Chapter 1 – Introduction

Aims of the research

Barnett and Stocker (1998) argue that community gardens are "agents of change" for sustainability due to the interconnected economic, ecological and social outcomes they create for participants and communities (p180). Much literature on community gardens focuses on how participation in community gardening can create positive social outcomes for participants, particularly those living in less advantaged areas (Okvat and Zautra 2011; Teig et al 2009; Wakefield et al 2007; Holland 2004). However, little has been written about the importance of networks that may exist between community gardens and other garden projects or with community organisations. This study will explore the role that social connections play in sustaining community gardens and will seek to establish links between community garden networks and their potential for overcoming social and economic disadvantage in urban communities.

In the following sections, community gardens will be defined and their place in history will be discussed. The current forms of these gardens, as tools for social and economic revival will be reviewed to highlight their links to sustainability with an emphasis on the interconnected economic, environmental and social goals and potential outcomes of participation in community gardening. Chapter 2 will discuss social capital theory and its links to community gardening and the achievement of outcomes. To test this hypothesis, greater Hobart has been chosen as an example of an area with diverse sociocultural demographics and a growing number of organised gardening projects. Flexible qualitative research methods chosen for data collection in this study will be discussed in Chapter 4 and the findings from the interviews with garden coordinators and participants will be presented in Chapter 5. Finally, the key findings will be discussed in Chapter 6 with a focus on the features of social networks that best provide social and economic outcomes for gardens and their communities.

Defining community gardens

Community gardens differ from place to place and across time. Research suggests that community gardens, while largely heterogeneous, may share some distinct features.

Ferris et al (2001) conducted a survey of community gardens in San Francisco to differentiate these projects from private gardens. Their results indicated that public ownership, access and democratic control of these areas were emphasised features of the gardens.

Community gardens are often established by residents with a desire for a shared garden space. The "grassroots" nature of community gardening has been emphasised by Francis (1989) and Glover et al (2005a). Glover et al refer to community gardening as an "organised, grassroots initiative" providing benefits to individuals and the community (2005a, p79). Francis stresses that these gardens are "designed, built or managed by the people who use them. Gardens are valued by their users as places to work, meet people and socialise as well as places to grow vegetables" (1989, p54). The potential that these gardens have as community locations for informal socialising, or "third places" (Oldenburg 1999) between the public and private spheres, will be discussed later in this chapter in the context of sustainability and will be considered in the interview process.

The claim that every community garden enjoys a sense of community has been refuted by some researchers, most notably Pudup (2008) who argues that the use of the term "community garden" is problematic, as it assumes a "community" exists. This argument is supported by Nordahl (2009). "Community" may be present where garden members live in the same neighbourhood, but not in the sense of social cohesion, cooperation and support. For these reasons, Pudup prefers the term "organised garden project" to describe these initiatives. For the purpose of this research project, Pudup's term will be used to avoid the implication of a value-laden, sense of community. This is particularly significant considering the study will focus on the presence of networks and relationships of the people of organised garden projects (OGPs).

Organised garden projects through history and their links to overcoming disadvantage
This section will briefly explore the evolution of OGPs in the United States, the United Kingdom and Australia emphasising how these projects have been used in times of economic hardship to overcome social and economic disadvantage by providing a cheap source of locally grown produce.

United States

The United States has a long association with OGPs. Schmelzkopf (1995) argues that participation in OGPs, supported by government subsidies, has been common during times of economic crisis since the late nineteenth century, encouraging large-scale food production in urban areas with clear economic goals. Gardens were established with government funding during the two World Wars and the Great Depression (Lawson 2004). The "Victory Gardens" of World War II, at their most productive, were responsible for 42% of the United States' vegetable production, at a value of US$1 billion (Lawson 2004, p162).

In the post-War era, efforts in and support for OGPs subsided, but underwent a renaissance in the 1970s, initiated at a grassroots level by residents and neighbourhoods, with some government assistance (Lawson 2004). This interest has continued to the present day where a diversity of OGPs can be found across the country, both in more and less advantaged areas; with varying levels of external financial assistance (Lawson 2004).

United Kingdom

Organised garden projects (allotment gardening) have also played a significant role in the United Kingdom since the 18th century, during times of economic downturn and in the two World Wars (Herzfeld 2008; Perez-Vazquez et al 2008). With concerns over self-sufficiency in the 1960s, OGPs rose in popularity at a grassroots level in the United Kingdom and has continued to do so (Perez-Vazquez et al 2008).

Australia

Australia has a similar history of OGP involvement although on a smaller scale. Government support for OGPs occurred during World War II and interest at a grassroots level increased from 1970s onwards, in "a decade characterised by increasing concern over environmental conditions, greater leisure time and changing recreational activities" (Australian City Farms and Community Gardens Network 2002).

Presently, a diverse range of community garden projects exist around Australia ranging from small community gardens on public and leased land, with either individual or communal beds, to larger projects incorporating social enterprises (Grayson and Campbell 2011). Food gardens in schools have also become popular, particularly with the availability of funding for these initiatives.

As discussed, organised garden projects (OGPs) have evolved in intent and purpose since the latter half of the nineteenth century. Where they originated in urban areas on a large scale resulting from government incentives in tough economic times, OGPs today can be the result of a group of dedicated residents with an idea and ambition for transforming vacant or underutilised land. The reasons for establishing the gardens may be economic, ecological or social, or a combination of all three. OGPs therefore have strong ties with the interconnected goals and tenets of sustainability.

Organised garden projects and their links to sustainable development

OGPs are considered "change agents" for sustainability due to their economic, ecological and social aims and potential outcomes (Stocker and Barnett 1998, p180). The term "sustainable development" will briefly be examined before its links to OGPs are discussed.

In 1983, The United Nations established the World Commission on Environment and Development (WCED) and commissioned a report on the interconnected issues of the environment and development. The Bruntland Report was released in 1987 and while the definition of sustainable development was and continues to be contentious, it is defined in the Bruntland Report as:

> "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987)

Local Agenda 21 (LA21) is an outcome of the 1992 U.N. Conference on Environment and Development and is a framework for "implementing sustainable development at the local level…[it] comprises systems and process to integrate environmental, economic and social development." (Commonwealth of Australia 1999, p7). Local Agenda 21 initiatives are also a tool for local governments for building awareness and engendering community involvement and participation in local planning and other issues (Commonwealth of Australia 1999).

Holland (2004) argues that LA21 "emphasises self-help, self-development and community involvement" (p287). It is easy to see how OGPs, as participatory grassroots initiatives, have the potential to fulfil the requirements of LA21 by creating sustainable solutions to local problems, where community concerns surrounding issues such as climate change, peak oil,

and social and economic disadvantage are present. Where such concerns are not present, it stands to reason that challenges exist for local governments to engage with residents and build awareness of the potential benefits of OGP participation.

Research supports the sustainable development goals and outcomes of OGP involvement. Barnett and Stocker's (1998) research on King William Park in Fremantle claims that the development of the garden educated participants about the importance of community contributions to place-making, collaboration with government and LA21 planning. This resulted in an increased community awareness of the need for sustainability planning through a LA21 Plan for Fremantle, which has since taken place (1998, p188).

Similarly, Holland (2004) assessed the aims of existing OGPs in the United Kingdom and found that these projects were examples of sustainability in action. He cites the examples of city farms, where social, environmental and economic benefits were apparent to participants (Holland 2004, p302-303). In their research, Ferris et al (2001) found a positive link between urban green spaces, such as OGPs, and the implementation of LA21 goals and sustainability policies.

This research will therefore examine the various ways in which OGPs contribute to sustainability and LA21 goals. A brief overview of these connections follows which will be raised during the interview process and later discussed in Chapter 6.

Economic outcomes

As previously indicated, OGPs had their roots during periods of economic downturn, as a mechanism to provide employment and produce to less advantaged sections of the community. Where economic benefits were once the sole aim of garden establishment, there are many reasons for establishing OGPs.

The economic outcomes from participating in OGPs are diverse. Kearney (2009) cites several economic benefits including a reduction in the cost of living through the provision of a cheap source of produce and the potential for retail ventures, thus creating employment and income for participants. Hancock (2001) supports this view and cites the example of garden participants in New York growing herbs to sell to local restaurants, creating a source of income. OGPs can also be sites for participants to access skills and training; as well as

offering opportunities for innovation and developing new knowledge. Hanna and Oh (2000) argue that while these gardens have other functions, because they yield produce, which in turn have monetary values and can be sold or eaten by participants, there is a direct link to improving the economic situation of garden participants.

However, the financial potential of OGPs may be less developed than both ecological and social benefits. Holland (2004) surveyed garden projects in the United Kingdom and found that while there was economic potential, many of the gardens surveyed had little economic purpose.

Ecological outcomes

Many OGPs are set up on under-utilised lands and the immediate ecological benefits are therefore clear, in terms of increasing productive green spaces and some cases, biodiversity corridors. However, there are other benefits to the environment.

Harris (2008), Kearney (2009) and Hancock (2001) all argue that OGPs have the potential to reduce negative environmental impacts through the provision of a local source of food, thus negating transport and production costs associated with mass-produced food. Waste is further reduced if the garden has a composting system, or if rainwater is harvested and used. Kearney (2009) also claims that OGPs can be ecologically restorative, by providing a habitat for insects and birds and a green space in urban areas contributing to the health of the city. This can, in turn, lead to a series of beneficial social outcomes.

Tangible social outcomes

The potential social benefits from participation in OGPs have been highlighted by theorists undertaking research in this area. Indeed, according to Holland (2004), in cases where food production has been the key objective of establishing a garden, "what is grown is secondary to what else is achieved" and other goals, such as social connections between gardeners, are significant (p303). Glover goes further by claiming that "community gardens are less about gardening than they are about community" (2004 p143).

The possible social benefits from OGPs participation are diverse and tangible, such as improved nutrition and the promotion of an active lifestyle through physical participation in gardening.

School gardens are a growing phenomenon in Australia and research by Somerset et al (2005), conducted via a survey of sample schools in Queensland, indicates that improved nutrition among students was a consequence of having a food garden in schools.

Similarly, Wakefield et al (2007) studied active community gardens in South East Toronto and concluded that participants identified many social benefits from gardening, including better access to food, improved nutrition, increased physical activity and improved mental health. This finding is supported by Hancock (2001) who identifies improved nutrition as a potential benefit of garden participation, along with the potential for inter-generational learning and education about gardening, the environment and nutrition.

Intangible social outcomes

Other potential outcomes of OGPs, such as benefits from improved relationships and connections to residents and the broader community, are less tangible and more difficult to measure. Intangible outcomes from social capital are a focus of this research and will be discussed in greater detail in Chapter 2. This research project will focus on the networks that exist within and between garden projects, as well as the networks that exist between OGPs and other organisations – for example, other community or not-for-profit organisations, as well as local and state governments and businesses.

Relationships and networks form the foundation of OGPs, as grassroots initiatives existing within neighbourhoods. Social networks play a strong role both in the initial formation of these gardens, but also in an ongoing basis, particularly because many of these projects are volunteer-based, often operating with no paid staff (Glover et al 2005b). Interaction and relationships between gardeners are therefore vital to the survival of the garden.

Further, OGPs have the potential to be "third places" for their neighbourhoods, providing an informal setting in which residents, often as strangers to each other, can meet and converse (Oldenburg 1999). Third places are defined by Oldenburg (1999) in their opposition to first places (the private sphere - the home) and second places (the public sphere – the workplace). He argues that as informal meetings places, third places, such as cafes, bookstores and bars, have the potential to create:

> "an environment in which everybody knows just about everybody. In most cases, it cannot be said that everyone, or even a majority, will *like* everybody else. It, however, important, to know everyone, to know how they variously add to and subtract from the general welfare, to know what they can contribute in the face of various problems or crises, and to learn to be at ease with everyone in the neighbourhood irrespective of how one *feels* about them." (Oldenburg 1999, p xvii-xviii)

Social interaction is a both an attraction of and an outcome from garden participation. As previously stated, even when social outcomes are not the stated aim of the garden or of participation in it, social benefits have been highlighted as significant for garden participants (Glover 2004, Holland 2004). OGPs therefore provide a setting for positive social capital, although it should not be assumed that this will be a standard result (Glover 2005b; Bourdieu, 1986).

Interconnected outcomes

The preceding discussion has highlighted some of the potential outcomes from OGP participation. In reality, these projects can simultaneously produce economic, ecological and social benefits, strengthening them as exemplars of sustainability. Holland (2004) argues that OGPs have a "multiplicity of purposes" and when these ecological, social and economic objectives and benefits are linked, it leads to "greater recognition of sustainability in action" (p303).

Holland (2004), for example, describes an OGP tackling disadvantage in Santa Cruz, California. This garden was established to assist homeless people and has provided them with access to produce and employment and has connected participants to the wider community, thereby producing social and economic outcomes. In other cases, it is easy to see how garden can stimulate simultaneous ecological, economic and social outcomes for garden participants.

Research question

The questions underlying the research in this thesis are based on discovering the links, if any, between the outcomes from relationships and networks established in the OGP setting and possible solutions to economic disadvantage. Where organised garden projects have previously been a government mechanism for achieving economic outcomes, the role of these

gardens will again be considered in the context of concerns about increased economic disadvantage and social exclusion. In order to explore these questions, a series of interviews were carried out with OGP coordinators and participants to ascertain the importance of these social connections.

.

Chapter 2 sets out social capital theory and addresses its relevance to OGPs and the relationships within them. Chapter 3 discusses the diverse demographics of the case study area and the findings from the interviews are presented in Chapter 5 and are analysed and discussed in Chapter 6.

Chapter 2 – Social capital

Social capital and organised garden projects

The aim of this chapter is to provide an understanding of how social interaction in the garden setting can result in positive social capital outcomes. At the outset, it is plausible to consider that OGPs provide opportunities for local residents to work together to solve problems of mutual concern, to achieve garden aims and to engage, at a localised level, with government and public institutions (Glover et al 2005a). On an individual level, the social connections established between garden participants can also have positive outcomes.

It is this community involvement and social connectivity that has led many researchers to value OGPs for their social capital-creating potential (Glover et al 2005a; Glover 2004; Okvat and Zautra 2011; Teig et al 2009; Wakefield et al 2007; Hancock 2001; Schmelzkopf 2002 and Glover et al 2005b). Some researchers have gone further to argue that the garden's role as a social site is more significant than their food production purpose (Holland 2004, Saldivar-Tanaka and Krasny 2004).

As "third places" (Oldenburg 1999) between the public and private spheres, organised garden projects have the potential to be sites for intangible social outcomes, both through their use as meeting places and as locations for leisure and social activities. Participation in OGPs has the potential to increase social interaction, both planned and accidental, which can lead to the establishment of social networks and potential outcomes.

Social networks are important to organisations such as OGPs because of their grassroots origins and dependency on voluntary participation. King (2004) claims that the origins and operations of non-profit organisations are:

> "aligned with the core dimensions of social capital: networks, relationships
> and trust, and shared vision and norms…Without these core components of
> social capital, nonprofits cannot be effective in achieving their missions."
> (p482-483)

Glover, Parry et al (2005b) argue that institutions such as OGPs rely on their social connections to achieve greater goals for the gardens. They state that "[c]onnections,

knowledge, time, and skills, among other tangible and intangible resources, are also key to the ultimate success of organizations, particularly grassroots organizations which invariably have fewer institutionalized resources upon which to operate" (2005b, p450-451).

Ostensibly, the intangible social aspects of OGPs are far from peripheral but to fully appreciate the role of social connections in the ongoing sustainability of OGPs, it is necessary to explore the concept of "social capital".

Interpreting social capital

The definition of social capital is elusive and has been debated amongst theorists for many years. However, in its broadest sense, it is about the outcomes from social connections.

Bourdieu (1986) locates social capital, which he characterises as "connections", with human and physical capital as resources that can be exchanged by individuals for economic capital (p243). Bourdieu argues that social capital requires the personal investment of energy and time to maintain it and stresses that continual participation in social networking and group membership leads to an accumulation of social capital and eventual personal gain, through a "continuous series of exchanges in which recognition is endlessly affirmed and reaffirmed" (1986, p250).

For this reason, Bourdieu argues that social capital can be unevenly distributed and that power relations play a part in an individual's capacity to exploit this resource. He emphasises the risk that well-connected people and organisations will try to maintain their stocks of social capital to the exclusion of others and explains by stating that "the structure of the distribution of the different types and subtypes of capital at a given moment in time represents the immanent structure of the social world" (1986, p242).

Neither, argues Bourdieu, does social capital exist merely because of an institution or organisation which may permit it to. He claims that "the existence of a network of connections is not a natural given, or even a social given" (1986, p249). Coleman (1990) furthers this argument by stating that stocks of social capital, if not given enough attention, may weaken and cease to provide benefits. Coleman argues that:

"social capital depreciates if not renewed. Social relationships die out if not maintained, expectations and obligations wither over time; and norms depend on regular communication" (1990, p321)

Where Bourdieu sees social capital as a transactional exchange by which individuals can improve their economic positions, Coleman (1990) focuses on the relationships between individuals in his interpretation of social capital, still locating social capital within the economic system. He argues that social capital is "created when the relations among persons change in ways that facilitate action" (1990, p304).

Coleman supports Bourdieu's argument that social capital is a resource which can benefit individuals but argues that it cannot be easily exchanged, and does not belong to individuals alone, but is rather an "attribute of the social structure in which a person is embedded" (1990, p315). His focus is on the presence and function of social capital in family and community networks.

Where Coleman and Bourdieu argue that social capital exists within relationships between individuals, Putnam (1995) claims that social capital is embedded in communities and regions. Putnam defines social capital as "features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" (1995, p67).

By measuring civic engagement, through participation in volunteer groups and voter turnout in elections, Putnam seeks to establish a link to the quality of government and of public life. Putnam's interpretation of social capital has been criticised as being reductionist by trying to link participation in voluntary associations with the presence of social capital. Putzel (1997) argues that Putnam's selection of indicators of social capital aims to "identify a single explanatory framework to account for the entire gamut of political and economic performance" (p940).

