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# Community wellbeing and local attitudes to onshore conventional gas development in the Gippsland Basin

Andrea Walton and Rod McCrea

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# Contents

Acknowledgments.....	7
Executive summary .....	8

## **Part I Introduction and Methods** **22**

1	Concepts used in this report.....	23
	1.1 Community wellbeing.....	23
	1.2 Attitudes and perceptions of onshore conventional gas development.....	24
2	Method .....	27
	2.1 Survey overview .....	27
	2.2 Survey procedure .....	28
	2.3 Survey sample and representativeness.....	28
	2.4 Measures .....	30
	2.5 Analyses.....	31

## **Part 2 Results** **32**

3	Community wellbeing.....	33
	3.1 Overall community wellbeing and place attachment .....	33
	3.2 Dimensions of community wellbeing.....	35
	3.3 Most important dimensions of community wellbeing.....	38
4	Expected future community wellbeing .....	39
5	Attitudes and perceptions of onshore conventional gas development.....	40
	5.1 Attitudes towards onshore conventional gas development.....	40
	5.2 Feelings towards onshore conventional gas development.....	42
	5.3 Adapting to onshore conventional gas development .....	43
	5.4 Perceptions about onshore conventional gas development and the sector.....	44
	5.5 Model of social acceptance: A framework for explaining trust and social acceptance of onshore conventional gas development.....	49
6	Deeper dive into the underlying drivers of social acceptance .....	52
	6.1 Possible industry effects: Concerns, risks, and benefits .....	52
	6.2 Industry and community relationship: Trust in industry, relationship quality and fairness.....	57

6.3	Governance: Trust in government, regulations, engaging and working with the community.....	58
6.4	Distributional fairness: Sharing costs and benefits.....	60
6.5	Knowledge and information.....	60
7	Demographic differences.....	65
8	Conclusions.....	67
8.1	Community wellbeing.....	67
8.2	Local attitudes to onshore conventional gas development.....	67
8.3	Perceptions of underlying drivers of social acceptance.....	68
Appendix A	Sample representativeness.....	69
Appendix B	Background information provided for survey questions relating to onshore conventional gas development.....	70
Appendix C	Measures and reliability of scales.....	71
Appendix D	Statistical analyses.....	74
Appendix E	All survey items by subregion.....	75
Appendix F	Tables of demographic differences.....	82
References	.....	90

# Figures

Figure 1 Mean scores of overall community wellbeing, expected future wellbeing, and place attachment: By subregions, 2019.....	9
Figure 2 Most important dimensions to community wellbeing: Gippsland Basin, 2019 .....	11
Figure 3 Community wellbeing dimensions, Gippsland Basin: By subregions, 2019 .....	12
Figure 4 Attitudes towards onshore conventional gas development in the Gippsland Basin: Total Gippsland Basin .....	14
Figure 5 Attitudes towards onshore conventional gas development in the Gippsland Basin: By subregion, 2019 .....	14
Figure 6 Attitudes towards onshore conventional gas development in Gippsland Basin: By farm ownership, 2019 .....	15
Figure 7 Perceptions of community adapting to onshore conventional gas development: By subregion, 2019 .....	16
Figure 8 Perceptions of onshore conventional gas development: Summary, Gippsland Basin, 2019 .....	19
Figure 9 The CSIRO model of social acceptance of onshore conventional gas development: Gippsland Basin, 2019 .....	20
Figure 10 Dimensions of community wellbeing grouped into six domains.....	23
Figure 11 List of factors that underlie trust and acceptance of onshore conventional gas development .....	25
Figure 12 CSIRO model of social acceptance (or lack thereof) and its underlying drivers.....	26
Figure 14 Outline of survey question topics .....	28
Figure 15 LGAs sampled in the survey: Otway and Gippsland basins .....	29
Figure 16 Mean scores of overall community wellbeing and place attachment: By subregions, 2019 .....	33
Figure 17 Overall community wellbeing items: By subregions, 2019.....	34
Figure 18 Community wellbeing dimensions: By subregions, 2019 .....	36
Figure 19 Community wellbeing dimensions: By farm owners, 2019 .....	37
Figure 20 Most important dimensions to community wellbeing: Gippsland Basin, 2019 .....	38
Figure 21 Expected future community wellbeing: By subregions, 2019 .....	39
Figure 22 Attitudes towards onshore conventional gas development in the Gippsland Basin: Total Gippsland Basin .....	40
Figure 23 Attitudes towards onshore conventional gas development in the Gippsland Basin: By subregion, 2019 .....	41

Figure 24 Attitudes towards onshore conventional gas development in Gippsland Basin: By farm ownership, 2019 .....	41
Figure 25 Feelings towards onshore conventional gas development in the Gippsland Basin: By subregion, 2019 .....	42
Figure 26 Feelings by attitude to onshore conventional gas development: Gippsland Basin 2019 .....	43
Figure 27 Perceptions of community adapting to onshore conventional gas development: By subregion, 2019 .....	44
Figure 28 Perceptions about onshore conventional gas development: Summary, Gippsland Basin, 2019 .....	47
Figure 29 The CSIRO model of social acceptance of onshore conventional gas development: Gippsland Basin, 2019 .....	49
Figure 30 Knowledge scores for each attitude group: Gippsland Basin, 2019 .....	51
Figure 31 Perceived impacts of onshore conventional gas development in Gippsland Basin: By subregion, 2019 .....	53
Figure 32 Perceptions of risk from onshore conventional gas development in the Gippsland Basin: By subregion, 2019 .....	54
Figure 33 Perceptions of the role of onshore conventional gas in the energy transition .....	55
Figure 34 Perceived benefits from onshore conventional gas development in Gippsland Basin: By subregion, 2019 .....	56
Figure 35 Perceptions of trust in industry, relationship quality, and procedural fairness: By subregion, 2019 .....	57
Figure 36 Perceptions of government’s handling of onshore conventional gas development ...	58
Figure 37 Perceptions of formal governance, informal governance, and trust in government: By subregion, 2019 .....	59
Figure 38 Perceptions of distributional fairness to have onshore conventional gas development in the region: By subregions, 2019 .....	60
Figure 39 Knowledge confidence and awareness levels about onshore conventional gas: By subregion, 2019 .....	61
Figure 40 Perceptions of information sources and information need: By subregion, 2019 .....	62

# Tables

Table 1 Descriptions of the fifteen dimensions of community wellbeing.....	24
Table 2 Gippsland LGAs sampled in the survey and main urban centres or localities within each LGA .....	29
Table 3 Summary of survey questions .....	30
Table 4 Underlying drivers and perceptions of onshore conventional gas development: Example items.....	45
Table 5 Information needs about onshore conventional gas development in the Gippsland Basin .....	63

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# Executive summary

This research establishes baseline data for community wellbeing and local attitudes and perceptions of onshore conventional gas development in two geological basins of southern Victoria: the Otway Basin and Gippsland basins. Using a representative sample, the research provides empirical data which can be used to inform planning and decision making in relation to improving community wellbeing in Local Government Areas (LGAs) throughout the basins. It also provides baseline data on community expectations and perceptions of onshore conventional gas development in the Otway and Gippsland basins and delivers a framework for understanding these matters. This report presents findings for selected LGAs in the Gippsland Basin.

The study is part of the Victorian state government's Victorian Gas Program of research studies and findings will inform the government in their future decisions and activities related to onshore conventional gas in Victoria. There is currently a moratorium on the exploration and development of onshore conventional gas until June 2020, providing time for the Victorian Gas Program studies to be completed.

## What we did and when

Over a four-week period in September to October 2019, we conducted a comprehensive survey of 801 residents in the Otway and Gippsland basins using telephone interviews that took 35 minutes to complete on average. The survey was divided into two parts. First, it measured residents' perceptions of community wellbeing in their local areas along 15 different wellbeing dimensions. Second, it measured local attitudes and feelings towards onshore conventional gas development in their respective Basins and their perceptions of a range of factors that contribute towards shaping these attitudes. Perceptions of *unconventional* gas development were not included because it is banned in Victoria. The survey was in-depth and comprised approximately 170 questions, including demographics. The response rate was 26%, which means every fourth person on average agreed to participate in the research, which is a good outcome for lengthy telephone surveys.

## Who participated

The sample of participants comprised at least 100 residents from each of eight Local Government Areas (LGAs) across the Otway and Gippsland basins. The Gippsland Basin sample included three LGAs from the Gippsland geological basin of Victoria: Latrobe, Wellington, and East Gippsland. These LGAs are referred to as subregions in this report and used for reporting results. Participants were randomly selected using databases of landline and mobile telephone numbers. To ensure a representative sample was obtained, quotas for age, gender and subregion were used in combination with weighting the data to achieve representativeness by LGA or subregion, age, gender, and whether living in- or out-of-town according to 2016 census data (ABS, 2016).

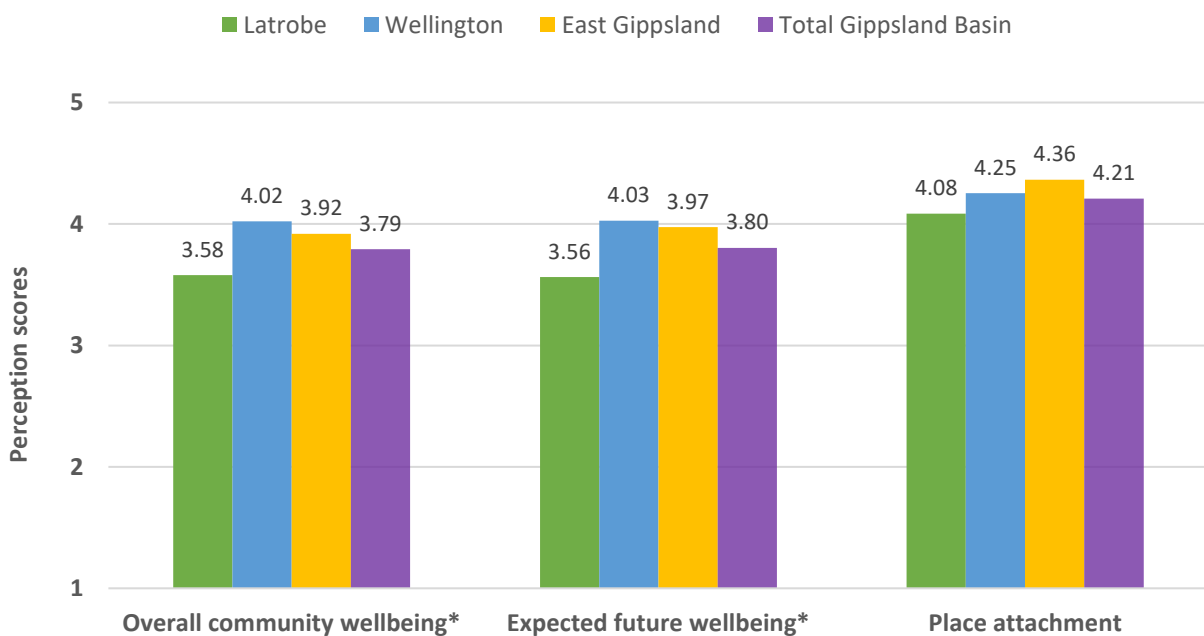
## COMMUNITY WELLBEING

Community wellbeing scores reflect perceptions about whether the community is a great place to live and whether it offers a great quality of life for all ages. As such, it differs from individual wellbeing. Fifteen dimensions of community wellbeing were evaluated using approximately 70 questions. These covered social, environmental, political, economic, health, and physical infrastructure aspects of the community, including services, facilities, and the built environment. When assessing community wellbeing and future community wellbeing there was no reference to onshore conventional gas development in the survey questions.

Results showed community wellbeing overall was robust across the Gippsland Basin with all three subregions indicating robust scores, though the Latrobe subregion was statistically lower than the others. In contrast, Wellington subregion was statistically higher than the basin average. People felt their communities were quite suitable for seniors and young children but less so for teenagers. Residents of Latrobe reported statistically lower scores than the rest of the Gippsland Basin for all the items except suitability for teenagers. Subsequently, Latrobe residents were much more modest in their perceptions about the quality of life that their community offered and its suitability for young children and for seniors.

Figure 1 shows that expectations of future community wellbeing, in three years hence, were also positive, though less so in Latrobe. Residents across the Gippsland Basin reported very high levels of place attachment indicating a very strong sense of belonging and pride in their communities.

Figure 1 Mean scores of overall community wellbeing, expected future wellbeing, and place attachment: By subregions, 2019



Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions; \* statistical difference in mean scores between subregions

Analyses of the 15 wellbeing dimensions showed that across the Gippsland Basin personal safety, town appearance, and environmental quality were rated most highly. In contrast, the condition and safety of local roads, local decision-making and trust in leaders, and economic and business opportunities were rated the least across the region, which were mainly viewed unfavourably or borderline satisfactory on average. Economic opportunities were reported the most unfavourable in all subregions.

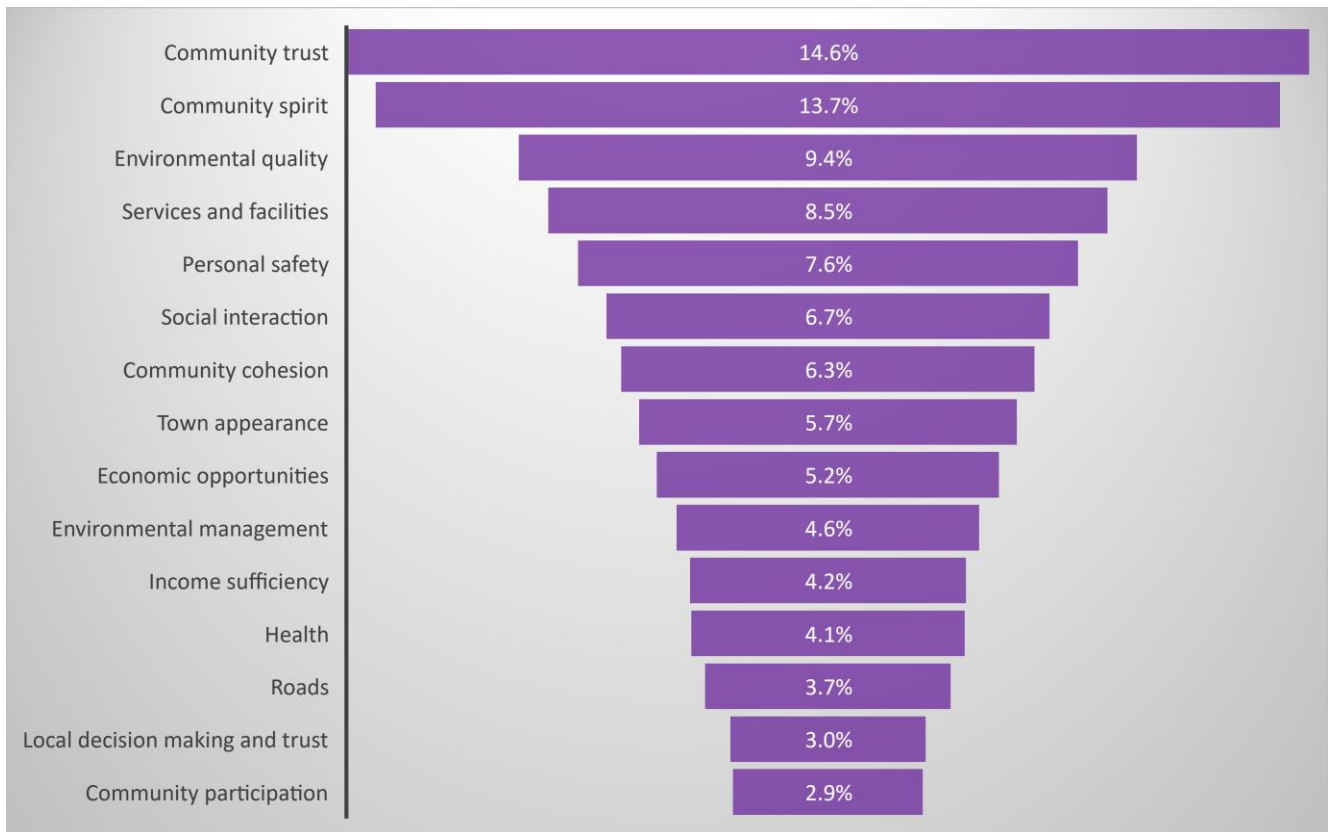
Figure 3 shows there were significant differences among the subregions on ten of the dimensions. A common pattern for a number of these differences was statistically higher scores reported in the Wellington and East Gippsland subregions and statistically lower scores in Latrobe when compared to the average across the Gippsland Basin. The biggest differences were the personal safety dimension, where East Gippsland ( $M = 4.16$ ) and Wellington ( $M = 4.10$ ) were considerably higher than Latrobe ( $M = 3.56$ ), and the community spirit dimension, which followed a similar pattern in Wellington ( $M = 3.98$ ) and Latrobe ( $M = 3.34$ ). In contrast, statistically lower scores in East Gippsland were evident for satisfaction with services and facilities, environmental management, and local decision making and trust when compared to the rest of the Gippsland Basin.

Farm owners perceived statistically higher levels of personal safety, income sufficiency, social interaction, community spirit, and community participation than residents who did not own a farm.

Differences in community wellbeing also emerged based on age, gender, income, and education levels. Key differences included young people being least satisfied with overall community wellbeing and expected future community wellbeing with older people the most satisfied. Particularly, young people had low perceptions of community trust and spirit and were not very satisfied with their participation in the community. Women along with people on low incomes both reported significantly lower levels of personal safety compared to the Gippsland Basin average. People with low education levels reported significantly less satisfaction with income sufficiency compared to residents with degree qualifications.

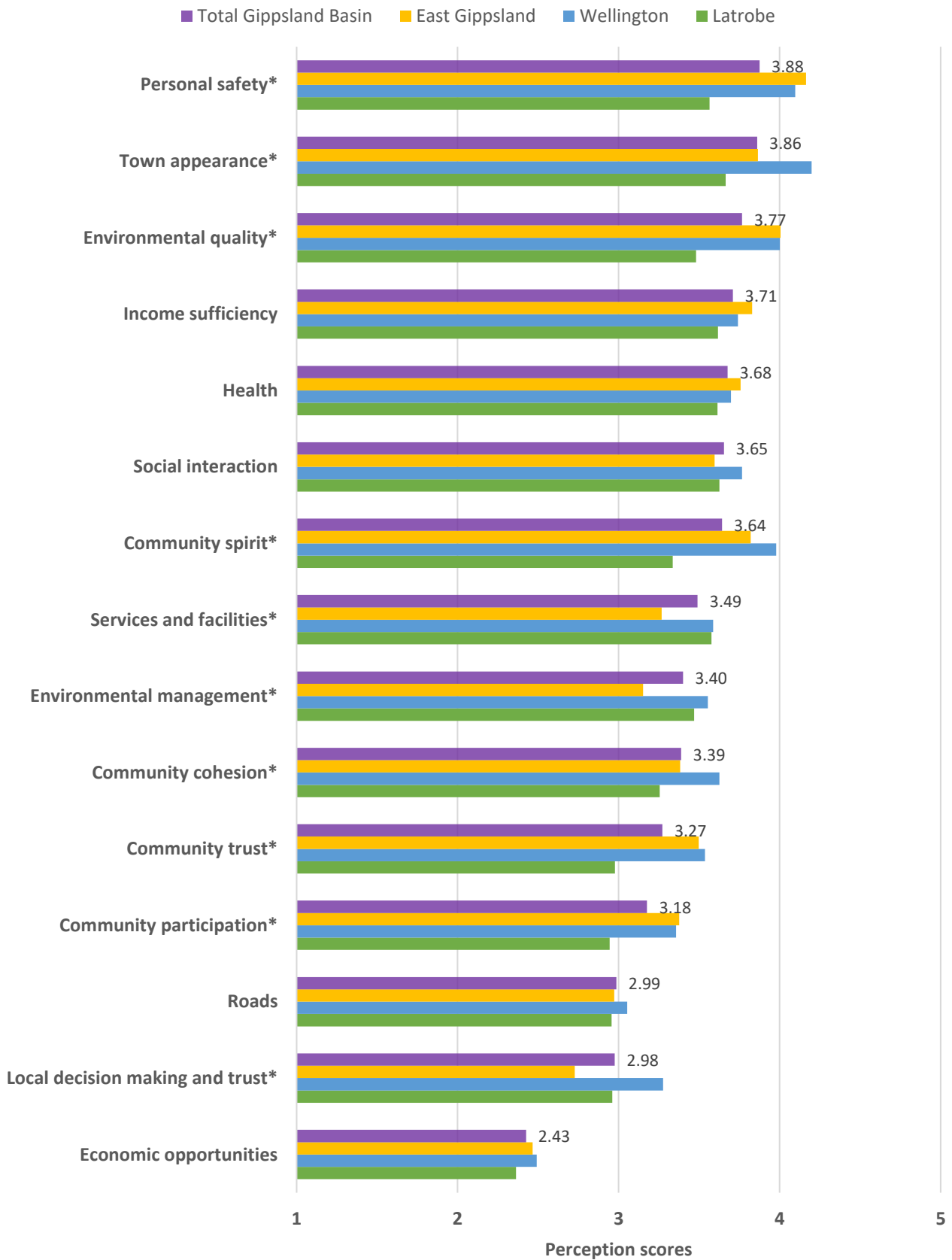
Across the Gippsland Basin the five most important dimensions that explained a sense of community wellbeing were: *community trust, community spirit, environmental quality, services and facilities, and personal safety*, as shown in Figure 2. Understanding which dimensions contribute most to a sense of wellbeing within the community is important. Sometimes, the dimensions that are evaluated as highest or lowest by residents are not necessarily the same as those that contribute most to residents' perceptions that their community is a great place to live.

Figure 2 Most important dimensions to community wellbeing: Gippsland Basin, 2019



Note: the larger the percentage the more important the dimension to a sense of community wellbeing in that subregion

Figure 3 Community wellbeing dimensions, Gippsland Basin: By subregions, 2019



Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions; \* statistical difference in mean scores between subregions

## Key messages: Community wellbeing

1. Community wellbeing overall was robust across the Gippsland Basin with Latrobe statistically lower and Wellington statistically higher than the Basin average.
2. Three of the fifteen wellbeing dimensions were rated unfavourably or borderline levels of satisfaction on average across the Gippsland Basin shires. These were the condition and safety of local roads, local decision making and trust in leaders, and economic and business opportunities, which was particularly low.
3. A pattern emerged where Wellington commonly demonstrated higher scores than the total Gippsland basin and Latrobe lower scores. East Gippsland was more mixed, reporting higher scores than the Basin average on some dimensions, though lower scores than the other subregions on three dimensions.
4. Differences were evident among farm owners and those who don't own a farm with farm owners showing higher satisfaction across a range of community wellbeing dimensions.
5. Differences in community wellbeing also occurred based on age, gender, income, and education levels. In particular, young people were considerably less satisfied on a range of dimensions whereas older people were most satisfied.
6. The main drivers of community wellbeing across the region were *community trust*, *community spirit*, *environmental quality*, *services and facilities*, and *personal safety*.
7. Understanding the most important dimensions to a sense of community wellbeing helps to identify where to target initiatives and scarce resources aimed at improving the quality of life for residents.
8. All subregions showed positive expectations that community wellbeing in three years hence would be high, though statistically less so in Latrobe.

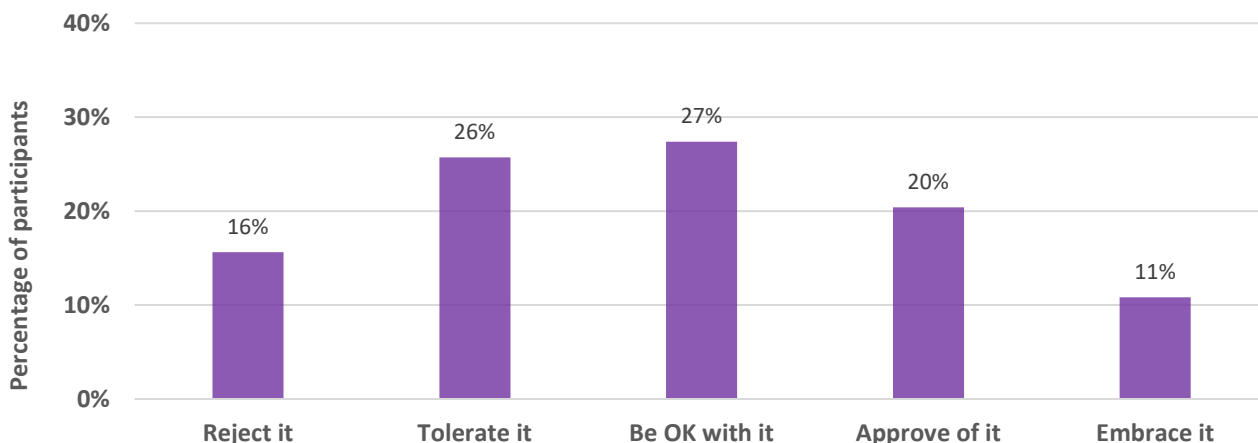
## ATTITUDES AND PERCEPTIONS OF ONSHORE CONVENTIONAL GAS DEVELOPMENT

Attitudes towards onshore conventional gas development in the Gippsland Basin ranged across a spectrum of views:

- 16% of people rejected onshore conventional gas development
- 11% of people embraced onshore conventional gas development
- 73% of people tolerated, would be ok with it, or approved of onshore conventional gas development
  - 26% would tolerate it
  - 27% would be ok with it
  - 20% would approve it

We also measured people’s feelings towards onshore conventional gas development for each of the attitude categories: people who reject the idea had very negative feelings ( $M = 2.04$ ), people who tolerate had more neutral feelings around the mid-point of three ( $M = 2.95$ ), people who were ok with it had more positive feelings ( $M = 3.40$ ), as did those who approve of ( $M = 3.92$ ) and embrace it ( $M = 4.59$ ).

Figure 4 Attitudes towards onshore conventional gas development in the Gippsland Basin: Total Gippsland Basin

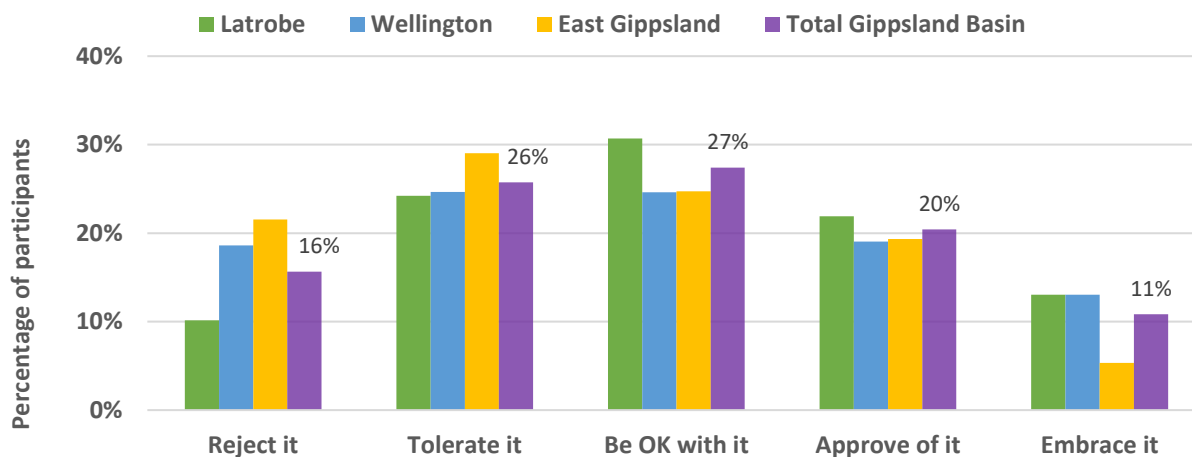


Note: Percentages rounded to the nearest whole percent

### Differences in perceptions

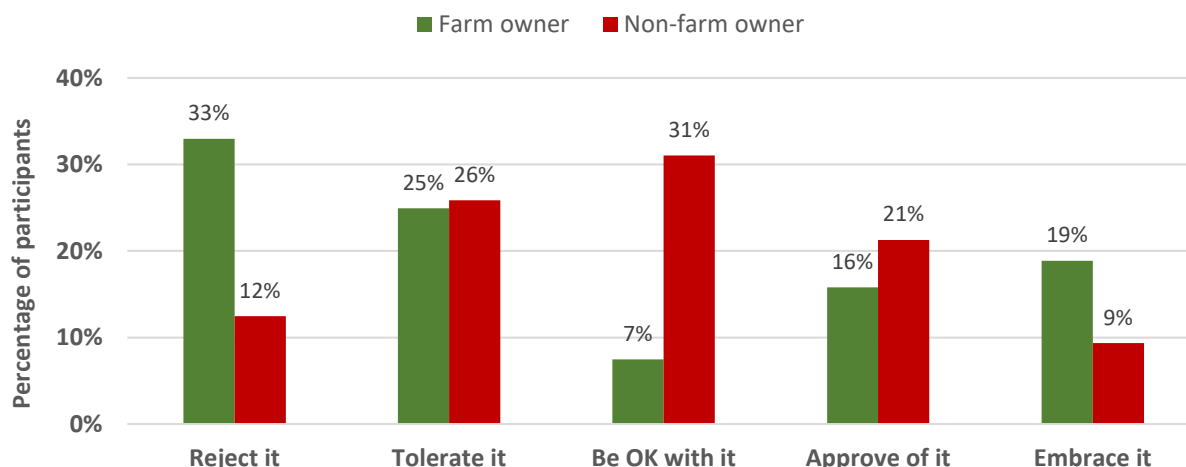
Attitudes towards onshore conventional gas development demonstrated a similar range in views across the different subregions with most people in each of the subregions either tolerating, being ok with it, or approving onshore conventional gas development in the region. However, residents in Latrobe showed statistically more favourable views than residents in East Gippsland who showed the least favourable views overall. Of note was that the percentage of residents in East Gippsland who would reject such gas development in the region (22%) was twice as much as those who would reject it in Latrobe (10%). Correspondingly fewer residents embraced the idea in East Gippsland (5%) compared to Latrobe (13%) and Wellington (13%).

