

Sustainable Water Options for Sportsfields

Milestone 2 Report

Victoria University
January 2009

A Smart Water Project

**The Socio-economic Impacts
of
Water Restrictions
on
Turf Sports grounds in Metropolitan Melbourne**

Final Report
December 2008

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Acknowledgements

The authors acknowledge the generous support of Smart Water and participating water authorities, City West Water; South East Water and Yarra Valley Water. We would like to thank the following people and organisations that provided information and advice on sports grounds and sport participation: the municipalities of Bayside, Boroondara, Brimbank Fairfield, Greater Bendigo, Hume, Knox, Melbourne, Moreland, Mornington Peninsula, Nillumbik, Whitehorse, Wyndham, Yarra Ranges; sporting clubs and associations VicSport, VICNORD, Victoria Blind Cricket, Blind Sports Victoria, the Eastern Football League, the Australian Football League, VicTouch and the Football Federation of Victoria as well as anonymous members of several sporting clubs. The Victorian government departments of Planning and Community Development and Sport and Recreation Victoria provided invaluable guidance and Nexus Research conducted the sample survey. As ever, responsibility for any errors or omissions rests with the authors.

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Recommended Citation:

Weller, S. and English A. (2008) Socioeconomic Impact Study of Water Restrictions on Turf Sports grounds in Metropolitan Melbourne, Centre for Strategic Economic Studies, Melbourne.

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Executive Summary

The aim of this report is to develop a better understanding of the social and economic effects of Class 3a water restrictions on sporting fields within Melbourne. The report provides the social economic component of the “Sustainable Water Options for Sportsfields Project”, which is funded by the Victorian Government’s Smart Water program and coordinated by the Institute for Sustainability and Innovation at Victoria University.

The scope of the project was limited to metropolitan public turf-based sports grounds such as Australian football and rugby grounds, soccer pitches and cricket ovals. The work undertaken and reported here included a review of previous research on the social impacts of sport and sports ground maintenance issues, a contingent valuation survey that aimed to quantify the value that the community places on sporting grounds, and a program of interviews that sought to assess the local scale impacts of Melbourne’s water restrictions, which at Level 3a limit the number of sporting grounds that local authorities are permitted to irrigate. At the time the study was undertaken, October 2008, councils were required to reduce their water allocations to less than 25% of pre-water restriction levels or to limit irrigating to one in four turf sporting grounds. As a result, many unwatered grounds were deteriorating and many sports and sporting clubs had been forced to alter their routines and game schedules.

The study has found that restrictions have in effect reduced the amount of useable turf-based sporting spaces available in metropolitan Melbourne. Yet demand for participation, from a wide variety of sports and activities, continues to increase. As a result, restrictions have generated tensions over ground allocations and intensified the use of turf grounds. The study has found that:

- § Water restrictions are creating new demands and costs for local government administration, forcing them to allocate additional staff and resources to manage access to sports grounds.
- § Restrictions are altering the relationship between sporting clubs and local government and increasing the transparency of allocation mechanisms.
- § The redistribution processes triggered by water restrictions are systematically excluding less competitive individuals from access to turf-based sport.
- § The redistribution processes triggered by water restrictions are systematically excluding less advantaged segments of the community – children, women, migrants and the disabled – from access to turf-based sports.
- § Restrictions are imposing substantial and unsustainable costs on sporting clubs that rely on the goodwill of volunteers.
- § Restrictions are compromising the capacity of clubs to contribute to building stronger communities.
- § These outcomes directly undermine the government’s health, well-being and participation objectives.

The contingent valuation study found that the community supports sporting grounds as a core community asset and opposes their closure. A large number of people surveyed were willing to pay a small levy to ensure that sporting facilities were maintained, although there are also people that support maintaining grounds from existing resources, without the imposition of an additional tax or levy. Most people support using user fees and charges to help fund water saving measures.

1. Introducing the Project

Since April 2007, level 3a water restrictions have been in force in metropolitan Melbourne. They require that only 1 in 4 sporting grounds can be watered or that water use is reduced by more than 25% on watered grounds. These measures aim to achieve an 80% reduction in water use on sports grounds. At the time this study was commissioned, the city was in its second year of Level 3a water restrictions and many people expected even harsher restrictions that prohibit the use of water outdoors.¹ This report was commissioned by Smart Water to examine how water restrictions on sports grounds were affecting sports participation and the community.

1.1 Background

Water restrictions have been introduced into a system of sportsground management that has existed for many years. In metropolitan Melbourne, as in the rest of Victoria, local government is responsible for the provision and maintenance of sports grounds. In the metropolitan area, each local jurisdiction manages in the range of 20 to 50 turf based sporting grounds. The number of grounds per head of population varies depending on age of the urban settlement in different places and the relative affluence of different neighbourhoods. The 1,645 sportsgrounds in Melbourne cover around 2,500 hectares of land. As a general rule, there is less green space and less space allocated to sport in the inner city compared to the outer suburbs. Climatic conditions vary across the city, with the warmer, inland western and north-western suburbs receiving less rainfall and more rapid evaporation than the eastern suburbs. Given land values, inner city municipalities face high barriers to expanding their turf-based sporting grounds or establishing alternative recreation venues. Where green space exists, tensions between sport uses and passive uses of open space are not uncommon. Local government authorities obtain water allocations from one of three metropolitan water authorities which retail water in Victoria's water management structure.

Traditionally, councils have maintained sporting grounds to the basic standards required by sporting codes. The costs of maintenance have been borne by the community, although clubs and teams pay modest fees that typically cover 10% to 20% of cost of maintaining the playing surface. Sporting clubs are voluntary organisations that are seldom in a position to pay the full cost of upkeep. Elite competitions are often supported by private sponsors, but small local clubs, junior and social competitions depend on member contributions and fund-raising activities. Most non-elite sports therefore depend on council maintenance services. However, local government in Victoria has limited revenue raising capacity but faces increasing demands on its resources as the population ages.

The introduction of water restrictions has prevented councils from carrying out their usual role of preparing sports grounds. When level 3a restrictions were first introduced, councils were permitted to irrigate only one in four grounds. Un-watered grounds were left to survive on rainfall, that is, unless local clubs or councils could find ways to bring additional water to the grounds. A change in policy in 2008 allowed councils to apply to their water authority to convert to an allocation system in which any sports facility can be irrigated so long as the municipality's total water use is less than the approved "1 in 4" allocation. To qualify for this regime, water authorities require that councils develop a "Water Conservation Plan" and that they:

- Install water meters on all sports grounds to monitor water use;
- Introduce centralised watering systems for all sports grounds;

¹ As it turned out, harsher restrictions were avoided: "If you go to (stage) 4, you will lose thousands and thousands of jobs across the state for what would be only modest water savings" (Premier Brumby cited in Ker, 2008).

- Provide detailed plans for the conversion of all grounds to warm season grasses;
- Undertake an efficiency audit of different irrigation systems in local conditions;
- Monitor water consumption and report to the water authority on a monthly basis;
- Publish irrigation schedules online and display signage at affected grounds.

Councils have responded by investing in water efficient technologies, drought tolerant turf, water recycling and storage and implementing strategies that reduce their water consumption. Councils generally rely on limited state or federal funding to support these investments.

When this study commenced, community disquiet about the impacts of water restrictions included worries about injuries to players, concern that children would be excluded from physical activity and anxiety about the collapse of community networks if sporting clubs failed. These outcomes were already evident in rural areas (e.g. Driscoll and Wood, 1999; Tonts, 2005). There was concern too, that restrictions would result in ground closures, compromise the viability of sporting clubs, undermine community development, and lead to job losses in turf industries. In response, the Municipal Association of Victoria—which is the peak organisation representing local government—commissioned the report on *Strategies for Managing Sports Fields in a Drier Climate Report* (GDH, 2007). It emphasised the importance of sport in the community and listed some possible socio-economic costs of sports ground closures. This report provides further explication of these issues.

1.2 The Study Brief

This study of the socio-economic impacts of sports grounds is the first component of a larger project that aimed to understand the value of sports fields to the community, assess the social and economic impacts of water restrictions, develop an information package that explains alternative water options and develop a software tool to enable users to assess the relative merits of different options for particular sportsfields.

1.3 Methodology

The study combined four field research methods.

Literature Review

Before commencing data collection and analysis, previous studies of sports ground use, the quality of playing surfaces and the importance of sport to community cohesion were reviewed. Papers on cost benefit analysis and contingent valuation were also reviewed to guide the data collection process.

Analysis of Aggregate Data

Aggregate data from the ABS and other sources was used to estimate the costs and benefits of sport participation.

Sample Survey

In order to determine how the community values sports grounds a contingent valuation method (CVM) survey was conducted. It uses a 'stated preference' approach to determine respondents' willingness-to-accept (WTA) values for maintaining sports grounds during water restrictions. The survey was conducted in Australia's five largest cities and included questions about the use and maintenance of sporting grounds. The survey is reproduced in Appendix D.

Semi-Structured Interviews

To understand how water restrictions have altered the processes and allocations of local level turf-based sports, 50 semi-structured interviews were conducted with selected informants: 22 with council officers, 17 with representatives of sporting clubs and associations, 12 with state

government officers and six with other stakeholders. All interviews were conducted between September and December 2008. The interview questions sought to understand: the short and long term impacts of water restrictions; the different costs and benefits of restrictions; how councils and clubs made decisions about their responses; what alternatives they considered; and, what they hoped could be done in the future. The interview schedule and introductory letter are both included in Appendix C. Some interviews were conducted face-to-face and others by telephone. The analysis of interview data followed a data tabulation approach (Miles and Huberman, 1984).

1.4 Structure of the Report

The remainder of the report is structured as follows:

- Chapter 2 introduces the existing literature on sport participation and the costs and benefits of community level sport;
- Chapter 3 reports the outcomes of the contingent valuation of the value of local sports grounds in urban Australia;
- Chapter 4 draws on data collected in interviews with local councils and sporting clubs and associations to examine the local level reallocation processes triggered by water restrictions;
- Chapter 5 concludes by identifying four policy options for minimizing the adverse social and economic impacts of water restrictions on sporting grounds.

2. Social Impacts of Participation in (Local) Sport

By its very nature, sport is about participation. It is about inclusion and...
cooperation

(United Nations, 2003)

2.1 Sport and Recreation

There is substantial literature on the benefits of sport and recreation. Driscoll and Wood (1999, see also ABS, 2001) list the following benefits of participation in sport:

- **Social capital development;** social capital is developed via the leadership, initiative, club membership, participation, skill development and community development work of clubs and organisations.
- **Creation of community hubs;** sport and recreation clubs and organisations are key social spaces and community hubs in rural communities which contribute to community and cultural development.
- **Environmental and physical development;** sport and recreation contribute to the development of facilities, services, streetscapes, spaces and the preservation of landscapes.
- **Health improvement and promotion;** sport and recreation provide opportunities for socialisation and friendship networks, reduce social isolation, enhance community well-being and can lead to improved physical health.
- **Cultural values;** the maintenance of sporting and recreation traditions can reinforce dominant cultural values (but can also produce dis-benefits such as sexism, racism and discrimination against people with disabilities).
- **Economic development and town survival;** sport and recreation events, tourism and festivals promote rural communities, provide employment, and support local trade and business.
- **Community safety;** sport and recreation contribute to community safety through the development of social networks, provision of life saving services, training and rescue, learn-to-swim programs and firearm safety.
- **Creating champions;** sport and recreation clubs and organisations provide facilities, resources, programs and skill development which enable rural elite athletes to develop their potential.
- **Community control and investment;** sport and recreation contribute to a sense of local and community control.
- **Junior sports development;** opportunities for young people to be active, to develop skills, to socialise and to learn the rules of life and the game are an important feature of sport and recreation.
- **Local innovation;** through sport and recreation communities create new synergies which utilise, share and showcase local talent and resources.
- **Community identity and local pride;** a sense of place is developed and reinforced through sport, recreation and cultural activity.

Most of these activities have a direct but non-quantifiable bearing on the quality of local 'human capital' and the strength of local social networks, both of which have a direct impact on long-term economic and social development. Sport is part of the 'soft infrastructure' of local economies and contributor to regional economic competitiveness. The problem for assessing the social impacts of sporting grounds is that, in theory, these benefits could be delivered in a range of sporting codes,

and are not unique to turf-based sports. For example, in the United States these benefits are derived from indoor basketball competitions.

2.2 Sport Participation Rates

One of the most significant negative consequences expected from water restrictions is a decline in sport participation. It is reasonable to expect that restrictions will have a negative impact on participation. Levels of physical activity are shaped by the interplay among environmental, biological and psychological factors. Bauman, et al.'s (2008) ecological model of physical activity (Figure 2.1) depicts these factors as concentric circles representing individual, socio-cultural and environment/policy contexts that promote or discourage participation in physical activity. Figure 1 circles the aspects of Bauman's model that are altered by water restrictions. Research shows the participation is inhibited in places with poor access to supportive physical environments (Popkin, et al. 2005; Estabrooks, et al. 2003) and for people with lower financial capacity to pay to participate in sporting activities (Sobal and Stunkard, 1989). Lower socio-economic groups have poorer physical activity participation rates than higher socio-economic groups (Kavanagh, et al. 2007; World Health Organization, 2006).

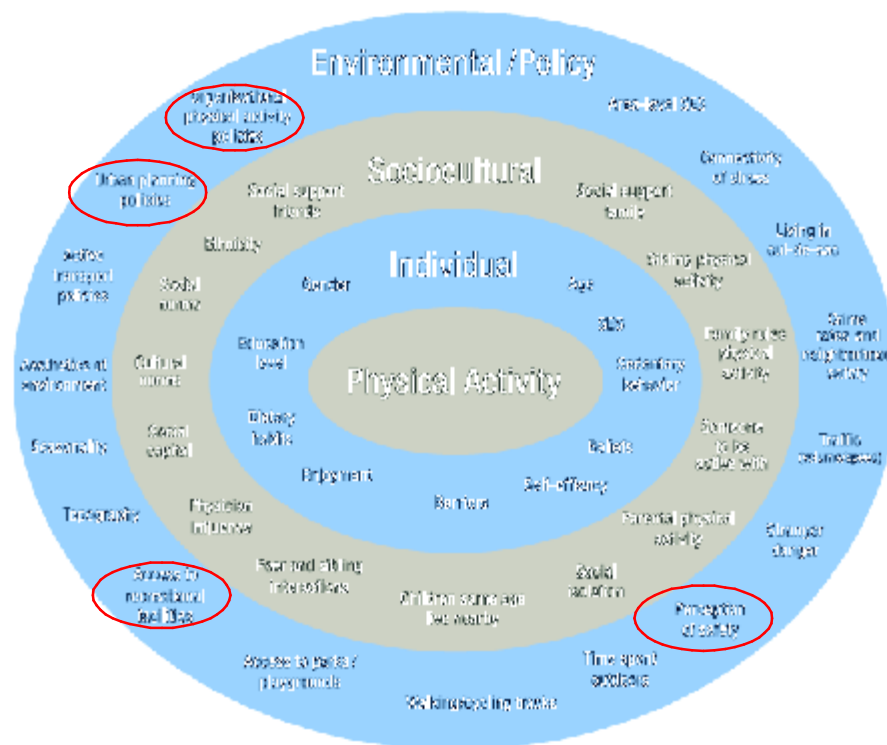


Figure 2.1 Bauman's Ecological Model of Physical Activity
Source: Bauman, 2008.