Other researchers in this area have argued that the social capital doesn't always have positive outcomes for individuals or communities. Fukuyama (2001), for example, acknowledges the dark side of social capital by citing heavily networked groups such as the Ku Klux Clan or

the Mafia. He proposes that the net value of social capital should be considered, instead of assuming that all social capital is good.

As shown, scholars working in the field of social capital have varied interpretations of the term, its role in social relations and what indicators should be used to measure its presence and reach. White (2002) argues that it is useful to consider a continuum of social capital, rather than one fixed definition. He claims that:

> "At one end is the concern with citizenship, empowerment, democratization and social justice, while at the other end social capital may be associated with strategies to strengthen traditional family and community structures and the remoralization of the social order. The points on the continuum should not be seen as alternatives" (2002, p258).

This study will draw on the work of previous research into social capital in considering the value and presence of social capital in OGPs. Emphasis will be given to the role of social networks in overcoming social and economic disadvantage; specifically Bourdieu's (1986) and Coleman's (1990) arguments that social capital requires personal investment and attention to endure; Bourdieu's work (1986) recognising the influence of power structures; Putnam's (1995) use of social trust and civic engagement as measurements of social capital (although his selection of indicators are questionable); and Fukuyama's (2001) notion of measuring the net value of social capital. These will be considered in the interview process and discussed in Chapter 6.

Measuring social capital

As noted, there are many ways to measure social capital, and much debate over how this is best achieved. As social capital is about outcomes from social relationships, connections and networks, the focus of this research will be on different aspects of social networks in OGPs and which features facilitate outcomes for garden participants and communities.

White (2002) defines social networks as a "web of social relations or resources that surround individuals, groups or organizations and the characteristics of their ties" (p261). This study will build on the work of White and his research on social networks, as a proxy for social capital, in evaluating the effects of community initiatives by using three key features of social

networks. These are the density of networks as measured by the quality of relationships between people and their links to positive outcomes, the reachability of networks, based on the theory that small distances in relationships leads to faster communication, and the level of centralisation of networks, defined by White as the extent to which the "network is not divided into cliques or subgroups" (p261). These will be discussed here and then used as a framework for presenting the interview findings in Chapter 5.

Network density

White (2002) suggests that social networks are important as it is the quality of relations between people, not the quantity that will lead to "collective action and cooperative behaviour" (p261). This study will determine the quality of social networks in OGPs using several measurements including sociability, trust and reciprocity.

Firstly, levels of sociability will be measured. This can be indicated through the amount and quality of interaction between gardeners, for example time spent in the garden talking to other gardeners, activities undertaken in the garden apart from gardening and new friendships formed within the garden. Glover et al (2005a) and Teig et al (2009) stress the importance of sociability in the organised garden setting. Glover et al argue that OGPs provide a setting in which relationships between people are built as:

> "most community gardens are established with the purpose to create and share positive, expressive, and friendly interactions with neighbors and community members…sociability values drive grassroots associations to encourage social interaction among a set of people or population" (2005a, p86).

Teig et al (2009) comment that non-gardening activities in the garden act as a catalyst for other social processes in the neighbourhood. They argue that "[p]lanning and decision-making take place, and social connections are cultivated, both among gardeners and between gardeners and other neighbourhood residents" (2009, p1120).

Secondly, trust and reciprocity amongst garden participants will be measured as indicators of social capital in OGPs.

Trust in social networks has been identified as an indicator of the presence of social capital. Uslaner (2005) argues that participation in some forms of civic engagement, such as volunteer activities, depend on and promote what he calls generalised trust, described as "the perception that most people are part of your moral community" (p6). This is contrasted with knowledge-based trust, which is based on the experiences of individuals rather than their beliefs.

Uslaner therefore argues that how you trust is a key determinant for measuring levels of civic engagement because participation in the more demanding forms of engagement, such as volunteer work, "depend upon generalized trust *and* reinforce it" (2005, p15). It can be argued that generalised trust is important in activities such as OGPs as these can bridge social groups.

Glover et al (2005b) support Uslaner's argument and argue that trust "helped transform formal relationships restricted to the garden context into genuine friendships" extending beyond the garden setting (p464). Teig et al (2009) also found high levels of trust among garden participants in garden projects in Denver, Colorado.

Whether people who participate in voluntary activities, such as OGPs, are more willing and able to trust strangers ("generalised trusters") or if participation in these activities encourages these sentiments remains a challenge for researchers. Trust is considered an important characteristic of social capital and for the purpose of this study will be measured through levels of garden participation and friendships existing outside the garden setting.

Reciprocity is another social norm used to indicate social capital. Reciprocity broadly denotes an expectation that people will respond and react to each other in similar ways. King (2004) elucidates by saying that "participants may exchange favors and help not tit for tat but in a diffuse, tacit manner in which they may return favors in an unspecified manner at an unspecified time" (p473). In the OGP setting, reciprocity may translate to garden participants borrowing tools from each other in the expectation that a favour that is fitting and proportionate (but not necessarily the same) will be returned.

Teig et al (2009) found that garden participants exhibited evidence of reciprocity through their willingness to share garden produce in the expectation that the favour would be

returned, as well as garden participants seeking emotional support and advice from other participants. In this research, reciprocity will be measured by the exchange of favours in the garden setting, or if participants turn to each other for support and advice.

<u>Network reachability</u>

White (2002) analyses network reachability, or the distances between relationships, which he argues is significant as small distances can lead to faster communication, and therefore better outcomes for individuals (2002, p261). Network reachability will be measured in this study through the use of strong and weak ties to achieve garden aims and if bridging or bonding social capital is apparent.

The reachability of networks builds on the earlier work of Granovetter (1973) who analysed how "strong ties" and "weak ties" can assist in achieving positive social capital outcomes. Granovetter's model suggests weak ties can be "indispensable to individuals' opportunities and to their integration into communities", whereas strong ties can lead to "overall fragmentation" and less significant outcomes (p1378). Granovetter argues that information, and hence opportunities, has greater reachability if it is transmitted through weak ties rather than strong ties, as the information can reach a greater number of individuals (p1366). White's (2002) research into community networks in the United Kingdom reaffirms Granovetter's theory that weak ties are essential to individuals' opportunities and their place in society.

Work has also been undertaken on the importance of strong ties within social networks. Glover et al (2005b) conducted interviews with OGP leaders and participants in St Louis to assess the role of social connections in advancing the aims of their gardens. They found that the garden participants used both their strong and weak ties to assist with the garden, to attract new members to the garden and to acquire resources.

The presence of strong and weak ties in social connections is linked to "bridging" and "bonding" social capital. Glover et al (2005b) concluded their research by stating that OGP networks depend on both established networks (bonding) and the resources of outsiders (bridging) to further the garden's aims. Kingsley and Townsend's (2006) analysis of an OGP also found evidence of bridging and bonding between garden participants and Teig et al

(2009) claim that participation in OGPs is a social "leveller," where people work together in the garden setting regardless of their backgrounds.

<u>Centralisation of networks</u>
The third feature of networks that will be discussed is the degree to which networks are centralised, as an indicator of social cohesion or integration. White (2002) argues that where networks were shown to be highly integrated in his case studies, they were able to offer support and benefits for network members. According to White, if a network is not well integrated, there is a risk of closed networks developing, and a subsequent concentration of advantage (power). This builds on the earlier work of Bourdieu (1986) who analysed the potential uneven distribution of social capital.

This research will build on White's analysis of network centralisation and integration for the dual purposes of discussing democratic processes in the garden setting and the possible connections social capital has to providing solutions to social and economic disadvantage.

Several researchers have discussed the relationship between social capital and democratic and civic engagement (Putnam 1995; Knack and Keefer 1997) and to tackling issues of social and economic disadvantage (Ferris et al 2001; Hanna and Oh 2000; Schmelzkopf 1995; Kawachi et al 1997 and Knack and Keefer 1997).

This research will therefore attempt to establish a link between the presence of social capital within individual garden networks, between networks of OGPs, connections with other organisations and the potential community development benefits. Network centralisation will be measured through levels of access to the garden and its resources and access to decision-making processes.

Glover et al (2005a) argue that as grassroots undertakings, OGPs are more likely to be more democratic and less hierarchical, allowing direct involvement in decision-making processes. They argue that:

> "[c]ommunity gardens require gardeners to participate directly in the workings of the association and facilitate face-to-face interaction. By making collective decisions, associational members are afforded

opportunities to join a group effort, become an active member of a community, take on leadership roles, and work toward common goals." (2005a, p80)

However, it cannot be assumed that these democratic features are present in OGPs merely on the basis of their grassroots origins. Glover et al (2005a) concede that it is difficult to conclude if participation in OGPs breeds democratic values or whether people with these values are more likely to be attracted to OGPs.

For the purpose of this study, the decision-making structures of the gardens will be analysed to assess the integration of garden networks. Whether all garden members are afforded the same rights to making decisions about the future directions of the garden or if this is concentrated among a select few will be considered. Similarly, whether or not garden participants have proportionate rights and responsibilities will be another indicator used to gauge network centralisation.

The availability of the garden to neighbourhood residents will be used to assess the democratic values present in the OGPs studied. This will be measured by the level of garden accessibility to all parts of the community including the garden physical accessibility and any consideration of less socially and economically advantaged parts of the neighbourhood.

Gaps in the current research

This study will address the argument that OGPs can be sites of social capital, through their establishment and maintenance of social connections. That these projects require social capital in their establishment and continuing function as third places for local residents will also be considered in the following chapters.

The roles of OGPs and social networks in tackling social and economic disadvantage will also be the subject of this research. Where previous research has focussed on the presence of social capital in individual OGPs, little research has been undertaken on the networks established and maintained between OGPs and other gardens or other organisations in the broader community, and how this can assist with tackling issues of disadvantage by furthering social capital outcomes.

This study will address that gap in the research by focussing not only on social connections within gardens but on networks that exist outside of the garden setting, on individual and organisational levels. These networks will be diagrammatically presented and in Chapter 5 in the context of both network density and reachability. Building on the work of Glover et al (2005a and 2005b), this research will seek opinions from both garden leaders (coordinators) and garden participants. The need for community gardens to "mobilise their resources" to achieve garden aims to establish and sustain the garden will also be considered (Glover et al 2005b, p450).

Chapter 3 – Case study area

The demography of disadvantage in Tasmania

This chapter will examine social and economic disadvantage in Tasmania generally and then in the case study area to assess the value of external social connections and their outcomes in the OGP setting. Work undertaken at local and state government levels to address these inequities, in particular the current focus on social inclusion, will be discussed to provide a policy context.

It has been argued by community organisations and parts of government that disadvantage is prevalent in Tasmania (Tasmanian Council of Social Services 2007 and 2009; Stronger Communities Taskforce 2008; Adams 2009). The Tasmanian Council of Social Services (TASCOSS 2007) argues that disadvantage is pervasive in Tasmania as:

> "Tasmania has levels of poverty and disadvantage that are higher than the national average. No matter how you look at it, poverty, disadvantage and exclusion are part of every day life in Tasmania" (p4).

The 2009 *Social Inclusion Strategy* (the Strategy) presents policy responses to disadvantage, which prevents Tasmanians from having "a decent education, skills, meaningful work, access to services, good relationships and a say on what matters to us" (Adams 2009; p8).

The Social Inclusion Commissioner Professor David Adams uses a variety of social and economic indicators to argue the case for the existence of disadvantage in Tasmania (see Table 1), including data indicating community concern about food insecurity.

Accordingly, one of the ten strategies for action outlined in the Strategy centres around access to food and food security. One of these actions is the establishment of a Food Security Council to hold funds to "support infrastructure investment in food security and to promote food security social enterprises" (Adams 2009, p30). The Strategy emphasises OGPs as an exemplar for social inclusion and addressing disadvantage through their social, economic and environmental outcomes arguing that:

> "To start up a community garden requires some community leadership, skills around gardening, access to capital and land, ways of engaging local people, a 'business plan' to pull it all together and a decent amount of time and energy to keep it going often with local volunteers. Many communities have already chosen to go down this path but others don't have the capability and mix of resources to make it happen." (Adams 2009, p24-25)

Whether networks of residents have the right mix of capabilities and resources to start and maintain OGPs will be discussed in Chapter 6 based on the research results.

A Tasmanian Government response to the Strategy was the establishment of the Tasmanian Food Security Council (TFSC) to oversee the distribution of grants to projects to boost food security and social inclusion (Social Inclusion Unit 2009). The TFSC has provided one round of grant funding to successful applicants but due to a lack of government finances, a second round of funding was withdrawn, meaning many of the successful round one projects were not able to apply for additional funding to extend their projects.

In the following section, social and economic disadvantage in the case study area of greater Hobart will be outlined (see Figure 1).

Table 1 – Estimated social exclusion risk factors in Tasmania

|	Number (rounded)	Reference year
Poverty and financial hardship		
People living below the poverty line	64 000	2005-06
Households dependent on government pensions and allowances	69 000	2007-08
People worried about food security	18 000	2005
People accessing emergency relief services	16 000	2007-08
Exclusion from housing		
People who are homeless	2 500	2006
People waiting for public housing	3 000	2009
Exclusion from jobs and skills		
Adults with poor literacy skills (aged 15-74)	174 000	2006
Adults (aged 25-64) with no qualifications	116 000	2008
Long term unemployed (aged 15 and over)	2 200	2008-09
People employed part-time	75 000	2008-09
Children living in jobless families	21 000	2006
Locational disadvantage, service and transport exclusion		
People living in rural areas (with population < 1000 people)	130 000	2006
People living in disadvantaged* areas (*as identified by ABS Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-Economic Disadvantage)	39 000	2006
People who cannot easily access transport	9 400	2006
People who have difficulties in accessing services they need	81 000	2006
Households who do not have access to the internet (digital exclusion)	79 000	2006
Risk behaviours		
People consuming alcohol at risky levels (aged 14 and over)	39 000	2007
People who used illicit drugs (aged 14 and over)	60 000	2007
Population groups at-risk		
People with a disability	24 000	2006
Tasmanian Aborigines	17 000	2006
Older Tasmanians (65+) living alone	20 000	2007
Lone parent families with children aged under 15	12 000	2007

(Adams 2009)
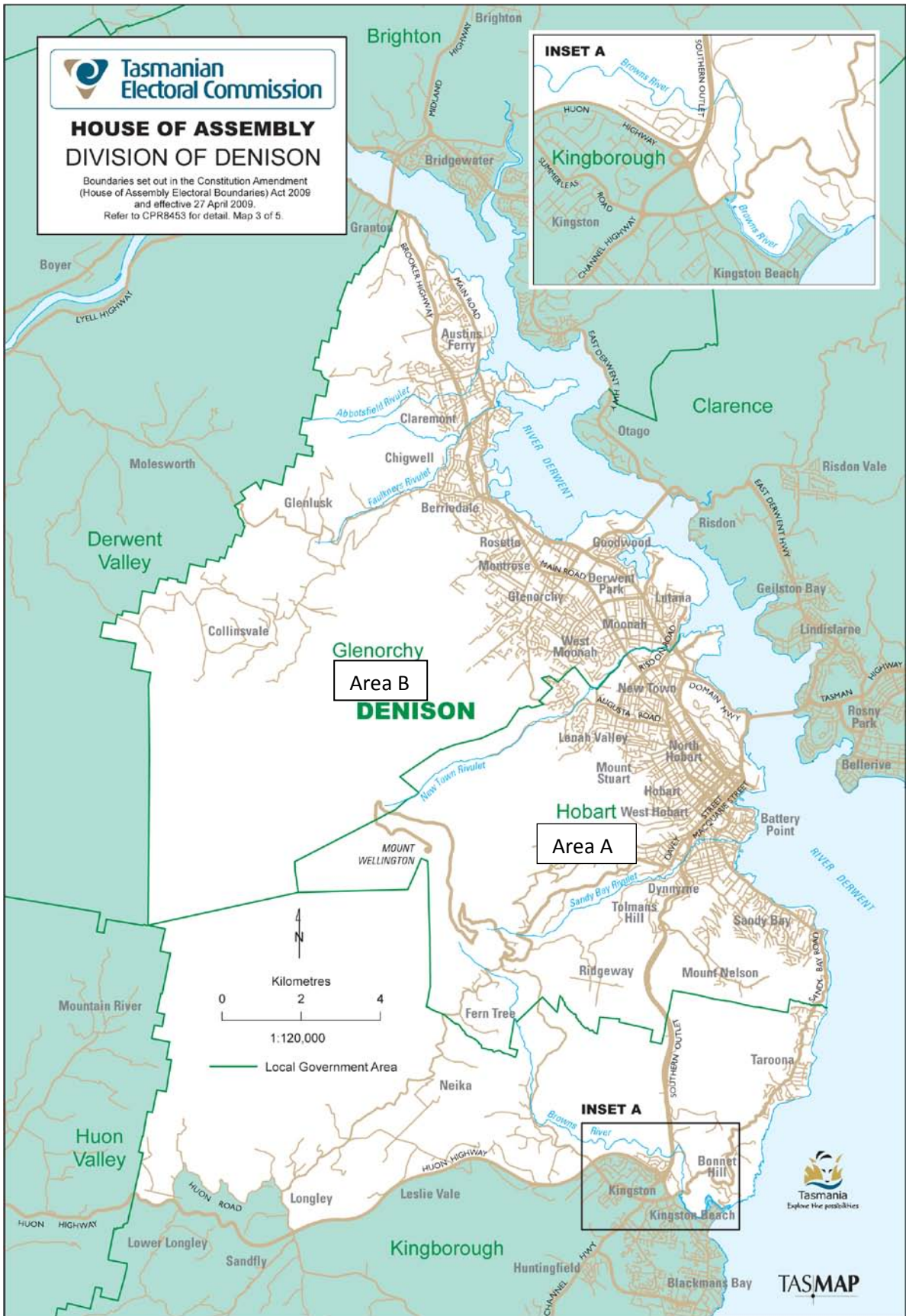
Figure 1: Map of the Case Study Area
(Tasmanian Electoral Commission 2011)

The case study area

The research in this study focuses on organised garden projects and their links to social and economic disadvantage within the greater Hobart area, namely the Hobart City (Area A) and Glenorchy City (Area B) municipalities. Disadvantage, measured through a variety of indicators, is present in both areas (see Table 2). These indicators are indicative of the multiple and complex needs within the community.