Figure 5 Attitudes towards onshore conventional gas development in the Gippsland Basin: By subregion, 2019



There were also differences between farm owners and non-farm owners across the Gippsland Basin in their attitudes towards onshore conventional gas development. Figure 6 shows farm owners who reject such gas development (33%) were almost three times that of non-farm owners who reject it (12%). Also of note is the tendency for farm owners' views to exhibit a more polarised spread with fewer being in the middle of the distribution. This contrasts with people who don't own a farm and exhibit a bell curve distribution in their spread of views about onshore conventional gas development.

Figure 6 Attitudes towards onshore conventional gas development in Gippsland Basin: By farm ownership, 2019



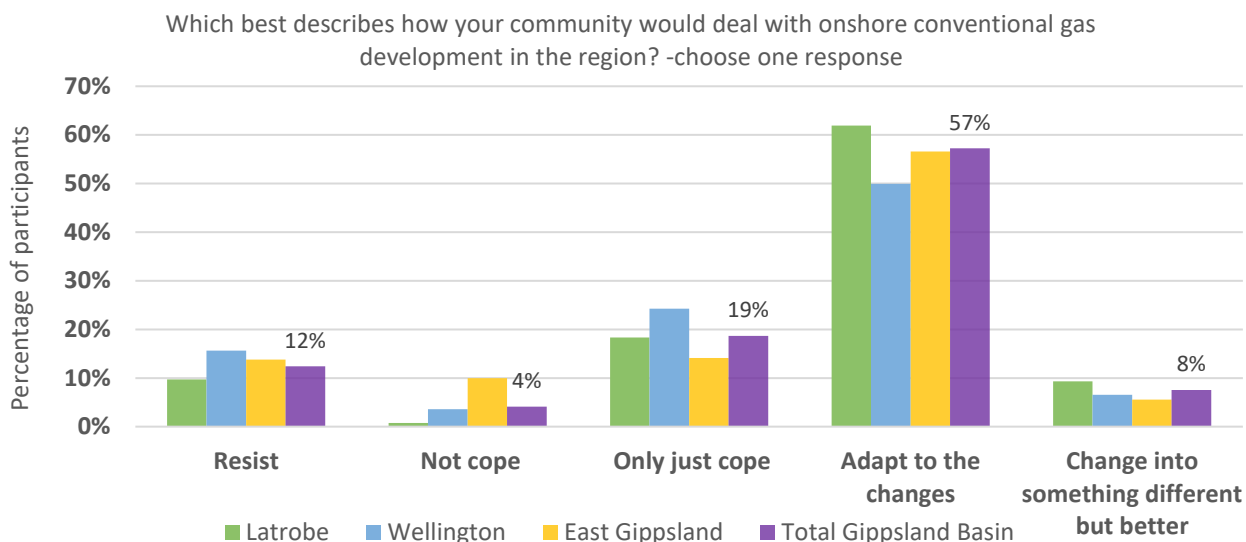
### Adapting to onshore conventional gas development

Across the Gippsland Basin, most people believed that their community would adapt to changes associated with onshore conventional gas development (57% of residents) or transform into something different but better (8% of residents). Even so, Figure 7 shows that one fifth of the region's residents believed their community would only just cope (19% of residents). A few believed their community wouldn't cope (4% of residents) with more people thinking their community would resist the changes (12% of residents).

Latrobe indicated the highest proportion of residents who believed their community would respond well by either adapting to the changes or transforming into something different but better (62% and 9% respectively) and the least proportion reporting that their community would not cope (1% of residents).



Figure 7 Perceptions of community adapting to onshore conventional gas development: By subregion, 2019



## Key messages: Attitudes and feelings about onshore conventional gas development

1. Across the Gippsland Basin, residents demonstrated a range of views towards onshore conventional gas development with most people indicating they would tolerate, be ok with it, or approve of onshore conventional gas development in the region.

  - Perceptions differed among the subregions with East Gippsland tending to be less favourable in their views with a largest percentage of people indicating they reject the idea of onshore conventional gas development in the Gippsland Basin (22%), which was twice as much as in Latrobe (10%). Correspondingly fewer residents embraced the idea in East Gippsland (5%) compared to Latrobe (13%) and Wellington (13%).
  - Farm owners showed polarised views towards onshore gas development with more farm owners indicating they reject the idea (33%) compared to those who don't own a farm (12%). However, there were also a similar percentage of farm owners who either approved (16%) or embraced the notion (19%).
2. There were no real differences in community attitudes and feelings towards onshore gas development in the Gippsland Basin based on age, gender, education levels, or income.
3. Residents were fairly neutral in how pleased ( $M = 3.02$ ) or optimistic ( $M = 3.03$ ) they felt towards onshore conventional gas development in their region and did not report feeling worried ( $M = 2.16$ ) nor angry ( $M = 2.68$ ) on average. These feelings were similar across the Gippsland Basin except for Latrobe residents who felt more optimistic on average and East Gippsland residents who indicated statistically lower levels of optimism.
4. Latrobe indicated the highest proportion of residents who believed their community would respond well by either adapting to the changes (62%) or transforming into something different but better (9%).

## Perceptions of underlying drivers of social acceptance

Previous research and interviews with stakeholders identified a range of issues that were important to communities and underpin people's overall attitudes and feelings towards onshore conventional gas development. The survey asked approximately 90 questions related to these issues, which were grouped together into nine key themes or underlying drivers, most with sub-components.

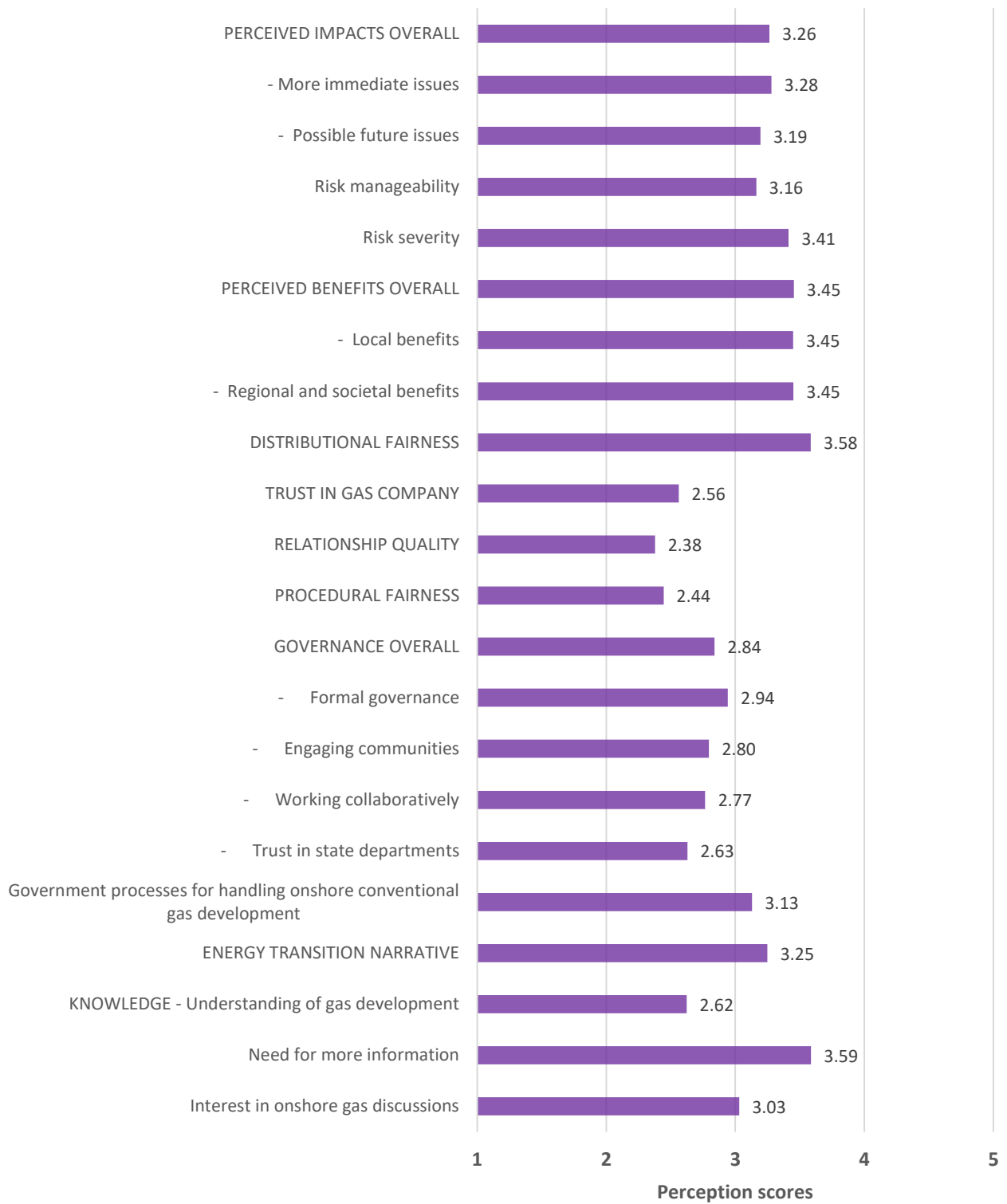
- 1. Perceived impacts:** immediate issues, possible future issues, risk manageability and severity
- 2. Perceived benefits:** local benefits, regional and societal benefits
- 3. Distributional fairness:** perceptions of how fairly impacts and benefits are shared
- 4. Trust in the onshore conventional gas industry:** trust and confidence in industry competence, and doing the right thing by communities
- 5. Relationship quality:** perceptions of the relationship between the gas companies and community
- 6. Procedural fairness:** perceptions of how fairly the gas companies will treat the community
- 7. Governance:** perceptions of formal governance (regulations and compliance), government engaging with and working collaboratively with communities, trust in state departments
- 8. Energy transition narrative:** the role of onshore conventional gas in reducing carbon emissions and transitioning to renewable energies
- 9. Knowledge:** awareness and understanding of the onshore conventional gas industry

Figure 8 summarises the scores for each of the underlying drivers (and relevant sub-components) for the Gippsland Basin. It also includes additional scores about risk perceptions, information needs and views about the government's handling of onshore gas development and the role of this gas in the energy narrative.

- Concerns about impacts overall were not overly high ( $M = 3.26$ ) with similar levels of concern about immediate issues such as impacts on water and the community as those more future oriented concerns, for example the integrity of gas wells over time. People perceived the severity of risks to be moderate ( $M = 3.41$ ) but only had modest confidence that risks could be managed ( $M = 3.16$ ).
- Potential benefits from onshore conventional gas development were perceived favourably ( $M = 3.45$ ). Residents viewed local benefits and wider regional and societal benefits similarly.
- Distributional fairness scores were moderately good ( $M = 3.58$ ) indicating that people thought it fair on average provided landowners were compensated fairly and that benefits outweighed the impacts.

- Perceptions of trust in gas companies were limited ( $M = 2.56$ ) and views about how the gas company would treat locals (relationship quality and procedural fairness) were unfavourable, indicating low expectations that the community would be treated fairly or that the gas companies would be genuine in their interactions.
- Perceptions of governance and confidence in government to hold companies to account through regulation was marginal ( $M = 2.94$ ). Similarly, expectations that government would engage with communities about gas was borderline with limited trust in government and confidence in their ability to work together with communities and gas companies to solve issues.
- However, people had a modestly positive view of the government's processes for dealing with onshore gas development in terms of the moratorium and undertaking the science first ( $M = 3.13$ ).
- Knowledge levels about onshore conventional gas development and an understanding of the differences between conventional and unconventional gas was limited ( $M = 2.62$ ) with people indicating a need for more information ( $M = 3.59$ ).
- People indicated they had a positive view on average about the broader role of gas in the future energy mix ( $M = 3.25$ ).

Figure 8 Perceptions of onshore conventional gas development: Summary, Gippsland Basin, 2019



*Note:* Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions except perceived impacts where the higher the score the greater the concern

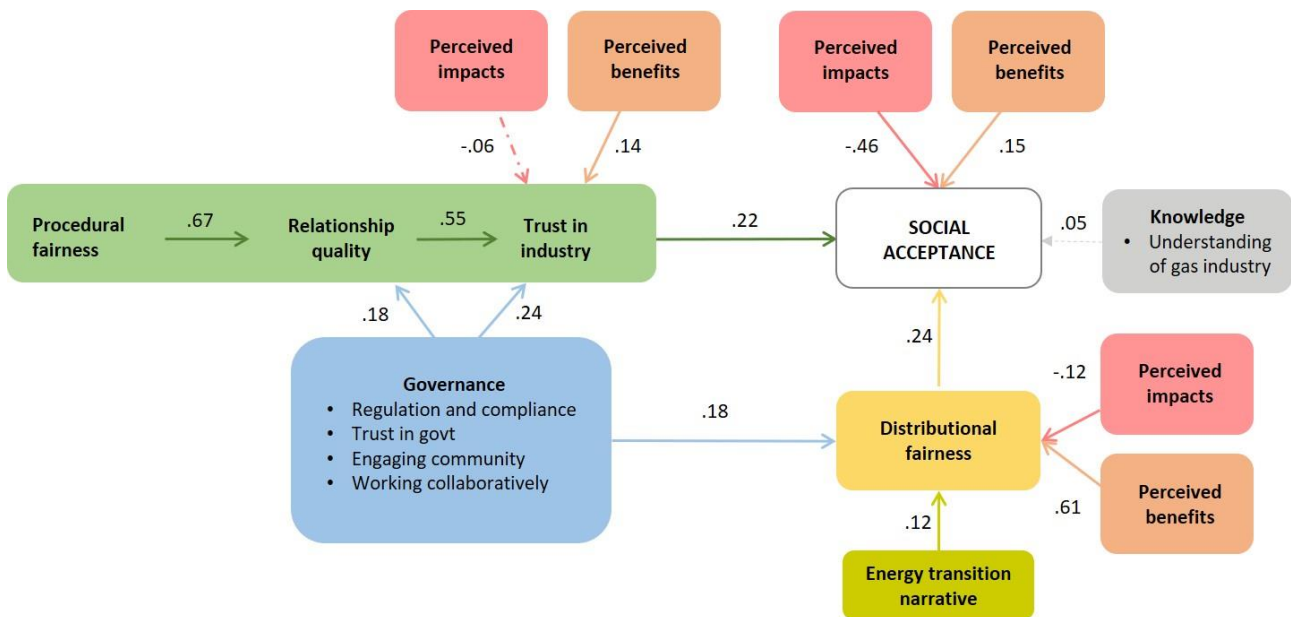
## Model of social acceptance: A framework for understanding community concerns and expectations of onshore conventional gas development

Statistical modelling of the nine key factors contributing to trust and social acceptance showed how the different factors work together to shape people’s overall attitude or level of acceptance towards onshore conventional gas development. It also shows the factors important for trust in the industry and a sense of distributional fairness, as shown in Figure 9.

The model demonstrates that people’s trust and acceptance of the industry is dependent on a range of factors. Moreover, each factor needs to be addressed and improved if people’s trust in industry and acceptance of onshore conventional gas development in their communities is to change.

The statistics attached to the model identify which factors are more important than others – the larger the number the stronger the influence. Negative relationships indicate more of one leads to less of the other, and dashed arrows show expected relationships which were not significant. These relationships are described and discussed in the report and summarised in the key messages.

Figure 9 The CSIRO model of social acceptance of onshore conventional gas development: Gippsland Basin, 2019



### Key messages: Perceptions of underlying drivers of social acceptance

1. Concerns about negative effects of onshore conventional gas development not only shaped people’s acceptance levels directly but also influenced people’s notions of distributional fairness. People were similarly concerned about long-term future issues of onshore conventional gas development as they were about more immediate impacts.

- This means perceived impacts (concerns) directly affect social acceptance, or lack thereof, as well as indirectly affecting it by contributing to how much they believe it is fair in terms of how costs and benefits would be distributed and shared.
2. People viewed the benefits from onshore gas quite favourably. Benefits are not only important in shaping overall attitudes about gas but are particularly important in weighing up a sense of fairness.
    - Perceived benefits were at least four times as important as perceived impacts in determining distributional fairness.
  3. People's expectations were low that the gas industry could be trusted or that they would treat people fairly.
    - Trust in industry is determined by the quality of the relationship industry has with community and the procedural fairness by which they engage with their community. Good governance was also important for building trust in industry.
  4. Confidence in government to effectively regulate the gas industry was modest, yet results show perceptions of good governance of the industry not only supports trust in industry but also beliefs about distributional fairness.
    - This means regulation and compliance, planning, collaborating, engaging with communities, and trust in gas governing bodies all shape people's views of how much they trust industry and how fair they believe gas development would be for their community.
  5. Perceptions of distributional fairness was an important factor that directly influenced acceptance.
    - This means perceived fairness in the distribution of impacts and benefits is important, in addition to perceived impacts and benefits.
    - The narrative around the role of onshore conventional gas in Victoria's transition to renewable energy sources is also important for determining perceptions of fairness. The more residents believe there is a greater need for gas in achieving a low carbon energy supply, the more they factor this point into weighing up the fairness of costs and benefits.
  6. People's knowledge and understanding of the industry was limited.
    - Both those who reject and those who embrace onshore conventional gas development have higher levels of industry knowledge than those with more moderate views like 'tolerating it' or 'being OK with it'.
    - Knowledge and understanding needs to relate to the things people care about for it to be a greater influence in shaping people's views about onshore gas development rather than technical industry knowledge. For example, how the industry will be governed, and how they can have their say; what are the negative impacts, and how they will be managed or mitigated; and what are the benefits both locally and more broadly to the region and society.
    - People indicated an interest and need for more information.

# Part I Introduction and Methods

## Background to the research

This study is part of the Victorian state government's Victorian Gas Program of research studies and findings to inform the government in their future decisions and activities related to onshore conventional gas in Victoria. There is currently a moratorium on the exploration and development of onshore conventional gas until June 2020, providing time for the Victorian Gas Program studies to be completed.

## Project purpose

The purpose of this project is to create baselines for understanding community concerns, expected benefits, knowledge of, and factors important for explaining trust and acceptance in relation to onshore conventional gas development in the Gippsland and Otway geological basins of Victoria (VIC). The research is part of a broader government appraisal reviewing the feasibility of an onshore conventional gas industry operating in the Gippsland and Otway basins.

In addition, the research assesses baseline levels of community wellbeing, expectations of the region's future and identifies community values and beliefs in relation to onshore conventional gas development.

Establishing baseline measures of community wellbeing and regional attitudes towards onshore conventional gas development enables government stakeholders to consider community expectations, current perceptions of and concerns related to conventional gas, and other matters related to trust of and acceptance of an onshore gas sector. This knowledge informs stakeholders of issues that are important to communities, their level of importance, and their extent, so that if such an industry were to proceed it could be done so in a manner that met community expectations. This research also provides valuable insights for developing community engagement strategies that would be critical for building trust with regional communities if any development progresses after the moratorium ends in June 2020.

# 1 Concepts used in this report

## 1.1 Community wellbeing

A measure of community wellbeing is a snapshot in time of the perceived 'quality of life' within the community; an evaluation of the community as a 'good place to live' (McCrea, Walton, & Leonard, 2014). The notion of community wellbeing means different things to different people and thus a comprehensive measure of wellbeing that incorporates different '*dimensions*' of wellbeing is used to gain a deeper understanding of the various aspects of community wellbeing.

Drawing on international research and previous research in onshore gas development regions in the Western Downs region of Queensland and the Narrabri region of New South Wales (McCrea, Walton, & Leonard, 2014; McCrea, Walton, and Leonard, 2019; Walton and McCrea, 2017; Walton and McCrea, 2018), we investigated wellbeing across 15 dimensions. These dimensions can be grouped into six domains: social, environmental, political, physical infrastructure, economic, and health (McCrea et al., 2014). Figure 10 depicts the 15 dimensions grouped into the six domains, which we measure and discuss further in this report.

Figure 10 Dimensions of community wellbeing grouped into six domains





**Table 1 Descriptions of the fifteen dimensions of community wellbeing**

<b>Dimension</b>	<b>Domain</b>	<b>Brief description</b>
<b>1. Personal safety</b>	Social	Safety at home alone at night, walking outside alone at night
<b>2. Community spirit</b>	Social	Friendliness, supporting each other
<b>3. Community cohesion</b>	Social	Inclusion, welcoming of newcomers and people with differences
<b>4. Community trust</b>	Social	Trust within the community and people seen around locally
<b>5. Community participation</b>	Social	Supporting community based organisations and activities
<b>6. Social interaction</b>	Social	Visiting, talking, and going out with others in the community
<b>7. Environmental quality</b>	Environment	Quality of the environment in which people live - levels of dust, noise, air, drinking water, and overall quality of the general environment
<b>8. Environmental management</b>	Environment	Managing the environment for the future: waterways, nature reserves, and parks
<b>9. Local decision making</b>	Political	Citizens having a say and being heard in local decision making
<b>10. Trust in local leaders</b>	Political	Local leaders and local council can be trusted
<b>11. Services and facilities</b>	Physical infrastructure	Schools, childcare, sports and leisure facilities, shopping, medical and health services, and community support services
<b>12. Town appearance</b>	Physical infrastructure	General physical appearance of the town, cleanliness, parks, gardens
<b>13. Roads</b>	Physical infrastructure	Condition and amount of traffic on the roads
<b>14. Income sufficiency</b>	Economic	Household income sufficient for household expenses, and lifestyles
<b>15. Economic opportunities</b>	Economic	Job opportunities in the community, local businesses doing well
<b>16. Health</b>	Health	Diet and eating habits, exercise habits, physical and mental health

## 1.2 Attitudes and perceptions of onshore conventional gas development

Community acceptance of an industry's activities within a community is important for the establishment and ongoing operation of a new industry. This acceptance is commonly referred to as a 'social licence to operate' (SLO), whereby the industry meets the ongoing expectations of the community with regards to its actions and thus gains ongoing acceptance (Curran, 2017; Gunningham, Kagan, & Thornton, 2004; Moffat & Zhang, 2014).

Building on previous studies (e.g., Grubert and Skinner, 2017; Zhang and Moffat, 2015), as well as CSIRO research in the Western Downs region of Queensland and the Narrabri region of New South Wales into unconventional gas development (Walton & McCrea, 2017 and 2018), we identified and modified a range of factors that may also shape people's perceptions and attitudes towards onshore conventional gas development.

As listed in Figure 11, these factors can be described as the underlying drivers of trust and acceptance, or a lack of trust and acceptance. When people have high levels of these factors then

they are likely to have more positive views towards onshore conventional gas development, and when they have low levels of these factors they are more likely to have negative views, with one exception: when people have high levels of concern over possible negative impacts from gas development then they are likely to have more negative views of the industry and its development.

Figure 11 List of factors that underlie trust and acceptance of onshore conventional gas development

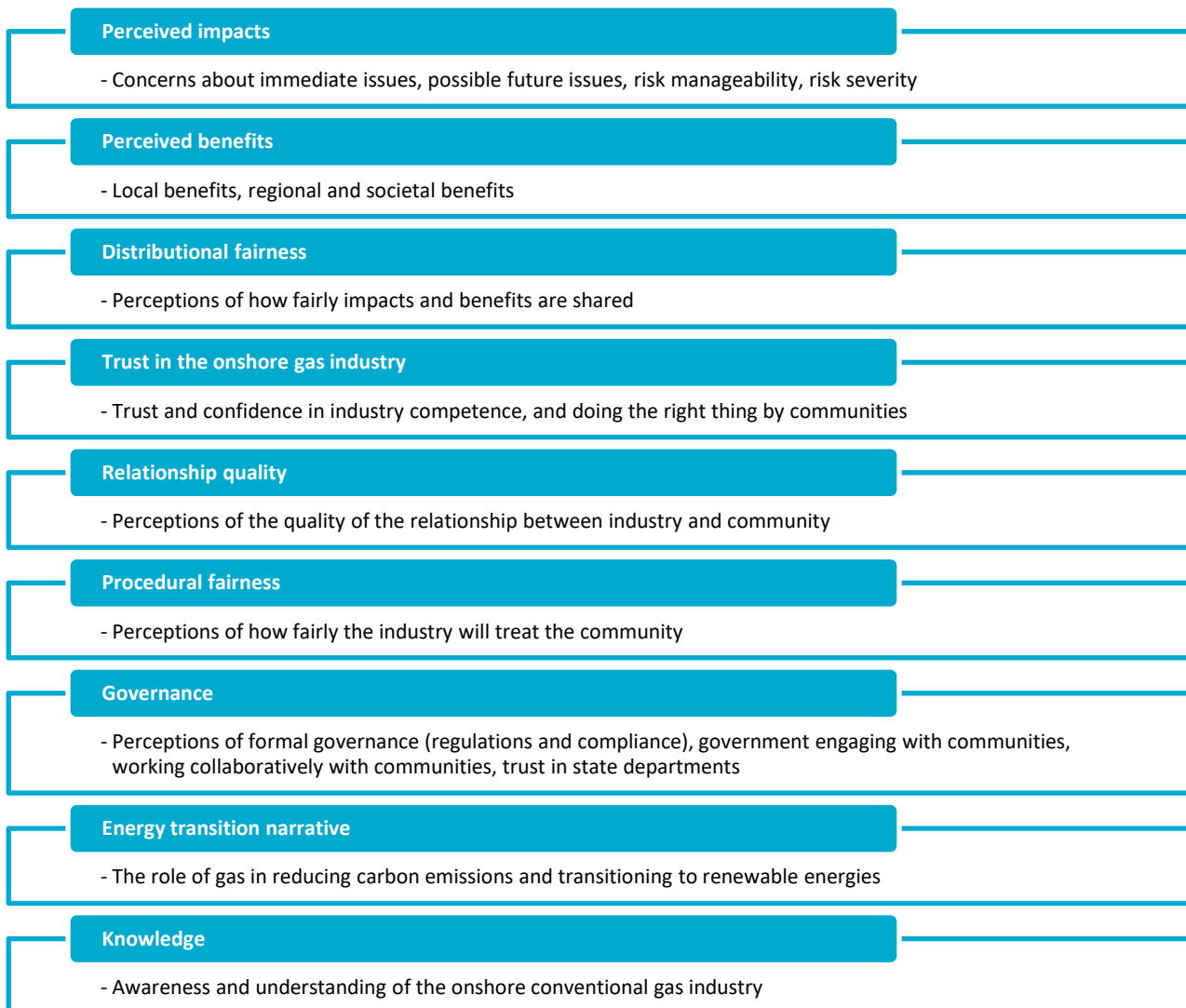
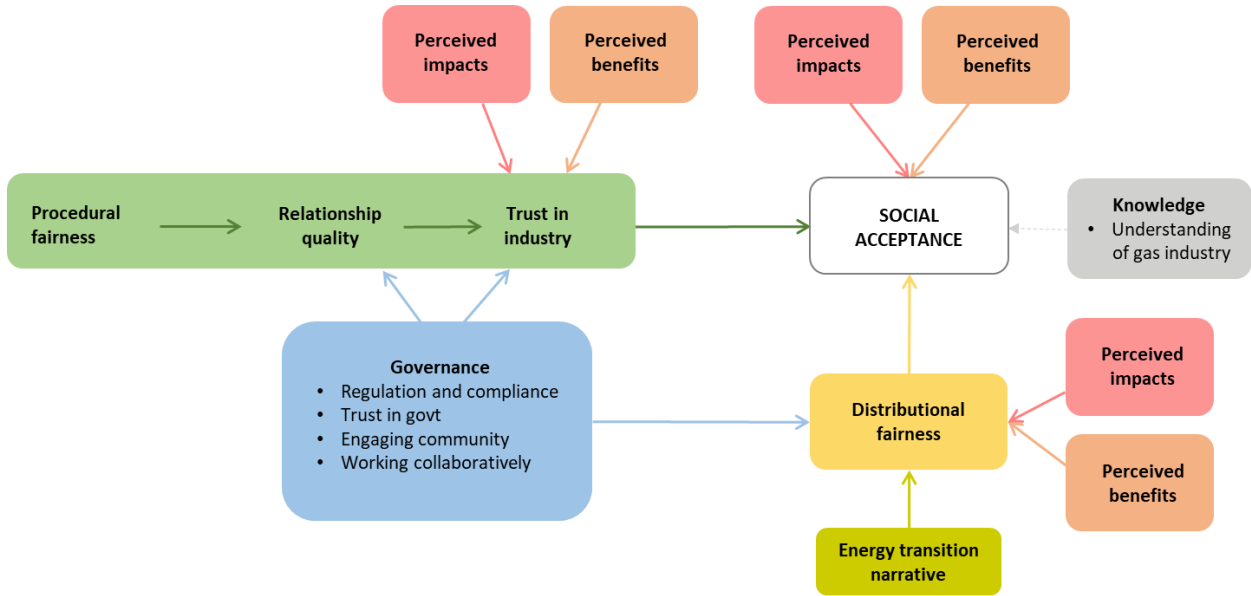


Figure 12 shows a model of how these factors work together to explain a person’s level of acceptance (or lack thereof) for onshore conventional gas development within their community. Each of these factors are important to communities and represent concerns that communities have about conventional gas development, their expectations if trust in the industry is to be achieved, and their views related to fairness and how benefits are distributed and costs borne by host communities.

