



Cardinia Food Circles

Food Systems Background and Mapping

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1. Executive Summary

This report is the first phase in a multi-year, collective impact food systems project: **Cardinia Food Circles**. This Project will inform the development of the 2017-2021 **Cardinia Public Health and Wellbeing Plan**, and support the implementation and achievement of the objectives agreed upon by Cardinia Shire Council in that Plan, across the seven 'liveability' domains.

The evidence concerning the relationship between a good food system and good living is overwhelming. As this report demonstrates, the multiple and complex dimensions of this relationship have a direct bearing on the Shire of Cardinia and the quality of life - expressed as '*liveability*' - of its citizens.¹

Via a desktop analysis of existing policies, strategies and relevant reports, complemented by a small number of interviews with key informants, this report explores some of the principle systemic influences on the food system in Cardinia. It aims to uncover the contextual reasons why many Cardinia Shire residents are not eating as well as would be hoped, given the goal of optimising liveability for all. In applying a systems-lens to the question of food, the report has revealed a myriad of factors at the local, state and national levels — and across the domains of economy, ecology, politics, and culture — that influence and shape what ends up on the plate in Cardinia households, restaurants and cafes, and workplaces.

The Report has also identified gaps in the documentation, as well as omissions and weaknesses in the programs, projects and initiatives undertaken to date. This gap analysis has informed the recommendations we make for the subsequent development and implementation of the Cardinia Food Circles project. As a desktop review with insights from a small number of people who have worked to build a healthier Cardinia food system, it is by no means exhaustive or comprehensive, and we make no claims to that end. Rather, the Report is an evidence-based starting point from which to build discussion and future action, laying the foundations for the next stages of the Cardinia Food Circles project.

The next stage of the Project will be to work with internal and external stakeholders in small groups (of 10-15 people) to collaboratively build a profile of the Cardinia Food System across the four domains of economy, ecology, politics and culture (see Section 7 and Appendix 11). The findings of this report will be circulated to those stakeholders prior to meeting in a workshop format; the report therefore serves both as a starting point to stimulate discussion and debate, and as a resource for all persons interested in the Cardinia food system and in this project. We fully expect that the data in this report will be complemented by the wealth of knowledge and experience that the stakeholders will bring to the food profile assessment process. That profile will form the project baseline, against which progress over the coming months and years can be monitored and evaluated.

The Shire of Cardinia is experiencing rapid and significant processes of change. Despite seemingly intractable challenges, there are wonderful opportunities in the municipality to build upon its considerable strengths and assets. Cardinia could become an exemplary municipality in the way it approaches its food system. Indeed, that is the aspiration of the Cardinia Food Circles project.

¹ Cardinia Shire Liveability Plan 2017-2021, Research and Data Profile, September 2016

Principal Findings and recommendations

Consistent with the Circles of Social Life methodology, these findings are classified under the four domains of economy, ecology, politics and culture.

Economy

- 1. There are major opportunities to support existing and new growers to achieve greater produce diversity and extended production seasons in the Cardinia area**
- 2. There are significant economic pressures on Cardinia residents that negatively affect their eating patterns and overall health and wellbeing**
- 3. Government regulatory barriers place restrictions on the capacity of farmers to sell directly at the farm gate, with permits required for stores over 50m²**
- 4. Former HTCS staff considered the lack of consistent program branding a lost opportunity that undermined the impact of projects**

Economically, food is an integral part of a balanced production and exchange system. Growing, processing, and providing food can generate sustainable employment. The Shire of Cardinia has an established and successful agriculture sector. However, there remain other economic areas that need focussed attention in the municipality. Common to many cities in Australia and across the world, inequities in access to good food are associated with basic problems in the local community. Setting up or supporting exemplary small-to-medium food enterprises is one way amongst many of responding to this issue.

Economic recommendations:

- a. Diversify and expand food production, distribution and consumption in the Shire, with an emphasis on fresh, seasonal and where possible local produce**
- b. Support business innovation and local job creation in Shire's food system, for example through consideration of a Cardinia Local Food Hub**
- c. Explore opportunities to support the emergence of essential food providers in retail environments, especially in rural areas, as opposed to heavily burdening communities with non-essential food providers (Healthy Food Connect Report 2014)**
- d. Supporting local suppliers to provide economically accessible locally produced food (Aspirational Energy Transition Plan)**
- e. Encouraging changes in pre-existing food retailers to support people to make healthier choices (such as changes in in-store promotion, display of foods and food placement, menu adaptation, portion size) (Healthy Food Connect Report 2014)**

Ecology

- 1. The Cardinia Western Port Green Wedge Management Plan and Bunyip Food Belt Proposal reflect a deep understanding of the significance of the ecological values of Cardinia region and the importance of preserving it for its biodiversity, agricultural, horticultural and heritage values**
- 2. Currently, just over half of the shire's stormwater comes from agricultural areas. Agricultural land use is also the most significant contributor to pollutant loads to receiving waters**

3. **High levels of obesity and dietary related ill health levels in part caused by the lack of fresh food outlets (food deserts) across the shire & low levels of food literacy**
4. **Only 3.4% of Cardinia residents meet both fruit and veg daily intake requirements**
5. **In common with all municipalities, minimising food waste and recovering vital nutrients presents a major challenge. 32% of waste in the garbage bin in Cardinia was food waste, constituting a major source of methane gas emissions**

Ecologically, living in a sustainable environment that enables availability and access to nutritious food has a direct relationship to better health outcomes. Adequate fruit-and-vegetable consumption, for example, can decrease the risk of obesity and diet-related chronic diseases. Yet most Australians, including over 93 per cent of people within the Shire of Cardinia, do not consume adequate amounts of fruits and vegetables.² Growing food locally can, for example, contribute to changing this problem.