Table 2: Indicators of disadvantage in the case study area

	Hobart City (Area A)	Glenorchy City (Area B)	Australian average
Population (people)	47,700	43,413	-
Median individual weekly income	$526.00	$384.00	$466.00
Unemployment rate	5.5%	6.8%	5.2%
% of single parent households	15.7%	22.7%	15.8%
% of population aged over 65	13.9%	17.0.%	13.3%
% of single person households	30.9%	30.8%	22.9%
% population renting	32.6%	27.5%	27.2%
% of rentals through a state or federal public housing authority	9.3%	30.8%	14.9%
SEIFA Index of Relative Disadvantage rating	1041	920	

(Sources: ABS Census data – Australian Bureau of Statistics 2006a and 2006b)

City of Hobart

As Tasmania's capital, the City of Hobart is the centre for many government, education and community services. The Hobart City Council's *Social Inclusion Strategy* (2010) notes that while Hobart City is the least disadvantaged area in Tasmania (according to the Australian Bureau of Statistics Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-Economic Disadvantage), there are still certain parts of the municipality and certain demographic cohorts that are less advantaged. In particular, the suburbs of New Town and

North Hobart are identified as facing "similar levels of disadvantage to suburbs in Glenorchy and Sorell" (Hobart City Council 2010, p3).

Specific demographic cohorts within the municipality, including some older people, people with disability and culturally and linguistically diverse people are identified as those at greater risk of disadvantage by the Hobart City Council (2010). Other trends contributing to disadvantage in Hobart City include an ageing population, a growth in the numbers of older people living alone (38.3% of occupants of single-person households are aged 65 years or older), a pattern of workers leaving the state, a low birth rate due to fewer young and a growth in the number of international university students (Hobart City Council 2008, p4, 28, 56).

City of Glenorchy

In contrast, the City of Glenorchy is the eighth most disadvantaged local government area in Tasmania. Key business sectors in the Glenorchy area include retail and other services, manufacturing, wholesale trade, construction (City of Glenorchy 2010).

The *Glenorchy Social Plan* identifies a number of social disadvantage factors in the area including an ageing population, a high proportion of one-parent families (22% in 2001), low school retention rates (55.4%), a higher rate of infant deaths and youth unemployment (City of Glenorchy 2003 and 2010).

While pockets of disadvantage exist in the City of Hobart, broadly speaking, social and economic disadvantage is more widespread and visible in Glenorchy.

Local government support for organised garden projects in the case study area
As stated in Chapters 1 and 2, OGPs, through their potential positive outcomes can contribute to ameliorating economic and social disadvantage. The Hobart City Council recently adopted a formal policy to support the establishment of OGPs and identifies and provides suitable council-owned land for use as OGPs, based on a demonstrated need and community commitment (2011). Residents must indicate how the site will be established and maintained through a written application and approval process (Hobart City Council 2011).

The Glenorchy City Council does not have a formal policy but works with local communities to set up OGPs if contact is made. R. Park from the Glenorchy City Council, in an email message to the author on the 10th of November 2011, stated that the council works with residents to:

> "*identify who owns the land any other associated issues and processes that may need to be considered and agreements would be reached from there…If it is council land we would negotiate use/access, availability etc*"

Current organised garden project initiatives in the case study area

The first round of grant funding from the TFSC was distributed in early 2011. In the case study area, there are two projects currently underway which address issues of food security, social exclusion and disadvantage.

Glenorchy Family Food Alliance

The *Glenorchy Family Food Alliance* (GFFA) aims to establish and maintain effective networks and partnerships between local primary and high schools, the Glenorchy City Council and other community organisations concerned with sustainability and food security issues (Glenorchy Family Food Alliance 2010). With a focus on engaging children and families in healthy and local eating, the GFFA aims to develop a model of food security. The project is trialling initiatives such as a "'garden craft' training program, curriculum development, a 'Family Food' network, support for community and school gardens and micro enterprise development" (Community Nutrition Unit 2011a, par. 11).

Feeding the Future

The *Feeding the Future* (FTF) project is a state-wide collaboration including several schools in the greater Hobart area, the Royal Tasmanian Botanical Gardens and community welfare organisations. The goal of FTF is "to create a sustained food and knowledge network which will engage the community and empower them to participate in their own solution to food security issues" (Community Nutrition Unit 2011a, par. 6). The project seeks to establish a network of gardens for sharing produce to minimise food insecurity amongst disadvantaged Tasmanians by supplying community kitchens with produce from OGPs. In a practical sense, garden participants can join the FTF "guild" and use garden beds to grow crops to be donated to the FTF project for distribution to disadvantaged Tasmanians. As guild members, garden

participants can also access certified horticulture courses at a reduced cost (Community Nutrition Unit 2011b).

Both the GFFA and FTF are potential examples of how networks between OGPs and other gardens and community organisations can facilitate positive outcomes for disadvantaged Tasmanians. The significance of these networks will be explored in Chapter 6 in the discussion on the case study research results.

As this chapter has illustrated, social and economic disadvantage is present although not necessarily visible in Tasmania and in the case study area. The role that OGPs play in addressing the issues of 'at risk' communities is discussed further in Chapter 6.

Chapter 4 - Methodology

This research project will use a case study to examine social networks that exist within OGPs and beyond the garden setting. A total of 16 organised garden projects were identified in the case study area although it is assumed that more exist. Eleven gardens were located in Area A (Hobart) and five in Area B (Glenorchy), including five school gardens, three garden projects attached to or auspiced by community houses and one garden which also has a social enterprise function.

The principal method for gathering data for analysis was from face-to-face interviews conducted with representatives of these gardens. This methodology follows that of other researchers working in the area of identifying social capital in OGPs (Glover 2005a; Glover 2004; Somerset et al 2005; Teig et al 2009; and Kingsley and Townsend 2006).

Using contact details obtained from the *Eat Well Grow Well* website listing of OGPs (2009), garden coordinators were contacted via email to determine their interest in participating in interviews. Five coordinators replied and agreed to be interviewed. Some replied to say that the garden was no longer operational, for example at schools where school renovations resulted in the garden's removal.

Some OGPs didn't have a specified garden coordinator; instead nominated participants are the contacts for the garden. The contact details of garden participants willing to be interviewed were sourced from the garden coordinators where possible. Eight garden participants agreed to be interviewed.

An initial aim of the thesis was to arrange focus groups for organised garden participants to get a diversity of opinions on each OGP. However, it was problematic to arrange for a time and place suitable for garden participants to be involved in focus group sessions together.

Interviewing

Using qualitative and quantitative methods, this investigation aims to understand the role of social connections in OGPs by analysing a set of interview responses from a sample of members from eight OGPs in the case study area. In four instances both the coordinator and participants from the same garden were interviewed providing a richness of perspectives.

Flexible qualitative research methods in the form of in-depth, semi-structured interviews were chosen as the principal method for data collection. In addition to the interview process, a brief confidential survey collected quantitative data about the garden participant's background.

Interviews were conducted over a two week period in August 2011, undertaken at times convenient to the interviewee. Time played a key role in the data collection process; many of the coordinators and participants work full-time and it was difficult to arrange a convenient opportunity for interviewing. Many of the interviews were conducted at the interviewee's place of residence or work. Interviewing the garden coordinators and participants in a place in which they felt comfortable may have contributed to the honesty of responses.

Two broad sets of questions were developed for organised garden coordinators and participants. Interviews were semi-structured with a focus on particular issues relevant to the research question. The interview questions were open-ended in nature to facilitate a free-flowing conversation.

Introductory questions which are pertinent to this study include:
- Motivations for garden establishment,
- funding used to set up the garden,
- the tenure arrangement,
- perceived social, economic and environmental benefits of garden participation, and
- the dissemination of education about nutrition and ecological processes and/or gardening amongst garden participants.

Following on from White (2002), the density, reach and centralisation of social networks were topics for discussion in these interviews. Questions therefore focussed on topics such as sociability in the garden, trust and reciprocity (network density); the use of social ties to achieve garden and personal aims including both strong and weak social connections (network reachability); and governance and decision-making structures of the garden, the distribution of roles and responsibilities, and garden accessibility (network centralisation) (White 2002).

Data analysis

The data obtained by the interviews were both qualitative and quantitative. The interviews were digitally recorded with the interviewee's consent and later transcribed. The responses were then categorised thematically and analysed using an Excel spreadsheet. Due to the small size of the sample this process was executed without the aid of computer software for qualitative analysis.

Difficulties and constraints

A constraint of the study was the difficulty in contacting and locating garden coordinators and particularly participants, which could be considered a reflection of the loose structure of many of the OGPs. Whether this research ignores the views of the more marginal members of OGPs is debatable as it is unknown if these members would have participated in the study.

This study covers a broad range of OGPs in the case study area but for the purposes of comparison, it would have been preferable to have a larger sample size of participants. However, the study sample does provide an indication of the existing social networks both within individual OGPs and the connections that exist between the gardens and other organisations, which are integral for the purposes of this study.

Another perceived difficulty with the research was that interviews occurred during early August, which coincided with a period of particularly miserable weather in the case study area. Without wishing to promote the dogma of environmental determinism, it is likely that the weather had *some* impact on responses.

Ethics

Garden coordinators were provided with an information sheet detailing the research project and a consent form upon initial contact via email. This information was also provided to garden participants before the commencement of every interview. The coordinators and participants were reassured that the interviews were confidential which encouraged a free-flowing and honest conversation to take place.

The results of these interviews are set out in the following chapter and their implications for social capital theory are discussed in Chapter 6.

Chapter 5 - Findings

Establishing the gardens

This chapter sets out the findings from the interviews with garden coordinators and participants in the case study area. The potential outcomes from OGP participation, as emphasised in Chapters 1 and 2, will be presented here.

The majority of the gardens were established for ecological reasons. In most neighbourhood gardens, a pre-existing network of local community members worked together to establish a local garden. In two instances, Gardens 2S and 8N, access to grant funding was the major determinant for garden establishment. While other gardens were able to access grant funding, this wasn't considered a major impetus for setting up the garden. The amount of money spent establishing the gardens also varied greatly, from several hundreds of dollars ($600 for Garden 3S) to many thousands of dollars ($52,800 for Garden 8N).

The people of the organised garden projects

For some OGPs both the coordinator and a participant representative were interviewed. However, as mentioned in Chapter 4, this was not possible for all garden projects. An officer from an organisation involved with OGPs was also interviewed to gain a broader perspective of the garden projects in the case study area and their links to overcoming disadvantage. He is referred to in this chapter as 'Ian.'

Five garden coordinators were interviewed. Gardens 5N, 6N and 7N don't have garden coordinators and are managed by the garden participants. Three coordinators are teachers at the school gardens, the garden coordinator of Garden 8N is also the coordinator of the neighbourhood house which auspices the garden while the coordinator of Garden 4N is a volunteer, who established the garden and has decades' of experience in horticulture education. Eight gardeners were interviewed and their background details are presented in Table 4.

Table 3: Profile of the organised garden projects

Garden (S =school, N= neighbour-rhood)	Year estab-lished	No. of beds	Motivations for the garden	Cost of estab-lishing the garden	Funding source(s)	Membership cost	Tenure of land
1S **Area A**	2009	8 beds	School community interest in sustainability; the school is also involved in the AUSSI-Tas initiative	$7-8,000	Various sources – school budget, prize money, grant funding and donations	-	Garden on school grounds
2S **Area B**	2010	17 beds	Grant funding that was transferred to the school that had to be spent within a timeframe	Unknown	Grant funding	-	Garden on school grounds
3S **Area A**	2007	6 beds	Interest from coordinating teacher and grant funding	$600	Grant funding	-	Garden on school grounds
4N **Area A**	1997	60 beds	Interest from local community in sustainability and desire to set up first community garden in Hobart	$3,500	Grant funding from various sources	$50 a year per member, including $25 to umbrella organisation	Council land
5N **Area A**	2009	50 beds	Interest from local community members; linked to Community Association	$16,670	Grant funding from various sources	$50 a year per member, including $25 to umbrella organisation	Council
6N **Area A**	2008	12 beds	Interest from local community in sustainability; linked to Community Association; many members have small backyards	$800	Cost for construction of fence donated by Community Association	$0	Private land, donated for use as an organised garden project
7N **Area A**	2009	16 fruit trees and 1 large bed	Interest from local community in sustainability; linked to Community Association	$7,000	Grant funding from various sources, fundraising	No membership yet - no individual beds available	Private land leased from an adjoining church
8N **Area B**	2009	49 beds	Local council received federal grant for garden; some level of community interest in sustainability	$52,800	Grant funding	$5 a year	Council land

Table 4: Profile of the garden participants

Garden Participant	Age	Country of birth/ cultural background	Occupation	Highest level of education	Previous gardening training	Length of time involved in project	Time per week spent in garden	Distance from home to garden
A (male) Andrew; Garden 6N	32	Australia	Project Officer	University	No formal training	3 years	1/2 hour	1km
B (female) Bronwyn; Garden 6N	42	Australia	Town Planner	University	Was a market gardener for 3 years, lifelong hobby	3 years	1/2 hour	1km
C (female) Colleen; Garden 4N	51	Australia	Retired	Year 12	No formal training	8 years	7 hours in summer, 1 hour in winter	3kms
D (male) David; Garden 4N	51	Scotland	Retired	High School	No formal training	8 years	2 hours	3kms
E (female); Ethel; Garden 5N	62	Scotland	Retired	University	Lifelong interest	3 years	2 hours	500m
F (female) Frances; Garden 8N	43	Australia	Sole parent (unemployed)	Year 12	Personal interest	2 years	Several hours every weekend	1km
G (male) Greg; Garden 6N	63	South Africa & Wales	Environmental advocate and educator	Technical college	No formal training, personal interest	3 years	2 hours	400m
H (female) Harriett; Garden 7N	52	Australia	Technical Officer	University	No formal training	2 years	3 hours	6km

Economic, ecological and social aspects highlighted in the interviews

This section will present the economic, ecological and social outcomes of OGP participation highlighted by participants and coordinators.

Participants noted some economic benefits from participation in the OGPs although it was indicated that these weren't a central motivating influence to garden participation.

The coordinator of Garden 2S commented that a parent who had volunteered in the garden was consequently offered paid employment at the school. Frances from Garden 8N has accessed further training through the garden project. The produce from Garden 7N has been made into jam and sold. This income goes towards the yearly rent of the garden space. Two

participants, Colleen and David, reported a significant decrease in their cost of living from growing food in the garden: *"say we're just having a basic meal of vegies and meat, all our vegies will be from the plot. We don't have to buy anything."* (Colleen)

Two garden coordinators commented that there was not the level of need present in the community for OGP participation based on perceived economic outcomes to be significant, but that this may change with future economic downturns.

In all cases, the existence of OGPs has created productive green spaces and a local source of food for garden participants. Most gardens have composting systems, although the success of these varied. At Garden 8N, for example, the compost was initially used as a deposit for household waste.

Tangible social outcomes from participation highlighted by participants include better access to a range of foods and health promotion through physical activity. Psychological benefits were also highlighted, for example by David from Garden 4N: *"Once sort of you go through the gates then you like leave the world outside…so it's really good like that"*

Education as a social outcome of OGP participation varied greatly. In the school gardens, the prioritising of environment education was dependent on the garden's integration into the school curriculum. At Garden 1S, the school has an overarching sustainability curriculum based around the garden including education about waste management, biodiversity, energy conservation and food miles.

At Garden 3S, use of the garden is interwoven with education about ecological processes by the teachers who choose to, but it isn't built into the whole school curriculum. The garden coordinator commented that sustainability education is limited: *"it's only successful with a few teachers who take it seriously...probably only 3 or 4. So the others probably really just pay lip service to it"*.

Ian commented on the broader issues of getting people to connect to the outside world, by stating that disengagement from the environment affects society and impacts on people's willingness to participate and commit to OGPs. This disengagement is reflected through the nature-culture dichotomy, where culture (humanity) is positioned as superior to and separate

from nature (the "environment"). He stated this was evident in school where some teachers aren't able to get around this cognitive disconnect in their teaching.

At Garden 2S, the garden is used for education about the environment and has been used in maths lessons (for measurements), however there isn't any specific education about gardening or ecological processes. The coordinator commented that: *"it's finite in terms of what it can offer for the full curriculum."*

None of the garden participants interviewed had any formal training in gardening and few neighbourhood OGPs provide education on gardening and ecological processes. Three of the Gardens, 6N, 7N and 8N, have no specific education available. In Garden 5N, the gardeners organise ad hoc workshops for garden members about relevant aspects of gardening. In Garden 4N, the garden coordinator provides advice to participants where possible:

> *"if you want to get information, um, he's [the coordinator] always there to sort of give it, but he doesn't force himself on you...yeah we go up and pester him and he's always got an answer."* (David, Garden 4N)

This coordinator recognises the need for education, especially in facilitating success at the beginning of a participant's involvement:

> *"I have to be careful, I won't want to impose because people want to learn themselves the hard way which is amazing but, so if they're doing something silly I do leave a note...there is so much education needed."* (Coordinator of Garden 4N)

The lack of education was also highlighted as a barrier to participation by Ian and Colleen and David from Garden 4N. Colleen commented that when participants have failed crops, they give up.

Social capital outcomes

For some participants, the social aspects of participation in OGPs weren't a major motivator, whilst for others meeting new people was an attraction to being involved in the project. This

next section will present findings from the interviews based on themed questions around social capital as examined in Chapter 2. These will be discussed further in Chapter 6 as to how they relate to social capital theory.

<u>Network density</u>

Sociability

All garden coordinators and participants reported some level of sociability in their gardens, measured by social interaction, non-gardening activities or the formation of new friendships.

In the school gardens, the level of social interaction was found to be highly dependent on the involvement of teachers and parents and how the garden was prioritised by the school community.

