objective of the post-TII reform project. Recommendation 3.9 of the TII Final Report was that ‘All trip and fare data should be transmitted directly on a continuous basis from the vehicle to the Taxi Services Commission’, while Recommendation 10.9 was that ‘the Taxi Services Commission should be provided with effective information gathering powers, including the requirement for all taxi permit holders to provide data on trips, shifts and fares direct from the taxi-cab to the Commission on a continuous basis, and for Authorised Taxi Organisations to provide specified service delivery data on a regular basis’. Implementation of these recommendations is currently progressing.

The combination of the improved capture of taxi industry data and the ABS demographic data will mean that the *next* determination of Victorian taxi zones be informed by an understanding of:

- where taxi use occurs, and how much revenue is generated by the taxi industry in each area of Victoria
- where taxi journeys frequently cross zone boundaries
- where new entry into the taxi industry has occurred, and where taxi services have relocated or been concentrated
- relationships between taxi pricing and geographic spread of demand
- where latent demand for taxi services may exist
- where the competition objectives of the reform have been achieved, where this has not been achieved, and why..

This is a new approach for the TSC, and data-driven indicators measuring the performance of the taxi industry are in early stages of development. However, given that developing this capacity is a priority for the TSC, considerable progress is expected over the next three to five years. Beyond the matter of zone boundary determination, data-driven performance monitoring is expected to become the key driver of the TSC's compliance and enforcement activities and its operational policy development.

It is anticipated that an evaluation and review of the zone boundaries will also occur within the next three to five years.

10. Consultation

The general question of the continued use of the zoning system, as well the specific proposal to adopt a four zone system (Metropolitan, urban, regional and country) were discussed extensively in the draft and final reports of the TII. The inquiry process in general was characterised by a very high level of consultation, including public hearings, calls for written submissions and targeted consultation with a wide range of key stakeholder groups. Stakeholders engaged extensively with the inquiry, with almost 2,000 written submissions being received.

Consequently, affected parties have had substantial opportunities to make representations on this issue and propose their preferred option. The TII Final Report addresses the views of stakeholders – notably incumbent licence-holders – responding to the reactions received to its draft report proposals (see pp 84-88). Given the focus of the currently proposed Order, the views of non-metropolitan licence-owners, as reported in the TII final report, can be noted. Significant opposition to the proposals from taxi licence-owners, operators and the VTA was reported. Key views reported were that:

- Country taxi networks made it clear that the inquiry's zoning proposals were not favoured, although it was difficult to assess whether the responses were primarily concerned with the removal of the public interest test for licences;
- Some country operators argued that the uniqueness of particular areas required that they be recognised as zones;
- Some groups disputed the basis on which the zones had been decided. One view was that taxi business values outside Melbourne reflect the value of the business associated with the licence, not the licence in isolation. A second was that zones should be based on the location of a town, its population and demographics, rather than on a cost basis.
- Some smaller networks expressed concerns that operators would be able to work over broader areas. They suggested this would 'flood' some areas with taxis, while other areas would suffer shortages.
- Country operators disputed the fact that competition could lead to better service quality. Network submissions also argued that competition would lead to customer safety issues as drivers tried to out-compete each other and sought to cover their costs by adopting unsafe practices or undercutting fares, with the possibility of disputes occurring between drivers and between drivers and passengers. (TII, Final Report, p 84).

The TII response to these views highlighted the fact that existing zone restrictions provide a high level of protection from competition and that it was unsurprising that proposed relaxations on these restrictions would be widely opposed. However, it highlighted the fact that:

> *"...concerns that service levels will fall would only be relevant if existing zones were merged that had distinctly different profitability (which can be measured in licence*

values) and if the restrictions on the numbers of licences were maintained. This is why it is important for zoning changes to be introduced at the same time as new licences are made available, as this will reduce costs for new operators and improve availability more generally." (TII Final Report, p 84).

As discussed above, the TSC's preferred option addresses the above concern to ensure that sufficient new licences are made available at an attractive price to offset any potential reductions in service standards in particular areas.

No further consultation has been conducted during the development of this RIS. This reflects two factors. First, limited time is available in which to make the required Order, given that the relevant parts of the Transport Legislation Amendment (Foundation Taxi and Hire Car Reform) Act 2013 will come into operation on 1 July 2014 and the making of an order prior to this date is essential to enable the taxi market to continue to operate. Secondly, as the options canvassed in this RIS all represent variants of the TII's Final Report recommendation regarding zone allocations, a clear understanding of stakeholder views on this issue has already been obtained.

However, the RIS will be released for a 60 day consultation period, consistent with Victorian government policy on RIS best practice consultation. This will ensure that all affected licence-holders will have an adequate opportunity to respond to the proposals made in the RIS.

11. Statement of compliance with National Competition Policy

The National Competition Policy Agreements set out specific requirements with regard to all new legislation adopted by jurisdictions that are party to the agreements. Clause 5(1) of the Competition Principles Agreement sets out the basic principle that must be applied to both existing legislation, under the legislative review process, and to proposed legislation:

> *The guiding principle is that legislation (including Acts, enactments, Ordinances or Regulations) should not restrict competition unless it can be demonstrated that:*
>
> *(a) The benefits of the restriction to the community as a whole outweigh the costs; and*
> *(b) The objectives of the regulation can only be achieved by restricting competition.*

Clause 5(5) provides a specific obligation on parties to the agreement with regard to newly proposed legislation:

> *Each party will require proposals for new legislation that restricts competition to be accompanied by evidence that the restriction is consistent with the principle set out in sub-clause (1).*[44]

Accordingly, every regulatory impact statement must include a section providing evidence that the proposed regulatory instrument is consistent with these NCP obligations. The recently released OECD Competition Assessment Toolkit[45] provides a checklist for identifying potentially significant negative impact on competition in the RIA context. This is based on the following three questions:

- Does the proposed regulation limit the number or range of suppliers?
- Does the proposed regulation limit the ability of suppliers to compete?
- Does the proposed regulation limit the incentives for suppliers to compete vigorously?

According to the OECD, if all three of these questions can be answered in the negative, it is unlikely that the proposed regulations will have any significant negative impact on competition.

The taxi industry is one in which government legislation has, over many decades, implemented very substantial restrictions on competition, both by strictly limiting the number of taxis licensed to operate in various markets and by adopting a range of restrictions on the manner in which taxis and hire cars can operate. The overall objective of the reforms to taxi regulation currently being implemented by the Victorian government is to reduce the extent of these restrictions.

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[44] Clause 5, Competition Principles Agreement, 11 April 1995 accessed at www.ncc.gov.au/pdf/PIAg-001.pdf
[45] See *Integrating Competition Assessment into Regulatory Impact Analysis.* OECD, Paris, 2007. (DAF/COMP(2007)8).

The changes to the existing zoning arrangements already adopted in legislation will significantly increased the extent of potential competition in the taxi industry outside the Melbourne metropolitan zone by enabling taxi licence holders to choose where they will operate from within a much broader range of possibilities that present. That is, nonmetropolitan taxi licences will be allocated to one of the three nonmetropolitan zones and will be able to operate in any area throughout that zone whereas, at present, they are generally able to operate only in a small geographical area, usually surrounding a single town or regional city.

While this fundamental change to the existing zoning structure is established in legislation, the proposed Order which is the subject of this RIS is essential in order to give practical effect to the change. Consequently, the proposed order can be seen as having a strongly pro-competitive impact of the operations of the Victorian taxi industry beyond the Melbourne metropolitan zone.

That said, it is clear that the maintenance of the zone structure means that a geographically based restrictions on competition will continue to exist. The rationale for these restrictions was presented by the TII in its Final Report and has been accepted by the government and adopted in legislation, as noted above. Therefore, the underlying question of the competitive impacts of maintaining a zone structure is beyond the scope of this RIS.

Box 11.1: Rationale for retention of zoning restrictions

The TII set out the rationale for the retention of zoning restrictions in Section 3.4 of its Final Report. It notes that zoning arrangements, by restricting where taxis can work, entail a number of costs, including restrictions on competition and reduced efficiency due to an increased level of "empty running" (i.e. trips taken without passengers in order to return to the zone). However, it points out that "...*it was not possible to consider zoning approaches without also considering restrictive licensing. Restrictive licensing creates artificial shortages of taxis and, given that taxis will naturally gravitate to where the most work is available, zones ensure that areas of relatively lower demand have a taxi service. In countries with minimal barriers to entry of new taxis, taxis are not confined to working in particular areas".*

That is, the retention of zoning restrictions is an inevitable corollary of the decision to retain *de facto* restrictions on taxi licence numbers in the medium term (i.e. by charging substantial annual fees for new licences issued by government, thus significantly reducing demand) and move only gradually to a more competitive taxi industry. In such a context, zone restrictions help to ensure that service standards are maintained in smaller towns and less profitable areas, by requiring some taxis to serve these areas.

The proposed order, reflecting option 3 as discussed above, contains a substantially lesser degree of effective restriction on competition than does Option 1. This is partly the product of the fact that almost all areas would be allocated to either the regional country zones under option 3, whereas the same areas would be distributed amongst three zones (urban, region or country) were option 1 to be adopted. Thus, it provides a significantly wider potential field of operations for taxis. More importantly, however, the allocations made under option 3 significantly enhance the potential demand for new taxi licences, vis-a-vis option 1 and, thereby, can be expected to increase significantly the growth in the total number of taxi services in operation over time. As noted above, the OECD Competition Assessment Toolkit highlights the importance of the number of suppliers to compete in the market as key indicator of the intensity of competition. Again, however, Option 2 can be seen as the most pro-competitive of the options considered in this regard.

