CLIMATE ADAPTATION PROJECT

Research paper 2

Parents, children and climate change

Clive Hamilton¹

This research paper is the second in a series reporting the results of a new public opinion survey exploring what Australians think and how they feel about life on a warmer planet, and how to prepare for it. Carried out by Roy Morgan Research for Clive Hamilton, Professor of Public Ethics at Charles Sturt University in Canberra, the survey sampled the views of almost 2,000 adults, chosen to be representative of the Australian population. An overview of the survey method can be found at the end of this paper, with full details available in a separate technical report.

Summary

Almost half of Australian parents are either very concerned or extremely concerned about the effects of climate change on their children's well-being and life chances. Mothers are significantly more concerned than fathers. Grandparents (especially grandmothers) too express high levels of concern about life prospects for their grandchildren in a warming world. This suggests a cultural expectation that women bear the moral responsibility for safeguarding the next generation against planetary threats.

Anxiety about children rises with perceptions of how much the climate is likely to change. Four in five parents who expect Australia to be 'Much hotter' in 2050 are very or extremely concerned about the effects of climate change on their children's well-being in 2050. Less than a fifth of parents who believe Australia will be only 'A bit warmer' in 2050 say the same.

Parents who voted Labor are much more likely to be very concerned or extremely concerned about their children's future in a changing climate, with three out of five expressing high

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levels of concern compared to one out of five parents who voted for the Coalition. Four out of five Greens-voting parents have high levels of concern for their children.

Among young adults, anxiety about the changing climate is affecting their decisions to have children. Among women yet to have children, four in ten say they are moderately or very hesitant to have a child because of climate change. Only one in six men without children say the same. Women's greater reluctance points to a gendered calculus of risk. As levels of climate concern are expected to rise in the next decade or two, we can expect a decline in Australia's birth rate due to global warming.

Introduction

Research Paper 1 provided insights into how Australians view the future under climate change, including how warm they expect it to be in 2050. In this paper we explore the concerns of parents about their children's well-being and life-chances on a warming globe. Parents are attuned to these issues because extreme weather events, resource scarcity and economic instability could have far-reaching effects on the lives of their off-spring.

Although systematic information is scarce, parents have complex feelings about raising children when the global climate is changing. A US study found many parents express high levels of concern when asked about the potential impacts of climate change on their children.² An Australian study of expectant women found that anxiety about climate change caused distress and 'is associated with increased levels of antenatal depression and worry.'³ A qualitative study of self-selected parents from wealthy countries found that 'parents experience sadness, hopelessness and anxiety about the future of their children' in a changing climate.⁴ Some feel guilty because they do not always model the right behaviour.

Responses to our survey reveal the emotional weight of climate change felt by many parents. Table 1 shows that, while more than four out of five express at least slight concern, almost half of parents (47%) are either very concerned or extremely concerned about the effects of climate change on their children's well-being and life chances in the coming decades.

² Marie E. Heffernan et al., 'Parental concerns about climate change in a major United States city', *Academic Pediatrics*, 2023, 23(7): 1337-1342.

Amy D. Lykins, Mary Bonich, Cassandra Sundaraja and Suzanne Cosh, 'Climate change anxiety positively predicts antenatal distress in expectant female parents', *Journal of Anxiety Disorders*, 2024, 101, 102801.
 A. İdil Gaziulusoy, 'The experiences of parents raising children in times of climate change: Towards a caring research agenda', *Current Research in Environmental Sustainability*, 2020, 2, 100017.

Mothers are more worried, with 51% expressing high levels of concern compared to 41% of fathers. A quarter of fathers are not concerned at all.

Research Paper 1 showed much stronger concerns about climate change among those with university degrees. Although most parents are concerned about the effects of a changing climate on their children's future, anxieties are much higher among those with university degrees. Well over half of those with degrees are very or extremely concerned, while less than a quarter of those who have completed Year 12 or less have the same feelings.