By measuring these factors, we provide empirical evidence to the conventional gas industry and key stakeholders as to the current levels of these factors within communities. Results can be used to guide industry improvements and government initiatives, and strengthen policy and standards governing the onshore conventional gas sector.

Figure 12 CSIRO model of social acceptance (or lack thereof) and its underlying drivers



## 2 Method

### 2.1 Survey overview

The survey was conducted during September-October 2019 over an eight-week period using computer-assisted telephone interviewing (CATI). The survey involved 801 participants from eight local government areas (LGAs) in southern Victoria – 501 participants from the Otway Basin and 300 from the Gippsland Basin. The survey explored community wellbeing and attitudes to onshore conventional gas development. Specifically, the survey targeted participants from five LGAs in the Otway Basin and three LGAs in the Gippsland Basin.

A third-party research company administered the survey using a database of landline and mobile telephone numbers to randomly select residents based on pre-determined selection criteria and demographic quotas to achieve a representative sample.

On average, the survey took 35 minutes to complete and the response rate was 25.9%, which is considered a good outcome for lengthy telephone surveys.

This report focusses results on the Gippsland Basin sample and the sample profile is detailed in Appendix A.

#### **Key points**

Total Sample: 801 participants

- Five Otway Basin LGAs: Glenelg Shire, Southern Grampians Shire, Moyne Shire, Warrnambool City, Corangamite Shire
- Three Gippsland Basin LGAs: Latrobe City, Wellington Shire, East Gippsland
- At least 100 participants per LGA
- Weighted sample representative on age, gender, LGA and location (in or out-of-town) according to the Australian Bureau of Statistics (ABS, 2016)
- Landowners included
- 35 minute telephone interview with approximately 170 questions, including demographics
- Inclusion criteria: residents of target LGA, age 18 years or older
- Random selection using landline and mobile telephone numbers
- Quotas, screening questions and weighting used to achieve sample representativeness

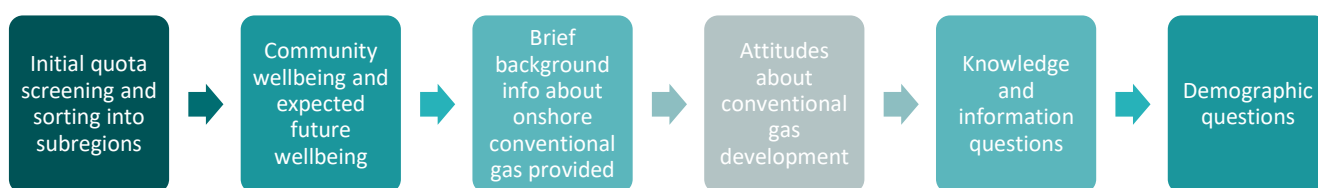
## 2.2 Survey procedure

The survey comprised approximately 170 questions covering five main topics. Figure 13 shows the flow of questions, with the initial part of the survey including screening and demographic questions. Within each of the three targeted LGAs, there were various main towns and participants were asked which main town they felt most part of. This town and surrounds became the subsequent reference for community wellbeing related questions for that participant. For example, if a participant identified Bairnsdale and surrounds as their community then all subsequent questions were framed in relation to ‘the town and surrounds of Bairnsdale’. Residents also identified whether they lived in or out-of-town.

The survey then proceeded with community wellbeing questions, followed by attitudes and perceptions about onshore conventional gas development and the sector, then knowledge and information need questions about the sector, and finally a few more demographic questions.

At the end of the survey participants were asked whether they would like to be in a prize draw for \$50 gift vouchers as a thank-you for completing the survey. Twenty participants were randomly selected to receive vouchers.

Figure 13 Outline of survey question topics



## Ethics Review

All procedures adhered to the National Statement on Ethical Conduct in Human Research, as well as the ethical review processes of the CSIRO, which granted ethics approval.

## 2.3 Survey sample and representativeness

The Gippsland Basin sample comprised 300 residents from three LGAs (see Figure 14). These LGAs are reported as ‘subregions’ in this report. Table 2 shows the main urban centres or localities in each of the subregions sampled.

Those living out-of-town were over sampled to ensure sufficient out-of-town residents and farmers were included in the research. Over-sampled residents were later weighted to ensure the statistics were representative for each subregion and the Gippsland Basin as a whole.

Figure 14 LGAs sampled in the survey: Otway and Gippsland basins

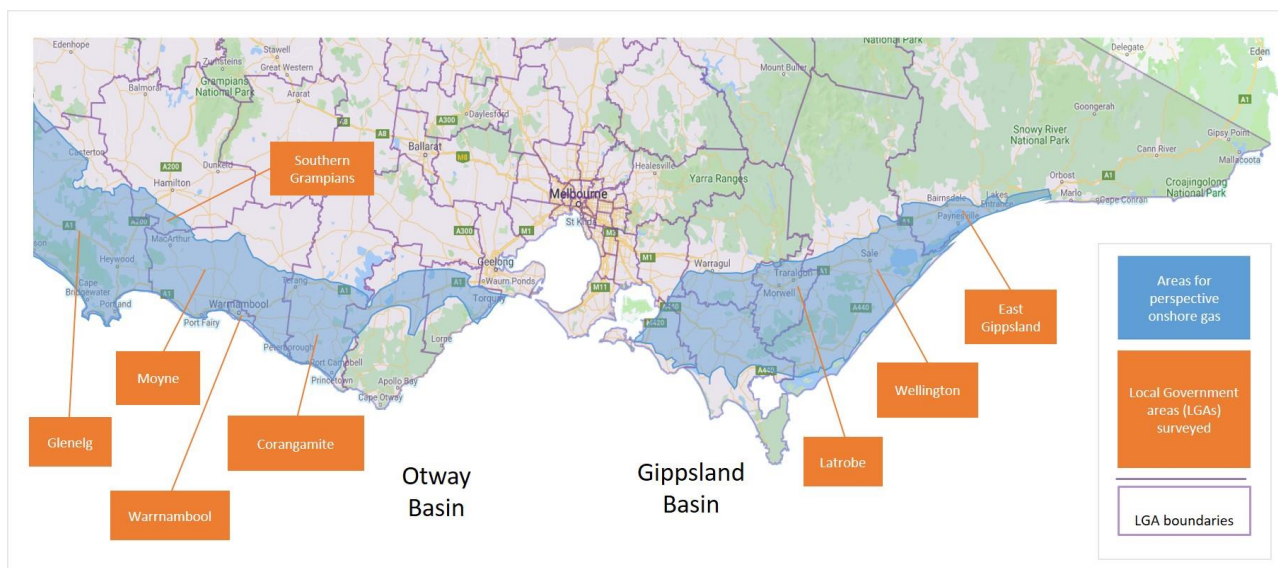


Table 2 Gippsland LGAs sampled in the survey and main urban centres or localities within each LGA

LATROBE CITY	WELLINGTON SHIRE	EAST GIPPSLAND SHIRE
Boolarra	Briagolong	Bairnsdale
Churchill	Golden Beach - Paradise Beach	Bruthen
Glengarry	Heyfield	Eagle Point
Moe – Newborough	Loch Sport	Lake Tyers Beach
Morwell	Maffra	Lakes Entrance
Toongabbie	Port Albert	Lindenow
Traralgon	Rosedale	Mallacoota
Traralgon South	Sale	Marlo
Tyers	Stratford	Metung
Yallourn North	Yarram	Newlands Arm
Yinnar		Omeo
		Orbost
		Paynesville

## Representativeness

The sample was reasonably representative on age, gender, and living in- or out-of-town, though the data was also weighted by these characteristics for each of the LGAs to match ABS 2016 population census. The data was weighted using the *calibrate* program in Stata15 and the weighted sample used in analyses of results. The sample profile is described in Appendix A .

## 2.4 Measures

### 2.4.1 Response scales

Survey questions mainly used a Likert response scale from 1 to 5, where 1 was the least and 5 was the most. Participants were either asked to indicate how much they agreed with a statement, or how satisfied they were with the issue in question. The agreement response scales ranged from 1 = strongly disagree to 5 = strongly agree, and the satisfaction response scales ranged from 1 = very dissatisfied to 5 = very satisfied. The demographic questions required participants to choose the most accurate category (single response item).

There were two categoric questions where participants were required to choose one response from a range of choices. There was also one open ended question, which asked participants for a short response in their own words (to describe their information needs regarding onshore conventional gas development, if any).

### 2.4.2 Survey items

The survey comprised approximately 170 questions (items) covering five main topics. A brief outline of the items used to measure each topic area is summarised in Table 3. Descriptions of individual measures and scales are detailed in Appendix C along with reliability of each scale. The survey questions with exact wording of all items are detailed in Appendix E .

Table 3 Summary of survey questions

SURVEY TOPIC	BRIEF DESCRIPTION
<b>1. Community wellbeing</b>	66 items <i>Fifteen dimensions</i> of wellbeing each with their own set of multiple items (57 items), as outlined in Section 1.1., and place attachment (4 items) <i>Overall wellbeing</i> , five items rating the community as a suitable place to live for different segments of the population (children / teenagers / seniors), and assessing the community overall as a place to live (that offers a good quality of life / they are happy to be living in)
<b>2. Expected future community wellbeing</b>	3 items <i>Expected future community wellbeing</i> in 3 years hence (as a place that offered a good quality of life / where they would be happy to be living). They were also asked to choose how wellbeing in their community might change in the future (decline / stay about the same / improve).
<b>3. Attitudes and perceptions of onshore conventional gas development and the sector</b>	77 items <ul style="list-style-type: none"><li>• Perceived impacts - immediate and future</li><li>• Perceived risks - manageability and severity</li><li>• Personal impact</li><li>• Perceived benefits – local and wider (regional and societal)</li><li>• Perceived fairness – procedural and distributional</li></ul>

		<ul style="list-style-type: none"> <li>• Trust in gas companies</li> <li>• Quality of relationships and responsiveness of gas companies</li> <li>• Governance – formal (compliance, regulations); engaging community, working collaboratively; trust in gas governing bodies; govt. handling of onshore gas development</li> <li>• Energy transition narrative - the role of gas in reducing carbon emissions and transitioning to renewable energies</li> <li>• Feelings towards onshore conventional gas development, measuring positive emotions (pleased, optimistic) and negative emotions (angry, worried)</li> <li>• Attitudes towards onshore conventional gas development – acceptance of conventional gas development in the region</li> <li>• Community adapting, perceptions of the community’s coping and adapting to a proposed onshore conventional gas development</li> </ul>
<b>4. Knowledge and information</b>	15 items	Use of different types of information sources; self-rated knowledge about the industry / gas extraction / the moratorium; need for more information; interest in gas discussion
<b>5. Demographic questions</b>	9 items	Age, gender, employment status, household income, education, farm ownership, location type (live in or out-of-town), and subregion (Latrobe City, Wellington Shire, and East Gippsland Shire)

## 2.5 Analyses

### 2.5.1 Statistical tests

A range of bivariate and multivariate analyses were undertaken including t-tests, chi-square tests, dominance analyses, and path analyses. The latter two analyses are explained in Appendix D .



# Part 2 Results

## Reporting of results

Findings reported as 'significant' means that they were 'statistically significant' at  $p$  value less than the .05 level. This means there is less than a five percent chance that the findings were due to chance. This is a convention in scientific report writing and denoted as  $p < .05$ . In some instances, scores have been rounded to one decimal place in the graphical figures.

Results of the survey are typically described as average scores out of 5, using a scale from 1 to 5 where 1 is the least and 5 is the most. A score below the midpoint of 3 is considered unfavourable on average, except where otherwise indicated. Results for subregions are reported as Latrobe, Wellington, East Gippsland, and the total region as the Gippsland Basin.

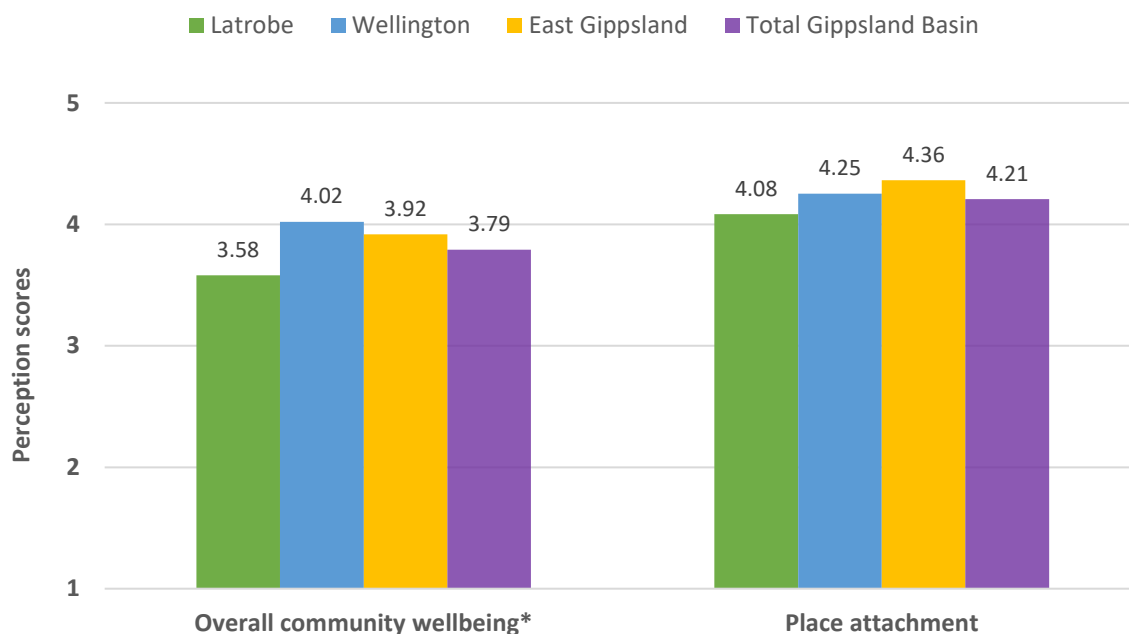
# 3 Community wellbeing

## 3.1 Overall community wellbeing and place attachment

Community wellbeing across the three Gippsland Basin shires was robust ( $M = 3.79$ ) though there was significant variation among the three subregions (shires). Figure 15 shows community wellbeing was highest in the Wellington subregion and lowest in the Latrobe subregion where Latrobe residents held a much more modest view about the quality of life and the wellbeing that their community offered.

Place attachment was high across the Gippsland Basin shires ( $M = 4.21$ ) with all subregions reporting a strong sense of belonging and level of pride towards their local towns and surrounding areas. Figure 15 shows no real differences in placement attachment among the regions.

Figure 15 Mean scores of overall community wellbeing and place attachment: By subregions, 2019

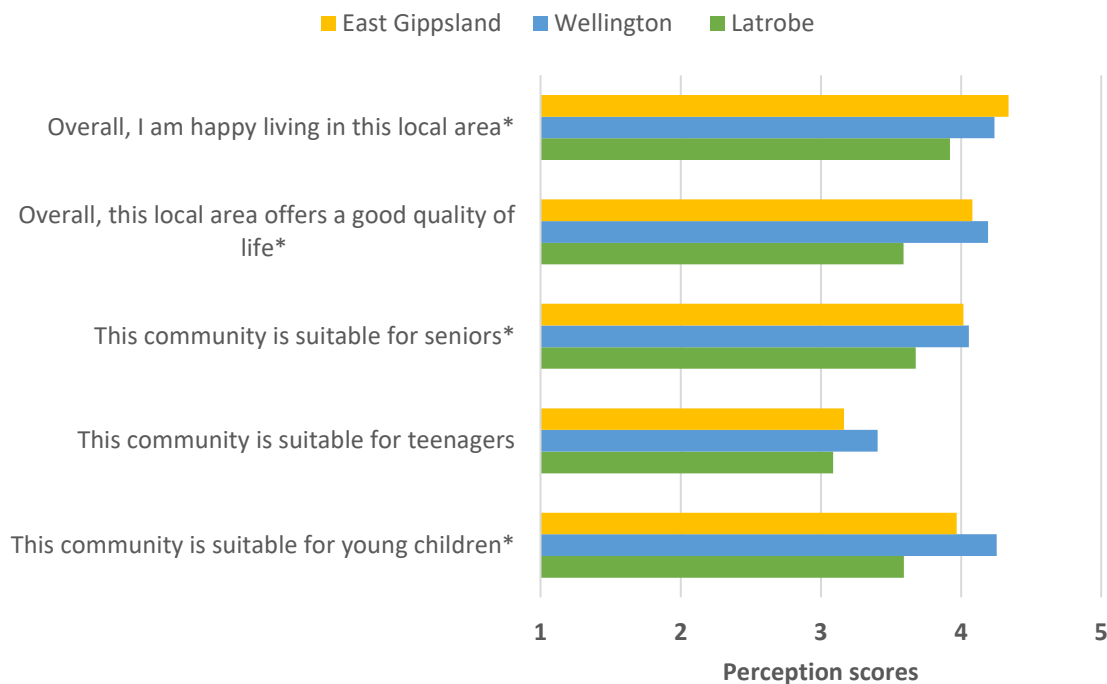


Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions; \* statistical difference in mean scores between subregions

The individual items that comprise the overall community wellbeing score showed that residents were very happy living where they do and that they viewed their communities as great places to live and offering a good quality of life.

Figure 16 shows that people felt their communities were quite suitable for seniors and young children but less so for teenagers. Residents of Latrobe reported statistically lower scores than the rest of the Gippsland Basin for all of the items except suitability for teenagers. Subsequently Latrobe residents were much more modest in their perceptions about the quality of life that their community offered and its suitability for young children and for seniors.

Figure 16 Overall community wellbeing items: By subregions, 2019



Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions; \* statistical difference in mean scores between subregions

### Differences between farm owners and non-farm owners

Farm owners reported statistically higher overall community wellbeing scores ( $M = 4.07$ ) than residents who did not own a farm ( $M = 3.74$ ). However, there were no differences in place attachment between farm owners and others, with both groups reporting a high sense of belonging and level of pride towards their local communities. These results reflected the same pattern for people who lived in a town or out of a town.

## 3.2 Dimensions of community wellbeing

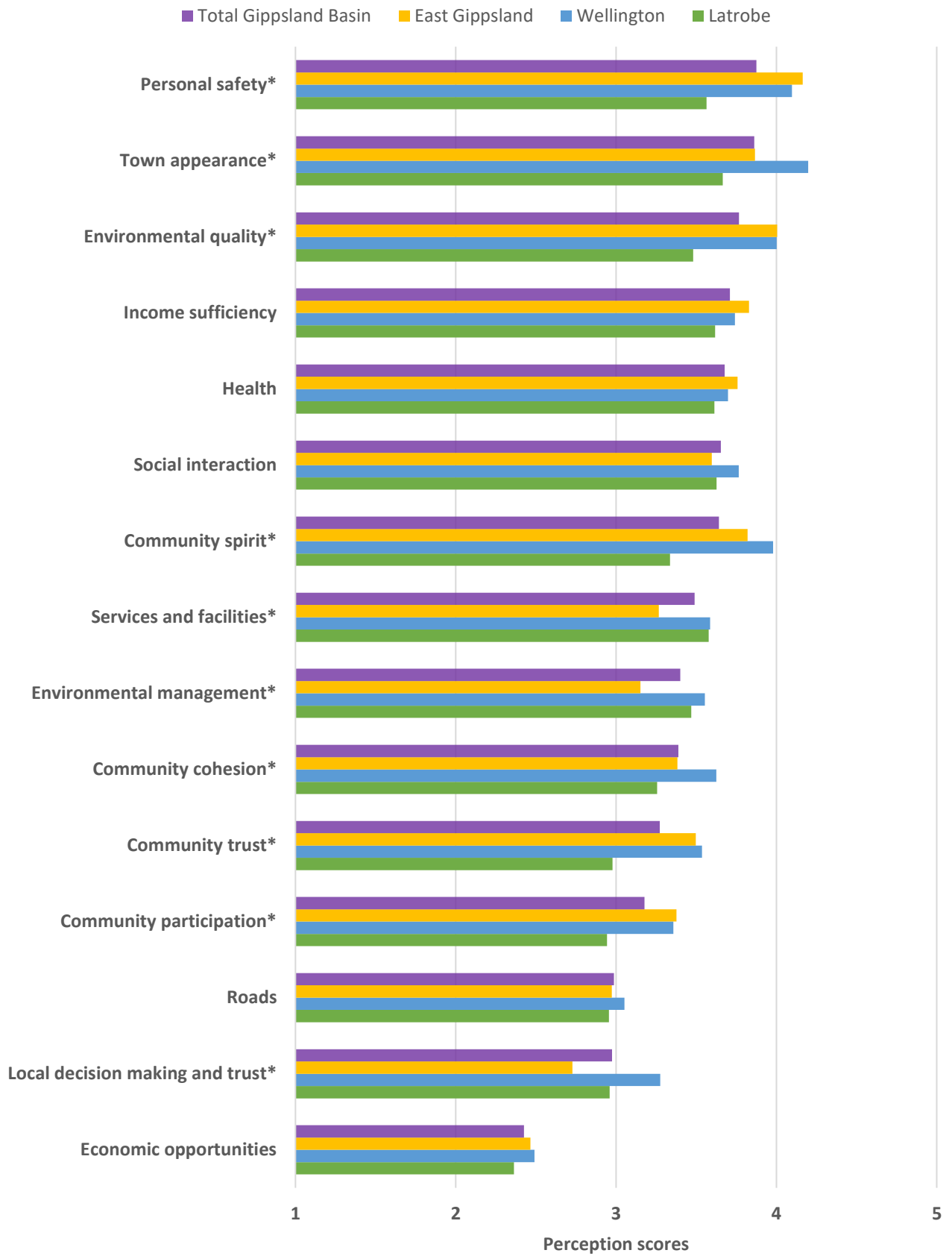
The survey measured fifteen different dimensions of community wellbeing and analysed differences among the subregions. As shown in Figure 17, twelve of the fifteen dimensions were rated positively on average across the region, two as borderline, and one dimension unfavourably.

Personal safety, town appearance, and environmental quality were rated most highly, though residents in Latrobe held statistically lower scores than the rest of the Gippsland Basin.

In contrast, the condition and safety of local roads, local decision making and trust, and economic and business opportunities were rated least favourably across the region. In most of the subregions these were rated as borderline satisfactory or unfavourable on average. Economic opportunities were particularly reported unfavourably in all subregions.

There were significant differences among the subregions when compared to the total Gippsland Basin shires in ten of the fifteen dimensions. A typical pattern emerged where Wellington demonstrated higher scores than the total region in most of these differences and Latrobe tended to show lower scores. East Gippsland showed a more mixed picture with higher scores on some dimensions along with Wellington, like personal safety and environmental quality, and lower scores on others, such as for local decision making and trust, satisfaction with environmental management, and services and facilities.

Figure 17 Community wellbeing dimensions: By subregions, 2019



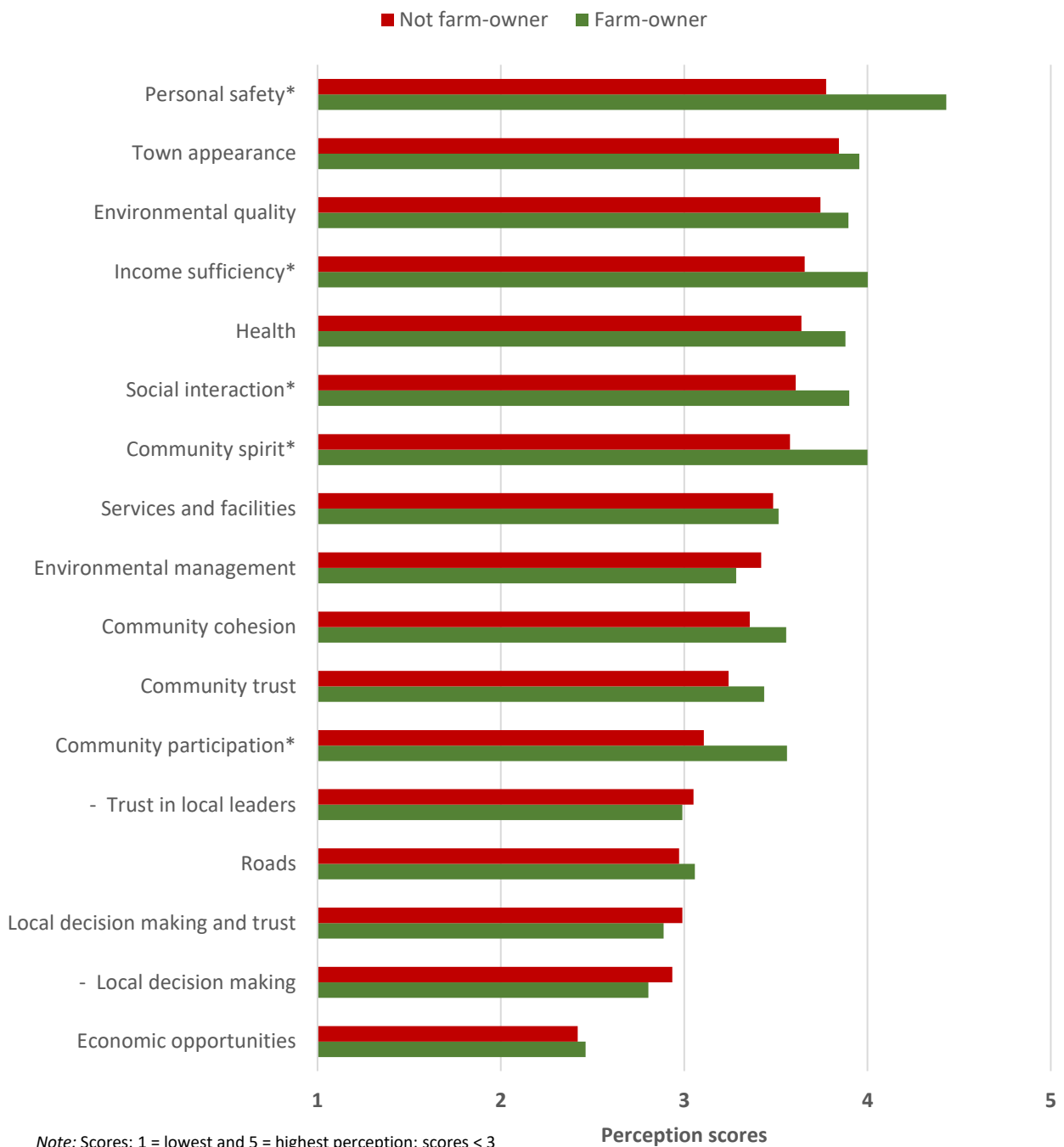
Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions; \* statistical difference in mean scores between subregions

## Differences between farm owners and non-farm owners

There were statistically significant differences between farm owners and other residents in five of the fifteen community wellbeing dimensions.

Figure 18 shows farm owners reported statistically higher levels of personal safety, income sufficiency, social interaction, community spirit, and community participation than residents who did not own a farm.

Figure 18 Community wellbeing dimensions: By farm owners, 2019



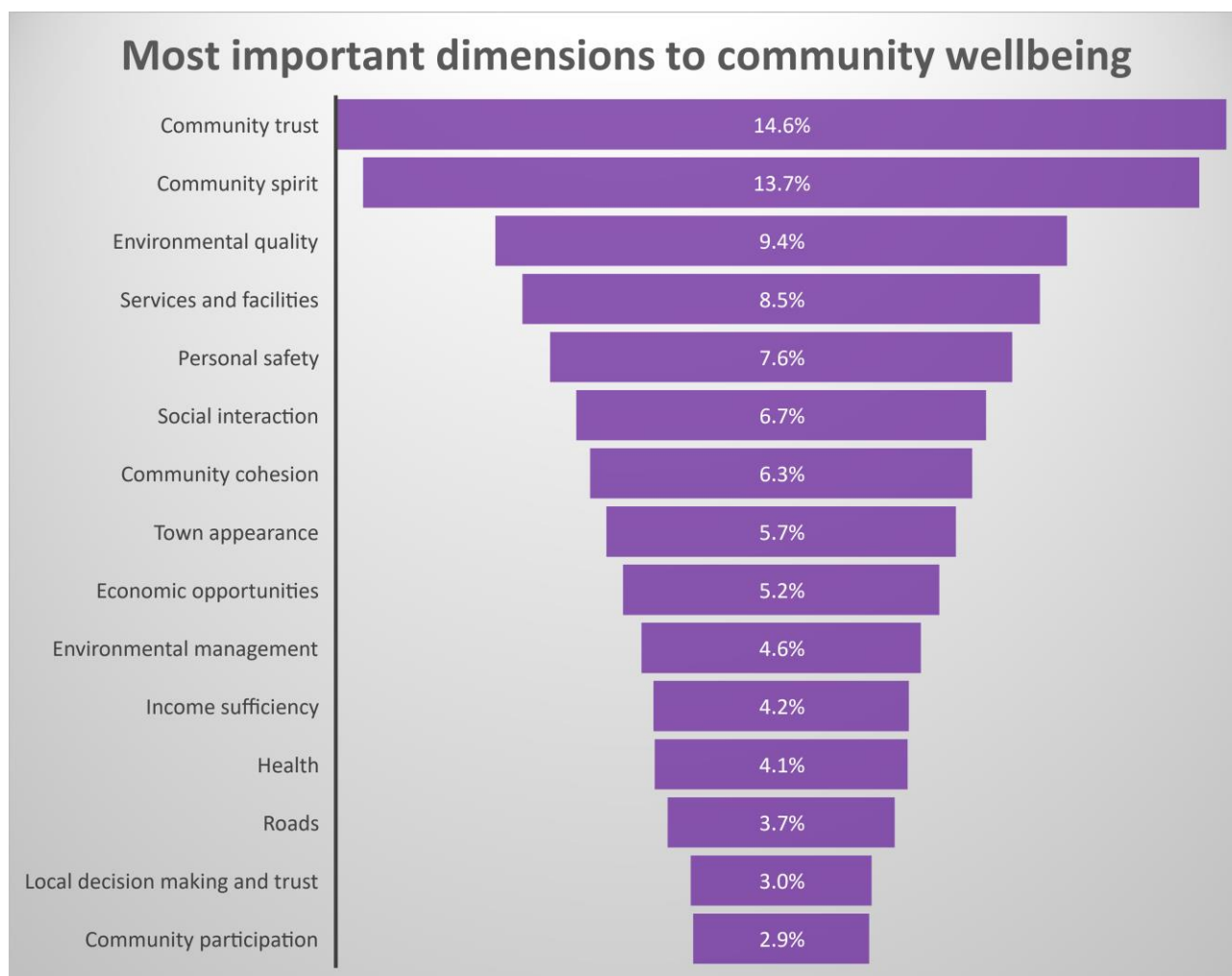
Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions; \* statistical difference in mean scores

### 3.3 Most important dimensions of community wellbeing

Understanding which dimensions contribute most to a sense of wellbeing within the community is useful in helping identify where to target initiatives aimed at improving the quality of life for its residents. Sometimes, the dimensions that are evaluated as highest or lowest by residents are not necessarily the same as those that contribute most to residents' perceptions that their community is a great place to live.