Option 3 entails a slightly greater degree of restriction on competition than does Option 2, since its moves the major regional cities of Ballarat, Bendigo and Geelong to the Urban zone and thus prevents competition in these areas from regional zone taxis. This inevitably entails efficiency and service quality costs, as discussed above. However, these costs are considered to be justified by the improved outcomes in terms of equity, particularly for incumbent taxi licence holders, that Option 3 will deliver.

Appendix 1: Proposed Zone Allocations Under Each Option

Table A1 set out in detail the zones to which each existing taxi area would be allocated under each of the three options discussed in this RIS. It also includes data on the average price at which taxi licences were transferred over the period 2001 – 2013 where such data are available.

Table A1: Options for zone allocations and average taxi licence transfer prices

Town/Region	Option 1	Option 2	Option 3	Average transfer price (2001-2013)
Ballarat	Urban	Regional	Urban	$318,919
Bendigo	Urban	Regional	Urban	$223,681
Geelong urban zone (incl. Lara, Leopold)	Urban	Regional	Urban	$218,852
Sunbury area (incl. Gisborne, Macedon, Romsey, Riddell's Creek, Woodend)	Urban	Regional	Regional	$235,280
Mornington Peninsula LGA	Urban	Regional	Regional	$249,688
Yarra Valley (incl. Healesville, Warburton, Yarra Glen, Seville)	Urban	Regional	Regional	$118,500
Pakenham	Urban	Regional	Regional	$106,000
Wallan area (incl. Kilmore, Wandong, Broadford, Whittlesea)	Urban	Regional	Regional	$44,150
Melton/Bacchus Marsh	Urban	Regional	Regional	$100,000[46]
Wodonga	Regional	Regional	Regional	$295,000
Mildura	Regional	Regional	Regional	$273,286
Wangaratta	Regional	Regional	Regional	$263,844
Warrnambool	Regional	Regional	Regional	$251,666
Traralgon	Regional	Regional	Regional	$236,000
Bairnsdale	Regional	Regional	Regional	$224,500
Shepparton-Mooroopna	Regional	Regional	Regional	$210,446
Colac	Regional	Regional	Regional	$186,000
Warragul	Regional	Regional	Regional	$185,000
Echuca	Regional	Regional	Regional	$171,648
Sale-Maffra	Regional	Regional	Regional	$167,222
Morwell	Regional	Regional	Regional	$145,417
Hamilton	Regional	Regional	Regional	$145,100
Portland	Regional	Regional	Regional	$134,750
Moe-Yallourn	Regional	Regional	Regional	$114,522
Bellarine Peninsula	Regional	Regional	Regional	NA
Torquay	Regional	Regional	Regional	NA
Drouin	Regional	Regional	Regional	NA
Horsham	Regional	Country	Country	$94,500

[46] Estimate, based on recorded assignment price.

Castlemaine	Regional	Country	Country	$42,857
Swan Hill	Regional	Country	Country	$20,000
Leongatha	Regional	Country	Country	NA
Korumburra	Regional	Country	Country	NA
Benalla	Country	Regional	Regional	$137,650
Yarram	Country	Country	Country	$120,000
Heathcote	Country	Country	Country	$115,000
Numurkah	Country	Country	Country	$95,000
Lakes Entrance	Country	Country	Country	$88,900
Anglesea	Country	Country	Country	$84,500
Kyneton	Country	Country	Country	$82,857
Wonthaggi	Country	Country	Country	$75,000
Grantville Area	Country	Country	Country	$71,500
Timboon	Country	Country	Country	$70,000
Rochester	Country	Country	Country	$67,500
Creswick	Country	Country	Country	$61,500
Kerang	Country	Country	Country	$60,333
Kyabram	Country	Country	Country	$60,000
Neerim South	Country	Country	Country	$60,000
Beechworth	Country	Country	Country	$52,000
Ararat	Country	Country	Country	$50,000
Port Fairy	Country	Country	Country	$50,000
Euroa	Country	Country	Country	$43,100
Apollo Bay	Country	Country	Country	$42,500
Winchelsea	Country	Country	Country	$40,000
Yackandandah	Country	Country	Country	$40,000
St Arnaud	Country	Country	Country	$38,700
Alexandra	Country	Country	Country	$30,000
Wahgunyah	Country	Country	Country	$30,000
Stawell	Country	Country	Country	$28,000
Camperdown Area	Country	Country	Country	$26,320
Yarrawonga	Country	Country	Country	$25,250
Daylesford	Country	Country	Country	$20,000
Bannockburn	Country	Country	Country	$10,000
Halls Gap	Country	Country	Country	$4,255
Maryborough	Country	Country	Country	NA
Seymour	Country	Country	Country	NA
Emerald	Country	Country	Country	NA
Cobram	Country	Country	Country	NA
Cowes	Country	Country	Country	NA
Inverloch	Country	Country	Country	NA
Tatura	Country	Country	Country	NA
Mansfield	Country	Country	Country	NA
Paynesville	Country	Country	Country	NA
Trafalgar	Country	Country	Country	NA
Myrtleford	Country	Country	Country	NA

Red Cliffs	Country	Country	Country	NA
Warracknabeal	Country	Country	Country	NA
Bright	Country	Country	Country	NA
Robinvale	Country	Country	Country	NA
Koo Wee Rup	Country	Country	Country	NA
Orbost	Country	Country	Country	NA
Rutherglen	Country	Country	Country	NA
Ballan	Country	Country	Country	NA
Cohuna	Country	Country	Country	NA
Mount Beauty	Country	Country	Country	NA
Nagambie	Country	Country	Country	NA
Garfield	Country	Country	Country	NA
Dimboola	Country	Country	Country	NA
Casterton	Country	Country	Country	NA
Lorne	Country	Country	Country	NA
Ouyen	Country	Country	Country	NA
Corryong	Country	Country	Country	NA
Rushworth	Country	Country	Country	NA
Metung	Country	Country	Country	NA
Koondrook	Country	Country	Country	NA
Wedderburn	Country	Country	Country	NA
Dunolly	Country	Country	Country	NA

Appendix 2: Victorian taxi zones as at December 2013

1. Metropolitan Taxi-cab Zone

The area bounded by the coastline, the mouth of the Werribee River, a direct line to Cherry Tree Creek and its intersection with the Princes Highway, a direct line to the intersection of Bulban and Ball Roads, a direct line to the Werribee River and its intersection with Hobbs Road, Hobbs, Boundary and Robinsons Roads, Western Highway, Clarke Road, Monaghans Road, a straight line from the intersection of Monaghans Road and Taylors Road to the intersection of Holden Road and Calder Highway, a straight line to the intersection of Bulla Road and Quartz Street, Bulla, Somerton, Oaklands, Konagadera, Mt Ridley, Summerhill, Epping, Bridge Inn and Doctors Gully Roads, Bannans Lane North, Hurstbridge - Arthurs Creek, Heidelberg - Kinglake, Cherry Tree, Kangaroo Ground - St Andrews, Eltham - Yarra Glen and Kangaroo Ground - Warrandyte Roads, Pigeon Bank Lane, Pigeon Bank Gully Creek, Yarra River in a north-easterly direction, Victoria Road, Mc Intyre Lane, Yarra Glen, St Huberts, Boundary, Killara and Gruyere Roads, Old Gippsland Road, Sebire Avenue, Warburton Highway, Beenak, Wandin East, Queens, Monbulk, Stonyford, Olinda Creek, Barbers, Doughtys, Falls, The Georgian, Olinda-Monbulk, Main, Emerald-Monbulk, Moxhams, Priors, Kallista-Emerald, William, Grantulla, Belgrave - Gembrook, Wellington and Garden Roads, Princes Highway, Mc Naughton and Kombi Roads, railway line, Westall, Heatherton and Boundary Roads, Old Dandenong, Centre Dandenong, Lower Dandenong, Springvale, Pillars, Wilson and Mc Mahens Roads a direct south line to Rossiter Road, northern boundary of City of Frankston, Eel Race Road to the coastline.

2. Outer Suburban Taxi-cab Zone

The area bounded by the coastline from Gunyong Creek to Eel Race Road, northern boundary of the City of Frankston, Rossiter Road, a direct north line to Wilson and Mc Mahens Roads, Pillars, Springvale, Lower Dandenong, Centre Dandenong, Old Dandenong, Boundary, Heatherton and Westall Roads, railway line, Kombi and Mc Naughton Roads, Princes Highway, Garden, Wellington, Cardinia Creek and Duffys Roads, the MMBW boundary, Red Hill, Lewis, Emerald-Beaconsfield Rd, Split Rock, Officer- Upper Beaconsfield, Brown and Starling Roads, Princes Highway, Station Street, Officer, South Road to the intersection of Leckey Road, a straight line to the intersection of Soldiers and Thompsons Roads, Thompson, Berwick-Cranbourne, Ballarto and Clyde-Five Ways Roads. South Gippsland Hwy, Browns, Hastings-Dandenong, McKays, Centre, Cranbourne - Frankston, Warrandyte, Baxter-Tooradin, Sages and Moorooduc Roads, Wooralla Drive, Tower Road and Gunyong Creek to the Coastline.