Table 1 (Q5) How concerned are you about the effects of a changing climate or extreme weather events on your children's well-being and life chances in 2050? (Asked of parents who are not yet grandparents, n = 718) %

		Gen	nder	Highest level of education					
	Total	M	F	Less Yr 12	Year 12	Trade qual	College cert	Under grad	Post grad
Not at all concerned	18.1	<u>25.6</u>	12.0	20.9	35.3	34.6	12.1	15.7	12.9
Slightly concerned	14.2	13.1	15.2	14.5	14.4	17.9	16.7	13.9	11.8
Moderately concerned	21.2	20.6	21.5	<u>43.4</u>	27.0	14.7	26.3	16.5	17.8
Very concerned	24.2	22.2	25.6	<u>12.0</u>	<u>11.7</u>	18.5	29.1	28.4	25.8
Extremely concerned	22.3	18.5	25.7	<u>9.2</u>	<u>11.7</u>	14.4	<u>15.9</u>	25.6	31.7
Very or extremely concerned	46.5	40.7	51.3	21.2	23.4	32.9	45.0	54.0	57.5

Note: Underlined numbers are significantly different from the mean at the 95% level. For more details of education levels see notes to Table 1 in Research Paper 1.

Table 2 cross-tabulates levels of concern about children's well-being against respondents' expectations about how much warmer Australia will be in 2050, ranging from 'About the same' to 'Much hotter.' It is apparent that parents who expect greater warming and associated climate change are much more worried about their children's future. Among parents who believe Australia will be 'A bit warmer' in 2050, only 16% say they are very or extremely concerned about the effects of climate change on their children's well-being. Among parents who expect Australia to be 'Much hotter' in 2050, 82% say they are very or extremely concerned, falling to 47% among those who believe it will be 'Somewhat warmer'. This gradient is to be expected, but the differences are very striking.

Similarly, those who say they are very concerned or extremely concerned about climate change are much more worried about their children's future than those who express less

concern about climate change. The same pattern is apparent when parents are classified by how often they have feelings of insecurity about climate change.

Table 2 (Q5) How concerned are you about the effects of a changing climate or extreme weather events on your children's well-being and life chances in 2050? (Asked of parents who are not yet grandparents, n = 718) %

		Expectation for 2050 climate						
	Total	About the same	A bit warmer	Somewhat warmer	Much hotter			
Not at all concerned	18.1	<u>72.1</u>	20.6	<u>2.1</u>	<u>1.2</u>			
Slightly concerned	14.2	20.6	<u>35.7</u>	12.8	<u>3.1</u>			
Moderately concerned	21.2	<u>6.6</u>	28.1	<u>38.1</u>	<u>13.7</u>			
Very concerned	24.2	<u>0.7</u>	<u>12.0</u>	<u>34.2</u>	<u>34.5</u>			
Extremely concerned	22.3	0	<u>3.7</u>	<u>12.8</u>	<u>47.5</u>			
Very or extremely concerned	46.5	0.7	15.7	47.0	82.0			

Note: Table does not show the n = 11 respondents who think the climate will become cooler, though these are included in the total data.

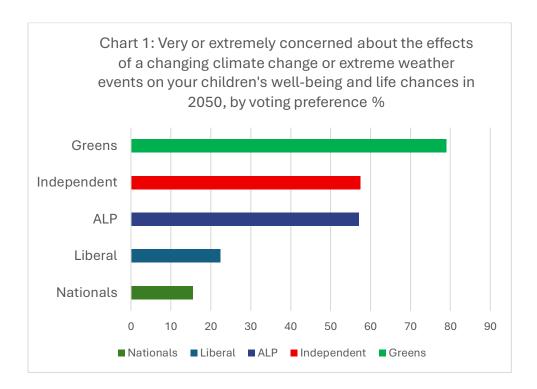
In a result with political resonances, parents who vote for progressive parties are much more anxious about their children's future as the planet warms compared to those who vote for conservative parties. The results are shown in Table 3 and illustrated in Chart 1.

Table 3 (Q5) How concerned are you about the effects of a changing climate or extreme weather events on your children's well-being and life chances in 2050? (Asked of parents who are not yet grandparents, n = 718) %

	First preference vote in 2025							
	Total	ALP	Liberal	Nationals	Greens	Indep		
Not at all concerned	18.1	<u>6.5</u>	<u>27.2</u>	39.8	0.4	14.7		
Slightly concerned	14.2	13.0	<u>26.3</u>	13.9	<u>5.2</u>	<u>5.4</u>		
Moderately concerned	21.2	23.4	24.2	30.7	15.4	22.4		
Very concerned	24.2	28.5	19.1	<u>7.5</u>	30.9	28.9		
Extremely concerned	22.3	28.6	3.2	8.0	<u>48.1</u>	28.6		
Very or extremely concerned	46.5	57.1	22.3	15.5	79.0	57.5		

Note: Breakdown by party excludes a number of minor parties, informal votes, respondents who did not vote, could not vote, or refused to answer.