At Garden 1S, social interaction is high, as evidenced through the use of the buddy class system, where older students are paired with younger students for their work in the garden. The garden is fully integrated into the school curriculum and there is also a high level of interest from the school community.

At Garden 3S, which has students from both Area A and Area B, there is some interest from some teachers and classes who have beds in the garden. However, due to school renovations, the garden has been moved twice and is now at the rear of the school grounds out of sight of many of the classrooms. The coordinator commented that the garden's location impacts negatively on the level of interest from the school community.

The location of the garden within the school grounds may be important to levels of sociability and will be discussed in the following chapter. At Garden 1S, for example, several classrooms look out over the garden whereas in Gardens 2S and 3S, the gardens are out of sight from many of the classrooms.

At Garden 2S, due to a lack of integration into the school curriculum and poor weather at the time of interviewing, the garden had little recent use. The coordinator indicated a desire to have more parent involvement in the garden but these efforts have been unsuccessful; she commented on the difficulties in getting the school community to use the garden:

> *"I was talking to a teacher today and she said* "There's a garden plot out there, it's got our name on it, the children in my class haven't been out there, they've never done anything out there, could it, would it be alright if we went out there and weeded it?" *and I said* "Yes that would be fantastic" "

The school has now employed their gardener to work for six hours a week with classes in the garden to ensure regular use.

Levels of sociability in the gardens located in neighbourhoods are diverse. At Garden 4N, which has garden participants from both Area A and B, it was noted that it was rare to see another gardener at the site, let alone have a conversation with them.

> *"there's a lot of different um, um types of people, you know what I mean. Like some people want to just go there and keep their head down and get out...If you don't really feel sociable...you can be catered for you know"*
> (David)

As some garden participants live in other suburbs, opportunities for social interaction are diminished as they spend minimal time there. The coordinator of the garden commented that *"because they are so far away they come just when they have to"* and don't stay for very long. Attempts to attract more local residents to the garden were being made by the coordinator.

At Garden 8N (Area B), there is a low level of community uptake of the 49 garden beds, with approximately only 15 garden participants. Despite this, there is a small group of dedicated gardeners who interact and share ideas. This was noted both by the garden coordinator and the garden participant interviewed.

> *"people who live here should feel ownership over this garden and...I've tried to make networks which aim to support this...I'm really determined to make sure this garden succeeds...we're weeding the abandoned beds and planting them out because we've got to make it seem successful."* (Frances)

The garden coordinator noted that the site of the garden, several blocks away from the neighbourhood house at the end of a dead end street, has impacted on community interest. The coordinator was involved in discussions with the council as to the best location:

> *"as you can imagine my first choice was to have it in this area here* [on the grounds of the neighbourhood house] *which is council property but they didn't see that as being suitable and then the second site that was chosen...but then there was an issue with overhead power lines, so we actually went to the third choice was, so vacant land."*

Another aspect noted by both people interviewed, was that there hadn't been any vandalism of this garden, indicating it is a valued part of the neighbourhood. This may also be an indicator of trust and reciprocity among community members:

> *"I bought a hose and I just left the hose here just as like a little test, how bad is this area that I live in, and the hose is still here! So it actually got added on to, someone added an extension and some other things to it"* (Frances)

Participants from two garden projects, Gardens 5N and 7N, commented on the prevalence of non-garden participants dropping in to the garden and how this increased the levels of social interaction and the potential for the formation of new friendships. The location of both gardens is significant; one is located among several other public recreation areas and the other is located near a large school and on church grounds.

The coordinator of Garden 4N, who was also involved in setting up Garden 5N, commented that Garden 5N is *"a meeting place for local people. People love to be close to their neighbours where they live and so the social calendar there works really well"*.

Non-gardening activities
All garden coordinators and participants indicated that attempts have been made to have a social focus in the gardens.

In the school Gardens 1S and 3S education about food is interwoven into the activities of classes. At Garden 1S, classes regularly hold kitchen events where they harvest, cook and eat food from the garden:

> *"the kids love setting their room up as a kitchen, making stuff, and then they love setting it up as a restaurant, you know, to eat together...the message should be to children that this is a low cost thing and that you can produce nutritious delicious meals...in any environment"* (Coordinator).

At Garden 3S, food is harvested for students to eat or take home. At Garden 2S, there is the intention to use the produce more broadly through the school. The garden coordinator noted that so far produce has been used to make healthy foods for school events such as school fairs as alternatives to other food normally offered.

At most neighbourhood gardens, attempts have been made at holding non-gardening events at the garden. Most respondents expressed an interest in holding more events over the warmer spring and summer months.

Participants from Garden 6N commented that there weren't any non-gardening events based at the garden, but that through the Community Association the neighbourhood holds several community events with a sustainability focus which are well attended. At Garden 4N, social activities are limited to an informal annual end-of-year picnic at the garden. Garden 8N previously held monthly BBQs at the garden however concern was expressed over the inadequate facilities, such as toilets and seating:

> *"It just concerns me because in summer it gets really really hot...and older people, like we don't have anywhere to sit down. Inside the shipping container there's some big pots that the fruit trees, we just turn them upside down and sit on them"* (Frances)

The coordinator expressed a wish to have a Men's Shed set up at the garden site, which would boost community connections:

> *"I think it needs to have that multi-activity stuff happening in it...There's the water on and there's the shed for keeping things in, but there's no place to make a cup of tea, because it doesn't have the power. There's no place..., you can only stay long enough... if you want to go to the toilet you've got to go home. So there're all those disadvantages, they're only subtle ones but I think they're quite important ones."*

Gardens 5N and 7N have held successful events at the garden which have attracted both garden participants and non-garden members and have thereby expanded the membership base. Garden 7N holds semi-regular pizza nights for their local area:

> *"that's how we've sort of expanded gradually just talking to people and inviting them to come and we've been when daylight savings is here we have just a social evening, one evening, where we use the pizza oven...we'll make a pizza and sit around and talk, that works quite nicely."* (Harriett)

Some events held at Garden 5N have been too successful, prompting concerns over public liability for the garden group:

> *"social events have the possibility of getting us into terrible trouble because we had an winter solstice celebration the first year, 2009...maybe 30 people turned up, freezing cold, you know 6 o'clock in the middle of June...The next year it was bigger, it was 200..., no, I thought this is going to be too big... We'll go down to the beach and use the public BBQs...But the garden can't do that because we're just too liable for insurance issues if someone gets burnt...so we had to can it this year...So there is a great delight and wish for social events but small groups like ours can't put themselves at risk."* (Ethel)

Personal networks

Most of garden participants stated they had met new people through the garden they otherwise wouldn't have. Some participants commented that existing neighbourhood

relationships were strengthened as a result of working together but that no new friendships had been made. Other participants commented that some new relationships were formed but they remained at an acquaintance level. Andrew from Garden 6N commented that *"Yeah, relationships, I suppose. It's not, it's not that we don't like them, we're just not friends with them"*

In contrast, other participants stated that making new friends was a key motivator for participating in OGPs. Harriet from Garden 7N commented that the garden has *"been a good way to get to know other people in the community that I wouldn't have met otherwise…I have made some more friends. It's been really nice to do, to widen my friendship circle in the suburb."* Similarly, Frances from Garden 8N said she had *"formed and maintained strong friendships because of the garden."*

Some participants noted that the garden also provided an opportunity, as a third place, for non-garden participants to meet, and possibly form friendships. The placement of a sand pit in Garden 5N, for example, and its close proximity to other third places attracted parents with their children to the site. Social interaction between gardeners and passers-by was boosted:

> *"It's a very simple thing a sandpit…It's amazing how it's a drawcard for children. They just love to get in that sandpit and I think quite a few young mothers maybe walk by and meet each other casually"* (Ethel)

Social norms - trust

Initially, interview questions were structured to determine the existence of trust indicators, specifically participation in OGPs and the friendships between garden participants existing outside the garden setting. However, as will be discussed further in Chapter 6, the use of these indicators to measure trust is somewhat problematic.

Several OGPs in this case study have had issues attracting garden participants and two school gardens have had difficulties attracting parents to volunteer in the garden. The coordinator of Garden 2S indicated that time and competing priorities were a factor both for parents and for her to organise a volunteer roster for the garden.

New friendships extending beyond the garden boundaries exist in several projects. However, where friendships didn't continue outside the garden, it was shown to be related to factors other than the garden participants' level of trust, such as time constraints or a desire to keep the garden separate to other parts of their lives. Ethel, for example, when asked if she socialises with other garden participants outside the garden setting, commented *"Um not really no, because we're friends with a different group of people I think. Only at the garden social events, if we have an afternoon tea or something after a working bee"* (Ethel, Garden 5N). Further, some participants responded that the garden had not altered their levels of trust, as garden participation wasn't a significant part of their lives.

The garden participants were asked further questions on trust via email following the interviews to explore Uslaner's (2005) notion of 'generalised trust', particularly in relation to how participants trust others and what they perceive their levels of trust to be.

Frances from Garden 8N stated that, based on her experiences, some caution is required when dealing with people but commented:

> *"I believe if you show respect you receive respect, If you go about blaming people for things, (eg damage to the crops in the community garden or pinching food) that is exactly what they will do, if you show trust and say, 'hey can you tell me who it was who damaged my food... and thank you for finding out ...' the next time they see me they say "hey [*Frances]..." and no more damage has been done in the garden."*

Harriett (Garden 7N) commented that her involvement in the garden has reinforced her "belief in the goodwill of others" but that different levels of trust are applied to the various groups that use the garden, for example, the regular garden users compared to the youth justice and work-for-the-dole participants.

Andrew from Garden 6N also exercises caution when meeting and dealing with new people based on past experiences (what Uslaner (2005) would call "strategic-based trust"):

> *"I am inherently distrustful of strangers...I make a quick judgment or assessment about a person's trustworthiness in the first second or two that I see them...Within the context of the community garden I have had/have a high level of trust with the people involved in it. There is/has been nobody involved with the community garden who I would not trust well enough to invite back to my house for a cuppa afterwards."*

Greg (Garden 6N) indicated that he was a generalised truster (Uslaner 2005) when asked about his levels of trust in people:

> *"I generally entrust people unless they show any indication that they can't be. Sometimes that causes problems for me, in being let down, but I take a position that it is better to work on the basis of trust than mistrust. Nearly all people return trust and goodwill if it is offered to them."*

Furthermore, Greg acknowledged that low levels of trust may be impact on people's ability to work cooperatively with each other, therefore affecting levels of participation in voluntary activities:

> *"we actually have to become more able to do things with other people so that society becomes stronger...we don't do it all that well because we are so used to our private space and privately owned things and feeling like someone else might be exploiting us etc so that we don't easily do things cooperatively"*

Social norms - Reciprocity

In the school gardens, reciprocity was reflected through parents volunteering in the garden in exchange for the perceived benefits to their children's education. However, there were differing levels of commitment across the parent communities. Garden 1S had almost too much parent involvement and enthusiasm, Garden 3S had just enough parent involvement whereas Garden 2S had only one parent who, for a long period of time, was the sole garden volunteer. As mentioned, her efforts were rewarded by employment as a teacher aide.

In the neighbourhood gardens, many garden participants share surplus seeds and seedlings, although it is difficult to assess whether this is a sign of reciprocity or if participants were just reluctant to throw away excess.

Within some gardens, produce from communal beds and fruit trees is shared indicating that garden participants work for common, not just individual, interests. At Garden 7N, for example, in addition to the jam that is made and sold, at the time of interviewing garden participants had expressed their gratitude to the volunteer labour by cooking them pizza on site. In Garden 6N produce is distributed among participants and the broader community (including the landowner).

Frances from Garden 8N expressed a desire to exchange produce with other gardeners after experiencing a glut of summer vegetables. She also lamented the loss of produce from neglected beds:

> *"That was one of the saddest things in the summer was, we were watching food rot. It was really sad, like, some of the beds down there were just self-seeded tomatoes but and they were rotting."*

While many of the garden participants provide advice to each other about gardening practices, the interview findings did not provide any evidence of participants offering each other emotional support or advice.

Networks to other gardens and organisations
Evidence of networks between garden projects and the wider community was highlighted through the interview process. Following the work of White (2002), sociograms depicting the social networks of each garden project in this study are presented in the Appendices. These provide a visual representation of the quantity and quality of and outcomes from the connections with other gardens, individuals and organisations.

The schools of Gardens 1S and 3S are linked to the AUSSI-Schools initiative which aims to establish a school culture based on the principles of sustainable development (Department of Sustainability, Environment, Water, Population and Communities 2010). The coordinators of

both school gardens noted that this was a networking group for teachers on a variety of environmental issues, including OGPs.

Garden 2S is linked to garden projects at other schools through the GFFA. At the time of interviewing, the garden coordinator commented that a network of school garden coordinators had recently been established, which would aim to "*develop a team of the people involved in the gardens, so the coordinator, to look at efficiencies and share strategies and to try to help make it more sustainable*". Through the GFFA, the school also operates a weekly food co-op which sells organic local produce (not from the garden) to the school community. The co-op is run by a school parent, with the intention that after trialling the co-op will become their business.

Several neighbourhood gardens evolved from and are supported by existing community structures. For example, Gardens 5N, 6N and 7N, were established as a direct result of a network of dedicated residents. In these instances, their community associations served as a mechanism to organise and work cooperatively to establish this goal. Community associations continue to serve as a conduit for sharing news about the garden including advertising upcoming social events.

Some garden participants and coordinators commented that they had good connections and relationships with their local councils, who provided council land for the garden, as well as ongoing support and maintenance work.

Four of the five neighbourhood gardens have other community organisations, especially local schools or disability groups, growing produce as members in the garden's beds. Participants noted that the success of this was directly influenced by the distance needed to travel to access the garden. At Garden 5N, for example "*the high school's got a plot, not so successful. When you realistically look at it how often are they going to get kids along? It's a 15, 20 minute walk.*" (Ethel) In contrast, the nearby playgroup uses its plot regularly.

At Garden 8N, the participants are trying to encourage a nearby school to use the garden. A school that had previously used the garden on a regular basis had closed down due to school amalgamations. Frances from this garden commented that:

> *"the school's also got a chaplain and it actually gave him something to do with the kids he actually could take them out of the school. All of the kids that were naughty at school, were never naughty in here. Never. We grew sweet potatoes, grew potatoes, broad beans, and we made up all these wedges with sour cream it was great"*

Through the auspicing neighbourhood house, this garden is also connected with the Feeding the Future program. Crops for distribution to less-advantaged communities are being grown in the garden by the neighbourhood house.

Garden 7N has links to a local school that is a garden member and also uses the garden for photography lessons. This Garden is also connected to other organisations, for example, a youth justice program and a work for the dole organisation that provide labour for the garden.

Despite the presence of several informal connections with other community organisations, only one of the gardens, Garden 2S, had a formal network established with other OGPs (through the GFFA), although many participants knew of and had visited other gardens and wished to be better connected. Potential outcomes noted by garden participants included the exchange of knowledge about gardening and advantages of being connected to a larger movement.

Several garden participants envisioned the possibilities derived from a paid employee who would work with gardens to assist participants to create and sustain networks with other gardens and organisations. Several participants outlined the potential benefits of such a central role – including regular maintenance of the gardens, and knowledge-sharing about gardening, available funding sources and businesses sympathetic to garden projects.

Network reachability

Use of social ties to achieve garden aims

All gardens use strong and weak social ties to keep the garden going, with differing levels of success. In Garden 4N (see Appendix 4), both the coordinator and participants commented that there wasn't any need for external social connections to sustain the garden as the membership fees cover the cost of compost and the garden beds are maintained within the

garden community. However, it was noted that the garden coordinator does most of the maintenance work, including fixing garden beds and mowing the lawn around the beds.

At Garden 6N (see Appendix 6) the land was donated by a neighbour, so the use of a strong tie played a significant role in the garden's origin. Money from the Community Association was also used to construct a fence. The garden was established with few external inputs or resources and without the need for major funding, because the participants had a desire to *not* have raised beds and to *not* import soils, as they saw this as going against the tenets of sustainability.

Ethel from Garden 5N (see Appendix5) noted that the garden participants had attempted to have goods donated from external sources (using weak ties) but have failed, *"we often appeal for help and don't really get it so mmm, its hard…Yeah no, we haven't been very successful in getting useful things donated."* This garden uses weak social ties to recruit passers-by as new members.

Garden 7N (see Appendix 7) has lawn clippings donated from a nearby sports club and an acquaintance helped to construct a garden path, thereby using weak ties to achieve garden aims. Garden participants have also attempted to use weak social ties to recruit new members at garden events, although this has been hampered by a current lack of individual allotments. Harriett commented that *"we'll put in the allotments that's part of our strategy to attract more people because nobody really wants to do the shared thing"*

Frances from Garden 8N (see Appendix 8) is currently trying to attract greater interest to the garden, by trying to get school classes back into the garden, using a local gardening identity to promote the garden and by advertising the garden through the Feeding the Future program.

At the schools, Garden 1S (see Appendix 1) enlisted the energy and enthusiasm of school parents (strong social ties) and Green Corps to do work in the garden. Fruit trees were donated by a local garden business. At Garden 3S (see Appendix 3), the coordinator's partner helped to establish the garden and a small number of parents volunteer in the garden on a regular basis, providing an example of how strong ties keep this garden going. At Garden 2S (see Appendix 2), the coordinator considered using weak social ties to achieve garden aims, however she identified a problem:

> *"all the schools in our area are having gardens happening so we can't all go and badger...our local nursery...but we can't all go and say can you donate that's not fair on that business and we can't all, yeah, it takes money..."*

Bridging and bonding

Most interviews provided evidence, through the examples cited above, of the presence of bridging and bonding social capital in OGPs. Garden participants frequently used the resources of outsiders, especially in the establishment phase, to meet garden aims. Some of the gardens intentionally 'bridge' to different parts of the community; the sandpit at Garden 5N and the pizza teas of Garden 7N are examples of this.

In contrast, Garden 6N provides an example of the effect of 'bonding' on the garden and its participants. Andrew commented that their neighbourhood is a *"very affluent culturally homogenous bit of Hobart"* while Greg stated that garden participation helped to strengthen community relationships rather than create new friendships. The bonding between gardeners has helped them further their goals: *"we've certainly built a lot more social connection and cohesion"* (Greg).