Across the Gippsland Basin, the five most important dimensions that explained a sense of community wellbeing were: *community trust*, *community spirit*, *environmental quality*, *services and facilities*, and *personal safety*. Figure 19 lists the different community wellbeing dimensions in order of the relative importance that each dimension makes to a sense of wellbeing within the community (see Appendix D for a description of dominance analysis).

Figure 19 Most important dimensions to community wellbeing: Gippsland Basin, 2019



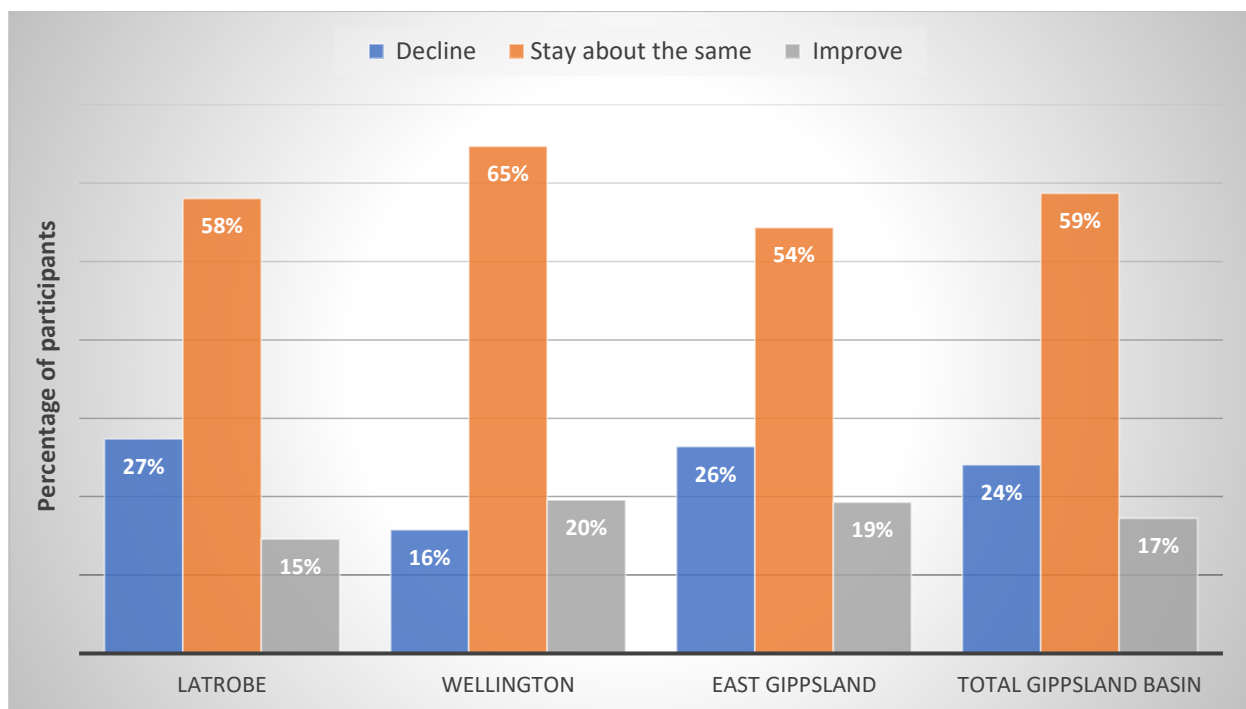
Note: the larger the percentage the more important the dimension to a sense of community wellbeing in that subregion

## 4 Expected future community wellbeing

Most people across the three subregions of the Gippsland Basin expected future community wellbeing to stay about the same in three years time (59% of residents), as shown in Figure 20. However, more people were feeling less positive in their outlook expecting community wellbeing to decline (24% of residents) than expecting it to improve (17% of residents).

This was particularly the case in Latrobe, less so in East Gippsland and not the case in the Wellington subregion. In Wellington, more people indicated they expected community wellbeing to improve than those who expected it to decline.

Figure 20 Expected future community wellbeing: By subregions, 2019





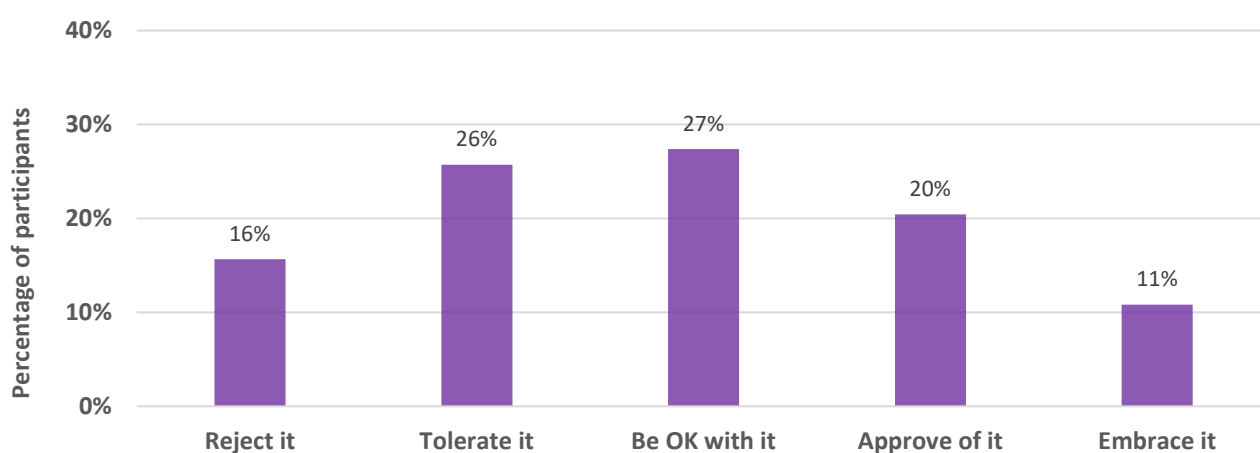
# 5 Attitudes and perceptions of onshore conventional gas development

## 5.1 Attitudes towards onshore conventional gas development

Attitudes towards onshore conventional gas development in the Gippsland Basin ranged across a spectrum of views and followed a relatively normal distribution.

- 16% of people rejected onshore conventional gas development
- 11% of people embraced onshore conventional gas development
- 73% of people tolerated, would be ok with it, or approved of onshore conventional gas development
  - 26% would tolerate it
  - 27% would be ok with it
  - 20% would approve it

Figure 21 Attitudes towards onshore conventional gas development in the Gippsland Basin: Total Gippsland Basin

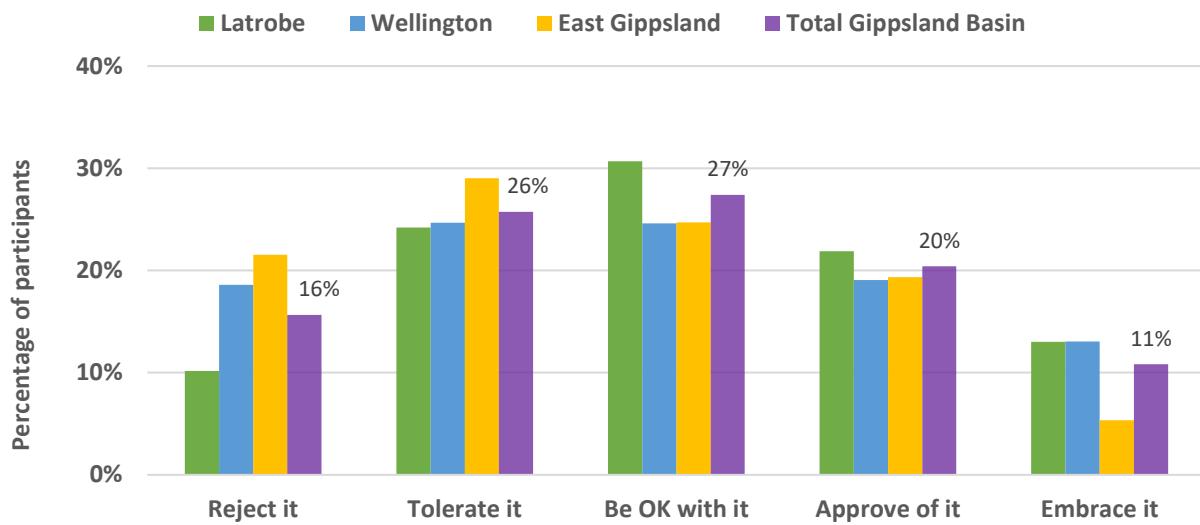


Note: Percentages rounded to the nearest whole percent

### Differences among subregions

Figure 22 shows attitudes towards onshore conventional gas development demonstrated a similar range in views across the different subregions with most people in each of the subregions taking a more moderate view in either tolerating, being ok with it, or approving of gas development in the region. Residents in Latrobe showed statistically significant more favourable views than residents in East Gippsland who showed the least favourable views overall. Of note is that the percentage of residents in East Gippsland (22%) who would reject gas development in the region was twice as much as those who would reject it in Latrobe (10%). Correspondingly fewer residents embraced onshore conventional gas development in East Gippsland (5%) compared to Latrobe (13%) and Wellington (13%).

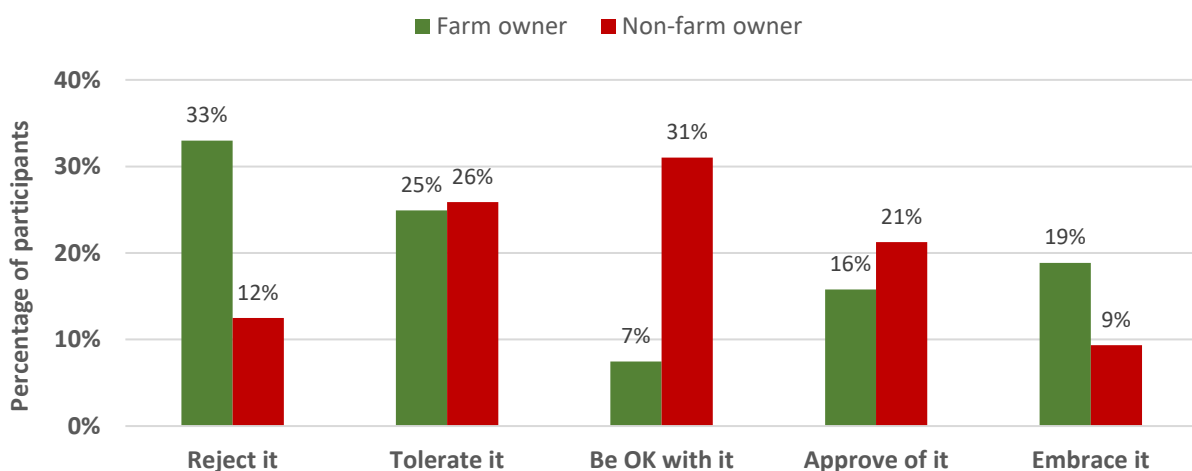
Figure 22 Attitudes towards onshore conventional gas development in the Gippsland Basin: By subregion, 2019



### Differences between farm owners and non-farm owners

Figure 23 shows differences between farm owners and non-farm owners in their attitudes towards onshore conventional gas development in the region. These differences were statistically significant with farm owners' views exhibiting a more polarised spread with fewer being in the middle of the distribution. This contrasts with people who don't own a farm and exhibit a bell curve distribution in their spread of views about gas development. Farm owners who reject gas development (33%) were almost three times that of non-farm owners who reject gas development (12%). However, more farm owners also embrace the idea of gas development (19%) than people who don't own a farm (9%).

Figure 23 Attitudes towards onshore conventional gas development in Gippsland Basin: By farm ownership, 2019



### Differences in attitudes based on gender, education, and income levels

There were no significant differences in community attitudes towards onshore gas development in the Gippsland Basin based on gender, education levels, or income.

## 5.2 Feelings towards onshore conventional gas development

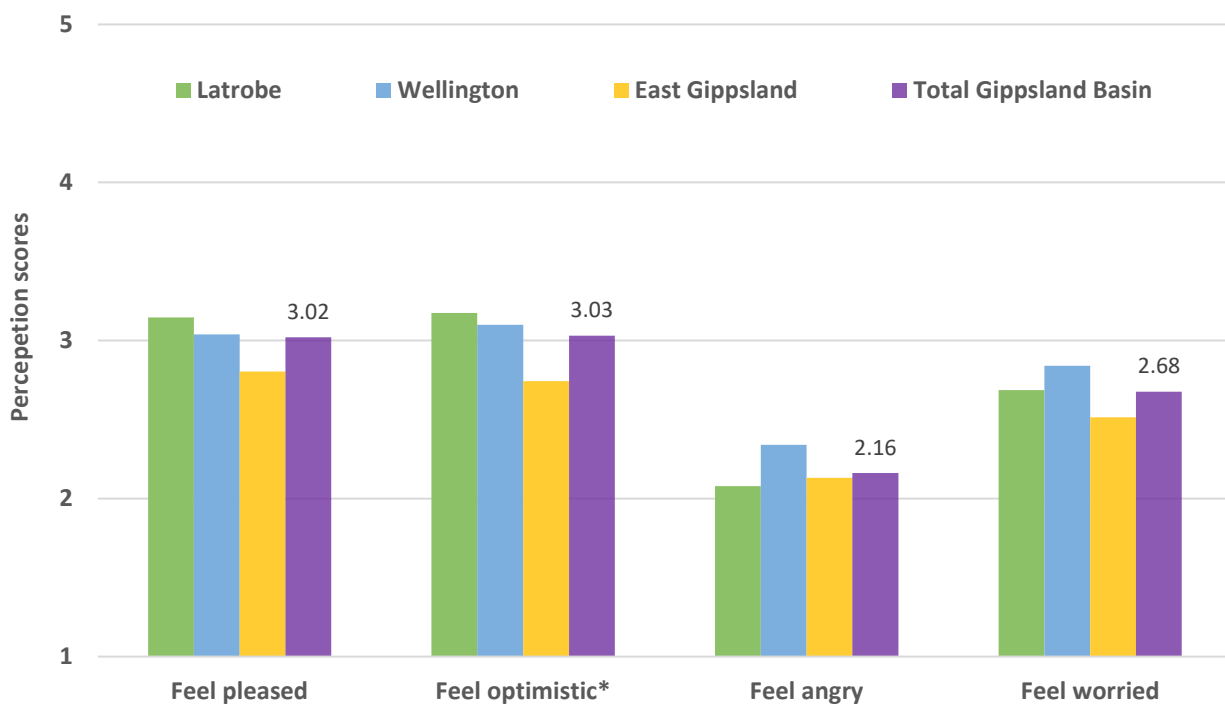
The survey measured both positive and negative feelings towards onshore gas development. Positive feelings included feeling optimistic and feeling pleased while negative feelings measured feeling angry and feeling worried.

Results showed residents had fairly neutral feelings on average towards onshore conventional gas development in their region. On average people neither agreed nor disagreed about feeling pleased ( $M = 3.02$ ) or optimistic ( $M = 3.03$ ) towards development.

In terms of negative emotions across the region people disagreed with feeling worried on average ( $M = 2.68$ ) and particularly did not feel angry on average ( $M = 2.16$ ) towards onshore gas development.

These levels of feelings were similar across the Gippsland Basin except for Latrobe residents who felt more optimistic than the rest of the region about onshore gas development. In contrast, East Gippsland residents indicated statistically lower levels of optimism.

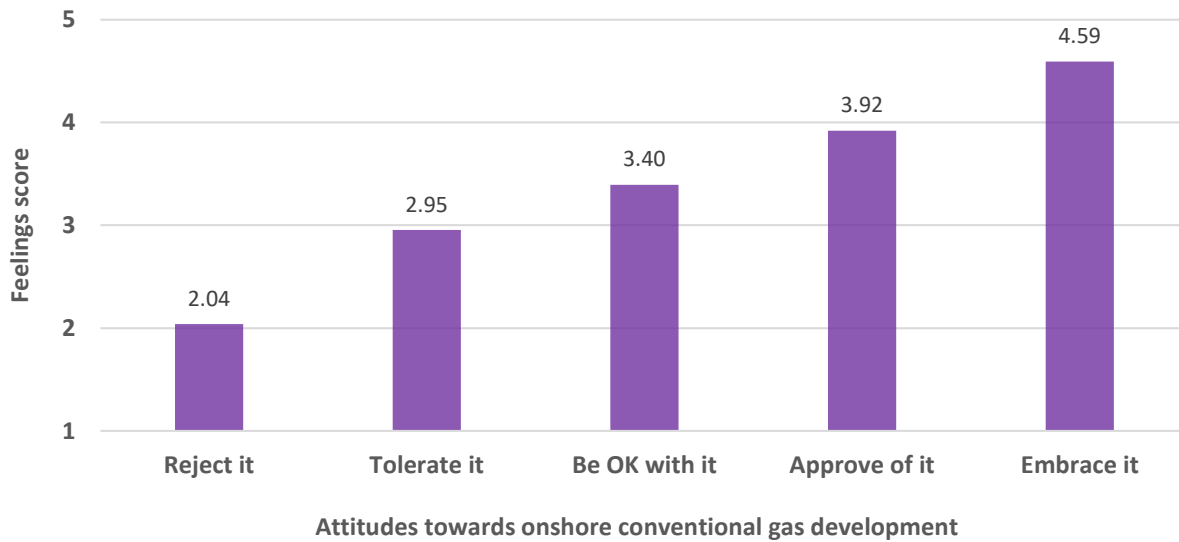
Figure 24 Feelings towards onshore conventional gas development in the Gippsland Basin: By subregion, 2019



Note: \* statistical difference in mean scores between subregions

In terms of how these feelings correspond to different attitudes to onshore conventional gas development in the Gippsland Basin, those rejecting it had clearly negative feelings toward such development ( $M = 2.04$ ). Those who would tolerate it had quite neutral feelings ( $M = 2.95$ ), while those who would be 'OK with it', approve of it, or embrace all had positive feelings (over 3) toward onshore conventional gas development, as shown in Figure 25.

Figure 25 Feelings by attitude to onshore conventional gas development: Gippsland Basin 2019

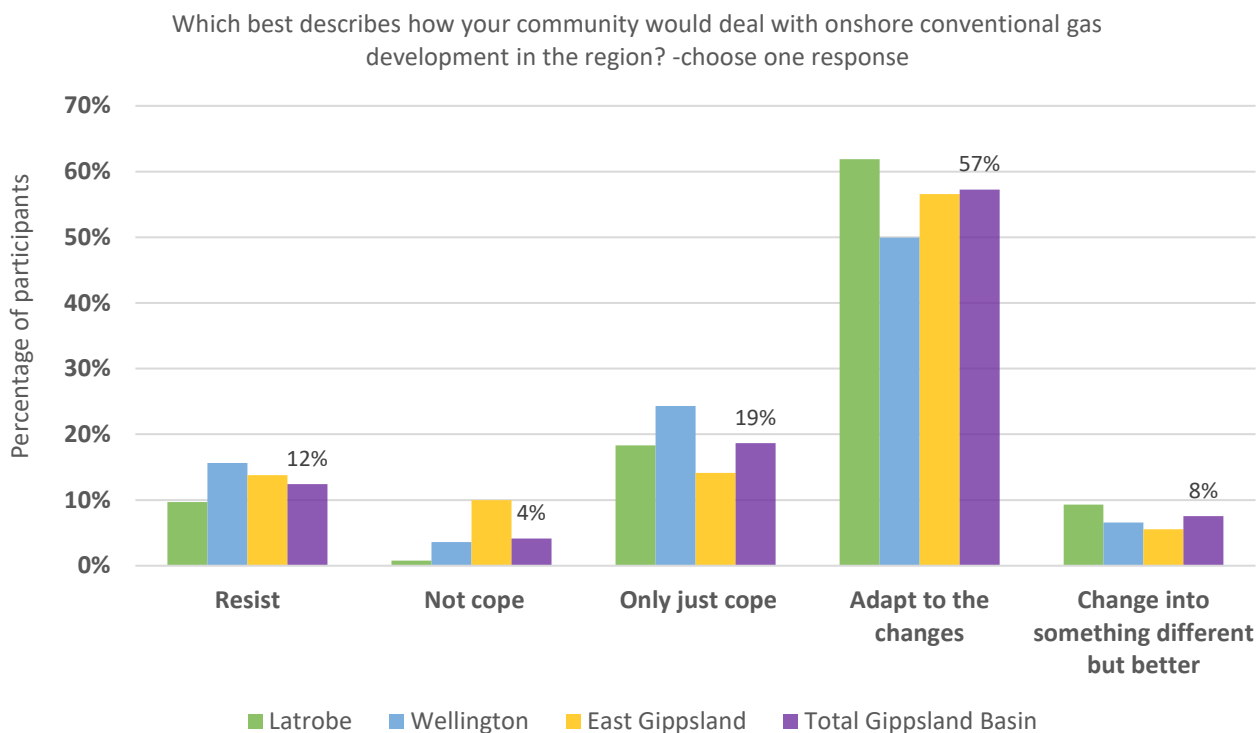


### 5.3 Adapting to onshore conventional gas development

Across the Gippsland Basin, most people believed that their community would adapt to changes associated with onshore conventional gas development (57% of residents) or transform into something different but better (8% of residents). On the other hand, Figure 26 shows that one fifth of the region’s residents believed that their community would only just cope (19% of residents), but few believed their community wouldn’t cope (4% of residents) with more people thinking their community would resist the changes (12% of residents).

Figure 26 also shows some variation across the Gippsland Basin with Latrobe indicating the highest proportion of residents who believed their community would respond well by either adapting to the changes (62% of residents) or transforming into something different but better (9% of residents) and the least proportion reporting that their community would not cope (1% of residents).

Figure 26 Perceptions of community adapting to onshore conventional gas development: By subregion, 2019



## 5.4 Perceptions about onshore conventional gas development and the sector

### 5.4.1 Summary of the underlying drivers

Previous research and interviews with stakeholders identified a range of issues that underpin people’s overall attitudes and feelings towards onshore conventional gas development. The survey asked approximately 90 questions related to these issues, which are grouped together into key themes or underlying drivers. For example, trust in the gas industry or perceptions of governance are each a key theme or underlying driver. Table 4 lists the underlying drivers of people’s attitudes towards onshore conventional gas development measured in the survey along with examples of items for each. It also includes additional measures of risk perceptions, information needs, and views about the government’s processes for handling onshore gas development.

**Table 4 Underlying drivers and perceptions of onshore conventional gas development: Example items**

UNDERLYING DRIVERS AND PERCEPTIONS	DESCRIPTION EXAMPLES OF ITEMS
<p><b>PERCEIVED IMPACTS OVERALL</b></p> <ul style="list-style-type: none"> <li>- More immediate issues</li> <li>- Possible future issues</li> </ul>	<p>Damage to underground water; air, dust, noise, and light pollution; a threat to ‘clean’ and ‘green’ image and tourism; reduces region’s visual attractiveness; impact on farm property values; increased traffic; community division; health impacts</p> <p>The use of conventional gas contributing to climate change; integrity of gas wells over time (e.g. leaks)</p>
<p><b>Risk manageability</b></p>	<p>Any risks have been identified; are understood by science; are manageable; can be alleviated as problems arise</p>
<p><b>Risk severity</b></p>	<p>Potential risks can adversely affect future generations; are potentially disastrous</p>
<p><b>PERCEIVED BENEFITS OVERALL</b></p> <ul style="list-style-type: none"> <li>- Local benefits</li> <li>- Regional and societal benefits</li> </ul>	<p>Local employment; local business opportunities; opportunities for young people to stay in region; corporate support for local community activities; cheaper gas for local industries; cheaper gas for residents</p> <p>Improving energy security in the region; supporting the viability of big gas users; make the region more attractive to new businesses and industry; boosting the wider state economy</p>
<p><b>DISTRIBUTIONAL FAIRNESS</b></p>	<p>Fair to have onshore conventional gas development in the region if your local council was compensated accordingly; your community received a fair share of the benefits; if affected landholders were compensated fairly; if regional benefits outweigh any impacts</p>
<p><b>TRUST IN GAS COMPANY</b></p>	<p>Trust local gas companies to act responsibly; in local communities’ best interests; trust their capability; overall extent of trust</p>
<p><b>RELATIONSHIP QUALITY</b></p>	<p>Gas companies would be accessible or easy to contact; open, honest and transparent; engage in genuine two-way dialogue</p>
<p><b>PROCEDURAL FAIRNESS</b></p>	<p>Gas company would listen to and respect community opinions; inform residents of important developments</p>
<p><b>GOVERNANCE OVERALL</b></p> <ul style="list-style-type: none"> <li>- Formal governance</li> <li>- Engaging community</li> <li>- Working collaboratively</li> <li>- Trust in state departments</li> </ul>	<p>Legislation and regulation could be counted on to ensure companies did the right thing; government regulators would be able to hold companies accountable</p> <p>The local council would listen to and advocate for local communities about gas development; the EPA would listen to and respond to community concerns; state government would listen to and respond to any community concerns.</p> <p>Government, communities, and gas companies can work together to address any problems; to maximise any benefits; share information, resources and learnings; proactively plan for future changes; manage any changes effectively</p> <p>Trust state departments and agencies overseeing onshore conventional gas development to act responsibly; in local communities’ best interests; trust their capability</p>
<p><b>Government processes for handling onshore conventional gas development</b></p>	<p>The state government is following good processes by placing a permanent ban on coal seam gas and fracking; introducing the moratorium on onshore conventional gas; conducting scientific research prior to exploration</p>
<p><b>ENERGY TRANSITION NARRATIVE</b></p>	<p>The role of gas in reducing carbon emissions; and transitioning to renewable energies</p>
<p><b>KNOWLEDGE</b></p>	<p>How much do you feel you know about the onshore conventional gas industry; how aware are you that hydraulic fracturing is permanently banned in Victoria; not needed to extract conventional gas; that one or two conventional gas wells can produce large volumes of gas; about the differences between conventional and unconventional gas</p>
<p><b>Need for more information</b></p>	<p>How much more information do you feel you need about onshore conventional gas development</p>

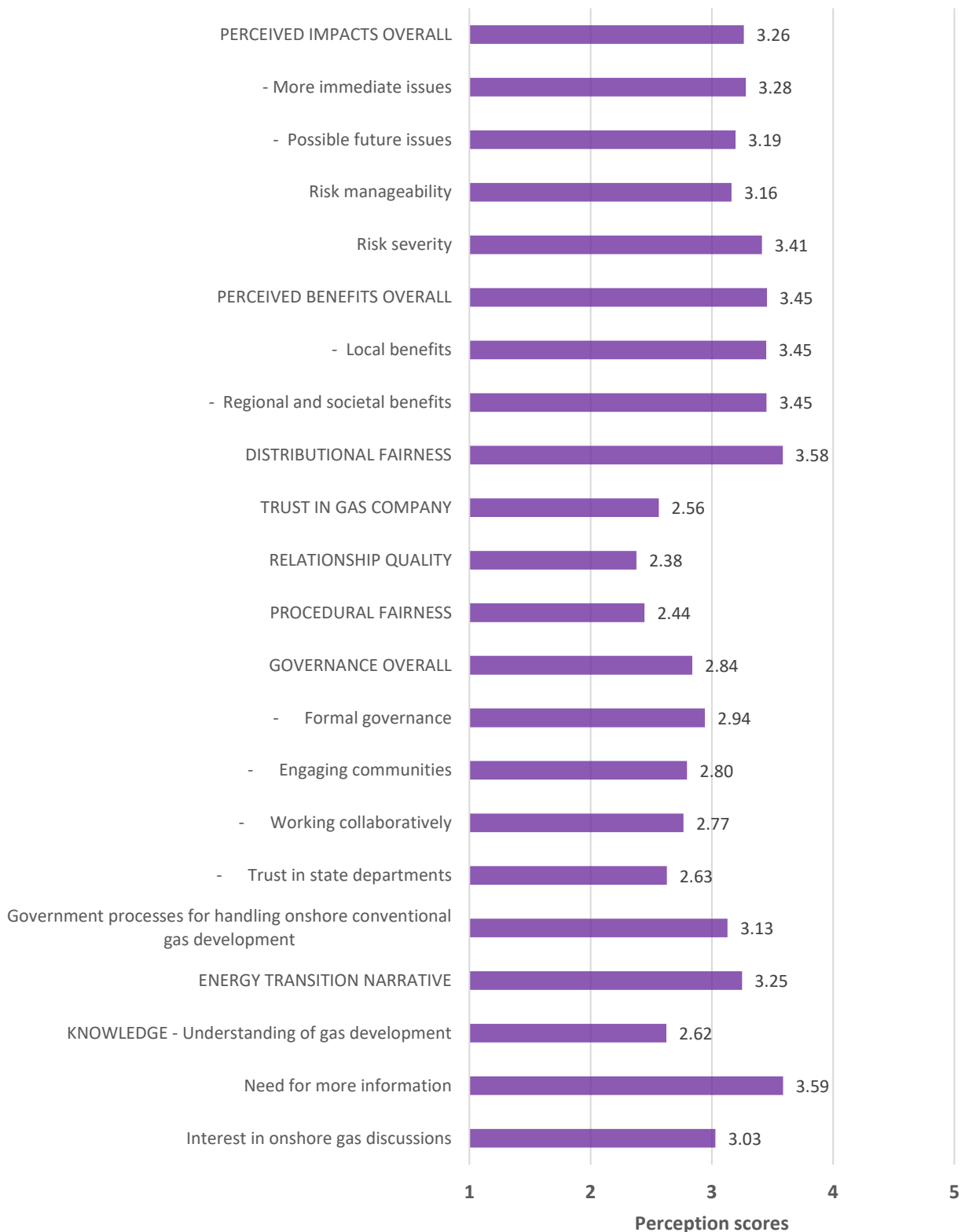
*Note:* Uppercase indicates the underlying drivers of people’s attitudes towards onshore conventional gas development used in the model of social acceptance described in section 5.5.

