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# Earnings of horticulture industry pieceworkers

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Expert report of Greg Houston

11 June 2021

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# 1. Introduction

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1. I have been asked by Seyfarth Shaw Australia (Seyfarth) to prepare this report in the context of an application made by the Australian Worker's Union (AWU) to the Fair Work Commission (FWC) to vary the *Horticulture Award 2020* (MA000028) (the proceedings).<sup>1</sup>
2. By way of support for its application, the AWU asked Dr Elsa Underhill to prepare an expert report on the piece rates in the Australian horticulture industry. In particular, Dr Underhill was asked by the AWU to cover:<sup>2</sup>
  - (a) The composition of the workforce in the horticulture industry, including the number of employees working in the industry and the proportion of employees engaged on a casual basis; and
  - (b) The average earnings of employees engaged as pieceworkers in the horticulture industry.
3. In support of AWU application, the United Workers Union (UWN) asked Dr Joanna Howe to provide a statement in relation to the proposed application to vary the *Horticulture Award 2020*.<sup>3</sup>
4. Seyfarth has asked me to prepare a report that reviews and critiques the expert reports of both Dr Underhill and Dr Howe, including the methodology, assumptions and conclusions in each report.<sup>4</sup>

## 1.1 Instructions

5. Seyfarth's initial letter of instructions asks me to address the following issues:<sup>5</sup>
  - 1.1 Please provide a précis of your relevant experience and expertise in relation to relevant economic disciplines, including your qualifications and work experience.
  - 1.2 Please confirm that you have read the Expert Evidence Practice Note and agree to abide by it.
  - 1.3 Please provide a critique of the methodology adopted in the Expert Report and provide your opinion on whether it suffers from any flaws, issues or inconsistencies.
    - (a) This includes considerations such as whether the data presented, used and relied on in the Expert Report (including in Parts A, B and C) is statistically sound, including in terms of valid sample size, focus groups fairly chosen etc.
    - (b) If issues are identified with the Expert Report, please explain these issues and any impact they have on the conclusions presented in the Expert Report.
  - 1.4 Are the conclusions and inferences made in the Expert Report, including in Part D of the Expert Report, sound? Please provide reasons why.
6. In a supplementary letter of instructions, Seyfarth asks me to carry out a similar review of the methodology adopted in relation to Dr Howe's expert report, ie:<sup>6</sup>

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<sup>1</sup> Expert retainer and letter of Instruction, 14 May 2021, p 1.

<sup>2</sup> Expert report of Dr Elsa Underhill, *Piece rates in the Australian horticulture industry*, 19 March 2021 ('Expert report of Dr Underhill'), para 9.

<sup>3</sup> Statement of Dr Joanna Howe, undated (Howe report).

<sup>4</sup> Expert retainer and letter of Instruction, 14 May 2021, p 1.

<sup>5</sup> Expert retainer and letter of Instruction, 14 May 2021, p 1.

<sup>6</sup> Supplementary scope letter, 7 June 2021, p 1.

Please review and address in your report the methodology underpinning the opinions expressed in the section of Howe Report headed “Underpayment of Wages of Workers Earning Piece Rates”

Please address the same questions in relation to this section of the Howe Report as the questions we asked in the engagement Letter in relation to the Underhill report.

You should give reasons for each opinion and, where appropriate, you should state the methodology you have used in reaching your conclusions. You should also set out the information and data you have relied upon to prepare your report, as well as any assumptions you have made in preparing your report. Finally, you should also make it clear if a particular question or issues falls outside your area of expertise.

7. In performing my review of Dr Underhill’s expert report and Dr Howe’s expert report, I have been asked to assume that:<sup>7</sup>

1. “The phrase ‘average competent employee’ envisages the existence of a pool of hypothetical competent employees. Hypothetical employees who are not competent must be excluded from the pool. The average competent employee is selected from the pool of hypothetical competent employees.”

2. A “competent employee” is one that is “suitable, sufficient or adequate” for the purpose of doing the work that is to be done at a piecework rate. A “competent” employee is to be distinguished from a “proficient” employee.

3. “The average competent employee is the ordinary, normal or typical competent employee”, with “an average level of diligence and an average level of aptitude”.

4. “The assessment of the average competent employee must be made by reference to the workforce that is available or potentially available to the employer.” Hence, “the average competent employee in a less experienced workforce should be attributed with less experience, while the converse is also true”.

Please also make the following factual assumption:

5. At any given point in time, a significant proportion of the workforce (eg 20% or more) engaged on piecework rates under the Horticulture Award 2020 is not competent in the sense described above.

8. In preparing this report I have been provided with a copy of the Federal Court of Australia Expert Evidence Practice Note, including the *Harmonised Expert Witness Code of Conduct* (the Code) and the *Concurrent Expert Evidence Guidelines*. I acknowledge that I have read and understood the Expert Evidence Practice Note and agree to be bound by it.
9. I attach a copy of my three letters of instructions as Annexure A.

## 1.2 Experience and qualifications

10. I am a founding Partner of the economic consulting firm HoustonKemp. Over a period of more than thirty years I have accumulated substantial experience in the economic analysis of markets and the provision of expert advice and testimony in litigation, business strategy and policy contexts. I have developed that expertise in the course of advising corporations, regulators and governments on a wide range of competition, regulatory and financial economics assignments.
11. My industry sector experience spans aviation, beverages, building products, digital platforms, e-commerce, electricity and gas, employee remuneration, grains, healthcare, insurance, litigation funding, medical waste, mining, office products, payments networks, petroleum, ports, rail transport, retailing, scrap metal, securities markets, steel, stevedoring, telecommunications, thoroughbred racing, waste processing and water. I have filed expert reports and/or given expert evidence on these matters on numerous occasions before arbitrators, appeal panels, regulators, the Federal Court of

<sup>7</sup> Supplementary letter: additional assumptions for Expert Retainer, 10 June 2021, p 1.

Australia, the Competition Tribunal, the Fair Work Commission, state Supreme Courts, the High Court of New Zealand and other judicial or adjudicatory bodies.

12. A consistent theme of my professional activity as an applied economist is the gathering, analysis and interpretation of empirical evidence for the purpose of drawing conclusions that inform business, policy, regulatory and judicial decisions. In each of the industry contexts I list above, my work has required me:
  - a. to identify the nature and extent of data that are most relevant to the decision at hand;
  - b. to perform relevant econometric, statistical or other forms of quantitative analysis on that data; and
  - c. to draw appropriate conclusions in light of that analysis.
13. I hold a BSc(Hons) in Economics, a University of Canterbury post-graduate degree, which I was awarded with first class honours in 1983. I attach a copy of my curriculum vitae as Annexure B.
14. I have been assisted in the preparation of this report and the associated research tasks by my colleagues, Martin Chow, Bronwyn Taylor, and Liam Hickey. Notwithstanding this assistance, the opinions in this report are my own and I take full responsibility for them.

### 1.3 Organisation of this report

15. I have structured my report as follows:
  - a. in section two, I provide my assessment of Dr Underhill's expert report;
  - b. in section three, I present my analysis of Dr Howe's expert report; and
  - c. in section four, I set out my expert witness declaration.

## 2. Assessment of Dr Underhill's expert report

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16. In this section, I set out my response to Dr Underhill's expert report, in accordance with questions 1.3 and 1.4 of my letter of instructions, ie:<sup>8</sup>
- 1.3 Please provide a critique of the methodology adopted in the Expert Report and provide your opinion on whether it suffers from any flaws, issues or inconsistencies.
    - (a) This includes considerations such as whether the data presented, used and relied on in the Expert Report (including in Parts A, B and C) is statistically sound, including in terms of valid sample size, focus groups fairly chosen etc.
    - (b) If issues are identified with the Expert Report, please explain these issues and any impact they have on the conclusions presented in the Expert Report.
  - 1.4 Are the conclusions and inferences made in the Expert Report, including in Part D of the Expert Report, sound? Please provide reasons why.
17. Dr Underhill draws upon findings from two previous research projects, to which she refers in her report as 'research project 1'<sup>9</sup> and 'research project 2'.<sup>10</sup>
18. Dr Underhill's expert report does not describe in detail the methodologies underpinning these research projects. In this section, I therefore first set out my understanding of the methodology applied in each of Dr Underhill's research projects 1 and 2, as described in the underlying academic papers authored by Dr Underhill and colleagues.<sup>11</sup>
19. In order to address the considerations raise in question 1.3, I:
- a. comment on the methodologies of the two research projects;
  - b. set out my reservations as to the reliability of the assessment and comparison of different hourly rates that Dr Underhill makes in her expert report;
  - c. set out my reservations as to the reliability of the assessment of piece rates and the link to unsafe work practices that Dr Underhill draws in her expert report;
  - d. set out a number of additional reservations as to reliability of Dr Underhill's research for application to the questions the subject of her expert report; and
  - e. finally, set out my opinion as to the implications of these reservations for the conclusions drawn by Dr Underhill in her expert report.
20. I set out my response to question 1.4 in section 2.7 below.

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<sup>8</sup> Expert retainer and letter of Instruction, 14 May 2021, pp 1-2.

<sup>9</sup> Expert report of Dr Underhill, para 6.

<sup>10</sup> Expert report of Dr Underhill, para 7.

<sup>11</sup> In respect of research project 1: Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, Journal of Industrial Relations, 2015, pp 1-19; in respect of research project 2: Underhill, E, Huang, S, Yi, S, and Rimmer, M, *Using social media to improve temporary migrant workers' access to information about their employment rights*, Journal of Australian Political Economy, 84, 2019, pp 147-174.

## 2.1 Methodology of research projects

21. In this section, I describe my understanding of the methodologies underpinning research project 1 and research project 2.

### 2.1.1 Research project 1

22. Dr Underhill describes research project 1 as 'the only major academic survey to collect data on pieceworker earnings in horticulture in Australia'.<sup>12</sup> The methodology by which the empirical data are collected is set out in the 2015 academic paper by Dr Underhill and Malcolm Rimmer (the 2015 paper).<sup>13</sup> I have also been provided with three additional academic papers,<sup>14</sup> each of which were published by Dr Underhill and colleagues, and draw upon the data collected in research project 1.

23. The data in table three of Dr Underhill's report were drawn from research project 1.<sup>15</sup>

24. My review of these papers indicates that the primary research methodology comprised a combination of:<sup>16</sup>

- in-person interviews of participants undertaken through focus groups at three regional locations in Victoria, one in Tasmania, and one in the Northern Territory;
- telephone interviews of backpacker hostel and caravan park operators in all six Australian states and the Northern Territory; and
- an online survey administered to harvest workers – with respondents recruited by placing invitation cards at working hostels used by harvest workers, and through a website used to locate harvest work.

25. The online survey yielded 417 responses. However, following a process of data cleaning, only 303 responses were used.<sup>17</sup> I assume that the 278 observations on which the summary data in table three of Dr Underhill's report are based were a subset of these 303 responses.

26. Dr Underhill makes no suggestion that focus group participants or telephone interviewees were selected at random or in a manner intended to reflect the population of interest, being all horticulture workers. Although the online survey was advertised in particular locations, it was available online to any harvest workers. Workers were therefore able to self-select<sup>18</sup> into the group of survey respondents.

27. There is no information available to me as to the nature of the questions asked of participants in Dr Underhill's empirical research in research project 1.

<sup>12</sup> Expert report of Dr Underhill, para 24.

<sup>13</sup> Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, Journal of Industrial Relations, 2015, pp 1-19.

<sup>14</sup> Underhill, E and Rimmer, M, *Itinerant foreign harvest workers in Australia: the impact of precarious employment on occupational health and safety*, Policy and Practice in Health and Safety, 13(2), 2015, pp 26-46; Underhill, E, Groutsis, D, van den Broek, D and Rimmer, M, *Migration intermediaries and codes of conduct: temporary migrant workers in Australian horticulture*, Journal of Business Ethics, 2018, 153(3), pp 675-689; and Underhill, E and Rimmer, M, *Private governance, state regulation and employment standards: how political factors shape their nexus in Australian horticulture*, Relations Industrielles, 2017, 72(1), pp 33-55.

<sup>15</sup> Expert report of Dr Underhill, para 24.

<sup>16</sup> Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, Journal of Industrial Relations, 2015, pp 3-4; and Underhill, E and Rimmer, M, *Itinerant foreign harvest workers in Australia: the impact of precarious employment on occupational health and safety*, Policy and Practice in Health and Safety, 13(2), 2015, pp 26-27.

<sup>17</sup> Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, Journal of Industrial Relations, 2015, p 4.

<sup>18</sup> I make a number of observations in relation to the problems arising from self-selected samples in section 2.2.2.

### 2.1.2 Research project 2

28. The data in table four of Dr Underhill's report were drawn from research project 2. Dr Underhill describes research project 2 as a major research project on how temporary migrant workers access information about their employment rights, conducted in 2018 by herself, Professor M Rimmer, Associate Professor S Yi, and Ms S Yuang, for the Victorian government.
29. Dr Underhill states that research project 2 involved a survey of 416 temporary migrants across Australia, focusing on their usage of social media to access information relevant to their employment rights, and including data on wages paid to harvest workers.<sup>19</sup>
30. The only paper provided to me that appears to detail the methodology used in research project 2 is the 2019 paper titled '*Using social media to improve temporary migrant workers' access to information about their employment rights*' ('2019 paper').<sup>20</sup> I note that the data presented in table four of Dr Underhill's report do not appear in the 2019 paper. However, the 2019 paper matches Dr Underhill's description of research project 2 that I have set out in paragraph 28. I therefore assume that the data in table four were drawn from the survey described in the 2019 paper.
31. I understand the research methodology used as the basis for the 2019 paper, and for research project 2, to be as follows:
- a. the researchers held a series of focus groups and subsequently developed an online survey – the focus groups were designed to understand the digital communication methods used by temporary migrant workers (referred to by Dr Underhill as TMWs) and the most appropriate methods for future government communication with TMWs;<sup>21</sup>
  - b. two focus groups were held in regional Victoria and two in Melbourne – focus groups were offered in Korean and Chinese languages (one for each location);<sup>22</sup>
  - c. the focus groups in regional Victoria were attended by TMWs employed in meat processing and horticulture;<sup>23</sup>
  - d. the focus groups had 32 participants in total, 16 of whom attended in regional Victoria;
  - e. the survey included questions related to social media usage and knowledge of employment rights<sup>24</sup> – the 2019 paper does not comment on the nature of any questions asked in the survey regarding wages, hourly rates, working hours, whether the employee was being paid piece rates, or the basis on which they were being paid piece rates; however, given the information presented at table four of Dr Underhill's report, I assume that participants were asked to report or estimate their hourly rate of pay, and whether they were paid piece rates or paid by the hour;

<sup>19</sup> Expert report of Dr Underhill, para 7.

<sup>20</sup> Underhill, E, Huang, S, Yi, S, and Rimmer, M, *Using social media to improve temporary migrant workers' access to information about their employment rights*, Journal of Australian Political Economy, 84, 2019, pp 147-176.

<sup>21</sup> Underhill, E, Huang, S, Yi, S, and Rimmer, M, *Using social media to improve temporary migrant workers' access to information about their employment rights*, Journal of Australian Political Economy, 84, 2019, p 154.

<sup>22</sup> Underhill, E, Huang, S, Yi, S, and Rimmer, M, *Using social media to improve temporary migrant workers' access to information about their employment rights*, Journal of Australian Political Economy, 84, 2019, pp 153-154.

<sup>23</sup> Underhill, E, Huang, S, Yi, S, and Rimmer, M, *Using social media to improve temporary migrant workers' access to information about their employment rights*, Journal of Australian Political Economy, 84, 2019, pp 154.

<sup>24</sup> Underhill, E, Huang, S, Yi, S, and Rimmer, M, *Using social media to improve temporary migrant workers' access to information about their employment rights*, Journal of Australian Political Economy, 84, 2019, p 154.

- f. the survey was advertised at 'select backpacker hostels', regional supermarkets, websites used for relevant job advertisements, and Facebook groups or pages popular with TMWs;<sup>25</sup>
- g. the 2019 paper states that 416 'usable' responses to the survey were received,<sup>26</sup> which I take to be the responses remaining after the dataset was cleaned – further details in relation to the data cleaning process are neither provided in the 2019 paper nor provided in any other sources I have been able to identify;
- h. the 2019 report indicates that 31 per cent of those responses came from workers employed in horticulture;<sup>27</sup> however, the sample size of harvest workers in table four is 81, which is less than 31 per cent of 416 – there is no explanation offered in the 2019 paper or in Dr Underhill's report as to the sample size of 81, although I note that one possible explanation is that only some of the survey respondents employed in horticulture answered questions about their hourly rates and whether they were paid piece rates.; and
- i. participants were offered a retail gift card as a reward for attending the focus groups – respondents to the online survey were given the option of participating in a draw for ten \$100 e-gift cards.

## 2.2 Critique of survey methodology

32. In this section, I set out my opinion in relation to Dr Underhill's survey methodology, for which my principal observations are that:

- a. the sampling methodology results in a non-representative sample, undermining its ability to generalise findings to horticultural workers in Australia; and
- b. the research suffers from self-response bias.

### 2.2.1 Non-representative sample

- 33. Dr Underhill's empirical research in both research projects 1 and 2 involves the collection of data and information from a sample of the underlying 'population' of horticultural workers, ie, it does not involve the collection of information from every horticultural worker.
- 34. In each case, the ability to make inferences from sample data in relation to the underlying population from which the sample is drawn depends on the extent to which that sample reflects (or can be weighted to reflect) the underlying population of interest.
- 35. Nevertheless, Dr Underhill's description of the empirical fieldwork, which I summarise in section 2.1 above, does not involve any discussion of the extent to which the sample reflects the population of interest, ie, all horticultural workers. Similarly, neither Dr Underhill's academic research nor her report makes any suggestion that the primarily research methodology is reflective of the horticultural industry workforce.
- 36. I note that Dr Underhill and colleagues acknowledge in the academic paper associated with research project 1 that 'more research is required about the size and composition of the harvest workforce'.<sup>28</sup>

<sup>25</sup> Underhill, E, Huang, S, Yi, S, and Rimmer, M, *Using social media to improve temporary migrant workers' access to information about their employment rights*, Journal of Australian Political Economy, 84, 2019, p 154.

<sup>26</sup> Underhill, E, Huang, S, Yi, S, and Rimmer, M, *Using social media to improve temporary migrant workers' access to information about their employment rights*, Journal of Australian Political Economy, 84, 2019, p 155.

<sup>27</sup> Underhill, E, Huang, S, Yi, S, and Rimmer, M, *Using social media to improve temporary migrant workers' access to information about their employment rights*, Journal of Australian Political Economy, 84, 2019, p 155.

<sup>28</sup> Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, Journal of Industrial Relations, 2015, p 15.

Robust sampling methodology involves random (probability) sampling

37. In order to obtain a representative sample of a population, a robust sampling methodology involves:<sup>29</sup>
- a. random sampling from the population; such that
  - b. everyone in the population has the same chance of ending up in the sample.
38. By way of example, Wild and Seber state that:<sup>30</sup>
- (1) Well designed statistical studies employ randomization to avoid subjective and other biases.
    - i. Surveys and observational studies should use some form of random sampling to obtain representative samples
39. In some research studies, it may be appropriate to design a stratified sampling frame. Under a stratified sampling frame, the population is first divided into subgroups (or strata). For example, in a study of horticulture workers it may be appropriate to stratify the sampling frame by State or Territory, by type of produce (eg, pea picking, strawberry picking, etc), or by personal characteristic of the individual such as age, gender or level of experience. In circumstances where a stratified sampling frame is deployed, the sample size for each subgroup may be determined proportionally to its weight in the population of interest, and then collected randomly within each stratum.
40. Stratified sampling frames can lead to greater statistical precision (ie, smaller estimation errors) where the differences between the groups (strata) are meaningful and where the variables upon which the population is stratified are strongly correlated with the dependent variable of interest, ie, rates of pay. Dividing the population into independent strata may also enable researchers to draw inferences about these subgroups.
41. Given the diverse nature of horticulture across Australia, including by location and by crop, in my opinion it is likely to be both desirable and appropriate to design a stratified sampling frame.

Dr Underhill's samples are not the outcome of a randomisation process

42. Dr Underhill's samples in each of research project 1 and 2 could be described as a 'non-probability sample'.<sup>31</sup> Non-probability samples do not involve random sampling, and result in samples for which units from the population are included with unknown probabilities.
43. Concerns associated with the external validity of research findings based on non-probability samples such as online surveys have been identified and described by Joye and colleagues (2016), ie:<sup>32</sup>
- Being a self-selected group, coverage of the population usually is poor and though companies try to improve representativeness by weighting according a few socio-demographic variables external validity typically is a problem [sic]. This therefore calls into question the quality of such surveys.
44. In addition, non-probability samples limit the ability of researchers to undertake robust statistical analysis, as noted by Vehovar and colleagues, ie:<sup>33</sup>

<sup>29</sup> Wild, C J and Seber, G A F, *Chance encounters*, John Wiley & Sons, 1999, p 2.

<sup>30</sup> Wild, C J and Seber, G A F, *Chance encounters*, John Wiley & Sons, 1999, p 32.

<sup>31</sup> Within the category of non-probability samples, the research project samples could be classified as a convenience or volunteer sample: Vehovar, V, Toepoel, V and Steinmetz, S, *Non-probability sampling*, in Wolf, C, Joye, D, Smith, T and Fu, Y (eds.), *The SAGE Handbook of Survey Methodology*, SAGE Publications, 2016, pp 329-330.

<sup>32</sup> Joye, D, Wolf, C, Smith, T and Fu, Y, *Survey methodology: challenges and principles*, in Wolf, C, Joye, D, Smith, T and Fu, Y (eds.), *The SAGE Handbook of Survey Methodology*, SAGE Publications, 2016, p 7.

<sup>33</sup> Vehovar, V, Toepoel, V and Steinmetz, S, *Non-probability sampling*, in Wolf, C, Joye, D, Smith, T and Fu, Y (eds.), *The SAGE Handbook of Survey Methodology*, SAGE Publications, 2016, p 334.

with non-probability samples, by definition, the inclusion probabilities are unknown or zero, so without further assumptions this very fact formally prevents any statistical inference calculations (e.g. estimates, variances, confidence intervals, hypothesis testing, etc.)

and:<sup>34</sup>

in a non-probability setting the statistical inference based on probability sampling principles formally cannot be applied. Still, the practitioners routinely use the corresponding 'estimates', which should be rather labelled as 'indications' or even 'approximations'.

#### Consequences of the sampling limitations

45. In my opinion, Dr Underhill's research did not involve a well-specified sampling frame, insofar as the data may then be applied to draw valid inferences as to the population of interest for the purposes of her expert report.
46. A researcher using a non-randomised sample of the kind undertaken by Dr Underhill is not able to make robust generalisations about the population from this sample – because there is no basis for expecting the sample to be representative of the population. Such limitations are consistent with Dr Underhill's acknowledgement in the 2015 paper as to there being insufficient research available as to the composition of the population of horticultural workers in Australia.<sup>35</sup>
47. It follows that the data collected from research project 1 and research project 2 are unlikely to be appropriate estimates for the 'average earnings of employees engaged as pieceworkers in the horticulture industry', ie, Dr Underhill's response to question (b) put to her by AWU.
48. The non-random (non-probability) samples in Dr Underhill's research also have the consequence that any statistical tests performed on these data are inappropriate and unreliable.

#### 2.2.2 Dr Underhill's research suffers from self-selection bias

49. Self-selection occurs when respondents decide themselves whether or not to be surveyed. Self-selection introduces bias when the characteristics of those who opt-in are different from those who do not opt in.
50. Concerns with self-selection bias in the context of online surveys has been noted by Lyberg and Weisberg, ie:<sup>36</sup>

[However,] selection bias is a serious potential problem for web surveys because people who opt-in for a web survey might be very different from those who do not. Even weighting the sample on the basis of known population characteristics may not handle this problem because people who respond to such a web survey may differ from those with the same demographics who do not respond.

51. Dr Underhill does not identify in her expert report any potential form of bias associated with her earlier research findings, although her 2015 paper does so, stating that:<sup>37</sup>

some degree of response bias should be acknowledged, skewing findings towards dissatisfied workers.

<sup>34</sup> Vehovar, V, Toepoel, V and Steinmetz, S, *Non-probability sampling*, in Wolf, C, Joye, D, Smith, T and Fu, Y (eds.), *The SAGE Handbook of Survey Methodology*, SAGE Publications, 2016, p 341.

<sup>35</sup> Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, *Journal of Industrial Relations*, 2015, p 15.

<sup>36</sup> Lyberg, L, and Weisberg, H, *Total survey error: a paradigm for survey methodology*, in Wolf, C, Joye, D, Smith, T and Fu, Y (eds.), *The SAGE Handbook of Survey Methodology*, SAGE Publications, 2016, p 32.

<sup>37</sup> Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, *Journal of Industrial Relations*, 2015, p 4.