Network centralisation

Decision-making and the division of roles and responsibilities

In the schools, the coordinating teacher and/or principal makes the decisions about the garden. The coordinator at Garden 2S noted that there wasn't any consultation with the school community about the establishment of the garden. As such, the school community feels little ownership of the garden: *"no one in this school initiated it or drove it. Um, it was a gift to us. So there is no ownership there."*

The majority of the participants from neighbourhood OGPs were involved in the decision-making processes in some way but also expressed concerns about these practices.

At Garden 4N, the coordinator makes all the decisions. However, both the coordinator and the participants interviewed stated that attempts to enlist participants to take on additional

roles had not been successful. The participants indicated concern over the current decision-making structure, as the coordinator could not be expected to continue indefinitely in this role:

> *"I think it's unfair. What I would like to see happen is that working bees happen so everybody comes and you know maintains all of it. Because no one's really interested in that side of it so* [the coordinator] *does everything. But he doesn't seem to mind. You know, well I kind of think he does...But then he kind of doesn't want to hand the reins over to somebody else. To see like his baby go downhill and that's exactly what would happen. It would go downhill"* (Colleen)

Several gardens have informal decision-making groups which were particularly active in the initial stages of development. Garden 6N, which doesn't have a coordinator, uses a group email system to communicate about the garden. However, participants noted that the one or two who respond usually have the most input and influence in decision-making. Greg commented on the need for more structure, through functional positions, to keep the garden going: *"so that we don't depend on one or two people too much cos if they fail then there's no one to pick up the pieces and make sure everything gets done."*

At Garden 7N, an email system is sometimes used to communicate information, but communal decisions are made in the garden. This OGP doesn't have a coordinator but has two participants (including Harriet) who act in coordinating roles. Garden 5N does not have a coordinator but has a loose committee structure. As there are no office bearers, no responsibility is taken for decisions that are made and working bees aren't very well attended.

> *"we have a committee meeting every 2 months, probably not often enough and make decisions* [laughs] *and then say well "Who's going to do that, and who's going to do this?", and so people say "I'll do that", "I'll take on this". But there's no...imperative to get things actually done and reported back when you don't have a more formal structure. So things tend to slide then."* (Ethel)

Several OGPs hold working bees, although time was raised as a factor impacting on attendance. Several participants commented on the need to share roles and responsibilities

more broadly among participants, to avoidance a reliance on one or two people. Time constraints were also acknowledged as affecting decision-making processes.

Concerns with garden participants working together for a shared vision were raised by two garden participants from different gardens. Colleen from Garden 4N questioned the possibility of garden participants sharing garden responsibility: *"I can't see...there's a lot of strong personalities there and I can't see people kind of working together."* Greg from Garden 6N commented that the value in participating in OGPs was not the produce, but the goal of trying to make people more community-oriented through cooperation:

> *"The actual exercise is an exercise in social change and that's why see even when we go down there I put certainly more effort in than I get out in vegetables and so does [Andrew] and [Bronwyn]. I see the value in it as being more than just the vegetables...it's part of the process of trying to help community, people to become more community orientated."*

This view is supported by Ian who commented on the occasional competitive nature of sustainability groups and how this can hinder the communal nature and function of organised garden projects.

Garden accessibility and disadvantage

In the school gardens, accessibility is limited to the school teachers, students and their families. Garden 3S is physically accessible and the garden coordinator commented that students from migrant backgrounds enjoy using the garden:

> *"Well we've got a child who's mainly in a wheelchair. She absolutely loves gardening and um she gets very excited when she goes out there...She loves just feeling the dirt and planting...and the other group that really love gardening are the um E.A.L., the children um from other backgrounds, like the Karen-Burmese children that have come here as refugees."*

The participants of Garden 6N stated that their garden was exclusive and not intended to be accessible to the broader community. Andrew commented that it's *"not community in the sense of inclusive; its community in the sense of the Greenies who know each other...It doesn't bring in people who live down this end or Asian kids* [international students] *or new*

people or any of that." Physical access to the steep garden is also limited. There aren't any individual plots, which is also a deterrent to members of the community who may be interested in joining the garden. Physical access to many of the gardens remains a problem, particularly those gardens with narrow paths between beds or limited seating.

Garden 7N attracts visitors from across the demographic spectrum, including work-for-the-dole groups, youth justice groups, at-risk members of the community (who have been referred to the garden) and elderly women who frequent the garden after church on Sundays:

> *"we'd like it be a public area so people can feel free to come in and join and go out again...high school girls come in during the week with a couple of mums in the garden, and then work for dole guys come in and fix up the shed and do sort of infrastructure for us, so they'll be in it during the week. There's a group nearby...and they have to do community service and occasionally they'll be there mowing the lawns and stuff so, so there's quite often people there during the week for various reasons"* (Harriet)

For Harriet, garden accessibility provides a mechanism to give something back to the community:

> *"it's nice to feel like you're giving back a bit like we find that we get groups that are a bit alienated some of them...so it's nice to have somewhere we can invite other parts of the community and feel like we're giving something back as well. So it's community spirit"*

Frances (Garden 8N) said that involvement in the garden helped to foster a sense of identity for her daughter, because she doesn't believe their community, located in an area of lesser advantage, has a strong identity.

> *"I've got a nine year old daughter and to me it was about her feeling um,* [this suburb] *doesn't have a shopping centre...we now don't have a school...we don't have services and we don't have anything. For me getting my daughter involved in the community garden was about having identity...it's about having that recognition, who I am, this is where I'm from"*

Local interest in Garden 8N is limited to a few committed gardeners and Frances remarked that a lack of signage and/or information probably plays a part in this:

> *"A lot of people drive past this garden, a lot of people stop, a lot of people walk in and have a look, but can you see the sign that tells you how to apply for a garden bed? Can you see the sign that tells you who to contact? [laughs]"*

The coordinator of Garden 8N raised the issue of attracting people from less advantaged backgrounds to the garden and for them to see the benefits of it:

> *"I think in the areas where neighbourhood houses are, the really tight socioeconomic groups...how you shift from that survival sort of mm living to being able to think about, um "How I can support myself?"...so that shift in thinking that we can do a lot of... we can grow vegies and...live much more sustainably...It's hard because you have, in lots of areas...the group of committed people who are usually the ones who are the most aware um but I'm always conscious of the ones who may need it most that are the ones that we're not connecting with."*

Ian noted that while many people see the benefits from growing their own food, for example, he commented that this mind shift hasn't occurred across the whole community:

> *"those people who are battlers, are still battlers and they often regard themselves as not having enough time to put in to, um, doing their own vegies...I feel community gardens break down some of those barriers because there's no real commitment...It's not in their backyard so they can come in...they can participate for a bit and they get something you know...I think they'll be forced into some of this as well effectively through economic reasons. They'll realise that they...if they grow a couple of lettuces out the back, you know, at least they save on a little bit of something... on the other hand, need support to do that so if they don't get the support to do that, they won't do that either."*

As previously mentioned, it was highlighted by coordinators that economic necessity was likely to force more people into garden participation.

Key findings, with particular emphasis on education, garden location, social connection and garden accessibility, will be further discussed in Chapter 6 in relation to social capital theory and the links to disadvantage.

Chapter 6 - Discussion

This chapter will discuss the key findings of the interviews with garden participants and coordinators which address the function of social capital in organised garden projects in the case study area. Simply, the hypothesis that social networks can facilitate social capital outcomes in the garden setting, particularly for less advantaged sections of the community, will be tested.

An overall finding of the research is that social networks play a key role in organised garden projects; however several barriers to the effectiveness of social networks were highlighted by the garden participants and coordinators during the interview process. These will be raised in the discussion below with particular emphasis on time constraints, the location of the garden within the school or neighbourhood, and the simplification of the relationship between humanity and the environment (the culture-nature dichotomy) being issues that were frequently raised, all of which were reported to impact on garden participation.

Grant funding

A major finding of this study is that where gardens were established *solely* as a result of grant funding, issues concerning community ownership and consequently participation were raised as concerns by coordinators and participants alike. Further, the amount of money spent on establishing the gardens, through grant funding and other means, wasn't shown to be a determinant for the success of OGPs. This research projects shows that funding as a motivator for garden establishment can have negative impacts on the long-term viability of OGPs. While Gardens 2S and 8N are managed by the people who use them, the minimal community involvement in the garden establishment (stemming from a successful grant application) has affected their use. This finding is at odds with Francis' (1989) argument that organised garden projects are "designed, built or managed by the people who use them" (p54). Residents need to be involved in the design and construction of gardens, not just the management. It should, be noted, however, that efforts are being made by coordinators and participants in these gardens to increase community involvement.

It is unknown if a trend to rely on grant funding for OGP establishment is peculiar to Tasmanian gardens, but such a reliance can create a short-term garden focus which, when the funding runs out, can leave the garden in a precarious situation. Additionally, as many grant

rounds are subject to the health of the budgets providing them, they are an unreliable source of support.

The study therefore suggests that further research and policy development surrounding the establishment of OGPs should focus on developing a sustainable model for gardens that avoids a reliance on grant funds. A major finding from the interviews was that garden participants independently suggested the creation of a paid "garden networker" whose role it would be to work with OGP participants to create and sustain networks with other gardens and organisations and to provide gardening advice and maintenance in the gardens. While this idea introduces other considerations such as the source of funding and its impact on an essentially volunteer system of organisation, it should be noted that both the Hobart and Glenorchy councils have community development officers who, along with other duties, work with residents to establish OGPs. It may be that these roles and the support that councils provide needs to be better communicated to residents, or these roles could be extended as part of a garden networker framework.

Garden location and links to sociability

One value of this research project lies in its demonstration of garden location as a major influence on levels of garden participation and sociability. As White (2002) argues that the quality of social connections is significant for outcomes for individuals, it is therefore necessary to consider how garden location can facilitate sociability and lead to establishment and maintenance of dense social networks.

Garden location was shown to be critical to creating a setting favourable to the formation of new networks. Where gardens are located in close proximity to other potential "third places", sociability is boosted (see Appendices 5 and 7) (Oldenburg 1999). In particular, where gardens are located in heavily pedestrianised areas new relationships among gardeners and passers-by are encouraged.

A further finding is that many gardens successfully act as places for non-gardening activities where garden members and local residents can interact in an informal setting. Through these events, garden members are able to casually socialise with each other and other neighbourhood members and these events are also used as mechanisms to recruit new members to the garden (and potentially establish valuable networks). These findings therefore

support Glover et al's argument (2005a) that OGPs provide a setting conducive to the formation of new relationships and the hypothesis put forward by Teig et al (2009) that social connections can be cultivated between gardeners and other residents in the OGP setting.

In contrast, in Garden 8N, site selection was raised as a barrier to sociability, as was the lack of signage. Similarly in the school gardens, where school gardens are out of sight of the classrooms, participation in the garden is diminished.

The findings suggest that further research should focus on the location of OGPs and the links to sociability, particularly in relation to suitably pedestrianised and accessible locations. Further investigations could also focus on potential deterrents to non-gardening events, including issues relating to public liability and a lack of facilities for participants.

Social interaction as a motivator for garden participation

As noted above, the gardens provide a setting in which new friendships could be formed (Glover et al 2005a) but the findings indicate that this only occurs as a result of a clear intention and investment of time and energy from garden participants . For some participants who were new to their neighbourhood or didn't have many existing local friendships, the formation of new friendships were emphasised as significant outcomes.

Similarly, where interaction with other participants is limited (and thus the potential for new friendships), it was found that this was also by choice, particularly in the case of Garden 6N, which is intentionally exclusive. While many new friendships had been formed and acquaintances made in the garden setting, in some instances, the garden participants had not made new friends or even acquaintances. This was shown to be unrelated to the garden environment, but instead because the participants do not wish to interact with others. Putnam's (1995) use of participation in voluntary associations as a measurement of social capital is questioned here, as this study shows that garden participants can be involved in the garden project but have limited interaction with other participants. Thus, there is the potential for social capital to be produced, if the participants so choose, but it cannot be assumed that participation in voluntary associations, such as OGPs, will necessarily lead to these outcomes.

It should be noted that White's argument that network density can facilitate "collective action and cooperative behaviour" is supported by the findings of this study (2002, p261). Quality relationships, through networks of garden participants, were significant in the neighbourhood and school gardens where a dedicated group of residents or parents worked together to see the garden established. The fact that many of these individuals knew each other before the garden was established is not relevant here, as it highlights the need for quality relationships to achieve outcomes for OGPs. This also supports Glover et al's theory that OGPs are the result of a "collective venture" (2005b, p454).

Trust and reciprocity

This study aimed to identify evidence of trust amongst garden participants as one of the indicators of social capital. However, the findings indicate that the use of trust to measure social capital is questionable (Glover et al 2005b; Teig et al 2009). Where participants, for example, were asked if garden involvement had improved their levels of trust in others, some responded that it hadn't because the garden wasn't a large part of their lives, not because of particular garden experiences.

Additionally, the formation of new friendships formed through garden participation shows that individuals are trusting but fails to clarify whether this is because the participants were already trusting individuals (Uslaner's "generalised trusters" 2005), or if trust is the result of garden involvement. Nevertheless, the fact that new friendships had been established and maintained through the garden experience indicates that trust was found to be present in the organised garden projects, although the use of trust signifying the presence of social capital is tenuous in this context.

Similarly, some participants commented that the friendships they had made in the garden stayed within the garden boundaries, even where they had indicated they were generally trusting of others. This was commonly because they want to keep the garden as a separate part of their lives or because time constraints dictate this. These findings run contrary to Glover et al's (2005b) use of friendships existing outside the garden setting as a precursor of trust, suggesting that the indicators of trust to measure social capital need further consideration.

Further, despite some participants saying they exercised caution when dealing with new people, based on previous negative experiences, none of the respondents reported distrusting other garden participants. Generally, the participants' interaction with other gardeners had been friendly, indicating the "net value" of social capital, as identified by Fukuyama (2001), in the OGP context is generally positive.

The results of this study indicate that reciprocity is present in the garden setting and that, in general, participants are willing to share gardening advice and garden resources. In schools, this is evidenced by the number of parents (as strong social ties) providing regular help in the garden and in neighbourhood gardens with communal beds and fruit trees where produce is shared. These findings support King's argument that reciprocity can be found through the expectation of returned favours. However, the findings did not back up the argument put forward by Teig et al (2009) that garden participants could turn to each other for emotional support and advice. This may be because garden participants are able to seek such advice in other settings or through other networks.

Barriers to reciprocity were highlighted through the interviews. A particular theme was that Western individualism is impacting on the ability of people to work together for common aims, in this case in the garden setting. This proposition requires more attention particularly in the context of sustainability and LA21 goals, both of which emphasise community involvement and cooperation.

Decision-making and the division of roles and responsibilities

Levels of reciprocity are also connected with the division of labour in the garden setting. A major finding of this study is that decision-making is highly fragmented in the OGPs of this study (White 2002). This is contrary to the argument advanced by Glover et al (2005a) who claim that OGPs, as grassroots initiatives, are less hierarchical. However, the reason for this uneven distribution of power is more complex than individuals seeking power, as suggested by Bourdieu (1986).

The school gardens in this study exist in a hierarchical system and decisions regarding the garden are therefore made from the top-down, by the coordinating teacher and/or principal. It could be argued that these school gardens don't hold true to the spirit of "community gardening" due to this rigid decision-making structure. That said, it is likely that students (as

garden participants) may get a say in what they get to grow and how to the produce is used, and consequently have some input into decision-making processes.

The findings indicate that none of the structures in place in neighbourhood gardens are conducive to widespread democratic decision-making or to an adequate distribution of roles and responsibilities. Decision-making processes in neighbourhood gardens with relaxed structures (Gardens, 5N, 6N and 7N) are democratic in the sense that the garden participants who choose to put in the time and energy to be involved in the decision-making process are the ones who ultimately influence these decisions. Further, it was found that the ways decisions are made in these gardens has the potential to impact on their continuation. In Garden 4N, for example, where decisions about the garden are made solely by the coordinator, it was highlighted as negatively impacting on the garden's future direction, as garden participants weren't willing to be involved.

The findings of this study strongly indicate that many garden participants are unable and in some instances unwilling to take on roles within the garden setting. This is to be expected considering the nature of organised garden projects as volunteer activities, which many participants regard as a hobby. However, it should be further explored whether this reluctance has connections to levels of reciprocity in the gardens. As stated, participants indicated the difficulty involved in getting garden participants to work together and that individualism may be a cause.

Generally, the distribution of roles and responsibilities were raised as a major concern for the ongoing viability of the garden, as it was considered that too few people were doing too much of the work, and that this was not by choice. Time constraints were also highlighted as a barrier to both changing the way decisions are made and as a barrier to making decisions in the first place.

The findings of the study therefore support the argument put forward by Bourdieu (1986) that social capital can be unevenly distributed, through the access to decision-making. However, in the gardens in this study, it is indicated that the uneven distribution of power is unintentional. That is, opportunities for democratic participation exist, but participants may choose not to be involved in them, rather than there being a denial of access to these opportunities. Where closed networks have developed and power has therefore been

concentrated (White 2002), it could be interpreted that this has been the result of garden participants finding it difficult to find other gardeners willing to share roles and responsibilities, rather than a desire to have control of the garden.

These findings also provide a mixed result in response to the claim of Glover et al (2005a) about the promotion of democracy in the organised garden setting. While it is clear that democratic processes can be promoted in these gardens, this study suggests that this can occur for those who choose to participate in the democratic process.

Connections with other OGPs and other organisations

The hypothesis that networks between OGPs can result in positive social outcomes, particularly for less advantaged parts of the community, is tested by the results of the finding which indicate that the gardens within the case study area are not heavily networked with each other. This is despite garden participants highlighting the benefits of such connections and a desire to be better linked to other garden projects.