The social benefits of sport are intimately related to local cultures and history. In Australia, the social benefits of sport are gained predominantly from turf-based sports. This is evidenced by aggregate participation data.

Since participation figures for metropolitan Melbourne were not available for this study, Table 2.1 shows data for the state of Victoria, where 73% of Victoria's population lived in 2006 (ABS, 2006). Australian Rules football, cricket and soccer are the dominant sporting codes played on turf sports grounds. Other turf-based sporting codes—touch football, rugby, softball and baseball—have

relatively small numbers of participants.² ERASS data show that participation in soccer has increased by 10% since 2001, but the largest increases in active recreation between 2001 and 2007 have been in non-organised activities such as walking the dog or jogging. Participant in Australian football and cricket has been modest. Table 1 shows that in 2007, soccer was the most popular turf based sport in Victoria, followed by Australian Rules football, cricket and rugby. It includes walking and running as predominantly non-organised turf-based activities because in urban areas they often centre at sporting grounds. Table 2.1 also shows the rank of each activity, in order of number of participants, to indicate the importance of turf-based activities relative to non-turf based activities (for example, swimming, cycling, netball and basketball).

Table 2.1 Sport Participation, Victoria, 2007

| Rank | Turf-Based Activity | Organised | Non-organised | Total | Total |
|------|-------------------------|--------------|---------------|--------------|-------|
| | | Freq. (000s) | Freq. (000s) | Freq. (000s) | % |
| 1 | Walking (other) (some) | 42.6 | 1,371.4 | 1,391.1 | 34.0 |
| 5 | Running (some) | 31.2 | 338.8 | 354.5 | 8.7 |
| 6 | Golf | 136.6 | 166.5 | 278.1 | 6.8 |
| 10 | Football (soccer) | 78.1 | 79.1 | 147.9 | 3.6 |
| 12 | Australian football | 107.3 | 34.5 | 136.6 | 3.3 |
| 13 | Cricket (outdoor) | 96.5 | 44.5 | 134.5 | 3.3 |
| 17 | Lawn bowls | 71.0 | 3.5 | 73.9 | 1.8 |
| 41 | Touch football | 13.7 | 3.2 | 16.9 | 0.4 |
| 42 | Rugby union | 11.4 | 5.3 | 16.7 | 0.4 |
| 44 | Hockey (outdoor) (some) | 13.9 | – | 13.9 | 0.3 |
| 47 | Softball | 11.6 | – | 11.6 | 0.3 |
| 49 | Rugby league | 7.8 | 2.2 | 9.3 | 0.2 |
| 50 | Baseball | 9.1 | – | 9.1 | 0.2 |

Source: Australia, 2007.

Table 2.2 shows that most cricket and Australian Rules football occurs in organised club activities, whereas soccer is evenly divided between organised and non-organised modes of participation. Table 2.2 also shows the small proportions of players that are women: 18% in soccer, 11.2% in Australian rules, and 6% in cricket. Melbourne's leading women's sport is netball (not a turf-based activity). It attracts 154,000 players in Victoria and is ranked 9th among sports (i.e. it has more players than Australian Rules football). Appendix A provides details of the main 50 physical activities in Victoria.

Table 2.2 Participation in Turf Based Sport, Victoria, 2007

| | Organised | Non-Organised | Total | % Organised | % Women |
|------------------------|--------------|---------------|--------------|-------------|---------|
| | Freq. (000s) | Freq. (000s) | Freq. (000s) | % | % |
| Soccer | 78.1 | 79.1 | 147.9 | 52.8 | 18.0 |
| Australian rules | 107.3 | 34.5 | 136.6 | 78.6 | 11.2 |
| Cricket | 96.5 | 44.5 | 134.5 | 71.7 | 6.0 |
| Rugby (League & Union) | 106.9 | 27.0 | 127.9 | 83.6 | 8.5 |
| Touch Football | 13.7 | 3.2 | 16.9 | 81.1 | 13.0 |
| Softball | 3.8 | 0.2 | 7.8 | 48.7 | 67.2 |
| Baseball | 9.1 | - | 9.1 | - | - |

Source: ERASS, 2007

² Issues pertaining to Golf and Lawn Bowls are not considered in this report. In metropolitan Melbourne, hockey is mainly played on synthetic surfaces but turf is often used in training activities.

These data show that participation in turf-based sports and other physical activities that occur on sporting grounds are a major component of all physical activity in Victoria.

2.3 Health Benefits and Costs

In addition to the Sport's direct benefits for health, fitness and strength translate into high worker productivity and less absenteeism and fewer work days lost to sickness. There is ample evidence that participation in sport reduces stress, enhances well-being and alleviates mental health problems (Peacock, et al. 2007). The health and well-being benefits of sport derive not simply from participation, but from the quality of participation (Hawkins, et al. 2003; Townsend, et al. 2002).

The health and well-being benefits of participant in physical activity translate into long term savings in health care service costs. The treatment of diabetes, for example, which is essentially a preventable disease and one that can be reversed with diet and exercise, costs the Australian community around \$800 million per annum (AIHW, 2008). Quantifying these benefits requires sophisticated econometric models that predict the second and third-order impacts of behavioural or policy changes. However, Econtech (2007) has estimated that obesity costs the Australian community \$1.5 billion per annum in direct healthcare costs and more than \$2 billion per annum after including the wages of health professionals, lost wages and other indirect costs. Depression has been estimated to cost \$3.5 billion per annum (Pollard, 2004). Higher rates of participation in sport would reduce these health costs in the long term.

On the negative side, turf based sports generate health costs through injuries and permanent impairments caused by sports injuries. Henley (2007) estimated that the direct cost of football injury hospitalization was \$44 million in 2004-05. This figure does not include injuries treated by allied health professionals (such as physiotherapists), which Cassell et al. (2003) estimates treat two-thirds of all sport injuries. In Victoria, Australian Rules football accounts for 29% of all sport-related hospital emergency presentations and 22% of sport-related visits to General Practitioners (Finch et al. 1999).³ Australia Rules football generates high rates of serious knee (ACL) injuries, but it seems that these are more likely to occur in wet conditions.

Nonetheless, there is widespread concern that the deterioration of playing surfaces as a result of water restrictions will generate more or more severe sporting injury rates. Yet Otago et al. (2007) questions the direct link between ground conditions and injury rates reported in Norton et al. (2001) and Orchard et al. (2001). In addition, the sport insurer interviewed during this project reported no increase in insurance claims since restrictions began. On the contrary, the number of sprinkler-related injuries had declined.

2.4 Economic Benefits and Costs

In 2004, 85,400 people in Victoria derived all or part of their income from organized sport and physical activity (ABS, 2004). GDH (2007) estimated that 2,000 were employed in local football and 1,000 in local cricket activities. ABS (2004) estimates that only 8% of the 350,000 people nationally who participate in sport are paid for their contribution. Or, to put it any way, 92% of the work of maintaining sporting activities is done by volunteers.

³ Estimates of the costs of sport injury differ depending on the measurement approach (prevalence or an incidence) and are plagued by data difficulties.

Maintaining sports grounds is costly. They require direct input resources such as fertilizers and soil, human resources to mow and roll the grounds and sufficient water to maintain the surface to a useable standard. These costs are being estimated in detail in a forthcoming Smart Water study by consultancy firm URS. The economic costs of water restrictions spread over a wide area. In Chapter 4 we show that water restrictions have saved water but have generated new costs as additional resources and personnel have been required to manage grounds and ground allocations.

2.5 Social Benefits and Costs

Sport is a socializing institution (Edwards, 1973) and sports clubs are hubs around which such social activities are organized. This makes sports grounds and their facilities “community assets” with a social function more extensive than simply organising and playing sport. Many sports organizers, participants and volunteers are involved in range of local associations and ventures. Sporting clubs and activities provide informal opportunities to strengthen local social ties and community networks and to improve the local-scale coordination of a range of complementary activities (SPARC, 2006). Sports, especially team sports, are associated with community pride and the formation of local identity (Beem, 1999; Victoria, 2005). Sport affiliations bring a sense of purpose and identity for large groups of people. Rosentraub and Ijla (2008:345) contend that “public parks as well as sport facilities and the celebrations they engender create a stage in which confidence, public spirit, and a sense of optimism regarding the future of a community and city could be created or generated.”

The benefits of sportsgrounds are sometimes understood as contributing to ‘social capital’ (ABS, 2004; Grootaert, 2004; Nicholson and Hoye, 2008). The World Bank (1998) defines social capital as:

Social capital refers to the institutions, relationships, and norms that shape the quality and quantity of a society's social interactions. Increasing evidence shows that social cohesion is critical for societies to prosper economically and for development to be sustainable. Social capital is not just the sum of the institutions which underpin a society – it is the glue that holds them together.

Social capital includes social networks, trust and reciprocity, and the confidence that people will do the right thing which makes them part of a group. The proponents of social capital view it as the basis of economic prosperity as complex interactions at the inter-personal scale stimulate innovation, cooperation and healthy interaction (Putnam et al. 1993; Putnam, 2000). In Australia, sporting clubs make up about half of all voluntary social organizations, which make them the base for the social development and bonding of social capital (Tonts, 2005).

Yet Nicholson and Hoye (2008:223) view the perception that sporting clubs are “overwhelmingly constructive spaces that generate social connections, social cohesion and social integration of increasingly multicultural societies” as overly optimistic. The social bonding generated by sporting clubs is not necessarily socially inclusive (Collins and Kay, 2003). Critics of the notion of social capital argue that this type of dense social network is necessarily exclusive, and defines its collective identity in relation to some ‘other’ that is not part of its social milieu. Not everyone will fit in with every type of club. Physical activity assists ‘at risk’ youth (Morris, et al. 2003; Loxley, et al. 2004), but individuals may have become ‘at risk’ at a consequence of exclusion from social groups such as sporting groups. Similarly, team players are unlikely to become ‘at risk’ if they lose access to sportsgrounds. Australia’s turf based

sporting culture may promote anti-social behaviours (Coalter, 1989; Duff, et al. 2004; Snow and Munro, 2006).

The problem for policymakers is to create policies that maximise the positive social benefits of sporting clubs and minimise their negative and exclusionary aspects.

2.6 Conclusion

Turf-based sports have direct and indirect impacts that permeate through Melbourne's social, cultural and economic fabric. Most of these impacts are positive and reflect the role the ways that sports grounds are connections and nodes of interaction for local communities.

3. Valuing Sports grounds

This chapter reports the outcomes of a random survey of the community to determine the value it placed on sports grounds and to gauge the extent of public support for maintaining sporting grounds in useable condition. The survey interviews were conducted by a market research firm, Nexus Research Pty. Ltd., in October 2008, as part of an 'omnibus' survey that asked respondents their views on a variety of unrelated issues. The survey used a quota sampling structure with quotas set to match population proportions. The survey's scope was the five major capital cities – Melbourne, Sydney, Brisbane, Adelaide and Perth. The questions focused on respondents' use of sports grounds, the value they accord sports grounds and their attitudes to ground management and maintenance. The survey used a combination of question formats to increase the reliability of estimates.⁴ This chapter's three sections summarise the results pertaining to each of these issues.

3.1 Public Use of Sports Grounds

The 1504 person sample was stratified by age and gender with a view to obtaining responses from similar proportions of younger men, older men, younger women and older women (Table 3.1). Overall, 69% of respondents had used a sports ground at some time in the past twelve months. The usage rate was highest among younger men, with 76.5% of respondents using sporting grounds in active and passive activities. The usage rate remains high across age and gender groups, with least use (60.5%) among women over 40 years of age attending sports grounds. More than half the people interviewed used grounds in an activity related to organised sport – including playing a turf-based sport, attending a sports ground to accompany a player, watching sporting matches, or working as a volunteer or paid employee.

Table 3.1 Visits to Sports grounds During the Past 12 months

| Type of User | Men Under 40 | Men 40 and over | Women Under 40 | Women 40 and over | Total |
|-------------------------|--------------|-----------------|----------------|-------------------|-------|
| | % | % | % | % | % |
| Organised sport user | 31.5 | 24.4 | 27.4 | 18.1 | 24.9 |
| Spectator (n.e.c) | 22.8 | 27.1 | 27.7 | 27.4 | 26.5 |
| Sub-total: Sport users | 54.3 | 51.5 | 55.1 | 45.5 | 51.4 |
| Passive User (only) | 22.8 | 19.7 | 14.8 | 14.2 | 17.6 |
| Sub-total: Ground Users | 76.5 | 70.2 | 69.9 | 60.5 | 68.9 |
| Non Users | 23.5 | 28.8 | 30.1 | 39.5 | 31.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of Respondents | 311 | 431 | 332 | 430 | 1504 |
| % of Respondents | 20.7 | 28.7 | 22.1 | 28.6 | 100 |

Source: Sports ground Survey.

Note: Respondents allocated to most intensive use only. Organised sport user includes players, people attending sports grounds with players, volunteers and paid workers. (n.e.c) not elsewhere classified.

Many respondents participated in multiple capacities (e.g. player, spectator and volunteer) and also used sporting grounds for non-sporting recreational uses. Some respondents (17.6%) did not participate in sport-related activities but used grounds for picnics, events or get-togethers. About a

⁴ The survey is reproduced in Appendix C.

third of respondents (31.1%) had not visited a sporting ground at all in the last twelve months. Table 3.1 is important because it suggests that about quarter of the urban population are active users of sporting grounds, half the urban population is actively linked to turf-based sporting pursuits and about 70% of the adult urban population use sporting facilities for sport or recreation.

Many people use sports grounds in multiple capacities: as players, spectators and as participants in non-sport related activities. Table 3.2 shows the distribution of these multiple forms of participation for four demographic segments – younger men (under 40), older men (40 and over), younger women (under 40) and older women (40 and over). Only a small proportion of survey respondents actually played turf-based sports: one in five young men (20.9%) but less than one in ten among the other groups. However, 25–30% of respondents were involved in activities that are associated with organised sport. Men were more likely than women to help out in a volunteer capacity and to work at a sports ground, but women – and especially younger women - were more likely to accompany a player to the ground. The most prominent sport-related activity was attending a sports ground as a spectator. Most players and club helpers also attended games as spectators. Moreover, comparing Tables 3.1 and 3.2 shows that most players and spectators also use sporting grounds for passive recreational activities

Table 3.2 Sports Grounds: Patterns of Multiple Use

| Type of User | Men Under 40 | Men 40 and over | Women Under 40 | Women 40 and over |
|---------------------|--------------|-----------------|----------------|-------------------|
| | % | % | % | % |
| Player | 20.9 | 6.0 | 8.1 | 4.0 |
| Accompanying Player | 13.2 | 16.9 | 22.6 | 15.6 |
| Volunteer | 4.2 | 6.3 | 4.8 | 2.6 |
| Paid Worker | 2.3 | 2.1 | 0.6 | 0.0 |
| Spectator | 38.9 | 41.5 | 45.2 | 39.8 |
| Passive Use | 44.1 | 32.9 | 36.4 | 30.5 |

Source: Sports ground Survey

Note: multiple response, N = 1504

This data suggests that active and passive uses of sports grounds are complementary and that many passive grounds uses are linked to the activities of organised sporting clubs.