Among ALP voting parents, 57% say they are very concerned or extremely concerned. Of those who voted for the Greens, 79% took the same view, as did 58% of Independent voters. On the conservative side, only 22% of Liberal voters say they are very concerned or extremely concerned while 16% of National Party voters say the same. Although not shown in the table, compared to the 40% of National Party voters who say they are 'Not at all concerned', 56% of One Nation voters take the same view.



The same questions asked of parents were also asked of grandparents. Anecdotally, grandparents are worried about how their grandchildren will fare in a warming world and recent years have seen a surge in climate activism among grandparents.⁵ However, a recent study in the UK found no empirical support for increased concerns about climate after becoming a grandparent; grandchildren seem to be absorbed into concern for children.⁶

Table 4 shows high levels of concern among grandparents, with 44% saying they are very or extremely concerned about their grandchildren's well-being in a warming world.

Grandmothers are more concerned than grandfathers. Comparing with parents' levels of

⁵ COTA, *Weathering the Storm: Older adults and climate change in NSW*, Engagement Report 2025, COTA, Sydney, 2025; Romina Rodela, 'The rise of parent led climate movement from care to climate action,' npj Climate Action, 2024, 3:101; Claire Moodie, 'Extinction Rebellion grandparents fighting for the future of their grandchildren,' ABC News online, March 2021.

⁶ Lieke Voorintholt, Gerard van den Berg and Adriaan Soetevent, 'For the future of our grandchildren: Grandparenthood and climate change concerns', 2025, IZA Discussion Papers, No. 17795, Institute of Labor Economics (IZA), Bonn.

concern shown in Table 1, grandparents' levels of concern match them closely. Similarly, grandparents with higher levels of education express higher levels of concern for their grandchildren on a warming globe. And those who vote for progressive parties are much more concerned than those who vote conservative.

As expected, we see a very strong correlation between level of concern for grandchildren's future well-being and levels of concerns about climate change as such. Those grandparents very worried about climate change are very worried about the future well-being and life-chances of their grandchildren, and vice versa.

Table 4 (Q5) How concerned are you about the effects of a changing climate or extreme weather events on your grandchildren's well-being and life chances in 2050? (Asked of all grandparents, n = 471) %

	Grandparents				
	Total	Total M			
Not at all concerned	19.2	<u>24.1</u>	<u>14.7</u>		
Slightly concerned	16.0	16.2	15.7		
Moderately concerned	21.1	22.6	19.7		
Very concerned	25.7	23.6	27.5		
Extremely concerned	18.1	<u>13.5</u>	<u>22.4</u>		
Very or extremely concerned	43.8	37.1	49.9		

Deciding to have children

For many young people, the future does not look promising.⁷ The era of steady progress, in which young people could assume they will be better off than their parents, seems to have passed, with uncertain employment and housing prospects along with political instability looming large for many. Climate anxiety amplifies these feelings of uncertainty about the future and personal prospects and together they have a bearing on decisions to form families.

It has been known for some time that anxiety about the changing climate among young people is impinging on their decisions to have children. A large international survey published in *The Lancet* in 2021 found that 40% of young people aged 16 to 25 are hesitant

⁷ Monash Centre for Youth Policy and Education Practice et al., 'The 2024 Australian Youth Barometer,' Monash University, 2024; Pelin Akyol et al., 'Will young Australians be better off than past generations?, e61 Institute, Report, 2025.

about having children because of the 'climate crisis'. The figure for Australia was 43%. A 2023 review of thirteen studies linking climate change anxiety with reproductive decision-making in OECD countries found that stronger concern about climate change is generally associated with greater reluctance to have children.