Indeed, only one OGP has a formal connection with other gardens and the gains from this network are yet to be determined. Garden 2S, in the less advantaged Area B, is connected with other garden projects in the case study area, through its recent involvement with the Glenorchy Family Food Alliance (GFFA). It is anticipated that through projects such as the GFFA and Feeding the Future, further networks between OGPs exist or are being established in the case study area. However, it is significant that only one of the OGPs in this study has these connections with other gardens.

Most gardens are connected, if only loosely, to other organisations (i.e. disability groups that were garden members). The findings indicate that where gardens were heavily networked with other organisations, this was a direct result of efforts from participants to maintain and establish these connections.

The most heavily networked garden is Garden 7N (see Appendix 7) which has regular visitors from a variety of community organisations, including many that deal with less advantaged sections of the population. That this garden is so heavily embedded in its neighbourhood is an intentional result of the participants' desire to have the garden as an accessible public space, which could be considered to be intentional "bridging" social capital.

While many of the networks don't provide tangible outcomes for the garden, use of the garden by community members illustrates how the garden is giving back to the community, and how social outcomes are being achieved for disadvantaged parts of the community. This garden represents an encouraging example of the outcomes that OGPs can provide in their community, particularly for less advantaged parts of the population.

Where gardens aren't widely connected, this was sometimes intentional, as in the case of Garden 6N, which has an exclusive garden network facilitating "bonding", but not bridging, social capital (Glover et al 2005b; Kingsley and Townsend 2006). In other less-networked gardens, some efforts were being made to establish connections to ensure the garden's future and to boost participation.

As indicated in Chapter 5, the school gardens utilise their institutional networks as well as local school relationships to fulfil their garden goals. Two schools are linked to an education for sustainability initiative and it is anticipated this association provides some indirect support to the relevant teachers and gardens.

The findings also indicate that support from a network of organisations is significant in the establishment phase of gardens and that, for garden projects to continue, these connections need to be maintained. This supports the arguments put forward by Bourdieu (1986) and Coleman (1990) that social networks require an investment of time and energy.

Indeed, many coordinators and participants interviewed acknowledged the benefits of being better connected with other gardens and organisations. However, time constraints were perceived to be a major impediment to the establishment and maintenance of these connections, particularly in gardens without a formal coordinating role.

Most of the gardens have connections to other organisations, particularly with their local council and many had been involved in grant application processes. The findings therefore support the argument put forward by Glover et al (2005a) that OGP participation provides an opportunity for residents to engage with government and public institutions.

Projects such as the GFFA and FTF have the potential to provide many of the necessary linkages between OGPs and less advantaged parts of the population, and thus potentially

facilitating positive social capital outcomes. At the time of interviewing these projects were still in their infancy so their significance cannot be assessed. It will be very important to assess these models in the future to determine the value of networks between gardens, how to engage less advantaged parts of the population in organised garden projects through mechanisms such as neighbourhood houses and other community organisations, and the potential links to tackling social and economic disadvantage.

Strong and weak ties

How gardens are able to utilise their strong and weak ties to achieve garden aims, which White (2002) describes as "network reachability" was another focus of this study.

The findings indicate that strong ties were particularly significant for school gardens that often rely on the parents of the students for garden establishment and maintenance. In Garden 2S, one parent kept the garden going for several months, highlighting the importance of one strong tie. In the majority of the neighbourhood gardens strong ties in the form of a network of garden participants keep the garden going often without a garden coordinator, but frequently in combination with the resources available through community associations. The findings from the interviews support the argument put forward by Glover et al (2005b) that emphasises strong ties in OGPs.

Weak ties were apparent in school gardens, particularly during establishment when goods were donated from local businesses etc. However, as was noted at one school, many schools in the area were all using their weak social ties to request donations from the same local business. Weak ties were found to be important in the neighbourhood gardens, where they were more significant than strong ties in achieving collective outcomes for the garden and personal outcomes for the participants. These findings support Granovetter's (1973) theory that weak social ties have a greater reach in creating opportunities and achieving results. In most gardens, participants and coordinators were able to utilise weak social ties to obtain goods and labour to set up the garden.

These findings therefore support Glover et al's (2005b) argument that OGPs rely on social connections to achieve greater garden aims. However, garden participants reported issues with exploiting their weak ties to achieve garden aims, indicating the complexities in the use of social ties. Participants had made, for example, attempts to recruit new members and

access resources, but had not necessarily been successful in doing so. This suggests that even where strong and weak ties are present, garden coordinators and participants aren't always able to capitalise on them. This dilemma is highlighted in Tasmania's *Social Inclusion Strategy* where, in defining the inherent difficulties of OGPs, Adams states that garden networks may not have the "capability and mix of resources" to keep gardens going (2009, p24-25). This is particularly significant for gardens in disadvantaged areas that may have limited resources to achieve garden aims.

Economic outcomes

The economic outcomes from OGP participation were emphasised by some participants, but were of negligible significance for others.

Where residents from less advantaged areas participated in OGPs the economic outcomes were emphasised, particularly paid employment, access to training and food production which had reduced living costs. Where garden participants reported no economic gain from garden participation, this suggests either the *need* to grow produce to reduce cost of living expenses is not present or that it was not an aim of the participants' involvement in the garden. It was commented by interviewees that future economic crises may provide an incentive for the broader community to become involved in growing their own food and in OGPs, as it was stated that there is not the level of economic need at present.

While every garden has economic potential, as identified by Kearney (2009) and Hancock (2001), this was not emphasised by any of the participants or coordinators as goals of the project. Garden 7N has the most significant economic outcome for the garden overall, through the sale of produce, but this was not identified as a stated aim of the garden process.

Education

Education about sustainability and gardening processes were inconsistently apparent across the gardens of the case study area. In the school gardens, the level of sustainability education was found to be highly dependent on the garden's integration into the school curriculum and the level of commitment from the school community, particularly teachers. In the neighbourhood gardens, the evidence provided indicate that a lack of education available, or at least awareness, about gardening and the hard work involved in growing produce may impact on garden participation.

School education was highlighted as a solution to overcoming the issue of nature-culture dualism. It was suggested that this shift in thinking is necessary for improving community participation in OGPs. This is particularly relevant when considering the aims of sustainability, which inherently require the integration of economic, ecological and social perspectives and recognition that each perspective is interrelated. While this is not is easily or quickly remedied, the presence of OGPs in schools provides an example of how gardening and self-sufficiency practices can become more ingrained in society and can facilitate the necessary philosophical shift. Although as the findings indicate, this has to be matched by a economic and philosophical investment by the school and the school community, which isn't easy in the context of competing financial and curricular priorities.

In the broader community, it is difficult to identify the best strategy to engage communities, particularly those of lesser advantage, in OGPs if they are cognitively disconnected from the "environment". This concern was raised several times during the interview process and requires further investigation in the context of tackling issues of social and economic disadvantage.

Garden accessibility

Access to any institution can be restricted at many levels and in the case of OGPs several barriers to garden participation were highlighted. The findings indicate that physical access, the exclusive nature of some gardens and a lack of awareness of the benefits of garden involvement are potential barriers to garden involvement. This is particularly significant in the context of addressing social and economic disadvantage and building community capacity, as residents first need access to the gardens to benefit from participation.

At a basic physical level, concerns such as steepness, narrow beds, limited seating and the need for fencing were highlighted across the interviews. Barriers to garden membership were raised several times, including a lack of information about how to become a garden member and a low turnover of beds due to members losing interest but not advising the coordinator. A lack of beds for individual use was also seen as a possible deterrent to participation. It should be noted that in some gardens efforts are being made to overcome these issues.

In Garden 6N, it was highlighted by residents that the garden is exclusive and doesn't cater to the whole neighbourhood. As mentioned, the garden only has communal plots which could act as a deterrent for new members, but the participants do not actively seek new members to the garden. It was raised by one participant that the international students who live nearby, for example, are not included in the garden network. This particular part of the population has been emphasised as being at risk of disadvantage by the Hobart City Council (2010).

The lack of demographic spread of many of the gardens and their failure to address issues of social and economic disadvantage could indicate that OGPs are being taken up by those from more advantaged parts of the community, those who already have the capacity and social and economic resources to get by.

It may be that the benefits of OGP participation to overcoming disadvantage have not been emphasised in the areas of need. Concern was strongly emphasised in the findings that the garden projects weren't reaching out to parts of the community who needed it the most. This was highlighted in relation to Garden 8N which is located in an area of lesser advantage and has experienced a low uptake of garden beds from the neighbourhood. It may be that parts of the community that are more aware about sustainability and nutrition are participating in garden projects elsewhere, whereas less advantaged parts of the community either aren't aware of the benefits of this involvement, or don't have the time support, or inclination for this to occur.

The issue therefore relates to communicating the benefits of the garden within the neighbourhood. Both the coordinator and Ian (the community engagement officer) emphasised the shift in thinking required, particularly in these areas, to encourage residents to become garden participants and to understand the potential benefits. Measures to attract at-risk parts of the community to garden participation should be considered in the wider policy context for how the projects are supported by government and organisations.

However, the intangible social outcomes for individuals who are connected with OGPs were shown to be significant in this study. Where the gardens connect with the parts of the community identified in Chapter 3 as being at risk of social exclusion, such as people with disability, older Tasmanians and single-parent households (as has occurred in Gardens 2S,

3S, 4N, 7N and 8N), they have contributed to a sense of community and belonging and may have facilitated other worthwhile connections for these individuals.

These findings suggest that, particularly in areas of lesser advantage, more needs to be done to both support existing gardens and to encourage greater garden participation by local residents in these networks.

Chapter 7 - Conclusion

Organised garden projects, as illustrations of sustainability in action (Holland 2004), need to be responsive to the needs and wants of their communities. Many of the gardens in this study have achieved or are on the way to achieving their stated intentions (be they economic, ecological or social, or a combination) although all gardens are facing challenges. While the aims of these gardens may never be fully realised, that is in many ways irrelevant. Where gardens may cease to exist in the future, this shouldn't be seen as a failure on the part of coordinators or participants, but rather a reflection of what the neighbourhood needs and wants.

The interviews from coordinators and participants of organised garden projects in the case study area provide a snapshot, but not the whole picture, of these grassroots initiatives and their potential for strengthening community connections and providing relief to social and economic disadvantage. This study has shown that the networks created through participation in OGPs can provide solutions to social and economic disadvantage, although the potential of this participation has not yet been fully realised in the case study area. Future directions for research in this area should focus on how disadvantaged communities can be engaged and supported in their participation in OGPs and the role that education and community engagement has to play in this.

As discussed, social capital is more than just the presence of networks, relationships and connections between people. At the heart of social capital is the transactional exchange which results in benefits, actions and/or outcomes for the individuals and groups involved. In all of the OGPs, social capital was identified in the form of social connections and relationships to facilitate action and to achieve garden outcomes. The quality, reach and distribution of these relationships (White 2002) rather than their mere existence was significant to achieving these goals. The findings of the study therefore support Bourdieu's (1986) argument that existence of a network of connections is not a natural or social given and Coleman's (1990) case that social capital, not just networks, is created when relations among persons change in ways that facilitate action.

Further, where social networks in OGPs have best facilitated outcomes for individuals and communities, the garden setting acted as a third place between the public and private spheres and provided a location for individuals to feel included, to form new relationships, to

contribute to their local area and to establish connections (Oldenburg 1999). Following on from White (2002), how garden participants, as individuals embedded in social structures, can best access resources and invest in social relationships to achieve outcomes given their level of commitment in the garden projects in significant. It must also be considered how groups can best mobilise social capital to achieve a shared vision for their gardens.