52. Although not acknowledged in her expert report prepared for the proceedings, I agree with the statement made in Dr Underhill's 2015 paper that self-selection bias is very likely to exist in these data, because:
- a. dissatisfied workers are more likely to fill in the online survey or participate in the focus groups; and
  - b. dissatisfied workers are more likely to have received lower pay for their work, with the consequence that the results of research projects 1 and 2 are likely to understate the average earnings of employees engaged as pieceworkers in the horticulture industry.<sup>38</sup>
53. In my opinion, on the information and data presented in Dr Underhill's expert report, there is no robust methodology by which to assess the likely extent of response bias in the reported results of research projects 1 and 2 that Dr Underhill presents.

## 2.3 Assessment and comparison of pay rates

### 2.3.1 Hourly rates earned by hourly rate and piece rate workers

54. Setting aside the reservations I describe above as to the underlying empirical data, in the material below I explain the basis for my opinion that Dr Underhill has not undertaken a like-for-like comparison of the wages in each group, ie, wages paid by the hour and those paid by piece rates.
55. In her expert report, Dr Underhill compares the hourly earnings of employees on an hourly rate with an estimate of the hourly rate equivalent wage for employees on a piece rate. In making this comparison, Dr Underhill relies on the findings from research project 1 and research project 2.

I present Dr Underhill's findings on hourly earnings from research project 1 and research project 2 in Table 2-1 and

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<sup>38</sup> I note that this self-response bias is also likely to apply in relation to workers on hourly rates of pay.

56. Table 2-2 below, respectively.
57. Drawing on the findings from these two research projects, Dr Underhill concludes that piece rate workers earnings are generally 'well below' the earnings of hourly paid workers and only 60 per cent of the amount of an 'average competent worker' would expect to earn.<sup>39</sup>

Table 2-1: Hourly earnings for harvest workers, 2014 (n=278)

	Paid by the hour (n = 158)	Paid by piece rates (n = 120)
Mean	\$16.20	\$11.69
Median	\$18.00	\$12.00
Minimum	\$3.00	\$2.00
Maximum	\$28.25	\$30.00
Standard Deviation	4.833	5.01
Award minimum	\$16.87	\$19.40 (for an average competent worker)

Source: Expert report of Dr Underhill, Table 3, p 12.

<sup>39</sup> Expert report of Dr Underhill, para 25.

Table 2-2: Average hourly earnings for harvest workers, 2018 (n=81)

	Paid by the hour (n = 53)	Paid by piece rates (n = 28)
Mean	\$21.03	\$16.28
Median	\$22.13	\$15.00
Minimum	\$10.00	\$5.00
Maximum	\$26.00	\$25.00
Standard Deviation	3.039	5.63
Award minimum	\$22.86	\$26.29 (for an average competent worker)

Source: Expert report of Dr Underhill, Table 4, p 13.

### 2.3.2 Dr Underhill does not make a like-for-like comparison

58. I note that the minimum wage set out in the *Horticulture Award 2020* varies depending on the employee level.<sup>40</sup> For illustration, I set out the 2020 minimum hourly wage in Table 2-3, noting that any comparison between award rates and survey data would need to draw up the applicable award rates over the period for which the survey data relates.
59. My understanding of the variation in these hourly rates by 'level 1-5' is that, generally, employees that perform at a higher level and are required to undertake more skilled activities have a higher level of classification.<sup>41</sup> By way of example, the general description of a class 1 employee includes undertaking induction training, exercise minimal judgment and working under direct supervision of others.<sup>42</sup> In contrast, the general description for a class 5 employee includes performing work under minimal supervision, providing on the job training, and operating all lift equipment.<sup>43</sup>
60. Furthermore, casual employees are entitled to receive a loading of 25 per cent of the hourly rate,<sup>44</sup> while junior rates apply to those 20 years of age or under.<sup>45</sup> Junior rates set out the minimum rate payable to a junior employee as a percentage of the adult rate.<sup>46</sup> For example, the minimum rate for junior employees of 16 and 19 years of age is 60 and 90 per cent of the adult rate, respectively.<sup>47</sup>

Table 2-3: Adult employee minimum rates by employee classification

Classification	Minimum hourly rate
Level 1	\$19.84
Level 2	\$20.41
Level 3	\$20.99
Level 4	\$21.79
Level 5	\$23.09

<sup>40</sup> *Horticulture Award 2020*, clause 15.1(a).

<sup>41</sup> *Horticulture Award 2020*, schedule A. With the exception of level 5, the highest level of classification, the indicative duties for each classification level includes undertaking structured to advance to the next level.

<sup>42</sup> *Horticulture Award 2020*, schedule A.1.

<sup>43</sup> *Horticulture Award 2020*, schedule A.5.

<sup>44</sup> *Horticulture Award 2020*, clause 11.3(a)(ii).

<sup>45</sup> *Horticulture Award 2020*, clause 15.3(a).

<sup>46</sup> *Horticulture Award 2020*, clause 15.3(a).

<sup>47</sup> *Horticulture Award 2020*, clause 15.3(a).

Source: Horticulture Award 2020

61. The details that I set out above highlight that the minimum hourly rate to which an hourly paid worker is entitled depends on several factors, including:<sup>48</sup>
- a. the employment classification, which aligns with the performance and duties of the employee;
  - b. whether the employee is employed on a casual basis, and so should receive a 25 per cent loading; and
  - c. the age of the employee, and so whether junior rates apply.
62. In my opinion, a like-for-like comparison of hourly earnings between piece rate employees and hourly paid employees would need to account for various factors that influence an employee's minimum wage. Otherwise, there is a risk that the difference in hourly earnings between the two groups of employees are driven by differences in the distribution of experience, age and casual-worker status across groups. I note that I am unable to assess the extent to which these factors explain differences in pay between the two groups, since I do not have access to the underlying survey data.
63. More fundamentally, survey research is not well-suited to the making of causal inference or put simply, would not typically confer to the researcher an ability to explain observed differences between groups. As noted by Jann and Hinz:<sup>49</sup>

This is a fundamental problem using observational (in contrast to experimental) data. Consequently, survey research often cannot isolate 'causes' and 'effects', as all potential covariates cannot be excluded and problems such as omitted variable bias, selection bias, and endogeneity might occur.

### 2.3.3 Formal hypothesis tests performed by Dr Underhill

64. In the presentation of these results at tables 3 and 4 of her expert report, Dr Underhill reports 't-statistics' and 'p-values', implying the undertaking of some statistical analysis. However, Dr Underhill does not describe the statistical testing she has undertaken in her expert report.
65. In the material below, I first describe the statistical tests and terminology used, and then my opinion as to the statistical testing that it is likely Dr Underhill reports at tables 3 and 4 of her expert report.
66. Statistical tests are often used to test the hypothesis that a researcher's observed results – such as a difference in average rates of pay across sample groups – are likely to be the result of sampling variability (alone) so that, notwithstanding any observed differences, average rates of pay are the same across groups in the underlying population. Such a test is described as being of whether there is evidence against such a 'null hypothesis' – suggesting that there is a difference in the underlying average rates of pay in the population of interest.<sup>50</sup>
67. In this case, a statistical test known as a two sample t-test can be used to test the null hypothesis that the average reported hourly rates in the underlying populations of piece rate workers and hourly rate workers are the same, ie,<sup>51</sup>

Null hypothesis:  $\mu_{\text{piece rate}} - \mu_{\text{hourly rate}} = 0$ ,

<sup>48</sup> I note that this list is not necessarily exhaustive.

<sup>49</sup> Jann, B and Hinz, T, *Research question and design for survey research*, in Wolf, C, Joye, D, Smith, T and Fu, Y (eds.), *The SAGE Handbook of Survey Methodology*, SAGE Publications, 2016, p 107.

<sup>50</sup> Wild, C J and Seber, G A F, *Chance encounters*, John Wiley & Sons, 1999, pp 375-377.

<sup>51</sup> See, for eg, Wild, C J and Seber, G A F, *Chance encounters*, John Wiley & Sons, 1999, pp 430-433.

Where  $\mu_{\text{piecerate}}$  and  $\mu_{\text{hourlyrate}}$  represent the average hourly earnings in the underlying population of piece rate workers and hourly rate workers, respectively.

68. The two sample t-test assesses whether the observed difference in the averages in the sample data shown by Dr Underhill can credibly be explained in terms of sampling variation.<sup>52</sup> Evidence against the null hypothesis would be a difference in the means of the two samples that was sufficiently large that it could not credibly be explained away in terms of sampling error.
69. The result of a t-test is a corresponding 'p-value'. The p-value measures the strength of evidence against the null hypothesis: the smaller the p-value, the stronger the evidence against that null hypothesis.<sup>53, 54</sup>
70. In order to confirm the nature of the tests reported in tables 3 and 4 of her report, I sought to replicate the tests apparently undertaken by Dr Underhill.
71. Based on my replications, for which I obtain results that are very similar to, and identical to, those presented at the bottom of tables 3 and 4, respectively,<sup>55</sup> in Dr Underhill's report, I find it very likely that Dr Underhill has undertaken a two-sample t-test in respect of each of the 2014 and 2018 data.
72. For each of the 2014 and 2018 datasets, Dr Underhill finds strong evidence against the null hypothesis, ie, strong evidence that there is a difference in average hourly rates reported by piece workers and those receiving hourly rates, with p-values of 0.000 in each case. Put differently, the results of the t-test suggest that the observed difference in reported average hourly rates of Dr Underhill's survey samples is unlikely to be explained by sampling variation alone. These results are consistent with my attempted replication of these statistical tests.<sup>56</sup>
73. Notwithstanding, my replication of the statistical testing apparently undertaken by Dr Underhill's does not resolve the reservations I express above as to the ability of the data obtained by Dr Underhill's in research project 1 and research project 2 to inform the questions on which she was asked to opine in her report. The reservations I express include that statistical testing is inappropriate and unreliable in the context of non-probability samples.

## 2.4 Assessment of piece rates and unsafe work practices

74. In her expert report, Dr Underhill considers that the use of piece rates leads to unsafe work practices, ie, Dr Underhill states that:<sup>57</sup>

Low rates of pay for piece workers in horticulture create an incentive for piece workers to speed up their output. The nature of harvesting work, however, means that the few short cuts available to workers to increase output are inextricably linked to poorer health and safety;

and that:<sup>58</sup>

<sup>52</sup> Each time a sample is drawn from a population, it is very likely that the composition of that sample will be different for each draw. By consequence, the sample mean and other calculations performed on the basis of sample data will also vary with each draw from the population, holding sampling methodology and population constant. These differences represent sampling variation.

<sup>53</sup> Formally, for a t-test, a p-value is the probability that, if the hypothesis is true, sampling variation would produce an estimate that is further away from the hypothesised value than the estimate we got from our data.

<sup>54</sup> Wild, C J and Seber, G A F, *Chance encounters*, John Wiley & Sons, 1999, p 381.

<sup>55</sup> I undertake a two-tailed test, although a one-tailed test could also have been used. The choice of a two-tailed test has no bearing on my conclusions.

<sup>56</sup> In particular, in respect of the 2014 data, the difference between my test statistic of 7.548 and Dr Underhill's test statistic of 7.589 is very small and could be caused by differences in rounding. In respect of the 2018 data, I have calculated a test statistic of 4.156, which is equal to the test statistic quoted by Dr Underhill.

<sup>57</sup> Expert report of Dr Underhill, para 38.

<sup>58</sup> Expert report of Dr Underhill, para 40.

Not only are piece workers low paid, their work involves risks beyond those experienced by hourly rate workers. This data points to employers in horticulture paying cursory attention to OHS risks, which they contribute to by offering piece rate payments. As long as piece work rates fail to provide to provide a decent minimum wage, workers will continue to take chances with their safety.

75. Dr Underhill appears to make these conclusions on the basis of the survey responses from research project 1. I have re-presented those results in Table 2-4 below.

Table 2-4: Payment methods and unsafe work practices

Issue	Never/rarely (%)		Sometimes (%)		Often/always (%)	
	Hourly paid (n=151)	Piece worker (n=116)	Hourly paid (n=151)	Piece worker (n=116)	Hourly paid (n=151)	Piece worker (n=116)
Discouraged from taking lunch breaks	47.3	21.6	28.2	31.4	24.4	47.1
Discouraged from stopping to drink water	61.2	50.0	24.3	27.6	14.5	22.4
Working in extreme heat (35 degrees+)	46.7	26.7	28.3	25.0	25.0	48.3
Carrying excessive loads	65.1	37.9	23.7	30.2	11.2	31.9
Not stabilising ladders before climbing	84.2	62.1	11.8	24.1	3.9	13.8
Raising OHS issues without negative consequences	23.7 <sup>59</sup>	40.2	34.4	28.4	42.0	31.4

Source: Expert report of Dr Underhill, Table 5.

76. On the basis of the survey responses presented in table 2-4 above, Dr Underhill concludes that “*piece workers were often or always.*<sup>60</sup>”

- i. *twice as likely to be discouraged from taking lunch breaks;*
- ii. *almost twice as likely to not drink water if it took too long to access;*
- iii. *almost twice as like to work in extreme heat (35 degrees and above);*
- iv. *three times as likely to carry excessive loads; and*
- v. *almost five times as likely to not stabilise a ladder before climbing on it.”*

77. I note that this description of the survey results is inaccurate. Taking proposition (i) above as an example, a more accurate description of the result would be to say that (almost) twice the proportion of piece workers in the sample reported being often or always discouraged from taking lunch breaks, as compared with the proportion of hourly workers in the survey sample. This distinction makes clear that:

- a. there is no inference of ‘likelihood’, because these responses are not representative of the underlying population; and
- b. there is no meaningful interpretation of the phrase ‘often or always twice as likely’.

<sup>59</sup> I note that this value is denoted as “23.7.4%” in Dr Underhill’s expert report. I have assumed that the correct value is 23.7 per cent so that the total response rate is closer 100%.

<sup>60</sup> Expert report of Dr Underhill, para 39.

78. Setting aside the semantic presentation of these data, I understand that the survey responses above are based on those obtained in research project 1. In addition to the reservations in relation to the underlying empirical data I set out in section 2.2 above, in the remainder of this section, I set out my opinion as to:
- a. potential concerns with Dr Underhill's questionnaire and results, including:
    - i. the applicability of questions to all respondents;
    - ii. the subjectivity of questions and interpretation of results; and
    - iii. apparent inconsistencies between Dr Underhill's expert report and her other research reports that draw on survey responses from research project 1; and
  - b. Dr Underhill's use of research project 1 data to make causal inferences as to the relationship between piece rates and unsafe work practices.

#### 2.4.1 Potential concerns with Dr Underhill's questionnaire

79. Since I do not have access to the underlying survey questions and responses, my observations are inherently limited to the inferences that can be drawn from the results of the survey presented in section C of Dr Underhill's report.
80. The accuracy and the interpretation of the results will depend critically on the questions that respondents were asked to answer, and the particular wording of the survey questions. For example, the Australian Bureau of Statistics notes that:<sup>61</sup>

A poorly designed questionnaire can be the biggest source of non-sampling error (either directly or indirectly). The questionnaire can influence the response rate achieved in the survey, the quality of responses obtained and consequently the conclusions drawn from the survey results.

81. I discuss below a range of potential concerns with the apparent form of the survey questions, drawing upon inferences I have drawn from the presentation of the results.

#### Applicability of questions to all respondents

82. The reported survey results imply that many of the questions were only applicable to some of the respondents. For example:
- a. using ladders or carrying excessive loads may only be required for some types of fruit or vegetables, eg, strawberry picking would be unlikely to involve a ladder given the height of strawberry plants;
  - b. whether a particular worker is required to work in excessive heat would depend on the location of the farm and season being worked; and
  - c. the question concerning the raising of OH&S issues without negative consequences appears to be relevant only to people who have raised multiple workplace issues before – otherwise it would be difficult for a respondent to provide a frequency of the event occurring.
83. As shown in Table 2-4 above, Dr Underhill reports responses only by the frequency of event occurring, ie, never/rarely, sometimes, and often/always. It is unclear if the survey allowed respondents to respond with a 'I don't know' or 'not applicable/relevant'.

<sup>61</sup> Australian Bureau of Statistics, *Questionnaire design*, available at <https://www.abs.gov.au/websitedbs/D3310114.nsf/home/Basic+Survey+Design+-+Questionnaire+Design>, accessed 2 June 2021.

84. It is unclear how a respondent would answer a particular question if it was not relevant and the survey did not allow for a 'not applicable' response. Notwithstanding, it is likely to make the results less meaningful and harder to interpret, particularly for questions that are only applicable to a smaller proportion of respondents.

#### Subjectivity and interpretation of responses

85. It is unclear if the survey provides guidance on how respondents should interpret the frequency dimension of the questions. As such, the responses may well involve a degree of subjectivity as to how questions should be interpreted. For example:
- a. a respondent that states that they 'often or always' work in extreme heat (35 degrees or more) would require there to be extreme heat whenever this employee works – it is unclear whether some employees have responded with 'never/rarely' because:
    - i. there were never/rarely days with extreme heat; or
    - ii. they never/rarely work on days when there is extreme heat;
  - b. it is unclear if the survey provides guidance on what excessive load means (eg, carrying loads of 20 kilos or more) and frequency (eg, always could be interpreted as carrying excessive loads once or twice a day or 'all the time' when they are working);
  - c. it seems likely that not all respondents would have raised OH&S issues while working in the sector and respondents that have raised OH&S issues may have done so only once or twice. It is also unclear if the survey provided guidance on the definition of negative consequences or what these consequences could be. It is also unclear how respondents who have never raised an OH&S issue due to fear of negative consequences would answer this question, ie, respondents could answer either 'never/rarely', since they have never raised an OH&S issue, or 'often/always' if they consider there would be negative consequences from raising an OH&S issue; and
  - d. it is unclear if respondents are discouraged from taking lunch or drink breaks due to pressure from their employers, because of their desire to earn additional income or for some other reason (such as forgetting to take such a break).

#### Inconsistencies between Dr Underhill's expert report and other research reports

86. Dr Underhill's expert report relies on survey responses from research project 1. These survey responses appear in other research reports published by Dr Underhill and colleagues, including:
- the paper titled *Layered vulnerability: temporary migrants in Australian horticulture* (ie, the 2015 paper);<sup>62</sup> and
  - another research report where Dr Underhill and colleagues examine health and safety issues for foreign harvest workers in the sector (the OH&S research paper).<sup>63</sup>
87. There appears to be a number of potential inconsistencies between Dr Underhill's expert report and her other research reports. For example, the OH&S research paper also presents survey responses that appear to be drawn from the same survey undertaken for the 2015 paper. I present these results in Table 2-5 below. I note the following:

<sup>62</sup> Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, Journal of Industrial Relations, 2015, pp 1-19.

<sup>63</sup> Underhill, E and Rimmer, M, *Itinerant foreign harvest workers in Australia: the impact of precarious employment on occupational health and safety*, Policy and Practice in Health and Safety, 13(2), 2015, pp 26-27.

- a. the results presented in the OH&S research paper are the same as those presented in Dr Underhill's expert report for three questions – however, the results in relation to the fourth question as to whether workers are discouraged from taking a lunch break are different. For example, Dr Underhill's expert report suggests that 21.6 per cent of piece rate workers are never/rarely discouraged from taking a lunch break,<sup>64</sup> whereas the results from the OH&S research paper suggest that this figure is 20.7 per cent;<sup>65</sup> and
- b. Dr Underhill's expert report indicates that the sample size for the survey responses was 267 but the OH&S research paper suggests the sample size was 268.

Table 2-5: Table 5 from OH&amp;S research paper

Issue (n=268)	Never/rarely (%)		Sometimes (%)		Often/always (%)	
	Hourly paid	Piece worker	Hourly paid	Piece worker	Hourly paid	Piece worker
Not stabilising ladders before climbing	84.2	62.1	11.8	24.1	3.9	13.8
Working in extreme heat (35 degrees+)	46.7	26.7	28.3	25.0	25.0	48.3
Carrying excessive loads	65.1	37.9	23.7	30.2	11.2	31.9
Discouraged from taking lunch breaks (n=259)	45.0	20.7	27.2	30.2	23.8	47.4

Source: Underhill, E and Rimmer, M, *Itinerant foreign harvest workers in Australia: the impact of precarious employment on occupational health and safety, Policy and Practice in Health and Safety, 13(2), 2015, p 39.*

88. The interpretation of the survey results between Dr Underhill's research reports also appear to involve inconsistencies. Table 2-6 below shows the survey results in relation to drink breaks from the 2015 paper and the OH&S research paper, including the outcomes of the statistical test. Since the results, including outcomes of the statistic tests, are identical, it is likely that they are based on survey responses to the same question.
89. However, the two research reports have interpreted the results differently, ie:
  - a. the 2015 paper reports the results as how frequently employees **missed drink breaks**,<sup>66</sup> whereas
  - b. the OH&S research paper reports the results as how frequently employees are **discouraged from stopping to drink water**.<sup>67</sup>

<sup>64</sup> Expert report of Dr Underhill, table 5.

<sup>65</sup> I note that Dr Underhill's expert report suggests that the sample size of 267 was used for the lunch break question, ie, it does not indicate that a different sample size was used for the lunch break question. Table 5 of the OH&S research paper suggests that a lower sample size (n=259) was used for the lunch break question. I note also that the percentages of hourly paid and piece workers reported in table 5 of the OH&S research paper add up to 96.0 per cent and 98.3 per cent respectively, whereas these percentages add up to 100 per cent (allowing for rounding) in Dr Underhill's expert report. This may offer a partial explanation for the different percentages reported. However, without access to the underlying survey data, I cannot draw a conclusion in relation to the different sample sizes or percentages reported.

<sup>66</sup> Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, Journal of Industrial Relations, 2015, p 15.

<sup>67</sup> Underhill, E and Rimmer, M, *Itinerant foreign harvest workers in Australia: the impact of precarious employment on occupational health and safety*, Policy and Practice in Health and Safety, 13(2), 2015, p 37.

90. Furthermore, when discussing the results of the research in relation to drink breaks as between piece rate and hourly paid workers, Dr Underhill states that piece rate workers are, often or always:<sup>68</sup>
- almost twice as likely to not drink water if it took too long to access
91. This represents another way to interpret the survey results from the question related to drink breaks, which is different from the two above.

Table 2-6: Results on drink breaks from the 2015 paper and the OH&S research paper

Survey results	Contractor (%)	Farm (%)	Statistical test
Often/always missing drink breaks – as reported in table 4 from the 2015 paper	24.0	16.1	$\chi^2 = 8.127$ ; DF 2; $p < 0.05$
Often/always discouraged from stopping to drink water – as reported in table 4 from the OH&S research paper	24.0	16.1	$\chi^2 = 8.127$ ; DF 2; $p < 0.05$

Source: Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, *Journal of Industrial Relations*, 2015, p 15; and Underhill, E and Rimmer, M, *Itinerant foreign harvest workers in Australia: the impact of precarious employment on occupational health and safety*, *Policy and Practice in Health and Safety*, 13(2), 2015, p 37.

92. I note also that the 2015 paper and the OH&S research paper provide information as to whether drinking water is supplied for farm employees and contractor employees. I expect that a similar analysis could be done for piece rate employees compared with hourly rate employees, but this analysis is not included in Dr Underhill's expert report.

#### 2.4.2 Causal relationship between piece rates and unsafe work practices inferred by Dr Underhill

93. Dr Underhill's expert report implies there is a causal relationship between poor work practices and piece rate working. In particular, Dr Underhill states that:<sup>69</sup>

This data points to employers in horticulture paying cursory attention to OHS risks, which they contribute to by offering piece rate payments. As long as piece work rates fail to provide a decent minimum wage, workers will continue to take chances with their safety.

94. I explain below my reservations in relation to Dr Underhill's conclusion that the use of piece rates leads to poor work practices.

Comparison between hourly paid workers and piece rate workers may not be like-for-like

95. I note in section 2.3 that an assessment as to differences between hourly paid workers and piece rate workers should be made on a like-for like basis. In other words, it is possible an employee is engaged on an hourly rate basis because their responsibilities are not limited to the picking of products. For example, an employee may also be responsible for training new staff or administrative duties.
96. It follows that an hourly rate workers may have a different response to the survey questions when compared to piece rate workers because of differences in their role and duties, rather than differences in how they are paid.

Other potential hypotheses that could explain the correlation

97. I note in para 63 that survey research is not well-suited to the making of causal inferences. In other words, although piece rate workers may experience poorer work practices, it does not follow that

<sup>68</sup> Expert report of Dr Underhill, para 39(ii).

<sup>69</sup> Expert report of Dr Underhill, para 40.

these are caused by the use of piece rates. Accordingly, changes to or the elimination of piece rates would not necessarily lead to improved work practices.

98. In any case, there may well be other explanations for poor work practices that are unrelated to piece rates. For example, Dr Underhill's OH&S research paper concludes that workers employed by contractors were more susceptible to poorer work practices.<sup>70</sup> Table 2-7 shows the different responses from employees hired directly by the farm and employees hired through a contractor.
99. The results indicate that contractor employees have poorer work practices since they are more likely to be discouraged from stopping to drink water and working in extreme heat, and less likely to be supplied with drinking water or raise OSH issues without negative consequences.
100. In the OH&S research paper, Dr Underhill considered that these responses were:<sup>71</sup>

... consistent with the pressures that flow from the contractor promising the farmer a defined output within a set timeframe.