3.2 Valuing Sports grounds

Because sporting grounds are a public good, their value is not set by the market. This makes their value difficult to quantify. Public goods are typically valued by non-market methods that rely on either revealed or stated preferences (Mitchell and Carson, 1989). Revealed preferences are established by analysing actual user statistics. Unfortunately for this study, water restrictions had not been in place for long enough for their effects to appear in available aggregate data. In any case, the large number of factors that influence the use of sporting grounds would make it difficult to reliably attribute any observed change in usage rates solely to the effects of water restrictions. The second method estimates the value of non-market goods by examining stated preferences. The stated preference approach is an appropriate means to estimate of the value of common assets such as sports grounds (Mitchell and Carson, 1989; Noonan, 2003). Here values are estimated using indirect methods such as contingent valuation method (CVM), which measures the value of common resources, such as sporting grounds, by asking people about their willingness-to-pay for access, monitoring their willingness-to-travel to use the resource or by assessing their willingness-to-accept responsibility for the asset as if it was their own property. Aabø (2005) argues that these different methods reflect different understandings of property rights. She recommends the willingness-to-accept method for 'mixed' goods—such as sports grounds—that combine

individual and collective aspects.⁵ Willingness-to-accept estimates are generally higher than willingness-to-pay estimates for the same good. Although it is an inexact science, CVM provides fascinating insights into the value communities place on common resources.

In this study, valuations for sporting grounds were embedded in a survey that also asked about sport participation and responses to water restrictions. In the CVM method, results are sensitive to the wording of the survey questions and the scaling of the options respondents are offered. Questions are framed by a 'scenario' that sets up the situation and forces respondents to place a value on their likely response (i.e their stated preference). In this survey, the scenario was based on Aabø's (2005) study of the value of public libraries in Norway. Her scenario was reworked for the Australian and the sports ground context and then subjected to pilot tests to identify any ambiguous wording that might elicit incoherent responses. The scenario was deliberately structured to convey the impression that sports grounds were at risk, so that people would be forced to think about the cost of saving them from possible closure:

Given the city's current water shortages, many grass-based sports grounds have not been watered and are deteriorating. Imagine that harsher restrictions are introduced and that the watering of sports grounds is completely prohibited. This may result in many grounds becoming unusable for sports such as football, rugby or cricket. This may affect sports clubs, their facilities and sports related businesses. Sports grounds could be maintained at pre-drought standards if extra water resources were allocated or money invested in recycling and water tanks. However, this may require the introduction of a special levy or cuts to other public spending.

After testing various options, the survey included a scale of eleven value options, with the hypothetical payment in the form of an annual fee:

\$1 \$3 \$5 \$10 \$15 \$20 \$25 \$35 \$50 \$70 \$100⁶

The sample was split into two groups, using a random number allocation, with a view to increasing the accuracy of value estimates (Welsh and Poe, 1998). The first group was read the scenario question and offered value assessments in descending order (\$100, \$75 ... \$5, \$1). The second group was asked the same question, but value offers were given in an ascending order of values (\$1, \$3 ... \$75, \$100). For each value, respondents were asked whether they would be "Very Likely", "Quite Likely", "Not Sure", "Quite Unlikely" or "Very Unlikely" to retain sports grounds at each of the specified prices. In effect, this format generated willingness-to-pay values in the ascending scale and willingness-to-accept values in the descending scale.⁷

Table 3.3 shows the results of this process for the ascending willingness-to-pay values sub-sample. At the token amount of one dollar per annum, four out of five respondents (79.2%) were willing to pay for the maintenance of sporting grounds. However, their support declined rapidly, with only half (49.9%) of the respondents willing to pay at \$10, a quarter (27.4%) willing to pay at \$25 and only one in ten people (9.1%) willing to pay at a \$100 value. 15.1% of respondents were not willing to pay for sports grounds at all, even for the token value of \$1. It is likely that this group included some people that literally do not value sports grounds, some that reject the concept of paying charges in

⁵ Water restrictions are likely to have different impacts for the community and personal aspects of sporting grounds: Individual physical exercise can be obtained by other means, but the social and community benefits of team interaction or participation in sporting clubs are not easily transferred to other contexts.

⁶ For comparison purposes, a one-way inner city fare on public transport in Australia is about \$3, while a mid-range concert ticket might cost about \$100.

⁷ The final version of the scenario question favours a 'willingness-to-pay' response. A true 'willingness-to-accept' question would have sought to establish the level of compensation respondents would be willing to accept if grounds were closed.

addition to the taxes they already pay for the upkeep of community assets, and some that reject the notion of quantifying value in this way. At \$100, 84.7% of the sample was unwilling to pay for maintaining sports grounds. However, some of the 9.1% of respondents that were willing to pay the survey's maximum value of \$100 may have been willing to pay even more.⁸

Table 3.3 Willingness to Pay: Ascending Values

| Willingness to Pay | \$1 | \$5 | \$10 | \$15 | \$20 | \$25 | \$50 | \$75 | \$100 |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | % | % | % | % | % | % | % | % | % |
| Very Likely | 60.8 | 46.1 | 36.6 | 28.2 | 23.9 | 19.5 | 12.4 | 6.8 | 5.9 |
| Quite Likely | 18.4 | 15.9 | 13.2 | 12.5 | 11.4 | 7.9 | 5.0 | 3.7 | 3.2 |
| <i>Sub-total</i> | <i>79.2</i> | <i>62.1</i> | <i>49.9</i> | <i>40.7</i> | <i>35.2</i> | <i>27.4</i> | <i>17.4</i> | <i>10.5</i> | <i>9.1</i> |
| Not Sure | 5.7 | 8.2 | 7.6 | 8.5 | 8.2 | 9.2 | 7.6 | 7.2 | 6.3 |
| Quite Unlikely | 3.2 | 5.0 | 8.0 | 8.6 | 7.2 | 8.5 | 9.9 | 12.5 | 10.1 |
| Very Unlikely | 11.9 | 24.7 | 34.5 | 42.2 | 49.4 | 54.9 | 65.1 | 69.8 | 74.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Sports ground Survey

Note: Four cases with missing values recoded as "Not Sure".

Table 3.4 Willingness to Accept: Descending Values

| Willingness To Accept | \$100 | \$75 | \$50 | \$25 | \$20 | \$15 | \$10 | \$5 | \$1 |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | % | % | % | % | % | % | % | % | % |
| Very Likely | 18.0 | 29.8 | 40.4 | 56.4 | 63.5 | 66.4 | 69.6 | 72.7 | 75.9 |
| Quite Likely | 18.9 | 12.4 | 13.1 | 6.3 | 3.8 | 2.6 | 2.2 | 1.1 | 0.3 |
| <i>Sub-total</i> | <i>36.9</i> | <i>42.2</i> | <i>53.5</i> | <i>62.7</i> | <i>67.3</i> | <i>69.1</i> | <i>71.9</i> | <i>73.9</i> | <i>76.2</i> |
| Not Sure | 12.4 | 9.5 | 8.1 | 5.4 | 4.6 | 3.6 | 3.2 | 2.9 | 2.6 |
| Quite Unlikely | 13.5 | 13.8 | 7.8 | 6.0 | 4.7 | 4.6 | 4.0 | 3.6 | 3.5 |
| Very Unlikely | 37.2 | 34.5 | 30.6 | 25.9 | 23.4 | 22.7 | 20.9 | 19.6 | 17.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Sports ground Survey

The second group of respondents was read the same scenario but offered values in descending order until reaching a value that each person was "Very Likely" to accept. Table 3.4 shows more than a third of respondents (36.9%) said that they were either "Very Likely" or "Quite Likely" to pay the high opening value of \$100.⁹ As anticipated by Aabø's (2005), asking the value questions in descending willingness-to-accept order generated consistently higher valuations than the ascending order willingness-to-pay value form. Here more than half the respondents (53.5%) valued sporting grounds at \$50 and almost three quarters (73.9%) were willing to accept a \$5 value. When the questions were asked in descending value order, 24% of respondents declined to provide a positive value. Perhaps they would not accept any responsibility for sports grounds or perhaps they disagreed with the notion of valuing common goods in this way. As it turned out, only 39.1% of willingness-to-accept responses fell within the \$1 to \$100 range imposed by the question structure. For ascending order questions, one in five (20.8%) of respondents would not quantify the value of sporting grounds and 8.5% may have valued them more highly than the question structure allowed. Table 5 summarises these limits.

⁸ Since the maximum value is constrained and the responses are not normally distributed, it is not appropriate to calculate mean values for these data.

⁹ This suggests that the maximum value could have been set at a higher amount.

Table 3.5 Limits of Valuations

| Limits of Valuations | Ascending Values | | Descending Values | |
|-------------------------------|------------------|------|-------------------|------|
| | Freq. | % | Freq. | % |
| Will Not Pay | 145 | 20.8 | 172 | 24.0 |
| Will Pay between \$1 and \$75 | 492 | 70.7 | 281 | 39.1 |
| Will Pay \$100, possibly more | 59 | 8.5 | 265 | 36.9 |
| | 696 | 100 | 718 | 100 |

Source: Sports ground Survey.

To further demonstrate the extent to which the two question forms elicit different types of responses, Figure 3.1, which displays the same data as was presented in Tables 3.3 and 3.4, shows that in addition to the differences in the magnitude of responses, the ascending value questions produce a concave distribution while the descending value questions generate a convex distribution. These differences further suggest that the sub-samples should be treated as separate samples.

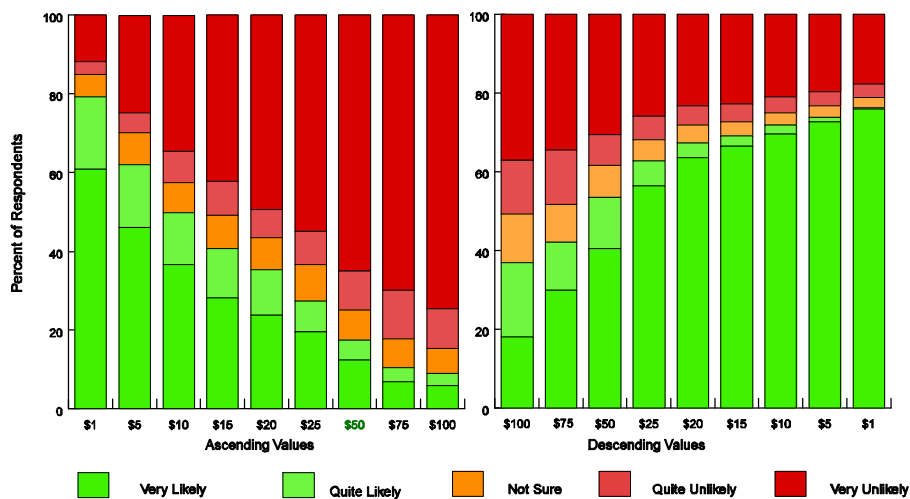


Figure 3.1 Willingness to Pay: Ascending and Descending Scales

Note: Split sample: Ascending and descending scales are different respondents

For ascending or willingness-to-pay values that began at \$1, it appears that respondents understood the question as asking the amount they would be willing to pay if a fee or levy was imposed to maintain sporting grounds. This interpretation was clearly implied by the question wording. In the case of descending values, the starting bid of \$100 dollars per annum was too high to be interpreted as a likely actual charge rate. As a consequence, it appears that respondents have interpreted the question in hypothetical terms – as asking how much they value sports grounds. This response resembles a willingness-to-accept rather than willingness to pay and provided consistently higher values. It follows that the descending value questions give a more accurate picture of the value of sports fields to the community.¹⁰

Types of Ground Users

To examine how valuations vary among the types of sporting ground users, survey respondents were categorised into four user groups. The first, “Club Associates” are frequent users of sporting

¹⁰ In the research design it had been anticipated, following Venkatachalam (2004), that data in the two question forms would be merged to provide more accurate estimates within a single sample. Separating the samples creates two smaller sample sizes and increases the sampling error, which in turn reduces the confidence of extrapolation of the survey results to the wider population.

grounds and include sports players, their friends, club volunteers and paid workers. The second group included those who reported that they attended grounds as sport spectators but did not report active involvement in sporting activities or an association with players. The third group had used sporting grounds for passive recreation but were not involved in sporting activities (i.e. as per groups 1 and 2). The fourth and final group had not used sports grounds in the last twelve months.

Table 3.6 shows that these groups differ in their willingness to value sports grounds as well as the values they accord to them. Respondents that were associated with clubs were most willing to pay or accept \$100 or more to maintain sports grounds. High numbers of spectators, passive users and non-users also place a high value on grounds. Although non-users dominate the “Will Not Pay” option, reasonable numbers of ground users are also opposed to any levy or payment.

Table 3.6 Limits to Values by User Group

| User Group | Will Not Pay or Accept | | Will Pay \$1 to \$75 | | Will Pay \$100 or more | |
|-----------------------------|------------------------|-------|----------------------|-------|------------------------|-------|
| | Freq. | % | Freq. | % | Freq. | % |
| Descending (Accept) Values: | | | | | | |
| Club Associates | 23 | 13.4 | 46 | 16.4 | 96 | 36.2 |
| Spectators | 49 | 23.3 | 67 | 23.8 | 74 | 27.9 |
| Passive Users | 31 | 18.0 | 58 | 20.6 | 43 | 16.2 |
| Non-Users | 78 | 45.3 | 119 | 39.1 | 52 | 19.6 |
| Total | 172 | 100.0 | 281 | 100.0 | 265 | 100.0 |
| Ascending (Pay) Values | | | | | | |
| Club Associates | 22 | 15.2 | 139 | 28.3 | 25 | 42.4 |
| Spectators | 30 | 20.7 | 148 | 30.1 | 16 | 27.1 |
| Passive Users | 23 | 15.9 | 83 | 16.9 | 11 | 18.6 |
| Non-Users | 70 | 48.3 | 122 | 24.8 | 7 | 11.9 |
| Total | 145 | 100.0 | 492 | 100.0 | 59 | 100.0 |

Source: Sports ground Survey

Figure 3.2 details how willingness-to-accept valuations differ between the two most different groups, club associates and non-users.

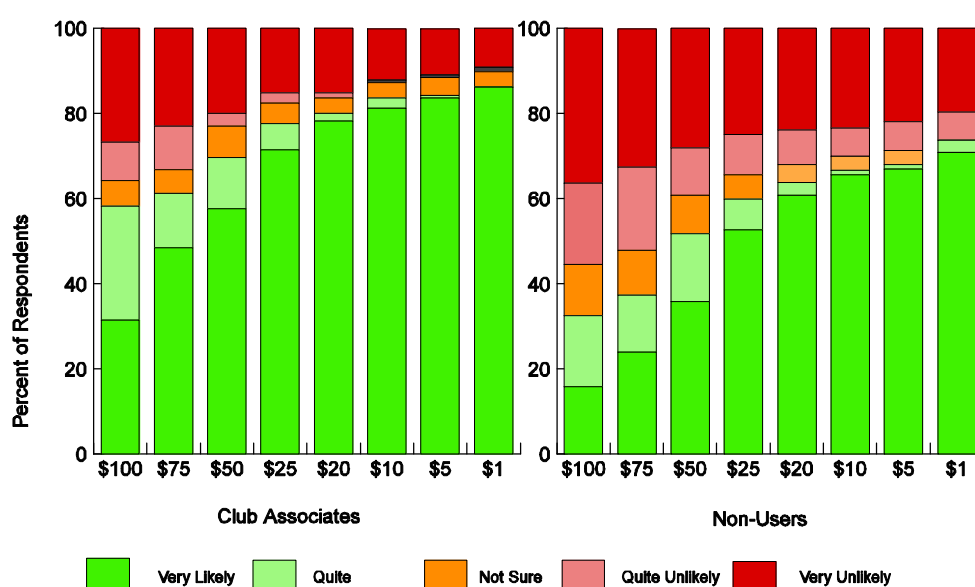


Figure 3.2 Comparisons of Club Associates and Non-Users (Descending Values)

Source: Sports ground Survey. See Appendix A1 for the data used in this figure

Separating the data into user segments shows that equivocal responses decline as values decline. For both types of users, the gradient of the value curve becomes steeper after the \$20 value, suggesting an optimal acceptable range of \$20–\$1

Threshold Values

To further examine the possibility that there exist some critical values that separate different attitudes, Figure 3.3 identifies the threshold value at which each respondent altered an equivocal ('Not Sure') or negative ('Quite Unlikely') response to a positive valuation (that is, at least 'Quite Likely' to pay or accept). These values are shown for four groups of users in both the Ascending Value and Descending Value scales.