## 5.4.2 Perceptions of the underlying drivers: A summary

Figure 27 shows the level of each of these underlying drivers for the Gippsland Basin and includes some additional perception scores about risk, the state government's handling of onshore gas development, and information needs. A more detailed analysis of each key driver is found in Section 6, which allows the reader to more deeply engage with each of the concepts and gain a more specific understanding of the driver. The main points are summarised as follows:

- Concerns about impacts overall were not overly high ( $M = 3.26$ ) with similar levels of concern about immediate issues such as impacts on water and the community as those more future oriented concerns, for example the integrity of gas wells over time. People perceived the severity of risks to be moderate ( $M = 3.41$ ) and only had modest confidence that risks could be managed ( $M = 3.16$ ).
- Potential benefits from onshore gas development were perceived favourably ( $M = 3.45$ ). Residents viewed local benefits and wider regional and societal benefits similarly.
- Distributional fairness scores were also moderately good ( $M = 3.58$ ) indicating that people thought it fair on average provided landowners were compensated fairly and that benefits outweighed the impacts.
- Perceptions of trust in gas companies were limited ( $M = 2.56$ ) and views about how the gas company would treat locals (relationship quality and procedural fairness) were unfavourable, indicating low expectations that the community would be treated fairly or that the gas companies would be genuine in their interactions.
- Perceptions of governance and confidence in government to hold companies to account through formal governance like legislation and regulation was marginal ( $M = 2.94$ ). Similarly, expectations that government would engage with communities about gas was borderline and confidence in their ability to work together with communities and gas companies to solve issues was limited, with trust in state government departments and agencies overseeing onshore conventional gas development being relatively low.
- On the other hand, people had a modestly positive view of the government's processes for dealing with onshore gas development in terms of the moratorium and undertaking the science first ( $M = 3.13$ ). People also indicated they had a positive view on average about the broader role of gas in the future energy mix ( $M = 3.25$ ).
- Knowledge levels about onshore conventional gas development and an understanding of the differences between conventional and unconventional gas was limited ( $M = 2.62$ ) with people indicating a need for more information ( $M = 3.59$ ).

**Figure 27 Perceptions about onshore conventional gas development: Summary, Gippsland Basin, 2019**



*Note:* Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions except perceived impacts where the higher the score the greater the concern



### **Differences among subregions**

Perceptions differed among the subregions on six of the underlying drivers. There was a pattern for residents from the East Gippsland subregion to perceive impacts as greater, benefits as lower and confidence in governance as lower than the other subregions. However, East Gippsland residents also indicated statistically higher need for more information about gas development than the rest of the Gippsland Basin. In contrast, Latrobe residents on average indicated statistically lower levels of concern about impacts than the rest of the basin while Wellington residents showed higher levels of confidence in governance than the other subregions. Appendix F details these differences.

### **Differences between farm owners and non-farm owners**

There were also differences in the perception of the underlying drivers between farm owners and those who did not own a farm. Farm owners perceived the benefits to be lower (particularly wider regional benefits), lower levels of fairness in how benefits and impacts would be shared, and lower levels of confidence in state departments to govern onshore conventional gas development. On the other hand, farm owners reported statistically higher levels of knowledge and understanding about gas development. Appendix F details these differences.

## 5.5 Model of social acceptance: A framework for explaining trust and social acceptance of onshore conventional gas development

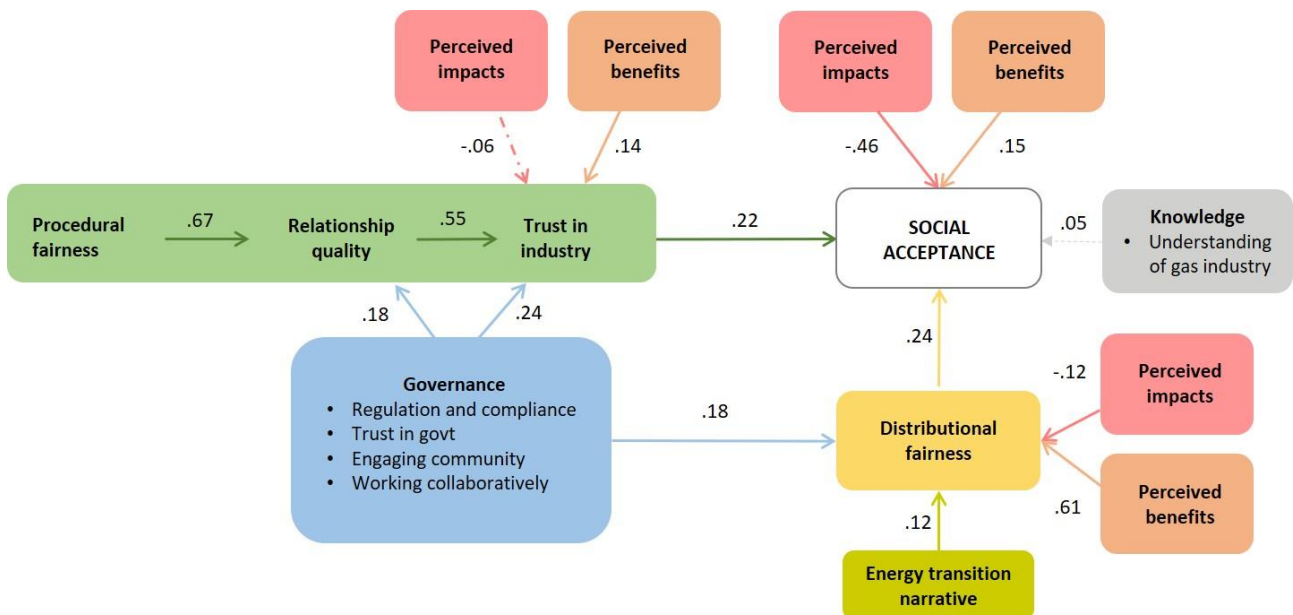
By using the results for each of the underlying drivers described in Table 4, statistical modelling shows how each of these key factors work together to shape people’s overall attitude or social acceptance of onshore gas development. The model displayed in Figure 28 also shows how these factors contribute to trust in the industry and a sense of fairness in how people perceive costs and benefits would be shared, if onshore conventional gas development were to proceed.

### 5.5.1 How the model works

The model uses arrows to show the relationships among the different drivers and numbers on the arrows to show the relative importance of each of the drivers. Looking at the size of the numbers on the arrows gives an indication of the size of a factor’s importance in determining the perception of the factor that the arrow is pointing to. This means the larger the number the more important the factor. See Appendix D for a description of path analysis.

The relationships between all these factors were positive except for perceived impacts, which demonstrated negative relationships (shown by a negative sign on the number). A positive relationship means that when a person perceives one factor to be high, they are more likely to perceive the corresponding factor to also be high. In contrast, a negative relationship means that when a person perceives one factor to be high, they are more likely to perceive the other factor to be low. Dashed arrows show expected relationships which were not significant.

Figure 28 The CSIRO model of social acceptance of onshore conventional gas development: Gippsland Basin, 2019



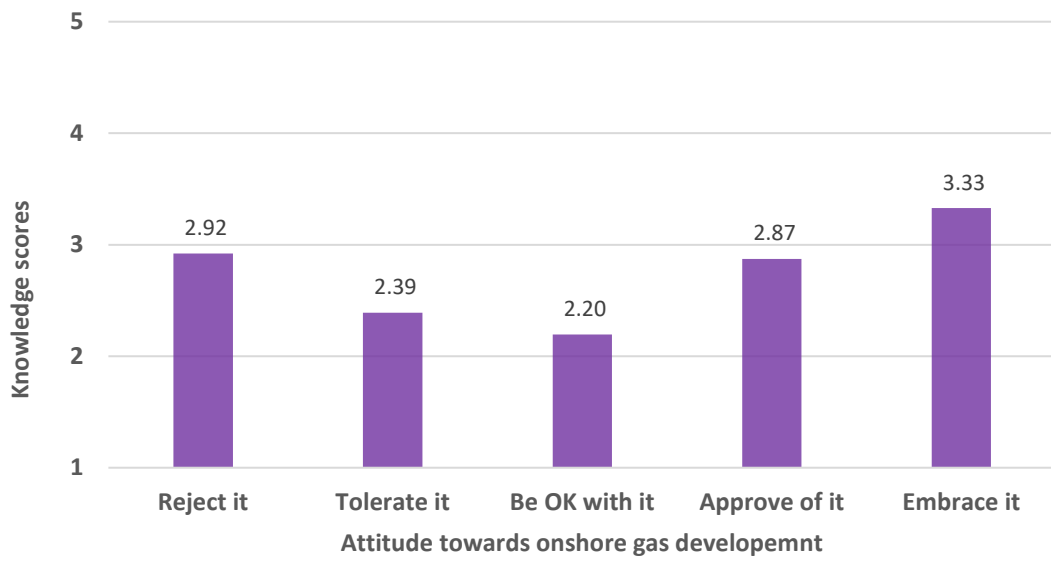
## 5.5.2 Results of the model: A summary

Analysis shows the model works extremely well to explain 75% of the variation in social acceptance of onshore conventional gas development in the Gippsland Basin.

Some of the key points are as follows:

- **Perceived impacts** and **benefits** both act directly on acceptance to directly influence people's level of acceptance.
  - Perceived impacts is the main driver of acceptance or lack thereof.
- **Perceived impacts** and **benefits** also act indirectly to influence acceptance by shaping trust in the industry and perceptions of distributional fairness.
  - Perceived benefits is more important in contributing to people's perceptions of how much they trust the onshore conventional gas industry and how much they believe it is fair in terms of how costs and benefits would be distributed and shared.
- Perceptions of **trust in the industry** are largely determined by the quality of the relationship industry has with community and the procedural fairness by which they would treat their community.
  - Good governance is also important for building trust.
- Good **governance** of the industry not only supports trust in industry but also beliefs about distributional fairness.
  - This means compliance, regulations, planning, collaborating, engaging with communities, and trust in gas governing bodies all shape people's views of how much they trust industry and how fair they believe gas development would be for their community.
- Perceptions of **distributional fairness** directly influences acceptance.
  - Benefits are at least three times as important as impacts in driving a sense of fairness.
  - The narrative around the role of onshore conventional gas and what it plays in Victoria's transition to renewable energy sources is also important for determining perceptions of fairness. The more people believe there is a greater need for gas in the energy mix, the more they factor this point into weighing up the fairness of costs and benefits.
- People's **knowledge and understanding** of the industry has a small influence on acceptance.
  - Knowledge has a non-linear relationship with attitudes about onshore conventional gas development. This means that low levels of knowledge do not correspond to the least favourable views about gas development. Rather, as Figure 29 shows, the relationship is a U-shape with the lowest levels of knowledge corresponding to the lukewarm attitudes of tolerating it or being OK with it. Both people who reject gas development and those who approve of it have higher levels of knowledge and understanding, while the highest level of knowledge associates with those people who embrace such gas development. Regardless, the level of knowledge and understanding was either low or borderline except for those who embrace gas, which was moderate.

Figure 29 Knowledge scores for each attitude group: Gippsland Basin, 2019



## 6 Deeper dive into the underlying drivers of social acceptance

### 6.1 Possible industry effects: Concerns, risks, and benefits

#### 6.1.1 Perceived impacts

The greatest concerns about possible impacts of onshore conventional gas development in the Gippsland Basin was the possible unfair treatment of farmers ( $M = 3.71$ ) and the potential for community division over any development ( $M = 3.55$ ), both of which were higher than or similar to concerns for damage to underground water ( $M = 3.52$ ). The level of these concerns was moderate.

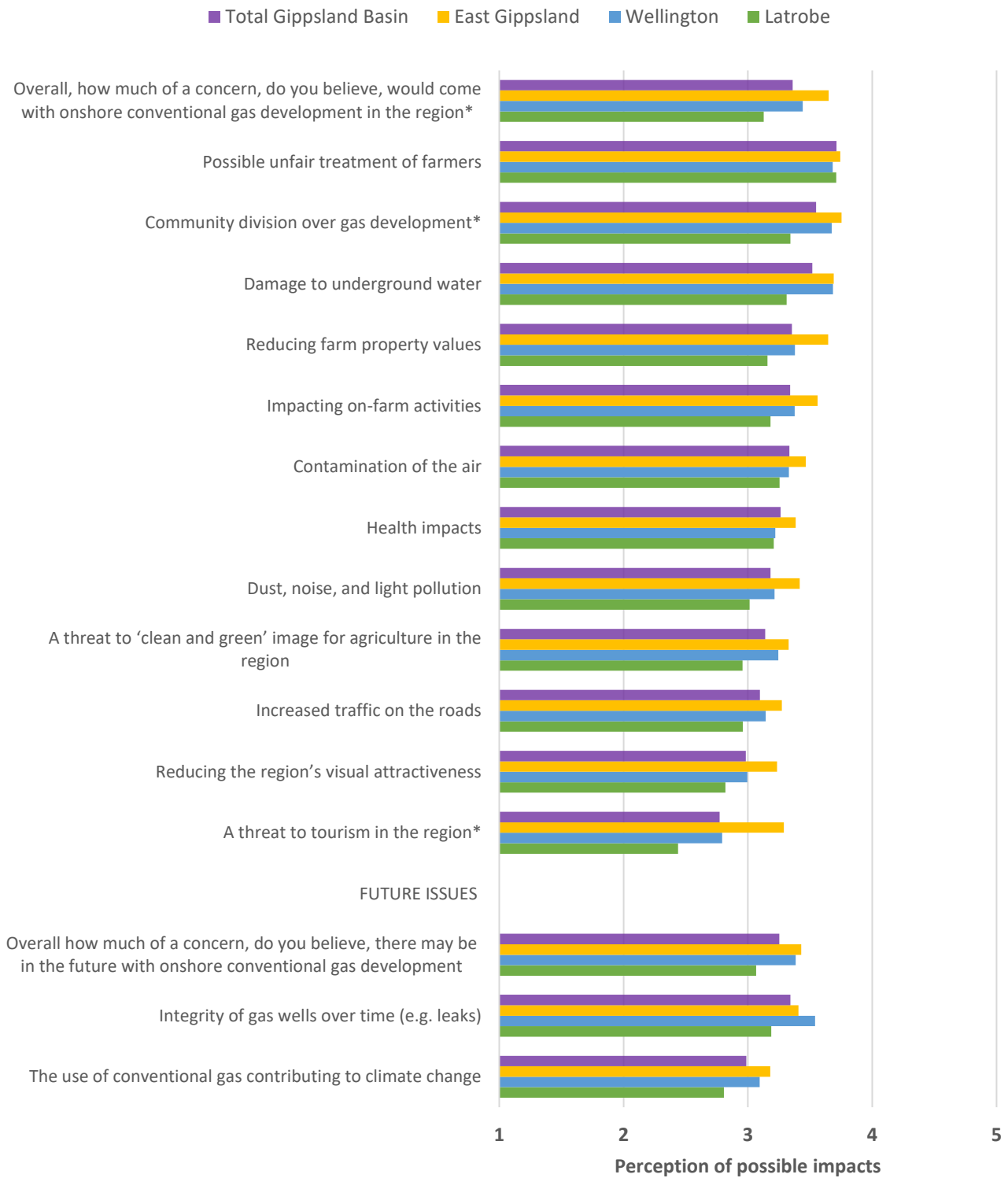
There were low levels of concern about increased traffic on roads ( $M = 3.10$ ), a possible threat to the clean green image of the region's agriculture ( $M = 3.14$ ), and the concern about dust, noise, and light pollution ( $M = 3.18$ ). There was borderline level of concern about the possible effect of gas development on the region's visual attractiveness ( $M = 2.98$ ) and people were not really concerned on average about the threat to the region's tourism ( $M = 2.77$ ), except in East Gippsland.

Figure 30 shows some variation in these level of concerns across the subregions though in most cases these differences were not statistically different, meaning that the subregions had similar levels of concern about many of the impacts. While concerns about community division were moderately high, they were significantly lower for Latrobe residents ( $M = 3.34$ ), and as mentioned, East Gippsland residents were significantly more concerned about the threat to tourism ( $M = 3.29$ ) compared to the other two subregions who were not really concerned on average with scores less than 3 ( $M = 2.44$  in Latrobe and  $M = 2.79$  in Wellington). The other statistical difference was in the overall perspective residents had about impacts of onshore conventional gas development: Latrobe had the lowest overall score ( $M = 3.13$ ) reflecting the lowest level of concerns among the subregions and East Gippsland the highest ( $M = 3.65$ ).

When it comes to concerns about future issues there was moderate level of concern across the Gippsland Basin about maintaining the integrity of gas wells over time ( $M = 3.34$ ) and borderline level of concern on average about onshore conventional gas contributing to climate change ( $M = 2.99$ ).

Appendix E details the perception score for each item of perceived impacts by subregion.

Figure 30 Perceived impacts of onshore conventional gas development in Gippsland Basin: By subregion, 2019



Note: 1 = not at all concerned and 5 = very concerned; the higher the score the greater the concern

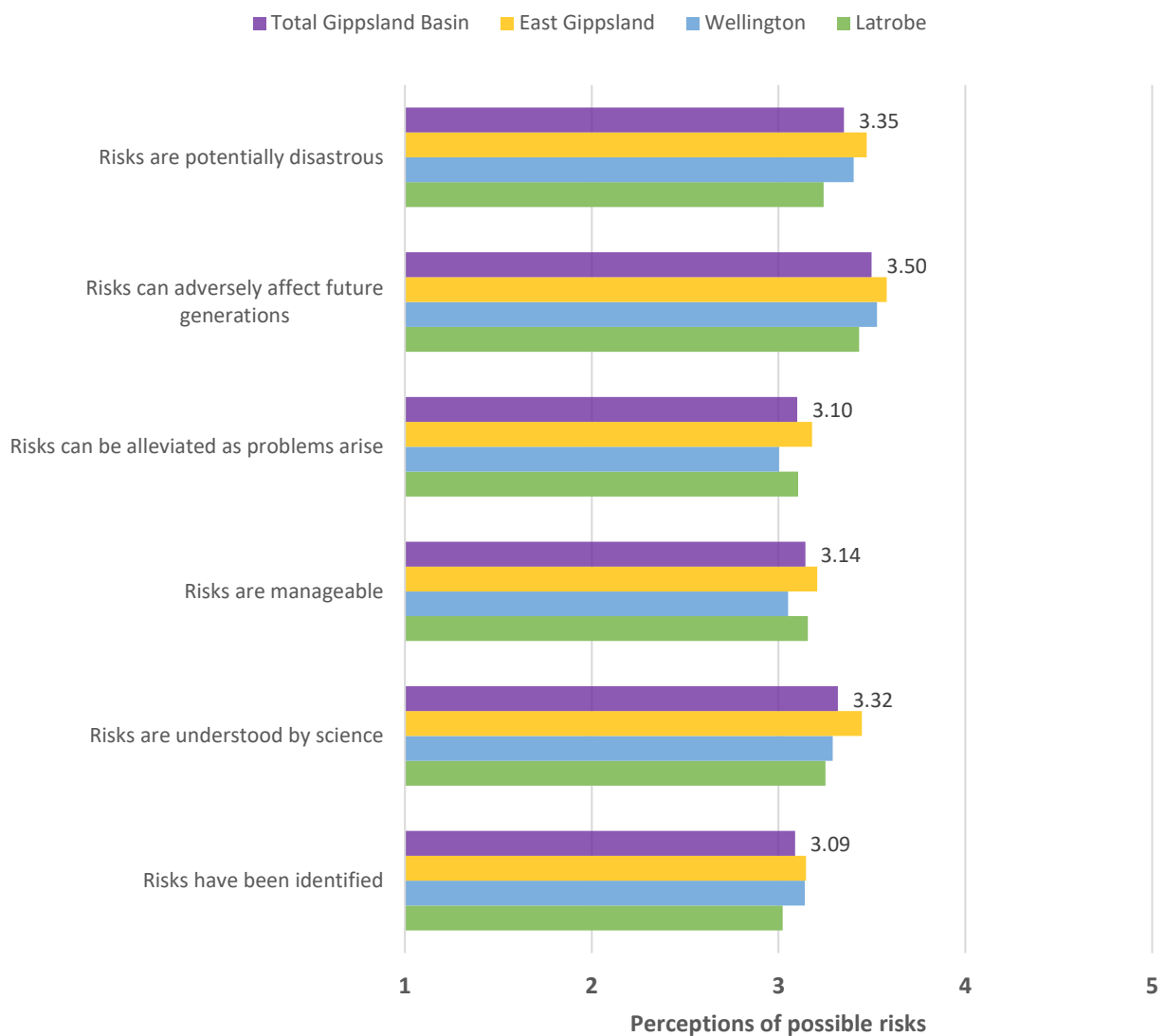
\* significant difference between subregions

## 6.1.2 Perceived risk

People tended to view the risks associated with onshore conventional gas development moderately. Figure 31 shows residents felt the risk of possible adverse effects affecting future generations to be moderately high ( $M = 3.50$ ) but were less concerned about risks being potentially disastrous ( $M = 3.35$ ). They perceived the risks as just manageable on average ( $M = 3.14$ ), and somewhat understood by science ( $M = 3.32$ ). Residents also reported borderline levels of agreement that the risks associated with onshore conventional gas have been identified ( $M = 3.09$ ) and that risks can be alleviated as problems arise ( $M = 3.10$ ).

Figure 31 also shows these views were similar across the Gippsland Basin with no statistical differences in risk perceptions among the subregions.

**Figure 31 Perceptions of risk from onshore conventional gas development in the Gippsland Basin: By subregion, 2019**



Note: 1 = Strongly disagree and 5 = Strongly agree  
 \* significant difference between subregions

### 6.1.3 Perceived benefits

Perceptions of benefits from onshore conventional gas development were moderately favourable with people perceiving local benefits and wider regional and state benefits similarly. Residents from across the basin perceived the corporate support that may come from gas companies to local communities ( $M = 3.69$ ), career opportunities for young people to stay in the region ( $M = 3.67$ ), and the possible opportunities for local businesses ( $M = 3.60$ ) and local employment ( $M = 3.66$ ) as the four most positive benefits.

On the other hand, there was only borderline agreement that onshore gas development would provide cheaper gas for local industries ( $M = 3.10$ ) and for local residents ( $M = 3.02$ ).

Figure 33 shows variations across the Gippsland Basin in how people perceived potential benefits from onshore conventional gas development. Residents from East Gippsland held less positive views about potential benefits for local business, local employment and from corporate sponsorship, whereas Latrobe residents viewed these benefits far more favourably. Latrobe also perceived the wider regional and state benefits overall as more positive than the other subregions, with East Gippsland the least positive.

#### The role of gas more broadly: the energy transition narrative

People viewed the role gas has to play in the energy transition differently from other benefits. Residents agreed that there was an important role for gas in reducing carbon emissions by replacing coal ( $M = 3.45$ ), but were more modest in their agreement that gas was important in the transition to renewable energy sources ( $M = 3.28$ , as shown in Figure 32). There were no real differences in views about the role for onshore conventional gas development across the subregions.

Figure 32 Perceptions of the role of onshore conventional gas in the energy transition

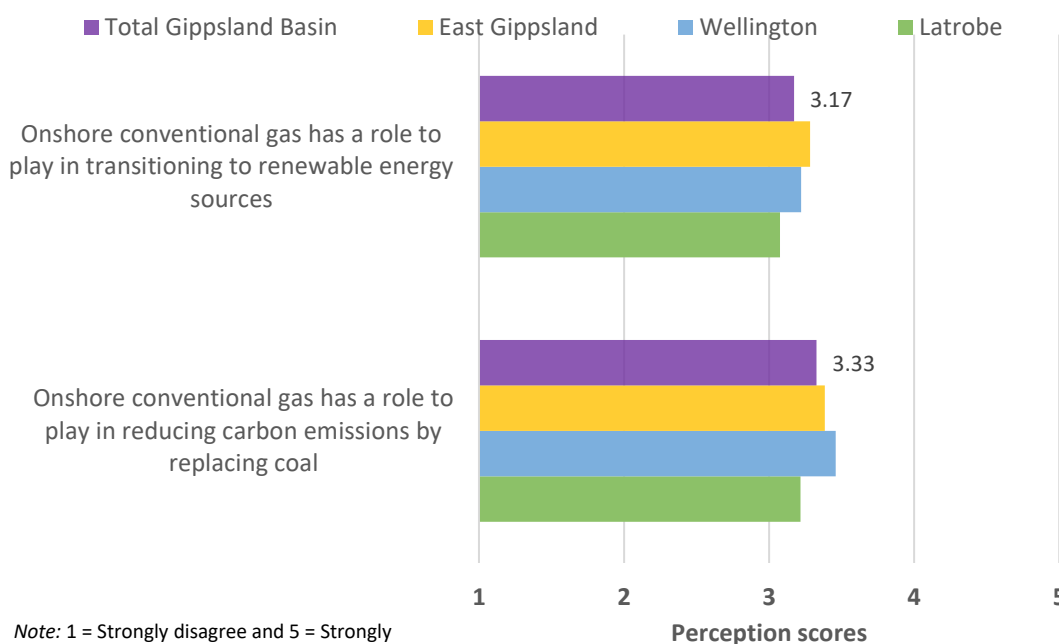
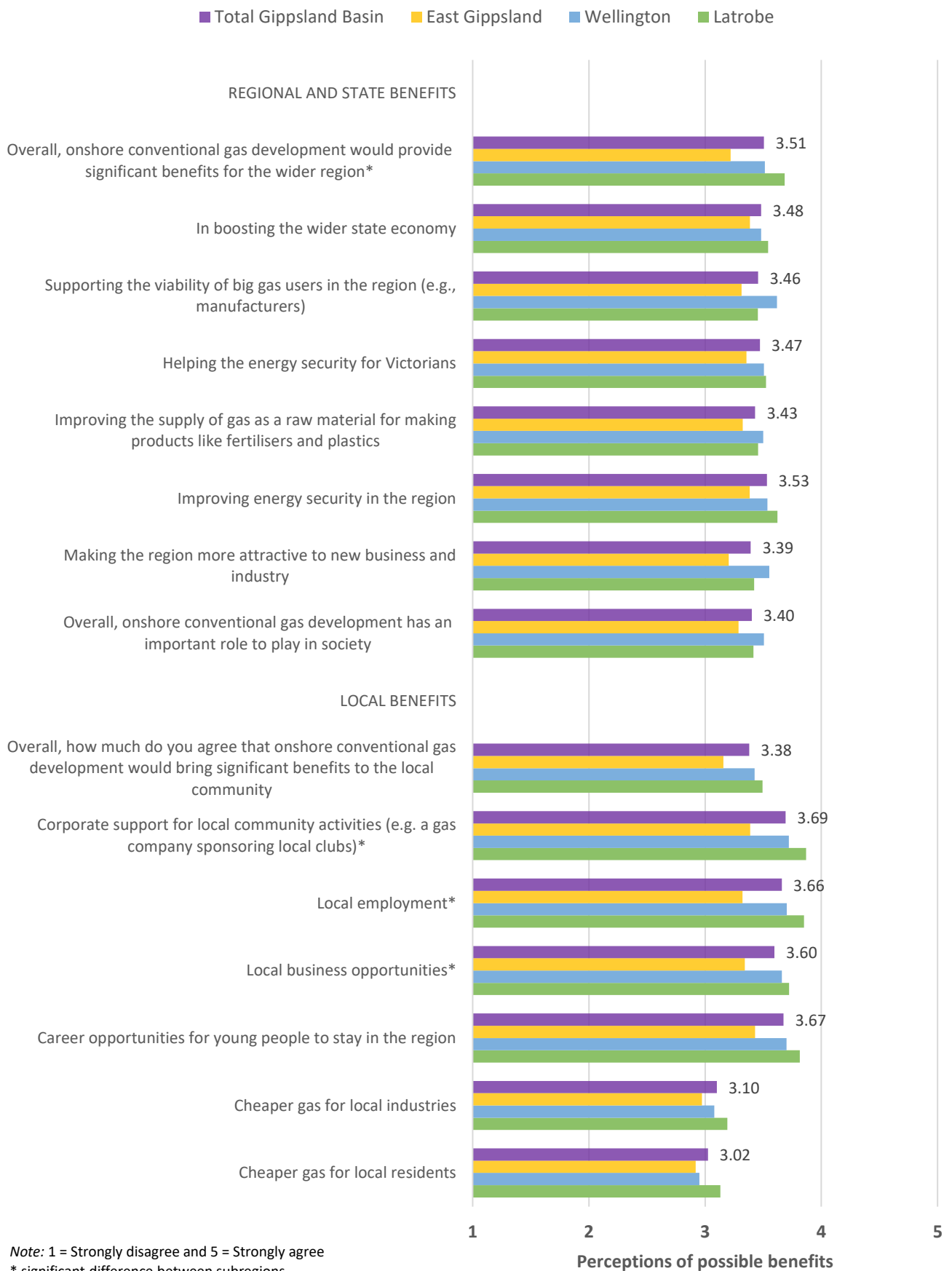