Table 2-7: Survey responses of farm and contractor employees from the OH&S research paper

Issue	Never/rarely (%)		Sometimes (%)		Often/always (%)	
	Farm employee (n=195)	Contractor employee (n = 75)	Farm employee (n=195)	Contractor employee (n = 75)	Farm employee (n=195)	Contractor employee (n = 75)
Discouraged from stopping to drink water	60.6	41.3	23.3	34.7	16.1	24.0
Working in extreme heat (35 degrees+)	41.5	30.7	28.5	22.7	30.1	46.7
Drinking water supplied	21.8	39.2	17.1	27.0	59.1	29.7
Raise OSH issues without negative consequences	26.4	31.1	25.9	32.4	37.3	20.2

Source: Underhill, E and Rimmer, M, *Itinerant foreign harvest workers in Australia: the impact of precarious employment on occupational health and safety, Policy and Practice in Health and Safety, 13(2), 2015, p 37.*

101. The above suggests that an alternative explanation of poor work practices could be the use of contractor employees, who may be pressured by the contractor to produce above a certain level.

Conclusion that increases in piece rates or a move to hourly paid rates would improve safety practices

102. In paragraph 40 of her expert report, Dr Underhill appears to suggest that employers 'paying cursory attention' to OH&S risks is one of the factors that explain why piece rate workers experience poorer work practices. In the same paragraph, Dr Underhill then suggests that 'As long as piece work rates fail to provide a decent minimum wage, workers will continue to take chances with their safety'. It follows that Dr Underhill implicitly considers that an increase in piece rates to a level where it provides a 'decent minimum wage' would improve work safety practices.
103. In my opinion, the incentives created from an increase in piece rates may well have an opposite effect, ie, an increase in piece rates would improve the financial returns workers receive from being more

<sup>70</sup> Underhill, E and Rimmer, M, *Itinerant foreign harvest workers in Australia: the impact of precarious employment on occupational health and safety, Policy and Practice in Health and Safety, 13(2), 2015, p 38.*

<sup>71</sup> Underhill, E and Rimmer, M, *Itinerant foreign harvest workers in Australia: the impact of precarious employment on occupational health and safety, Policy and Practice in Health and Safety, 13(2), 2015, p 38.*

productive. This could further encourage workers to focus on productivity and discourage workers from focusing on safety outcomes, such as taking breaks or stabilising their ladder when climbing.

## 2.5 Other considerations

104. In the material below, I draw together a number of other considerations that give rise to further reservations in relation to Dr Underhill's report and underlying analyses.

### 2.5.1 Derivation of estimated hourly-equivalent rates from paid piece rates

105. I note that Dr Underhill's report presents piece rates as an (average) hourly rate. Dr Underhill does not provide a description as to how these piece rates were converted into hourly rates. By definition, the hourly equivalent rate for a piece rate worker may vary across a range – depending on their productivity and output in each hour – so that the average equivalent hourly rate could plausibly vary substantially over any given day, week, month and so on.

106. Dr Underhill's analysis is based on information collected via an online survey. I note in para 114 that I do not have access to the survey questions or the responses. However, the accuracy and interpretation of the results will depend critically on the questions that respondents were asked to answer, and the particular wording of the survey questions. By way of example, it is unclear:

- a. whether and, if so, how the survey specifies the nature of earnings that respondents are asked to provide – by way of example, whether it clarifies that earnings should be expressed as inclusive or exclusive of superannuation contribution, income tax and overtime earnings; in my opinion, the relevant earnings measure should be pre-tax, but excluding overtime and superannuation, so that it is comparable with the minimum hourly rates specified in the award;
- b. whether the survey specifies the time period of the earnings – I note in paragraph 58 that earnings should be compared with the applicable minimum hourly rates at the time, but it is unclear whether the survey specifies that respondents should only include earnings in the relevant period;
- c. over what time period respondents are asked to provide details of earnings and hours worked – for example, the survey could ask respondents to provide hours worked or earnings for the past fortnight or for the past year; having a duration that is 'too short' risks biasing the results since earnings in that period may not be representative of the whole year, whereas having a duration that is 'too long' risks reducing the accuracy of the information provided since respondents would be required to provide information for which they may no longer have an accurate recollection;
- d. whether the respondents are asked to account for (or have otherwise accounted for) the non-payment of wages – research project 1 indicates that non-payment of wages was a problem for 40 of the survey respondents, representing around 14.8 per cent of the responses;<sup>72</sup> if respondents have accounted for non-payment of wages in their reported earnings, then it is possible that piece rate workers are earning a lower hourly wage than hourly rate workers because of non-payment, rather than because a piece rate has been set too low;
- e. whether the survey responses have been validated against other information sources, such as payslip information of employees; and

<sup>72</sup> Underhill, E and Rimmer, M, *Layered vulnerability: temporary migrants in Australian horticulture*, Journal of Industrial Relations, 2015, p 12.

- f. whether the survey provided a definition of working hours – in the absence of any such definition, it is possible that some respondents may include lunch breaks or travel time to and from work in their estimate of number of hours worked.

107. I expect that the many of the potential complications I identify above would be more likely to reduce the accuracy of the estimated hourly rate for piece rate workers, as distinct from that for hourly rate workers. I would expect hourly rate workers to be more likely to have an accurate recollection of their hourly wage, as would be specified in their contract or agreement.
108. In contrast, the hourly rate for a piece rate worker will depend on their productivity and will likely vary over time. An accurate estimate of hourly earnings of a piece rate worker would require the survey to specify the information that is required and for the respondent to have an accurate recollection of hours worked and earnings over time.

### 2.5.2 Extent to which 2013 and 2014 data are relevant in 2021

109. Dr Underhill does not comment on the ability to generalise the findings of data collected in 2013 and 2014 (research project 1) and in 2018 (research project 2) to 2021.
110. However, Dr Underhill does identify that the composition of the horticulture workforce has changed dramatically over the past twenty years.<sup>73</sup> This observation suggests the potential for dynamism and change in the workforce – with implications for pay rates – over time. In my opinion, the observed medium term dynamism is further likely to limit the applicability of data collected in 2013 and 2014 to the question of pay for piece workers in 2021.
111. Further, I would expect the COVID-19 pandemic to have had significant consequences for the composition of the horticultural labour force, given the restrictions on international travel and visas into Australia, and Dr Underhill's conclusion that '*temporary migrant workers, especially working holiday makers, make up more than 50% of seasonal workers in harvesting.*'

### 2.5.3 Quality of underlying data

112. I observe that table 3 in Dr Underhill's report presents data suggesting that the minimum earnings for an hourly rate employee was \$3 per hour in research project 1.<sup>74</sup> In my opinion, the observation that an employee was engaged on any basis with an hourly rate of \$3 per hour is implausibly low.
113. The presence of this observation in the data may well indicate potential shortcomings in the quality of the underlying data. The process by which Dr Underhill may have inspected and taken steps to ensure the quality of these data is not disclosed in either her expert report or academic papers.

### 2.5.4 Survey questions and responses

114. The information with which I have been provided does not contain the survey questions or the responses from the survey. I am therefore unable to undertake any detailed review or assessment of the survey or the underlying data.

## 2.6 Implications for Dr Underhill's expert report and conclusions

115. Dr Underhill sets out her conclusions at para 41,<sup>75</sup> in the form of seven bullet points. I draw on my opinions set out in this section to respond to each of these bullet points in turn below.

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<sup>73</sup> Expert report of Dr Underhill, para 12.

<sup>74</sup> Expert report of Dr Underhill, table 3, p 12.

<sup>75</sup> Expert report of Dr Underhill, para 41.

- a. In relation to bullet point **one**, I have no basis for commenting on the unpublished ABS statistics.

In relation to bullet point **two**, Dr Underhill does not present any empirical data but appears to be relying on the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) estimate that she refers to in paragraph 12 of her report, ie, in February 2019, 57 per cent of casual and contract workers across fruit, grape and nut farms were from overseas. In my opinion, this statistic is likely to be of limited relevance in light of the COVID-19 pandemic and its implications for the extent of working holiday makers in the casual and contract workers population.

In addition, I am not confident that the denominator in the ABARES statistic (being, all casual and contract workers in fruit, grape and nut farms) is consistent with the implied denominator in Dr Underhill's conclusion, ie, all seasonal workers in harvesting, because:

- i. workers that are neither casual nor contract workers, ie, full time or part time workers, may be a significant proportion of the workforce;
- ii. there is no evidence as to whether fruit, grape and nut farms are reflective of the harvesting workforce more generally; and
- iii. according to Dr Underhill, workforce numbers are 'highly volatile, changing by as much as 10,000 employees from quarter to quarter'<sup>76</sup> – a point estimate in February 2019 is therefore unlikely to be reliable.

However, I do not have any data by which to assess the reasonableness of Dr Underhill's estimates as to the composition of the horticultural workforce.

- b. I have no comment on bullet points **three, four, or five**.
- c. In relation to bullet point **six**, Dr Underhill makes three key conclusions – I set these out below and provide my opinion in relation to each.
- d. In relation to bullet point **seven**, Dr Underhill considers that there is low rates of pay for piece workers encourages unacceptably high level of unsafe practices – I provide my opinion on this point below.

#### Bullet point six

116. Dr Underhill makes three key conclusions in bullet point six, ie:<sup>77</sup>

- a. the rate of pay for piece workers is substantially less than the minimum hourly rate of pay received by hourly paid casual workers;
- b. very few piece workers earn the rate which 'the average competent worker' should be able to earn; and
- c. piece rates are set at a rate too low for average workers to earn the hourly minimum, let alone the 'average competent worker' rate.

<sup>76</sup> Expert report of Dr Underhill, para 14.

<sup>77</sup> Expert report of Dr Underhill, para 41, bullet point six.

***The rate of pay for piece workers is substantially less than the minimum hourly rate of pay received by hourly paid casual workers***

117. In relation to (a), this conclusion appears to follow from the results of research project 1 and research project 2, for which Dr Underhill presents statistically significant evidence in support of her conclusion that the average rates of pay in the two populations are different.
118. I note in paragraph 62 that a like-for-like comparison of earnings across groups would need to account for various factors that influence an employee's wage, such as differences in experience, age, and casual-worker-status across groups. In the absence of any attempt to assess whether such factors explain differences across groups, in my opinion it is not possible to attribute the difference in observed earnings to the difference in pay structure.
119. Separately and in addition, in my opinion the data upon which Dr Underhill relies to draw these conclusions cannot be generalised to represent the population of horticultural workers in Australia in 2021. In particular, these data are:
- a. the product of a poorly-specified sampling frame;
  - b. the product of non-random samples – with the consequence that any statistical testing performed will be inappropriate and unreliable;<sup>78</sup>
  - c. likely to be the subject of material bias associated with self-selection; and
  - d. unlikely to be reflective of 2021 conditions, given that:
    - i. the data for research project 1 were collected in 2013 and 2014; and
    - ii. although the data for research project 2 were collected in 2018, there has been a structural break (COVID-19) since that date, and in addition, the sample size for research project 2 is unreliably low.
120. These shortcomings are caused and/or exacerbated by the relative lack of research into the composition of the horticultural workforce in Australia.
121. By consequence, in my opinion Dr Underhill does not present sufficient information to draw any reliable conclusions as to:
- a. the rates of pay for piece workers in the horticultural industry in Australia; or
  - b. the rates of pay for hourly paid workers in the horticultural industry in Australia.

***Very few piece workers earn the rate which 'the average competent worker' should be able to earn***

122. I explain at paragraphs 119 to 121 above why, in my opinion, Dr Underhill does not present sufficient information to draw any reliable conclusions as to the number of piece workers in the Australian horticultural industry that are earning at least the rate of the 'average competent worker'. Put another way, the severe limitations in Dr Underhill's sampling methodology mean that her conclusions are limited in their application to the group of individuals in her sample and cannot be generalised to the population of interest.
123. Nevertheless, I also observe that this conclusion refers to the distribution of hourly rates, as reported in research projects 1 and 2. Dr Underhill does not present detailed information as to the distribution of

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<sup>78</sup> See my discussion in section 2.2.

piece rates reported in her survey, aside from the mean, median, minimum, maximum and standard deviation. From these summary statistics I observe that:

*In relation to research project 1:*

- a. the maximum rate reported by respondents was \$30 per hour for piece rate workers, and that this is above the expectations of the 'average competent worker' – suggesting that at least one employee received more than the rate of the 'average competent worker';
- b. the mean is higher than the median, suggesting a positive skew in the distribution; and
- c. the direction of the self-selection bias would suggest that these data understate the distribution of piece rates in the underlying population, as Dr Underhill and colleagues note elsewhere.

*In relation to research project 2:*

- a. the maximum rate reported by respondents was \$25.00 per hour for piece rate workers, and that this below the expectations of the 'average competent worker' – suggesting that none of the workers in the sample received the rate of the 'average competent worker';
- b. the mean is higher than the median, suggesting a positive skew in the distribution; and
- c. the direction of the self-selection bias would suggest that these data understate the distribution of piece rates in the Australian horticultural population, as Dr Underhill and colleagues note elsewhere.

***Piece rates are set at a rate too low for average workers to earn the hourly minimum, let alone the 'average competent worker' rate***

124. In performing my review of Dr Underhill's expert report and Dr Howe's expert report, I have been asked to assume that: <sup>79</sup>

1. "The phrase 'average competent employee' envisages the existence of a pool of hypothetical competent employees. Hypothetical employees who are not competent must be excluded from the pool. The average competent employee is selected from the pool of hypothetical competent employees."

2. A "competent employee" is one that is "suitable, sufficient or adequate" for the purpose of doing the work that is to be done at a piecework rate. A "competent" employee is to be distinguished from a "proficient" employee.

3. "The average competent employee is the ordinary, normal or typical competent employee", with "an average level of diligence and an average level of aptitude".

4. "The assessment of the average competent employee must be made by reference to the workforce that is available or potentially available to the employer." Hence, "the average competent employee in a less experienced workforce should be attributed with less experience, while the converse is also true".

Please also make the following factual assumption:

5. At any given point in time, a significant proportion of the workforce (eg 20% or more) engaged on piecework rates under the Horticulture Award 2020 is not competent in the sense described above.

125. From these assumptions it is possible to draw the following propositions:

<sup>79</sup> Supplementary letter: additional assumptions for Expert Retainer, 10 June 2021, p 1.

- a. It is very likely that a proportion of the respondents in each of Dr Underhill's survey samples in research project 1 and research project 2 could be classified as not competent;
  - b. piece rate workers that do not meet the definition of 'competent' are very likely to report low rates of hourly-equivalent wages, on average, relative to competent workers;
  - c. the inclusion of these non-competent workers' reported hourly-equivalent rates in the calculation of the average rate of pay for piece workers means that the average hourly-equivalent piece rate amongst all piece rate workers would be expected to be below the (conditional) average of those employers who are competent, so that;
  - d. the average rate of pay across all piece workers, in hourly-equivalent terms, would be expected to be below the average competent worker rate.
126. Dr Underhill's conclusion that 'piece rates are set too low for average workers to earn the 'average competent worker' rate does not appear to recognise that this is in fact the expected outcome, based on the assumptions provided to me in my supplementary letter and reproduced in para 124 above.<sup>80</sup>
127. In addition, for the reasons I describe at paragraphs 119 to 121 above, in my opinion Dr Underhill does not present sufficient information to draw any reliable conclusions as to the piece rates set in the Australian horticultural industry.

Bullet point seven

128. In bullet point seven, Dr Underhill states that:

The low rates of pay for piece workers in the horticulture encourages an unacceptably high level of unsafe work practices.

129. In making this statement, Dr Underhill appears to make the assumptions that:
- a. there is a casual relationship between the use of piece rates and unsafe work practices; and
  - b. an increase in piece rates would lead to improved work safety practices.
130. I present my opinion in relation to n these assumptions in further detail below.

***Causal relationship between the use of piece rates and unsafe work practices***

131. Dr Underhill's conclusion that there is link between the use of piece rates and unsafe work practices is based on her analysis of survey results from research project 1. The survey results suggest that piece rate workers are more likely to be exposed to poor work practices when compared to hourly paid workers. On this basis, Dr Underhill's appears to conclude that the use of piece rates lead to poor work practices.
132. In section 2.4.2, I set out my concerns as to the causal inference that Dr Underhill has made between piece rates and work safety practices, ie:
- a. I noted in para 119 that, in my opinion, the data upon which Dr Underhill relies to draw these conclusions cannot be generalised to represent the population of horticultural workers in Australia in 2021. I set out my reasoning for this opinion in paragraph 119;
  - b. Dr Underhill's assessment is not like-for-like, since it is possible a worker is employed on an hourly basis because their role is not limited to picking fruit or vegetables – for example, hourly rate workers may also be responsible for training and other administrative duties, and

<sup>80</sup> Supplementary letter: additional assumptions for Expert Retainer, 10 June 2021, p 1

so it follows that the difference in survey response between piece rate workers and hourly rate workers could be due to differences in responsibilities;

- c. I note in para 63 that survey research is not well-suited to the making of causal inference – in other words, although piece rate workers may experience poorer work practices, such outcomes are not necessarily caused by the use of piece rates, so that changes to or the elimination of piece rate would not necessarily lead to improved work practices; and
- d. there may be other reasons there could be other explanations for poor work practices that are unrelated to piece rates – for example, I note in para 98 that Dr Underhill's OH&S research paper concludes that workers employed by contractors were more susceptible to poorer work practices, and so it follows that poor work practices could be caused by how workers are employed rather than the use of piece rates.

### ***An increase in piece rate would lead to improved work safety practices***

- 133. Dr Underhill's statement appears to suggest that an increase in the piece rate would lead to improved safety outcomes.
- 134. In my opinion, there is no economic reasoning that would give rise to an unambiguous expected relationship between the existence of piece rates and safety outcomes.

## 2.7 Response to question 1.4

- 135. In this section, I set out my response to question 1.4 of my letter of instructions, ie:

*Are the conclusions and inferences made in the Expert Report, including in Part D of the Expert Report, sound? Please provide reasons why.*

- 136. I have organised my response to this question by reference to the two questions that Dr Underhill was asked in her report, ie:<sup>81</sup>
  - (a) The composition of the workforce in the horticulture industry, including the number of employees working in the industry and the proportion of employees engaged on a casual basis; and
  - (b) The average earnings of employees engaged as pieceworkers in the horticulture industry.

### 2.7.1 (a): Size and composition of the workforce

- 137. To estimate the size of the horticultural workforce industry in Australia, Dr Underhill presents unpublished ABS data.<sup>82</sup>
- 138. I do not have access to these data and so have no basis for comment in relation to the estimate that Dr Underhill presents in table one as to the total size of the horticulture workforce in Australia.
- 139. In relation to the composition of the workforce, I note that Dr Underhill refers to a number of other sources in her report. I have not undertaken any steps to verify whether the statistics and observations Dr Underhill makes by reference to these papers are correct or reasonable.
- 140. Dr Underhill does not present any empirical data, but appears to be relying on the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) estimate to which she refers in paragraph 12 of her report, ie, in February 2019, 57 per cent of casual and contract workers across fruit, grape and nut farms were from overseas.

<sup>81</sup> Expert report of Dr Underhill, para 9.

<sup>82</sup> Expert report of Dr Underhill, table 1, p 6

141. In my opinion, this statistic is likely to be out of date in light of the COVID-19 pandemic and its consequences for the extent of working holiday makers in the casual and contract workers population.
142. Further, I am not confident that the denominator in the ABARES statistic (being, all casual and contract workers in fruit, grape and nut farms) is consistent with the implied denominator in Dr Underhill's conclusion, ie, all seasonal workers in harvesting, because:
- a. workers that are neither casual nor contract workers, ie, full time or part time workers, may be a significant proportion of the workforce;
  - b. there is no evidence as to whether fruit, grape and nut farms are reflective of the harvesting workforce more generally; and
  - c. according to Dr Underhill, workforce numbers are 'highly volatile, changing by as much as 10,000 employees from quarter to quarter'<sup>83</sup> – as such, a point estimate in February 2019 is unlikely to be reliable.
143. However, I do not have any data with which to assess the reasonableness of Dr Underhill's estimates as to the composition of the horticultural workforce.

#### 2.7.2 (b): average earnings of employees engaged as pieceworkers

144. Dr Underhill makes three key conclusions as to the average earnings of employees engaged as pieceworkers, ie:<sup>84</sup>
- a. the rate of pay for piece workers is substantially less than the minimum hourly rate of pay received by hourly paid casual workers;
  - b. very few piece workers earn the rate which 'the average competent worker' should be able to earn; and
  - c. piece rates are set at a rate too low for average workers to earn the hourly minimum, let alone the 'average competent worker' rate.
145. I set out my response to these points at paras 117 to 127 above.

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<sup>83</sup> Expert report of Dr Underhill, para 14.

<sup>84</sup> Expert report of Dr Underhill, para 41, bullet point six.

### 3. Assessment of Dr Howe's report

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146. In this section, I set out my response to Seyfarth's instruction in relation to the report of Dr Howe, ie:<sup>85</sup>

Please review and address in your report the methodology underpinning the opinions expressed in the section of Howe Report headed "Underpayment of Wages of Workers Earning Piece Rates"

Please address the same questions in relation to this section of the Howe Report as the questions we asked in the Engagement Letter in relation to the Underhill Report.

You should give reasons for each opinion and, where appropriate, you should state the methodology you have used in reaching your conclusions. You should also set out the information and data you have relied upon to prepare your report, as well as any assumptions you have made in preparing your report. Finally, you should also make it clear if a particular question or issue falls outside your area of expertise.

147. In the remainder of this section, I:

- a. set out my understanding of Dr Howe's methodology and conclusions;
- b. describe my assessment of Dr Howe's methodology in her research report, JH-1;
- c. discuss findings from the national survey of vegetable growers and inconsistencies with Dr Howe's conclusions; and
- d. set out my high level assessment of the National Temporary Migrant Work survey, to which Dr Howe refers in her expert report.

#### 3.1 Dr Howe's reasoning and conclusions

148. In paragraph 19 of her report, Dr Howe states that:

The data from my research outlined at [6] has supported a finding that piece rates are generally set at levels which mean that workers who are on a piece rate don't earn at least Award minimum rates, in fact they are paid well below the Award minimum rates, generally earning less than \$15 an hour.

149. In making this conclusion, Dr Howe has relied on findings from a previous research report that she and colleagues have undertaken, titled *Towards a Durable Future: Tackling Labour Challenges in the Australian Horticulture Industry*.<sup>86</sup> This research report is attached to Dr Howe's report and referred to as 'JH-1' (hereafter, research report JH-1). Research report JH-1 is supported by a set of four appendices, comprising:

- a. the project methodology;
- b. list of findings;
- c. the national survey of vegetable growers;<sup>87</sup> and

<sup>85</sup> Supplementary scope letter, 7 June 2021, p 1.

<sup>86</sup> Howe, J, Clibborn, S, Reilly, A, van den Broek, D and Wright, C F, *Towards a Durable Future: Tackling Labour Challenges in the Australian Horticulture Industry*, January 2019 ('research report JH-1').

<sup>87</sup> OmniPoll, *Vegetable grower practices, experiences and views concerning employment of seasonal farm labour*, August/September 2016.

- d. a report from Monash University, titled: *Empirical background to the Horticulture Labour Research Project: Report to Alexander Reilly and Joanna Howe*.<sup>88</sup>

150. Dr Howe's report also refers to two other studies that support her conclusion that piece rate workers are underpaid when compared to the minimum wage, ie:<sup>89</sup>

- a. a report from the Fair Work Ombudsman in 2016, which found that more than one-third of working holiday makers (WHMs) were paid less than the minimum wage; and
- b. the National Temporary Migrant Work survey in 2017, which found that the worst paid jobs (within temporary migrant workers, the exclusive focus of the survey) were in fruit and vegetable picking, where 15 per cent of participants said they had earned five dollars an hour or less and 31 per cent had earned \$10 an hour or less. Dr Howe has indicated that her analysis shows that these underpayments were through the use of piece rates.<sup>90</sup>

151. The findings from the National Temporary Migrant survey are included in an attachment to Dr Howe's report, marked as JH-3.

## 3.2 Assessment of Dr Howe's methodology in research report JH-1

152. In this section I set out my assessment of Dr Howe's methodology in her research report, JH-1.

### 3.2.1 Research methodology

153. The methodology adopted in research report JH-1 involves the following principal steps:<sup>91</sup>

- a. phase 1, where the research team had background discussions with key stakeholders and undertook a literature review;
- b. phase 2, where a national survey of vegetable growers was conducted, involving 332 growers;
- c. phase 3, which involved the development of 13 regional case studies, involving interviews and focus groups with 121 growers, 124 workers and 110 other stakeholders; and
- d. phase 4, where the preliminary findings were presented at workshops to key stakeholders and feedback from the workshops were taken into account in the final report.

154. The underpayment of piece rate workers is mainly discussed in two sections of research report JH-1, ie:

- a. in chapter two, which found there is non-compliance with labour standards by a subset of growers, ie:
  - i. 'paying extremely low piece rates based on an inflated assumption of the competency of the average worker';<sup>92</sup> and

<sup>88</sup> Gamlen, A, Arunachalam, D and Healy, E, *Empirical background to the Horticulture Labour Research Project: Report to Alexander Reilly and Joanna Howe*, 20 July 2018.