3. Urban taxi zones

Urban (Geelong) Taxi-cab Zone

The area bounded by the coastline, Hermsley Road to the Portarlington Road railway crossing at Curlewis, Curlewis road, a straight south-west line to the intersection of Ocean

Grove Road, a straight south-west line to the intersection of Barwon Heads and Breamlea Roads, a straight south-west line to the intersection of Torquay and Blackgate roads, a straight north-west line to the intersection of Anglesea and Dickens Roads, a straight north-west line to the intersection of Princes Highway and Devon Road, a straight north-west line to the intersection of Barrabool and Hendy Main Roads, a straight north-east line to the intersection of Hamilton Highway and Pollocksford Road, a straight north-west line to the Midland Highway railway overpass at Gheringhap, a straight north line to the intersection of Sutherland Creek and Staceys Roads, Staceys Road to Geelong-Ballan Road, a straight north-east line to the intersection of Geelong-Bacchus Marsh and Peak School Roads, Peak School Road, a straight east line to Hughes Road, Hughes Road, Pousties Road, Beach Road and the coastline to Hersmsley Road.

Urban (Ballarat) Taxi-cab Zone

The area within a radius of 11 km of the principal Post Office within the City of Ballarat.

Urban (Bendigo) Taxi-cab Zone

The area within a radius of 13 km of the principal Post Office within the City of Bendigo.

4. Country Taxi-cab Zones[47]

a. Zones specified as a simple function of the distance from the principal Post Office of the town indicated.

Distance from PO	No. of zones	Zones
3.2 km	5	Korumburra, Mt. Beauty, Newborough, Wodonga, Yarrawonga.
4 km	2	Horsham, Port Fairy.
4.8 km	3	Inverloch, Moe, Neerim South,
5 km	14	Alexandra, Corryong, Dunolly, Euroa, Lorne, Merbein, Nagambie, Ouyen, Redcliffs, Rushworth, Wedderburn, Winchelsea, Yarram, Yarck.
8 km	32	Apollo Bay, Ararat, Benalla, Casterton, Cobram, Cohuna, Colac, Dimboola, Echuca, Emerald, Hamilton, Heathcote, Halls Gap, Kerang, Koondrook, Koo Wee Rup, Kyabram, Kyneton, Leongatha, Mansfield, Maryborough, Numurkah, Pakenham, Seymour, Shepparton, St Arnaud, Stawell, Swan Hill, Terang, Timboon, Torquay, Wonthaggi.
9 km	1	Trafalgar,
10 km	3	Rochester, Wahgunyah, Warnambool.

[47] Note: In some materials, the TSC and VTD have distinguished 'taxi-cab zones' (areas that have been formally proclaimed as taxi-cab zones for the purposes of a licence issue under s.143A) and 'taxi-cab service areas' (operational areas described only in taxi-cab licence conditions). That distinction is not relevant to the following list, and the phrase 'taxi-cab zone' is used to refer to all such operating areas.

12 km	1	Bannockburn
13 km	3	Daylesford, Portland, Tatura
15 km	1	Melton/Bacchus Marsh.
16 km	2	Phillip Island, Robinvale
50 km	1	Orbost
Total	**74**	

b. Zones specified in terms of the distance from two or more post offices (8)

Bellarine Peninsula Taxi-cab Zone (North)

The area within a radius of 8 km of the principal Post Office in Drysdale, and the area within a radius of 8 km of the principal Post Office in Portarlington, and the area within a radius of 8 km of the principal Post Office in St Leonards.

Bellarine Peninsula Taxi-cab Zone (South)

The area within a radius of 8 km of the principal Post Office in Ocean Grove, and the area within a radius of 8 km of the principal Post Office in Point Lonsdale.

Creswick Taxi-cab Zone

The area within a radius of 10 km of the principal Post Office in Creswick, excluding places within a radius of 11 km of the principal Post Office in Ballarat.

Grantville/Anderson/Kilcunda Taxi-cab Zone

The area within a radius of 10 km of the principal Post Office in Grantville, and the area within a radius of 7 km of the intersection of the Bass Highway and Phillip Island Tourist Road.

La Trobe Valley Taxi-cab Zone

The area within a radius of 4.8 km of the principal Post Office in Morwell, the area within a radius of 4.8 km of the principal Post Office in Traralgon, the area within a radius of 4.8 km of the principal Post Office in Churchill, and the area within lines drawn between the outer-circumference of each of the three radii.

Sale/Maffra Taxi-cab Zone

The area within a radius of 8 km of the principal Post Office in Sale, and the area within a radius of 8 km of the principal Post Office in Maffra.

Sunbury/Gisborne Taxi-cab Zone

The area within a radius of 8 km of the principal Post Office in Sunbury, the area within a radius of 8 km of the principal Post Office in Gisborne, the area within a radius of 8 km of the principal Post Office in Macedon, the area within a radius of 10 km of the principal Post

Office in Romsey, the area within a radius of 2 km of the principal Post Office in Riddell's Creek, and the area within a radius of 8 km of the principal Post Office in Woodend.

Tatura Taxi-cab Zone

The area within a radius of 13 km of the principal Post Office in Tatura, excluding places within a radius of 8 km of Shepparton.

Wallan/Whittlesea Taxi-cab Zone

The area within a radius of 3 km of the principal Post Office in Wandong, the area within a radius of 4 km of the principal Post Office in Broadford, the area within a radius of 8 km of the principal Post Office in Kilmore, the area within a radius of 9 km of the principal Post Office in Wallan, and the area within a radius of 10 km of the principal Post Office in Whittlesea.

Warragul/Drouin Taxi-cab Zone

The area within a radius of 9 km of the principal Post Office in Warragul, and the area with a radius of 9 km of the principal Post Office in Drouin.

Yarra Valley Taxi-cab Zone

The area within a 8km radius of the Healesville Post Office, a 4km radius of the Yarra Glen Post Office, a 6km radius of the Warburton Post Office, a 5km radius of the intersection of Sunnyside Rd and Warburton Hwy at Seville East, and the area bounded by straight lines drawn between the outer-circumference of the four radii on the northern, eastern and southern sides, and the metropolitan taxi zone on the western side.

c. Zones specified differently in the licence conditions of individual taxis within the zone (6)

Bairnsdale Taxi-cab Zone

- For 6 out of 9 Bairnsdale taxis: The area within a radius of 12 km of the principal Post Office in Bairnsdale.

- For 3 out of 9 Bairnsdale taxis: The area within a radius of 12 km of the principal Post Office in Bairnsdale, (excluding places within the area within a radius of 5 km of the principal Post Office in Paynesville), and the area within a radius of 12 km of the principal Post Office in Metung. See also Metung Taxi-cab Zone, Paynesville Taxi-cab Zone.

Camperdown Taxi-cab Zone

- For 2 out of 4 Camperdown taxis: The area within a radius of 8 km of the principal Post Office in Camperdown.

- For 2 out of 4 Camperdown taxis: The area within a radius of 8 km of the principal Post Office in Camperdown, the area within a radius of 8 km of the principal Post Office in Cobden, and the area within a radius of 8 km of the principal Post Office in Terang. See also Terang Taxi-cab Zone.

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Castlemaine Taxi-cab Zone

- For 5 out of 7 Castlemaine taxis: The area within a radius of 8 km of the principal Post Office in Castlemaine.

- For 2 out of 7 Castlemaine taxis: The area within a radius of 3 km of the principal Post Office in Castlemaine.

Garfield Taxi-cab Zone

- For 1 out of 2 Garfield taxis: The area within a radius of 8 km of the principal Post Office in Garfield.

- For 1 out of 2 Garfield taxis: The area within a radius of 3 km of the principal Post Office in Garfield.

Lakes Entrance Taxi-cab Zone

- For 5 out of 7 Lakes Entrance taxis: The area within a radius of 8 km of the principal Post Office in Lakes Entrance.

- For 2 out of 7 Lakes Entrance taxis: The area within a radius of 4 km of the principal Post Office in Lakes Entrance.

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Metung Taxi-cab Zone

- For 1 out of 4 Metung taxis: The area within a radius of 15 km of the principal Post Office in Metung, excluding places within a radius of 8 km of the principal Post Office in Lakes Entrance.

- For 1 out of 4 Metung taxis: The area within a radius of 12 km of the principal Post Office in Metung, excluding places within a radius of 8 km of the principal Post Office in Lakes Entrance.

- For the remaining 2 Metung taxis, see Bairnsdale Taxi-cab Zone above

d. *Zones specified with reference to particular roads or other landmarks (3)*

Sunraysia (Mildura) Taxi-cab Zone

The area bounded by Paschendale Avenue, Sturt Highway, Whitecliff Avenue, Nineteenth Street, Walnut Avenue, Dow Avenue, Coorong Avenue, a straight line drawn along Morpung Avenue to the Murray River, and the Murray River to Paschendale Avenue