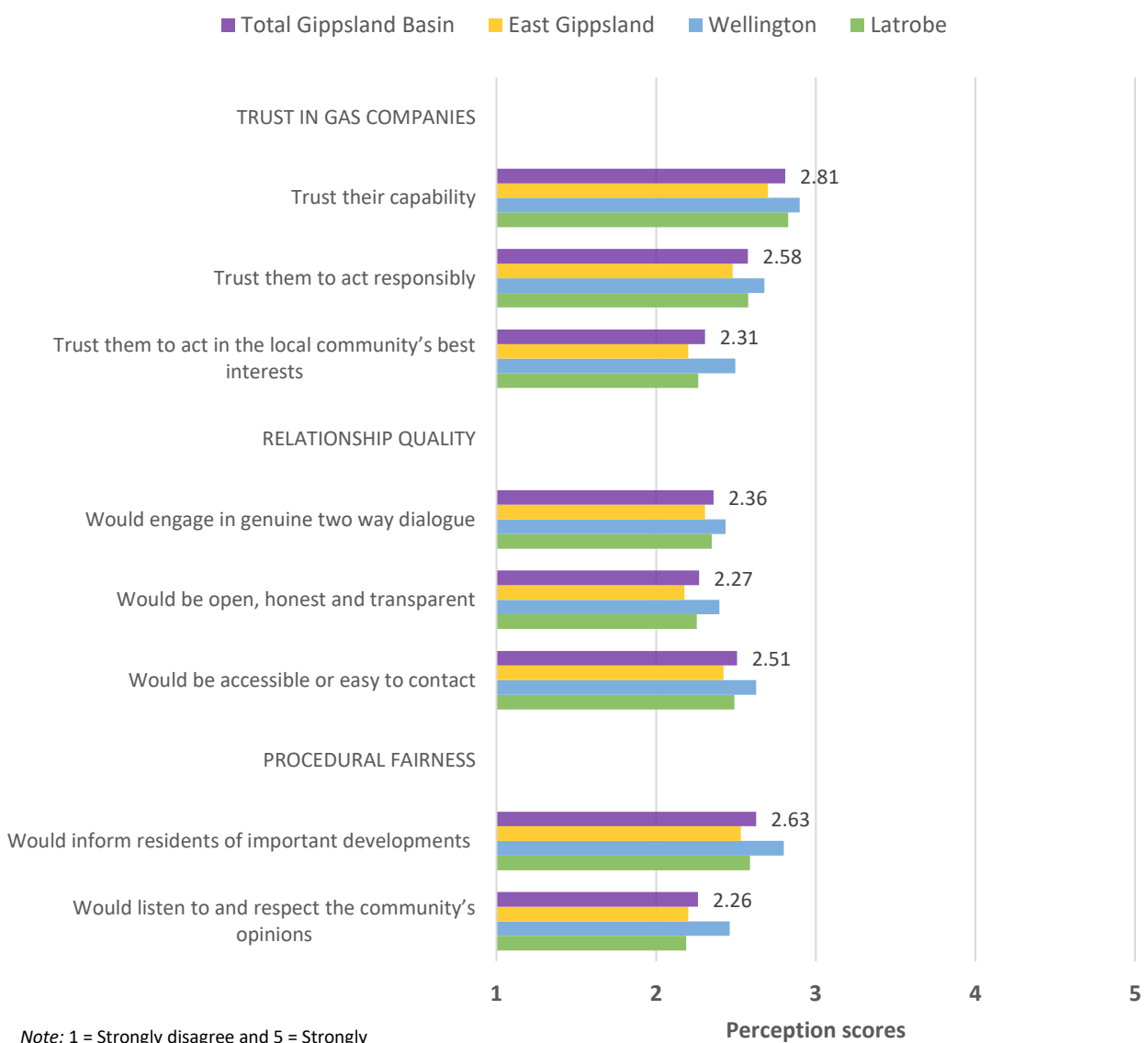
Figure 33 Perceived benefits from onshore conventional gas development in Gippsland Basin: By subregion, 2019



## 6.2 Industry and community relationship: Trust in industry, relationship quality and fairness

Results showed trust in gas companies was limited with people having the most trust in the gas companies' capabilities and the least trust in their preparedness to act in communities' best interests. Figure 34 also shows expectations were low across the Gippsland Basin that gas companies would engage with them in a genuine, open, and transparent way or that the companies would be very accessible or easy to contact. Residents held slightly more positive views that gas companies would keep them informed of important developments. These views were similar across the Basin.

Figure 34 Perceptions of trust in industry, relationship quality, and procedural fairness: By subregion, 2019



### 6.3 Governance: Trust in government, regulations, engaging and working with the community

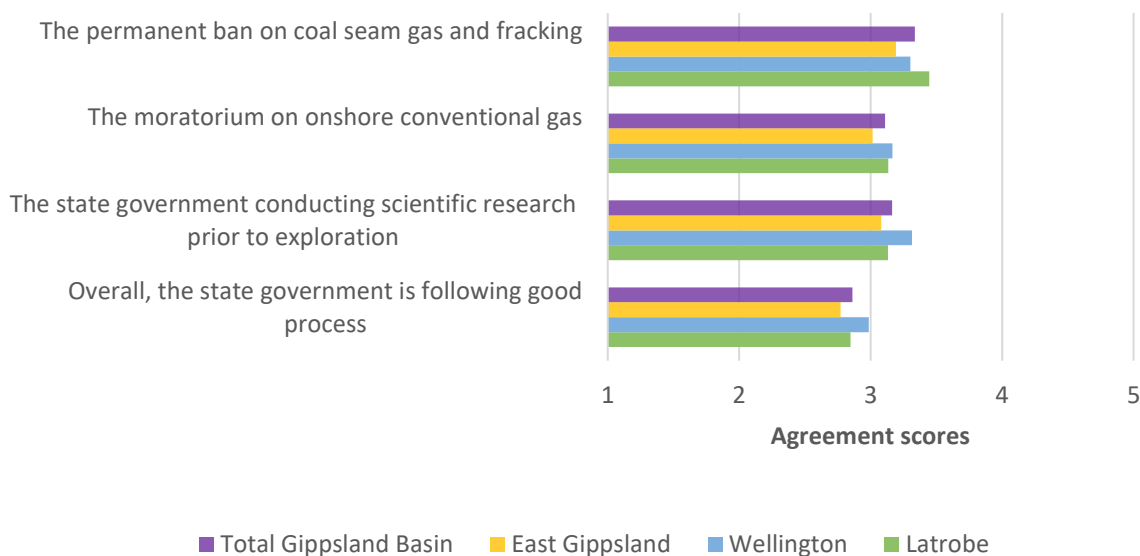
Confidence in formal governance such as legislation and regulation and the respective governing authorities to hold gas companies to account was borderline on average across the Gippsland Basin. People felt similarly modestly about whether local council would listen and advocate on their behalf, and that government regulators would listen to and respond to community concerns. State government was seen as the least likely to listen to local community concerns, especially in East Gippsland. Similarly, trust in state departments to act in the community’s best interest was relatively low across the Gippsland Basin.

Figure 36 shows some significant differences among the subregions. Residents in Wellington were significantly more positively about being able to work collaboratively with gas and the gas industry, especially compared to the East Gippsland. The community was also significantly less likely to think that the State government would listen to and respond to their concerns in East Gippsland.

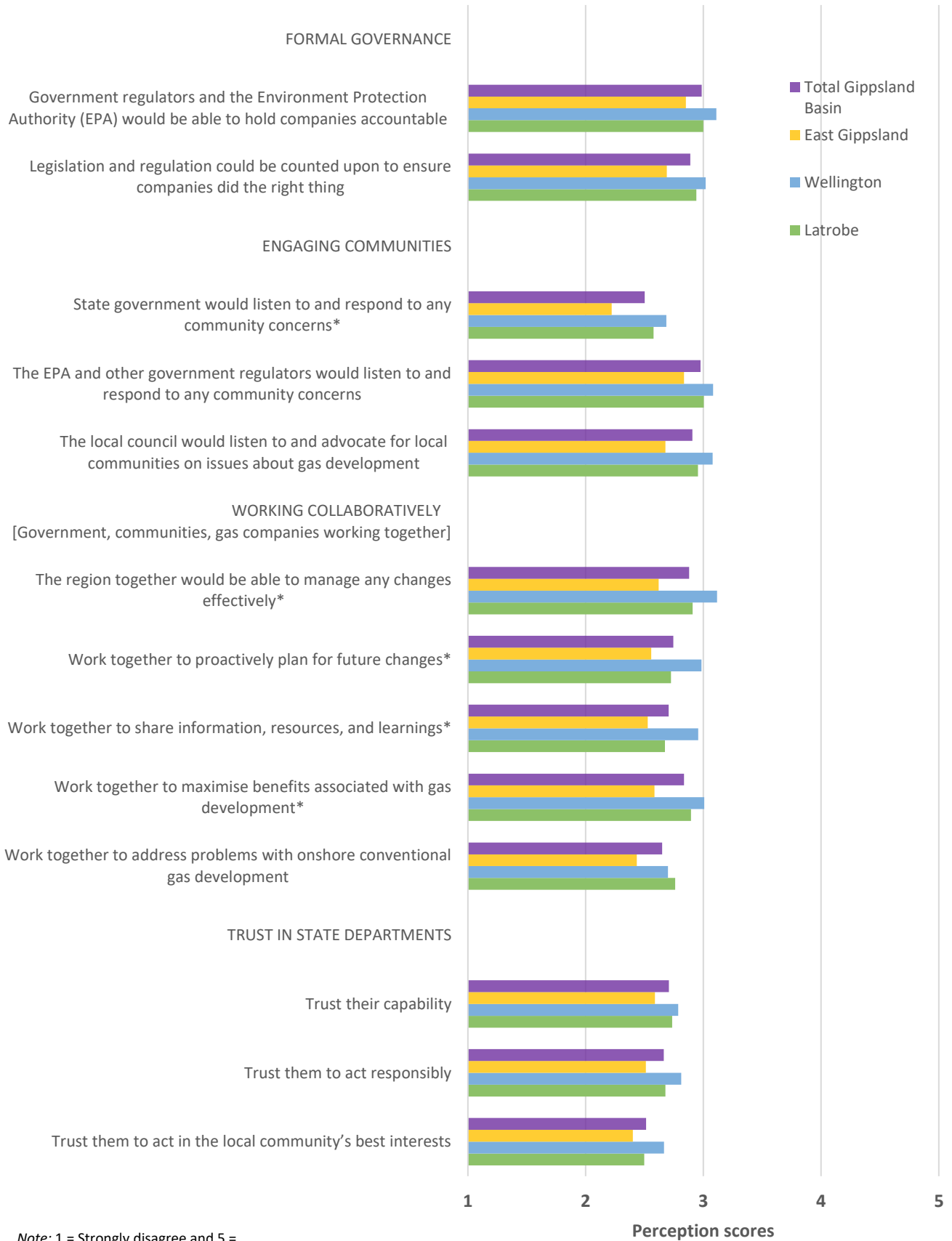
However, Figure 35 shows people were more favourable of the state government’s processes for dealing with onshore gas development in terms of the permanent ban on fracking, the moratorium on onshore conventional gas, and undertaking the science first.

**Figure 35 Perceptions of government’s handling of onshore conventional gas development**

Thinking about the government's handling of onshore conventional gas development, how much do you agree the following have been good processes for decision making?



**Figure 36 Perceptions of formal governance, informal governance, and trust in government: By subregion, 2019**

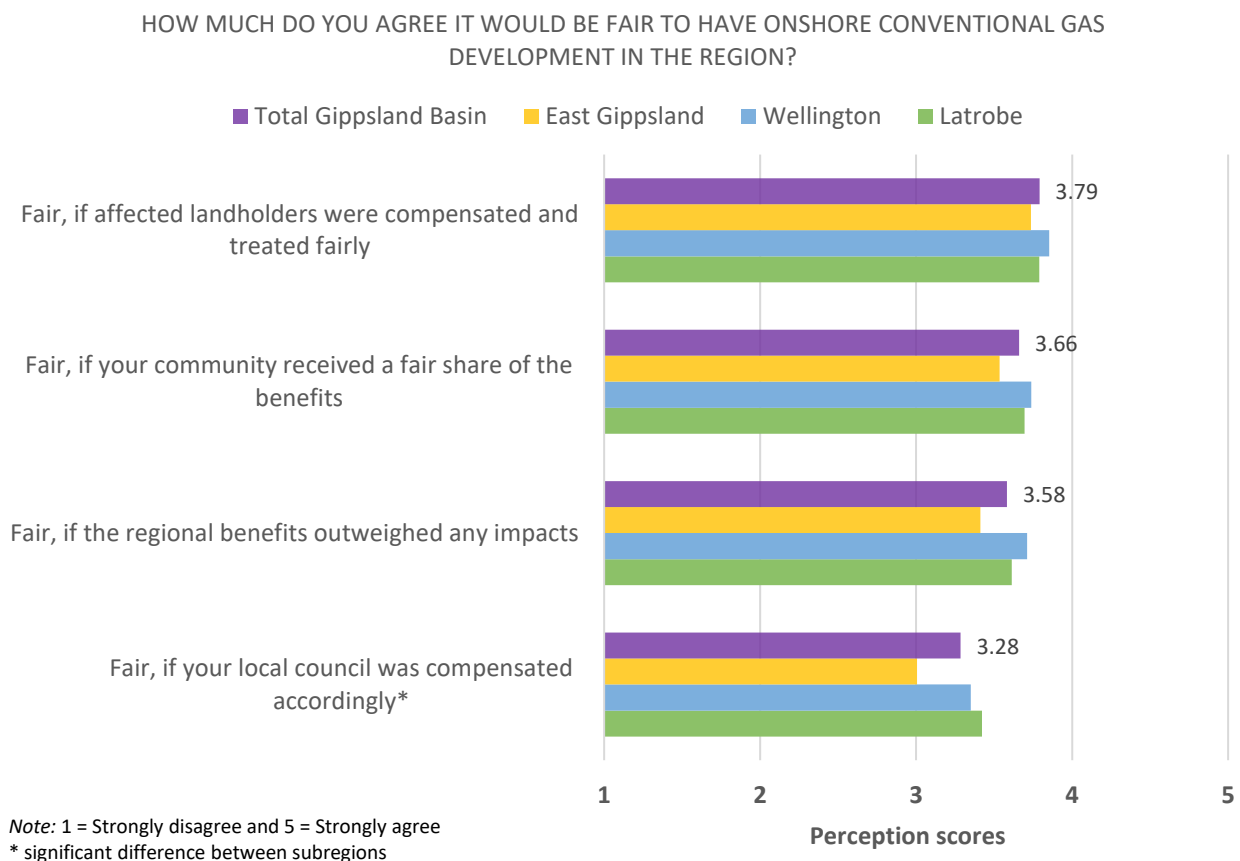


Note: 1 = Strongly disagree and 5 = Strongly agree

## 6.4 Distributional fairness: Sharing costs and benefits

Figure 37 shows that residents' highest perceptions of fairness around onshore conventional gas development in the region related to compensating affected landholders fairly. When given the option of the local council being compensated accordingly, residents only indicated modest views that this was necessary for a fair outcome, especially in East Gippsland. More important was that communities more generally receive a fair share of the benefits.

**Figure 37 Perceptions of distributional fairness to have onshore conventional gas development in the region: By subregions, 2019**



## 6.5 Knowledge and information

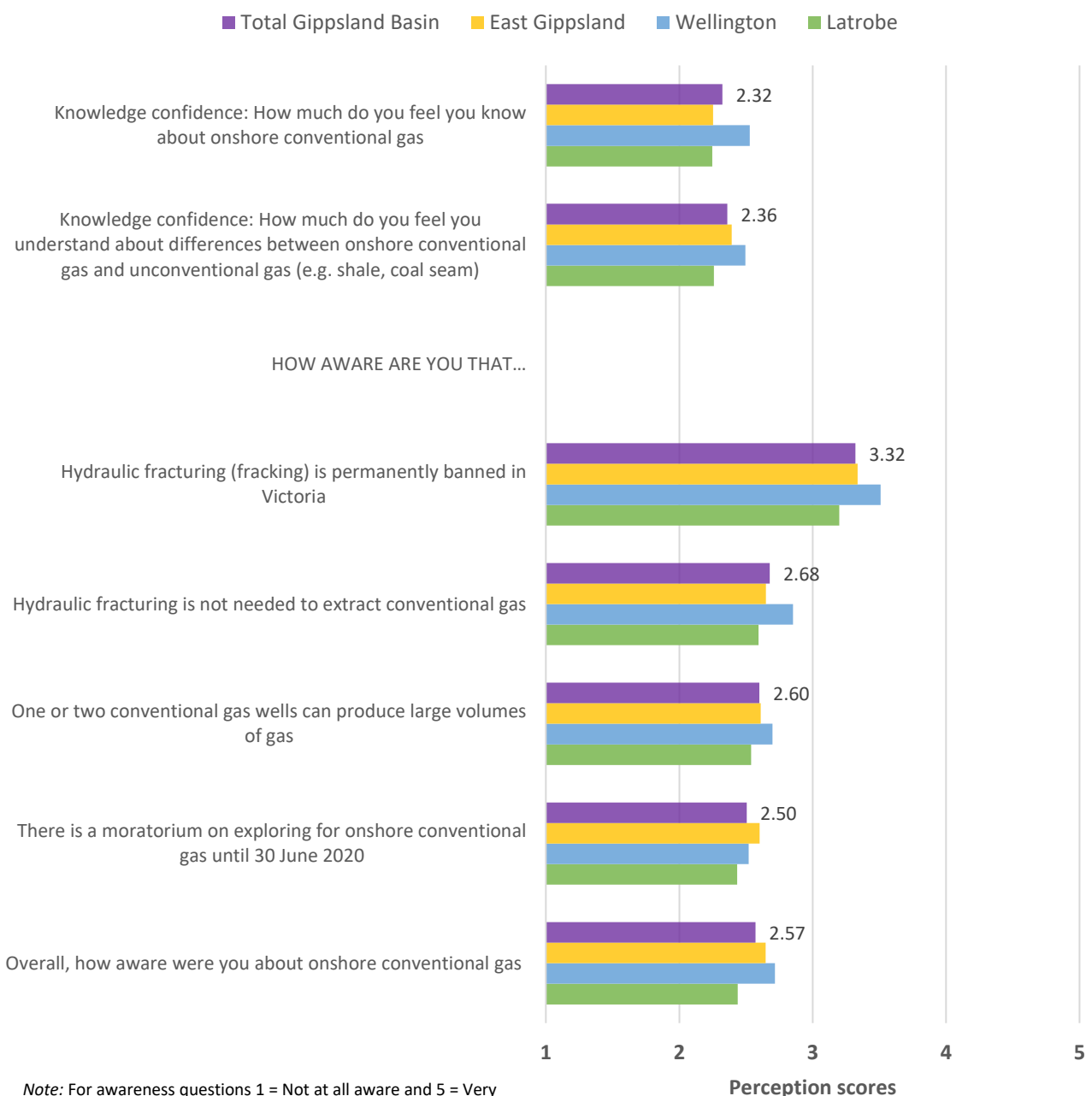
### 6.5.1 Knowledge confidence and awareness

Figure 38 shows residents across the Gippsland Basin had low levels of confidence in their knowledge when it comes to how much they feel they know about onshore conventional gas

development ( $M= 2.32$ ). They also had low confidence in understanding differences between conventional and unconventional gas development ( $M = 2.36$ ).

Residents indicated low levels of awareness and understanding about issues related to the extraction of gas, such as hydraulic fracturing not needed to extract conventional gas or that large volumes of gas can come from one or two conventional wells. On the other hand, people were more aware that hydraulic fracturing is permanently banned in Victoria, but a lot less so about the moratorium that exists on exploration for onshore conventional gas until June 2020. These results were similar across the subregions.

Figure 38 Knowledge confidence and awareness levels about onshore conventional gas: By subregion, 2019



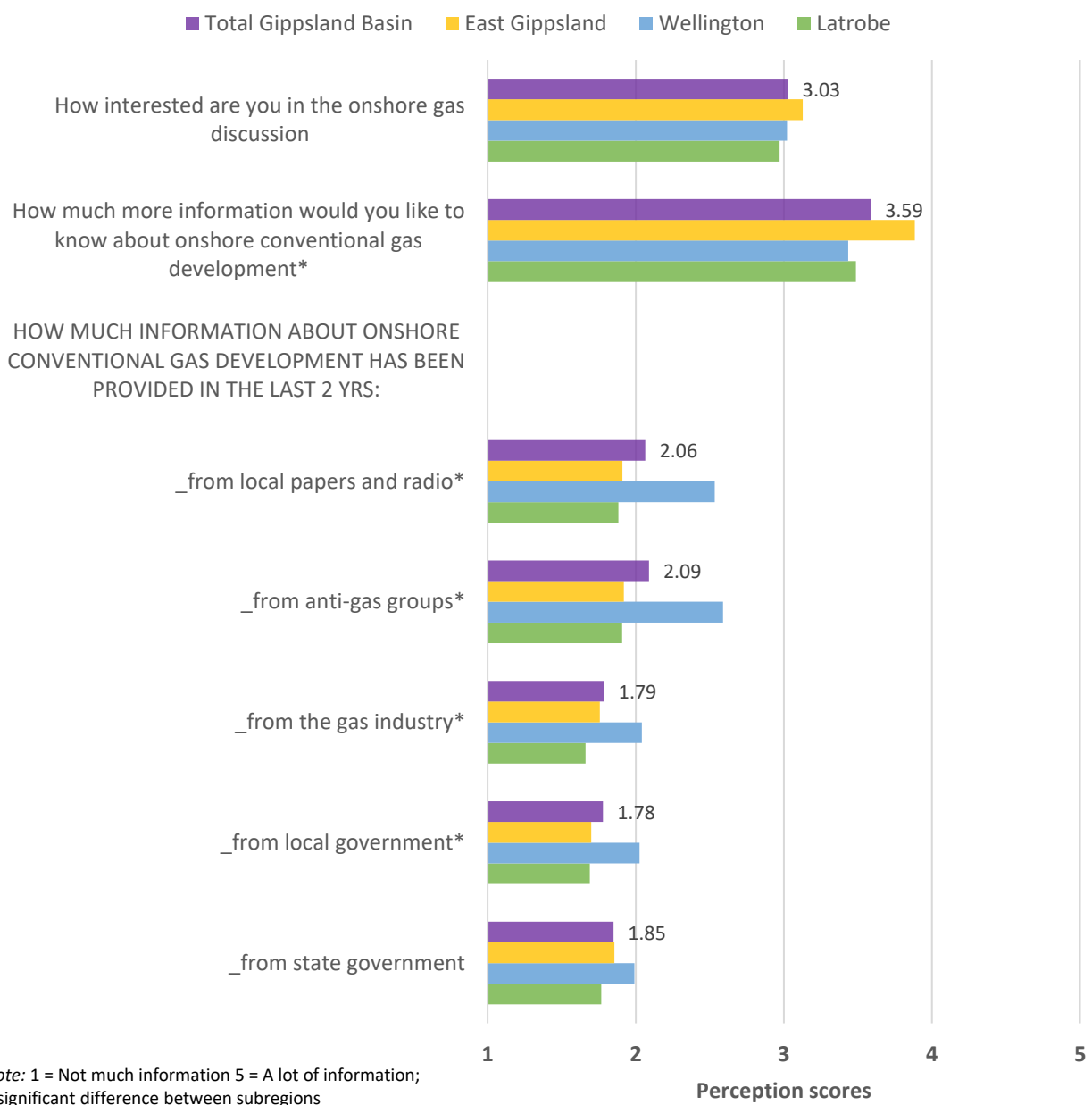
Note: For awareness questions 1 = Not at all aware and 5 = Very aware; For knowledge confidence questions 1 = Not much at all and 5 = Know a lot

## 6.5.2 Information need and information sources

Across the Gippsland Basin people indicated getting limited amount of information about onshore gas development in the last two years. Figure 39 shows that people had mostly received their information from local papers and radio, and anti-gas groups though this was still limited. Figure 39 shows there were statistical differences among the subregions with a pattern emerging of Wellington residents indicating getting more information than the other subregions.

Residents in all subregions indicated they would like to know more about onshore conventional gas development, particularly those residents from East Gippsland. However, residents across the basin indicated borderline levels of interest or 'somewhat interested' on average in the onshore gas discussion.

Figure 39 Perceptions of information sources and information need: By subregion, 2019



### 6.5.3 Things that people would like to know more about

Using an open-ended question, participants in the Gippsland Basin were asked to briefly describe the main information they would like about onshore conventional gas development. Thematic analysis revealed key topics residents would like to know more about.

Table 5 Information needs about onshore conventional gas development in the Gippsland Basin

MAIN THEMES	% OF RESIDENTS	SUBTHEMES (% OF MAIN THEME COMMENTS)
Potential negative effects	49%	Environmental impacts and risks (48%); health & safety impacts/risks (22%); impacts on farmers, agriculture and landholders (16%); risk mitigation and management plans (13%)
Potential benefits	37%	Pros and cons generally (34%); employment impacts and benefits (22%); economic cost and benefits (22%); who benefits? (14%)
What's happening	35%	Where (33%) and when (32%); onshore conventional gas development plans (18%); general info about developments (14%)
Geographic level	26%	Local area, community and town level information (81%); regional level information (16%); state and national level (3%)
Processes involved	22%	Drilling, extracting, and distributing onshore conventional gas (73%); destination of the gas (17%); resource quantity, quality, location and value (8%)
Governance	16%	Information around control, decisions, ownership, responsibility and accountability for onshore conventional gas development (46%); need for honesty, transparency and trust in information (22%); information about foreign ownership and exports (20%); independent and objective scientific research (19%)
Why do it?	5%	Rationale, purpose, and goals of onshore conventional gas development (54%); alternatives to this development such as renewable energy (31%); how to resist or stop such development (15%)
Other information	2%	n.a.
None needed or unsure	12%	n.a.

*Note:* The percentage of total residents can add to more than 100% because respondents may express more than one information need; weighted data; n.a. = not applicable.

Table 5 shows that nearly half of respondents in the Gippsland Basin (49%) wanted to know more about any potential negative effects of onshore conventional gas development, particularly any environmental impacts and risks. Over a third (37%) wanted more information about benefits such as economic and employment benefits, including any adverse impacts on these (i.e., a balanced view of benefits).

A need to know what's happening (35%) was related to the where and when of onshore conventional gas development, as well as more general information about onshore conventional



gas plans and developments. Another dimension was seeking information at different geographic levels. Most information needed related to the local area or community, followed by the regional level, and to a much lesser extent the state and national levels.

Almost a quarter of residents (22%) wanted to know more about the process involved. This need was primarily about processes of drilling, extracting, and distributing onshore conventional gas. Residents in Gippsland also wanted to know how these developments would be governed (16%) – particularly around decision making, responsibility and accountability – and whether the gas would be exported. There was also a clear need expressed for honest, transparent and trustworthy information from independent and objective sources (e.g., scientific research).

A relatively small percentage of respondents (5%) wanted to know why we need onshore conventional gas development. What was the rationale behind onshore conventional gas development and what about alternatives such as renewable energy? Only 12% of residents did not need any further information or were unsure of what information they may need.

## 7 Demographic differences

The data was analysed to identify differences in findings based on demographic characteristics. Differences in perceptions of community wellbeing and local attitudes and perceptions of onshore conventional gas development based on age, gender, education, and income levels were identified and are reported in this section. Differences based on whether participants lived in a town or out of a town are also described. Differences based on subregions and farm ownership are reported in the main part of the report. All demographic and locational differences are also summarised in tables in Appendix F.

### **Age**

Overall community wellbeing was significantly higher for older residents (aged 55+) than for younger residents (18 to 34 years) in the Gippsland Basin. This was reflected across a range of community wellbeing dimensions: personal safety and health, services and facilities, environmental quality, and community trust, participation, and spirit. Older residents also had significantly higher place attachment and expected future community wellbeing than younger residents.

Attitudes and perceptions of onshore conventional gas development did not vary greatly by age. However, younger residents were significantly more likely to rate risk severity higher while older residents expressed significantly lower trust in gas companies. Younger residents also had significantly less interest in the gas discussion, knowledge and awareness about onshore conventional gas, and expressed a significantly lower need for more information.

### **Gender**

Overall community wellbeing, place attachment, and expected future community wellbeing in the Gippsland region were not significantly different between males and females. However, females did express significantly lower perceptions of personal safety, environmental quality (e.g., dust and noise), and levels of community trust in their local area.