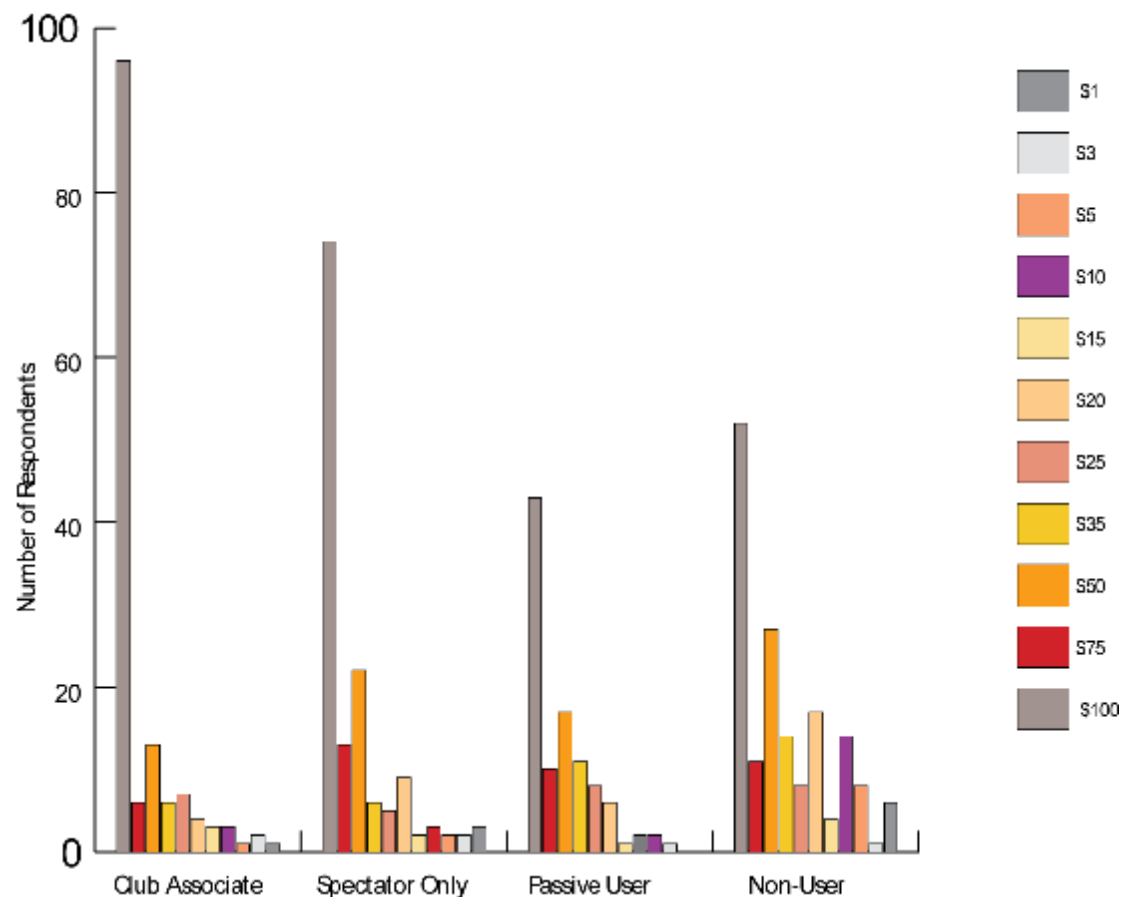


Figure 3.3 Scaled 'WTP' Values by User Type – Descending Scale

Note: 'Will Not Pay' and 'Not Sure' excluded.

For the descending or community valuation response, the majority of respondents offered the highest value available (\$100). Below \$100, the modal value at which respondents changed their response was \$50 value, although for non-users the lower values of \$20 and \$10 were also popular choices. For the ascending or personal willingness-to-pay response, responses are skewed toward lower values with the modal value at \$5 for all four user groups.

At these modal values (\$50 descending scale, \$5 ascending scale) there is a strong similarity between the ascending sample and the descending sample responses. Figure 4 shows threshold values in percentage form. Here, at \$5 on the ascending (personal) scale and at \$50 on the descending scale, just fewer than 60% club users, a little over 40% of spectators and a little over 20% of non-users are willing to pay for ground upkeep. Passive users differ in their response

patterns. This data suggests perhaps that consumers' personal willingness to pay is about 10% of their perception of the net value of a community resource.

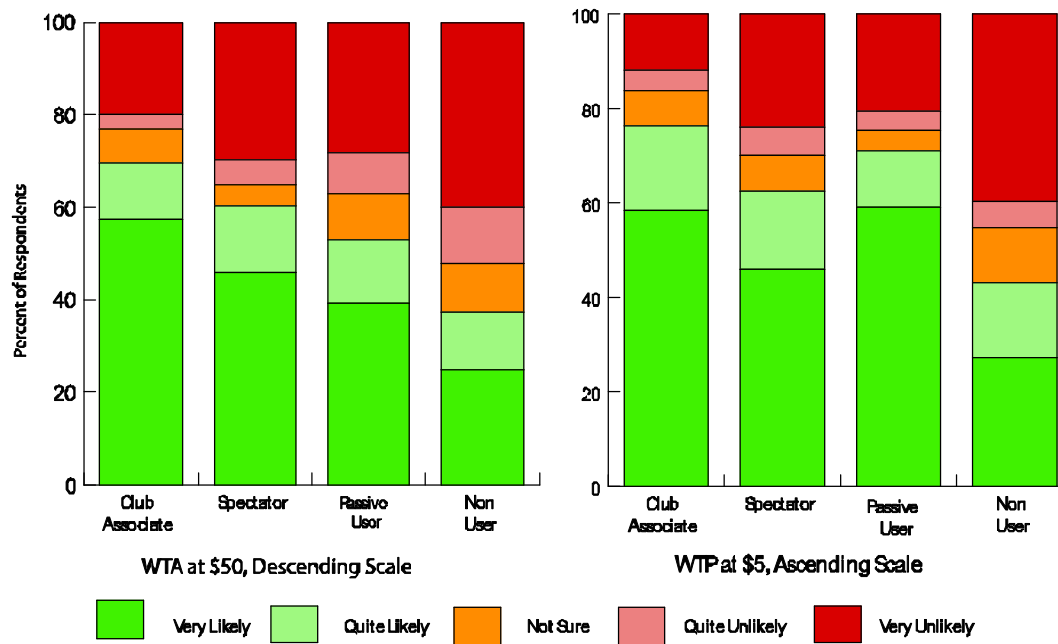


Figure 3.4 User Group Differences at Selected Values

Note: Split sample: Ascending and descending scales are different respondents

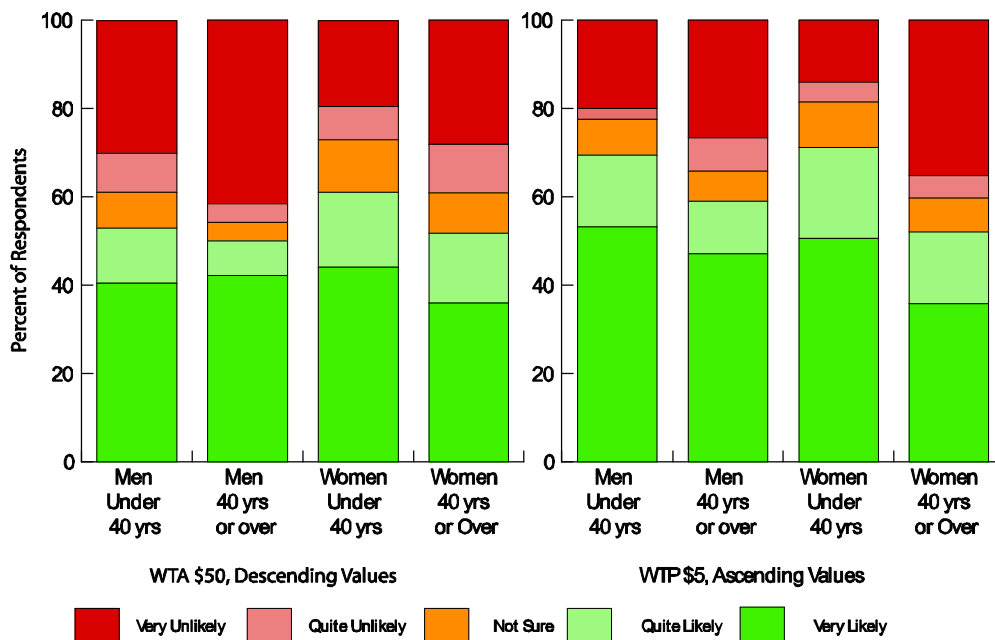


Figure 3.5 Age and Gender Differences at Selected Values

Note: Split sample: Ascending and descending scales are different respondents

Age and Gender

Figure 3.5 reveals the patterns for gender and age groupings. It suggests that older women are the least willing to pay for sporting grounds, but that younger women are most likely to place a high value on sports grounds. Women under 40 years of age are the least likely to give a 'Will Not Pay' response. Closer scrutiny of the data suggests that households with children are most likely to support maintaining sports grounds.

Place Differences

It is likely that valuations of sports grounds differ from place to place depending on local climatic conditions and local policy settings. For example, New South Wales's local parks levy or Victoria's local ground user fees (which are typically set at 10-20% of the actual cost of maintaining grounds) may have been familiar to respondents and altered their valuations. When the survey was conducted, in October 2008, Brisbane had recently received heavy rainfall while Melbourne and Adelaide were experiencing an unusually dry spell. Higher average rainfalls in Brisbane and Sydney suggests that sports grounds might require less irrigation and survive better without irrigation. Sports grounds in Melbourne and Adelaide have been affected by drought in recent years. These contingencies may explain the patterns of outcomes shown in Figure 3.6. It appears that Sydney and Perth have the highest willingness to pay for ground upkeep and that Melbourne has the highest rate of unwillingness to pay for ground upkeep.

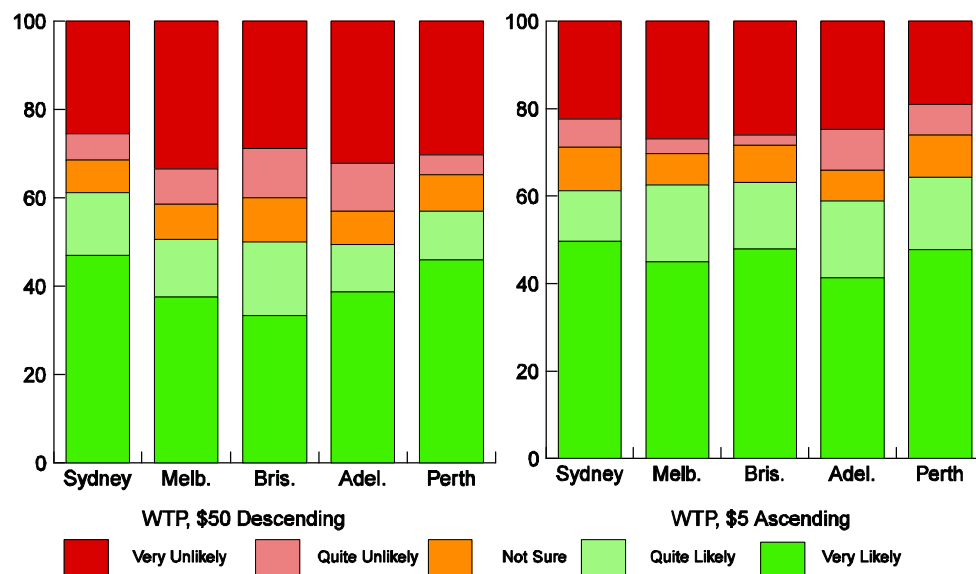


Figure 3.6 Valuations by Capital City

Source: Sports grounds Survey

To conclude: This section has shown that the use of descending and ascending values changed the way that interviewees responded to the valuation task. In the descending version, responses provide an indication of the willingness-to-accept value that the community places on sports grounds as a common resource. The values placed on sports grounds vary significantly with the type of user, but in general are quite high, in the range of \$50 or more. In combination, the results suggest that the community – including ground users and non-users – places a high value on sporting grounds. Although it is beyond the scope of this project, it is possible that further analysis of willingness-to-accept (descending) valuations could identify an optimal value for sporting facilities. The willingness-to-pay (ascending) values, on the other hand, provide a more pedestrian

measure of the level of tax or charge individuals would bear if some sort of parks levy was imposed to maintain grounds. That value would be relatively uncontroversial at about \$5.

3.3 Options for Maintaining Sports grounds

In addition to the valuation questions, respondents were asked which of five options for maintaining sports grounds they supported. The options were to:

1. Provide resources for maintaining public sports grounds if the only alternative is to close them down.
2. Maintain public sports grounds, but on the condition that they become self-sufficient by relying upon recycled water.
3. Maintain public sports grounds, but only if it is not at the expense of other services.
4. Introduce a user-pays system for organisations with small ground fee.
5. Close down public sports grounds and retain as open parkland.

Table 3.7 shows strong public support for the introduction of measures that encourage sports grounds to be self-sufficient (86.4%). There is also strong support for a user-pays system (77.4%). 64.8% agreed with the proposition that sports grounds should be maintained, by not at the expense of other services. Responses also demonstrate that the closure of sporting grounds would be an unpopular decision: 72% disagreed with the suggestion that grounds be converted to open parkland.

Table 3.7 Options for Ground Maintenance

| | Strongly Agree | Agree | Not Sure/ Declined | Disagree | Strongly Disagree | Total |
|------------------------|----------------|-------|-----------------------|----------|-------------------|-------|
| | % | % | % | % | % | % |
| Only if no alternative | 19.5 | 40.5 | 13.9 | 21.2 | 4.9 | 100.0 |
| Self-sufficiency | 34.9 | 51.5 | 6.3 | 6.4 | 0.9 | 100.0 |
| No loss of services | 14.3 | 50.5 | 16.6 | 15.5 | 3.2 | 100.0 |
| User Pays | 22.5 | 54.9 | 8.1 | 11.4 | 3.1 | 100.0 |
| Make Open Parkland | 3.1 | 13.0 | 11.4 | 46.9 | 25.5 | 100.0 |

Source: Sports ground Survey

Table 3.8 shows that support for maintaining sports grounds and encouraging self-sufficiency is strong across user groups.