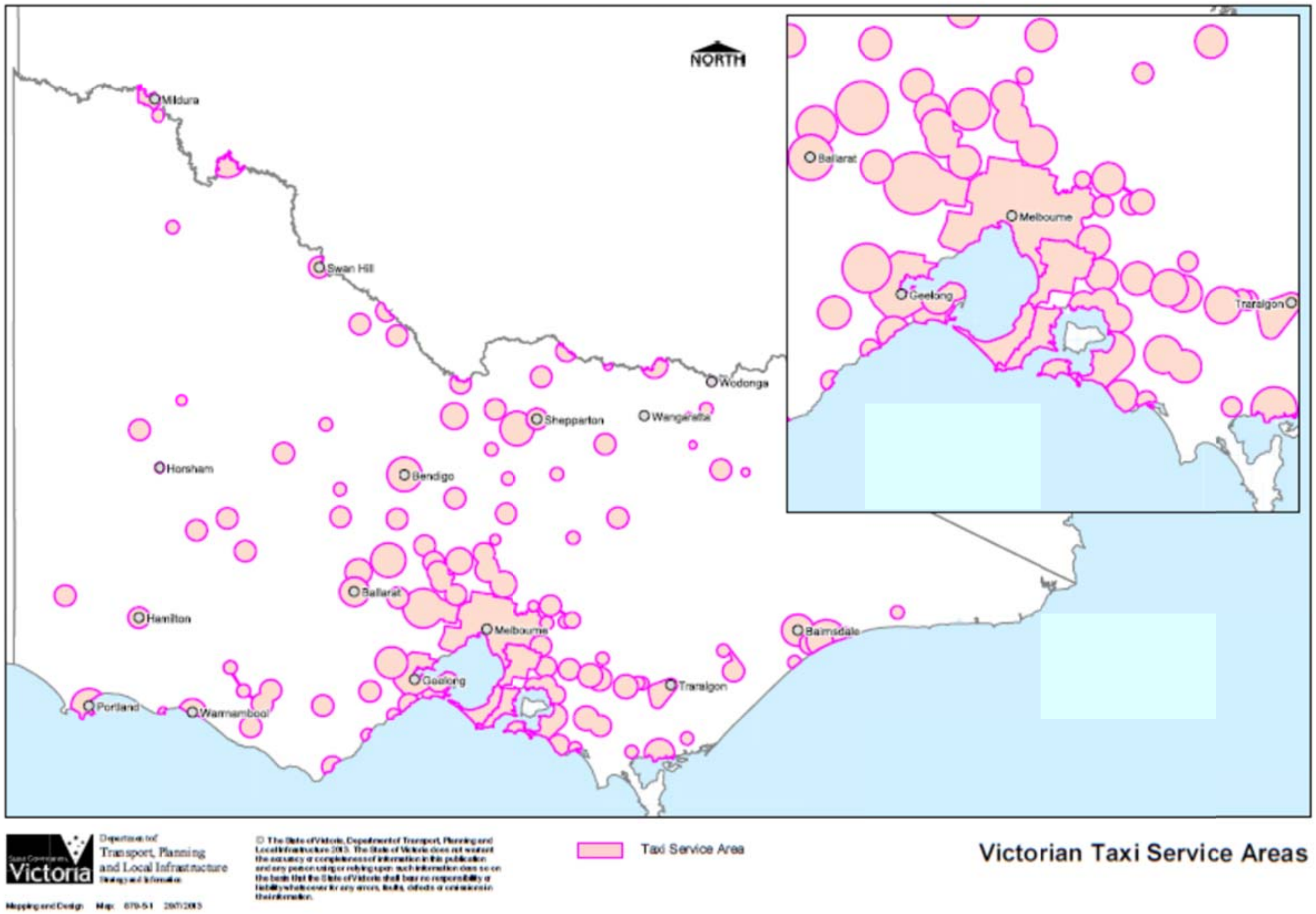
Port Phillip Taxi-cab Zone

The area bounded by the coastline, Canadian Bay Road, Mt Eliza Way, Wooralla Drive, Moorooduc Road, Eramosa Road, Derril Road, Ellerina Road, Balnarring Road, Tubbarubba Road, Bittern - Dromana Road, Red Hill Road, Station Road, Red Hill - Shoreham Road, Shands Road, Mornington - Flinders Road, Meakin Road, Boneo Road, Cape Schank Road and the coastline to Canadian Bay Road.

Westernport Taxi-cab Zone

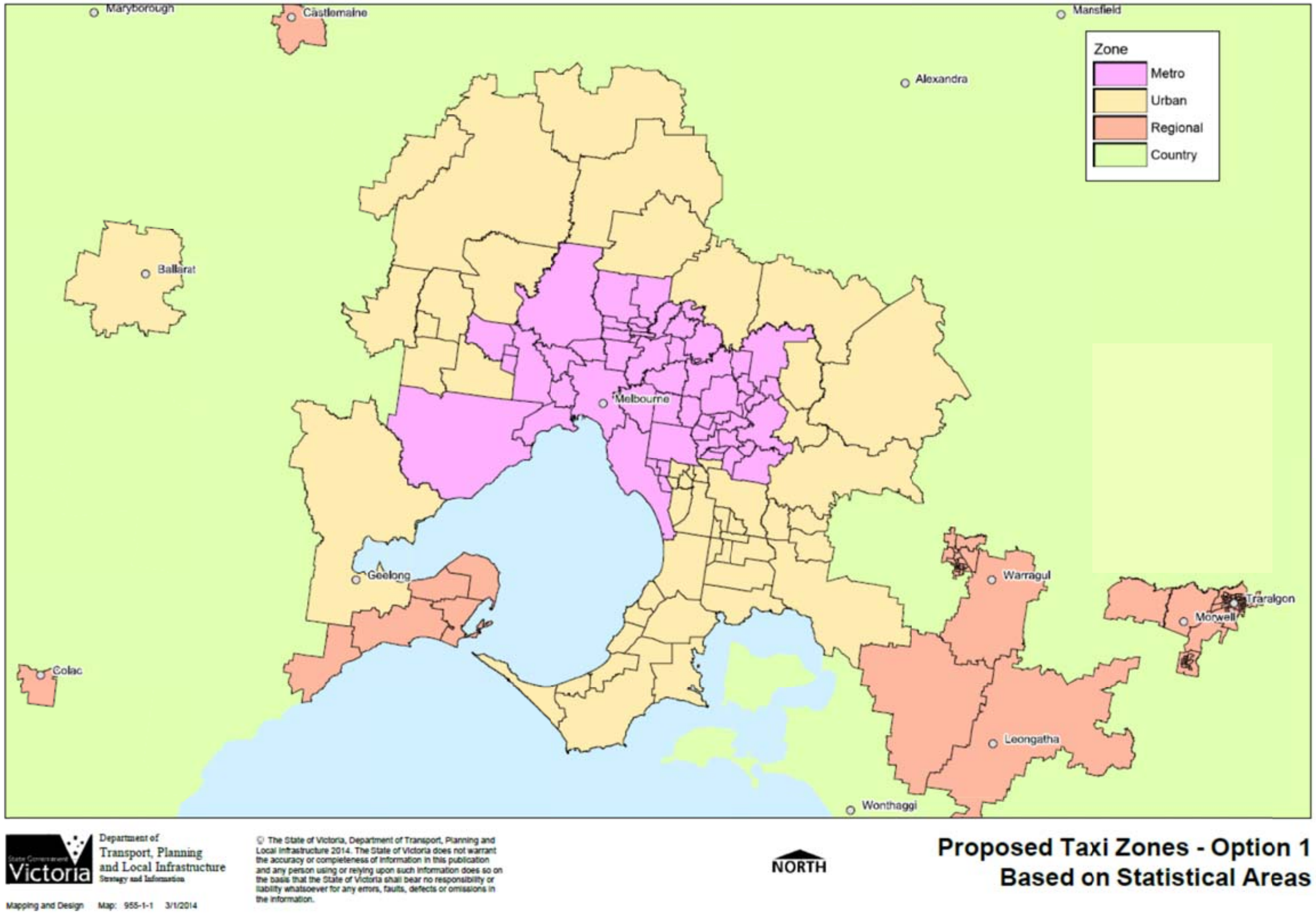
The area bounded by the coastline, the Mornington Peninsula Shire boundary, South Boundary East Road, Dandenong - Hastings Road, Eramosa Road, Derril Road, Ellerina Road, Balnarrang Road, Tubbarubba Road, Bittern - Dromana Road, Red Hill Road, Station Road, Red Hill - Shoreham Road, Shands Road, Mornington - Flinders Road, Meakin Road, Boneo Road, and Cape Shanck Road.