This is consistent with a 2025 study of American 16-24-years-olds, which found a quarter said climate change made them doubt whether they would have children. Another longitudinal study of 12th-graders in the United States found that stronger environmental concern predicted fewer desired children. In

The explanations people give for this reluctance cluster around four themes: uncertainty about children's futures, ethical worries about overconsumption and overpopulation, livelihood security, and political disillusionment. ¹² The study of OECD countries concluded that, although climate change concerns feed into a complex mixture of factors bearing on reproductive decisions, 'the majority of studies suggest that many people are choosing to forgo childbearing or reduce the number of children they have' because of their climate concerns. ¹³

With this background, our survey explored the parenthood question. After identifying respondents without children but considering having a child, we asked them to indicate the extent to which climate change makes them hesitant. The results are shown in Table 5.

Keeping in mind that several factors bear on the decision to become a parent, more than half say climate change makes them hesitant to some degree, with 28% saying it makes them moderately or very hesitant. Women, who typically have more say in the decision, ¹⁴ express

838, 2021, and Ann-Zofie Duvander et al., 'Who makes the decision to have children? Couples' childbearing intentions and actual childbearing,' *Advances in Life Course Research*, 43, 2020.

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⁸ Caroline Hickman at al., 'Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey', *The Lancet Planetary Health*, 2021, 5(12), e863-e873.

⁹ Hope Dillarstone, Laura Brown and Elaine Flores, 'Climate change, mental health, and reproductive decision-making: A systematic review', *PLOS Climate*, 2023, 2(11): e0000236

¹⁰ Ans Vercammen et al., 'Psychological impacts of climate change on US youth,' *PNAS*, 17 April 2025 122(16) e2311400122. Among young people directly exposed to an extreme weather event, the figure increases to 33%, compared to 19% of those who had not had direct exposure.

¹¹ Heather Rackin, Alison Gemmill and Caroline Hartnett, 'Environmental attitudes and fertility desires among US adolescents from 2005–2019,' *Journal of Marriage and Family*, 2023, 85(2): 631-644.

¹² A qualitative study of young climate activists found that it is a difficult topic of conversation. 'I love kids and would love to have children,' said an 18-year-old from New York. 'But I honestly don't think it's fair to have kids if the situation continues.' Clive Hamilton, 'Active voices: Fighting for a change in climate,' *Meanjin*, n.d. ¹³ Dillarstone et al., 'Climate change, mental health, and reproductive decision-making,' op. cit.

¹⁴ Although, in practice, it's complicated. See Maria Rita Testa and Danilo Bolano, 'When partners' disagreement prevents childbearing: A couple-level analysis in Australia,' *Demographic Research*, 44(33): 811-

much more hesitancy than men, with 40% moderately or very hesitant compared to 17% of men. Prospective parents in the 30-39 age group appear to be more hesitant than those in the 18-29 age group, although overall the pattern is similar.

Table 5 (Q7) How hesitant does the changing climate make you about having children? (Asked of all non-parents considering having children, n = 226) %

		Gender		Age $(M + F)$		Residence	
	Total	M	F	18-29	30-39	Sydney	Melbourne
Not at all hesitant	44.2	53.3	34.9	46.2	36.9	<u>60.6</u>	<u>28.6</u>
Slightly hesitant	27.7	29.8	24.7	26.0	30.5	24.3	<u>40.4</u>
Moderately hesitant	17.8	14.2	21.9	20.6	14.6	<u>6.0</u>	17.3
Very hesitant	10.2	2.8	<u>18.5</u>	7.2	<u>18.0</u>	9.1	13.7
Moderately or very hesitant	28.0	17.0	40.4	27.8	32.6	15.1	31.0

Note: The Sydney base is n = 39 people, so the results should be treated with caution.

The data do not allow any firm conclusions about the effect of education level or household income. They do suggest that prospective parents who are Greens voters (55% of whom are moderately or very hesitant) and Independent voters (47%) are much more hesitant than ALP voters (21%) and Liberal Party voters (15%).

Strikingly, prospective parents in Melbourne appear much more hesitant to have children because of climate change than those in Sydney (see Table 5). This may be a statistical anomaly or perhaps explained by differences in ethnic and other demographics of those in this restricted grouping. For comparison, across the whole population of Melbourne residents, 53% say they are very or extremely concerned about climate change while 48% of Sydney residents say the same.