Table 3.8 Ground Maintenance Preferences by User Group

| Conditions on Maintenance | Strongly Agree or Agree | | | | Total |
|---------------------------|-------------------------|-----------|--------------|----------|-------|
| | Club Associate | Spectator | Passive User | Non User | |
| | % | % | % | % | % |
| Only if no alternative | 65.3 | 60.5 | 62.2 | 53.6 | 60.0 |
| Self-sufficiency | 87.4 | 87.4 | 84.5 | 85.9 | 86.4 |
| No loss of services | 51.1 | 62.5 | 61.3 | 71.5 | 64.8 |
| User Pays | 76.6 | 79.1 | 77.7 | 76.7 | 77.4 |
| Make Open Parkland | 12.0 | 12.8 | 18.9 | 20.8 | 16.1 |

Source: Sports ground Survey

Under Victoria’s Level 3a “4 in 1” water restrictions, some sporting grounds have been temporarily closed due to poor ground conditions or during the conversion to warm season turf or for installation of sub-surface irrigation or water storage facilities. Harsher water restrictions in the future may result in more widespread ground closures. The survey asked respondents to nominate their preferred course of action in the event that grounds were closed (i.e. “How would you respond if your local sports ground was no longer maintained or was closed due to stricter water restrictions?”). Table 3.9 shows responses categorised by ground user type.

Table 3.9 Likely Responses to Closure, by User Group

| Response to Closure: | Club Associate | Spectator | Passive User | Total | |
|------------------------------------|----------------|-----------|--------------|-------|-------|
| | Freq. | Freq. | Freq. | Freq. | % |
| Find an alternative ground | 202 | 155 | 103 | 470 | 45.4 |
| Continue to use the area | 121 | 103 | 109 | 333 | 32.1 |
| Find alternative sport or activity | 61 | 67 | 23 | 151 | 14.6 |
| Don't Know | 33 | 55 | 18 | 110 | 10.6 |
| Cease involvement in activity | 42 | 42 | 15 | 98 | 9.5 |
| Do something else | 22 | 27 | 7 | 56 | 5.4 |
| Lobby Council / Government | 11 | 10 | 1 | 22 | 2.1 |
| Total | 492 | 459 | 276 | 1240 | 119.7 |

Source: Sports ground Survey

Note: Multiple responses accepted. Non-users excluded.

The answers shown in Table 3.9 suggest that if sporting grounds are closed, most participants will seek an alternative venue or continue to use playing surfaces regardless of their poor condition. About 1 in 7 (15.1%) respondents will seek alternative sports. Only about 1 in 10 (9.5%) expect to discontinue a turf-based activity. Another 1 in 10 people do not know what they would do. These responses suggest that the costs of sporting grounds closures are exaggerated in studies that compare current use patterns relative to an alternative scenario in which grounds are lost and players are denied access to sporting facilities. The responses do suggest that less access to turf-based grounds will put significant additional pressure on existing non-turf sporting facilities.

Table 3.10 Responses to Open Ended Question “What would you do?”

| What would You do? | Club Activity | Spectator Only | Passive User Only | Non User | Total |
|-----------------------------|---------------|----------------|-------------------|----------|-------|
| Nothing / Don't Know | 57 | 73 | 48 | 157 | 335 |
| Use Recycled Water | 91 | 90 | 71 | 80 | 332 |
| Install Water Tanks | 26 | 37 | 25 | 33 | 121 |
| Secure Extra Govt Funds | 27 | 27 | 9 | 24 | 87 |
| Make do | 16 | 19 | 12 | 12 | 59 |
| User Pays – Individuals | 16 | 10 | 9 | 24 | 59 |
| Install Bores | 14 | 13 | 10 | 17 | 54 |
| Harvest Storm / Rain Water | 7 | 12 | 14 | 13 | 46 |
| Impose Community Tax / Levy | 12 | 9 | 7 | 5 | 33 |
| Use Synthetic Surfaces | 6 | 5 | 1 | 6 | 18 |

Source: Sports ground Survey

The survey’s final question offered an open-ended invitation for respondents to recommend solutions to the problem of maintaining sports grounds in a water-constrained context. Their

responses were later coded and aggregated. The ten most common responses are shown in Table 3.10. The highest number of responses is in the 'don't know' category. Then, a range of water saving-options were proposed by respondents, including: recycled water, installing tanks, harvesting stormwater and installing bores. More people support securing extra funds to maintain sports grounds than support user pays or community taxes and levies. This reframes the issue in terms of the distribution of scarce (water) resources. Quite a number of people think that sport will simply have to make do. Less visible solutions, such as sub-surface irrigation and drought resistant grasses, are not mentioned - implying a low community awareness of these options.

3.4. Conclusion

The data presented in this chapter shows that sporting grounds are used by about 70% of people at some time during the year. They are highly valued by the community at large, although frequent users place much higher values on grounds. Because of the limits on values that were imposed by the survey design, it has not been possible to calculate a mean value of sporting grounds as a community asset. However, we have established that more than a third of people (36.9%) value grounds at more than \$100 and more than half (53.5%) value them at \$50. If we assume, following the MAV guidelines, that each sporting ground services about 22,000 people then at \$100 each ground is "worth" \$2.2 million. Moreover, at a willingness to pay \$5 for ground upkeep, each ground would be allocated \$110,000 per annum. That said, willingness-to-pay values should be treated with caution, and not interpreted as evidence of consumer acceptance of a ground maintenance levy.

4. The Impacts of Water Restrictions on Participation

Sports grounds are a key neighbourhood social resource to many different groups, involving many different stakeholders to provide this service. This section explores the impacts of water restrictions on these different groups by considering the following five sub-sections:

- The Implementation of Water Restrictions
- Impacts on Participation and Access
- Strengthening Communities
- Making Sport Sustainable
- Barriers to Change

This chapter draws on interviews with council officers, representatives of sporting associations, sporting clubs and other stakeholders to describe the community level responses and adaptations that have been triggered by water restrictions. Its focus is on direct participants and managers of turf-based sport. The chapter explains how water restrictions have constrained local councils' ability to meet the growing demand for sports participation and how they have exacerbated existing barriers to access. It shows that water restrictions have been a catalyst that has changed the local-scale management of sports grounds. The chapter's key conclusion is that water restrictions intensify pre-existing struggles over access to public space in the form of turf sporting venues. Consequently, water restrictions are generating substantial social and economic costs that are being born by the least advantaged groups in the community.

4.1 The Implementation of Water Restrictions

Across metropolitan Melbourne, population growth and increasing levels of sports participation, have placed pressure on finite recreation resources. Even before the current water crisis, demand for sport grounds exceeded the supply of the existing turf playing field resource. It is local councils' responsibility to manage sports grounds and to manage the relationship between the demand for and the supply of playing spaces. In built-up urban jurisdictions, there are few opportunities to expand the land available for turf-based sports. As a consequence, playing surfaces are becoming a scarce resource. This section explains how water restrictions have intensified existing pressures on access to sporting grounds.

Before water restrictions were introduced, the allocation of sporting grounds reflected a history of possession by established clubs and established sporting codes (principally cricket and football). Established sports clubs' quasi-proprietary interest over 'their' grounds was reinforced by a long history of delegated care and control supported by local councils, which have provided maintenance services from the public purse. Clubs' rights to turf-based territories have been formally recognised in a variety of ways, for example, in long-term leases on council-owned premises, or permission to construct clubhouses on council land. Many clubs have had exclusive or priority use of their ground for 50 years or more. Established codes (Australian football and cricket) attract a high level of Government subsidisation and are supported by well-resourced national associations.¹¹ Local ground resources have been shared to the extent that different clubs occupy the facilities in the summer and winter seasons.¹²

¹¹ Their large fund-raising capacity also enables them to attract dollar-for-dollar support for their projects.

¹² This demarcation is becoming less clear as pre-season training extends use into the opposite season.

In the past, when water was plentiful, council parks and gardens staff would maintain turf grounds to maximise the quality of the surface. Maintenance effort was dictated by the requirements of different sports (e.g. turf wickets). Playing surfaces were planted with grasses that suited the needs of particular sports and grounds were watered regularly throughout the hotter months to maintain the required turf condition. In recent years, councils have begun to shift to an approach that maximises the carrying capacity of sporting grounds and ensures that the playing surface is able to be used by a variety of sporting codes. This shift forms the context into which water restrictions have been introduced.

Level 3a water restrictions, which have been in force in Victoria since 2007, required initially that the local councils water only '1 in 4' sports grounds. Later an allocation system was introduced to give local jurisdictions more flexibility in how they would deploy their finite water allocation.¹³ This limits councils' capacity to maintain grounds in optimal condition. Councils' responses to restrictions varied from place to place. When managers understood the new regulations as a temporary imposition, and as a response to a short-term drought, they favoured short-term responses, such as purchasing and trucking in water to maintain ground standards, and lobbying State and Federal Governments for assistance to underwrite the associated costs. When they interpreted restrictions as the first steps in a permanent adjustment to the long-term effects of climate change, on the other hand, they instead gradually embraced the role of leading the community in resource conservation and a necessary shift to more efficient water use practices.

At the outset, the '1 in 4' watering rule forced Councils to select which venues would be irrigated and which would be neglected. To facilitate this difficult decision, most council managers have developed a quasi-objective points-based ranking system. The assessment criteria varied from place to place but in general sought to preserve valuable, high profile local resources. Table 4.1 shows the criteria used by three councils. The weighting accorded to criteria, the method for scoring grounds and the transparency of the process varied among jurisdictions. In most places the criteria were developed through a community consultation process. Nonetheless, the process generally resulted in water resources being allocated to larger and well-established clubs.

Table 4.1 Three examples of council ranking systems for selecting irrigated grounds.

| Council 1 | Council 2 | Council 3 |
|----------------------------|---|----------------------------|
| Community usage | Social facilities | Main sports grounds |
| Main sports grounds | Training facilities | Availability of facilities |
| Availability of facilities | Best local ground | Ground conditions |
| Condition of the ground. | At least one ground for each main sport | Community usage |

Sporting clubs' and associations' would have preferred rankings that rewarded activity level, the standard of game and the quality of club facilities; that is, rankings that protected established clubs and high grade competitions. Many sporting clubs and associations take the position that keeping grounds open and adequately maintained is a foundational responsibility of local government. The incapacity to provide this basic service is then interpreted as marking the failure of local government. Some sporting associations argue that councils have not done enough to pressure water authorities for more generous water allocations. They also protest that State Government water policies place a heavier burden on public water uses (sport) than on private sector and industrial uses.

¹³ Some councils opted to cease all watering of grounds because the water allocation was not sufficient to keep the grasses alive. Clubs and associations tend to agree with this assessment.

Consequently, the first year of restrictions (2007) was characterised by confusion, conflict and blame. Sporting clubs disadvantaged by council ranking systems and allocation processes often used political tools – such as lobbying elected councillors and members of parliament – to alter the council's allocation. The upshot of this politically charged process is that watering regimes have tended to protect the interests of the most powerful and well-resourced local clubs; clubs that are usually long-established, play dominant codes (football and cricket) and have deep connections in the community.

Struggles over access

The impact of water restrictions on ground usability has varied among municipalities, depending on local rainfall, soil type, ground conditions, types of sports played, intensity of use and so on. In some places grounds have been closed temporarily or limits placed on their use. In others, restrictions have meant that some sporting clubs and other ground users have been forced to reduce their use and others have been excluded from access to grounds.

Rather than closing grounds, most local councils have adopted a "limits of acceptable change" approach that allows all grounds to deteriorate within acceptable parameters and aims to minimise the disruption to ground users. This strategy 'shares the burden', enables councils to remain impartial and avoids council officers being forced to 'pick winners and losers' among sports, sports associations and clubs. Nonetheless, in most places, restrictions have intensified contestation over ground allocation. Managing this emotionally charged process has led local council managers to increase their monitoring of ground use and water use, improve the transparency of their ground allocation processes and introduce strategic audits of facilities use and management. Access pressures have also generated new technical demands for ground managers as they search for strategies to preserve grounds under reduced irrigation regimes. With councils, the imperative to constantly monitor the relationship between ground allocations and ground conditions has encouraged greater internal coordination among recreation, parks and gardens, environmental managers and planning departments. These changes challenge the traditional institutional divisions of labour in local government.

Local councils have also had to balance club and community demands to keep grounds open for use with the practical need to preserve the long term value of the ground as a local asset and resource. As well as protecting irrigated grounds from over-use, councils have been forced to limit the use of un-watered grounds to prevent them from deteriorating irretrievably.¹⁴ Un-watered grounds develop problems with compacted soil, disease and insect infestations. Restoring neglected grounds may prove more costly (and less water efficient) in the longer term than maintaining them continuously. There is also a risk that the "acceptable change" approach will increase injury rates. Since 2003, changes in insurance coverage, injury risks have been managed by clubs and associations by assessing each ground, immediately prior to matches being played, using an agreed checklist of risk factors.¹⁵ This system is far from perfect. All stakeholders are sensitive about injury risks, despite there being no evidence of increased injury rates or increased insurance claims or premiums since Level 3a water restrictions began in Melbourne.¹⁶ The only

¹⁴ Definitions of maximum ground carrying capacity vary from place to place, ranging from 12 to 26 hours per week, depending in part on local climatic conditions and material differences in ground quality as well as cultural considerations (Sunday as a rest day).

¹⁵ Councils also make regular inspections of ground wear and tear, overuse or inappropriate use with a view to sustainable long term management of the resource.

¹⁶ It seems that wet and uneven surfaces cause more injuries than dry, flat surfaces (Otago et al., 2007).

discernable change is an increasing incidence of superficial cuts, scrapes and strains from falling and running on compacted ground.¹⁷

In most cases, councils have managed water restrictions by encouraging sporting associations and clubs to take greater responsibility. This includes decisions about how they will manage their response to reduced ground access. Associations, for example, may elect to reduce the number of competitions or grades of competition offered in particular areas, or limit the number of teams permitted to join a particular competition (which, in turn, reduces the number of weeks of the home-and-away playing season). Similarly, clubs may elect to reduce the number of teams they field, to change the competitions they play in, or revise the ratio of senior to junior competitions.¹⁸ These processes enable clubs to adjust to reduced ground availability by limiting the number of opportunities for participation they offer, rather than by cancelling events during the season. In this way, the stresses of the 2007 season have been avoided in 2008 by shrinking metropolitan competitions.

Institutional Change

Managing water restrictions has impelled councils to increase their levels of engagement with ground users. The new demands on councils include informing users of water-related issues, explaining council policies on access and ground use, monitoring ground conditions, renegotiating ground access, rescheduling fixtures, moderating restriction-related disputes, policing ground use and dealing with encroachments by unauthorised users. These tasks are additional to ground maintenance work by parks and gardens staff. When the water restrictions continued in 2008, with no end in sight, stakeholders began to recognise their shared concerns and the need for solutions based upon consensus to the difficult problems that restrictions create. By late 2008, when this interview program was conducted, most council staff had accepted the pragmatic approach recommended by the Municipal Association of Victoria (GDH, 2007).

As a result, an unanticipated outcome of water restrictions is increased interaction and communication between local council staff and ground user groups. Councils have instigated meetings to exchange information about ground conditions and to develop shared solutions to ground allocation problems. Roundtable meetings involving council representatives and multiple ground users have been organised to negotiate access to grounds, while meetings between councils and single users have clarified individual access needs. In both formats, debating access issues and canvassing a range of possible responses have assisted councils to identify priorities and to avoid further politicisation of allocation disputes. Councils have learnt that when ground use policies change, engaging with and involving sporting clubs and associations at each stage of the implementation process facilitates implementation.