Map of existing Victorian taxi zone boundaries

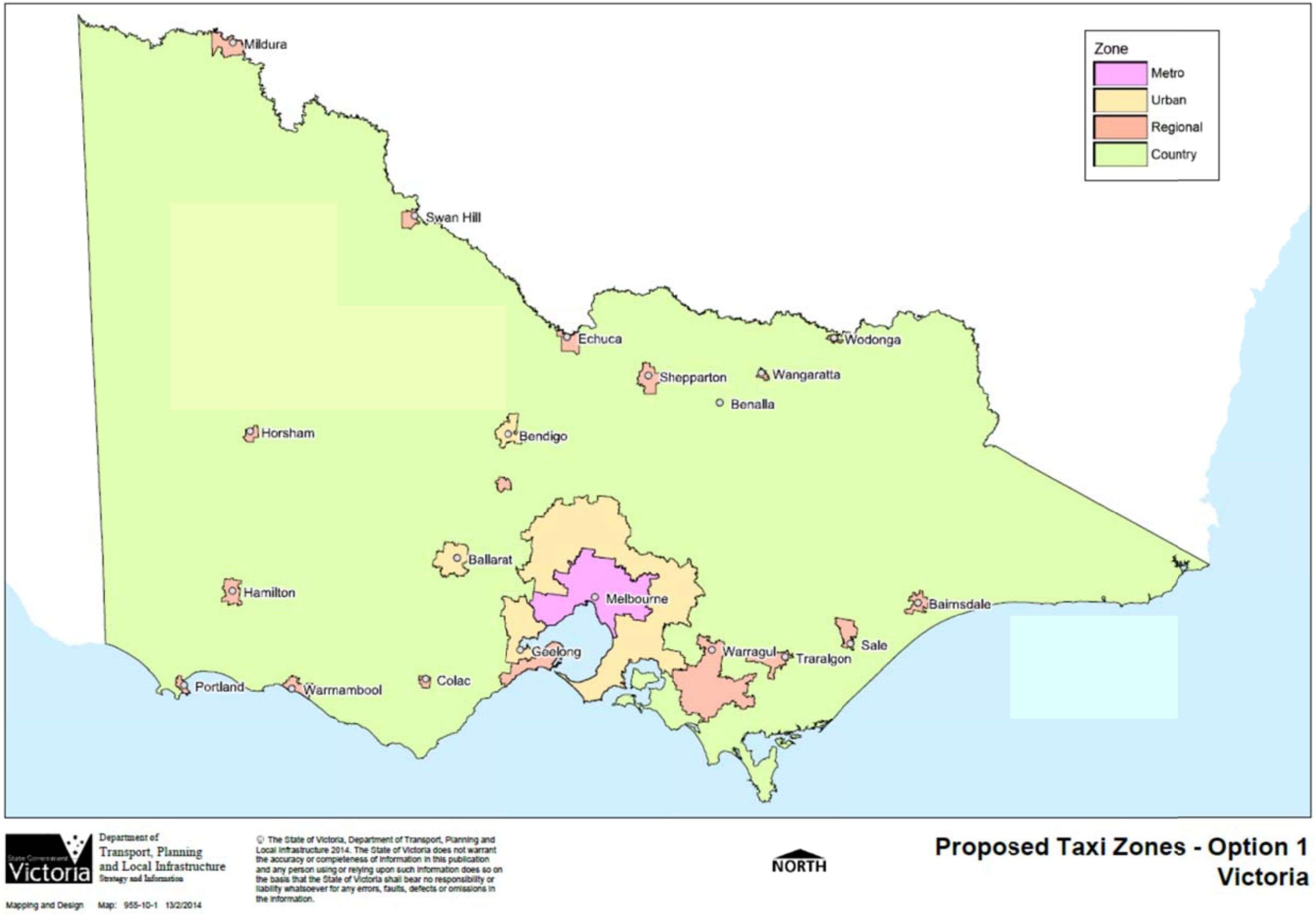


Appendix 3: Maps of proposed zone boundaries

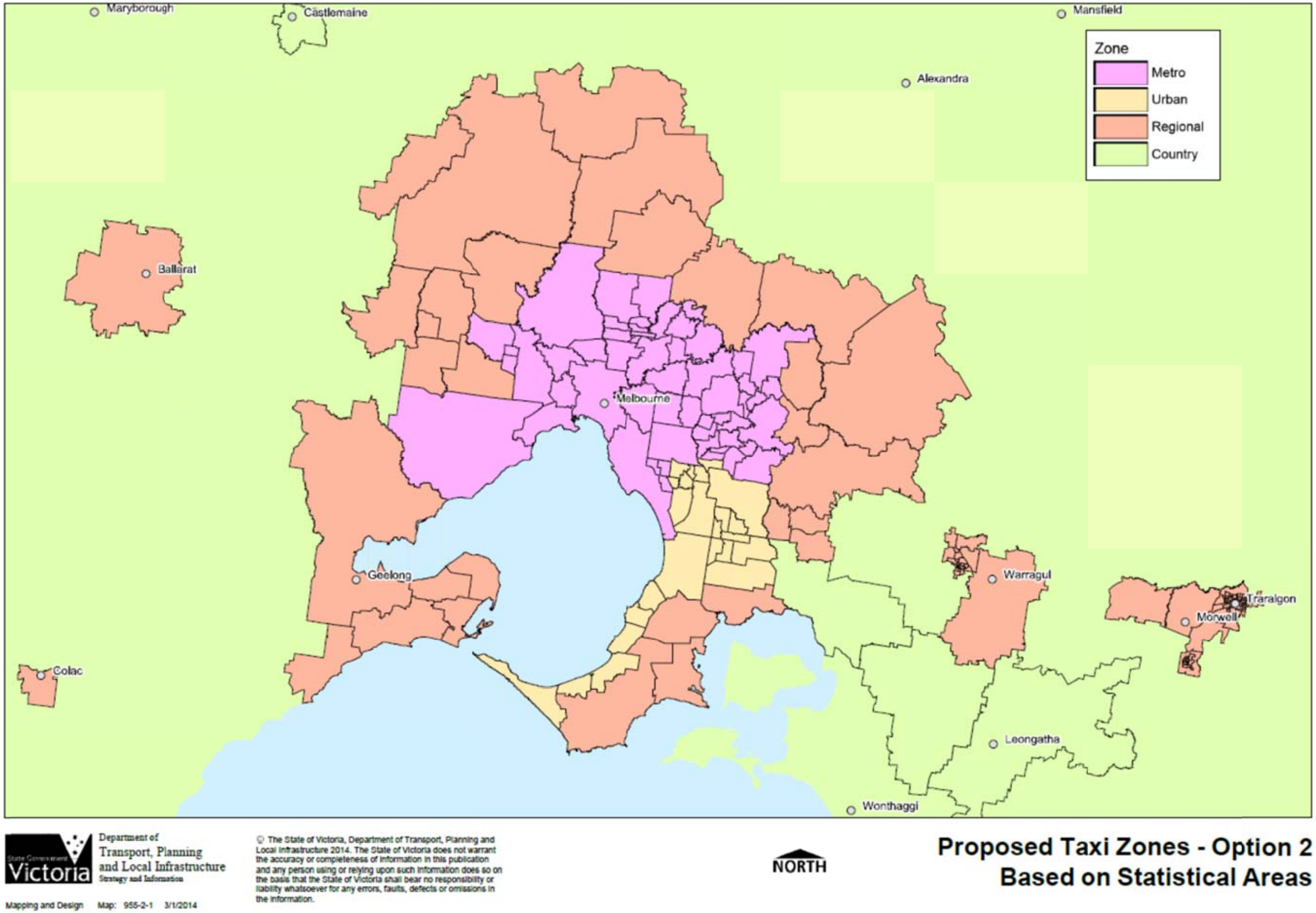
Option 1 – by ABS statistical areas



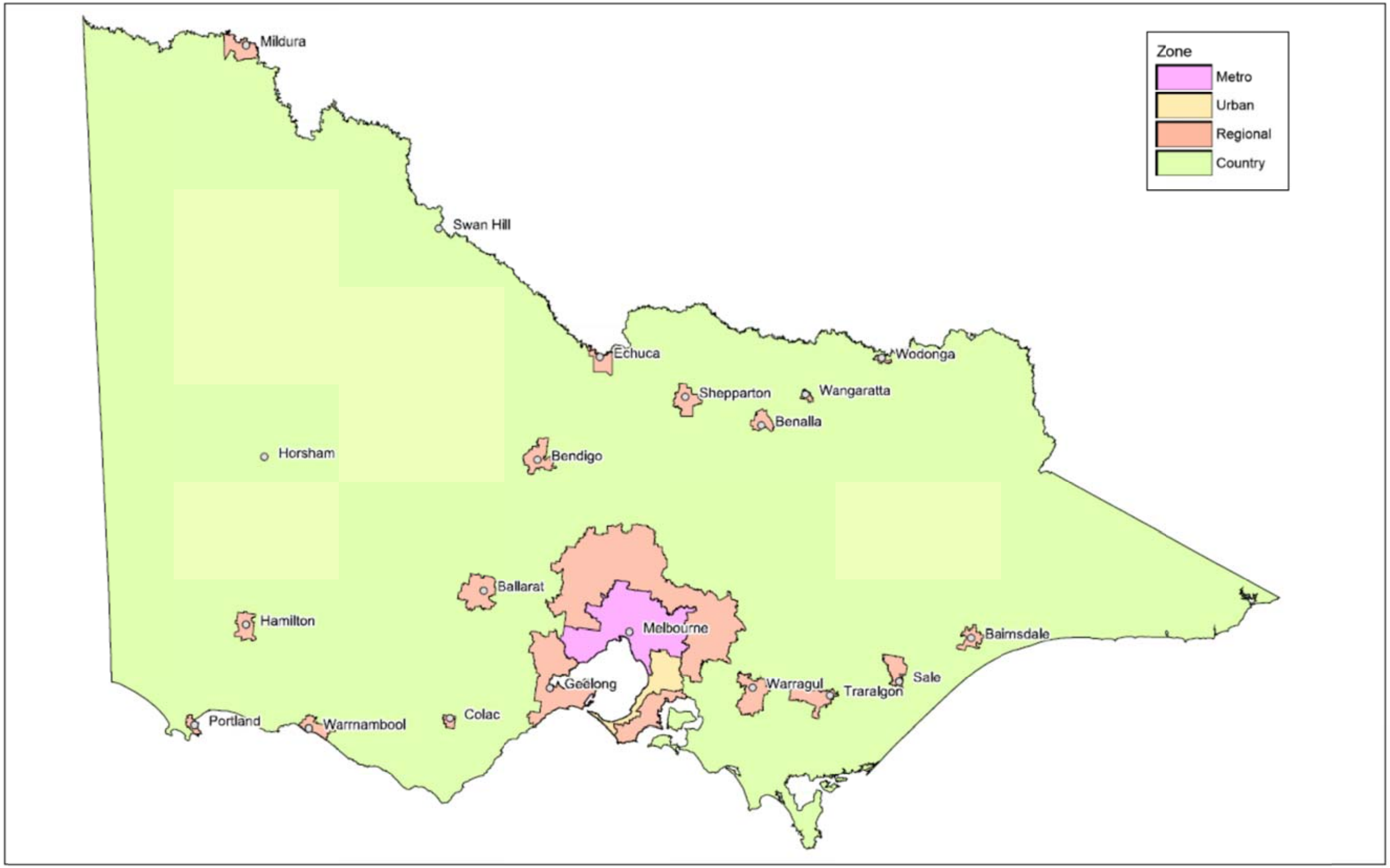
Option 1 – Statewide View



Option 2- by ABS statistical areas



Option 2 – Statewide View



Department of
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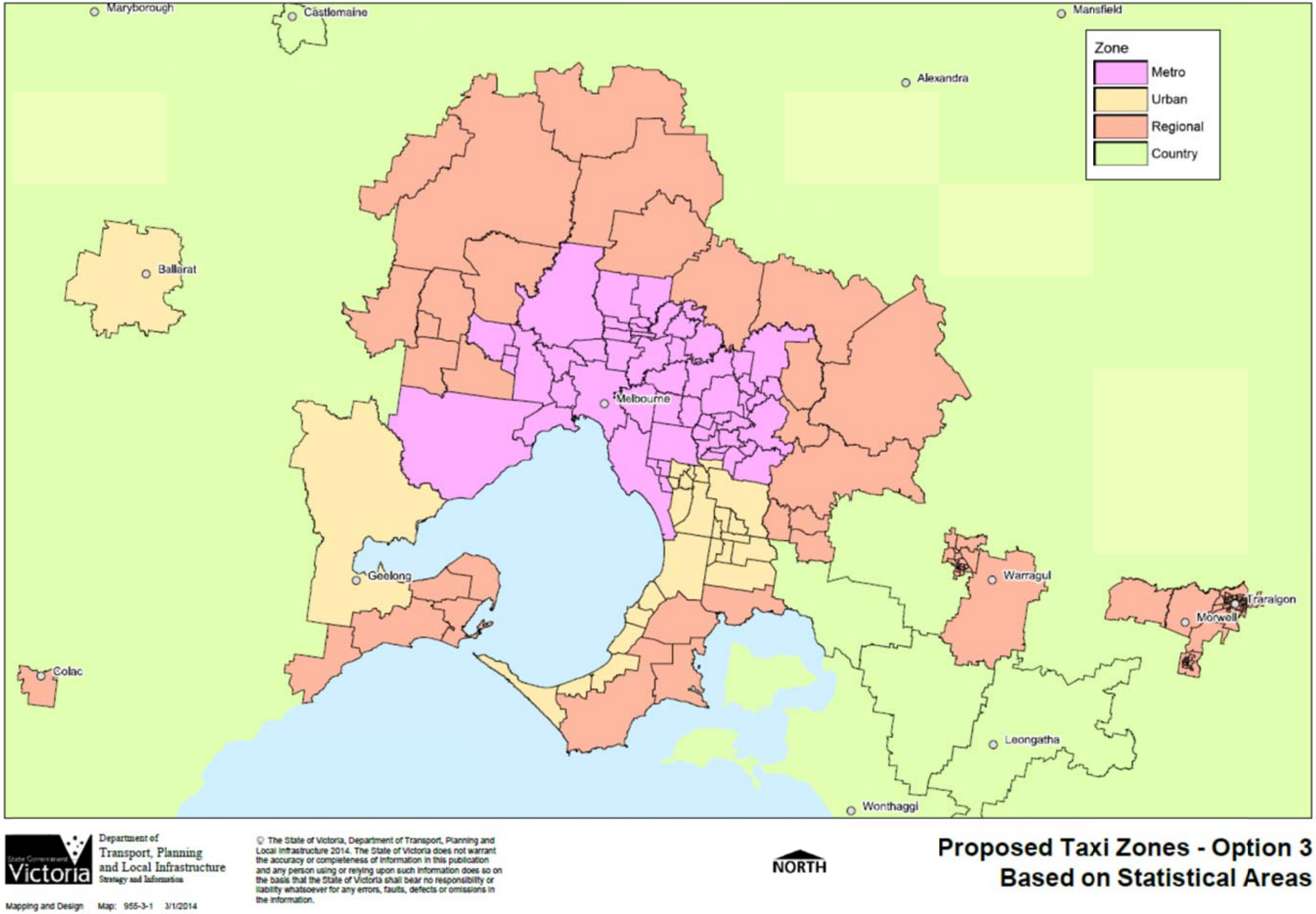
and Local Infrastructure
Strategy and Information