<sup>89</sup> Howe report, paras 20-21.

<sup>90</sup> Howe report, para 21.

<sup>91</sup> Research report JH-1, p 2 and appendix A: methodology.

<sup>92</sup> Research report JH-1, p 10.

- ii. although while the report notes that it is impossible to quantify the extent of non-compliance, it stated there is a growing body of evidence to suggest that non-compliance is 'endemic and multi-faceted';<sup>93</sup> and
- b. in chapter 10, which is focused on the WHM program, with the two most relevant findings in this chapter being:
  - i. finding 9, which concludes that underpayment of wages of WHMs is widespread, based on evidence from the focus groups;<sup>94</sup> and
  - ii. finding 10, which concludes that there is evidence of 'inappropriate use of piece rates in the employment of WHMs'.<sup>95</sup>

### 3.2.2 Assessment

155. Research report JH-1 does not appear to quantify the average pay received by piece rate workers or the proportion of piece rate workers that earn an hourly rate below the minimum wage.
156. Rather, Dr Howe's conclusion that piece rate workers generally earn an hourly rate that is 'well below the Award minimum rates'<sup>96</sup> appears to be based on outcomes of the focus group<sup>97</sup> and findings from two other relevant reports, which I note at paragraph 150 above.
157. It is not clear how Dr Howe reaches the conclusion that workers who are on a piece rate earn 'less than \$15 an hour' based on the research report JH-1. There are two references to a \$15/hour rate in research report JH-1, ie:

- a. an anecdotal quote from a stakeholder on page 72, stating that:<sup>98</sup>

You hear of people that say they're crammed into a house and then they're charged \$20 shoved into a minivan and taken it to work ... paid \$15 an hour, I've got no doubt it happens. I don't know anyone that does it, but I've got no doubt it happens, and I hope that gets cleaned up.

- b. a reference to a government report in relation to arrangements with contractors (that does not appear to be about piece rates), ie:<sup>99</sup>

One government report stated that contractors could give workers envelopes with wages from which accommodation, transport and often a finder's fee had already been deducted. This could result in workers getting hourly rates ranging from \$10 to \$15 an hour.

158. In addition, a number of anecdotal references to low rates of pay via piece rates appear throughout research report JH-1.
159. Further, Dr Howe presents findings from the national survey of vegetable growers in her appendices to research report JH-1. I discuss these results in more detail in section 3.3 below, but note here that

<sup>93</sup> Research report JH-1, p 9.

<sup>94</sup> Research report JH-1, p 97.

<sup>95</sup> Research report JH-1, p 97.

<sup>96</sup> Howe report, para 19.

<sup>97</sup> Page 10 of research report JH-1 states that evidence from the case studies described practices 'such as extremely low piece rates based on an inflated assumption of the competency of the average worker'; however, it does not make a comparison to the minimum Award wage rates.

<sup>98</sup> Research report JH-1, p 72.

<sup>99</sup> Research report JH-1, p 85.

these survey results report that 65 per cent of piece rate workers are paid above the award rate (of \$17 for full and part time workers, or \$22 for casual workers).<sup>100</sup>

160. The absence of robust, quantitative analysis means that Dr Howe's conclusions are derived primarily from a literature review and anecdotal evidence. It follows that it is impossible to demonstrate with any degree of statistical confidence:
- a. the average hourly wage received by piece rate workers; and
  - b. the distribution of hourly wages received by piece rate workers.
161. In my opinion, Dr Howe has not presented evidence from which it is safe to support her conclusion that the workers on piece rates are generally paid 'well below the Award minimum rates, generally earning less than \$15 an hour'.<sup>101</sup>

### 3.3 Survey results from phase 2 contradict Dr Howe's conclusion

162. One of the key outputs from research report JH-1 is the findings from the national survey of vegetable growers. The survey asks several questions related to pay, including whether the growers pay above or below minimum award rates.
163. Appendix C to research report JH-1 states that:<sup>102</sup>
- On this basis, 17% were classified as paying below the award for hourly rates, and 15% for piece rates.
164. On its face, this result appears to contradict Dr Howe's conclusion that piece rate workers are generally paid 'well below the Award minimum rates'.
165. I note there are also several limitations to this survey, including that:
- a. it is not a representative survey of the horticulture sector – rather, it is a survey of vegetable growers and so excludes some parts of the sector, such as fruit growers;
  - b. the survey collects information from employers, which may introduce an upwards bias if employers exaggerate wages or, put differently, employers may not want to admit underpaying their staff;
  - c. in respect of piece rates, the survey asks the respondent to answer 'for an average competent adult worker, what's the approximate hourly rate you pay for ordinary time, excluding any overtime or weekend loading?'<sup>103</sup> – in my opinion, there is a risk that respondents may not have an accurate estimate for an hourly rate equivalent to the piece rates offered across their average competent workforce;
  - d. the sample size is small for some of the findings, including pay received by piece rate workers; and

<sup>100</sup> See research report JH-1, appendix C, p 39. I note that there appears to be a rounding or methodological error in the approach to setting the 'below award' and 'Award or higher' criterion, whereby the full time/part time Award is \$17.70 while the criterion for 'below award' and 'Award or higher' is \$17 (where it should be \$17.70). Similarly for casual workers, the Award is \$22.13 while the criterion is set at \$22, although this latter error is less material.

<sup>101</sup> Dr Howe report, para 19.

<sup>102</sup> Research report JH-1, appendix C, p 39.

<sup>103</sup> Research report JH-1, appendix C, p 39.

- e. the non-response rate, particularly for the question related to hourly pay for piece rate workers.<sup>104</sup>

### 3.4 Survey results from the National Temporary Migrant Work survey (JH-3)

166. Dr Howe includes several supporting materials in her attachment marked (JH-3), ie:

- a. a 2017 report by Berg and Farbenblum, setting out the findings from the National temporary Migrant Work survey;<sup>105</sup>
- b. a report from the National Union of Workers, setting out the findings from a survey of over 650 farm workers;
- c. a submission from the National Union of Workers to an inquiry into the Seasonal Worker Programme; and
- d. a submission from the National Union of Workers to the Victorian Inquiry into the labour hire industry and insecure work.

167. I have not reviewed the various reports and submissions prepared by the National Union of Workers.

168. Further, I have not reviewed in detail the Berg and Farbenblum report. Notwithstanding, I make the following high level observations on the paper prepared by Berg and Farbenblum, ie:

- a. the respondents to the survey are temporary migrant workers, and so represent only a subset of workers – it follows that the survey results provide limited insight to the general pay conditions of the entire horticulture sector;<sup>106</sup> and
- b. the authors of the report have noted several methodological limitations to its survey, including:<sup>107</sup>
  - i. it is not possible to know survey responses reflect the experiences of the cohort to which the respondents belong - in other words, it could suffer from sample error, where the respondents responding to the survey are not representative of temporary migrant workers; as such, the author concludes that it does not enable definitive conclusions on what causes wage theft;
  - ii. the survey was anonymous and so it is not possible to know whether any participants completed the survey more than once from different devices;
  - iii. it is not possible to verify the accuracy of information provided by participants;
  - iv. it is possible that some groups of workers did not participate in the survey because of lack of trust or greater fear of negative participation, despite the anonymous nature of the survey;
  - v. it possible that workers that who have had a poor workplace experience were more willing to participate in the survey; and

<sup>104</sup> Research report JH-1, appendix C, p 39.

<sup>105</sup> Berg, L and Farbenblum, B, *Wage theft in Australia – findings of the National Temporary Migrant Work survey*, November 2017.

<sup>106</sup> Berg, L and Farbenblum, B, *Wage theft in Australia – findings of the National Temporary Migrant Work survey*, November 2017, p 5.

<sup>107</sup> Berg, L and Farbenblum, B, *Wage theft in Australia – Findings of the National Temporary Migrant Work survey*, November 2017, p 11.

- vi. there was an over-representation of international students from University of New South Wales, and to a lesser extent University of Technology, Sydney.

169. I agree with the limitations that the authors describe in their report. Notwithstanding these limitations, I note in paragraph 168.a that the respondents to the survey are not representative of workers in the horticulture sector. It follows that it is difficult to draw any conclusions regarding the average pay of a competent worker on piece rates in the horticulture sector from this survey.

### 3.5 Dr Howe's conclusions as to workers earning piece rates

170. The section of Dr Howe's report (paragraphs 19 to 25) titled the 'underpayment of wages of workers earning piece rates' contains seven paragraphs. In this section I draw on the reasoning and opinions I set out above to respond to each of the points made in these paragraphs.

171. In paragraph **19**, Dr Howe's conclusions are primarily based on a literature review and anecdotal evidence. The absence of robust, quantitative analysis means it is impossible to demonstrate with any degree of statistical confidence the average hourly wage earned by piece rate workers and the distribution of earnings. In my opinion, Dr Howe has not presented evidence that can safely be said to support her conclusion in paragraph 19.

172. In paragraph **20**, Dr Howe refers to a Fair Work Ombudsman report. I have not reviewed this report, although I note that the subject of this report is the pay of WHMs in general. WHMs are only a subset or horticulture workers, while WHMs also work in other sectors. In light of this, Dr Howe's report and its findings are of limited relevance to whether there is underpayment of piece rate workers in the horticultural sector.

173. In paragraph **21**, Dr Howe refers to the results of the National Temporary Migrant survey. I discuss my high level assessment of this survey in section 3.4. Noting that I have not reviewed the survey or report in detail, I observe as follows:

- a. the survey is focused on temporary migrant workers, which is a subset of horticulture workers – it follows that there is limited ability to use the survey results to draw conclusions regarding the average pay of an 'average competent worker'; and
- b. the authors have noted a number of limitations with the methodology, which were not acknowledged in Dr Howe's report.

174. In paragraph **22**, Dr Howe concludes that WHMs receive extremely low hourly wage rates when being paid by piece rates. Her conclusions in this paragraph are based on discussion from interviews and focus groups. The absence of robust, quantitative analysis means it cannot safely be said that these observations reflect the underlying population of horticultural workers in Australia. It follows that Dr Howe has not presented that can safely be said to support her conclusion in paragraph 22.

175. I have no comment on paragraph **23**.

176. In paragraph **24**, Dr Howe's states that she is aware of the frequency with which horticultural workers earn wages above the minimum rate of pay is low. This conclusion appears to be based on discussion from interviews and focus groups. The absence of robust, quantitative analysis means it is impossible to state with any degree of statistical confidence that her conclusions are valid. In my opinion, Dr Howe has not presented evidence that can safely be said to support her conclusion in paragraph 24.

177. I have no comment on paragraph **25**.

## 4. Declaration

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178. I confirm that, in preparing this report I have made all inquiries that I believe are desirable and appropriate and that no matters of significance that I regard as relevant have, to my knowledge, been withheld from the Court.



Greg Houston  
11 June 2021

# Annexure A – Letter of instruction

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14/05/2021

**PRIVILEGED & CONFIDENTIAL**

**VIA E-MAIL**

Greg Houston  
Partner  
HoustonKemp Economists  
Level 40, 161 Castlereagh Street  
Sydney NSW 2000  
greg.houston@houstonkemp.com

Dear Greg

**Expert Retainer - HoustonKemp Economists**

We act for the Australian Fresh Produce Alliance (**AFPA**).

We would like to engage you on retainer to act as an independent expert in relation to an application made by the Australian Workers' Union (**AWU**) to the Fair Work Commission (**FWC**) to vary the *Horticulture Award 2020* (MA000028) (**Proceedings**). The variation seeks to delete existing clause 15.2(i) and insert a new clause 15.2(k) to provide that employers must keep a record of all hours worked by a pieceworker as a time and wages record. The AFPA is opposing the variation.

This letter sets out the terms of your retainer.

**1. Engagement to prepare expert report**

As discussed with you, in phase 1, we would like you to prepare a report in which you review and critique the expert report produced by the AWU from Dr Elsa Underhill dated 19 March 2021 (**Expert Report**), including its methodology, assumptions and conclusions. A copy of the Expert Report is **enclosed** with this letter and the attachments to the report will be accessible to you by a link we send via email.

Without limiting the scope of your opinion (or any subsequent report), we would like you to specifically address the following issues:

- 1.1. Please provide a précis of your relevant experience and expertise in relation to relevant economic disciplines, including your qualifications and work experience.
- 1.2. Please confirm that you have read the Expert Evidence Practice Note (a copy of which is **enclosed** with this letter) and agree to abide by it.
- 1.3. Please provide a critique of the methodology adopted in the Expert Report and provide your opinion on whether it suffers from any flaws, issues or inconsistencies.
  - (a) This includes considerations such as whether the data presented, used and relied on in the Expert Report (including in Parts A, B and C) is statistically sound, including in terms of valid sample size, focus groups fairly chosen etc.

- (b) If issues are identified with the Expert Report, please explain these issues and any impact they have on the conclusions presented in the Expert Report.

- 1.4. Are the conclusions and inferences made in the Expert Report, including in Part D of the Expert Report, sound? Please provide reasons why.

You should give reasons for each opinion and, where appropriate, you should state the methodology you have used in reaching your conclusions. You should also set out the information and data you have relied upon to prepare your report, as well as any assumptions you have made in preparing your report. Finally, you should also make it clear if a particular question or issue falls outside your area of expertise.

## 2. **Other aspects of retainer**

In due course, as part of phase 2, we would like you to provide further evidence regarding the economic impact of AWU's proposal.

From time to time you may also be required to provide or respond to further evidence or expert opinions.

You may need to be available to give evidence in the FWC at some time during the course of the Proceedings. We may also ask that you be available at other times when any experts retained by other parties to the Proceedings are giving evidence.

## 3. **Legal professional privilege**

Your independent expert report and any drafts, notes or working papers prepared in accordance with your retainer are confidential and are not to be copied or used for any purpose unrelated to the Proceedings without our permission.

Materials supplied to you by Seyfarth Shaw Australia and AFPA are confidential and are not to be copied or used for any purpose unrelated to your retainer without permission.

Your report and any drafts prepared by you should have the following words inserted on the cover page:

*This document is protected by legal professional privilege. To ensure privilege is not waived, please keep this document confidential and in a safe and secure place. This document should not be distributed, and no reference to it should be made, to any person or organisation not directly involved in making decisions on the subject matter of this document.*

## 4. **Conflicts of interest**

As an independent expert, it is important that you are free from any possible conflict of interest in the provision of your advice or giving evidence in the Proceedings. You should ensure that you have no connection with any party to the Proceedings which would preclude you from providing your opinion in an objective and independent manner.

The other party in the Proceedings is the Australian Workers' Union.

## 5. **Rates**

AFPA will be responsible for payment of your fees but they will be processed by us. You should present your memoranda of fees to us on a monthly basis. Expenses such as taxis, parking, couriers, printing etc. are to be billed at cost.

Please provide us with a fee estimate at your earliest convenience.

6. **Communications**

Unless otherwise indicated, any request for documents and/or information, correspondence and any other communications regarding this matter should be directed through our office.

7. **Your duties and responsibilities as an expert witness**

Your role is that of an independent expert. As such, you are not an advocate for any party.

Although you are instructed and retained by Seyfarth Shaw Australia and AFPA, you are retained as an independent expert to assist the FWC, and you have an overriding duty to it. The FWC expects you to be objective, professional and to form an independent view as to the matters in relation to which your opinion is sought.

Your duties as an expert witness are set out in the expert witness code of conduct **enclosed** with this letter and referred to above.

8. **Confirmation and next steps**

Please sign and return this letter to confirm your agreement to the terms of the retainer. Please also provide a copy of your curriculum vitae at your earliest convenience.

Should you become aware of any matters which you believe would prevent you from performing your duties in accordance with the terms in this letter, please let us know as soon as possible.

Please do not hesitate to contact Henry Skene or Elizabeth Tan if you have any questions or concerns, or wish to discuss this matter further.

Yours faithfully



Henry Skene  
Partner

SEYFARTH SHAW AUSTRALIA

Encl: 1. Federal Court Expert Evidence Practice Note  
2. Dr Elsa Underhill's expert report dated 19 March 2021. We will also send you a link via email to our document sharing platform, kiteworks, in which you can access a copy of the attachments to the report.

**Signing Page**

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Signed by Greg Houston

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Date



## EXPERT EVIDENCE PRACTICE NOTE (GPN-EXPT)

### General Practice Note

#### 1. INTRODUCTION

- 1.1 This practice note, including the *Harmonised Expert Witness Code of Conduct* (“**Code**”) (see **Annexure A**) and the *Concurrent Expert Evidence Guidelines* (“**Concurrent Evidence Guidelines**”) (see **Annexure B**), applies to any proceeding involving the use of expert evidence and must be read together with:
- (a) the Central Practice Note (CPN-1), which sets out the fundamental principles concerning the National Court Framework (“**NCF**”) of the Federal Court and key principles of case management procedure;
  - (b) the Federal Court of Australia Act 1976 (Cth) (“**Federal Court Act**”);
  - (c) the *Evidence Act 1995* (Cth) (“**Evidence Act**”), including Part 3.3 of the Evidence Act;
  - (d) Part 23 of the *Federal Court Rules 2011* (Cth) (“**Federal Court Rules**”); and
  - (e) where applicable, the Survey Evidence Practice Note (GPN-SURV).
- 1.2 This practice note takes effect from the date it is issued and, to the extent practicable, applies to proceedings whether filed before, or after, the date of issuing.

#### 2. APPROACH TO EXPERT EVIDENCE

- 2.1 An expert witness may be retained to give opinion evidence in the proceeding, or, in certain circumstances, to express an opinion that may be relied upon in alternative dispute resolution procedures such as mediation or a conference of experts. In some circumstances an expert may be appointed as an independent adviser to the Court.
- 2.2 The purpose of the use of expert evidence in proceedings, often in relation to complex subject matter, is for the Court to receive the benefit of the objective and impartial assessment of an issue from a witness with specialised knowledge (based on training, study or experience - see generally s 79 of the *Evidence Act*).
- 2.3 However, the use or admissibility of expert evidence remains subject to the overriding requirements that:
- (a) to be admissible in a proceeding, any such evidence must be relevant (s 56 of the *Evidence Act*); and
  - (b) even if relevant, any such evidence, may be refused to be admitted by the Court if its probative value is outweighed by other considerations such as the evidence

being unfairly prejudicial, misleading or will result in an undue waste of time (s 135 of the Evidence Act).

- 2.4 An expert witness' opinion evidence may have little or no value unless the assumptions adopted by the expert (ie. the facts or grounds relied upon) and his or her reasoning are expressly stated in any written report or oral evidence given.
- 2.5 The Court will ensure that, in the interests of justice, parties are given a reasonable opportunity to adduce and test relevant expert opinion evidence. However, the Court expects parties and any legal representatives acting on their behalf, when dealing with expert witnesses and expert evidence, to at all times comply with their duties associated with the overarching purpose in the Federal Court Act (see ss 37M and 37N).

### **3. INTERACTION WITH EXPERT WITNESSES**

- 3.1 Parties and their legal representatives should never view an expert witness retained (or partly retained) by them as that party's advocate or "hired gun". Equally, they should never attempt to pressure or influence an expert into conforming his or her views with the party's interests.
- 3.2 A party or legal representative should be cautious not to have inappropriate communications when retaining or instructing an independent expert, or assisting an independent expert in the preparation of his or her evidence. However, it is important to note that there is no principle of law or practice and there is nothing in this practice note that obliges a party to embark on the costly task of engaging a "consulting expert" in order to avoid "contamination" of the expert who will give evidence. Indeed the Court would generally discourage such costly duplication.
- 3.3 Any witness retained by a party for the purpose of preparing a report or giving evidence in a proceeding as to an opinion held by the witness that is wholly or substantially based in the specialised knowledge of the witness<sup>1</sup> should, at the earliest opportunity, be provided with:
  - (a) a copy of this practice note, including the Code (see Annexure A); and
  - (b) all relevant information (whether helpful or harmful to that party's case) so as to enable the expert to prepare a report of a truly independent nature.
- 3.4 Any questions or assumptions provided to an expert should be provided in an unbiased manner and in such a way that the expert is not confined to addressing selective, irrelevant or immaterial issues.

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<sup>1</sup> Such a witness includes a "Court expert" as defined in r 23.01 of the Federal Court Rules. For the definition of "expert", "expert evidence" and "expert report" see the Dictionary, in Schedule 1 of the Federal Court Rules.

#### **4. ROLE AND DUTIES OF THE EXPERT WITNESS**

- 4.1 The role of the expert witness is to provide relevant and impartial evidence in his or her area of expertise. An expert should never mislead the Court or become an advocate for the cause of the party that has retained the expert.
- 4.2 It should be emphasised that there is nothing inherently wrong with experts disagreeing or failing to reach the same conclusion. The Court will, with the assistance of the evidence of the experts, reach its own conclusion.
- 4.3 However, experts should willingly be prepared to change their opinion or make concessions when it is necessary or appropriate to do so, even if doing so would be contrary to any previously held or expressed view of that expert.

#### ***Harmonised Expert Witness Code of Conduct***

- 4.4 Every expert witness giving evidence in this Court must read the *Harmonised Expert Witness Code of Conduct* (attached in Annexure A) and agree to be bound by it.
- 4.5 The Code is not intended to address all aspects of an expert witness' duties, but is intended to facilitate the admission of opinion evidence, and to assist experts to understand in general terms what the Court expects of them. Additionally, it is expected that compliance with the Code will assist individual expert witnesses to avoid criticism (rightly or wrongly) that they lack objectivity or are partisan.

#### **5. CONTENTS OF AN EXPERT'S REPORT AND RELATED MATERIAL**

- 5.1 The contents of an expert's report must conform with the requirements set out in the Code (including clauses 3 to 5 of the Code).
- 5.2 In addition, the contents of such a report must also comply with r 23.13 of the Federal Court Rules. Given that the requirements of that rule significantly overlap with the requirements in the Code, an expert, unless otherwise directed by the Court, will be taken to have complied with the requirements of r 23.13 if that expert has complied with the requirements in the Code and has complied with the additional following requirements. The expert shall:

- (a) acknowledge in the report that:
  - (i) the expert has read and complied with this practice note and agrees to be bound by it; and
  - (ii) the expert's opinions are based wholly or substantially on specialised knowledge arising from the expert's training, study or experience;
- (b) identify in the report the questions that the expert was asked to address;
- (c) sign the report and attach or exhibit to it copies of:
  - (i) documents that record any instructions given to the expert; and

- (ii) documents and other materials that the expert has been instructed to consider.

5.3 Where an expert's report refers to photographs, plans, calculations, analyses, measurements, survey reports or other extrinsic matter, these must be provided to the other parties at the same time as the expert's report.

## **6. CASE MANAGEMENT CONSIDERATIONS**

6.1 Parties intending to rely on expert evidence at trial are expected to consider between them and inform the Court at the earliest opportunity of their views on the following:

- (a) whether a party should adduce evidence from more than one expert in any single discipline;
- (b) whether a common expert is appropriate for all or any part of the evidence;
- (c) the nature and extent of expert reports, including any in reply;
- (d) the identity of each expert witness that a party intends to call, their area(s) of expertise and availability during the proposed hearing;
- (e) the issues that it is proposed each expert will address;
- (f) the arrangements for a conference of experts to prepare a joint-report (see Part 7 of this practice note);
- (g) whether the evidence is to be given concurrently and, if so, how (see Part 8 of this practice note); and
- (h) whether any of the evidence in chief can be given orally.

6.2 It will often be desirable, before any expert is retained, for the parties to attempt to agree on the question or questions proposed to be the subject of expert evidence as well as the relevant facts and assumptions. The Court may make orders to that effect where it considers it appropriate to do so.

## **7. CONFERENCE OF EXPERTS AND JOINT-REPORT**

7.1 Parties, their legal representatives and experts should be familiar with aspects of the Code relating to conferences of experts and joint-reports (see clauses 6 and 7 of the Code attached in Annexure A).

7.2 In order to facilitate the proper understanding of issues arising in expert evidence and to manage expert evidence in accordance with the overarching purpose, the Court may require experts who are to give evidence or who have produced reports to meet for the purpose of identifying and addressing the issues not agreed between them with a view to reaching agreement where this is possible ("**conference of experts**"). In an appropriate case, the Court may appoint a registrar of the Court or some other suitably qualified person ("**Conference Facilitator**") to act as a facilitator at the conference of experts.

- 7.3 It is expected that where expert evidence may be relied on in any proceeding, at the earliest opportunity, parties will discuss and then inform the Court whether a conference of experts and/or a joint-report by the experts may be desirable to assist with or simplify the giving of expert evidence in the proceeding. The parties should discuss the necessary arrangements for any conference and/or joint-report. The arrangements discussed between the parties should address:
- (a) who should prepare any joint-report;
  - (b) whether a list of issues is needed to assist the experts in the conference and, if so, whether the Court, the parties or the experts should assist in preparing such a list;
  - (c) the agenda for the conference of experts; and
  - (d) arrangements for the provision, to the parties and the Court, of any joint-report or any other report as to the outcomes of the conference (“**conference report**”).