More importantly, and consistent with other studies, the degree of concern about climate change is strongly correlated with reluctance to have children. Table 6 shows a sharp increase in reproductive hesitancy as concerns about future climate change rise, with 62% of those who are extremely concerned saying they are moderately or very hesitant to have a child. In the last section of this paper, we suggest that concerns will rise in coming years.

Although not shown in the table, the same pattern appears when we map reproductive hesitancy against expectations about climate in 2050—50% of prospective parents who

believe Australia will be 'Much hotter' in 2050 are moderately or very hesitant to have a child, (compared to none who believe it will only be a bit warmer) and 30% who believe it will be somewhat warmer. And nine in ten of those who experience climate-induced insecurity 'Very often' are moderately or very hesitant to have a child. At the other end, among those who never or rarely experience feelings of insecurity the percentages hesitant to have children are zero or near zero, as we would expect.

Table 6 (Q7) How hesitant does the changing climate make you about having children? (Asked of all non-parents considering having children, n = 226) %

Hesitancy about		How concerned about climate change						
having a child	Total	Not at all	Slightly	Moderately	Very	Extremely		
Not at all hesitant	44.2	<u>98.5</u>	90.3	43.7	<u>21.8</u>	<u>13.3</u>		
Slightly hesitant	27.7	0	<u>7.6</u>	<u>40.1</u>	<u>41.0</u>	24.8		
Moderately hesitant	17.8	<u>1.5</u>	<u>2.1</u>	16.1	26.9	28.1		
Very hesitant	10.2	0	0	0	10.4	<u>33.8</u>		
Moderately or very hesitant	28.0	1.5	2.1	16.1	37.3	61.9		

The results above are for non-parents considering having a child. Some non-parents are not considering having children. Clearly, several factors are likely to enter into their decisions, including age and fertility. We asked them how important climate change was to their decision to remain childless. The results are shown in Table 7. Climate change played no role at all for 58%. Climate change was moderately, very or extremely important for 28% (31% for women and 25% for men).

It is to be expected that climate change would play a greater role in the decision not to have a child among those more concerned about climate change. While those with little or no concern about climate change say it had no influence on their child-bearing decisions, 60% of those who are very or extremely concerned say climate change was moderately, very or extremely important. This suggests there is a cohort in Australia who have already decided to remain childless because of their climate concerns.

Table 7 (Q7a) How important has climate change been in your decision to not have children? (Asked of all non-parents not considering having children, n = 540) %

		Level of concern about climate change							
	Total	Not at all	Slightly	Moderately	Very	Extremely			
Not at all important	58.3	<u>96.9</u>	<u>83.1</u>	<u>74.6</u>	<u>48.9</u>	<u>27.0</u>			
Slightly important	13.3	0	8.2	15.6	<u>20.0</u>	13.0			
Moderately important	12.9	<u>3.1</u>	6.6	<u>5.7</u>	18.8	<u>20.2</u>			
Very important	8.9	0	2.2	<u>3.1</u>	8.6	<u>20.7</u>			
Extremely important	6.5	0	0	<u>1.1</u>	3.6	<u>19.1</u>			
Moderately, very or extremely	28.3	3.1	8.8	9.9	31.0	60.0			

The relationship is even more striking when we consider feelings of climate-induced insecurity. We can expect feelings of insecurity to become more common over the next decades.

Other things being equal (such as the level and pattern of migration), taken together these data suggest that in coming decades, as children become more climate aware through schooling and as anxiety increases due to more severe weather events, we can expect Australia's birth rate to decline more quickly than otherwise.

Rising concern in the future

In the analysis above we paid particular attention to the responses of those who are more anxious about climate change on the assumption that their heightened concern and the decisions they make will become more prevalent over the next decades. Anxieties about climate change are expected to rise because warming will mean more people will be exposed to extreme weather events and the scientific warnings will intensify. One study estimated that, on the 3°C warming trajectory likely from current climate pledges, a child born in 2020 can expect to live through *seven times* more extreme heatwaves than someone born in 1960. 15

¹⁵ Wim Thiery et al., 'Intergenerational inequities in exposure to climate extremes', *Science*, 374(6564): 158–60, 8 October 2021. Seven times more would amount to about thirty extreme heatwaves, a number that could be reduced to twenty-two if warming is held to no more than 2°C. The study was for a representative 'global child'.