Organised garden projects were originally established in the late nineteenth century through government incentives to ameliorate economic downturns in the community. Many gardens are now being established in response to ecological concerns at a grassroots level. As the study indicates, OGPs have much potential for tackling social and economic disadvantage, both through providing beneficial economic outcomes and social connections for those who may be socially isolated, or who need greater opportunities in their lives. Due to this recognised potential, is it again time for greater government interest and investment in these projects, or does more need to be done to educate the public about the benefits of garden project involvement and let the gardens evolve from the ground up?
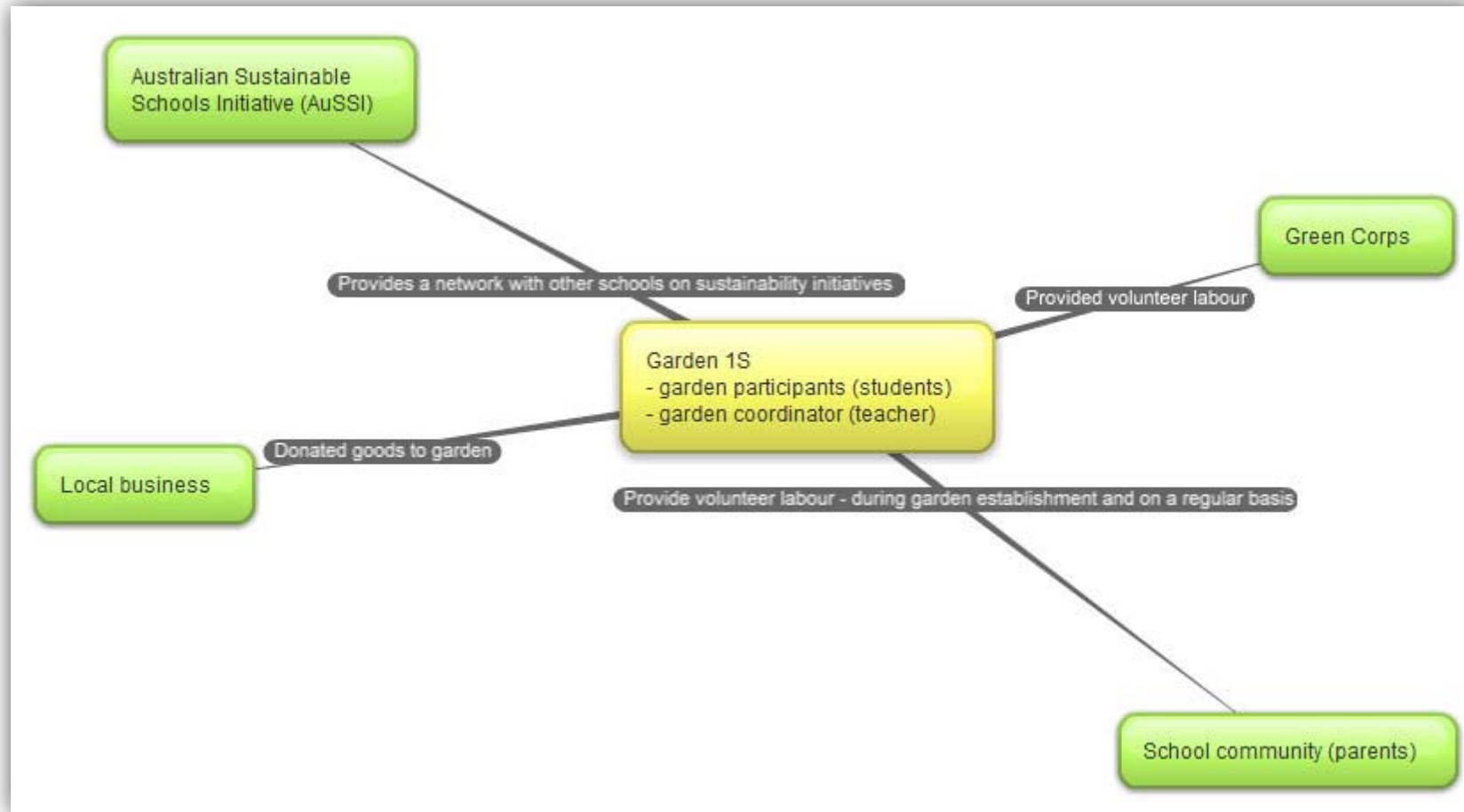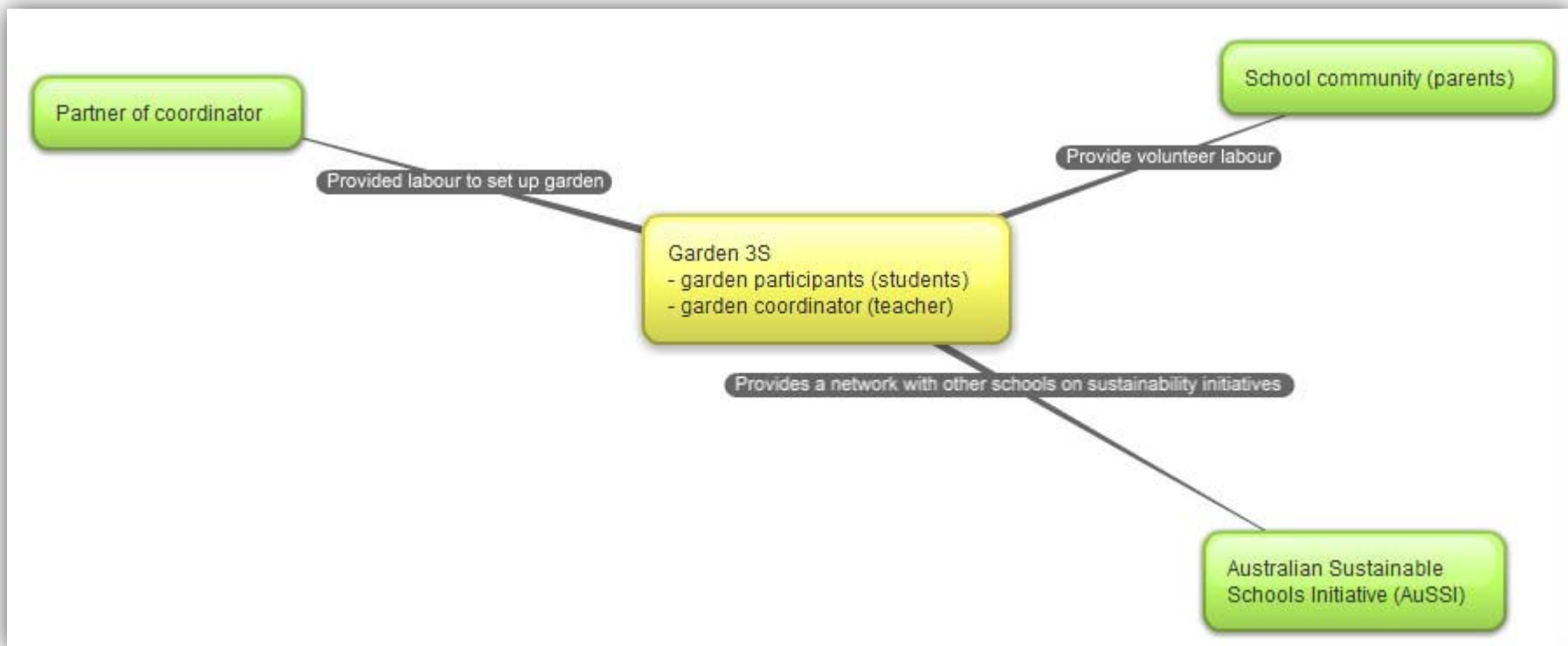
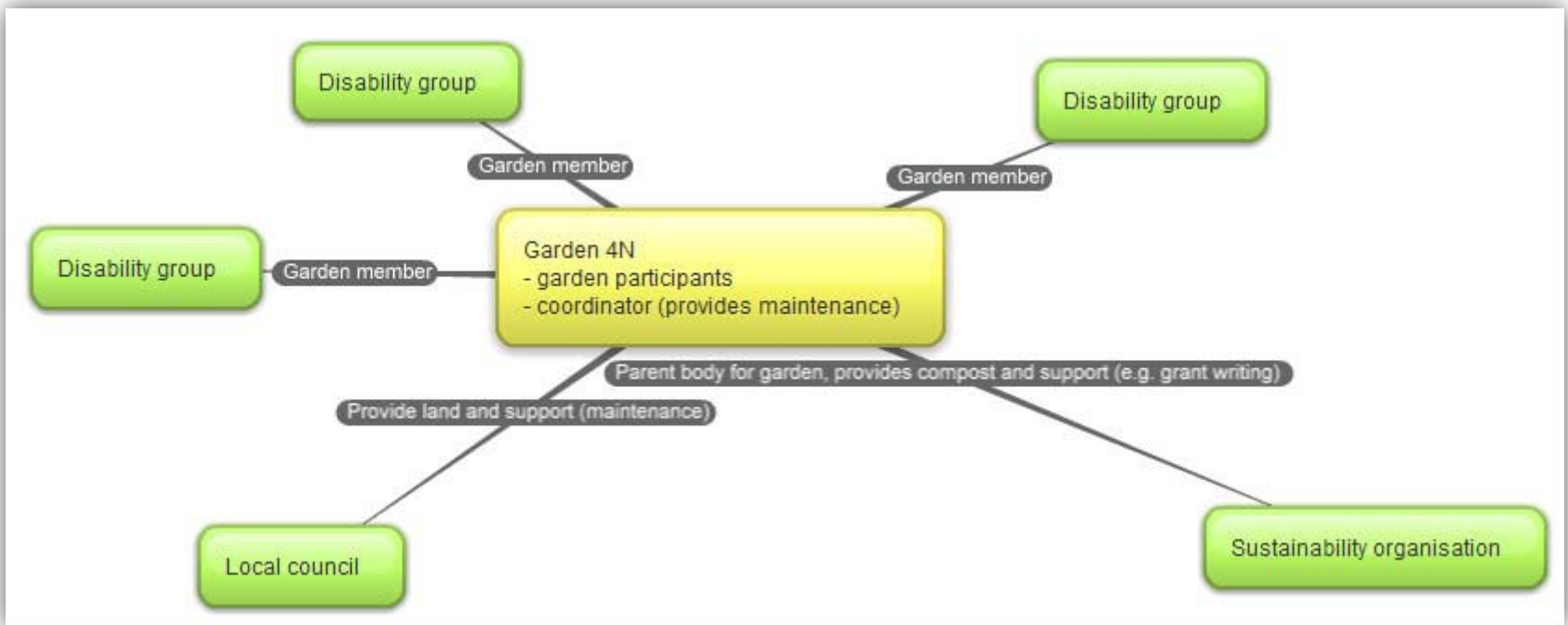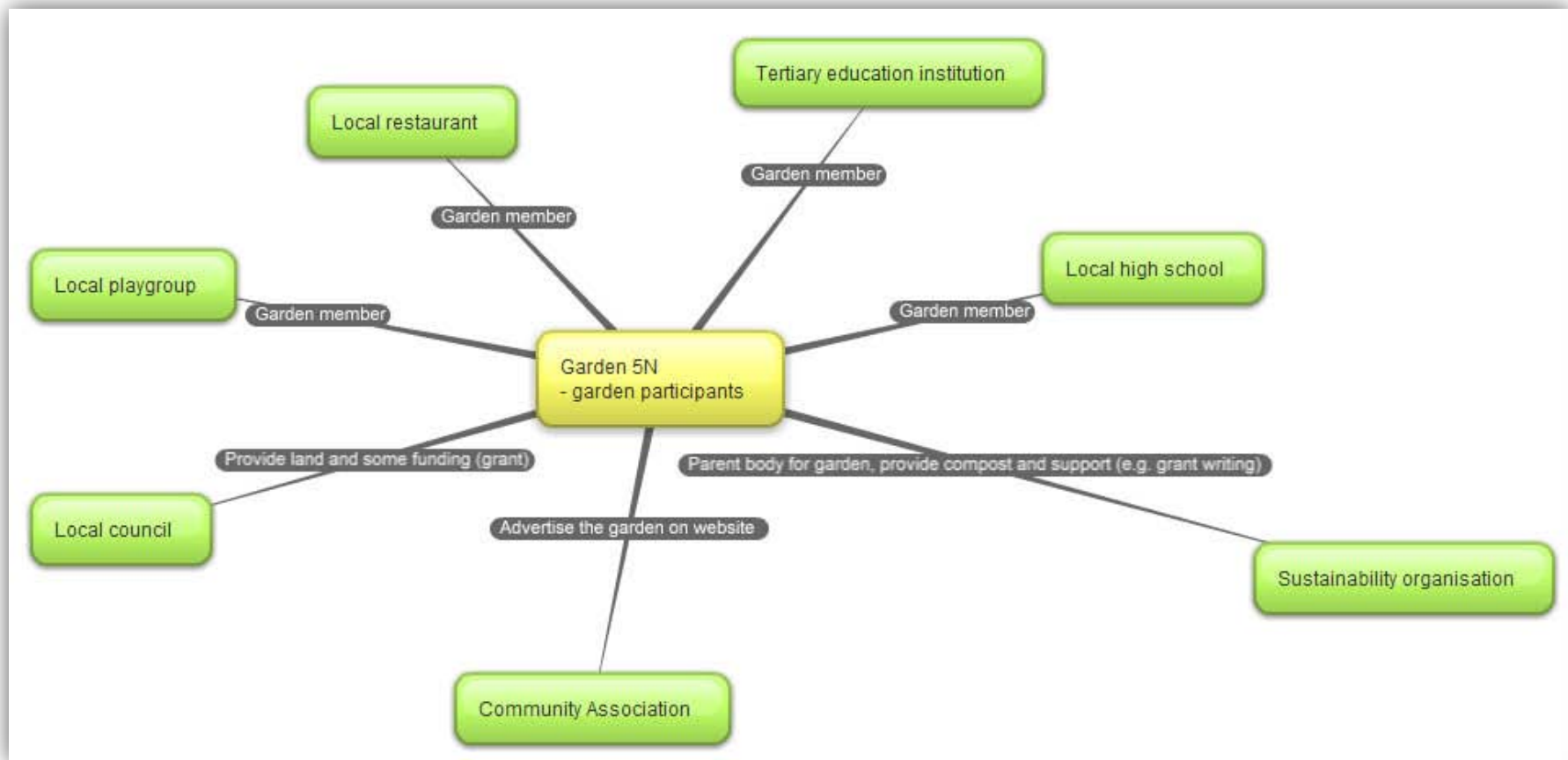**Appendix 1: Sociogram of Garden 1S with identified social networks**
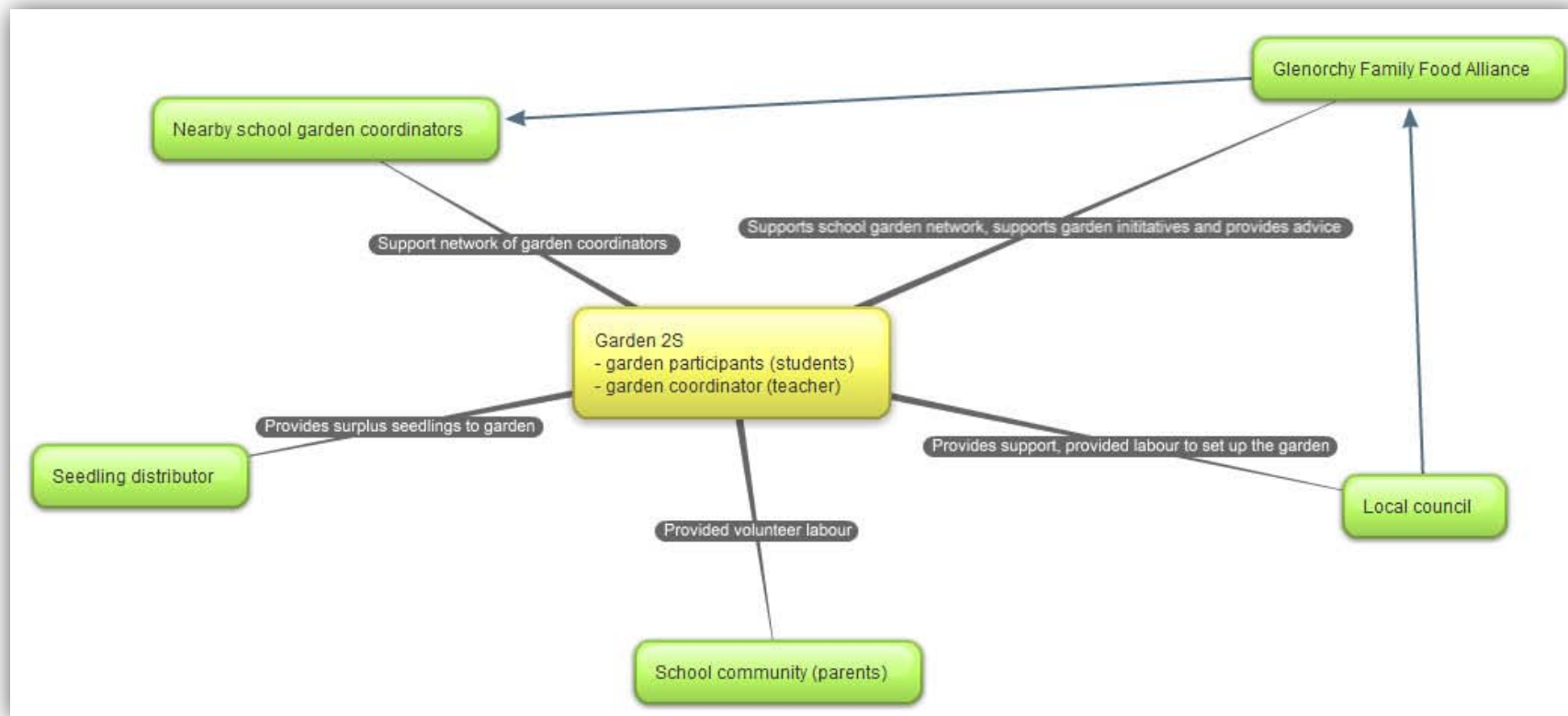
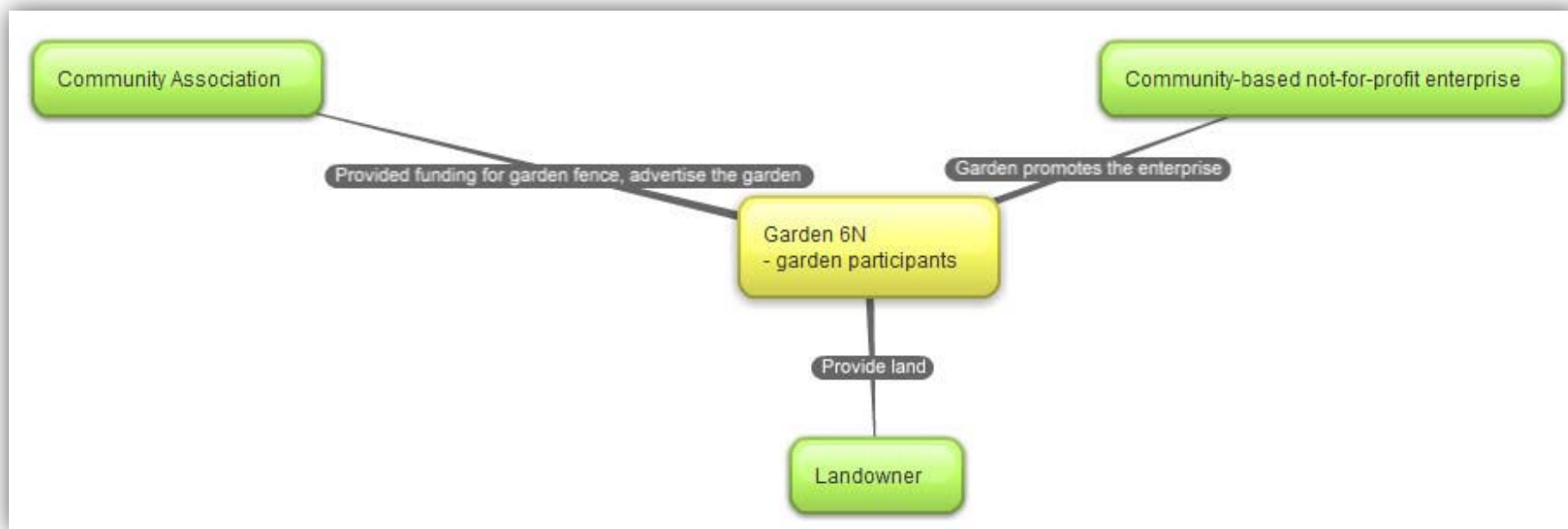**Appendix 2: Sociogram of Garden 2S with identified social networks**

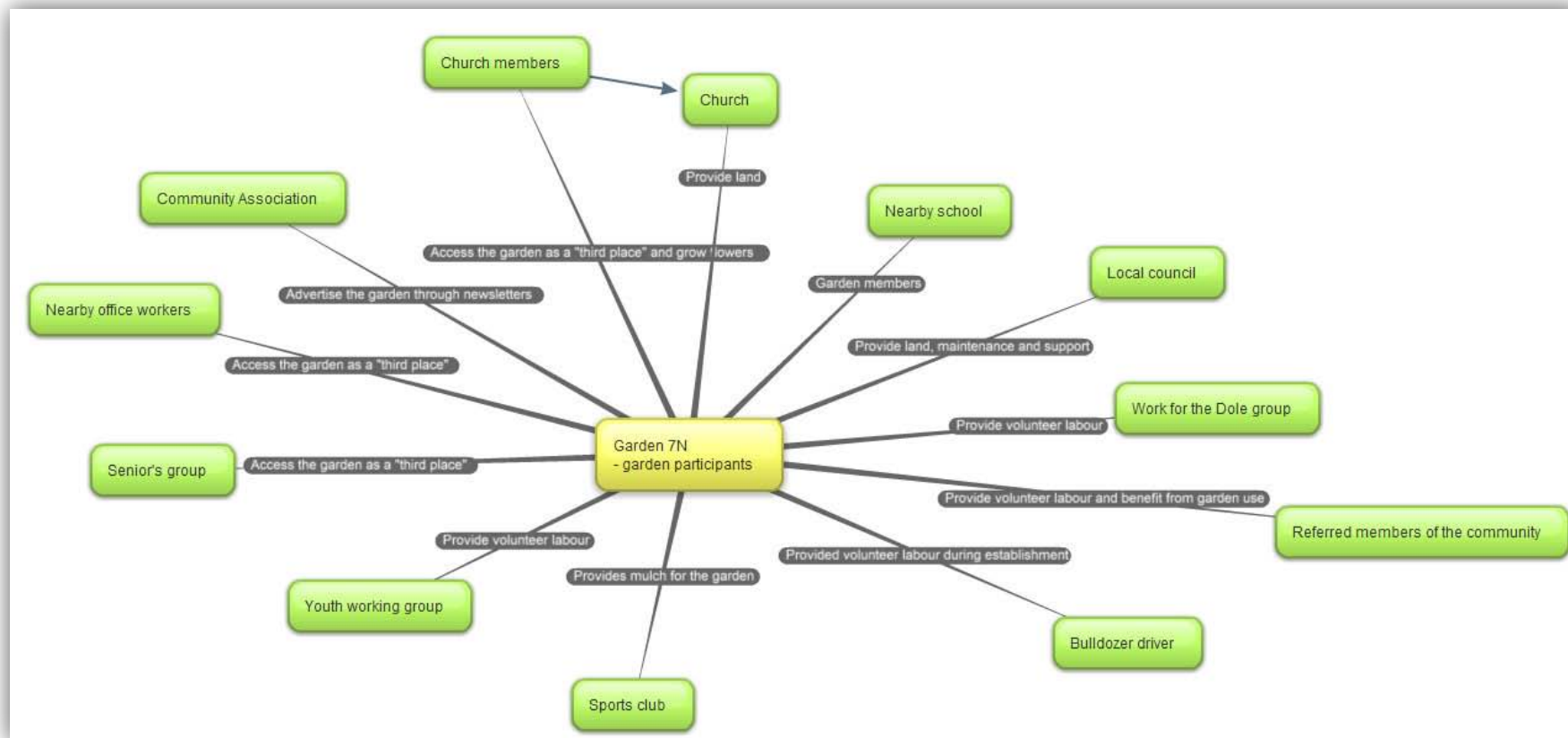**Appendix 3: Sociogram of Garden 3S with identified social networks**