The water restrictions have stimulated increasing inter-council cooperation.¹⁹ Since sporting associations' activities often span multiple local government jurisdictions, councils have been forced to cooperate with each other to negotiate access with multiple local council administrators, each with different rules and priorities. It is no surprise that associations want councils to agree on uniform ground access and ground closure policies. Councils, however, reject one-size-fits-all

¹⁷ Most minor incidents are not reported and are therefore difficult to determine. A serious on-field accident would test existing measures. If the ground condition is a contributing factor, widespread ground closures are likely to follow as councils and insurance companies demand more stringent ground assessments.

¹⁸ If one team is discontinued, other teams are likely to grow a long 'bench' of players seeking access to remaining teams. Participation is likely to fall away as players that are not able to secure a place in another team drift away.

¹⁹ Trans-boundary cooperation also arises when councils liaise with sporting associations, water authorities and state government departmental officials.

approach that ignores differences in the condition and resilience of particular grounds. They insist that local differences in rainfall and evaporation rates mean that both the severity of impacts of water restrictions and optimal responses to them must vary from place to place. In addition, the capacity of sporting clubs and associations to invest in water efficiency varies. Clubs that are supported financially by national structures (e.g. football and cricket) and large well-resourced clubs are more able to respond to water-related challenges, and their contributions needs to be taken into account when framing allocation policies.

Whilst this and other tensions remain, stakeholders in the ground allocation process appear to be 'learning by doing' in a process that is building local knowledge of urban land care. Most agree that this has been a constructive process: as knowledge has increased, discussions have become more sophisticated and expectations have converged. Overall, water restrictions have been a catalyst for increased local and regional scale cooperation, collaboration and service coordination. They have impelled councils to develop transparent strategic management frameworks for sporting grounds and to promote and implement coherent water management plans. They have forced councils to improve their understanding of the needs, priorities and operations of sporting clubs and to recognise the contribution that sporting clubs make to local communities. This knowledge is helping councils to develop sustainable approaches to managing local sports grounds. Concomitantly, as a result of interactions over ground allocation and use, sports clubs' better appreciation of the difficulties faced by councils have moderated their expectations about the quality of grounds and facilities and increased their willingness to share ground facilities. This study's informants believed that councils' water use practices will "never go back" to wasteful pre-restriction models and that re-designing facilities for more sustainable use of water resources is necessary to secure the viability of sporting grounds in the future.

Increasing Workloads

These institutional innovations have not been costless. Rather, they have generated complex new tasks for council officers, paid sporting association officials and (mostly) volunteer sporting club personnel. Many of these tasks are stressful for all involved. Reports of high attrition rates among council officers and club volunteers suggest that this level of demand is unsustainable. Onerous demands on club volunteers—in the form of additional meetings, preparation of funding submissions, negotiating to reschedule fixtures, making ground assessments, organising alternative training venues and organising (or physically providing) transport to venues—increases the risk that a proportion of them will burn out and stop volunteering altogether.²⁰ Volunteers are stressed by the uncertainty and confusion surrounding ground allocations. The work and stress involved in managing water restrictions is not sustainable for an organisational structure that relies on volunteer labour.

4.2 Impacts on Participation and Access

The previous section outlined the processes through which revised sports ground allocations have been managed. This section considers the impacts of these decisions on participation in and access to turf-based sports. It argues that water restrictions have compounded pre-existing problems in ground access, which derive from a growing population, increasing demand for sport participation and finite resources. Moreover, although the impacts of restrictions have differed for

²⁰ Clubs have access to some assistance via state government and sporting associations, such as the Australian Drug Foundation's Good Sports Accreditation Program and the AFL 'Quality Club Program' (VicHealth, 2008), but this appears woefully inadequate relative to the work incurred by water restrictions.

established sports clubs compared to less well-established clubs and recreational users, the 'sorting' process they instigate tends to advantage established clubs and elite, male sports.

As a result of water restrictions, established sporting clubs have been forced to make multiple changes to their traditional modes of operation. Clubs have:

- Limited (or in some cases, cancelled) pre-season training;
- Changed the location of pre-season training;
- Reduced the number of pre-season practice matches;
- Imposed limits on the number of teams they field;
- Imposed limits on the number of players on team lists;
- Changed the times and locations of training;
- Reduced the number of training seasons held on turf surfaces;
- Altered the content of training activities (for example, by replacing sessions that would have been on turf with sessions held at indoor stadiums, gyms or swimming pools);
- Altered the scheduling of matches;
- Played more games 'away' from their home grounds, often playing on grounds some distance from their local area;
- Reduced the duration of playing seasons;
- Changed the arrangements and locations of finals series;
- Cancelled matches when grounds are closed or not available.

Limits on the numbers of teams and/or number of players in teams mean that in practice the least able players and lower grade teams are the most likely to be dropped from competition. Because the aim of competitive sport is to win games, clubs are organised in skill hierarchies dominated by A-Grade men (and the need to replenish their ranks). Women's or junior's training has been the most affected by restrictions on ground use. In order of preference, junior boys, junior girls and women's teams may be dropped or relegated to the poorest quality playing fields or are required to find alternative venues. This process tends to exclude clubs' less able players and those that participate in sport for social and health reasons.²¹

Rather than cancelling matches scheduled for unplayable grounds, some clubs are negotiating access to alternative venues. This is a costly strategy. First, many clubs rely on revenue from home-game canteen sales. This is lost when the team plays an 'away' game. Second, playing in distant venues incurs additional transport costs. Third, using commercial venues such as swimming pools or indoor stadiums incurs hiring fees. These costs are passed on to players and members through higher membership and match fees. Transport difficulties increase the likelihood that junior games will be cancelled, given the difficulty in recruiting volunteers (i.e. parents) to ferry teams to distant venues. In at least two instances, the shorter playing season and reduced number of home games have led to the withdrawal of sponsorship. Clubs also worried that final series matches would be cancelled or curtailed. Finals are a critical source of revenue for local sport as gate tickets and canteen sales at finals games underpin the viability of individual clubs and leagues.²²

The displacement of matches has social costs that are impossible to quantify reliably. In places where there are not enough grounds to meet demand, clubs have at times moved their training activities into a neighbouring council's land or encroached on open spaces that are designated for passive recreation. Clubs and social users are also encroaching on playing surfaces that should

²¹ The magnitude of this reordering will not be quantifiable until 2007 and 2008 local level ERASS data becomes available.

²² Evidence provided by clubs suggests that the direct economic costs of losing a finals game range from several hundred to the tens of thousands of dollars, depending on the size and status of the competition.

be 'resting' to recover from a season's competition. In response, councils have been forced to police grounds to chase off 'marauding' outsiders.

This evidence strongly suggests that water restrictions are reducing participation and activity in turf-based sports, but in ways that are difficult to quantify. This research has not established whether former or potential players that have not been able to find a place with their preferred club are joining another club, taking up a different (non-turf) sport or simply dropping out of active participation. Anecdotally, it appears that the distribution of these outcomes depends on individual determination and skill level. To put it another way, water restrictions have intensified the competition for access to turf-based team sports, which in effect means that playing in turf based sporting teams is becoming a more elite activity than it was in the past.

In addition to the problems of established clubs, new clubs that do not have an existing claim to ground space and less well established clubs with weak territorial links to sports grounds (or under-developed local political networks) are finding it difficult to gain any access to grounds. The established clubs that are the participants in the negotiated ground allocation process are publicly recognised as having a legitimate claim to grounds. Their institutional presence is recognised by other stakeholders. For obvious reasons, the established clubs have nothing to gain by increasing the pool of groups with a claim to the use of scarce turf resources and may not view outsiders' claims as legitimate. In this project, some women's clubs complained that they were excluded from pre-season access to turf grounds, or allocated the least well maintained (and potentially most dangerous) corner of playing space, or forced to pay for access to playing spaces within schools. Some have been unable to access grounds during men's competition finals. Some were 'making do' with unmarked spaces in local parks. Junior sport has been similarly excluded. In 2007 and 2008, some Auskick and Milo junior competitions were cancelled. Two junior women's teams have folded, despite support from their councils. Other councils are reviewing the access to sports grounds by inner city schools. Migrant groups are also affected. The (soccer) Football Federation of Victoria (FFV) is encouraging potential new clubs that cannot access playing space to instead join an existing club. Historically, multicultural Melbourne has settled and integrated newly arrived migrant and refugee groups through their soccer affiliations. In addition, casual and recreational users are increasingly excluded by ground scarcity. Instead of allocating them ground space, councils are encouraging these social players to join existing clubs. Grounds are now rarely made available for special events and social gatherings, especially during winter. Excluded clubs and groups have looked to access playing spaces in schools, local parks and recreational centres.²³ Policies introduced to manage water restrictions therefore reduce active recreation opportunities for vulnerable and low-income groups and actively undermine the Government's health and wellbeing objectives.

4.3 Strengthening Communities

The water restrictions force sporting clubs to access playable grounds wherever they can be found. As a consequence, many clubs play fewer games on their home ground. This means that clubs are using their clubhouses less often and that club activities are less strongly territorialised. Clubs contend that the dispersal of matches away from their home venues threatens their financial viability through loss of canteen revenues, raffles and other fund-raising activities that rely on proximity and atmosphere. They are also conscious that the stress on their core volunteers is diminishing the quality of their social engagement. Because water restrictions are forcing clubs to use a wider range of venues for games and training activities, clubs' various teams and grades

²³ When the use of these venues incurs a cost (i.e. recreation centres), economically disadvantaged groups are discouraged from participation. In a cashless exchange, clubs often provide coaching services to schools in return for the use of school grounds.

have fewer opportunities to come together at the home ground clubhouse. Therefore water restrictions are directly undermining the clubhouse as the hub of sport-related social activity, and with it social interactions in sports clubs that form part of the 'soft' social infrastructure that stimulates and supports local economic development.

Local government policies, as expressed in their responses to water restrictions, seem to endorse the detachment of ground access from club control. Ground management policies now demand that facilities are shared and discourage clubs from viewing grounds as their exclusive space. Councils are conscious that the dominant sporting codes (cricket, football, soccer) have benefited from sole custody arrangements and have tended to exclude other users.²⁴ Councils are encouraging clubs to shift their claim from monopoly "ownership" to shared "management" of the community's grounds. Yet if the crucial social benefit of sport—its acknowledged role in strengthen communities—is intrinsically bound up with control of its home base, then weakening the bond between sporting activity and sporting clubs will undermine the important social benefits that sport provides to the wider community. This is an important area for future research.

4.4 Making Sport Sustainable

Councils are deploying a range of strategies to 'weather-proof' playing surfaces for maximum capacity in a water constrained environment. The main technological solutions are:

- Converting turf grounds to warm season grasses that can survive on reduced irrigation or precipitation alone. This solution is not supported by all users, given the specific turf preference of some sporting codes (e.g. cricket). Establishing these surfaces requires temporary closure of sports grounds. Councils argue that they need an additional, dedicated water allocation and supporting funds to facilitate the conversion and establishment of warm season grasses.
- The introduction of sub-surface irrigation, stormwater harvesting, recycled water or sewer mining requires large infrastructure investments as well as changes in ground management and irrigation practices.
- Purchasing and trucking in Grade A recycled water to sports grounds has been the dominant temporary strategy, but is gradually being replaced by longer term sustainable water solutions. Some councils complained about the bureaucratic hurdles that inhibit access to recycled water.
- Replacing turf with synthetic surfaces is another option, although some users have concerns about traction and temperature retention, as well as the possible impact on sport culture and heritage. Synthetic surfaces are common in field hockey and increasingly accepted for competitive soccer competitions as well as for heavy use-low skill activities (such as school sports). Installing multipurpose synthetic areas for high intensity (training) uses adjacent to or within larger open (turf) recreational spaces appears to be an effective means of reducing stress on turf.
- Improving lighting on turf playing areas enables grounds to be used for longer hours. Its establishment (\$20,000 - \$80,000) and operating costs can be partially offset by additional ground bookings.
- Establishing regional sporting centres with synthetic playing surfaces and lighting reduces demands on turf surfaces. Their capacity to house a range of indoor and outdoor sports accommodates shifting sport preferences and multiple users.

Councils have also identified a number of institutional and organisational reforms that will enable sport to be played in more water efficient ways. These include:

²⁴ Political action also appears to be effective, given examples of synthetic pitches being provided, emergency grants being allocated and water cartage bills being paid.

- Shifting the organisation of grounds to a two-tier system in which only a main ground in a set of geographically proximate grounds is irrigated and used for competition, while surrounding grounds rely on precipitation and are used primarily for training. This requires flexible scheduling to fit multiple matches on the main ground.
- Modifying training regimes or game structure for play on synthetic or poorer quality turf or other types of surfaces. Modified games include fut-sal, touch football and twenty-20 cricket.
- Reviewing access arrangements to counter the exclusionary effects of water restriction policies. In some areas, council policies have purposefully allocated additional space to women, juniors, seniors and otherwise disadvantaged constituencies.
- Reviewing pricing policies to recover a higher proportion of the cost of maintaining grounds. Locally-agreed pricing formulae take into account asset type, the quality of facilities, council coordination services and council contribution to ground maintenance. Small groups believe that they pay a higher percentage of the cost of their access to sporting grounds. These funds could then be dedicated to drought-proof grounds.
- Encouraging non-turf based sports such as basketball, tennis courts, hand tennis, and individual fitness activities.
- Offering services on a regional basis to provide services for regional or zone based sports or smaller and more specialised sports with limited facilities. Several metropolitan councils are cooperating to develop regional sport services.

4.5 Barriers to Change

During the interview program, council officers and clubs raised a number of issues that are pertinent to the social and economic impacts of water restrictions. Although it is clear to council officers that long term limits on water use (climate change) will demand major investments to protect and maintain urban turf grounds. Currently there is no obvious source for this capital beyond the temporary State government allocations. In the short term, councils were more concerned about future water quantity allocations than water prices. Knowing their water allocation would facilitate long term strategic investments and ground allocations

Traditionally, councils have borne a significant proportion of the costs of maintaining municipal sporting facilities, albeit with significant support from State and Federal fiscal transfers. This means that the community as a whole bears most of the cost of maintaining sporting grounds. Since local government in Victoria has a limited capacity for raising revenue, councils have a limited capacity to fund the new demands being generated by water scarcity.²⁵ State funding for improving the water efficiency of sports grounds has been project-based, with the \$20 million 'Drought Relief for Community Sport and Recreation Program' supporting over 400 local projects since 2004. Most of these projects have involved modest efficiency improvements such as installing water tanks and the conversion of grounds to warm season grasses. In councils' estimation, long term sustainability projects will not be possible until projects have access to a reliable recurrent funding base. One possibility is the experience in New South Wales, where the Recreation and Open Space Embellishment Program created in the 'Section 94' amendment to the Local Government Act (1993) allows councils to charge ratepayers an annual levy for local public open space improvements. The resulting recurrent budget allocation enables NSW councils to plan significant infrastructure improvements and to bid for matching State and Federal government infrastructure funding as well as support from the non-government sector.

²⁵ Nonetheless, the Victorian government views local governments as the appropriate scale of governance of drought relief programs. Its local knowledge, understanding local priorities and expertise in project implementation experience increases the likelihood that efficient and sustainable policy solutions will be identified.

Local government recoups part of the cost of ground maintenance by charging ground user fees. But few clubs have a capacity to pay higher fees or to contribute more to ground upkeep. Funding major works is beyond the reach of all but elite sports that attract significant sponsorship. This suggests that raising user charges to recoup their additional costs arising from water saving measures, watering and reorganisation of ground use is likely only to increase the inequity of allocations, since large clubs with active sponsors and affluent members will be more able to pay the charges. Discounting charges for clubs that nurture junior, women's sport and participation by disadvantaged users is one of the few levers through which councils can promote equity.