Mapping and Design Map: 955-11-1 13/2/2014

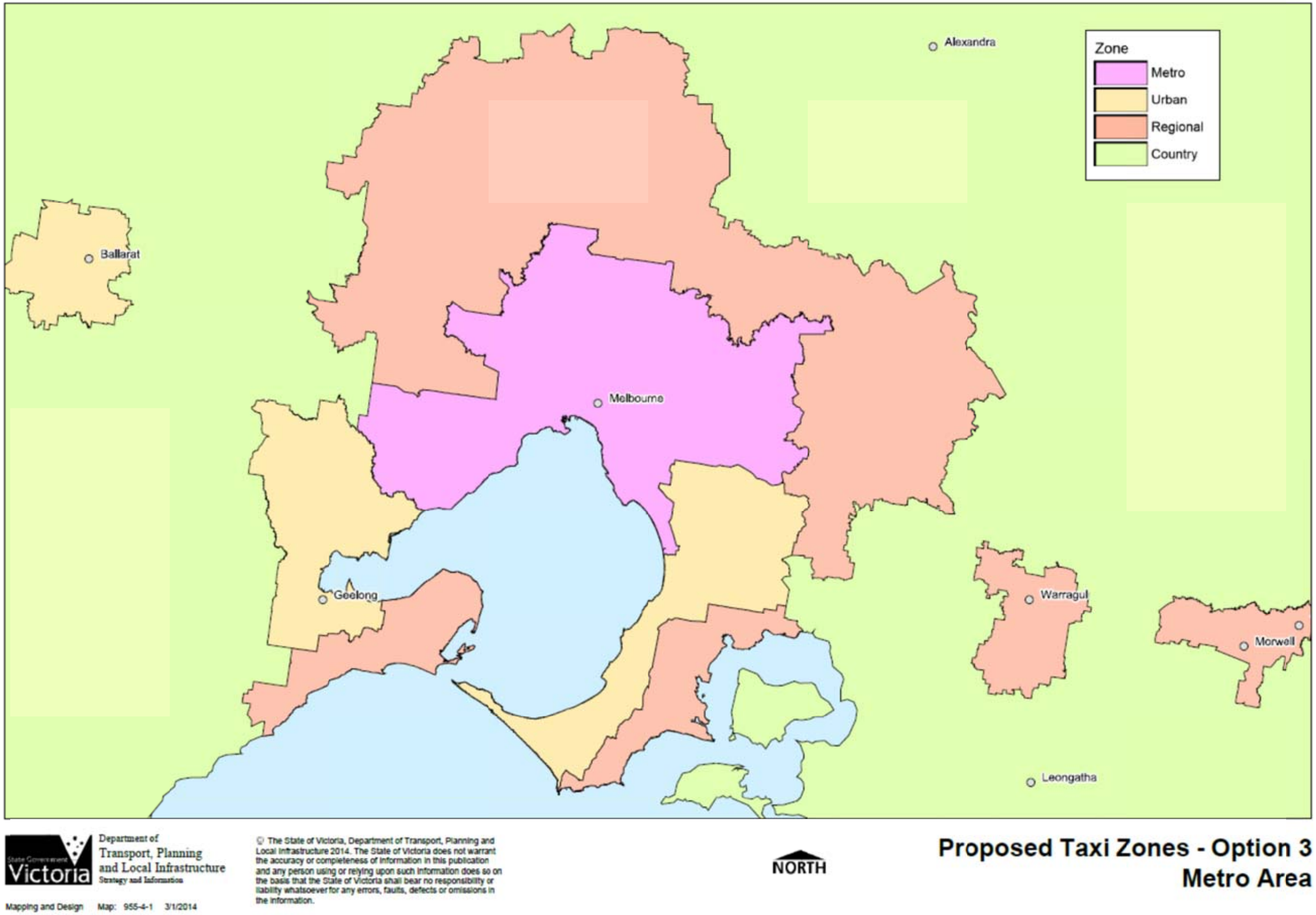
NORTH

Proposed Taxi Zones - Option 2
Victoria

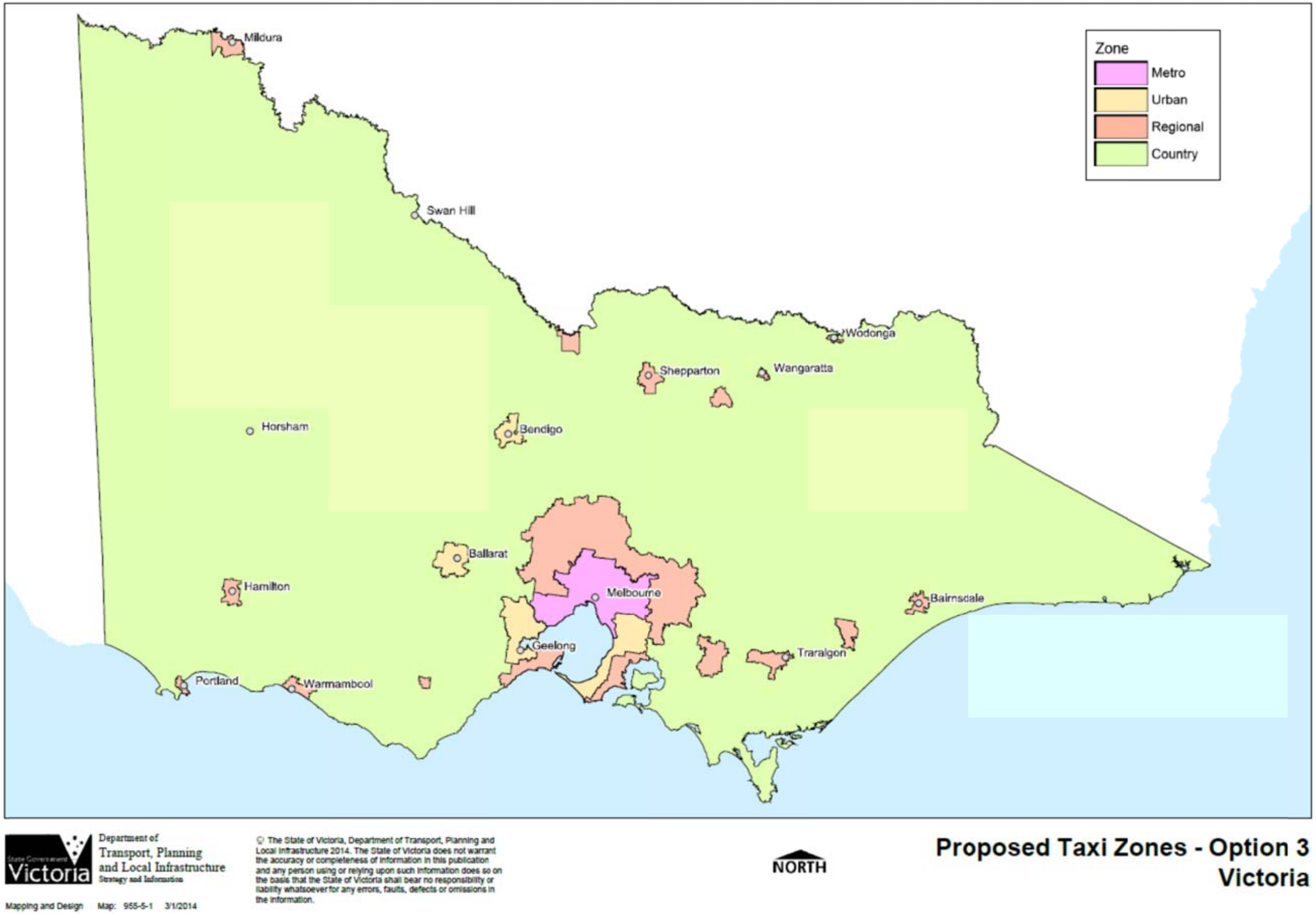
Option 3 – by ABS statistical areas



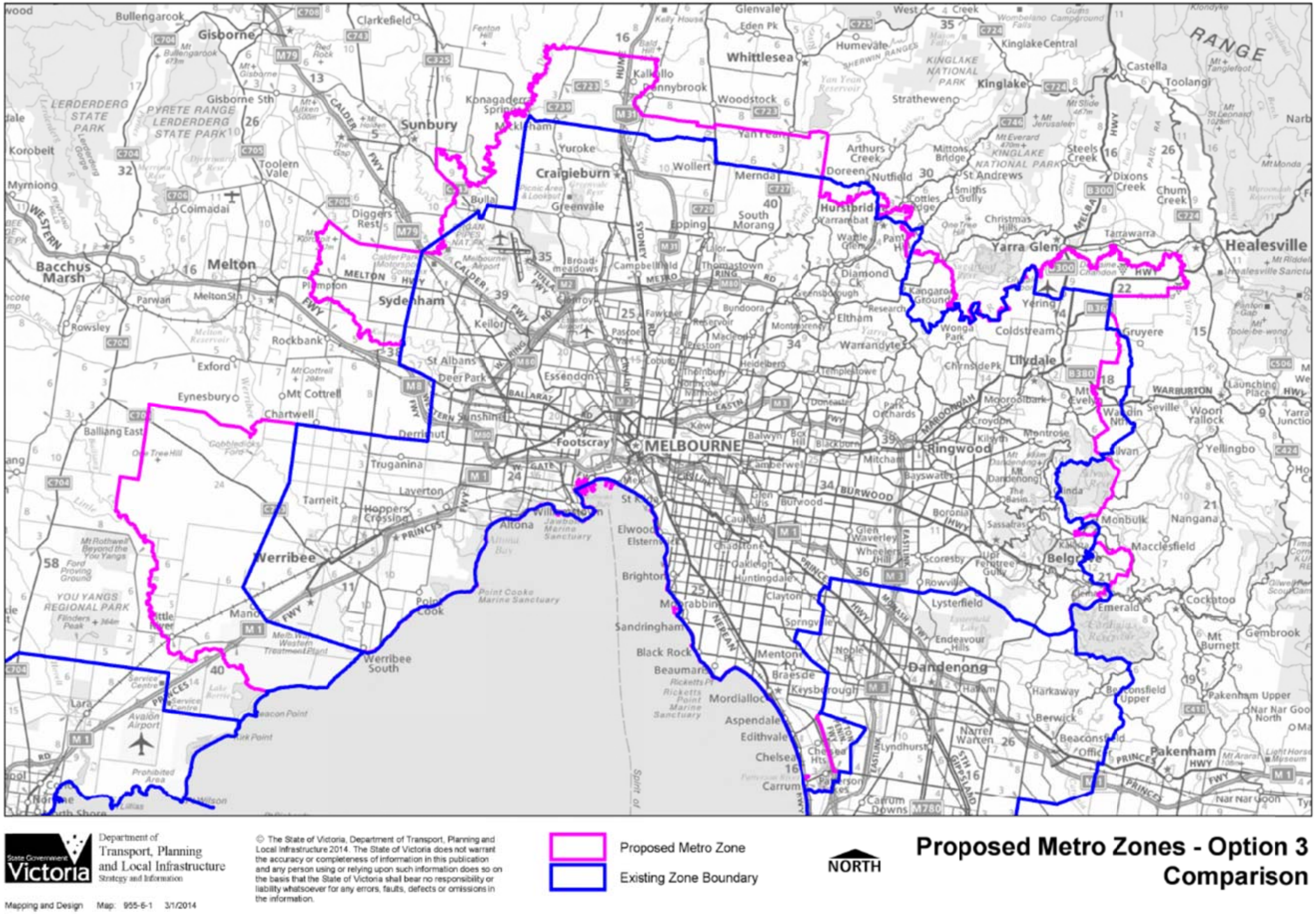