#### ***Conference of Experts***

- 7.4 The purpose of the conference of experts is for the experts to have a comprehensive discussion of issues relating to their field of expertise, with a view to identifying matters and issues in a proceeding about which the experts agree, partly agree or disagree and why. For this reason the conference is attended only by the experts and any Conference Facilitator. Unless the Court orders otherwise, the parties' lawyers will not attend the conference but will be provided with a copy of any conference report.
- 7.5 The Court may order that a conference of experts occur in a variety of circumstances, depending on the views of the judge and the parties and the needs of the case, including:
- (a) while a case is in mediation. When this occurs the Court may also order that the outcome of the conference or any document disclosing or summarising the experts' opinions be confidential to the parties while the mediation is occurring;
  - (b) before the experts have reached a final opinion on a relevant question or the facts involved in a case. When this occurs the Court may order that the parties exchange draft expert reports and that a conference report be prepared for the use of the experts in finalising their reports;
  - (c) after the experts' reports have been provided to the Court but before the hearing of the experts' evidence. When this occurs the Court may also order that a conference report be prepared (jointly or otherwise) to ensure the efficient hearing of the experts' evidence.
- 7.6 Subject to any other order or direction of the Court, the parties and their lawyers must not involve themselves in the conference of experts process. In particular, they must not seek to encourage an expert not to agree with another expert or otherwise seek to influence the outcome of the conference of experts. The experts should raise any queries they may have in relation to the process with the Conference Facilitator (if one has been appointed) or in

accordance with a protocol agreed between the lawyers prior to the conference of experts taking place (if no Conference Facilitator has been appointed).

- 7.7 Any list of issues prepared for the consideration of the experts as part of the conference of experts process should be prepared using non-tendentious language.
- 7.8 The timing and location of the conference of experts will be decided by the judge or a registrar who will take into account the location and availability of the experts and the Court's case management timetable. The conference may take place at the Court and will usually be conducted in-person. However, if not considered a hindrance to the process, the conference may also be conducted with the assistance of visual or audio technology (such as via the internet, video link and/or by telephone).
- 7.9 Experts should prepare for a conference of experts by ensuring that they are familiar with all of the material upon which they base their opinions. Where expert reports in draft or final form have been exchanged prior to the conference, experts should attend the conference familiar with the reports of the other experts. Prior to the conference, experts should also consider where they believe the differences of opinion lie between them and what processes and discussions may assist to identify and refine those areas of difference.

#### ***Joint-report***

- 7.10 At the conclusion of the conference of experts, unless the Court considers it unnecessary to do so, it is expected that the experts will have narrowed the issues in respect of which they agree, partly agree or disagree in a joint-report. The joint-report should be clear, plain and concise and should summarise the views of the experts on the identified issues, including a succinct explanation for any differences of opinion, and otherwise be structured in the manner requested by the judge or registrar.
- 7.11 In some cases (and most particularly in some native title cases), depending on the nature, volume and complexity of the expert evidence a judge may direct a registrar to draft part, or all, of a conference report. If so, the registrar will usually provide the draft conference report to the relevant experts and seek their confirmation that the conference report accurately reflects the opinions of the experts expressed at the conference. Once that confirmation has been received the registrar will finalise the conference report and provide it to the intended recipient(s).

## **8. CONCURRENT EXPERT EVIDENCE**

- 8.1 The Court may determine that it is appropriate, depending on the nature of the expert evidence and the proceeding generally, for experts to give some or all of their evidence concurrently at the final (or other) hearing.
- 8.2 Parties should familiarise themselves with the *Concurrent Expert Evidence Guidelines* (attached in *Annexure B*). The Concurrent Evidence Guidelines are not intended to be exhaustive but indicate the circumstances when the Court might consider it appropriate for

concurrent expert evidence to take place, outline how that process may be undertaken, and assist experts to understand in general terms what the Court expects of them.

- 8.3 If an order is made for concurrent expert evidence to be given at a hearing, any expert to give such evidence should be provided with the Concurrent Evidence Guidelines well in advance of the hearing and should be familiar with those guidelines before giving evidence.

## **9. FURTHER PRACTICE INFORMATION AND RESOURCES**

- 9.1 Further information regarding Expert Evidence and Expert Witnesses is available on the Court's website.
- 9.2 Further information to assist litigants, including a range of helpful guides, is also available on the Court's website. This information may be particularly helpful for litigants who are representing themselves.

J L B ALLSOP  
Chief Justice  
25 October 2016

## **HARMONISED EXPERT WITNESS CODE OF CONDUCT<sup>2</sup>**

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### **APPLICATION OF CODE**

1. This Code of Conduct applies to any expert witness engaged or appointed:
  - (a) to provide an expert's report for use as evidence in proceedings or proposed proceedings; or
  - (b) to give opinion evidence in proceedings or proposed proceedings.

### **GENERAL DUTIES TO THE COURT**

2. An expert witness is not an advocate for a party and has a paramount duty, overriding any duty to the party to the proceedings or other person retaining the expert witness, to assist the Court impartially on matters relevant to the area of expertise of the witness.

### **CONTENT OF REPORT**

3. Every report prepared by an expert witness for use in Court shall clearly state the opinion or opinions of the expert and shall state, specify or provide:
  - (a) the name and address of the expert;
  - (b) an acknowledgment that the expert has read this code and agrees to be bound by it;
  - (c) the qualifications of the expert to prepare the report;
  - (d) the assumptions and material facts on which each opinion expressed in the report is based [a letter of instructions may be annexed];
  - (e) the reasons for and any literature or other materials utilised in support of such opinion;
  - (f) (if applicable) that a particular question, issue or matter falls outside the expert's field of expertise;
  - (g) any examinations, tests or other investigations on which the expert has relied, identifying the person who carried them out and that person's qualifications;
  - (h) the extent to which any opinion which the expert has expressed involves the acceptance of another person's opinion, the identification of that other person and the opinion expressed by that other person;
  - (i) a declaration that the expert has made all the inquiries which the expert believes are desirable and appropriate (save for any matters identified explicitly in the report), and that no matters of significance which the expert regards as relevant have, to the

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<sup>2</sup> Approved by the Council of Chief Justices' Rules Harmonisation Committee

knowledge of the expert, been withheld from the Court;

- (j) any qualifications on an opinion expressed in the report without which the report is or may be incomplete or inaccurate;
- (k) whether any opinion expressed in the report is not a concluded opinion because of insufficient research or insufficient data or for any other reason; and
- (l) where the report is lengthy or complex, a brief summary of the report at the beginning of the report.

#### **SUPPLEMENTARY REPORT FOLLOWING CHANGE OF OPINION**

- 4. Where an expert witness has provided to a party (or that party's legal representative) a report for use in Court, and the expert thereafter changes his or her opinion on a material matter, the expert shall forthwith provide to the party (or that party's legal representative) a supplementary report which shall state, specify or provide the information referred to in paragraphs (a), (d), (e), (g), (h), (i), (j), (k) and (l) of clause 3 of this code and, if applicable, paragraph (f) of that clause.
- 5. In any subsequent report (whether prepared in accordance with clause 4 or not) the expert may refer to material contained in the earlier report without repeating it.

#### **DUTY TO COMPLY WITH THE COURT'S DIRECTIONS**

- 6. If directed to do so by the Court, an expert witness shall:
  - (a) confer with any other expert witness;
  - (b) provide the Court with a joint-report specifying (as the case requires) matters agreed and matters not agreed and the reasons for the experts not agreeing; and
  - (c) abide in a timely way by any direction of the Court.

#### **CONFERENCE OF EXPERTS**

- 7. Each expert witness shall:
  - (a) exercise his or her independent judgment in relation to every conference in which the expert participates pursuant to a direction of the Court and in relation to each report thereafter provided, and shall not act on any instruction or request to withhold or avoid agreement; and
  - (b) endeavour to reach agreement with the other expert witness (or witnesses) on any issue in dispute between them, or failing agreement, endeavour to identify and clarify the basis of disagreement on the issues which are in dispute.

## ANNEXURE B

# CONCURRENT EXPERT EVIDENCE GUIDELINES

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### APPLICATION OF THE COURT'S GUIDELINES

1. The Court's Concurrent Expert Evidence Guidelines ("**Concurrent Evidence Guidelines**") are intended to inform parties, practitioners and experts of the Court's general approach to concurrent expert evidence, the circumstances in which the Court might consider expert witnesses giving evidence concurrently and, if so, the procedures by which their evidence may be taken.

### OBJECTIVES OF CONCURRENT EXPERT EVIDENCE TECHNIQUE

2. The use of concurrent evidence for the giving of expert evidence at hearings as a case management technique<sup>3</sup> will be utilised by the Court in appropriate circumstances (see r 23.15 of the *Federal Court Rules 2011* (Cth)). Not all cases will suit the process. For instance, in some patent cases, where the entire case revolves around conflicts within fields of expertise, concurrent evidence may not assist a judge. However, patent cases should not be excluded from concurrent expert evidence processes.
3. In many cases the use of concurrent expert evidence is a technique that can reduce the partisan or confrontational nature of conventional hearing processes and minimises the risk that experts become "opposing experts" rather than independent experts assisting the Court. It can elicit more precise and accurate expert evidence with greater input and assistance from the experts themselves.
4. When properly and flexibly applied, with efficiency and discipline during the hearing process, the technique may also allow the experts to more effectively focus on the critical points of disagreement between them, identify or resolve those issues more quickly, and narrow the issues in dispute. This can also allow for the key evidence to be given at the same time (rather than being spread across many days of hearing); permit the judge to assess an expert more readily, whilst allowing each party a genuine opportunity to put and test expert evidence. This can reduce the chance of the experts, lawyers and the judge misunderstanding the opinions being expressed by the experts.
5. It is essential that such a process has the full cooperation and support of all of the individuals involved, including the experts and counsel involved in the questioning process. Without that cooperation and support the process may fail in its objectives and even hinder the case management process.

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<sup>3</sup> Also known as the "hot tub" or as "expert panels".

## **CASE MANAGEMENT**

6. Parties should expect that, the Court will give careful consideration to whether concurrent evidence is appropriate in circumstances where there is more than one expert witness having the same expertise who is to give evidence on the same or related topics. Whether experts should give evidence concurrently is a matter for the Court, and will depend on the circumstances of each individual case, including the character of the proceeding, the nature of the expert evidence, and the views of the parties.
7. Although this consideration may take place at any time, including the commencement of the hearing, if not raised earlier, parties should raise the issue of concurrent evidence at the first appropriate case management hearing, and no later than any pre-trial case management hearing, so that orders can be made in advance, if necessary. To that end, prior to the hearing at which expert evidence may be given concurrently, parties and their lawyers should confer and give general consideration as to:
  - (a) the agenda;
  - (b) the order and manner in which questions will be asked; and
  - (c) whether cross-examination will take place within the context of the concurrent evidence or after its conclusion.
8. At the same time, and before any hearing date is fixed, the identity of all experts proposed to be called and their areas of expertise is to be notified to the Court by all parties.
9. The lack of any concurrent evidence orders does not mean that the Court will not consider using concurrent evidence without prior notice to the parties, if appropriate.

## **CONFERENCE OF EXPERTS & JOINT-REPORT OR LIST OF ISSUES**

10. The process of giving concurrent evidence at hearings may be assisted by the preparation of a joint-report or list of issues prepared as part of a conference of experts.
11. Parties should expect that, where concurrent evidence is appropriate, the Court may make orders requiring a conference of experts to take place or for documents such as a joint-report to be prepared to facilitate the concurrent expert evidence process at a hearing (see Part 7 of the Expert Evidence Practice Note).

## **PROCEDURE AT HEARING**

12. Concurrent expert evidence may be taken at any convenient time during the hearing, although it will often occur at the conclusion of both parties' lay evidence.
13. At the hearing itself, the way in which concurrent expert evidence is taken must be applied flexibly and having regard to the characteristics of the case and the nature of the evidence to be given.
14. Without intending to be prescriptive of the procedure, parties should expect that, when evidence is given by experts in concurrent session:

- (a) the judge will explain to the experts the procedure that will be followed and that the nature of the process may be different to their previous experiences of giving expert evidence;
  - (b) the experts will be grouped and called to give evidence together in their respective fields of expertise;
  - (c) the experts will take the oath or affirmation together, as appropriate;
  - (d) the experts will sit together with convenient access to their materials for their ease of reference, either in the witness box or in some other location in the courtroom, including (if necessary) at the bar table;
  - (e) each expert may be given the opportunity to provide a summary overview of their current opinions and explain what they consider to be the principal issues of disagreement between the experts, as they see them, in their own words;
  - (f) the judge will guide the process by which evidence is given, including, where appropriate:
    - (i) using any joint-report or list of issues as a guide for all the experts to be asked questions by the judge and counsel, about each issue on an issue-by-issue basis;
    - (ii) ensuring that each expert is given an adequate opportunity to deal with each issue and the exposition given by other experts including, where considered appropriate, each expert asking questions of other experts or supplementing the evidence given by other experts;
    - (iii) inviting legal representatives to identify the topics upon which they will cross-examine;
    - (iv) ensuring that legal representatives have an adequate opportunity to ask all experts questions about each issue. Legal representatives may also seek responses or contributions from one or more experts in response to the evidence given by a different expert; and
    - (v) allowing the experts an opportunity to summarise their views at the end of the process where opinions may have been changed or clarifications are needed.
15. The fact that the experts may have been provided with a list of issues for consideration does not confine the scope of any cross-examination of any expert. The process of cross-examination remains subject to the overall control of the judge.
16. The concurrent session should allow for a sensible and orderly series of exchanges between expert and expert, and between expert and lawyer. Where appropriate, the judge may allow for more traditional cross-examination to be pursued by a legal representative on a particular issue exclusively with one expert. Where that occurs, other experts may be asked to comment on the evidence given.
17. Where any issue involves only one expert, the party wishing to ask questions about that issue should let the judge know in advance so that consideration can be given to whether

arrangements should be made for that issue to be dealt with after the completion of the concurrent session. Otherwise, as far as practicable, questions (including in the form of cross-examination) will usually be dealt with in the concurrent session.

18. Throughout the concurrent evidence process the judge will ensure that the process is fair and effective (for the parties and the experts), balanced (including not permitting one expert to overwhelm or overshadow any other expert), and does not become a protracted or inefficient process.

# REPORT ON PIECE RATES IN THE AUSTRALIAN HORTICULTURE INDUSTRY

## EXPERT OPINION PROVIDED BY DR. ELSA UNDERHILL

1. My name is Elsa Margaret Underhill of Deakin University and I reside at 30 Ramsden Street, Clifton Hill Victoria. I am an academic by profession. I have read the Harmonised Expert Witness Code of Conduct and agree to be bound by it.

### QUALIFICATIONS AND EXPERIENCE

2. I hold the following qualifications: Bachelor of Commerce (Melb), Master of Commerce (Melb) and Doctor of Philosophy (UNSW). I am a member of the Association of Industrial Relations Academics of Australia and New Zealand (former past President); the Industrial Relations Society of Victoria (former Vice-President); and the Association of Certified Practising Accountants of Australia.
3. I have over 30 years' experience as an academic. Until 2018 I was a Senior Lecturer in the Department of Management, Faculty of Business and Law at Deakin University in Melbourne. I have designed and taught subject in human resource management, industrial relations, occupational health and safety (OHS) management, labour economics and organisational behaviour at undergraduate and post-graduate level. I am currently a Visitor in the Department of Management at Deakin University.
4. My major research areas are the employment and OHS aspects of temporary migrant labour and labour hire employment, and worker representation in the building industry. My submissions to inquiries on Temporary Migrant Workers, and the licensing of labour hire employers have been recognised in the Final Reports and Recommendations of the the Australian Senate 2016 Report *A National Disgrace: The Exploitation of Temporary Work Visa Holders*, the *Victorian Enquiry into the Labour Hire Industry and Insecure Work*, and the *Queensland Parliamentary Inquiry into the Practices of the Labour Hire Industry in Queensland* (I was invited to make a written and verbal submission).

5. My expertise in labour hire employment has been recognised by government OHS and other agencies. I completed a report on labour hire employment and occupational injuries for WorkSafe Victoria which has been cited in the Productivity Commission's report on *National Workers' Compensation and Occupational Health and Safety Frameworks* in 2004; the Victorian government's *Maxwell review of the Occupational Health and Safety Act* (Victoria) 1985 in 2004; *the Final Report of the Commonwealth Government's House of Representatives inquiry into labour hire employment and independent contracting* in 2005 (where it was included in the submission by the Queensland government); and in the Hanks *Final Report of the Review of the Accident Compensation Act* in Victoria in 2008. I have also completed commissioned research for the Queensland Government on the *Safe Placement of Agency Workers* (in 2010). That research included focus groups of more than 60 labour hire agencies and hosts located throughout Queensland, and included recommendations which have been implemented by WorkSafe Queensland. My research was cited extensively in the *Victorian Inquiry into the Labour Hire Industry and Insecure Work, Final Report* (2016), and the Queensland *Parliament's Final report into the practices of the labour hire industry in Queensland* (2016). My expertise in labour hire employment provides a strong foundation for understanding employment practices in horticulture.
  
6. In 2013/14 I conducted the first major research project on employment conditions and OHS of Working Holiday Makers (Visa 417) in harvesting work across Australia (with Prof. M. Rimmer). We interviewed farmers, hostel owners, labour-hire contractors, employment agency staff, union officials and OHS Government agency staff; we held nine focus groups (64 attendees) of farm workers drawn from 14 countries, in three states and territories; and we conducted an online survey of harvest workers throughout Australia, with 303 useable responses. That research has been published in the *Journal of Industrial Relations* (Underhill & Rimmer, 2016), *Policy and Practice in Health and Safety* (Underhill & Rimmer, 2015), *Sage Research Methods Cases* (Underhill & Rimmer, 2019), *Journal of Business Ethics* (Underhill et al. 2018) and *Relations Industrielle* (Underhill & Rimmer, 2017). It has been widely cited in international peer reviewed journals such as *International Journal of Health Services, Geographical Research, Economic & Industrial Democracy, International Migration, Sociologia Ruralis, Theoretical Criminology, International Journal of Comparative Labour Law and Industrial Relations, and Occupational and Environmental Medicine*. It has been cited in the Australian Senate Report *A National Disgrace: The Exploitation of Temporary Work Visa Holders* (2016), and the *Victorian Inquiry into the Labour Hire Industry and Insecure Work, Final*

*Report* (2016). This research project collected substantial data on wages and employment conditions experienced by harvest workers in Australia. I draw upon the findings from this project (designated Research Project 1) in this report.

7. In 2018 I conducted (with Prof. M. Rimmer, Assoc Prof. S. Yi and Ms. S. Huang) a major research project on how temporary migrant workers access information about their employment rights, for the Victorian Government. We held four focus of temporary migrant workers in metropolitan and regional Victoria (32 participants) and conducted an online multi-lingual survey of 416 temporary migrants across Australia. This project focused primarily upon the use of social media, but also included data on wages paid to harvest workers throughout Australia. I draw upon the findings from this project (designated Research project 2) in this report.
8. My expertise in temporary migrant workers and horticulture working conditions has been recognised by government agencies, evident in the successful competitive tendering with the Victorian Government for Research Project 2, and invitations to participate in consultations for the Federal Government's *Migrant Worker Taskforce* and the Victorian Government's enquiry into *Labour Hire Employment and Insecure Work*. I have been invited to present my research into Working Holiday Makers' (WHMs) and harvesting work at the University of Quebec and Montreal, the University of Cardiff, and multiple workshops and conferences at the Universi of Sydney and Monash University.

## **NATURE OF THE EXPERT ADVICE REQUESTED**

9. The AWU commissioned me to provide an Expert Report, the scope of which covers the following:
  - (a) The composition of the workforce in the horticulture industry, including the number of employees working in the industry and the proportion of employees engaged on a casual basis; and
  - (b) The average earnings of employees engaged as pieceworkers in the horticulture industry.

10. This report is structured as follows: Part A presents data on the size and composition of the horticulture workforce, drawing primarily upon Australian Bureau of Statistics (ABS) data; Part B presents data on piece rates paid to horticulture workers drawing upon my research data, supplemented by other academic and trade union research; and Part C draws upon my research to identify the OHS risks associated with piece rates in horticulture. I present my conclusions in Part D.

## **A. WORKFORCE COMPOSITION**

11. The horticulture industry is defined in the Horticulture Award 2020 (Clause 4.2) as:

- (a) the sowing, planting, raising, cultivation, harvesting, picking, washing, packing, storing, grading, forwarding or treating of horticultural crops in connection with a horticultural enterprise; or
- (b) clearing, fencing, trenching, draining or otherwise preparing or treating land or property in connection with the activities listed at 4.2(a).

The award specifies that the Horticulture Industry does not mean:

- (a) the wine industry; (b) silviculture and afforestation; (c) sugar farming or sugar cane growing, sugar milling, sugar refining, sugar distilleries and/or sugar terminals; (d) any work in or in connection with cotton growing or harvesting; cotton ginneries and associated depots; cotton oil mills and the extraction of oil from seed; or (e) plant nurseries.

12. The composition of the horticulture workforce has changed dramatically over the past twenty years. Until the late 1990s, the workforce consisted predominantly of Australian residents including 'permanent' itinerant workers, local farm labour, working class urban workers who spent their holidays harvesting, and semi-skilled rural workers who abandoned their regular work for higher paid harvesting work in peak picking periods. By the early 2000's, overseas workers (working holiday maker [WHM] visa holders) had also entered the labour market. By 2006, the workforce was estimated to be 40-50% permanent itinerants, 20-30% WHMs, 15-25% Australian resident retirees, with the remainder a mix of Australian travellers and students (Hanson & Bell, 2007). Accompanying the entry of WHMs was a decline in wages and conditions which impacted most on permanent itinerants, whose numbers declined significantly. In 2005, following a severe shortage of farm labour, the Federal government

amended the WHM visa to encourage overseas workers to perform harvesting work – by offering a second WHM visa if 88 days of specified work (mostly rural) was completed in the first year of their stay in Australia (Underhill & Rimmer, 2016). A third year visa was introduced in 2019 for WHMs that have worked 6 months in the same specified work. This incentive has dramatically changed the composition of the horticulture workforce. The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) estimates that in February 2019, 57% of casual and contract workers across a range of horticulture crops (fruit, grape and nut farms) were from overseas (NALAC, 2021).

13. Estimating the size of the horticulture workforce is difficult due to the large number of transient workers, seasonality, and an unquantifiable number of undocumented workers in the industry. The data presented in Table 1 draws upon the ABS sub-industry classifications of Mushroom and Vegetable (undercover & outdoors), and Fruit and Tree Nut Growing. The Latter includes grape, kiwifruit, berry, apple and pear, stone and citrus fruit, olive growing and all other fruit and tree nuts. Together, these classifications match the award definition of Horticulture. Table 1 provides the quarterly data on total workforce, and the number and percentage of casual workers employed in the horticultural workforce since August 2014. Quarterly data is provided as it shows the volatility in employment numbers.

**Table 1: Horticultural workforce 2014-2020.**

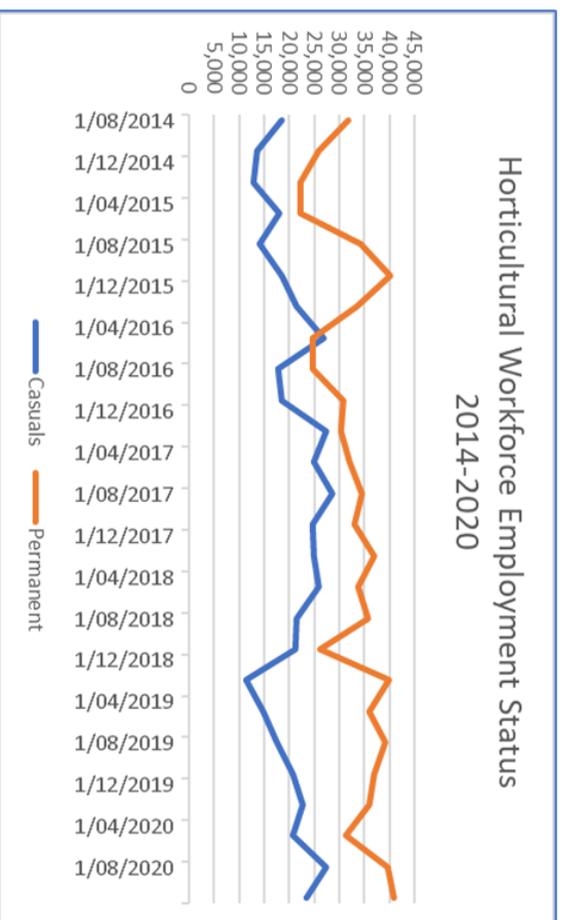
Date	Total Workforce	Casuals	Casuals %
1/11/2020	64,551	23,492	36.39%
1/08/2020	67,189	27,359	40.72%
1/05/2020	51,979	20,704	39.83%
1/02/2020	58,736	22,738	38.71%
1/11/2019	57,948	20,890	36.05%
1/08/2019	56,865	17,530	30.83%
1/05/2019	50,816	14,771	29.07%
1/02/2019	51,456	11,513	22.37%
1/11/2018	47,675	21,390	44.87%
1/08/2018	57,354	21,455	37.41%
1/05/2018	59,700	25,884	43.36%
1/02/2018	62,188	25,090	40.35%
1/11/2017	57,951	24,845	42.87%
1/08/2017	63,201	28,659	45.35%
1/05/2017	56,889	24,862	43.70%
1/02/2017	57,856	27,510	47.55%
1/11/2016	49,275	18,489	37.52%
1/08/2016	42,413	17,758	41.87%
1/05/2016	51,515	26,887	52.19%
1/02/2016	55,154	21,523	39.02%
1/11/2015	58,751	18,651	31.74%
1/08/2015	48,661	14,235	29.25%
1/05/2015	40,328	17,975	44.57%
1/02/2015	35,226	12,939	36.73%
1/11/2014	39,586	13,624	34.41%
1/08/2014	50,356	18,459	36.66%

Source: ABS Labour Force, Australia, Unpublished data.