There is persuasive evidence that public concern about climate change in many OECD countries will climb over the next 10–20 years and beyond, although it will vary among countries. While subject to fluctuations, multi-country survey trends have shown rising worry in most countries. Yale University's well-known *Global Warming's Six Americas* study divides the American public between the Alarmed, Concerned, Cautious, Disengaged, Doubtful, and Dismissive. Between 2013 and 2023, and despite sharp political polarization, the share of those in the Alarmed group grew from 15% to 28% while the Concerned grew from 24% to 29%. ¹⁶

The Pew Research Center has tracked climate beliefs in high and middle-income countries since 2013. There has been a steady increase in majorities who see it as a 'major threat', although numbers declined between 2022 and 2025 in high-income countries (including Australia). The authors suggest the recent decline is due to the spread of right-wing populism, although climate concerns are often demoted by other worries, such as cost of living pressures and wars.

There are several plausible causal drivers for the secular rise in concern, most obviously stronger scientific warnings and more experience of extreme weather events—although (as we say in Research paper 1) the relationship between experience of extreme events and concern about climate change is complex. Scientific warnings will only become louder as warming increases and extreme events multiply. At the same time, these real factors may be offset by political polarization and short-term issue competition. Overall, it is very likely that public concern about climate change will rise over the next decade or two and beyond, so that the opinions and behaviours of those 'most concerned' now will become typical of the population.

Implications

The data reveal that a sizable share of Australian parents—and especially mothers—experience deep unease about their children's prospects in a warming world. This collective

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¹⁶ Anthony Leiserowitz et al., *Global Warming's Six Americas*, Yale University and George Mason University. New Haven, 2023.

¹⁷ Pew Research Center, 'International Opinion on Global Threats', Report, August 2025.

¹⁸ Ziqian Xia et al., 'A meta-analysis of the relationship between climate change experience and climate change perception,' *Environmental Research Communications*, 2022, 4, 105005; Viktoria Cologna et al., 'Extreme weather event attribution predicts climate policy support across the world,' *Nature Climate Change*, 2025, 15:725–735.

dread goes beyond a personal feeling and becomes part of how families think about the future life circumstances of children, grandchildren and beyond. We are perhaps seeing a change in the way families conceive themselves, including a change in the narrative of the 'good parent' role. As the planet warms, with greater risks of social and economic disruption, parenting may require investment of emotional labour, planning, and money so as to prepare one's offspring for a different kind of world. More of the responsibility for future generations then shifts from the public sphere into private households.

The fact that women show markedly higher hesitation about having children in a climatestressed world points to a gendered calculus of risk. While both men and women register anxiety, the burden of translating that anxiety into reproductive choices falls disproportionately on women. This emerging pattern also hints at a broader cultural expectation that women bear the moral responsibility for safeguarding the next generation against planetary threats.

Traditionally, the 'social contract' between citizens and the state has been anchored in the assumption of a relatively stable future. The pronounced inter-generational anxiety revealed by this study suggests that neither older nor younger cohorts are confident that the state can guarantee a liveable environment for the next generation. Climate-induced parental concern is reshaping the social contract into a generational pact that can be met only through long-term planning to protect liveability.

Survey method summary

The survey, carried out by Roy Morgan Research, had an overall target of 2,000 completes, aiming for a mix of 1,700 completes broadly representative of the Australian population by age, gender, and region, and 300 additional completes from Australians living in areas affected by one or more extreme weather events since 2019 (see below). Non-interlocked quotas were set for the sample based on the distribution of the adult Australian population for each of age, gender and region.

Participants were invited to participate in the survey online via e-mail and SMS with a personalised link. A total of 2,099 respondents completed the survey, reduced to 1,955 after cleaning the data set to exclude poor-quality responses. The survey was carried out between 22 May and 22 June 2025.

To better assess the effects of direct exposure to extreme weather events, additional respondents were sought from Australians living in postcodes that had been affected by extreme weather events since 2019 (before the Black Summer Bushfires). The National Emergency Management Agency database, which lists severe events (floods and bushfires only), was used to define the areas so affected.

The average interview length for the survey was just under 10 minutes. Participants were given an incentive to complete the survey through a combination of 'panel points' redeemable in gift-vouchers and entry to a quarterly prize draw.

Full details of the survey methodology and the questionnaire can be found in the technical report posted on this website.

October 2025