Option 3 – Metropolitan-centred view



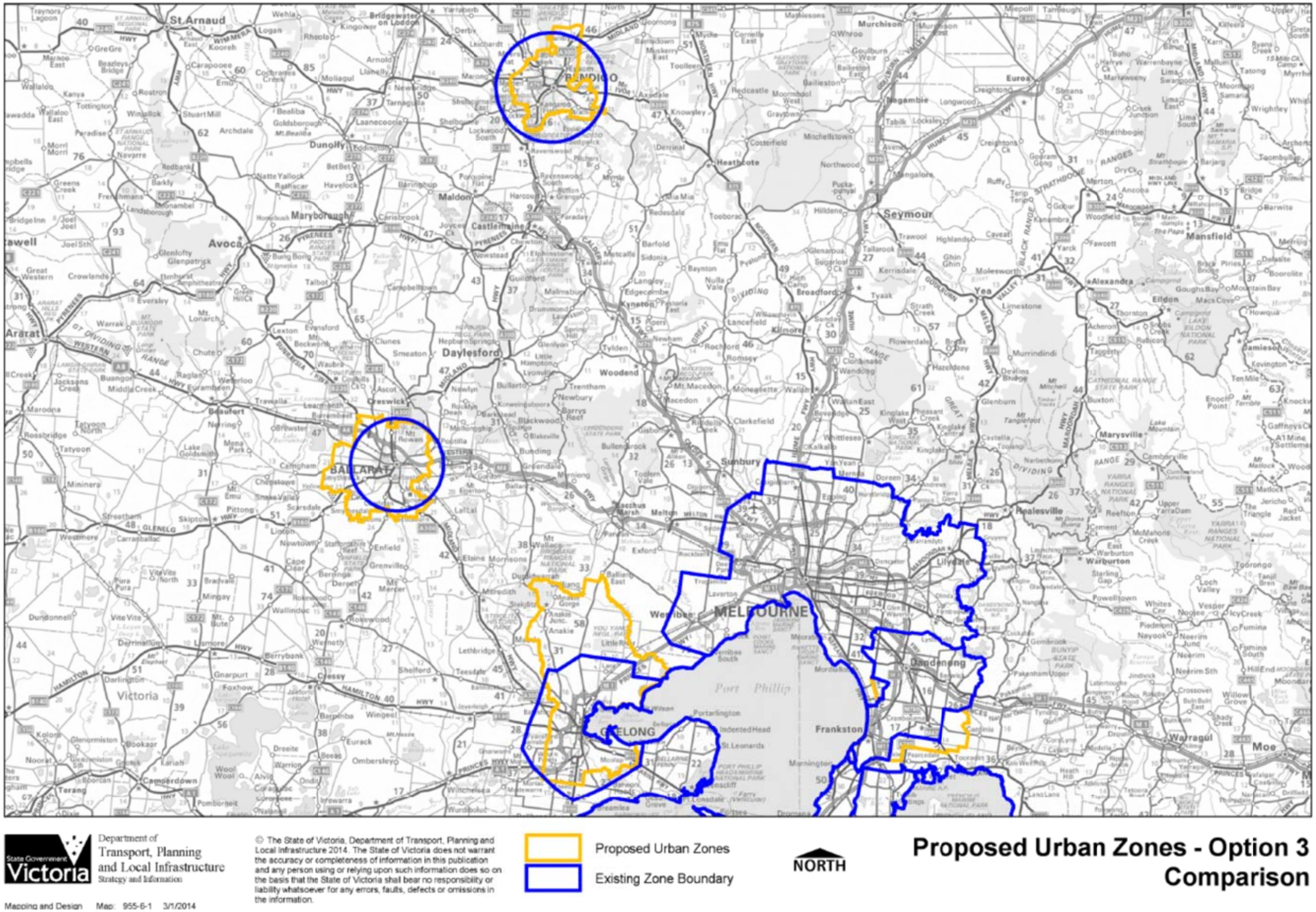
Option 3 – State-wide view



Option 3 – Current and proposed metropolitan boundary



Option 3 - Current outer suburban and urban boundaries, proposed urban boundaries