14. It can be seen that the workforce numbers are highly volatile, changing by as much as 10,000 employees from quarter to quarter. Casual employees make up a significant proportion of the workforce, averaging 39% of the workforce over the period, and peaking at just over half of the workforce in May 2015. Chart 1 shows the number of permanent and casual employees for the same period, demonstrating the high degree of volatility in employment for both groups of employees. The number of casual employees follows the same growth pattern as

permanent employees with the exception of 2019 through to mid-2020 when the number of casuals dropped in contrast to the relatively steady number of permanent employees.

**Chart 1: Horticultural Workforce Employment Status 2014-2020**



Source: ABS Labour Force, Australia, Unpublished data.

15. The ABS statistics, however, are likely to underestimate both the total workforce and proportion of casual employees in horticulture. As observed in paragraph 12, temporary migrant workers make up a significant proportion of the horticulture workforce, and are predominantly employed on a casual basis. WHMs are encouraged to work in horticulture for 88 days during their first year in Australia, to qualify for a second-year visa (a third year has recently been added to the WHM visa program, but is not included in current data). Table 2 shows the number of working holiday makers (WHMs) who have received a second-year visa since 2014-15. Temporary migrant workers are also employed under the Seasonal Worker Programme, but their numbers are too low to count for this report.

**Table 2: 2nd year 417 Visa holders 2014/15 – 2018/19**

Year	2nd year WHM visa holders <sup>1</sup>
2019-20	28,316
2018-19	37,418
2017-18	32,828
2016-17	34,097
2015-16	36,264
2014-15	41,339

Source: Department of Immigration and Border Protection. Working Holiday Maker Visa Programme Report, Canberra: Australian Government, Various years.

16. Approximately 95% of WHMs with a second-year visa achieved eligibility by working 88 days, in their first twelve months, in agriculture. In addition, a number of WHMs work in agriculture but fail to achieve 88 days employment, thereby being ineligible for the second-year visa. Research consistently finds almost all WHMs are employed as casual employees. The high degree of mobility, and often short-term employment of WHMs impedes an accurate count of their employment numbers in horticulture, which is important given their substantial numbers. They are likely to be understated in official data. ABARES, for example, states that in February 2019, around 63,000 overseas workers were employed in horticulture (with 56,000 Australian seasonal workers) (ABARES, 2020). In addition, an estimated 60,000 workers are on Temporary Protection Visas, or undocumented, and working as casuals in horticulture (NUW, 2018); they are also unlikely to be fully counted in official employment statistics. In sum, the ABS statistics provide an estimate of the minimum workforce size, but the total workforce is likely to be substantially larger.

17. Based on ABARES estimates provided above, the majority of seasonal horticulture workers are temporary migrant workers, predominantly WHM visa holders. Data from the Department of Home Affairs Working Holiday Maker visa program reports show that around 40% of second year WHM visas are granted to Asians (Taiwanese, South Korean, Japanese and Hongkongers). It is important to note that whilst most WHM visa holders come from countries where the mother tongue is not English, the visa does not require an understanding of the English language. A significant minority of WHMs have a poor grasp of English. Our 2018 survey for

the Victorian government (Project 2) found 26% of Asian, and 3% of European Union (EU) respondents **struggled** to understand written English, and another 2% could not understand written English at all. Just over half (52%) of Asians, and 17% of EU respondents said they can understand written English **moderately** well. Consequently, they relied upon inaccurate information from peers when seeking advice about their employment rights (Underhill et al. 2019/20). These workers are highly vulnerable to exploitation. They are poorly informed about their employment entitlements, and processes for enforcing their employment rights. The National Agriculture Labour Advisory Committee has recently recognised the vulnerability of these workers to exploitation, and recommended compulsory in person, multilingual induction to increase their understanding of their employment rights (NALAC, 2021). A lack of comprehension of written English is important given the Horticulture Award provision for piece rate agreements. The Horticulture Award 2020 specifies that “the employer and the individual employee must have genuinely made the piecework agreement without coercion or duress” (clause 15.2 (f)). This clause is likely to offer very little protection for temporary migrant workers with a poor understanding of English.

18. Along with the changing composition of the workforce has been a shift away from farmers hiring workers directly, to the use of labour hire employment. Until the early 2000s, horticulture workers were predominantly hired directly by farmers. Overtime, labour hire operators have emerged to become major employers in the industry. In 2012, a report by Hall and Partners/Open Mind commissioned by the Australian Government explained that “There are several levels of labour hire contractors [in horticulture].. At the highest level there are legitimate labour hire agents who provide a full labour hire service to their clients, many using backpacker labour. Entirely organised by the contractor and completely above board ....The next level contains more localised businesses, for instance where the owner of a backpacker hostel provides accommodation, and also organises the backpackers to work for local farms ...This would largely be aboveboard ...At the other end of the spectrum, illegal contractors work with agents / facilitators overseas to recruit workers for specific locations – in Australia they would approach a farmer (or other producer) directly and negotiate a set price for getting a crop down or a volume of work done. The rate can be negotiable, and a farmer may be paying the equivalent of close to the minimum wage, but it is certain that the agent would be taking a significant cut, and that workers are doing longer hours for the wages. Illegal contractors are a closed circle, operating underground. Farmers report only having a mobile phone number on which to contact them, and they do not have offices, but rather visit the

farmer once a week to collect a cheque –there is little interaction between the farmers and the workers, also because of a lack of English. Significantly, farmers are very willing to abrogate responsibility to these labour hire contractors” (Hall and Partners/Open Mind, 2012: 48).

19. Our 2014 survey found that WHMs employed by labour hire contractors (approximately 28% of respondents, half of whom were Asian) received lower wages and experienced harsher employment conditions than those employed by farmers. Labour hire employees/contractors earned an average of \$12.66 (SD 5.74) per hour compared to \$14.86 (SD 5.13) per hour for those employed by farmers. They were more likely to report working too few hours (27.3% compared to 12.7% of farm employees), and experienced greater OHS risks such as often or always missing drink breaks (24% compared to 16.1% of farm employees) and working in extreme heat (46.7% compared to 30.1% of farm employees).
20. The proportion of the horticulture workforce employed by labour hire operators is unknown. Their rapid growth, and associated high levels of labour exploitation however, has been well recognised by government enquiries in Queensland, South Australia and Victoria, as well as the Federal government’s Migrant Worker Taskforce. All three State governments have now introduced licensing arrangements for labour hire employers. The Migrant Worker Taskforce also recommended licensing of labour hire operators.
21. To sum, the horticultural workforce has undergone significant change in recent decades. The majority of seasonal workers are casual employees, a reflection of the seasonal, short-term nature of picking and packing work. The majority of seasonal workers are also overseas born temporary migrants (at least until international borders were closed in 2020), of whom a significant proportion have a poor understanding of English. They are poorly informed about their employment rights, including information about how to respond to underpayments and wage theft. There has been a shift away from harvest workers being employed by farmers, to being employed by labour hire operators. This has had a detrimental impact on employment standards in the industry. These changes point to the need for improved employment protections which are better understood and more easily accessed by horticulture workers.

## **B. AVERAGE EARNINGS OF EMPLOYEES ENGAGED AS PIECEWORKERS IN THE HORTICULTURE INDUSTRY.**

### **B1 HOW EXTENSIVE ARE PIECE WORK RATES IN THE HORTICULTURE INDUSTRY?**

22. There is no official data on the extent to which piece rates are paid in horticulture. However, a Fair Work Ombudsman (FWO) Report and several surveys provide an indication of the extent of piece rate payments. The FWO found more than 1/3 of employers in their study paid piece rates (FWO, 2018). Our Research Project 1 found 42% of farm workers were paid piece rates in their current job. In Research Project 2, of those working in horticulture, 31% were paid piece rates in their current job. A survey by UnionsNSW (2021) found piece rates were very widespread. UnionsNSW audited 1008 online advertisements for horticulture employment from late December 2019 to early September 2020. They found 88% of advertised jobs offered piece rates. The majority of jobs advertised were for strawberry, blueberries, grapes, zucchini and raspberry picking; and the main locations were in Queensland, NSW and Victoria. To sum, independent research suggests a significant proportion of the horticulture workforce – at least 30% - are paid piece rates. Trade union research based on job advertisements, rather than numbers employed, suggests the extent may be much higher.

### **B2 HOW MUCH ARE PIECE WORKERS PAID IN HORTICULTURE?**

23. The Horticulture award includes:

15.2 (b) The piece work rate fixed by agreement the employer and the employee must enable the average competent employee to earn at least 15% more per hour than the minimum hourly rate prescribed in the award...

15.2 (c) The calculation of piece work rates in clause 15.2(b) for casual employees will include the casual loading prescribed in clause 11.3(a).

15.2 (f) The employer and the individual employee must have genuinely made the piecework agreement without coercion or duress.

15.2(j) Nothing in this award guarantees an employee on a piecework rate will earn at least the minimum ordinary time weekly rate or hourly rate in this award....

24. Our Research Project 1 is the only major academic survey to collect data on pieceworker earnings in horticulture in Australia. Our second research project collected data from a

smaller number of horticulture workers. In comparing our findings with the award hourly rate of pay, we use the casual hourly rate because all of our respondents were employed as casual workers. For piece rate comparisons, we also use the benchmark of what ‘the average competent worker’ should earn (15% above the hourly rate of pay), because our surveys collected data from a large number of workers (especially Research Project 1) creating an averaging effect on the earnings data. Our Research Project 1, conducted in 2013/2014, found piece rate workers earned, on average, significantly less than hourly paid workers. Table 3 provides the data.

**Table 3: Average hourly earnings for harvest workers, 2014 (n=278)**

Payment method	Mean	Median	Minimum	Maximum	Standard Deviation	Award minimum
Paid by the hour (time wages) (n=158)	\$16.20	\$18.00	\$3.00	\$28.25	4.833	\$16.87
Paid piece rates (n=120)	\$11.69	\$12.00	\$2.00	\$30.00	5.01	\$19.40*

t(276)= 7.589, p = 0.000 \*average competent worker

25. Piece rate average earnings are well below the earnings of hourly paid workers, and only 60% of the amount an “average competent worker” would be expected to earn. There is also high variance in hourly earnings, with the lowest average hourly rate for piece rates being \$2.00 and the maximum \$30.00 per hour. A range of factors impact the productivity of harvest workers, such as experience, equipment, and the type and quality of the product picked. However, the low average pay of piece workers suggests that farmers and contractors fix piece rates too low on the basis of exaggerated performance expectations of the “average competent worker”.

26. A similar pattern was found in our second project, conducted in 2017/18. Table 4 provides the data.

**Table 4: Average hourly earnings for harvest workers, 2018 (n=81)**

<b>Payment method</b>	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Standard Deviation</b>	<b>Award minimum</b>
Paid by the hour (time wages) (n=53)	\$21.03	\$22.13	\$10.00	\$26.00	3.039	\$22.86
Paid piece rates (n=28)	\$16.28	\$15.00	\$5.00	\$25.00	5.63	\$26.29*

t(35.51)= 4.156, p = 0.000 \*average competent worker

27. The 2018 data shows piece workers' average hourly earnings were much less than hourly paid workers, and well under both the award rate for hourly pay and the "average competent worker". Whilst the number of respondents in Project 2 is less than Project 1, the same pattern of low piece rates persists. Also, the pay gap has widened between piece workers and hourly rate workers since 2014.
28. The focus groups conducted for Research Project 1 provided detailed accounts of the low piece rates paid in horticulture. For example, a Scottish worker in Mildura told of earning \$110.00 for a full week of picking peas; others spoke of earning a maximum of \$350 for 6 days, working 8-hour days picking table grapes. A worker from Hong Kong earned \$25 per day picking grapes whilst he "lived off my savings". An Italian worker in the Huan Vale earned \$200 for a week of picking strawberries, whilst another, working on a different farm in Cygnet, earned only \$70 over the week, being paid \$4.50 per tray picked. In the Huan Valley, piece rate earnings for strawberry pickers are so low that at least one backpacker hostel discounted accommodation costs (from \$170 to \$120 per week) to compensate for the low earnings, and to encourage workers to take on piece work. At the other end of the scale, an apple picker in the Huan Valley had earned \$1,000 in one week, although she also had three falls from the ladder over the week.
29. The Research Project 1 survey also provided scope for respondents to express their views on what changes they would like to see to improve the OHS and/or employment experience of backpackers working on farms in Australia. Of those paid piece rates in their current job, 31% expressed their discontent with piece rates. Of those paid hourly rates, only 16% (25) mentioned improvements to pay in the open-ended question, and of these, seven stated that only hourly rates of pay should be paid. For example:

*“Pay hourly rates for pickers. I worked 11 hours and got paid \$60”*

*“Paid at least minimum wage would be pretty cool, we’d feel less like slaves”*

*“More hourly paid work to prevent the backpackers from taking risks”.*

30. Other academic research has also identified very low piece rates in horticulture. First, Howe et al. (2018) conducted research in the horticulture industry from 2016-2018, interviewing and holding focus groups with 124 workers and 121 growers (as well as conducting a survey of 332 vegetable growers). They did not collect data on rates of pay, but reported comments from workers and growers about payment systems. Their focus groups revealed some workers had received as little as \$1 per hour on piece rates, despite working steadily; as they note “farmers and workers had very different perspectives on what was an appropriate and attainable level of productivity in setting a piece rate”. A sample of comments from workers on the lowest wage received included (Howe et al. 2018, p.97):

*“I did 11 days picking raspberries and for the first week we probably earned just over \$200 doing 8 or 9 hours a day” [\$5 per hour]*

*“I got just \$3 a bucket and this would take half an hour, forty minutes a bucket because the crop’s just not there” [\$6 per hour]*

*“I had a piece rate job where we ended up getting less than \$10 an hour. The farms don’t care if people leave after a few days because there are always new backpackers who try the job or even stay working despite the bad money because they can’t find something else” [<\$10 per hour].*

31. Howe et al. (2018, p.97) observed that piece rates were not adjusted to accommodate changes in the density of crops, resulting in very low rates of pay. They quote a picker in Katherine: *“You’re being forced to work piece-rate but the crops wouldn’t be very good. So they’d say, ‘don’t pick any of these because it’s diseased.’ And you’d spend all day walking up and down and looking for fruit to pick and you’d be expected to do all of that in your own time”.*

32. Second, Berg and Farbenblum (2017) surveyed 4,322 temporary migrants (mostly international students) about their employment experience, and found “Large-scale wage

theft was prevalent across a range of industries, but the worst paid jobs were in fruit- and vegetable-picking and farm work. Almost one in seven participants working in fruit- and vegetable-picking and farm work (15%) earned \$5 per hour or less. Almost a third (31%) earned \$10 per hour or less". Berg and Farbenblum do not identify whether these workers were paid piece rates, however, the data is consistent with our findings in Tables 3 and 4.

33. Two trade union surveys have also provided data on piece rate earnings in horticulture. First, the UnionsNSW survey of job advertisements calculated (based on interviews with pickers to establish average picking rates) 96% of the advertised jobs would result in less than the minimum hourly rate of pay. The average earning rates varied by product. For strawberry pickers, 65% of advertisements would result in earnings of less than \$2.00 per hour, likewise for 22% of grape picking advertisements. For blueberry pickers, rates that averaged \$10-\$14 per hour were more common; and 64% of capsicum picker advertisements would allow workers to earn \$10-\$12 per hour. These rates are consistent with academic research findings detailed above, and all are well below the minimum hourly wage (UnionsNSW, 2021).
34. Second, a survey of 655 workers by the NUW (2019) found the average hourly rate earned by piece workers was \$14.80 per hour, with the lowest reported at \$4.60 per hour, and the highest \$37.50. Just over 64% earned less than the minimum casual hourly rate of pay.
35. Two recent enquiries have highlighted concerns about piece rates in horticulture. First is the FWO report *The Harvest Trail Enquiry: A Report on Workplace Arrangements Along the Harvest Trail*, released in 2018. The FWO report highlighted what they termed 'the misuse of piece rates' as one of five key findings. They found more than one third of employers paid piece rates (of 638 employers), and over 100 "were not engaging pieceworkers correctly by having no written piecework agreement or having an invalid piecework agreement" (p.29). The report does not, however, include data on actual piece rates paid.
36. Second, the *Victorian Enquiry into the Labour Hire Industry and Insecure Work* (2016) observed that the piece rate award provisions in the Horticulture Award enabled employees to be paid below the minimum hourly rate of pay, undermining the safety net of the award minimum hourly rates. Piece rates also "contribute to a level of subjectivity and uncertainty regarding what rate is payable to an employee, and underlies a number of problematic outcomes" (p.24). The enquiry made two recommendations regarding piece rates. First, that the Victorian Government advocate for the FWO to focus more compliance activity on

underpayment/non-payment of award rates in the horticulture [and meat] industries ... and the imposition of piece rate arrangements” (p.24). Second, that labour hire agencies “should not use piece rates as a device to pay workers below the minimum time based rate of pay” (p.260).

37. In sum, all research findings confirm very low piece rate payments in the horticulture industry. **Whilst the findings vary between surveys, all find most piece workers are earning well below the minimum rate set for hourly paid casual workers.** Our two research projects showed an average hourly rate of \$11.69 in 2014, increasing to \$16.28 per hour in 2018. The minimum paid in both surveys was \$2.00 and \$5 per hour respectively. In 2014, the maximum rate reported by respondents was \$30 per hour, above the expectations of the “average competent worker”. In 2018, the maximum rate of \$25 did not reach the level that the “average competent worker” was expected to earn. Average piece rate earnings fall far short of average minimum hourly earnings; the work rate necessary for the ‘average competent worker’ to earn 15% above the minimum hourly rate is unachievable for most; and the floor to piece rate payments is exceptionally low.

### C. PIECE RATES AND UNSAFE WORK PRACTICES

38. Low rates of pay for piece workers in horticulture create an incentive for piece workers to speed up their output. The nature of harvesting work, however, means that the few short cuts available to workers to increase output are inextricably linked to poorer health and safety. Table 5 shows a range of unsafe work practice more often adopted by piece workers, based on survey responses in our Research Project 1.

**Table 5 Payment methods and unsafe work practices**

Issue	Frequency of event					
	Never/rarely (%)		Sometimes (%)		Often/Always (%)	
	Hourly paid (n=151)	Piece worker (n=116)	Hourly paid (n=151)	Piece worker (n=116)	Hourly paid (n=151)	Piece worker (n=116)
Discouraged from taking lunch breaks <sup>1</sup>	47.3%	21.6%	28.2%	31.4%	24.4%	47.1%
Discouraged from stopping to drink water <sup>2</sup>	61.2%	50.0%	24.3%	27.6%	14.5%	22.4%
Working in extreme heat (35 degrees+) <sup>3</sup>	46.7%	26.7%	28.3%	25.0%	25.0%	48.3%
Carrying excessive loads <sup>4</sup>	65.1%	37.9%	23.7%	30.2%	11.2%	31.9%
Not stabilising ladders before climbing <sup>5</sup>	84.2%	62.1%	11.8%	24.1%	3.9%	13.8%
Raise OHS issues without negative consequences <sup>6</sup>	23.7.4%	40.2%	34.4%	28.4%	42.0%	31.4%

1.  $\chi^2 = 19.299$ , DF 2,  $p < .000$ . 2.  $\chi^2 = 4.045$ , DF 2,  $p < .14$ ; 3.  $\chi^2 = 17.332$ , DF 2,  $p < .000$ ; 4.  $\chi^2 = 24.176$ , DF 2,  $p < .000$ ; 5.  $\chi^2 = 17.886$ , DF 2,  $p < .000$ . 6.  $\chi^2 = 7.435$ , DF 2,  $p < .05$ ;

39. Piece workers were often or always:

- (i) twice as likely to be discouraged from taking lunch breaks
- (ii) almost twice as likely to not drink water if it took too long to access
- (iii) almost twice as likely to work in extreme heat (35 degrees and above)
- (iv) three times as likely to carry excessive loads
- (v) almost five times as likely to not stabilise a ladder before climbing on it.

40. Piece workers were also less confident of being able to raise an OHS concern without negative consequences, with 40% compared to 24% of hourly paid workers reporting this. Not only are piece workers low paid, their work involves risks beyond those experienced by hourly rate

workers. This data points to employers in horticulture paying cursory attention to OHS risks, which they contribute to by offering piece rate payments. As long as piece work rates fail to provide a decent minimum wage, workers will continue to take chances with their safety.

## D. CONCLUSION

41. Based on the above analysis, I conclude that:

- The ABS statistics for the horticulture industry show employment at around 50-60,000 workers, with a high level of volatility and an average of 39% casual workers.
- Temporary migrant workers, especially WHMs, make up more than 50% of seasonal workers in harvesting. This highly mobile workforce is likely to be underestimated in the ABS data. These workers are primarily casual employees. Both the size of the workforce and the percentage of casual workers is likely to be greater than that estimated by the ABS.
- Around 40% of the temporary migrant workers in horticulture are Asians, with a poor understanding of English. They do not have a sound understanding of their employment rights and are vulnerable to exploitation. The piece work provisions in the Horticulture Award do not protect them from exploitation.
- An increased proportion of horticulture workers are employed by labour hire operators rather than farmers. Three state government enquiries, and the Federal Government Migrant Workers Taskforce have identified the heightened risk of exploitation associated with labour hire employment. State governments have recently introduced licensing requirements to improve employment standards in the industry. It is too early to assess whether licensing has impacted employment standards in horticulture.
- Whilst estimates vary, piece rates are paid to **at least** one-third of the workforce in horticulture.
- The rate of pay for piece workers is substantially less than the minimum hourly rate of pay received by hourly paid casual workers. Very few piece workers earn the rate which 'the average competent worker' should be able to earn. Piece rates are set at a rate too low for average workers to earn the hourly minimum, let alone the 'average competent worker' rate.

- The low rates of pay for piece workers in horticulture encourages an unacceptably high level of unsafe work practices.

*I have made all the inquiries that I believe are desirable and appropriate (save for any matters identified explicitly in my report) and that no matters of significance that I regard as relevant have, to my knowledge, been withheld from the Commission.*

Dr. Elsa Underhill, 19 March 2021.

ABARES. (2020). *Labour use in Australian Agriculture* (Research Report 20.20): Australian Bureau of Agriculture and Resource Economics and Sciences, Department of Agriculture, Water and Environment.

Australian Bureau of Statistics (2020), *Labour Force Statistics*, Quarterly statistics, 6291.0.55.003, unpublished data.

Australian Senate. (2016). *A National Disgrace: The Exploitation of Temporary Work Visa Holders*. Canberra, Australia: Commonwealth of Australia, Senate Standing Committee on Education and Employment.

Berg, L., & Farbenblum, B. (2017). *Wage theft in Australia: findings of the national temporary migrant work survey*. Sydney: Migrant Worker Justice Initiative, UNSW Law, University of Technology Sydney.

Department of Immigration and Border Protection. *Working Holiday Maker Visa Programme Report*, Canberra: Australian Government, Various years.

Department of Immigration and Citizenship (2020), *Working Holiday Maker Visa Programme Report, June 2020* Canberra: Australian Government.

Fair Work Ombudsman. (2018). *Harvest Trail Enquiry: A Report on Workplace Arrangements Along the Harvest Trail*: Commonwealth of Australia.

Hall & Partners/Open Mind. (2012). *A Sociological Investigation of Illegal Work in Australia. A Report submitted to the Department of Immigration and Citizenship*. Canberra: Department of Immigration and Citizenship.

Hanson, J., & Bell, M. (2007). Harvest trails in Australia: Patterns of seasonal migration in the fruit and vegetable industry. *Journal of Rural Studies*, 23(1), 101-117.

Howe, J., Clibborn, S., Reilly, A., Van den Broek, D., & Wright, C. F. (2018). *Towards a durable future: Tackling labour challenges in the Australian horticulture industry*. Adelaide: University of Adelaide.

National Agricultural Labour Advisory Committee [NALAC]. (2021). *National Agriculture Workforce Strategy*. Canberra: Australian Government.

National Union of Workers. (2018). *Australian Horticulture, Labour Exploitation and Australia's International Labour Supply: How a broken visa system drives exploitation in Australia's fresh food economy*. Melbourne: NUW.

National Union of Workers. (2019). *Farm-workers speak out*. Melbourne: National Union of Workers.