4.6 Conclusion

This chapter's major finding is that water restrictions intensify rather than moderate local sports' access and equity problems. Restrictions have not hurt the large established clubs that play on quality irrigated home grounds as much as they have hurt marginal smaller clubs, new clubs and social users. Established clubs have the financial resources to purchase recycled water to replenish 'their' grounds, but this option is beyond the means of less well resourced clubs.

Water restrictions have induced a redistribution of internal resources. Clubs have been forced to alter the structures of pre-season training, impose caps on the number of teams they field; delay seasons, or reduce the duration of seasons. Many clubs have been forced to relocate 'home' games to other venues. Clubs incur additional costs in negotiating with councils and other clubs, organising venues, incurring hiring fees for the use of playing and training facilities, and transporting players and supporters. Reducing the number of games played at home reduces clubs' income generating capacity, which relies on canteen sales and fund-raising that depend on the social interactions at clubrooms. Some clubs have lost sponsorship support as a result of loss of home-game exposure. Club volunteers are becoming exhausted by the relentless demands of managing the effects of water restrictions.

Water restrictions have reduced the available amount of turf sporting grounds. As a result, some users have less access to sports grounds and others have been excluded from access altogether. This allocation process has tended towards the exclusion of some constituencies rather than spreading the burden across all potential users. This process favours elite sports and elite athletes and allocates the costs of water restrictions to the less competitive players and social groups.

If these processes continue, traditional turf based sports will cease to be mass participation sports in urban areas as the new capacity for participation is directed to synthetic surface sports (basketball, netball, hockey, soccer, volleyball, cycling etc). These alternative sports probably offer similar experiences of teamwork, dedication and strategy as turf sports. They may well have lower injury rates. They may be more socially inclusive than cricket or Australian rules football. They certainly use less water. What then would be lost if water scarcity eliminated turf-based sport from the Melbourne metropolitan landscape? The answer to that question is found in the previous chapter, which established the high value that the community places on turf-based sport.

5. Conclusion: Key Social Policy Issues

This project has examined literature on the costs and benefits of sports grounds, surveyed the ways the community values sports grounds and examined the processes through which water restrictions have been implemented. The central finding is that water restrictions have added to a series of existing challenges for the provision of sporting facilities. The central challenge in drafting the overall conclusions is to focus on the project's aims rather than being drawn into discussion of the perennial problems of sports provision. The project brief requires the identification of four central policy conclusions.

5.1 Access and Equity

Traditionally and currently, turf based sporting grounds are maintained by councils and are used mostly by football, soccer and cricket clubs. The clubs, which pay small user fees, have often also made significant improvements to the grounds and facilities which lead them to perceive a degree of ownership over the resource. Councils and the State Government have encouraged clubs, through various incentives, to become leaders in the provision of junior sport and fitness-oriented social competition. Water restrictions have undermined this work. Water restrictions have impelled clubs to focus on their core business of competitive high grade football. When cuts have to be made, it seems that women's teams, social teams and junior activities bear the cost. These changes are difficult to quantify because clubs are cutting back the opportunities they offer. This outcome undermines Federal, State and local policies encouraging participation in sport for health, well-being and social engagement.

In addition, the allocation of water restrictions is inequitable to the extent that the '1 in 4' rule and uniform water allocation system produces harsher outcomes in localities with lower natural rainfall. It is not a coincidence that the suburbs with harshest climates are also the suburbs where lower income households are more likely to settle.

5.2 Planning for Diverse Activities and User Groups

Sporting grounds are not only used by organised clubs. This project's survey found that about 70% of people use sporting grounds to some extent, often as spectator or passive users. This highlights that grounds are already multi-user spaces that cater for a wider range of community needs. The community cares about and values these spaces. It seems to follow that future ground improvements need to keep in mind the amenity value for non-sport as well as sport users, for example, by including walking and jogging tracks and watering landscape vegetation as well as the playing surface. It is important that people enjoy using these spaces and that the spaces be opened up in ways that break-down the divisions between club users and recreational users.

5.3 Local Level Participation Data

Whilst the interviews conducted during this project highlight the inequitable outcome that water restrictions are producing, we were not able to access reliable data on participation at the scale of particular grounds. It is not possible to accurately assess the effectiveness of water saving measures without reliable ground use measures that include non-sport uses. Of particular interest would be data on the profile of users – for example, men versus women, juniors versus seniors, soccer versus football so that accounts of discriminatory practices can be verified or not. These

data should be published by councils or governments to maintain public confidence in the transparency of the ground allocation process. The Federal Government already collects data on sporting participation to the postcode level. This data is difficult to access, even in summary form. It would assist councils and clubs if this (ERASS) data was made publicly available, as is ABS Census Data, so that councils could develop profiles of community participation. This type of data would assist council resource allocation decisions.

An important aspect of data collection is monitoring minor injury rates. Although there is no evidence that harder grounds are producing more injuries, clubs report increasing incidence of minor scrapes and bruising. There are significant concerns about ground conditions and safety. The current system, in which sporting associations are responsible for assessing the suitability of play, is succeeding to the extent that competitions are able to proceed, but one or two serious injuries might alter this situation dramatically.

5.4 Funding Innovation

Sports ground conditions have deteriorated significantly since water restrictions were introduced in metropolitan Melbourne. Most public sports grounds, watered and un-watered, are experiencing serious declines in the overall quality of soil and turf conditions. Despite the deteriorating surfaces and reduced watering regimes, councils have attempted to keep grounds open and accessible to the community. Their strategies have aimed to maintain grounds at or above acceptable community thresholds through investments that will make grounds more self-sufficient: sub-surface irrigation, conversion to drought tolerant warm season turf, the construction of facilities for water capturing and locating alternative water sources. Councils face significant costs in making these investments or in reinstating damaged ground surfaces.

The management of reduced ground access, the reinstatement of degraded grounds and the conversion of grounds to water saving infrastructure impose additional costs for councils. Since councils do not have the capacity to fund and manage these innovations, they have relied on funding allocations from State and Federal Governments. Whilst these grants are welcome, their 'one-off' nature makes it difficult to plan or to respond strategically to the challenges of climate change. This situation is less than optimal.

The community strongly values sports grounds as a core community asset. Support for maintaining community sport and recreation facilities in a usable condition spans sporting, recreational and non-user groups. The survey suggests that this is a cost the community is willing to bear. In addition to user pays fees, local sports grounds levies and increased transfers from State and Federal Governments, councils might consider applying to the Federal Government's new Climate Change Action Fund to fund sustainability innovations such as the installation of energy efficient and solar-powered water saving devices and lighting facilities that enable grounds to be used at night.

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APPENDIX A SUPPORTING TABLES

Table A1 Sport Participation, Victoria, 2007

| Rank | Turf-Based | Activity | Organised | Non-organised | Total | Total |
|------|------------|---------------------------|-----------|---------------|---------|-------|
| 1 | Some | Walking (other) | 42.6 | 1,371.4 | 1,391.1 | 34.0 |
| 2 | | Aerobics/fitness | 416.3 | 488.1 | 849.4 | 20.8 |
| 3 | | Swimming | 85.6 | 401.8 | 462.9 | 11.3 |
| 4 | | Cycling | 37.2 | 425.5 | 439.0 | 10.7 |
| 5 | Some | Running | 31.2 | 338.8 | 354.5 | 8.7 |
| 6 | Yes | Golf | 136.6 | 166.5 | 278.1 | 6.8 |
| 7 | | Tennis | 140.2 | 142.1 | 262.0 | 6.4 |
| 8 | | Walking (bush) | 27.5 | 169.5 | 189.3 | 4.6 |
| 9 | | Netball | 133.3 | 27.0 | 154.5 | 3.8 |
| 10 | Yes | Football (outdoor) | 78.1 | 79.1 | 147.9 | 3.6 |
| 11 | | Basketball | 103.0 | 50.8 | 144.9 | 3.5 |
| 12 | Yes | Australian football | 107.3 | 34.5 | 136.6 | 3.3 |
| 13 | Yes | Cricket (outdoor) | 96.5 | 44.5 | 134.5 | 3.3 |
| 14 | | Yoga | 76.5 | 60.8 | 126.4 | 3.1 |
| 15 | | Weight training | 30.8 | 69.1 | 95.9 | 2.3 |
| 16 | | Dancing | 69.4 | 30.7 | 91.7 | 2.2 |
| 17 | Yes | Lawn bowls | 71.0 | 3.5 | 73.9 | 1.8 |
| 18 | | Martial arts | 59.5 | 14.4 | 68.5 | 1.7 |
| 19 | | Football (indoor) | 39.4 | 29.5 | 64.9 | 1.6 |
| 20 | | Fishing | 6.1* | 54.8 | 56.5 | 1.4 |
| 21 | | Surf sports | 3.6** | 46.6 | 49.0 | 1.2 |
| 22 | | Squash/racquetball | 14.3* | 35.3 | 47.1 | 1.1 |
| 23 | | Motor sports | 16.5 | 37.1 | 46.5 | 1.1 |
| 24 | | Ice/snow sports | 8.4* | 37.4 | 44.1 | 1.1 |
| 25 | | Aquarobics | 31.4 | 11.5 | 40.7 | 1.0 |
| 26 | | Badminton | 13.2* | 23.7 | 34.2 | 0.8 |
| 27 | | Cricket (indoor) | 18.2 | 14.9 | 31.2 | 0.8 |
| 28 | | Horse riding/equestrian | 10.9* | 22.2 | 27.6 | 0.7 |
| 29 | | Volleyball | 23.6 | 3.8 | 27.4 | 0.7 |
| 30 | | Canoeing/kayaking | 14.0* | 18.7 | 27.3 | 0.7 |
| 31 | | Tenpin bowling | 10.0* | 15.8 | 25.7 | 0.6 |
| 32 | | Athletics/track and field | 25.6 | 2.9 | 25.6 | 0.6 |
| 33 | | Roller sports | 2.4** | 24.2 | 24.9 | 0.6 |
| 34 | | Table tennis | 7.9* | 18.5 | 22.4 | 0.5 |
| 35 | | Rowing | 11.7* | 8.9 | 20.6 | 0.5 |
| 36 | | Sailing | 11.9* | 12.4 | 20.6 | 0.5 |
| 37 | | Boxing | 12.2* | 7.6 | 19.8 | 0.5 |
| 38 | | Shooting sports | 12.0* | 13.1 | 18.7 | 0.5 |
| 39 | | Waterskiing/powerboating | 4.2* | 14.5 | 17.9 | 0.4 |
| 40 | | Orienteering | 3.0** | 14.2 | 17.2 | 0.4 |
| 41 | Yes | Touch football | 13.7* | 3.2 | 16.9 | 0.4 |
| 42 | Yes | Rugby union | 11.4* | 5.3 | 16.7 | 0.4 |
| 43 | | Scuba diving | 7.5* | 10.8 | 15.0 | 0.4 |
| 44 | Some | Hockey (outdoor) | 13.9* | – | 13.9 | 0.3* |
| 45 | | Triathlon | 13.2* | 0.9** | 13.2 | 0.3* |
| 46 | | Rock climbing | 6.6* | 5.1* | 11.7 | 0.3* |
| 47 | Yes | Softball | 11.6* | – | 11.6 | 0.3* |
| 48 | | Carpet bowls | 9.3* | 2.4** | 10.9 | 0.3* |
| 49 | Yes | Rugby league | 7.8* | 2.2 | 9.3 | 0.2* |
| 50 | Yes | Baseball | 9.1* | – | 9.1 | 0.2* |
| 51 | | Gymnastics | 3.5** | 4.3 | 7.3 | 0.2* |
| 52 | | Darts | 3.7** | 0.9 | 3.7 | 0.1** |
| 53 | | Billiards/snooker/pool | – | 1.8** | 1.8 | 0.0** |
| 54 | | Hockey (indoor) | 1.5** | – | 1.5 | 0.0** |
| 55 | | Water polo | 1.1** | – | 1.1 | 0.0** |

Table A2 Threshold Values by Type of Participation – Descending Scale

| Threshold Value | Club Associate | Spectator Only | Passive User Only | Non User | Total |
|-----------------|----------------|----------------|-------------------|----------|-------|
| Will Not Accept | 19 | 39 | 28 | 71 | 157 |
| \$100 | 96 | 74 | 43 | 52 | 265 |
| \$75 | 6 | 13 | 10 | 11 | 40 |
| \$50 | 13 | 22 | 17 | 27 | 79 |
| \$35 | 6 | 6 | 11 | 14 | 37 |
| \$25 | 7 | 5 | 8 | 8 | 28 |
| \$20 | 4 | 9 | 6 | 17 | 36 |
| \$15 | 3 | 2 | 1 | 4 | 10 |
| \$10 | 3 | 3 | 2 | 14 | 22 |
| \$5 | 1 | 2 | 2 | 8 | 13 |
| \$3 | 2 | 2 | 1 | 1 | 6 |
| \$1 | 1 | 3 | 0 | 6 | 10 |
| Not Sure | 4 | 1 | 3 | 7 | 15 |
| | 165 | 181 | 132 | 240 | 718 |

Table A2 Club Associates – Descending Scale

| WTA Value | Very Likely | Quite Likely | Not Sure | Quite Unlikely | Very Unlikely |
|-----------|-------------|--------------|----------|----------------|---------------|
| \$100 | 31.5 | 26.7 | 6.1 | 9.1 | 26.7 |
| \$75 | 48.5 | 12.7 | 5.5 | 10.3 | 23.0 |
| \$50 | 57.6 | 12.1 | 7.3 | 3.0 | 20.0 |
| \$25 | 71.5 | 6.1 | 4.8 | 2.4 | 15.2 |
| \$20 | 78.2 | 1.8 | 3.6 | 1.2 | 15.2 |
| \$10 | 81.2 | 2.4 | 3.6 | 0.6 | 12.1 |
| \$5 | 83.6 | 0.6 | 4.2 | 0.6 | 10.9 |
| \$1 | 86.1 | 0.0 | 3.6 | 1.2 | 9.1 |

Table A3 Non-Users – Descending Scale

| WTA Value | Very Likely | Quite Likely | Not Sure | Quite Unlikely | Very Unlikely |
|-----------|-------------|--------------|----------|----------------|---------------|
| \$100 | 15.8 | 16.7 | 12.0 | 19.1 | 36.4 |
| \$75 | 23.9 | 13.4 | 10.5 | 19.6 | 32.5 |
| \$50 | 35.9 | 15.8 | 9.1 | 11.0 | 28.2 |
| \$25 | 52.6 | 7.2 | 5.7 | 9.6 | 24.9 |
| \$20 | 60.8 | 2.9 | 4.3 | 8.1 | 23.9 |
| \$10 | 65.6 | 1.0 | 3.3 | 6.7 | 23.4 |
| \$5 | 67.0 | 1.0 | 3.3 | 6.7 | 22.0 |
| \$1 | 70.8 | 2.9 | 0 | 6.7 | 19.6 |

APPENDIX B

INTRODUCTORY LETTER AND INTERVIEW SCHEDULE



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[Date]

Project: Socioeconomic Impact Study of Water Restrictions for Sportsfields

I am writing to request an interview with you as part of a university research project on the effects of reduced irrigation and water restrictions on sportsfields in the Melbourne metropolitan area. The interview will be semi-structured, and will ask for information from your organisation and your opinion on the management of turf-based sports and sportsfields since Class 3a water restrictions came into effect.