Females expressed significantly higher concerns about impacts from onshore conventional gas development in the Gippsland, both more immediate and possible future issues, and they perceived risk severity to be significantly higher than males. Even though expressing higher concerns, females had statistically lower interest in the gas discussion, expressing a lower need for more information than males and having lower knowledge and awareness of the industry.

### **Income**

Residents in the Gippsland Basin with low household incomes (less than \$40,000 pa) expressed significantly lower personal safety and income sufficiency than average. Residents in households with incomes of \$80,000 or more pa expressed higher than average satisfaction with income sufficiency, while those in household with more than \$120,000 pa also expressed higher

satisfaction with personal health. However, overall community wellbeing in the Basin did not differ significantly between households across different income ranges. Neither did their attitudes and perceptions about potential onshore gas development in the Basin.

## **Education**

Overall community wellbeing did not differ significantly in the Gippsland Basin by education level, though those with education less than a Year 12 level expressed lower satisfaction with income sufficiently, while those with higher education degrees expressed significantly more satisfaction than average. Those with higher education levels also reported statistically more community participation than average.

There were no significant differences in attitudes and perceptions about an onshore conventional industry in the Gippsland Basin, though those with low levels of education expressed significantly less interest in the onshore conventional gas discussion.

## **Living in-town and out-of-town**

Those living out-of-town expressed significantly higher overall community wellbeing and expected future wellbeing than those living in-town. This relates to more favourable evaluations of a variety of community wellbeing dimensions: personal safety, town appearance, roads, environmental quality, and community cohesion, trust and spirit.

However, those living out-of-town were significantly less likely to think that their local community would adapt to onshore conventional gas development and expressed significantly less favourable attitudes and feelings about such development. This related to statistically less favourable perceptions of benefits and distributional fairness, less trust in gas companies and their relationships with communities, as well as less confidence in governance overall (including formal governance and engaging with / working collaboratively with communities). Those living-out-town also had more confidence in their knowledge and awareness of the industry than those living in-town, though this level of knowledge and awareness was still modest.

These attitudes and perceptions of the gas industry mirrored those of farm owners, even though only 48% of residents living out-of-town were farm owners. However, 95% of in-town residents in the Gippsland Basin do not own farms and they had significantly more favourable attitudes and perceptions of an onshore conventional gas industry.

## 8 Conclusions

This research has established baseline measures of community wellbeing and local attitudes to onshore conventional gas development in the Gippsland Basin of Victoria using a representative sample of residents in the Latrobe, Wellington, and East Gippsland local government areas or 'subregions'. The research has measured and documented residents' perceptions of factors important to communities in relation to onshore conventional gas development. This baseline information is useful for targeting resources to maintain and enhance community wellbeing and for informing government in their future decisions and activities relating to onshore conventional gas development. Baseline information also enables any changes in community wellbeing and attitudes toward such development to be measured over time.

In reading the findings below, results were typically reported using a scale from 1 to 5, where one is the least and five is the most. A score below the midpoint of 3 is considered negative or unfavourable on average except for perceived impacts where the higher the score the greater the concern about potential impacts.

### 8.1 Community wellbeing

The research concluded that overall community wellbeing was robust across the Gippsland Basin, though there was some variation among the LGAs. The Latrobe LGA was statistically lower than the Gippsland Basin average, while Wellington was statistically higher. Expected future community wellbeing was positive across the region, though Latrobe was statistically lower than the rest of the Gippsland Basin. Place attachment was high across all the LGAs. The study found the most highly rated dimensions of community wellbeing across the Gippsland Basin were personal safety, town appearance, and environmental quality. In contrast, the condition and safety of local roads, satisfaction with local decision making, and economic and business opportunities were rated least favourably.

The research identified five dimensions of community wellbeing as being most important to residents in the Gippsland Basin: community trust, community spirit, environmental quality, services and facilities, and personal safety. These represent aspects of the community that contribute most to a good quality of life in the eyes of residents, indicating that their community is a great place to live. These dimensions are important areas for maintaining and building community wellbeing across the Gippsland Basin.

### 8.2 Local attitudes to onshore conventional gas development

The research findings showed that residents in the Gippsland Basin held a range of views toward onshore conventional gas development. Overall, nearly three quarters of residents in the basin said they would either 'tolerate' onshore conventional gas development (26%), 'be OK with it' (27%) or 'approve of it' (20%). Fewer residents said they would either 'reject it' (16%) or 'embrace

it' (11%). Tolerating it was associated with more neutral feelings on average toward onshore conventional gas development, while being OK with it was associated with more positive feelings.

The research found that residents in the Latrobe LGA had more favourable attitudes to onshore conventional gas development on average than those in East Gippsland where over 20% of residents indicated they would reject it. Also, farm owners were divided in their attitudes toward onshore conventional gas development, with 33% rejecting it on one hand and another 35% either approving of it or embracing it on the other.

In addition to these ranges of views, the research found most residents in the Gippsland Basin thought their local communities would either adapt to changes associated with any onshore conventional gas development (57%) or change into something different but better (8%).

### 8.3 Perceptions of underlying drivers of social acceptance

The research found nine different factors drive people's overall attitudes about onshore conventional gas development. These included perceptions of *impacts* and *benefits*; perceptions of *procedural fairness* and the *quality of the relationship* with the gas company, which underpin *trust in the gas operator*; perceptions of *distributional fairness* in terms of how benefits and costs will be shared; confidence and trust in *governance* of the industry; the belief in a role for gas as part of the *energy narrative* for transitioning to renewable energies; and the individual's confidence in their *knowledge and understanding* about onshore conventional gas development.

Using a scale from 1-5, results showed that concerns about overall impacts from onshore conventional gas development were not overly high on average (3.3) and overall benefits were perceived favourably (3.5). However, residents in the Gippsland Basin had limited trust in gas companies on average (2.6) as well as how they may engage with communities to maintain good relationships (2.4) and procedural fairness (2.4). Residents also lacked confidence in effective overall governance of the industry (2.8) including both formal and informal types of governance though confidence in formal governance (e.g. legislation and regulations) was slightly higher (2.9). This is despite residents having more positive views on average (3.1) about the state government handling of potential onshore gas development (i.e., banning coal seam gas development and fracking, placing a moratorium on onshore conventional gas, and conducting research prior to deciding whether to allow exploration).

Residents had relatively low confidence in their knowledge and understanding about onshore conventional gas development, and expressed a need for more information, especially on potential negative effects. They also wanted balanced information about potential benefits that included pros and cons, with information focussed at the local level. Other common information needs were around processes of gas extraction and distribution, how the industry might unfold in terms of place and size, and effective evidence-based governance of the industry. A smaller percentage of residents wanted information around why we need onshore conventional gas development; for example, compared to renewable energy.

## Appendix A Sample representativeness

The sample of residents in the Otway and Gippsland basins were reasonably representative based on quota sampling by age, gender, and location for each LGA. However, to make the sample more representative the sample was also weighted to reflect 2016 ABS population census data. This was particularly important to gain accurate estimates across the Otway and Gippsland basins as there were equal numbers surveyed in each LGA, though different populations in each LGA.

Table A. 1 Age, gender and location statistics for the sample, weighted sample, and 2016 census

	Otway Basin			Gippsland Basin		
	Sample	Weighted sample	2016 Census	Sample	Weighted sample	2016 Census
Age						
18-34	17%	22%	22%	26%	24%	23%
35-54	31%	32%	32%	32%	31%	30%
55+	52%	45%	45%	42%	46%	46%
Gender						
Male	44%	49%	49%	45%	49%	49%
Female	56%	51%	51%	55%	51%	51%
Location						
In-town	64%	70%	70%	63%	76%	75%
Out-of-town	36%	30%	30%	37%	24%	25%

## Appendix B Background information provided for survey questions relating to onshore conventional gas development

### **Excerpt from survey**

Moving on to community attitudes about onshore conventional gas development in the Gippsland and Otway basins, please consider this information:

- Conventional gas is found trapped deep underground under a layer of rock. It is used in Victoria for heating, electricity, and making things like fertilisers and plastics. At present Victoria relies on gas from offshore reserves.
- Currently, there is a moratorium on exploring for conventional gas onshore until 30 June 2020. During this time, the state government is assessing the potential for new discoveries of onshore conventional gas - including any risks, benefits and impacts.
- Unlike unconventional gas such as shale gas and coal seam gas, conventional gas involves far fewer wells and does not involve fracking. Finally, in Victoria, there will continue to be a permanent ban on fracking.

Please answer the following questions with this information in mind.

## Appendix C Measures and reliability of scales

Separate scales were developed for the various measures associated with community wellbeing and perceptions of onshore conventional gas development, and the sector, by averaging the items within the respective scale. All multi-item measures were tested for ‘internal consistency’ or reliability. As shown in Apx Table C. 1, the reliability of all multi-item measures (scales) for this survey usually exceeded .80. Reliability over .90 is considered very good, over .80 is considered good, and .70 considered adequate for scale development.

**Apx Table C. 1 Measures and reliability of scales used in survey**

Measures of community wellbeing	No. of items	Scale type / reliability <sup>1</sup>	Abbreviated survey items
Personal safety	3	Agreement 0.86	It is safe to be alone at home during the night; to walk alone outside at night; overall feel safe living in the area
Income sufficiency	3	Agreement .93	Your income is enough for household expenses; for the lifestyle you enjoy; overall satisfied income covers living expenses
Health	5	Satisfaction .82	With diet and eating habits; exercise habits; physical health; mental health; overall satisfaction with health and wellbeing
Services and facilities	7	Satisfaction .85	With local schools; childcare facilities; sports and leisure facilities; shopping (other than for food and everyday items); medical and health services; community support services; overall satisfaction with services and facilities
Town appearance	3	Satisfaction .85	With cleanliness in the town; greenery and parks in the town; overall satisfaction with general appearance of the town
Roads	3	Satisfaction .80	With condition; safety; amount of traffic on roads; roads overall
Environmental quality	5	Satisfaction .79	With level of dust; noise; quality of the air; drinking water; overall quality of the general environment
Environmental management	3	Satisfaction .86	With parks and nature reserves for the future; overall management of the natural environment for the future
Local decision making and trust	6	Agreement .93	See items for sub-scales:
- Local decision making	3	Agreement .89	Local council informs residents; opportunities to be heard; overall satisfied with how decisions are made for the community
- Trust in local leaders	3	Agreement .93	Your local council can be trusted; there are local leaders I can trust; Overall, I trust my local leaders
Economic opportunities	4	Agreement .90	There are good job opportunities; there is good job security for locals; local businesses are doing well; overall satisfied with employment and business opportunities
Community spirit	3	Agreement .93	People can rely upon one another for help; people have friendly relationships; overall there is good community spirit around here
Community cohesion	3	Agreement .890	Community is welcoming of newcomers; and people of different cultures; overall community includes everyone no matter who they are
Community trust	2	Agreement .92	People that you see around [local area] can generally; overall satisfied with levels of trust in local area
Community participation	3	Agreement .91	Involved in a local organisation or club; attended several community events in the past year; overall participate regularly in community activities



Social interaction	4	Agreement .84	Regularly visit someone's home; go out together socially; speak or text on phone; overall satisfied with level of social interaction in local area
Overall community wellbeing	5	Agreement .88	Community is suitable for young children; teenagers; seniors; overall, local area offers a good quality of life; overall, happy living in local area
Expected future wellbeing	2	Agreement .90	In 3 years time, I will be happy living in this local area; it will offer a good quality of life
Place attachment	4	Agreement .88	Feel that I belong to this area; pleased to come back to the area if I go away; I feel proud to living in this community; Overall, I feel very attached to this local area

Notes: <sup>1</sup> The Spearman-Brown Rho correlation was used for two item measures and Cronbach's alpha for other measures

Measures for perceptions and attitudes about onshore conventional gas	No. of items	Scale type / reliability <sup>1</sup>	Example survey items
Perceived impacts	16	Concern .96	See items for sub-scales:
- More immediate issues	13	Concern .96	Damage to underground water; air, dust, noise, and light pollution; a threat to 'clean' and 'green' image and tourism; reduces region's visual attractiveness; impact on farm property values; increased traffic; community division; health impacts
- Possible future issues	3	Concern .88	The use of onshore conventional gas contributing to climate change; integrity of gas wells over time (e.g. leaks)
Risk manageability	4	Agreement .585	Any risks have been identified: are understood by science; are manageable; can be alleviated as problems arise
Risk severity	2	Agreement .84	Potential risks can adversely affect future generations; are potentially disastrous
Perceived benefits	15	Agreement .96	See items for sub-scales:
- Local benefits	8	Agreement .93	Local employment; local business opportunities; opportunities for young people to stay in region; corporate support for local community activities; cheaper gas for local industries; cheaper gas for residents
- Regional and societal benefits	8	Agreement .95	Improving energy security in the region; supporting the viability of big gas users; make the region more attractive to new businesses and industry; boosting the wider state economy
Distributional fairness	4	Agreement .92	Fair to have onshore conventional gas development in the region if your local council was compensated accordingly; your community received a fair share of the benefits; if affected landholders were compensated fairly; if regional benefits outweigh any impacts
Procedural fairness	2	Agreement .87	Gas company would listen to and respect community opinions; inform residents of important developments
Relationship quality	3	Agreement .94	Gas companies would be accessible or easy to contact; open, honest and transparent; engage in genuine two-way dialogue
Governance overall	9	Agreement .95	See items for sub-scales:
- Formal governance	2	Agreement .88	Legislation and regulation could be counted on to ensure companies did the right thing; Government regulators would be able to hold companies accountable
- Engaging communities	3	Agreement .85	The local council would listen to and advocate for local communities about gas development; the EPA would listen to and respond to community concerns; State government would listen to and respond to any community concerns
- Working collaboratively	5	Agreement .94	Government, communities, and gas companies can work together to address any problems; to maximise any benefits; share information,

			resources and learnings; proactively plan for future changes; manage any changes effectively
- Trust in state departments	3	Extent of trust .95	Trust state departments and agencies overseeing onshore conventional gas development to act responsibly; in local community's best interest's; trust their capability
Trust in gas company	3	Extent of trust .93	Trust local gas companies to act responsibly; in local community's best interest's; trust their capability; overall extent of trust
Government's handling of onshore gas development	4	Agreement .83	The state government is following good processes re the permanent ban on coal seam gas and fracking; the moratorium on onshore conventional gas; conducting scientific research prior to exploration
Energy transition narrative			The role of gas in reducing carbon emissions; and transitioning to renewable energies
Community attitudes and feelings toward onshore CG development	6	Agreement .91	Attitude: reject, tolerate, accept, approve, embrace it (categoric); acceptance of onshore conventional gas development Feelings: pleased; optimistic; angry; worried
Community adapting to onshore CG development	1	Agreement n.a.	How local area would deal with onshore conventional gas: resist, note cope, only just cope, adapt to the changes, change into something different but better (categoric)
Knowledge	7	Level .89	How much do you feel you know about the onshore conventional gas industry; how aware are you that hydraulic fracturing is permanently banned in Victoria; not needed to extract conventional gas; one or two conventional gas wells can produce large volumes of gas; about the differences between conventional and unconventional gas
Need for more information	1	Level n.a.	How much more information do you feel you need about onshore conventional gas development

Notes: <sup>1</sup> The Spearman-Brown Rho correlation was used for two item measures and Cronbach's alpha for other measures; CG = conventional gas; n.a. = not applicable.

## Appendix D Statistical analyses

### Dominance analysis

Dominance analysis was used to determine the relative importance of various dimensions of community wellbeing in predicting overall community wellbeing. General dominance statistics were used because they are the most commonly used and easiest to interpret.

We reported the standardised versions of these statistics which calculates the percentage of the explained variation in overall community wellbeing which can be attributed to each dimension, adding up to 100% across all predictors. It does this by calculating the incremental contribution to R-squared across all models in which the independent variable is included. This involved running regressions for each possible combination of the CWB dimensions (over 16,000 regressions for each subregion).

### Path analysis

Path analysis was used to model the social acceptance of onshore conventional gas development in Victoria and its underlying drivers. The main advantage of path analysis over multiple regression analysis is that it can model a range of direct and indirect paths or influences on the main dependent variable - social acceptance in this case (McCrea, 2014). Direct paths are factors that lead directly to social acceptance. Indirect paths lead to social acceptance via mediating or intervening factors, and some factors have both direct and indirect paths to social acceptance.

The path models show the percentage of variation explained in each dependent variable and the standardised regression coefficients for each path predictor of that variable, giving an indication of the relative importance of each. Path analysis can also test how well the models fit the data. That is, how well the correlations implied in the path model fit the actual correlations in the data (McCrea, 2014). The path analysis in this report had good model fit (i.e., standardized root mean squared residual of less than .05).

# Appendix E All survey items by subregion

Apx Table E. 1 Survey item statistics by subregion

	Latrobe	Wellington	East Gippsland	Total Gippsland
<b>Section 1. Community wellbeing</b>				
<b>Q7 Thinking about [NAME] and surrounds, how much do you agree with the following statements on a scale from 1 = strongly disagree to 5 = strongly agree</b>				
a) I feel that I belong to this area	4.14	4.11	4.24	4.16
b) I am pleased to come back to the area, if I go away	4.26	4.49	4.56	4.40
c) I feel proud to live in this community	<b>3.91</b>	4.25	<b>4.32</b>	4.12
d) Overall, I feel very attached to this local area	4.03	4.16	4.33	4.15
<b>Q8 Now a few questions about personal safety. On a scale from 1 to 5, how much do you agree that:</b>				
a) It is safe to be alone at home during the night	<b>3.85</b>	<b>4.30</b>	<b>4.35</b>	4.11
b) It is safe to walk alone outside at night	<b>3.00</b>	3.65	<b>3.91</b>	3.43
c) Overall, I feel safe living in the area	<b>3.85</b>	<b>4.34</b>	4.22	4.08
<b>Q9 Thinking about your household income, how much do you agree that:</b>				
a) your income is enough for household expenses	3.63	3.79	3.85	3.73
b) your income is enough for the lifestyle you enjoy	3.54	3.62	3.80	3.64
c) Overall, you are satisfied that your income covers living expenses	3.67	3.81	3.84	3.76
<b>Q10 Now on a scale from 1 = very dissatisfied to 5 = very satisfied and thinking about your health and wellbeing, how satisfied are you with</b>				
a) your diet and eating habits	3.63	3.88	3.91	3.77
b) your exercise habits	3.31	3.41	3.34	3.34
c) your physical health	3.49	3.62	3.68	3.58
d) your mental health	3.89	3.81	3.93	3.88
e) Overall, how satisfied are you with your health and wellbeing	3.75	3.77	3.95	3.81
<b>Q11 Thinking of services and facilities for [NAME] and surrounds, how satisfied are you with</b>				
a) local schools	3.78	3.91	3.56	3.76
b) childcare facilities	3.52	<b>3.87</b>	3.40	3.58
c) sports and leisure facilities	3.91	<b>4.13</b>	<b>3.48</b>	3.85
d) shopping (other than food and everyday items)	<b>3.58</b>	3.10	<b>3.04</b>	3.30
e) medical and health services	3.31	3.27	<b>2.92</b>	3.19
f) community support services (e.g. meals on wheels, youth workers)	3.34	3.51	3.10	3.32
g) Overall, how satisfied are you with the services and facilities in your local area	3.51	3.52	3.39	3.48
<b>Q12 Thinking about [NAME]'s general appearance, how satisfied are you with:</b>				
a) Cleanliness in the town	<b>3.53</b>	<b>4.12</b>	3.81	3.77
b) Greenery and Parks in the town	<b>3.84</b>	<b>4.32</b>	3.96	4.00
c) Overall, how satisfied are you with the general appearance of the town	<b>3.62</b>	<b>4.14</b>	3.82	3.81
<b>Q13 Thinking about the roads outside of [NAME], how satisfied are you with the</b>				
a) Condition of the roads	2.71	2.70	2.63	2.69
b) Amount of traffic on roads	3.24	3.54	3.38	3.36
c) The roads overall	2.90	2.92	2.93	2.91

	Latrobe	Wellington	East Gippsland	Total Gippsland
<b>Q14 Thinking about pollution in the general environment, how satisfied are you with the</b>				
<b>[Note: higher score means more satisfied]</b>				
a) Level of dust	2.94	3.73	3.51	3.31
b) Level of noise	3.79	4.09	4.13	3.97
c) Quality of the air	3.08	4.07	4.31	3.69
d) Quality of drinking water	3.95	3.98	4.10	4.00
e) Overall quality of the general environment around [NAME]	3.65	4.13	3.95	3.86
<b>Q15 Now thinking about the natural environment around [NAME], how satisfied are you with the management of:</b>				
a) parks and nature reserves for the future	3.63	3.81	3.13	3.53
b) waterways and water supplies for the future	3.39	3.28	3.18	3.30
c) Overall, the management of the natural environment for the future	3.38	3.53	3.16	3.35
<b>Q16 Thinking about how decisions are made affecting [NAME] and surrounds, how much do you agree that:</b>				
a) The local council informs residents of important developments	2.89	3.12	2.66	2.88
b) There are opportunities for your voice to be heard on issues that are important to you	2.90	3.19	2.79	2.94
c) Overall, I am satisfied with how decisions are made that affect [NAME]	2.95	3.29	2.60	2.94
<b>Q17 Thinking about trust in local leaders, how much do you agree that:</b>				
a) Your local council can be trusted	2.76	3.12	2.41	2.75
b) There are local community leaders you can trust	3.26	3.51	3.06	3.27
c) Overall, you can trust your local leaders	3.06	3.45	2.92	3.12
<b>Q18 Regarding employment and business opportunities in [NAME] and surrounds, how much do you agree that:</b>				
a) there are good job opportunities	2.23	2.44	2.37	2.33
b) there is good job security for locals	2.21	2.56	2.60	2.41
c) local businesses are doing well	2.49	2.50	2.41	2.47
d) Overall, I am satisfied with employment and business opportunities in my local area	2.51	2.47	2.49	2.49
<b>Q19 Thinking about community spirit in [NAME] and surrounds, how much do you agree that:</b>				
a) People can rely upon one another for help	3.29	3.92	3.76	3.59
b) People have friendly relationships	3.32	4.01	3.79	3.63
c) Overall, there is good community spirit around here	3.40	4.02	3.91	3.71
<b>Q20 Thinking about how inclusive your local community is in [NAME] and surrounds, how much do you agree that</b>				
a) Your community is welcoming of newcomers	3.29	3.72	3.46	3.46
b) Your local community is welcoming of people of different cultures	3.18	3.57	3.22	3.29
c) Overall, your community includes everyone no matter who they are.	3.27	3.63	3.50	3.43
<b>Q21 Thinking about levels of trust in your local area, how much do you agree that:</b>				
a) People that you see around [NAME] can generally be trusted	2.95	3.48	3.45	3.23
b) Overall, you are satisfied with levels of trust in your local area	3.01	3.59	3.55	3.31
<b>Q22 Thinking about participating in local community groups around [NAME] (like school, sport, church, hobbies and services), how much do you agree that:</b>				
a) You are involved in a local organisation or club	3.10	3.35	3.40	3.25
b) You have attended several community events in the past year	2.96	3.46	3.42	3.22
c) Overall, you participate regularly in a variety of community activities	2.79	3.25	3.28	3.05
<b>Q23 Thinking about everyday interactions with people, other than those you may live with. How much do you agree that you do the following regularly</b>				
a) Visit someone's home	3.27	3.38	3.40	3.34
b) Go out together socially	3.32	3.64	3.28	3.39

	Latrobe	Wellington	East Gippsland	Total Gippsland
c) Speak or text on the phone	4.05	4.01	3.91	4.00
d) Overall, you have regular social interaction with others in your local area	3.86	4.03	3.80	3.89
<b>Q24 Thinking about overall community wellbeing around [NAME] and surrounds, how much do you agree that:</b>				
a) This community is suitable for young children	<b>3.59</b>	<b>4.26</b>	3.97	3.87
b) This community is suitable for teenagers	3.09	3.41	3.17	3.19
c) This community is suitable for seniors	<b>3.68</b>	<b>4.06</b>	4.02	3.87
d) Overall, this local area offers a good quality of life	<b>3.59</b>	<b>4.19</b>	<b>4.08</b>	3.89
e) Overall, I am happy living in this local area	<b>3.92</b>	4.24	<b>4.34</b>	4.12
<b>Q25 Imagining what it might be like in 3 years time, how much do you agree that:</b>				
a) Overall, I will be happy living in this local area	<b>3.64</b>	<b>4.05</b>	3.98	3.84
b) Overall, this local area will offer a good quality of life	<b>3.49</b>	<b>3.99</b>	<b>3.98</b>	3.76
<b>Q26 Over the next 3 years, do you think community wellbeing will</b>				
a) Decline	27%	16%	26%	24%
b) Stay about the same	58%	65%	54%	59%
c) Improve	15%	20%	19%	17%
	100%	100%	100%	100%
<b>Section 2. Community attitudes about onshore conventional gas development</b>				
<b>Q27 In relation to potential onshore conventional gas development in the [insert relevant basin from Q4 - Gippsland/Otway] basin, how much of a concern do you believe the following impacts may be:</b>				
Scale: 1=not a concern at all to 5=a very large concern				
a) a threat to the 'clean and green' image for agriculture in the region	2.96	3.25	3.33	3.14
b) a threat to tourism in the region	<b>2.44</b>	2.79	<b>3.29</b>	2.77
c) reducing the region's visual attractiveness	2.82	3.00	3.23	2.98
d) damage to underground water	3.31	3.68	3.69	3.52
e) contamination of the air	3.25	3.33	3.46	3.33
f) dust, noise, and light pollution	3.01	3.21	3.42	3.18
g) health impacts	3.21	3.22	3.39	3.26
h) increased traffic on the roads	2.96	3.14	3.27	3.10
Now thinking about impacts on farming, how much of a concern do you believe the following may be:				
i) reducing farm property values	3.16	3.38	3.65	3.35
j) impacting on-farm activities	3.18	3.38	3.56	3.34
k) possible unfair treatment of farmers	3.71	3.68	3.74	3.71
l) Finally, community division over gas development	<b>3.34</b>	3.67	3.75	3.55
m) Overall, how much of a concern, do you believe, would come with onshore conventional gas development in the region	<b>3.13</b>	3.44	<b>3.65</b>	3.36
<b>Q28 Thinking about possible future issues, how much of a concern do you believe the following may be:</b>				
a) the use of conventional gas contributing to climate change	2.81	3.09	3.18	2.99
b) integrity of gas wells over time (e.g. leaks)	3.19	3.54	3.41	3.34
c) Overall how much of a concern, do you believe, there may be with onshore conventional gas development in the future	3.07	3.38	3.43	3.25
<b>Q29 How much do you agree that any risks associated with onshore conventional gas development:</b>				
a) have been identified	3.02	3.14	3.15	3.09
b) are understood by science	3.25	3.29	3.45	3.32
c) are manageable	3.16	3.05	3.21	3.14
d) can be alleviated as problems arise	3.10	3.00	3.18	3.10

	Latrobe	Wellington	East Gippsland	Total Gippsland
e) can adversely affect future generations	3.43	3.53	3.58	3.50
f) are potentially disastrous	3.24	3.40	3.47	3.35
<b>Q30 Moving on to benefits, how much do you agree that onshore conventional gas development would provide significant local benefits such as</b>				
a) local employment	<b>3.85</b>	3.70	<b>3.32</b>	3.66
b) career opportunities for young people to stay in the region	3.81	3.70	3.43	3.67
c) local business opportunities	3.72	3.66	<b>3.34</b>	3.60
d) corporate support for local community activities (e.g. a gas company sponsoring local clubs)	<b>3.87</b>	3.72	<b>3.39</b>	3.69
e) cheaper gas for local industries	3.19	3.08	2.97	3.10
f) cheaper gas for local residents	3.13	2.95	2.92	3.02
g) Overall, how much do you agree that onshore conventional gas development would bring significant benefits to the local community	3.49	3.43	3.16	3.38
<b>Q31 How much do you agree that onshore conventional gas development would bring benefits to the wider region, such as</b>				
a) improving energy security in the region	3.62	3.54	3.38	3.53
b) supporting the viability of big gas users in the region (e.g., manufacturers)	3.45	3.62	3.31	3.46
c) making the region more attractive to new business and industry	3.42	3.55	3.20	3.39
d) improving the supply of gas as a raw material for making products like fertilisers and plastics	3.46	3.50	3.32	3.43
e) Overall, onshore conventional gas development would provide significant benefits for the wider region	<b>3.68</b>	3.51	<b>3.22</b>	3.51
<b>Q32 Thinking more broadly, how much do you agree that onshore conventional gas development has a role to play in</b>				
a) in boosting the wider state economy	3.54	3.48	3.39	3.48
b) energy security for Victorians	3.52	3.51	3.36	3.47
c) in reducing carbon emissions by replacing coal	3.22	3.46	3.38	3.33
d) in transitioning to renewable energy sources	3.08	3.22	3.28	3.17
e) Overall, onshore conventional gas development has an important role to play in society	3.42	3.51	3.29	3.40
<b>Q33 How much do you agree that it would be fair to have onshore conventional gas development in the region?</b>				
a) Fair, if your local council was compensated accordingly	3.42	3.35	<b>3.00</b>	3.28
b) Fair, if your community received a fair share of the benefits	3.69	3.74	3.53	3.66
c) if affected landholders were compensated and treated fairly	3.79	3.85	3.74	3.79
d) Fair if the regional benefits outweighed any impacts	3.61	3.71	3.41	3.58
<b>Q34 Thinking about how decisions might be made about onshore conventional gas development, how much do you agree that gas companies:</b>				
<i>Scale: 1=strongly disagree; 3=neither agree nor disagree; 5=strongly agree</i>				
a) would listen to and respect the community's opinions	2.19	2.46	2.20	2.26
b) would inform residents of important developments	2.59	2.80	2.53	2.63
<b>Q35 How confident are you that gas companies would</b>				
<i>Scale: 1=not at all confident; 5=very confident</i>				
a) be accessible or easy to contact	2.49	2.63	2.42	2.51
b) be open, honest and transparent	2.26	2.40	2.18	2.27
c) engage in genuine two way dialogue	2.35	2.43	2.31	2.36
<b>Q36 Thinking about gas companies operating onshore conventional gas developments, to what extent would you</b>				
<i>Scale: 1=not at all to 5=a great deal</i>				
a) trust them to act in the local community's best interests	2.26	2.50	2.20	2.31
b) trust them to act responsibly	2.58	2.68	2.48	2.58