Queensland Parliament. (2016). *Inquiry into the practices of the labour hire industry in Queensland*. Brisbane, Queensland: Finance and Administration Committee, Queensland Parliament.

Industrial Relations Victoria. (2016). *Victorian Inquiry into the Labour Hire Industry and Insecure Work, Final Report*. Industrial Relations Victoria, Melbourne.

Underhill, E., Groutsis, D., van den Broek, D., & Rimmer, M. (2018). Migration Intermediaries and Codes of Conduct: Temporary Migrant Workers in Australian Horticulture. *Journal of Business Ethics*, 153(3), 675-689.

Underhill, E., & Rimmer, M. (2015). Itinerant foreign harvest workers in Australia: the impact of precarious employment on occupational health and safety. *Policy and Practice in Health and Safety*, 13(2), 26-46.

Underhill, E., & Rimmer, M. (2016). Layered vulnerability: Temporary migrants in Australian horticulture. *Journal of Industrial Relations*, 58(5), 608-626.

Underhill, E., & Rimmer, M. (2017). Private governance, state regulation and employment standards: how political factors shape their nexus in Australian horticulture. *Relations Industrielles*, 72(1), 33-55.

Underhill, E., Huang, S., Yi, S., & Rimmer, M. (2019/20). Using social media to improve temporary migrant workers' access to information about their employment rights. *Journal of Australian Political Economy*, 84, 147-176.

UnionsNSW. (2021). *Wage Theft - The Shadow Market Part Two: The horticultural Industry*. Sydney: UnionsNSW.

07/06/2021

**PRIVILEGED & CONFIDENTIAL**

**VIA E-MAIL**

Greg Houston  
Partner  
HoustonKemp Economists  
Level 40, 161 Castlereagh Street  
Sydney NSW 2000  
greg.houston@houstonkemp.com

Dear Greg

**Supplementary scope to Expert Retainer - Greg Houston, HoustonKemp**

We refer to our letter of engagement to you dated 14 May 2021 (**Engagement Letter**).

This letter sets out a supplementary scope to your engagement as an expert under the Engagement Letter.

1. **Supplementary scope of expert report**

We refer to paragraph 1.3 of the Engagement Letter, which asks you to review the methodology adopted in the expert report of Dr Underhill (**Underhill Report**).

We would like you to carry out the same kind of methodology review in relation to another expert report — the expert report produced by the United Workers Union from Dr Joanna Howe (**Howe Report**).

Please review and address in your report the methodology underpinning the opinions expressed in the section of the Howe Report headed “Underpayment of Wages of Workers Earning Piece Rates”.

Please address the same questions in relation to this section of the Howe Report as the questions we asked in the Engagement Letter in relation to the Underhill Report.

You should give reasons for each opinion and, where appropriate, you should state the methodology you have used in reaching your conclusions. You should also set out the information and data you have relied upon to prepare your report, as well as any assumptions you have made in preparing your report. Finally, you should also make it clear if a particular question or issue falls outside your area of expertise.

2. **Phase 2 not required**

We refer to paragraph 2 of our Engagement Letter where we foreshadowed that we may request you to provide further evidence (**Phase 2**). We note that we have not requested you to commence any work on Phase 2 or provided you with any materials in relation to Phase 2 and we therefore assume that you have not commenced any work. We confirm that we have decided that we will not be proceeding with Phase 2.

Please do not hesitate to contact Henry Skene or Elizabeth Tan if you have any questions or concerns, or wish to discuss this matter further.

Yours faithfully



Henry Skene  
Partner

SEYFARTH SHAW AUSTRALIA

Encl:

1. Dr Joanna Howe's expert report. We will also send you the annexures via email due to filesize constraints.

**Signing Page**

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Signed by Greg Houston

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Date

10/06/2021

**PRIVILEGED & CONFIDENTIAL**

**VIA E-MAIL**

Greg Houston  
Partner  
HoustonKemp Economists  
Level 40, 161 Castlereagh Street  
Sydney NSW 2000  
greg.houston@houstonkemp.com

Dear Greg

**Additional assumptions for Expert Retainer - Greg Houston, HoustonKemp**

We refer to our letter of engagement to you dated 14 May 2021 and our supplementary scope letter dated 7 June 2021.

In performing your review of the Underhill Report and the Howe Report, please make the following assumptions as to the legal meaning of the concept of “average competent employee” in the *Horticulture Award 2020*:

1. “The phrase ‘average competent employee’ envisages the existence of a pool of hypothetical competent employees. Hypothetical employees who are not competent must be excluded from the pool. The average competent employee is selected from the pool of hypothetical competent employees.”
2. A “competent employee” is one that is “suitable, sufficient or adequate” for the purpose of doing the work that is to be done at a piecework rate. A “competent” employee is to be distinguished from a “proficient” employee.
3. “The average competent employee is the ordinary, normal or typical competent employee”, with “an average level of diligence and an average level of aptitude”.
4. “The assessment of the average competent employee must be made by reference to the workforce that is available or potentially available to the employer.” Hence, “the average competent employee in a less experienced workforce should be attributed with less experience, while the converse is also true”.

Please also make the following factual assumption:

5. At any given point in time, a significant proportion of the workforce (eg 20% or more) engaged on piecework rates under the *Horticulture Award 2020* is not competent in the sense described above.

Please do not hesitate to contact Henry Skene or Elizabeth Tan if you have any questions or concerns, or wish to discuss this matter further.

Yours faithfully



Henry Skene  
Partner

SEYFARTH SHAW AUSTRALIA

# Annexure B – Curriculum vitae

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## Greg Houston

### Partner

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### Overview

Greg is a founding partner of HoustonKemp. He is an expert in the application of economics to assist high stakes decision-making in competition, finance, policy and regulatory matters.

In the antitrust sphere, Greg is regularly sought to advise on the competitive effects of proposed merger transactions, and to provide expert testimony in antitrust enforcement proceedings. His evidence has been cited favourably in numerous proceedings before the Federal Court, the Competition Tribunal and in the decisions of Australian and international arbitrators. For many years, Greg has been listed by Who's Who Legal as one of the world's leading competition economists. More recently, Greg has been recognised in WWL's Thought Leaders – Competition for his contributions to competition economics.

On regulatory matters, Greg has played a substantial role in shaping the development of economic regulatory regimes governing communications, energy, transport and water services infrastructure in Australia and the Asia Pacific region. His clients in this area include governments, regulators, infrastructure service providers and trade associations.

Greg is also the foremost expert in the region on the application of economics to critical questions arising in securities class actions, insider trading and market manipulation. He has filed expert reports in numerous proceedings concerning the adequacy and effect of disclosures in relation to listed and unlisted securities, in both Australia and New Zealand. Greg's evidence was accepted in the only two wrongful disclosure matters for which final judgment on substantive elements was informed by economic evidence before the Federal Court.

In April 2014, Greg – together with Adrian Kemp – founded HoustonKemp, a firm dedicated to applying economic analysis to bring clarity and focus to complex problems arising in competition, finance, policy and regulation.

Greg holds a first class honours degree in economics from the University of Canterbury, and is a member of the Competition and Consumer Committee of the Law Council of Australia.

### Qualifications

**1982**                      **University of Canterbury, New Zealand**  
B.Sc. (First Class Honours) in Economics

### Prizes and scholarships

**1980**                      University Junior Scholarship, New Zealand

## Career details

- 2014-** **HoustonKemp Economists**  
Partner, Sydney, Australia
- 1989-2014** **NERA Economic Consulting**  
Director (1998-2014)  
London, United Kingdom (1989-1997)  
Sydney, Australia (1998-2014)
- 1987-89** **Hambros Bank, Treasury and capital markets**  
Financial Economist, London, United Kingdom
- 1983-86** **The Treasury, Finance sector policy**  
Investigating Officer, Wellington, New Zealand

## Project experience<sup>1</sup>

### Competition, access and mergers

- 2020-21** **Chapman Tripp & DLA Piper/Confidential client**  
**Competition market study**  
Advice and analysis in relation to the New Zealand Commerce Commission's market study of the retail grocery sector.
- 2017-21** **Gilbert + Tobin/Confidential client**  
**Alleged cartel conduct**  
Advice and analysis in relation to an Australian Competition and Consumer Commission investigation and then prosecution of alleged cartel conduct.
- 2020** **Allens/Confidential client**  
**Alleged misuse of market power**  
Advice and analysis in relation to Federal Court proceedings brought by a private party in relation to below cost pricing of a fast moving consumer good.
- 2020** **Ashurst/ASN**  
**Exclusive dealing**  
Expert report on the competitive effects of the exclusive dealing notification to the ACCC by the dedicated TV shopping channel retailer TVSN, proposing to be able to acquire products from suppliers on an exclusive basis.
- 2019-20** **King & Wood Mallesons/Confidential client**  
**Merger authorisation**  
Advice and preparation of expert report for use in a pending application for authorisation to be made to the Australian Competition and Consumer Commission.
- 2018-20** **HFW/Confidential client**  
**Market power provision**  
Advice and expert report prepared on the application of an industry-specific regulation directed at limiting a firm's pricing conduct in circumstances where it has market power.

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<sup>1</sup> Past ten years only.

- 2018-20**                    **Queensland Rail**  
**Access to facilities**  
Advice in relation to the Queensland Competition Authority's review of the declared status of services provided by QR's five rail networks, as well as the QCA's simultaneous review of the access undertaking applying to those networks.
- 2018-20**                    **DLA Piper/DBCT Management**  
**Access to facilities**  
Expert reports submitted to the Queensland Competition Authority's review of the declared status of services provided by the Dalrymple Bay Coal Terminal.
- 2017-19**                    **Johnson Winter & Slattery/Ramsay Healthcare**  
**Alleged misuse of market power**  
Expert reports and testimony in context of Federal Court proceedings brought by the Australian Competition and Consumer Commission against Ramsay Healthcare in relation to conduct by Coffs Harbour-based surgeons.
- 2017-19**                    **Wilson Harle/Wilson Parking**  
**Competitive effects of merger**  
Expert report submitted in High Court of New Zealand proceedings (settled shortly before trial) brought by the Commerce Commission concerning the competitive effects of an already completed merger transaction.
- 2017-20**                    **King & Wood Mallesons**  
**Competition analysis**  
Advice to a major digital platform service provider on competition matters arising in the Australian Competition and Consumer Commission's digital platforms inquiry, and the development of the news media and digital platforms bargaining code.
- 2015-20**                    **Port of Newcastle Operations**  
**Access to facilities**  
Advice and expert reports submitted to the National Competition Council on matters arising in applying the criteria for declaration under Part IIIA, in the context of applications by Glencore and the NSW Minerals Council seeking recommendation that navigation service be declared, and PNO's application for recommendation that the declaration of services be revoked.
- 2018**                        **Westpac Banking Corporation**  
**Competition analysis**  
Expert report prepared for the Productivity Commission in response to the draft finding in its banking competition inquiry that each of Australia's banks holds substantial market power.
- 2017-19**                    **Ashurst/Confidential client**  
**Anti-competitive bundling**  
Advice in relation to an Australian Competition and Consumer Commission's investigation of bundled discounts that were alleged to have had an anti-competitive effect.
- 2017**                        **Minter Ellison Rudd Watts/Complete Office Supplies**  
**Competitive effects of merger**  
Expert reports submitted in High Court of New Zealand proceedings concerning the proposed acquisition of OfficeMax by Platinum Equity injunction.

- 2017**                    **Minter Ellison/CrownBet**  
**Merger authorisation**  
Expert reports and testimony in Competition Tribunal proceedings concerning the proposed acquisition of Tatts by Tabcorp.
- 2016**                    **Bird & Bird/Generic Health**  
**Competitive effects of patent infringement**  
Expert reports and testimony in Federal Court proceedings concerning the damages arising from infringement of a pharmaceutical patent in relation to a pharmaceutical patent.
- 2016**                    **Manildra Group**  
**Competition analysis**  
Advice and preparation of an expert report assessing competitive constraints in the supply of fuel grade ethanol.
- 2016**                    **Clayton Utz/Anglo American**  
**Competitive effects analysis**  
Expert reports assessing the economic impact on the equine critical industry cluster if certain thoroughbred breeding operations were to leave the Upper Hunter.
- 2014-16**                **Ashurst and Gilbert + Tobin/Confidential client**  
**Competitive effects of agreements**  
Analysis and advice prepared in context of an Australian Competition and Consumer Commission investigation of agreements between a supplier and its major customers that are alleged to harm competition.
- 2015**                    **Corrs/Confidential client**  
**Merger clearance**  
Analysis, advice and expert report submitted to the Australian Competition and Consumer Commission in the context of a proposed acquisition in the office products sector.
- 2014-15**                **Australian Government Solicitor/Commonwealth of Australia**  
**Competition and trade analysis**  
Expert report on competition and trade in tobacco products, prepared in the context of the World Trade Organisation dispute settlement proceedings concerning Australia's tobacco plain packaging legislation.
- 2014-15**                **King & Wood Mallesons/Confidential client**  
**Competitive effects of agreement**  
Analysis and advice prepared in context of an Australian Competition and Consumer Commission investigation of agreements between a supplier and its major customers that were alleged to harm competition.
- 2013-14**                **Corrs/Australian Competition and Consumer Commission**  
**Effect of cartel conduct**  
Expert report filed in the Federal Court on the price effects of an alleged market sharing arrangement in relation to the supply of forklift gas, prepared in the context of proceedings brought against Renegade Gas (Supagas).
- 2013-14**                **Australian Competition and Consumer Commission**  
**Merger clearance**  
Expert report and testimony before the Competition Tribunal in the context of the Australian Competition and Consumer Commission's decision to oppose the acquisition of Macquarie Generation by AGL Energy.

- 2013-14**                    **Ashurst/BlueScope**  
**Merger clearance**  
Expert reports submitted to the Australian Competition and Consumer Commission in the context of the clearance of three approved transactions in the domestic steel industry.
- 2013-14**                    **Australian Government Solicitor/ACCC**  
**Merger clearance**  
Analysis and advice prepared in the context of the Australian Competition and Consumer Commission review of the proposed acquisition of petrol retailing sites in South Australia.
- 2013**                        **Corrs/Generic Health**  
**Patent damages estimation**  
Expert report on the nature and extent of the analysis necessary to estimate damages in a patent infringement proceeding.
- 2012-13**                    **Minter Ellison/Confidential client**  
**Merger clearance**  
Expert reports submitted to the Australian Competition and Consumer Commission in the context of a confidential application for clearance of a proposed acquisition in the industrial gases industry.
- 2011-12**                    **Gilbert + Tobin/Pact Group**  
**Merger clearance**  
Expert reports submitted to the Australian Competition and Consumer Commission on the competitive implications of the proposed acquisition of plastic packaging manufacturer Viscount Plastics by Pact Group.
- 2011**                        **Gilbert + Tobin/Caltex**  
**Access to facilities**  
Expert report submitted to the National Competition Council on matters arising in the applying the criteria for declaration under Part IIIA, in the context of the application by the Board of Airline Representatives of Australia for the declaration of services provided by the Caltex jet fuel pipeline serving Sydney airport.
- 2010-12**                    **Mallesons/APA**  
**Merger clearance**  
Expert reports submitted to the Australian Competition and Consumer Commission on the competitive implications of the proposed acquisition of the gas pipeline assets of Hastings Diversified Utilities Fund by APA Group.
- 2010-11**                    **Johnson Winter & Slattery/ATC and ARB**  
**Competitive effects of agreement**  
Expert reports and testimony in Federal Court proceedings concerning the competitive effects of restrictions on the use of artificial techniques in the breeding of thoroughbred horses for racing.
- 2010-11**                    **Victorian Government Solicitor/State of Victoria**  
**Competitive effects of agreement**  
Expert report prepared for the state of Victoria on the effects of restrictions applying to the trading of water rights on inter-state trade in the context of a constitutional challenge brought against the state of Victoria by the state of South Australia.

- 2009-11**                    **Arnold + Porter/Visa Inc, Mastercard Inc and others**  
**Payment card markets**  
Expert reports and deposition testimony on behalf of defendants in the United States Re Payment Card Interchange Fee and Merchant Discount Antitrust Litigation, on the effects of regulatory interventions in the Australian payment cards sector.

## Regulatory analysis

- 2019-21**                    **DLA Piper/Dalrymple Bay Infrastructure**  
**Review of access undertaking**  
Advice and expert reports prepared in the context of the Queensland Competition Authority's review of the access undertaking for users of the Dalrymple Bay coal terminal.
- 2019**                        **Brookfield Asset Management/Bank of America**  
**Regulatory due diligence**  
Vendor due diligence report on all regulatory aspects of the arrangements – and potential developments therein – applying to the Dalrymple Bay coal terminal
- 2018**                        **Johnson Winter & Slattery/Queensland Competition Authority**  
**Apprehension of bias claim**  
Expert reports submitted to the Queensland Supreme Court showing the chain of causation necessary for a connection between the QCA's Aurizon draft decision and the economic interests of the Port of Newcastle.
- 2017-18**                    **King & Wood Mallesons/Tasmania Gas Pipeline**  
**Gas pipeline arbitration arrangements**  
Expert reports on economic aspects of the Part 23 regime arbitration with Hydro Tasmania on the terms of access to the Tasmanian Gas Pipeline.
- 2017-18**                    **Victorian and South Australian electricity distribution networks**  
**Productivity adjustments**  
Expert report on the conceptual and empirical basis for pre-emptive productivity adjustments to DNSPs' projected operating expenditure.
- 2017-18**                    **Jemena**  
**Gas pipeline arbitration arrangements**  
Advice and analysis in relation to the new rules for arbitration of prices for services provided by non-scheme gas pipelines.
- 2016-18**                    **APA Group**  
**Gas market reform**  
Expert reports submitted to the Gas Market Reform Group in the context of its review of the gas pipeline coverage criteria, and the proposal to introduce the compulsory auction of contracted but unominated gas pipeline capacity.
- 2016-17**                    **Minter Ellison Rudd Watts/Trustpower, New Zealand**  
**Transmission pricing methodology**  
Expert reports submitted to the Electricity Authority and to the High Court of New Zealand in relation to proposed reforms to the transmission pricing methodology and the distributed generation pricing principles.

- 2016**                    **Johnson Winter & Slattery/Australian Gas Networks**  
**Materially preferable decision**  
Expert report reviewing whether aspects of the Australian Energy Regulator's (AER's) draft access arrangement decision would be likely to result in a materially preferable decision in terms of achievement of the national gas objective.
- 2015-17**                **Government of New South Wales**  
**Economic regulation for privatisation**  
Advisor to government of New South Wales on all economic regulatory aspects of the proposed partial lease the electricity transmission and distribution entities, TransGrid, AusGrid and Endeavour Energy.
- 2014-16**                **Powerco**  
**Input methodologies review**  
Advice and several expert reports prepared in the context of the Commerce Commission's reviews of cost of capital and others aspects of the Input Methodologies governing the determination of maximum prices for New Zealand electricity and gas distribution networks.
- 2015**                    **ActewAGL**  
**Regulatory price review**  
Expert report on the economic interpretation of provisions in the national electricity law and rules in relation to the application of the national electricity objective to the entire price determination of the Australian Energy Regulator.
- 2014-16**                **Atco Gas**  
**Access price review**  
Expert reports on the economic interpretation of provisions in the national gas law and rules in relation to depreciation and the application of the national gas objective to the entire draft decision, submitted to the Economic Regulation Authority of WA.
- 2014-16**                **Government of Victoria**  
**Economic regulation for privatisation**  
Advisor to government of Victoria on the design, development and application of the framework for economic regulation of the Port of Melbourne Corporation in the context of the privatisation of the port by way of long term lease.
- 2013**                    **Actew Corporation**  
**Interpretation of economic terms**  
Advice on economic aspects of the decision of the Independent Competition and Regulatory Commission in relation to the price controls applying to Actew.
- 2012-13**                **Ashurst/Brisbane Airport Corporation**  
**Draft access undertaking**  
Advice, analysis and expert reports in the context of the preparation of a draft access undertaking specifying the basis for determining a ten year price path for landing charges necessary to finance a new parallel runway at Brisbane airport.
- 2012**                    **King & Wood Mallesons/Origin Energy**  
**Interpretation of economic terms**  
Expert reports and testimony in the context of judicial review proceedings before the Supreme Court of Queensland on the electricity retail price determination of the Queensland Competition Authority.

- 2012**                    **Contact Energy, New Zealand**  
**Transmission pricing methodology**  
Advice on reforms to the Transmission Pricing Methodology proposed by Electricity Authority.
- 2011-12**                **Energy Networks Association**  
**Network pricing rules**  
Advice and expert reports submitted to the Australian Energy Market Commission on wide-ranging reforms to the network pricing rules applying to electricity and gas transmission and distribution businesses, as proposed by the Australian Energy Regulator.
- 2010-12**                **QR National**  
**Regulatory and competition matters**  
Advisor on the competition and regulatory matters, including: a range of potential structural options arising in the context of the privatisation of QR National's coal and freight haulage businesses, particularly those arising in the context of a 'club ownership model' proposed by a group of major coal mine owners; and an assessment of competitive implications of proposed reforms to access charges for use of the electrified network.
- 2002-12**                **Orion New Zealand Ltd, New Zealand**  
**Electricity lines regulation**  
Advisor on regulatory and economic aspects of the implementation by the Commerce Commission of the evolving regimes for the regulation of New Zealand electricity lines businesses. This role has included assistance with the drafting submissions, the provision of expert reports, and the giving of expert evidence before the Commission.
- 2011**                    **Meridian Energy, New Zealand**  
**Undesirable trading situation**  
Advice on the economic interpretation and implications of the New Zealand electricity rule provisions that define an 'undesirable trading situation' in the wholesale electricity market.
- 2011**                    **Ausgrid**  
**Demand side management**  
Prepared a report on incentives, constraints and options for reform of the regulatory arrangements governing the role of demand side management in electricity markets.
- 2010-11**                **Transnet Corporation, South Africa**  
**Regulatory and competition policy**  
Advised on the preparation of a white paper on future policy and institutional reforms to the competitive and regulatory environment applying to the ports, rail and oil and gas pipeline sectors of South Africa.
- 2010-11**                **Minter Ellison/UNELCO, Vanuatu**  
**Arbitral review of decision by the Vanuatu regulator**  
Expert report and evidence before arbitrators on a range of matters arising from the Vanuatu regulator's decision on the base price to apply under four electricity concession contracts entered into by UNELCO and the Vanuatu government, including country risk component of the allowed rate of return and bringing to account events from the prior regulatory period.

- 2007-11**                    **Powerco/CitiPower**  
**Regulatory advice**  
Wide ranging advice on matters arising under the national electricity law and rules, such as the framework for reviewing electricity distribution price caps, the treatment of related party outsourcing arrangements, an expert report on application of the AER's efficiency benefit sharing scheme, the potential application of total factor productivity measures in CPI-X regulation, and arrangements for the state-wide roll out of advanced metering infrastructure.
- 1999-2004,**                **Sydney Airports Corporation**  
**2010-11**                    **Aeronautical pricing notification**  
Wide ranging advice and expert reports on regulatory matters, including advice and expert reports in relation to SACL's notification to the ACCC of substantial reforms to aeronautical charges at Sydney Airport in 2001. This involved the analysis and presentation of pricing principles and their detailed application, through to discussion of such matters at SACL's board, with the ACCC, and in public consultation forums. Subsequent advice on two Productivity Commission reviews of airport charging, and notifications to the ACCC on revised charges for regional airlines.

## Securities and finance

- 2019-21**                    **Shine Lawyers/Representative proceeding**  
**Breach of disclosure obligations**  
Expert reports submitted in the context of proceedings before the Federal Court concerning the effect of certain disclosures on the price of ASX listed securities in Iluka Limited.
- 2020**                        **Corrs/Balance Legal Capital**  
**Appropriate litigation funding commission**  
Expert report prepared in the context of proceedings to approve the settlement of a consumer class action brought against Swann Insurance, on the reasonable range of and return on investment implied by historically observed funding commission rates in previous class action proceedings in Australia.
- 2020**                        **Johnson Winter & Slattery/Representative proceeding**  
**Group cost order application**  
Expert report prepared in the context of an application to be brought before the Supreme Court of Victoria to make a group cost order (GCO), under which the legal costs and funding commission for a representative proceeding would be set by reference to a percentage of the settlement amount.
- 2020**                        **McCabe Curwood/Lewer Corporation**  
**Economic interpretation of loan agreement**  
Expert report prepared for the Supreme Court of Victoria as to whether a US dollar loan could be interpreted, economically, as equivalent to the sum of an Australian dollar loan plus a foreign exchange forward contract.
- 2020**                        **Australian Securities and Investments Commission**  
**Breach of disclosure obligations**  
Expert report in reply submitted in the context of Federal Court proceedings brought by ASIC in relation to the materiality for the price of its securities of the January 2013 disclosure by Rio Tinto Limited of an impairment to the value of Rio Tinto Coal Mozambique assets.