Your participation in this research will contribute to the development of better understandings of the social and economic effects of Class 3a water restrictions within Melbourne on sport and may lead to new ideas about how policy might address any negative outcomes. The research is directed to improving knowledge and is not associated with any commercial venture. It is being conducted by Dr. Sally Weller, an experienced social researcher, Prof. John Carey, an experienced behavioural scientist, Dr. Nicholas Milne, a water treatment and policy researcher and Dr. Alex English, a social and environmental researcher.

We will contact you (by telephone or email) to request an interview, which can be held at a time and place convenient to you (but hopefully at some time in the next month). The interview will take about 20 minutes and, if you agree, may be audio recorded. At the beginning of the interview, the interviewer will request that you formally confirm your voluntary consent to participate.

As with all research conducted by researchers from Victoria University, this project is governed by the University's Research Ethics guidelines. These follow a national framework (outlined at <http://www.nhmrc.gov.au/publications/synopses/e42syn.htm>) which protects the privacy and confidentiality of any information you elect to provide.

Please contact Dr. Alex English (ph: 99191329) or Dr Sally Weller (ph:99191125) if you have any queries or concerns, or if you would like to make an interview time.

Yours sincerely,

Dr. Alex English

Any queries about your participation in this project may be directed to Dr. Alex English. If you have any queries or complaints about the way you have been treated, you may contact the Secretary, Victoria University Human Research Ethics Committee, Victoria University, PO Box 14428, Melbourne, VIC, 8001 phone (03) 9919 4761.

APPENDIX C

SAMPLE SURVEY

National Omnibus - October 2008

Questionnaire # _____ (1-4)

Q.1 Hello, my name's from Nexus, the market research company. We're asking people for their opinions on a few subjects. May I ask you some questions please?

First, since we have to interview a cross-section of the public, can I ask if you are under or over 40 years old?

[NB: Only adults, 18+ yrs qualify. Record segment below]

[REQUIRE ANSWER]

(100)

- q₁ Male - Under 40 yrs
- q₂ Male - 40 yrs or over
- q₃ Female - Under 40 yrs
- q₄ Female - 40 yrs or Over

Q.2 [Automatic question - City]

(99)

- q₂ Sydney
- q₃ Melbourne
- q₄ Brisbane
- q₅ Adelaide
- q₆ Perth

Q.3 [Random Number to Generate Q5 v Q6 Selection]

[REQUIRE ANSWER]

(15)

- q₁ 1
- q₂ 2
- q₃ 3
- q₄ 4
- q₅ 5
- q₆ 6

- q₇ 7
- q₈ 8
- q₉ 9
- q₀ 0

Q.4 [Automatic Question for Quota]

(99-100)

- q₂₁ Syd - YM
- q₂₂ Syd - OM
- q₂₃ Syd - YF
- q₂₄ Syd - OF
- q₃₁ Melb - YM
- q₃₂ Melb - OM
- q₃₃ Melb - YF
- q₃₄ Melb - OF
- q₄₁ Bris - YM
- q₄₂ Bris - OM
- q₄₃ Bris - YF
- q₄₄ Bris - OF
- q₅₁ Adel - YM
- q₅₂ Adel - OM
- q₅₃ Adel - YF
- q₅₄ Adel - OF
- q₆₁ Perth - YM
- q₆₂ Perth - OM
- q₆₃ Perth - YF
- q₆₄ Perth - OF

[A - IF THE ANSWER TO QUESTION 3 IS 0 OR 2 OR 4 OR 6 OR 8 OR 10, THEN SKIP TO QUESTION 6]

Q.5 I'd like to ask you some questions about the value you place on public sports grounds. To do this, I want to begin with a hypothetical scenario. I'm going to describe this scenario and then ask you some questions.

Scenario: Given the city's current water shortages, many grass-based sports grounds have not been watered and are deteriorating.

Imagine that harsher restrictions are introduced and that the watering of sports grounds is completely prohibited. This may result in many grounds becoming unusable for sports such as football, rugby or cricket. This may affect sports clubs, their facilities and sports related businesses.

Sports grounds could be maintained at pre-drought standards if extra water resources were allocated or money invested in recycling and water tanks. However, this may require the introduction of a special levy or cuts to other public spending.

Considering this scenario, how likely would you be to pay \$100 per year for maintaining your local sports grounds. Please give your answer in terms of being ...
 Very Likely Quite Likely Not Sure Quite Unlikely Very Unlikely ... to pay \$100 per year.
 [Read from top and stop when Very Likely] ... And if it were \$ per year ..

| | Likelihood to Contribute | | | | |
|-------|--------------------------|----------------|----------------|----------------|----------------------|
| | Very Likely | Quite Likely | Not Sure | Quite Unlikely | Very Unlikely |
| \$100 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (201) |
| \$75 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (203) |
| \$50 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (205) |
| \$35 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (207) |
| \$25 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (209) |
| \$20 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (211) |
| \$15 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (213) |
| \$10 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (215) |
| \$5 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (217) |
| \$3 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (219) |
| \$1 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (221) |

[A - IF THE ANSWER TO QUESTION 3 IS 1 OR 3 OR 5 OR 7 OR 9, THEN SKIP TO QUESTION 7]

Q.6 I'd like to ask you some questions about the value you place on public sports grounds. To do this, I want to begin with a hypothetical scenario. I'm going to describe this scenario and then ask you some questions.

Scenario: Given the city's current water shortages, many grass-based sports grounds have not been watered and are deteriorating. Imagine that harsher restrictions are introduced and that the watering of sports grounds is completely prohibited. This may result in many grounds becoming unusable for sports such as football, rugby or cricket. This may affect sports clubs, their facilities and sports related businesses. Sports grounds could be maintained at pre-drought standards if extra water resources were allocated or money invested in recycling and water tanks. However, this may require the introduction of a special levy or cuts to other public spending.

Considering this scenario, how likely would you be to pay \$1 per year for maintaining your local sports grounds. Please give your answer in terms of being ...
 Very Likely Quite Likely Not Sure Quite Unlikely Very Unlikely ... to pay \$1 per year.
 [Read from top and stop when Very Unlikely] ... And if it were \$ per year ..

| | Likelihood to Contribute | | | | |
|--|--------------------------|--------------|----------|----------------|---------------|
| | Very Likely | Quite Likely | Not Sure | Quite Unlikely | Very Unlikely |

| | | | | | |
|-------|----------------|----------------|----------------|----------------|----------------------|
| \$1 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (231) |
| \$3 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (233) |
| \$5 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (235) |
| \$10 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (237) |
| \$15 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (239) |
| \$20 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (241) |
| \$25 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (243) |
| \$35 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (245) |
| \$50 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (247) |
| \$75 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (249) |
| \$100 | q ₁ | q ₂ | q ₃ | q ₄ | q ₅ (251) |

Q.7 If the government were to spend money on maintaining public sports grounds, to what extent would you support the following options.

As I read out each option, please tell me whether you ..

Strongly Agree Agree Not Sure Disagree Strongly Disagree

with it. [\[Read out\]](#)

[REQUIRE ANSWER] [READ ANSWERS IN RANDOM ORDER]

| | Likelihood of Support | | | | |
|--|-----------------------|----------------|----------------|----------------|----------------------|
| | Strongly Agree | Agree | Not Sure | Disagree | Strongly Disagree |
| Provide resources for maintaining public sports grounds if the only alternative is to close them down. | q ₁ | q ₂ | q ₉ | q ₄ | q ₅ (271) |
| Maintain public sports grounds, but on the condition that they become self-sufficient by relying upon recycled water | q ₁ | q ₂ | q ₉ | q ₄ | q ₅ (272) |

| | | | | | |
|--|----------------|----------------|----------------|----------------|----------------------|
| Maintain public sports grounds, but only if it is not at the expense of other services | q ₁ | q ₂ | q ₉ | q ₄ | q ₅ (273) |
| Introduce a system where organisations that book the facilities are charged a small ground fee | q ₁ | q ₂ | q ₉ | q ₄ | q ₅ (274) |
| Close down public sports grounds and retain as open parkland. | q ₁ | q ₂ | q ₉ | q ₄ | q ₅ (275) |

Q.8 (postcoded) Have you visited a public grass sports ground during the last 12 months?

[If Yes, ask] When you visited a public grass sports ground in the last 12 months were you a ...

[REQUIRE ANSWER]

(291-304)

- q₀₁ Player in an Organised Sport
- q₀₂ With a Player in an Organised Sport, eg. taking them there or supporting them
- q₀₃ Paid Worker
- q₀₄ General Volunteer or Helper
- q₀₅ Spectator
- q₀₆ Recreational User, eg. Walking the Dog, Exercising, Playing with Friends
- q₀₇ Picnic
- q₀₈ Attend Festival / Event
- q₀₉ Training
- q₁₀ Club Meet
- q₁₈ Doing Something Else
- q₂₀ NOT VISITED IN LAST 12 MONTHS
- q₉₈ Other
- q₉₉ Don't Know

[EXCLUSIVE ANSWER: "NOT VISITED IN LAST 12 MONTHS"]

[A - IF THE ANSWER TO QUESTION 8 IS 20, THEN SKIP TO QUESTION 22]

Q.9 (postcoded) How would you respond if your local sports ground was no longer maintained or was closed due to stricter water restrictions?

Would you .. [Read out]

[REQUIRE ANSWER] [READ ANSWERS IN RANDOM ORDER, EXCEPT THE LAST 2]

(831-835)

- q₁ Continue to use the area
- q₂ Find an alternative ground
- q₃ Get involved in an alternative sport or activity
- q₄ Cease your involvement or activity at the sports ground
- q₅ Raise Money for Club / Ground
- q₆ Use Recycled Water
- q₇ Lobby Council / Government
- q₈ Do something else
- q₉ Don't Know

[EXCLUSIVE ANSWER: "Don't Know"]

Q.10 (coded) What do you think should be done about maintaining public sports grounds?

[REQUIRE ANSWER]

(81-84)

- q₀₁ Bores
- q₀₂ Business Sponsorship
- q₀₃ Community Fundraising
- q₀₄ Council Maintain Best as can
- q₀₅ Community Tax / Levy
- q₀₆ Desalination
- q₀₇ Exempt from Water Restrictions
- q₀₈ Extra Govt Funds
- q₀₉ Grey Water
- q₁₀ Levy Rate Payers
- q₁₁ Rates - Pay More
- q₁₂ Rates - Not Pay More
- q₁₃ Recycled Water
- q₁₄ Reduce Grounds

- q₁₅ Sprinkler Systems
- q₁₆ Storm / Rain Water
- q₁₇ Synthetic / Artificial Surfaces
- q₁₈ User Pays - Individuals
- q₁₉ User Pays - Sports Orgs
- q₂₀ Water Tanks
- q₉₈ Other
- q₉₉ None / Don't Know

Q.11 Now, just a few questions for demographic purposes. Into which of these age groups do you belong ... ? **[Read out]**

[REQUIRE ANSWER]

(101-102)

- q₀₂ 18-19
- q₀₃ 20-24
- q₀₄ 25-29
- q₀₅ 30-34
- q₀₆ 35-39
- q₀₇ 40-44
- q₀₈ 45-49
- q₀₉ 50-54
- q₁₀ 55-59
- q₁₁ 60-64
- q₁₂ 65-69
- q₁₃ 70 or over
- q₁₄ Refused

Q.12 **(Household Composition)** Are you ? **[Read out]**

[REQUIRE ANSWER]

(105)

- q₁ Single/never married
- q₂ Married/partnership, no children
- q₃ Married/partnership, children at home
- q₄ Single parent, children at home

- q₅ Single parent, children left home
- q₆ Married/partnership, children left home
- q₇ Widowed/Divorced/Separated
- q₈ [DNRO] Refused

Q.13 In total, how many people usually live in your household, including yourself?

[REQUIRE ANSWER]

Total people in household = ___ (106)

Q.14 Do you, yourself work? [Read out]

[REQUIRE ANSWER]

(108)

- q₁ Full Time
- q₂ Part Time
- q₃ Home Duties
- q₄ Retired /Pensioner
- q₅ Unemployed
- q₆ Student
- q₇ Refused

[S - IF THE ANSWER IS NOT 1-2, THEN SKIP TO QUESTION 16]

Q.15 Which one of these statements best describes your occupation? [Read out]

[REQUIRE ANSWER]

(109-110)

- q₀₁ Professional or senior government
- q₀₂ Business manager or executive
- q₀₃ Business owner or self-employed
- q₀₄ Sales or clerical
- q₀₅ Technical or skilled
- q₀₆ Semi-skilled
- q₀₇ Manual worker
- q₁₁ Other

q₁₂ Refused

[A - IF THE ANSWER TO QUESTION 13 IS 1, THEN SKIP TO QUESTION 17]

Q.16 Which one of these statements best describes the occupation of the main income earner of the household? [Read out]

[REQUIRE ANSWER]

(121-122)

- q₀₁ Professional or senior government
- q₀₂ Business manager or executive
- q₀₃ Business owner or self-employed
- q₀₄ Sales or clerical
- q₀₅ Technical or skilled
- q₀₆ Semi-skilled
- q₀₇ Manual worker
- q₀₈ Home duties
- q₀₉ Retired /pensioner
- q₁₀ Unemployed
- q₁₁ Other
- q₁₂ Refused

Q.17 And to classify your answers together with those from other people, may I ask what is your own approximate total annual income from all sources before tax?
Is it

[REQUIRE ANSWER]

(125)

- q₁ Less than \$20,000

- q₂ Less than \$40,000
- q₃ Less than \$60,000
- q₄ Less than \$80,000
- q₅ Less than \$100,000
- q₆ More than \$100,000
- q₇ Refused /Don't Know

Q.18 And may I ask what is your total household's approximate total annual income from all sources before taxes? Is it

[REQUIRE ANSWER]

(127)

- q₁ Less than \$20,000
- q₂ Less than \$40,000
- q₃ Less than \$60,000
- q₄ Less than \$80,000
- q₅ Less than \$100,000
- q₆ More than \$100,000
- q₇ Refused /Don't Know

Q.19 That's all the questions I have for you and just in case my supervisor needs to verify my work, could I ask for your first name please. [Type in]

[REQUIRE ANSWER]

_____ (130-145)

Q.20 Thank you very much for your help. Just to remind you, my name is from Nexus Research in Melbourne. If you have any queries please phone my Field Manager on (03) 8415-0251.

[Please record your own interviewer's ID number to certify that this is a true, accurate and complete interview, conducted in accordance with IQCA standards and the MRSA Code of Professional Behaviour (ICC/ESOMAR), and that you will not disclose to any third party the content of this questionnaire or any other information relating to this project]

[REQUIRE ANSWER]

ID No. _____ (146-149)

[A - IF THE ANSWER TO QUESTION 8 IS NOT 18, THEN SKIP TO QUESTION 9]

Q.21 (verbatim) Something Else in q8

_____ (305-374)

[A - IF THE ANSWER TO QUESTION 9 IS NOT 8, THEN SKIP TO QUESTION 23]

Q.22 (verbatim) Something Else in q9

(836-905)

Q.23 (verbatim) What do you think should be done about maintaining public sports grounds?
... Any other comments?

[Type in. DK/No Comment code 99]

[REQUIRE ANSWER]

(405-804)