	Latrobe	Wellington	East Gippsland	Total Gippsland
c) trust their capability	2.83	2.90	2.70	2.81
<b>Q37</b> Thinking about how onshore conventional gas development would be governed, how much do you agree that:				
<i>Scale: 1=strongly disagree; 3=neither agree nor disagree; 5=strongly agree</i>				
a) Legislation and regulation could be counted upon to ensure that companies did the right thing	2.94	3.02	2.69	2.89
b) Government regulators and the Environment Protection Authority (EPA) would be able to hold companies accountable	3.00	3.11	2.85	2.99
<b>Q38</b> Thinking about other government responses to onshore conventional gas development, how much do you agree that				
<i>Scale: 1=strongly disagree; 3=neither agree nor disagree; 5=strongly agree</i>				
a) The local council would listen to and advocate for local communities on issues about gas development	2.95	3.08	2.68	2.91
b) The EPA and other government regulators would listen to and respond to any community concerns	3.00	3.08	2.84	2.98
c) State government would listen to and respond to any community concerns	2.58	2.69	<b>2.22</b>	2.50
<b>Q39</b> How much do you agree that communities, gas companies, local councils and state government would be able to work together				
<i>Scale: 1=strongly disagree; 3=neither agree nor disagree; 5=strongly agree</i>				
a) to address any problems with onshore conventional gas development	2.76	2.70	2.43	2.65
b) to maximise any benefits associated with gas development	2.90	3.01	<b>2.59</b>	2.84
c) share information, resources, and learnings	2.67	<b>2.96</b>	2.53	2.70
d) proactively plan for future changes	2.73	<b>2.98</b>	2.56	2.74
e) Overall, the region together would be able to manage any changes effectively	2.91	<b>3.12</b>	<b>2.62</b>	2.88
<b>Q40</b> Thinking about the state government's handling of onshore gas development, how much do you agree the following have been good processes for decision making				
<i>Scale: 1=strongly disagree; 3=neither agree nor disagree; 5=strongly agree</i>				
a) the permanent ban on <u>coal seam</u> gas and fracking	3.44	3.30	3.19	3.34
b) the moratorium on onshore conventional gas	3.13	3.17	3.02	3.11
c) the state government conducting scientific research prior to exploration	3.13	3.32	3.08	3.16
d) Overall, the state government is following good process	2.85	2.99	2.77	2.86
<b>Q41</b> Thinking about state government departments and agencies involved in overseeing onshore conventional gas development, to what extent would you				
<i>Scale: 1=not at all to 5=a great deal</i>				
a) trust them to act in the local community's best interests	2.50	2.67	2.40	2.51
b) trust them to act responsibly	2.68	2.81	2.51	2.66
c) trust their capability	2.74	2.79	2.59	2.71
<b>Q42</b> Thinking about potential onshore conventional gas development in the region, overall how accepting are you? <i>Scale: 1=Not at all accepting; 3=Somewhat accepting; 5=very accepting</i>				
	3.44	3.23	3.10	3.29
<b>Q43</b> Overall, which best describes your attitude toward onshore conventional gas development in the [insert relevant basin from Q4 - Gippsland/Otway] basin. You would				
1. reject it	<b>10%</b>	19%	<b>22%</b>	16%
2. tolerate it	<b>24%</b>	25%	<b>29%</b>	26%
3. be OK with it	<b>31%</b>	25%	<b>25%</b>	27%
4. approve of it	<b>22%</b>	19%	<b>19%</b>	20%
5. embrace it	<b>13%</b>	13%	<b>5%</b>	11%
	100%	100%	100%	100%
<b>Q44</b> Thinking about potential onshore conventional gas development in the region, how much do you agree you would feel				



	Latrobe	Wellington	East Gippsland	Total Gippsland
Scale: 1=strongly disagree; 3=neither agree nor disagree; 5=strongly agree				
a) pleased	3.15	3.04	2.80	3.02
b) optimistic	<b>3.17</b>	3.10	<b>2.74</b>	3.03
c) angry	2.08	2.34	2.13	2.16
d) worried	2.69	2.84	2.51	2.68
<b>Q45</b> <i>In general, how accepting do you think <u>others</u> in your local community would be of onshore conventional gas development in the region</i> Scale: 1=Not at all accepting; 3=Somewhat accepting; 5=very accepting	<b>2.96</b>	2.74	<b>2.62</b>	2.80
<b>Q46</b> <i>How much do you agree that <b>[NAME]</b> and surrounds would adapt to onshore conventional gas development</i>	3.40	3.32	3.05	3.28
<b>Q47</b> <i>Which of the following best describes how <b>[NAME]</b> and surrounds would deal with onshore conventional gas development?</i>				
1. Resist	10%	16%	14%	12%
2. Not cope	1%	4%	10%	4%
3. Only just cope	18%	24%	14%	19%
4. Adapt to the changes	62%	50%	57%	57%
5. Change into something different but better	9%	7%	6%	8%
	100%	100%	100%	100%
<b>Q48</b> <i>Over the last couple of years, how much information about potential onshore conventional gas development has been provided to the community by the</i>				
Scale: 1= none at all to 5 = a lot				
a) state government	1.77	1.99	1.86	1.85
b) local government	1.69	<b>2.03</b>	1.70	1.78
c) the gas industry	<b>1.66</b>	<b>2.04</b>	1.76	1.79
d) anti-gas groups	<b>1.91</b>	<b>2.59</b>	1.92	2.09
e) local papers and radio	<b>1.88</b>	<b>2.53</b>	1.91	2.06
<b>Q49</b> <i>How much do you feel you know about onshore conventional gas?</i>				
<b>Q49</b> <i>How much do you feel you know about onshore conventional gas?</i>				
Scale: 1= very little to 5 = a lot				
	2.25	2.53	2.25	2.32
<b>Q50</b> <i>How much more information would you like to know?</i>				
Scale: 1= none at all to 5 = a lot				
	3.49	3.43	3.88	3.59
<b>Q51</b> <i>What is the main information you would like to know about onshore conventional gas development in the region, if any? (open question)</i>				
<b>Q52</b> <i>When it comes to onshore conventional gas development, prior to this survey, how aware were you that:</i>				
Scale: 1= Not aware to 5 = very aware				
a) Hydraulic fracturing (fracking) is permanently banned in Victoria	3.20	3.51	3.34	3.32
b) Hydraulic fracturing is not needed to extract conventional gas	2.59	2.85	2.65	2.68
c) There is a moratorium on exploring for onshore conventional gas until 30 June 2020.	2.43	2.52	2.60	2.50
d) One or two conventional gas wells can produce large volumes of gas	2.54	2.70	2.61	2.60
e) Overall, how aware were you about onshore conventional gas	2.44	2.72	2.65	2.57
<b>Q53</b> <i>When it comes to the differences between onshore conventional and <u>unconventional</u> gas development (e.g. shale gas), how much do you feel you understand about the differences.</i>				
Scale: 1= very little understanding to 5 = a lot of understanding				
	2.26	2.50	2.39	2.36
<b>Q54</b> <i>On a scale of 1 to 5, how interested are you in the onshore gas discussions?</i>				
Scale: 1= not at all interested; 3 somewhat interested; 5 = very interested				
	2.97	3.02	3.13	3.03



## Appendix F Tables of demographic differences

### **Differences based on the following attributes:**

- Subregions
- Out-of-town and In-town residence
- Farm ownership
- Gender
- Age
- Household Income
- Education level

**Apx Table F. 1 Demographic differences: Mean scores based on subregions**

Dimensions	East Gippsland	Wellington	Latrobe	Gippsland Basin
Personal safety	<b>4.16<sup>H</sup></b>	4.10	<b>3.56<sup>L</sup></b>	3.88
Income sufficiency	3.83	3.74	3.62	3.71
Health	3.76	3.70	3.61	3.68
Services and facilities	<b>3.27<sup>L</sup></b>	3.59	3.58	3.49
Town appearance	3.87	<b>4.20<sup>H</sup></b>	<b>3.66<sup>L</sup></b>	3.86
Roads	2.97	3.05	2.96	2.99
Environmental quality	<b>4.01<sup>H</sup></b>	<b>4.00<sup>H</sup></b>	<b>3.48<sup>L</sup></b>	3.77
Environmental management	<b>3.15</b>	<b>3.55<sup>H</sup></b>	3.47	3.40
Local decision-making and trust	<b>2.73</b>	<b>3.28<sup>L</sup></b>	2.96	2.98
Economic opportunities	2.47	2.49	2.36	2.43
Community cohesion	3.38	<b>3.63<sup>H</sup></b>	<b>3.26<sup>L</sup></b>	3.39
Community trust	<b>3.50<sup>H</sup></b>	<b>3.54<sup>H</sup></b>	<b>2.98<sup>L</sup></b>	3.27
Community participation	3.38	3.36	<b>2.94<sup>L</sup></b>	3.18
Community spirit	3.82	<b>3.98<sup>H</sup></b>	<b>3.34<sup>L</sup></b>	3.64
Social interaction	3.60	3.77	3.63	3.65
Overall community wellbeing	3.92	<b>4.02<sup>H</sup></b>	<b>3.58<sup>L</sup></b>	3.79
Expected future wellbeing	3.97	4.03	<b>3.56<sup>L</sup></b>	3.80
Place attachment	4.36	4.25	4.08	4.21
Community adapting	3.30	3.28	3.60	3.43
<b>ONSHORE CONVENTIONAL GAS PERCEPTIONS AND ATTITUDES</b>				
Perceived impacts	3.47	3.33	<b>3.10<sup>L</sup></b>	3.26
Risk manageability	3.25	3.10	3.14	3.16
Risk severity	3.52	3.47	3.32	3.41
Perceived benefits	3.27	3.50	3.55	3.45
Distributional fairness	3.44	3.66	3.63	3.58
Trust in gas company	2.46	2.68	2.56	2.56
Procedural fairness	2.30	2.49	2.36	2.38
Relationship quality	2.37	2.63	2.39	2.44
Governance overall	<b>2.58<sup>L</sup></b>	<b>2.93<sup>H</sup></b>	2.80	2.77
Formal governance	2.76	3.07	2.99	2.94
Engaging communities	<b>2.59<sup>L</sup></b>	2.95	2.84	2.80
Working collaboratively	<b>2.54<sup>L</sup></b>	<b>2.95<sup>H</sup></b>	2.80	2.77
Trust in gas governing bodies	2.50	2.76	2.64	2.63
Energy transition narrative	3.33	3.33	3.15	3.25
Knowledge and understanding	2.64	2.76	2.53	2.62
Information need	<b>3.88<sup>H</sup></b>	3.43	3.49	3.59
Interest in onshore gas discussion	3.13	3.02	2.97	3.03
Community attitudes and feelings	3.10	3.17	3.34	3.23

Note: Bold font indicates a significant difference from regional average (L = lower; H=higher)

ApX Table F. 2 Demographic differences: Mean scores based on living In-town and Out-of-town

Dimensions	In-town	Out-of-town	Gippsland Basin
<b>COMMUNITY WELLBEING</b>			
Personal safety	<b>3.72<sup>L</sup></b>	<b>4.36<sup>H</sup></b>	3.88
Income sufficiency	3.65	3.90	3.71
Health	3.64	3.79	3.68
Services and facilities	3.49	3.48	3.49
Town appearance	<b>3.81<sup>L</sup></b>	<b>4.03<sup>H</sup></b>	3.86
Roads	<b>2.93<sup>L</sup></b>	<b>3.16<sup>H</sup></b>	2.99
Environmental quality	<b>3.68<sup>L</sup></b>	<b>4.05<sup>H</sup></b>	3.77
Environmental management	3.42	3.33	3.40
Local decision-making and trust	3.01	2.85	2.98
Economic opportunities	2.41	2.49	2.43
Community cohesion	<b>3.32<sup>L</sup></b>	<b>3.61<sup>H</sup></b>	3.39
Community trust	<b>3.16<sup>L</sup></b>	<b>3.61<sup>H</sup></b>	3.27
Community participation	3.16	3.24	3.18
Community spirit	<b>3.53<sup>L</sup></b>	<b>4.00<sup>H</sup></b>	3.64
Social interaction	3.65	3.67	3.65
Overall community wellbeing	<b>3.72<sup>L</sup></b>	<b>4.03<sup>H</sup></b>	3.79
Expected future wellbeing	<b>3.69<sup>L</sup></b>	<b>4.15<sup>H</sup></b>	3.80
Place attachment	4.16	4.35	4.21
Community adapting	<b>3.55<sup>H</sup></b>	<b>3.05<sup>L</sup></b>	3.43
<b>ONSHORE CONVENTIONAL GAS PERCEPTIONS AND ATTITUDES</b>			
Perceived impacts	3.23	3.36	3.26
Risk manageability	3.19	3.09	3.16
Risk severity	3.43	3.37	3.41
Perceived benefits	<b>3.52<sup>H</sup></b>	<b>3.24<sup>L</sup></b>	3.45
Distributional fairness	<b>3.71<sup>H</sup></b>	<b>3.20<sup>L</sup></b>	3.58
Trust in gas company	<b>2.64<sup>H</sup></b>	<b>2.33<sup>L</sup></b>	2.56
Procedural fairness	<b>2.45<sup>H</sup></b>	<b>2.15<sup>L</sup></b>	2.38
Relationship quality	2.49	2.30	2.44
Governance overall	<b>2.85<sup>H</sup></b>	<b>2.53<sup>L</sup></b>	2.77
Formal governance	<b>3.06<sup>H</sup></b>	<b>2.59<sup>L</sup></b>	2.94
Engaging communities	<b>2.86<sup>H</sup></b>	<b>2.59<sup>L</sup></b>	2.80
Working collaboratively	<b>2.85<sup>H</sup></b>	<b>2.50<sup>L</sup></b>	2.77
Trust in gas governing bodies	2.68	2.48	2.63
Energy transition narrative	3.27	3.17	3.25
Knowledge and understanding	<b>2.53<sup>L</sup></b>	<b>2.92<sup>H</sup></b>	2.62
Information need	3.53	3.77	3.59
Interest in onshore gas discussion	3.01	3.10	3.03
Community attitudes and feelings	<b>3.31<sup>H</sup></b>	<b>2.98<sup>L</sup></b>	3.23

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Apx Table F. 2 Demographic differences: Mean scores based on farm ownership

Dimensions	Farm owner	Non-farm owner	Gippsland Basin
<b>COMMUNITY WELLBEING</b>			
Personal safety	<b>4.43<sup>H</sup></b>	<b>3.77<sup>L</sup></b>	3.88
Income sufficiency	<b>4.00<sup>H</sup></b>	<b>3.66<sup>L</sup></b>	3.71
Health	3.88	3.64	3.68
Services and facilities	3.52	3.49	3.49
Town appearance	3.96	3.84	3.86
Roads	3.06	2.97	2.99
Environmental quality	3.90	3.74	3.77
Environmental management	3.28	3.42	3.40
Local decision-making and trust	2.89	2.99	2.98
Economic opportunities	2.46	2.42	2.43
Community cohesion	3.56	3.36	3.39
Community trust	3.44	3.24	3.27
Community participation	<b>3.56<sup>H</sup></b>	<b>3.11<sup>L</sup></b>	3.18
Community spirit	<b>4.00<sup>H</sup></b>	<b>3.58<sup>L</sup></b>	3.64
Social interaction	<b>3.90<sup>H</sup></b>	<b>3.61<sup>L</sup></b>	3.65
Overall community wellbeing	<b>4.07<sup>H</sup></b>	<b>3.74<sup>L</sup></b>	3.79
Expected future wellbeing	4.06	3.76	3.80
Place attachment	4.37	4.18	4.21
Community adapting	<b>2.97<sup>L</sup></b>	<b>3.52</b>	3.43
<b>ONSHORE CONVENTIONAL GAS PERCEPTIONS AND ATTITUDES</b>			
Perceived impacts	3.38	3.24	3.26
Risk manageability	2.96	3.20	3.16
Risk severity	3.38	3.42	3.41
Perceived benefits	3.22	3.50	3.45
Distributional fairness	<b>3.19<sup>L</sup></b>	<b>3.66<sup>H</sup></b>	3.58
Trust in gas company	2.32	2.60	2.56
Procedural fairness	2.20	2.41	2.38
Relationship quality	2.30	2.47	2.44
Governance overall	<b>2.48<sup>L</sup></b>	<b>2.82<sup>H</sup></b>	2.77
Formal governance	<b>2.60<sup>L</sup></b>	<b>3.00<sup>H</sup></b>	2.94
Engaging communities	2.55	2.84	2.80
Working collaboratively	<b>2.42<sup>L</sup></b>	<b>2.83<sup>H</sup></b>	2.77
Trust in gas governing bodies	2.42	2.67	2.63
Energy transition narrative	3.12	3.27	3.25
Knowledge and understanding	<b>3.24<sup>H</sup></b>	<b>2.51<sup>L</sup></b>	2.62
Information need	3.57	3.59	3.59
Interest in onshore gas discussion	2.99	3.04	3.03
Community attitudes and feelings	3.01	3.26	3.23

Note: Bold font indicates a significant difference from regional average (L = lower; H=higher)

Apx Table F. 3 Demographic differences: Mean scores based on gender

Dimensions	Male	Female	Gippsland Basin
<b>COMMUNITY WELLBEING</b>			
Personal safety	<b>4.08<sup>H</sup></b>	<b>3.68<sup>L</sup></b>	3.88
Income sufficiency	3.79	3.63	3.71
Health	3.72	3.63	3.68
Services and facilities	3.51	3.47	3.49
Town appearance	3.86	3.86	3.86
Roads	2.96	3.01	2.99
Environmental quality	<b>3.87<sup>H</sup></b>	<b>3.67<sup>L</sup></b>	3.77
Environmental management	3.35	3.45	3.40
Local decision-making and trust	2.99	2.96	2.98
Economic opportunities	2.45	2.41	2.43
Community cohesion	3.43	3.34	3.39
Community trust	<b>3.43<sup>H</sup></b>	<b>3.12<sup>L</sup></b>	3.27
Community participation	3.10	3.25	3.18
Community spirit	3.70	3.58	3.64
Social interaction	3.62	3.68	3.65
Overall community wellbeing	3.87	3.71	3.79
Expected future wellbeing	3.90	3.71	3.80
Place attachment	4.30	4.12	4.21
Community adapting	3.33	3.53	3.43
<b>ONSHORE CONVENTIONAL GAS PERCEPTIONS AND ATTITUDES</b>			
Perceived impacts	<b>3.06<sup>L</sup></b>	<b>3.47<sup>H</sup></b>	3.26
Risk manageability	3.26	3.07	3.16
Risk severity	<b>3.25<sup>L</sup></b>	<b>3.58<sup>H</sup></b>	3.41
Perceived benefits	3.49	3.42	3.45
Distributional fairness	3.57	3.60	3.58
Trust in gas company	2.56	2.56	2.56
Procedural fairness	2.39	2.37	2.38
Relationship quality	2.44	2.45	2.44
Governance overall	2.75	2.79	2.77
Formal governance	2.90	2.98	2.94
Engaging communities	2.79	2.80	2.80
Working collaboratively	2.80	2.73	2.77
Trust in gas governing bodies	2.53	2.73	2.63
Energy transition narrative	3.20	3.29	3.25
Knowledge and understanding	<b>3.12<sup>H</sup></b>	<b>2.14<sup>L</sup></b>	2.62
Information need	<b>3.79<sup>H</sup></b>	<b>3.39<sup>L</sup></b>	3.59
Interest in onshore gas discussion	<b>3.28<sup>H</sup></b>	<b>2.78<sup>L</sup></b>	3.03
Community attitudes and feelings	3.31	3.14	3.23

Note: Bold font indicates a significant difference

Apx Table F. 4 Demographic differences: Mean scores based on age

Dimensions	18-34 years	35-54 years	55+ years	Gippsland Basin
<b>COMMUNITY WELLBEING</b>				
Personal safety	<b>3.36<sup>L</sup></b>	4.04	<b>4.04<sup>H</sup></b>	3.88
Income sufficiency	3.49	3.67	3.85	3.71
Health	<b>3.53<sup>L</sup></b>	3.56	<b>3.83<sup>H</sup></b>	3.68
Services and facilities	3.35	3.39	<b>3.63<sup>H</sup></b>	3.49
Town appearance	3.74	3.84	3.94	3.86
Roads	3.02	2.81	3.08	2.99
Environmental quality	<b>3.50<sup>L</sup></b>	3.73	<b>3.93<sup>H</sup></b>	3.77
Environmental management	3.49	3.31	3.41	3.40
Local decision-making and trust	2.98	2.90	3.02	2.98
Economic opportunities	2.39	2.43	2.44	2.43
Community cohesion	3.28	3.33	3.48	3.39
Community trust	<b>2.86<sup>L</sup></b>	3.27	<b>3.49<sup>H</sup></b>	3.27
Community participation	<b>2.79<sup>L</sup></b>	3.28	3.31	3.18
Community spirit	<b>3.33<sup>L</sup></b>	3.74	3.73	3.64
Social interaction	3.73	3.71	3.58	3.65
Overall community wellbeing	<b>3.45<sup>L</sup></b>	3.84	<b>3.93<sup>H</sup></b>	3.79
Expected future wellbeing	<b>3.34<sup>L</sup></b>	3.79	<b>4.05<sup>H</sup></b>	3.80
Place attachment	<b>3.86<sup>L</sup></b>	4.22	<b>4.38<sup>H</sup></b>	4.21
Community adapting	3.60	3.34	3.42	3.43
<b>ONSHORE CONVENTIONAL GAS PERCEPTIONS AND ATTITUDES</b>				
Perceived impacts	3.33	3.34	3.18	3.26
Risk manageability	3.26	3.12	3.14	3.16
Risk severity	<b>3.66</b>	3.48	<b>3.25</b>	3.41
Perceived benefits	3.56	3.41	3.43	3.45
Distributional fairness	3.67	3.60	3.54	3.58
Trust in gas company	<b>2.80<sup>H</sup></b>	2.57	<b>2.43<sup>L</sup></b>	2.56
Procedural fairness	2.52	2.40	2.29	2.38
Relationship quality	2.51	2.55	2.34	2.44
Governance overall	2.90	2.77	2.70	2.77
Formal governance	3.18	2.93	2.83	2.94
Engaging communities	2.83	2.81	2.77	2.80
Working collaboratively	2.88	2.76	2.71	2.77
Trust in gas governing bodies	2.83	2.61	2.54	2.63
Energy transition narrative	3.35	3.17	3.25	3.25
Knowledge and understanding	<b>2.07<sup>L</sup></b>	2.50	<b>2.99<sup>H</sup></b>	2.62
Information need	<b>3.21</b>	3.75	3.67	3.59
Interest in onshore gas discussion	<b>2.59<sup>L</sup></b>	3.10	<b>3.21<sup>H</sup></b>	3.03
Community attitudes and feelings	3.18	3.18	3.28	3.23

Note: Bold font indicates a significant difference from regional average (L = lower; H=higher)



Apx Table F. 5 Demographic differences: Mean scores based on household income

Dimensions	less than \$40,000	\$40,000 to \$80,000	\$80,000 to \$120,000	\$120,000 or more
<b>COMMUNITY WELLBEING</b>				
Personal safety	<b>3.61<sup>L</sup></b>	3.91	4.06	4.11
Income sufficiency	<b>3.13<sup>L</sup></b>	3.66	<b>4.03<sup>H</sup></b>	<b>4.39<sup>H</sup></b>
Health	3.64	3.57	3.58	<b>3.93<sup>H</sup></b>
Services and facilities	3.56	3.39	3.56	3.35
Town appearance	3.99	3.86	3.85	3.71
Roads	2.97	2.95	3.03	3.07
Environmental quality	3.57	3.87	3.85	3.81
Environmental management	3.31	3.38	3.47	3.56
Local decision-making and trust	2.94	2.95	3.15	2.93
Economic opportunities	2.27	2.47	2.62	2.37
Community cohesion	3.41	3.33	3.38	3.39
Community trust	3.26	3.33	3.43	3.15
Community participation	3.20	3.01	3.29	3.37
Community spirit	3.48	3.69	3.86	3.59
Social interaction	3.52	3.53	3.85	3.86
Overall community wellbeing	3.63	3.80	3.95	3.87
Expected future wellbeing	3.58	3.77	4.09	3.74
Place attachment	4.05	4.25	4.40	4.19
Community adapting	3.39	3.48	3.42	3.36
<b>ONSHORE CONVENTIONAL GAS PERCEPTIONS AND ATTITUDES</b>				
Perceived impacts	3.42	3.24	3.16	3.23
Risk manageability	2.99	3.14	3.28	3.24
Risk severity	3.39	3.56	3.32	3.43
Perceived benefits	3.23	3.47	3.57	3.46
Distributional fairness	3.52	3.63	3.64	3.53
Trust in gas company	2.30	2.70	2.68	2.46
Procedural fairness	2.27	2.45	2.50	2.26
Relationship quality	2.34	2.48	2.56	2.42
Governance overall	2.62	2.85	2.93	2.66
Formal governance	2.87	3.12	2.98	2.66
Engaging communities	2.68	2.85	2.98	2.66
Working collaboratively	2.63	2.88	2.88	2.63
Trust in gas governing bodies	2.43	2.62	2.91	2.62
Energy transition narrative	3.14	3.28	3.17	3.37
Knowledge and understanding	2.41	2.65	2.72	2.81
Information need	3.43	3.49	3.69	3.88
Interest in onshore gas discussion	2.77	2.97	3.08	3.26
Community attitudes and feelings	3.08	3.26	3.32	3.23

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

**Apx Table F. 6 Demographic differences: Mean scores based on education level**

Dimensions	Less than Yr 12	Completed Yr 12	Certificate, Dip, Trade	Degree or higher
<b>COMMUNITY WELLBEING</b>				
Personal safety	4.00	3.65	3.82	4.06
Income sufficiency	<b>3.37<sup>L</sup></b>	3.49	3.69	<b>4.16<sup>H</sup></b>
Health	3.59	3.72	3.63	3.78
Services and facilities	3.60	3.56	3.38	3.53
Town appearance	3.91	3.97	3.80	3.85
Roads	2.94	2.94	2.95	3.12
Environmental quality	3.58	3.72	3.76	3.94
Environmental management	3.08	3.45	3.44	3.52
Local decision-making and trust	2.97	2.87	2.95	3.10
Economic opportunities	2.41	2.48	2.35	2.52
Community cohesion	3.47	3.44	3.34	3.37
Community trust	3.25	3.17	3.22	3.46
Community participation	2.85	3.02	3.07	<b>3.71</b>
Community spirit	3.60	3.53	3.59	3.84
Social interaction	3.43	3.66	3.63	3.84
Overall community wellbeing	3.62	3.80	3.76	3.97
Expected future wellbeing	3.69	3.76	3.71	4.08
Place attachment	4.17	4.32	4.12	4.30
Community adapting	3.36	3.45	3.38	3.56
<b>ONSHORE CONVENTIONAL GAS PERCEPTIONS AND ATTITUDES</b>				
Perceived impacts	3.39	3.26	3.20	3.29
Risk manageability	3.24	3.11	3.21	3.07
Risk severity	3.60	3.26	3.43	3.37
Perceived benefits	3.41	3.66	3.38	3.44
Distributional fairness	3.64	3.84	3.48	3.53
Trust in gas company	2.63	2.78	2.52	2.41
Procedural fairness	2.41	2.59	2.34	2.26
Relationship quality	2.52	2.59	2.44	2.28
Governance overall	2.78	2.79	2.74	2.79
Formal governance	2.90	3.07	2.92	2.90
Engaging communities	2.85	2.84	2.73	2.83
Working collaboratively	2.85	2.76	2.75	2.73
Trust in gas governing bodies	2.52	2.67	2.59	2.74
Energy transition narrative	3.32	3.41	3.19	3.17
Knowledge and understanding	2.40	2.53	2.60	2.90
Information need	3.36	3.57	3.65	3.65
Interest in onshore gas discussion	<b>2.55</b>	3.04	3.12	3.22
Community attitudes and feelings	3.31	3.41	3.18	3.10

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

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**Contact us**

1300 363 400  
+61 3 9545 2176  
[csiroenquiries@csiro.au](mailto:csiroenquiries@csiro.au)  
[csiro.au](http://csiro.au)

**For further information**

Land and Water  
Andrea Walton  
+61 7 3833 5675  
[andrea.walton@csiro.au](mailto:andrea.walton@csiro.au)  
[csiro.au/landandwater](http://csiro.au/landandwater)

Land and Water  
Rod McCrea  
+61 7 3833 5677  
[Rod.mccrea@csiro.au](mailto:Rod.mccrea@csiro.au)  
[csiro.au/landandwater](http://csiro.au/landandwater)