Appendix 4: Draft Order Setting Taxi Zone Boundaries

TRANSPORT (COMPLIANCE AND MISCELLANEOUS) ACT 1983

Determination of Zone Boundaries

I, Graeme Samuel AC, Chair of the Taxi Services Commission, pursuant to section 143B(2) of the *Transport (Compliance and Miscellaneous) Act 1983* (the Act), determine that the Melbourne Metropolitan Zone, Urban and Large Regional Zone, Regional Zone and Country Zone are defined as comprising the following areas, as defined in the Australian Bureau of Statistics' *Australian Statistical Geography Standard,* July 2011:

The Melbourne Metropolitan Zone is comprised of:

the following SA4 units –

- Melbourne - Inner East
- Melbourne - Inner
- Melbourne - Inner South

the following SA3 units –

- Banyule
- Brimbank
- Darebin North
- Hobsons Bay
- Keilor
- Manningham - East
- Manningham - West
- Maribyrnong
- Maroondah
- Monash (excluding any areas defined as being within the Urban and Large Regional Zone as defined below)
- Moreland North
- Tullamarine - Broadmeadows
- Whitehorse - East
- Whitehorse - West
- Wyndham

and the following SA2 units –

- Bayswater
- Belgrave – Selby (excluding any areas defined as being within the Urban and Large Regional Zone as defined below)
- Boronia - The Basin
- Bundoora - North
- Bundoora - West
- Caroline Springs
- Chirnside Park
- Clarinda - Oakleigh South
- Clayton South

- Dingley Village (excluding any areas defined as being within the Urban and Large Regional Zone as defined below)
- Eltham
- Epping
- Ferntree Gully
- Hillside
- Hurstbridge
- Kilsyth
- Knoxfield - Scoresby
- Lalor
- Lilydale - Coldstream
- Lysterfield (excluding any areas defined as being within the Urban and Large Regional Zone as defined below)
- Mill Park - North
- Mill Park - South
- Montrose
- Mooroolbark
- Mount Dandenong - Olinda
- Mount Evelyn
- Plenty - Yarrambat
- Research - North Warrandyte
- Rowville - Central
- Rowville - North
- South Morang
- Taylors Hill
- Thomastown
- Upwey - Tecoma
- Wantirna
- Wantirna South
- Wattle Glen - Diamond Creek

The Urban and Large Regional Zone is comprised of:

the areas specified in section 143B(3) of the *Transport (Compliance and Miscellaneous) Act 1983*,

the following SA3 units:

- Ballarat
- Bendigo
- Casey - North
- Casey - South
- Frankston
- Geelong

and the following SA2 units:

- Cranbourne East
- Cranbourne North
- Cranbourne
- Cranbourne South

- Cranbourne West
- Dandenong North
- Dandenong
- Dromana
- Hampton Park - Lynbrook
- Keysborough
- Lynbrook - Lyndhurst
- Mornington
- Mount Eliza
- Mount Martha
- Narre Warren South
- Noble Park North
- Noble Park
- Point Nepean
- Rosebud - McCrae
- Rowville - South
- Springvale
- Springvale South

The Regional Zone is comprised of:

the following SA3 units:

- Macedon Ranges
- Sunbury

the following SA2 units:

- Bacchus Marsh
- Bairnsdale
- Beaconsfield - Officer
- Clifton Springs
- Colac
- Echuca
- Emerald - Cockatoo
- Flinders (excluding any areas defined as being within the Urban and Large Regional Zone as defined above)
- Hamilton (Vic.)
- Hastings - Somers
- Healesville - Yarra Glen
- Irymple
- Kilmore - Broadford
- Melton
- Melton South
- Melton West
- Merbein
- Mildura
- Moe - Newborough
- Monbulk - Silvan
- Mooroopna

- Morwell
- Ocean Grove - Barwon Heads
- Pakenham - North
- Pakenham - South
- Panton Hill - St Andrews
- Pearcedale - Tooradin
- Portarlington
- Portland
- Queenscliff
- Rockbank - Mount Cottrell
- Sale
- Shepparton - North
- Shepparton - South
- Somerville (excluding any areas defined as being within the Urban and Large Regional Zone as defined above)
- Torquay
- Wallan
- Wandin - Seville
- Warragul
- Warrnambool - North
- Warrnambool - South
- Whittlesea
- Woodend
- Yarra Valley

and the following SA1 units:

2106301	2106321	2106614	2106635	2107308	2107330
2106302	2106323	2106615	2106636	2107309	2107331
2106303	2106324	2106616	2106637	2107310	2107332
2106304	2106325	2106617	2106638	2107311	2107333
2106305	2106326	2106618	2106639	2107312	2107334
2106306	2106327	2106619	2106640	2107313	2107335
2106307	2106328	2106620	2106641	2107314	2107407
2106308	2106329	2106621	2106642	2107315	2107409
2106309	2106601	2106622	2106643	2107316	2107411
2106310	2106602	2106623	2106644	2107317	2107412
2106311	2106603	2106624	2106645	2107320	2107413
2106312	2106604	2106625	2106646	2107321	2107414
2106313	2106605	2106626	2106647	2107322	2107415
2106314	2106606	2106627	2107301	2107323	2107416
2106315	2106607	2106628	2107302	2107324	2107417
2106316	2106609	2106629	2107303	2107325	2107418
2106317	2106610	2106630	2107304	2107326	2107419
2106318	2106611	2106631	2107305	2107327	2107420
2106319	2106612	2106632	2107306	2107328	2107421
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The **Country Zone** is all other areas of Victoria not identified above as an area within the **Melbourne Metropolitan Zone**, the **Urban and Large Regional Zone**, or the **Regional Zone**.

Pursuant to section 143B(5) of the Act, the area bounded by the Princes Freeway, Beach, Pousties, Dandos and Avalon Roads (Avalon Airport) is deemed to be in an area of overlap between the **Melbourne Metropolitan Zone** and the **Urban and Large Regional Zone**.

Pursuant to section 143B(5) of the Act,

i) Any area that is within 1.5km of either side of the boundary separating the **Melbourne Metropolitan Zone** and the **Urban and Large Regional Zone** is deemed to be in area of overlap between these two zones,

ii) Any area that is within 1.5km of either side of the boundary separating the **Melbourne Metropolitan Zone** and the **Regional Zone** is deemed to be in area of overlap between these two zones,

iii) Any area that is within 1.5km of either side of the boundary separating the **Urban and Large Regional Zone** and the **Regional Zone** is deemed to be in area of overlap between these two zones.

Appendix 5: Calculating the equivalent capital cost of new licences

As discussed in section 3, entrance to the taxi industry will only lease new licences from government (thus leading to an overall increase in the number of taxis) if it is no more expensive to do so than to purchase or lease existing licence. Because new licences are issued subject to the payment of an annual fee, rather than being subject to a one-off purchase price, it is necessary to calculate the equivalent capital value of these licences in order to be able to compare them with recent values of existing taxi licences in each area.

The TII included calculations of the equivalent capital cost of the new licences in its final report, based on the annual licence fees for each of the nonmetropolitan zones that it had recommended in its draft report. Table A3 is reproduced from the taxi industry inquiry final report and reports the results of these calculations. The inquiry carried out two sets of calculations, based on alternative discount rates of 7% and 8% respectively. However, its report consistently uses the 7% rate as the benchmark figure.

Table A3: Proposed annual licence fees and equivalent capital costs

Indicative licence value, by zone	Rate at which future income is discounted	
	7%	8%
Urban zone – value at $16,000	$228,571	$200,000
Regional zone – value at $10,000	$142,857	$125,000
Country zone – value at $3,000	$42,857	$37,500

Source: Taxi Industry Inquiry, Final Report, p 64.

As highlighted above, the annual licence fees for the non-metropolitan zones that have been legislated are higher than those recommended by the inquiry, implying that the equivalent value of a perpetual license will also be higher. Table A4 provides an adjusted equivalent perpetual licence values, based on the legislated annual fees. The values contained in this table are calculated by simply calculating the ratio of the currently legislated annual licence prices and those initially proposed by the TII in its draft report and multiplying the estimates contained in table A3 by this ratio.

Table A4: Legislated annual licence fees and equivalent capital cost

Annual Licence Fee	Equivalent Perpetual Licence Value

	7% discount rate	8% discount rate
Urban Zone ($22,000)	$314,285	$275,000
Regional Zone ($11,000)	$157,142	$137,500
Country Zone ($3,400)	$48,571	$42,500

However, neither the original TII calculations nor the licence values contained in table A4 take account of the impact of the provision in the legislation which indexes the annual licence fee. This reflects the fact that the TII it did not recommend that indexation should occur. Therefore, table A5 provides adjusted estimates of the equivalent capital costs of licences in each zone which take account of the impact of indexation on these costs. The legislation requires that indexation be applied at a rate of (CPI - 0.5%) and adopt a 7% discount rate, as per the TII base case calculations. Table A5 also includes the non-indexed equivalent capital costs in order to demonstrate the impact of indexation over time.

Table A5: Annual licence fees and equivalent capital costs - including indexation

Annual Licence Fee	Equivalent Capital Cost	
	Without indexation	With indexation
Urban Zone ($22,000)	$314,285	$354,175
Regional Zone ($11,000)	$157,142	$177,088
Country Zone ($3,400)	$48,571	$54,736