- 2020**                    **JWS/Australian Securities and Investments Commission**  
**Breach of disclosure obligations**  
Expert report in reply submitted in the context of Federal Court proceedings brought by ASIC concerning the materiality for the price of its securities of information omitted from ASX disclosures made by GetSwift Limited.
- 2019-20**                **Joint Action Funding/Representative proceeding**  
**Valuation of damages**  
Expert reports submitted to the New Zealand High Court in the matter of Eric Houghton versus parties associated with former listed entity, Feltex Carpets Ltd, on the extent of loss arising from the allotment of shares under an IPO for which the prospectus contained untrue statements.
- 2019-20**                **Slater & Gordon/Representative proceeding**  
**Breach of disclosure obligations**  
Expert reports submitted in the context of proceedings before the Federal Court concerning the effect of certain disclosures on the price of ASX listed securities in Spotless Limited.
- 2019-20**                **Arnold Bloch Leibler/Australian Funding Partners**  
**Appropriate funding commission**  
Expert reports and sworn testimony in the proceedings before the Victorian Supreme Court concerning the appropriate level of funding commission to apply in the context of the 2018 settlement of representative proceedings brought against Banksia Securities Limited.
- 2017-20**                **Portfolio Law/Representative proceeding**  
**Misleading and deceptive conduct**  
Expert reports and sworn testimony in representative proceedings before the Federal Court concerning the effect of certain disclosures on the price of ASX listed securities in Myer Ltd.
- 2019**                    **Norton Rose Fulbright/Directors of QRxPharma**  
**Breach of disclosure obligations**  
Advice and analysis of the extent of potential damages arising from a shareholder class action alleging breach of disclosure obligations of the former ASX-listed entity, QRxPharma.
- 2019**                    **Elliot Legal/Representative proceeding**  
**Breach of disclosure obligations**  
Expert reports submitted in the context of proceedings before the Federal Court concerning the effect of certain disclosures on the price of ASX listed securities in Murray Goulburn Co-operative Company Limited.
- 2018**                    **Maurice Blackburn/Representative proceeding**  
**Misleading and deceptive conduct**  
Expert reports prepared in relation to Federal Court representative proceedings concerning the effect of certain disclosures on the price of ASX listed securities in Sirtex Medical Ltd.
- 2018**                    **William Roberts/Representative proceeding**  
**Misleading and deceptive conduct**  
Preliminary analysis on the extent of liability and potential damages arising from a shareholder class action alleging breach of disclosure obligations.

- 2017-18**                    **Australian Pipelines and Gas Association**  
**Allowed rate of return**  
Advice in relation to the rate of return guideline review being undertaken by the Australian Energy Regulator, including participation in the AER's concurrent expert evidence session one.
- 2017**                        **Slater and Gordon/Gasmere Ltd**  
**Share portfolio valuation**  
Expert report prepared in relation to Supreme Court of Victoria proceedings brought against Shaw and Partners concerning the appropriate valuation of a share portfolio, the subject of a damages claim following the collapse of Opus Prime.
- 2016-17**                   **Allens/QBE**  
**Shareholder class action**  
Advice and analysis on the extent of liability and potential damages arising from a shareholder class action alleging breach of QBE's ASX disclosure obligations.
- 2016**                       **Elliot Legal/Representative proceeding**  
**Misleading and deceptive conduct**  
Expert reports in representative proceedings in the Supreme Court of Victoria concerning the effect of certain disclosures on the price of ASX listed securities in Downer EDI Ltd.
- 2015-16**                   **Maurice Blackburn/Representative proceeding**  
**Misleading and deceptive conduct**  
Expert reports submitted to the Federal Court assessing the effect of alleged misstatements in relation to the annual accounts and associated going concern assumption in relation to Tamaya Resources Ltd (in liquidation).
- 2013-15**                   **Sydney Water Corporation**  
**Cost of capital estimation**  
Prepare three expert reports for submission to the Independent Pricing and Regulatory Tribunal (IPART) on the framework for determining the weighted average cost of capital for infrastructure service providers, and on estimation of an appropriate equity beta.
- 2012-15**                   **HWL Ebsworth/Confidential client**  
**Insider trading**  
Expert advice and analysis in the context of criminal proceedings alleging insider trading in certain ASX-listed securities (2012-13). Subsequent expert report filed in Supreme Court of Tasmania estimating price effects of inside information in context of 'proceeds of crime' proceedings.
- 2014**                       **Wotton Kearney/Genesys Wealth Advisors**  
**Misleading and deceptive conduct**  
Expert report submitted to the Supreme Court of Victoria assessing the accuracy of product disclosure statements and other information in relation to two fixed interest investment funds offered by Basis Capital.
- 2014**                       **TransGrid**  
**Cost of capital estimation**  
Preparation of an expert report for submission to the Australian Energy Regulator (AER) estimating the weighted average cost of capital for electricity network service providers.

- 2011-13**                    **Slater & Gordon/Modtech**  
**Shareholder damages assessment**  
Expert reports and testimony in representative proceedings before the Federal Court alleging misstatement and/or breach of the continuous disclosure obligations of the ASX-listed entity, GPT.
- 2011-12**                    **Freehills/National Australia Bank**  
**Shareholder damages assessment**  
Expert advice in connection with representative proceedings before the Federal Court alleging misstatement and/or breach of the continuous disclosure obligations of an ASX-listed entity.
- 2012**                        **Johnson Winter & Slattery/Victorian gas distributors**  
**Cost of equity estimation**  
Expert report submitted to the AER on the appropriate methodology for estimating the cost of equity under the capital asset pricing model.
- 2009-13**                    **Minter Ellison/Confidential client**  
**Misleading and deceptive conduct**  
Expert report and related advice in light of investor claims and pending litigation following the freezing of withdrawals from a fixed interest investment trust that primarily held US-denominated collateralised debt obligations (CDOs), as offered by a major Australian financial institution. Analysis undertaken included the extent to which the investment risks were adequately described in the fund documents, and the quantum of potential damages arising.
- 2011**                        **Barringer Leather/Confidential client**  
**Market manipulation**  
Expert report prepared in the context of criminal proceedings brought in the Supreme Court of NSW alleging market manipulation in the trading of certain ASX-listed securities.
- 2010-11**                    **Wotton Kearney/Confidential client**  
**Misleading and deceptive conduct**  
Expert report and analysis in light of investor claims and pending litigation following the freezing of withdrawals from two fixed interest investment trusts that primarily held US-denominated collateralised debt obligations (CDOs).
- 2010-11**                    **Maurice Blackburn/Confidential client**  
**Shareholder damages assessment**  
Analysis and advice in connection with representative proceedings before the Federal Court alleging misstatement and/or breach of the continuous disclosure obligations of an ASX-listed entity.
- 2010-11**                    **Mallesons/ActewAGL**  
**Judicial review of rate of return determination**  
Expert report and testimony in Federal Court proceedings seeking judicial review of a decision by the Australian Energy Regulator of its determination of the risk free rate of interest in its price setting determination for electricity distribution services.
- 2009-11**                    **William Roberts/Clime Capital**  
**Shareholder damages assessment**  
Expert reports submitted in representative proceedings before the Federal Court alleging misstatement and/or breach of the continuous disclosure obligations of ASX-listed entity, Credit Corp.

## Economic impact analysis

- 2020**                    **Seyfarth Shaw/Patrick**  
**Effect of industrial action by stevedores**  
Expert report submitted to the Fair Work Commission assessing the economic impact on the Australian and NSW economies of notified protected industrial action by stevedores.
- 2020**                    **Seyfarth Shaw/DP World**  
**Effect of industrial action by stevedores**  
Expert reports submitted to the Fair Work Commission assessing the economic impact on the Australian and NSW economies of notified protected industrial action by stevedores.
- 2020**                    **Crown Solicitor for New South Wales**  
**Relative economic effects of government expenditure decisions**  
Expert reports and testimony before the NSW Industrial Relations Commission in relation to the relative effects on the NSW economy of salary increases for public sector employees, as compared with increased expenditure on infrastructure projects – in the context of the effects of the Covid-19 pandemic.
- 2019**                    **Seyfarth Shaw/Confidential client**  
**Effect of potential industrial action by stevedores**  
Analysis and draft expert report in the context of a potential application to the Fair Work Commission addressing the economic effect that various forms of industrial action by stevedores would be likely to have on the Australian economy.
- 2016-17**                **Seyfarth Shaw/Confidential client**  
**Effect of potential industrial action by stevedores**  
Analysis and draft expert report in the context of a potential application to the Fair Work Commission addressing the economic effect that various forms of industrial action by stevedores would be likely to have on the Australian economy.
- 2015-16**                **Airservices Australia**  
**Effect of potential industrial action by air traffic controllers**  
Analysis and draft expert report in the context of a potential application to the Fair Work Commission addressing the economic effect that certain forms of industrial action by Air Traffic Controllers would be likely to have on passengers, businesses, and the Australian economy.
- 2014**                    **Confidential client**  
**Effect of potential industrial action by tug boat operators**  
Analysis and draft expert report in the context of a potential application to the Fair Work Commission addressing the economic effect that certain forms of industrial action by tug boat operators would be likely to have on iron ore exports and the Australian economy.
- 2011**                    **Freehills/Confidential client**  
**Effect of potential industrial action by stevedores**  
Analysis and draft expert report in the context of a potential application to the Fair Work Australia addressing the economic effect that various forms of industrial action by stevedores would be likely to have on the Australian economy.

## Valuation and contract analysis

- 2018-2020**                    **DLA Piper/Basslink Pty Ltd**  
**Damages valuation**  
Expert reports and testimony in arbitration proceedings concerning the extent of damages arising from the 2016 failure of the Basslink electricity interconnector cable between the Tasmanian and Victorian regions of the national electricity market.
- 2017-19**                    **DLA Piper & Arnold Bloch Leibler/Coal terminal users**  
**Price review arbitration**  
Expert reports and testimony in arbitration proceedings concerning the application of the price review clauses in the standard user agreement for Adani Abbot Point coal terminal.
- 2016**                        **SyCip Salazar Hernandez & Gatmaitan/Maynilad Water Services**  
**Concession contract dispute**  
Expert reports and testimony in arbitration proceedings concerning the application of the price review clauses in the Manila Water Concession agreements.
- 2015-16**                    **Clyde and Co/Apache Corporation**  
**Contract dispute**  
Expert reports submitted in the context of Supreme Court of Victoria proceedings concerning the appointment of receivers for Burrup Fertilisers Pty Ltd, in relation to the market price of gas available to supply an anhydrous ammonia plant on the Burrup Peninsula.
- 2015-16**                    **Raja, Darryl & Loh/Serudong Power Sdn Bhd (SPSB)**  
**Power purchase agreement arbitration**  
Expert reports submitted in the context of an international arbitration held in Kuala Lumpur concerning the interpretation of price indexation provisions in a power purchase agreement between SPSB and Sabah Electricity Sdn Bhd.
- 2015-16**                    **Australian Government Solicitor/Commonwealth of Australia**  
**Native title compensation**  
Expert reports and testimony before the Federal Court in relation to the native title compensation claim against the Northern Territory for certain acts extinguishing native title in the town of Timber Creek.
- 2014-15**                    **Minter Ellison/Foxtel Management Pty Ltd**  
**Assessment of reasonable licence fee**  
Expert reports prepared in the context of proceedings before the Copyright Tribunal concerning the appropriate valuation of the rights to be paid by Foxtel for the broadcast and communication of commercial recordings licensed by the Phonographic Performance Company of Australia.
- 2014-15**                    **Rahmat Lim & Partners/Port Dickson Power Berhad, Malaysia**  
**Power purchase agreement arbitration**  
Expert reports submitted in the context of an arbitration held in Kuala Lumpur concerning the interpretation of the price indexation provisions in a power purchase contract between Port Dickson Power Berhad and Tenaga Nasional Berhad.

- 2013**                    **Johnson Winter & Slattery/Origin**  
**Gas supply agreement price review**  
Analysis and advice on the implications of certain contract terms for the price of gas, to be determined in a potential arbitration concerning the terms of a substantial long term gas supply agreement.
- 2013**                    **Herbert Smith Freehills/Santos**  
**Gas supply agreement price review**  
Analysis and advice on factors influencing the market price of gas in eastern Australia, to be determined in a potential arbitration concerning the terms of a substantial long term gas supply agreement.
- 2012-13**                **Herbert Smith Freehills/North West Shelf Gas**  
**Gas supply agreement arbitration**  
Expert reports on the implications of certain contract terms for the price of gas under a substantial long term gas supply agreement.
- 2012-13**                **Allens/BHP Billiton-Esso**  
**Gas supply agreement arbitration**  
Analysis, advice and expert report on the implications of certain contract terms for the price of gas under a substantial long term gas supply agreement.
- 2012-13**                **Gilbert + Tobin/Rio Tinto Coal Australia**  
**Price review arbitration**  
Analysis and expert reports prepared in the context of an arbitration concerning the price to be charged for use of the coal loading facilities at Abbott Point Coal Terminal.
- 2012**                    **King & Wood Mallesons/Ausgrid**  
**Power purchase agreement arbitration**  
Expert report prepared and filed in an arbitration on the in relation to the effect of the government's newly introduced carbon pricing mechanism on the price to be paid under a long term power purchase and hedge agreement between an electricity generator and retailer.
- 2011**                    **Kelly & Co/Santos**  
**Wharfage dues agreement arbitration**  
Expert report and testimony in arbitration proceedings to determine the 'normal wharfage dues' to be paid for use of the port facility at Port Bonython for the transfer of petroleum products to tanker ships from a processing terminal in South Australia.

## **Institutional and regulatory reform**

- 2008-11**                **Department of Sustainability and Environment**  
**Management of bulk water supply**  
Advice on the concept and merits of establishing market based arrangements to guide both the day-to-day operation of the bulk water supply system in metropolitan Melbourne, as well as the trading of rights to water between the metropolitan water supply system and those throughout the state of Victoria.

## Sworn testimony, transcribed evidence<sup>2</sup>

- 2020**
- Expert evidence before the NSW Industrial Relations Commission on behalf of the Crown Solicitor for NSW, in the matter of the Crown Employees (Police Officers) and Paramedics and Control Centre Officers' awards.**  
Expert reports, sworn evidence, Parramatta, 7-8 October and 13 November 2020
- Expert evidence before Hon Robert French AC on behalf of Basslink Pty Ltd, in the matter of the State of Tasmania and**  
Expert reports, sworn evidence, via videolink, 13-14 October 2020
- Expert evidence before the Supreme Court of Victoria on behalf of Australian Funding Partners, in the matter of Laurence John Bolitho v Banksia Securities Limited**  
Expert reports, sworn evidence, via videolink to Melbourne, 4 August 2020.
- Expert evidence before the Supreme Court of Queensland on behalf of the QCoal group and Lake Vermont Resources, in the matter of Adani Abbot Point v QCoal, Sonoma Mine Management and Byerwen Coal (the QCoal Group), and Lake Vermont Resources**  
Expert reports, sworn evidence, Brisbane, 28 February 2020
- 2019**
- Expert evidence before the Federal Court on behalf of Ramsay Healthcare, in the matter of ACCC v Ramsay Healthcare**  
Expert reports, sworn evidence, Sydney, 9-10 December 2019
- Expert evidence before Hon Michael McHugh AM, on behalf of the QCoal Group and Lake Vermont Resources, in the matter of Adani Abbot Point Terminal v QCoal, Sonoma Mine Management and Byerwen Coal (the QCoal Group), and Lake Vermont Resources**  
Expert reports, sworn evidence, Brisbane, 21 February 2019
- 2018**
- Expert evidence before the Federal Court on behalf of TPT Patrol, in the matter of TPT Patrol v Myer**  
Expert reports, sworn evidence, Melbourne 23 August 2018
- Expert evidence before the Board of the Australian Energy Regulator, on behalf of the South Australian public lighting customers, in arbitration proceedings concerning public lighting charges**  
Expert reports, transcribed evidence, Melbourne, 7 May 2018
- Expert evidence before the Board of the Australian Energy Regulator, on behalf of the Australian Pipelines and Gas Association, in the Review of Rate of Return Guidelines, Concurrent expert evidence session one**  
Joint expert report, transcribed evidence, Sydney, 15 March 2018
- Expert evidence before the Federal Court on behalf of Changshu Longte Grinding Ball Co Ltd, in the matter of Changshu Longte v Anti-Dumping Review Panel and others.**  
Expert reports, sworn evidence, Sydney, 1 February 2018

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<sup>2</sup> Past ten years only.

- 2017**                    **Expert evidence before the Competition Tribunal on behalf of CrownBet, in the application by Tabcorp for authorisation to acquire Tatts**  
Expert reports, sworn evidence, Melbourne, 30 May–1 June 2017
- 2016**                    **Expert evidence before the Federal Court on behalf of Generic Health, in the matter of Bayer Pharma Aktiengesellschaft v Generic Health Pty Ltd**  
Expert reports, sworn evidence, Sydney, 14-15 December 2016
- Testimony before an UNCITRAL arbitral tribunal on behalf of Maynilad Water Service Inc (MWSI), in the matter of MWSI v Republic of the Philippines**  
Report, sworn evidence, Singapore, 6 December 2016
- Expert evidence on behalf of Powerco, at the Commerce Commission’s Conference on the Cost of Capital matters**  
Transcribed evidence, public hearings, Wellington, 7 September 2016
- Expert evidence before the Federal Court on behalf of plaintiffs, in the matter of HFPS v Tamaya**  
Expert reports, sworn evidence, Sydney, 13 May 2016
- Expert evidence before an arbitral tribunal on behalf of Serudong Power Sdn Bhd (SPSB), in the matter of SPSB v Sabah Electricity Sdn Bhd (SESB)**  
Expert reports, sworn evidence, Kuala Lumpur, 27-28 April 2016
- Expert evidence before the Federal Court on behalf of the Commonwealth of Australia, in the matter of Griffiths v Northern Territory**  
Expert reports, sworn evidence, Darwin, 24-25 February 2016
- 2015**                    **Expert evidence before an arbitral tribunal on behalf of Port Dickson Power Berhad (PDP), in the matter of PDP v Tenaga Nasional Berhad (TNB)**  
Expert reports, sworn evidence, Kuala Lumpur, 28 January 2015
- 2014**                    **Expert evidence before an UNCITRAL arbitral tribunal on behalf of Manila Water Corporation Inc (MWCI) in the matter of MWCI v Metropolitan Waterworks and Sewerage System (MWSS)**  
Expert reports, sworn evidence, Sydney (by videolink to Manila), 31 August 2014
- Expert evidence before the Australian Competition Tribunal on behalf of the ACCC, in the matter of AGL Energy v ACCC**  
Expert reports, sworn evidence, Sydney, 10-11 June 2014
- 2013**                    **Expert evidence before the Supreme Court of Victoria on behalf of Maddingley Brown Coal in the matter of Maddingley Brown Coal v Environment Protection Agency of Victoria**  
Expert reports, sworn evidence, Melbourne, 12 August 2013
- Expert evidence before the Federal Court on behalf of Modtech in the matter of Modtech v GPT Management and Others**  
Expert reports, sworn evidence, Melbourne, 27 March 2013
- 2012**                    **Expert evidence before the Supreme Court of Queensland on behalf of Origin Energy, in the matter of Origin Energy Electricity Ltd and Others v Queensland Competition Authority and Others**  
Expert reports, sworn evidence, Brisbane, 3 December 2012

- 2011**
- Expert evidence before the Federal Court on behalf of the Australian Turf Club and Australian Racing Board, in the matter of Bruce McHugh v ATC and Others**  
Expert report, sworn evidence, Sydney, 12 and 14 October 2011
- Expert evidence in arbitration proceedings before J von Doussa, QC, on behalf of Santos in the matter of Santos, and Others v Government of South Australia**  
Expert report, sworn evidence, Adelaide, 13-15 September 2011
- Expert evidence before a panel of arbitrators on behalf of UNELCO, in the matter of UNELCO v Government of Vanuatu**  
Expert report, sworn evidence, Melbourne, 23 March and 21 April 2011
- Expert evidence before the Federal Court on behalf of ActewAGL, in the matter of ActewAGL v Australian Energy Regulator**  
Expert report, sworn evidence, Sydney, 17 March 2011
- Deposition Testimony in Re Payment Care Interchange and Merchant Discount Litigation, in the United States District Court for the Eastern District of New York**  
Deposition testimony, District of Columbia, 18 January 2011

### Speeches and publications<sup>3</sup>

- 2019**
- RBC Renewables and energy transition forum**  
Economic and regulatory forces affecting the transition  
Panel discussant, Sydney, 12 September 2019
- Competition Matters conference**  
Competition issues for Digital platforms  
Panel discussant, Auckland, 26 July 2019
- Competition Law Conference**  
Proof of collusion, or optical illusion?  
Speech, Sydney, 25 May 2019
- Clayton Utz – Equitable briefing series**  
Expert joint conferencing and reports  
Panel discussant, Sydney, 16 May 2019
- 2018**
- RBC Capital Markets Global Infrastructure Forum**  
Australian utilities: current policy issues and industry trends  
Panel discussant, Sydney, 13 March 2018
- GCR 7<sup>th</sup> Annual Asia Pacific Law Leaders Forum**  
The role of algorithms: cartel enforcement in the era of artificial intelligence  
Panel discussant, Singapore, 10 March 2018
- 2017**
- IPART 25<sup>th</sup> Anniversary Conference**  
Electricity and Water: Mutual Lessons  
Speech, Sydney, 27 October 2017

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<sup>3</sup> Past ten years only

**Competition Law Conference**

ACCC v Flight Centre: What was going on?  
Speech, Sydney, 6 May 2017

**Association for Data-driven Marketing and Advertising**

Driving Customers to you: Insights from Location Data  
Speech, Melbourne, 5 April 2017

**GCR 6<sup>th</sup> Annual Asia Pacific Law Leaders Forum**

Roadblocks and Solutions in Cross Border Mergers  
Panel discussant, Singapore, 2 March 2017

**2016****NSW Planning Assessment Commission**

Economic Effects of Drayton South Mine on Upper Hunter Industry  
Presentation to public hearing, Muswellbrook, 16 November 2016

**2015****Electricity Networks Association Regulation Seminar, Brisbane**

Participant in Expert Plenary Panel  
Speech, Brisbane, 5 August 2015

**NZ Commerce Commission Input Methodologies Review, Wellington**

'Allocation of Risk' and 'New Technologies'  
Panel Discussant, Wellington, 29 July 2015

**Competition Matters Conference, Wellington**

Disruptive Technologies  
Chair, Discussion Panel, Wellington, 24 July 2015

**Competition Law Conference**

The Public Interest in Private Enforcement  
Speech, Sydney, 30 May 2015

**Singapore Aviation Academy, Singapore**

Private Financing of Airport Infrastructure Expansions  
Speech, Singapore, 5 March 2015

**GCR 4th Annual Asia-Pacific Law Leaders Forum**

Differences in using economics in EU and Asia Pacific  
Speech, Singapore, 5 March 2015

**AEMC Public Forum**

East Coast Gas Market Review  
Speech, Sydney, 25 February 2015

**2014****Competition and Consumer Workshop, Law Council of Australia**

An Economist's Take on Taking Advantage  
Paper and Speech, Brisbane, 14 September 2014

**Energy Networks 2014**

Innovation and Economic Regulation  
Speech, Melbourne, 1 May 2014

**The Network Industries Quarterly, *Consumer Advocacy in Australian Regulatory Decision Making – 'Hard Choices Await'*, Vol. 16, No 1, 2014**

Ecole Polytechnique Federale de Lausanne, 31 March 2014

**GCR 3rd Annual Law Leaders Asia Pacific**

Role of Economists in Competition Law Enforcement in Asia-Pacific  
Speech, Singapore, 6 March 2014

**2013****University of South Australia – Competition and Consumer Workshop**

Empirical test and collusive behaviour  
Speech and participation game, Adelaide, 16 November 2013

**Energy in WA Conference**

Capacity Payments in the WEM – Time to Switch?  
Panel Discussion, Perth, 21 August 2013

**ACCC/AER Regulatory Conference**

Designing Customer Engagement  
Speech, Brisbane, 25 July 2013

**Victorian Reinsurance Discussion Group**

Australian Mining – When Opportunities and Risk Collide  
Speech, Melbourne, 1 March 2013

**NZ Downstream Conference**

Investment and Regulation  
Panel Discussion, Auckland, 25 July 2013

**2012****Rising Stars Competition Law Workshop**

Expert Evidence in Competition Cases  
Speech, Sydney, 24 November 2012

**KPPU – Workshop on the Economics of Merger Analysis**

Theories and Methods for Measuring the Competitive Effects of Mergers  
Speech, Bali, 19-21 November 2012

**University of South Australia – Competition and Consumer Workshop**

Reflections on Part IIIA of the Competition Act  
Speech, Adelaide, 12 October 2012

**NZ Downstream Conference**

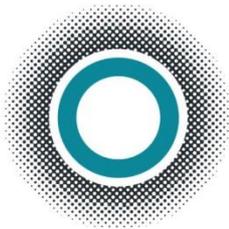
Lines company consolidation – what are the benefits and risks?  
Panel discussion, Auckland, 6-7 March 2012

**2011****Law Council of Australia - Competition Workshop**

Coordinated effects in merger assessments  
Speech, Gold Coast, 27 August 2011

**ACCC Regulatory Conference**

Adapting Energy Markets to a Low Carbon Future  
Speech, Brisbane, 28 July 2011



# HOUSTONKEMP

Economists

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