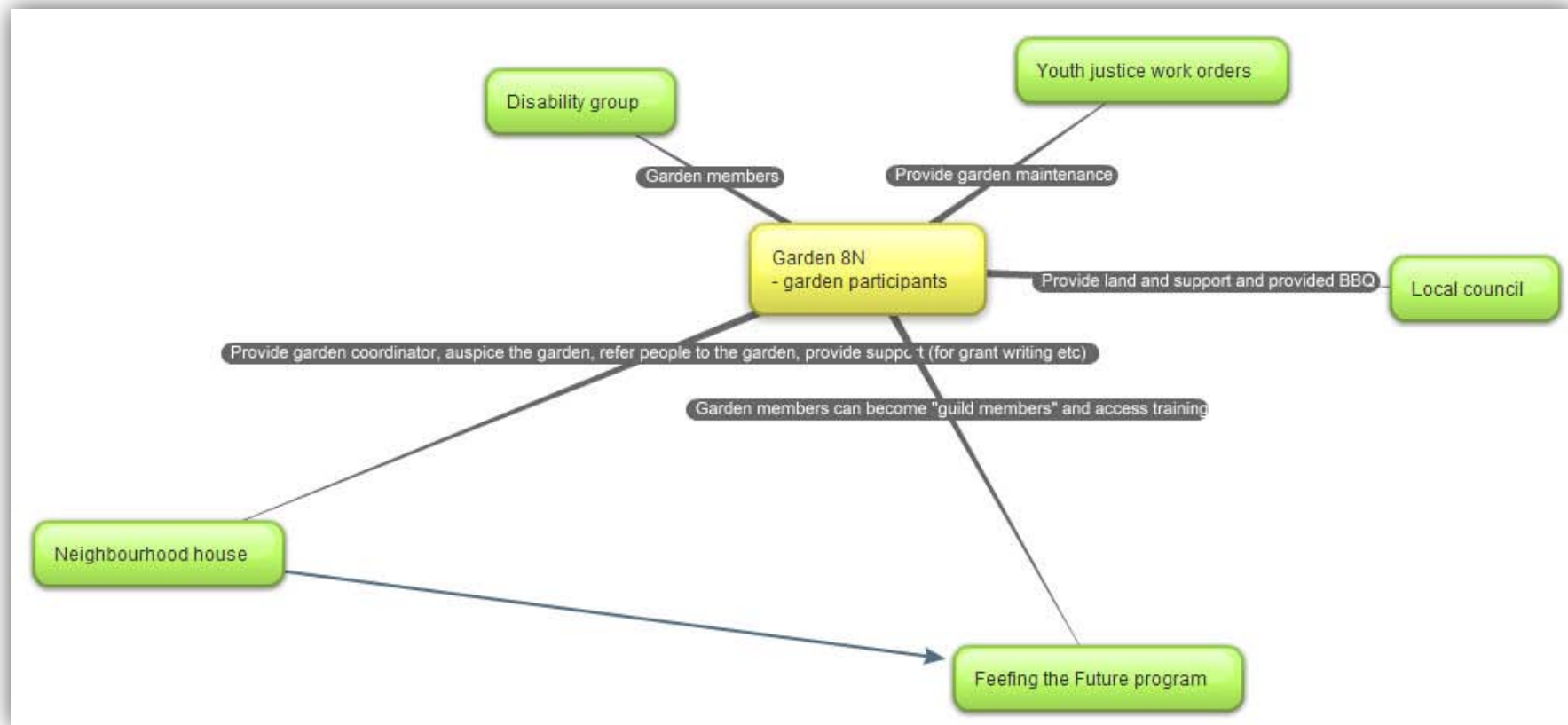**Appendix 4: Sociogram of Garden 4N with identified social networks**

Appendix 5: Sociogram of Garden 5N with identified social networks

Appendix 6: Sociogram of Garden 6N with identified social networks

Appendix 7: Sociogram of Garden 7N with identified social networks

Appendix 8: Sociogram of Garden 8N with identified social networks

References:

Adams, Professor David. 2009. *A Social Inclusion Strategy for Tasmania*. Hobart: Department of Premier and Cabinet (used with permission of the Government of Tasmania)

Australia. Department of Sustainability, Environment, Water, Population and Communities. 2010. "Australian Sustainable Schools Initiative (AuSSI) - Visions, goals and guiding principles." from http://www.environment.gov.au/education/aussi/what-is-aussi/vision.html.

Commonwealth of Australia. 1999. "Introduction" in *Our Community Our Future: A Guide to Local Agenda 21*. Canberra: Commonwealth of Australia

Australian Bureau of Statistics. 2006a. *2006 Census Quick Stats: Hobart (C) (Local Government Area)*.
http://www.censusdata.abs.gov.au/ABSNavigation/prenav/LocationSearch?locationLastSearchTerm=hobart&locationSearchTerm=hobart&newarea=LGA62810&submitbutton=View+QuickStats+%3E&mapdisplay=on&collection=Census&period=2006&areacode=LGA62810&geography=&method=Place+of+Usual+Residence&productlabel=&producttype=QuickStats&topic=&navmapdisplayed=true&javascript=true&breadcrumb=PL&topholder=0&leftholder=0&currentaction=104&action=401&textversion=false&subaction=1

Australian Bureau of Statistics. 2006b. *2006 Census QuickStats: Glenorchy (C) (Local Government Area)*.
http://www.censusdata.abs.gov.au/ABSNavigation/prenav/LocationSearch?locationLastSearchTerm=glenorchy&locationSearchTerm=glenorchy&newarea=LGA62610&submitbutton=View+QuickStats+%3E&mapdisplay=on&collection=Census&period=2006&areacode=LGA62610&geography=&method=Place+of+Usual+Residence&productlabel=&producttype=QuickStats&topic=&navmapdisplayed=true&javascript=true&breadcrumb=PL&topholder=0&leftholder=0&currentaction=104&action=401&textversion=false&subaction=1

Australian City Farms and Community Garden Network. 2002. "Looking back, a brief history of community gardens" http://communitygarden.org.au/blog/2002/10/11/looking-back-200/

Barnett, K. and L. Stocker. 1998. "The significance and praxis of community-based sustainability projects: Community gardens in Western Australia." *Local environment* 3(2): 179-189.

Bourdieu, P. 1986. "The Forms of Capital" in *Handbook of Theory and Research for the Sociology of Education*. J. Richardson (ed). New York City: Greenwood Press, pp 241-257.

City of Glenorchy. 2003. *Glenorchy Social Plan: 2003 Social Report and Recommendations for Future Planning*. Glenorchy: Glenorchy City Council, from http://www.gcc.tas.gov.au/content/upload/Social_Plan_2003_207.pdf

City of Glenorchy. 2010. *City of Glenorchy: Economic and Social Profile, December 2010*. Glenorchy: Glenorchy City Council, from http://www.gcc.tas.gov.au/content/upload/Economic_and_Social_Profile_December_2010_1044.pdf

Coleman, J. S. (1990). *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.

Glenorchy Family Food Alliance. 2010. *Glenorchy Community Food Alliance: A collaborative approach to addressing food security through schools in the Glenorchy area.* Sustainable Living Tasmania, from http://www.sustainablelivingtasmania.org.au/documents/GFFA_Project_Outline.pdf

Hobart City Council. 2010. *Social Inclusion Strategy 2010-2013: Everyone has their place.* Hobart, Hobart City Council, from http://www.hobartcity.com.au/Publications/Strategies_and_Plans/Social_Inclusion_Strategy

Eat Well Grow Well Tasmania. 2009. "Eat Well - Community Gardening." http://www.eatwelltas.org.au/gardencommunity.php.

Ferris, J., C. Norman and J. Sempik. 2001. "People Land and Sustainability: Community Gardens and the Social Dimension of Sustainable Development." *Social Policy and Administration* 35(5): 559-568.

Francis, M. 1989. "The Urban Garden as Public Space." *Places* 6(1): 52-59.

Fukuyama, F. M. 2001. "Social capital, civil society and development." *Third World Quarterly* 22(1): 7-20.

Glover, T. D. 2004. "Social Capital in the Lived Experiences of Community Gardeners." *Leisure Sciences* 26(2): 143-162.

Glover, T. D., K. J. Shinew and D.C. Parry. 2005a. "Association, Sociability and the Civic Culture: The Democratic Effect of Community Gardening." *Leisure Sciences* 27(1): 75-92.

Glover, T. D., D. C. Parry and K.J. Shinew. 2005b. "Building Relationships, Accessing Resources: Mobilizing Social Capital in Community Garden Contexts." *Journal of Leisure Research* 37(4): 450-474.

Granovetter, M. S. 1973. "The Strength of Weak Ties." *American Journal of Sociology* 78(6): 1360-1380.

Grayson, R. and F. Campbell. 2011. "Community gardening: growing food, growing community". Australian City Farms and Community Gardens Network, from http://communitygarden.org.au/wp-content/uploads/2009/08/community_gardening.pdf

Hancock, T. 2001. "People, partnerships and human progress: building community capital." *Health Promotion International* 16(3): 275-280.

Hanna, A. K. and P. Oh. 2000. "Rethinking Urban Poverty: A Look at Community Gardens." *Bulletin of Science, Technology and Society* 20(207): 207-216.

Harris, E. 2008. "Urban Planning for Community Gardens: What has been done overseas, and what can we do in South Australia?" Honours thesis, University of South Australia.

Herzfeld, M. 2008. *A snapshot of Tasmania's Community Gardens*. Hobart: University of Tasmania

Hobart City Council. 2011. *Hobart City Council: Support for Community Gardens*. Hobart: Hobart City Council.

Holland, L. 2004. "Diversity and connections in community gardens: a contribution to local sustainability." *Local environment* 9(3): 285-305.

Irvine, S., L. Johnson and K. Peters. 1999. "Community gardens and sustainable land-use planning: a case study of the Alex Wilson Community Garden." *Local Environment* 4(1): 34-45.

Kawachi, I., B. Kennedy, K. Lochner and D. Prothrow-Stith. 1997. "Social capital, income inequality and mortality." *American Journal of Public Health* 87(9): 1491-1498.

Kearney, S. C. 2009. "The Community Garden as a Tool for Community Empowerment." Masters thesis, University of Massachusetts.

King, N. K. 2004. "Social Capital and Nonprofit Leaders." *Nonprofit Management and Leadership* 14(4): 471-486.

Kingsley, J. Y. and M. Townsend. 2006. "'Dig In' to Social Capital: Community Gardens as Mechanisms for Growing Urban Social Connectedness." *Urban Policy and Research* 24(4): 525-537.

Lawson, L. 2004. "The Planner in the Garden: A Historical View into the Relationship between Planning and Community Gardens." *Journal of Planning History* 3: 151-176.

Nordahl, D. 2009. *Public produce: the new urban agriculture*. Washington DC: Island Press.

Okvat, H. A. and A. J. Zautra. 2011. "Community Gardening: A Parsimonious Path to Individual, Community, and Environmental Resilience." *American Journal of Community Psychology* 47: 374-387.

Oldenburg, R. 1999. *The great good place: Cafes, coffee shops, bookstores, bars, hair salons, and other hangouts at the heart of a community*. New York City, NY: Marlowe and Company.

Perez-Vazquez, A., S. Anderson and A.W. Rogers. 2008. "Assessing Benefits from Allotments as a Component of Urban Agriculture in England." in *Agropolis: The Social, Political and Environmental Dimensions of Urban Agriculture*. L. J. A. Mougeot (ed). London: Earthscan and the International Development Research Centre (IRDC): 239-266.

Pudup, M. B. 2008. "It takes a garden: Cultivating citizen-subjects in organized garden projects." *Geoforum* (39): 1228-1240.

Putnam, R. 1995. "Bowling Alone: American's Declining Social Capital." *Journal of Democracy* January: 65-78.

Putzel, J. 1997. "Accounting for the Dark Side of Social Capital: Reading Robert Putnam on Democracy." *Journal of International Development* 9(7): 939-949.

Saldivar-Tanaka, L. and M. E. Krasny. 2004. "Culturing community development, neighbourhood open space, and civic agriculture: The case of Latino community gardens in New York City." *Agriculture and Human Values* 21: 399-412.

Schmelzkopf, K. 1995. "Urban Community Gardens as Contested Space." *Geographical Review* 85(3): 364-381.

Schmelzkopf, K. 2002. "Incommensurability, Land Use, and the Right to Space: Community Gardens in New York City." *Urban Geography* 23(4): 323-343.

Somerset, S., R. Ball, M. Flett and M. Geissman. 2005. "School-based community gardens: Re-establishing healthy relationships with food." *Journal of the Home Economics Institute of Australia* 12(2): 25-33.

Tasmania. Community Nutrition Unit. 2011a. *Glenorchy Family Food Alliance*. Hobart: Department of Health and Human Services, from http://www.dpac.tas.gov.au/__data/assets/pdf_file/0017/142424/Glenorchy_Family_Food_Alliance_factsheet_-_FINAL.pdf

Tasmania. Community Nutrition Unit. 2011b. *Feeding the Future*. Hobart, Department of Health and Human Services, from http://www.dpac.tas.gov.au/__data/assets/pdf_file/0013/142420/Feeding_the_Future_factsheet_FINAL.pdf

Tasmania. Social Inclusion Unit. 2009. *A Social Inclusion Strategy for Tasmania: Preliminary Response, October 2009*. Hobart: Department of Premier and Cabinet.

Tasmania. Stronger Communities Taskforce. 2008. *The State of our Community Report 2007: Starting the Conversation*. Hobart: Department of Premier and Cabinet.

Tasmanian Council of Social Services. 2007. *An Unfair State? Poverty, Disadvantage and Exclusion in Tasmania*. Hobart: Tasmanian Council of Social Services.

Tasmanian Council of Social Services. 2009. *Just Scraping By: Conversations with Tasmanians living on low incomes*. Hobart: Tasmanian Council of Social Services.

Tasmanian Electoral Commission. 2011. *House of Assembly: Division of Denison* (map). Hobart: TASMAP, from http://www.electoral.tas.gov.au/pages/HouseMain.html (used with permission of the Government of Tasmania)

Teig, E., J. Amulya, L. Bardwell and M. Buchenau. 2009. "Collective efficacy in Denver, Colorado: Strengthening neighbourhoods and health through community gardens." *Health and Place* 15: 1115-1122.

Uslaner, E. M. 2005. "The Moral Foundations of Trust" prepared for the symposium *Trust in the Knowledge Society*, McGill University: University of Maryland, College Park.

Wakefield, S., F. Yeudall, C. Taron, J. Reynolds and A. Skinner. 2007. "Growing urban health: Community gardening in South-East Toronto." *Health Promotion International* 22(2): 92-101.

White, L. 2002. "Connection Matters: Exploring the Implications of Social Capital and Social Networks for Social Policy." *Systems Research and Behavioural Science* 19(3): 255-269.

World Commission on the Environment and Development (1987). *Report of the World Commission on the Environment and Development: Our Common Future*. New York, United Nations.

Adams, D. (2009). A Social Inclusion Strategy for Tasmania.

City-of-Glenorchy (2003). Glenorchy Social Plan: 2003 Social Report and Recommendations for Future Planning. Glenorchy, Glenorchy City Council.

Community-Nutrition-Unit (2011a). Glenorchy Family Food Alliance. Hobart, Department of Health and Human Services.

Community-Nutrition-Unit (2011b). Feeding the Future. Hobart, Department of Health and Human Services.

Glover, T. D. (2004). "Social Capital in the Lived Experiences of Community Gardeners." Leisure Sciences **26**(2): 143-162.

Glover, T. D., D. C. Parry, et al. (2005b). "Building Relationships, Accessing Resources: Mobilizing Social Capital in Community Garden Contexts." Journal of Leisure Research **37**(4): 450-474.

Glover, T. D., K. J. Shinew, et al. (2005a). "Association, Sociability and the Civic Culture: The Democratic Effect of Community Gardening." Leisure Sciences **27**(1): 75-92.

Herzfeld, M. (2008). A snapshot of Tasmania's Community Gardens, University of Tasmania**:** 27.

Kearney, S. C. (2009). The Community Garden as a Tool for Community Empowerment. Department of Landscape Architecture and Regional Planning, University of Massachsetts. **Master of Landscape Architecture**.

Kingsley, J. Y. and M. Townsend (2006). "'Dig In' to Social Capital: Community Gardens as Mechanisms for Growing Urban Social Connectedness." Urban Policy and Research **24**(4): 525-537.

Lawson, L. (2004). "The Planner in the Garden: A Historical View into the Relationship between Planning and Community Gardens." Journal of Planning History(3): 151-176.

Oldenburg, R. (1999). The great good place: Cafes, coffee shops, bookstores, bars, hair salons, and other hangouts at the heart of a community, Marlowe and Company.

Perez-Vazquez, A., S. Anderson, et al. (2008). Assessing Benefits from Allotments as a Component of Urban Agriculture in England. Agropolis: The Social, Political and Environmental Dimensions of Urban Agriculture. L. J. A. Mougeot. London, Earthscan and the International Development Research Centre (IRDC)**:** 239-266.

Saldivar-Tanaka, L. and M. E. Krasny (2004). "Culturing community development, neighbourhood open space, and civic agriculture: The case of Latino community gardens in New York City." Agriculture and Human Values **21**: 399-412.

Schmelzkopf, K. (1995). "Urban Community Gardens as Contested Space." Geographical Review **85**(3): 364-381.

Somerset, S., R. Ball, et al. (2005). "School-based commnity gardens: Re-establishing healthy relationships with food." Journal of the Home Economics Institute of Australia **12**(2): 25-33.

TASCOSS (2007). An Unfair State? Poverty, Disadvantage and Exclusion in Tasmania. Hobart, Tasmanian Council of Social Services.

Teig, E., J. Amulya, et al. (2009). "Collective efficacy in Denver, Colorado: Strengthening neighbourhoods and health through community gardens." Health and Place **15**: 1115-1122.

Uslaner, E. M. (2005). The Moral Foundations of Trust. Prepared for the symposium, "Trust in the Knowledge Society". McGill University, University of Maryland, College Park**:** 50.

White, L. (2002). "Connection Matters: Exploring the Implications of Social Capital and Social Networks for Social Policy." Systems Research and Behavioural Science **19**(3): 255-269.