Ecological recommendations:

- a. **Encourage the development of sustainable food systems that are readily able to adapt to climate change impacts (Healthy Food Connect recommendations) as well as minimise impacts on waterways and soils**
- b. **Continue to encourage community food waste reduction through education, composting and worm farms , reducing rubbish collection requirements (Aspirational Energy Transition Plan)**
- c. **Explore advanced technologies for processing organics to compost and support development of local markets for use of organic waste to enhance soil quality (See current Waste Management strategy – A new Waste and Resource Recovery Strategy available in 2018)**
- d. **Encourage local food production through community education and establishing and supporting community gardens (Aspirational Energy Transition Plan)**

Politics

1. **Systems thinking is new to most people and an emerging approach to organisational planning and strategy. HTCS evaluation report and conversations with former staff highlighted the lack of clarity and confidence in its communication as an ongoing challenge.**
2. **Healthy eating is mentioned in a number of council policies as a result of the food security principles developed under HTCS, but this is not properly reflected in strategic design or the coordination of local government sectoral KPIs & mutually supportive policies**
3. **Building the capacity of staff to increase the sustainability of projects will be enhanced with the appropriate investment of time and energy**
4. **The general public and local government employees are generally skeptical of investing too heavily into new programs because of the likelihood of change or disruption to previous health programs linked government funding election cycles**
5. **A major challenge is presented by the different levels of government and their powers in localised regional affairs**

² Cardinia Shire Liveability Plan 2017-2012, p114.

Politically, Cardinia Shire Council has taken the laudable step to develop a local food systems strategy that attends to the whole food system. The Healthy Together Cardinia team and other Council employees are acutely aware of the critical issues that affect a vibrant food system. They are clear about what the Council can directly change, what it can influence, and what is beyond its jurisdiction. Cardinia Shire Council could thus take a local, statewide and national lead in this area. That is, Cardinia could become a city that consciously treats food as a central part of its social life. In political terms, this means building questions of the vitality of the food system into the centre of its policy-making.

Political recommendations:

- a. Build capacity amongst council staff and councillors by integrating food systems thinking across different business units and within key council plans and strategies (Politics)**
- b. Evaluation processes and priorities should be in place from the outset of the project**
- c. Advocate to other levels of government through research and case studies for changes in planning policy for better control around density and proximity to vulnerable communities of fast food outlets**

Culture

- 1. The strongest predictors (amongst others) of inadequate vegetable consumption and inadequate vigorous moderate physical activity is “a lack of time”: the majority of Cardinia residents are faced with long commutes by car to work however this is not the only cause with cost and convenience significantly relevant factors**
- 2. Eating habits and healthy lifestyles are learnt; and there are powerful economic interests that shape eating habits of families and children**
- 3. Conversations with key stakeholders revealed that engagement and sustainability of future projects would be greatly enhanced if they were designed with community input in a ‘bottom up’ way**
- 4. Advocacy for change and accountability greatly benefit from vision, inspiration and living examples of possibilities**

Culturally, the liveability challenges of employment, transport and cost of living pressures, together with a planning framework that has privileged the expansion of non-essential food providers, mean that ‘making healthy choices the easy choices’ is far from simple and easy. Transforming a food system that, in effect, makes unhealthy choices the easy choices, to one that supports optimal health and wellbeing for all Shire residents, will require united and committed action around the aspirational visions and targets of the Cardinia Food Circles project. People of Cardinia already take food very seriously. This provides a strong basis for taking action in the area of food. Even though this cultural strength does not yet translate into more than an emergent and inchoate civic (political) engagement with food issues in the local area, the signs are promising.

Cultural recommendations

- a. Healthy eating and dietary habits and related issues must be analysed within a broad systemic context that factors in the myriad of potential causes and their effects. This is needed to build a shared understanding of the Cardinia food systems, and its challenges and opportunities amongst a diverse and representative group of stakeholders**

- b. Establish a shared and widely understood definition and baseline of food literacy with shire residents and council officers**
- c. Raise levels of food literacy across the shire, particularly amongst the youth**
- d. Establish a local food security coalition of food producers, distributors and consumers to strengthen food security (From 2014–15 Health Promotion Recommendations)**
- e. Evaluation and iterative community engagement processes worked into the life of the project but especially at the outset are essential.**

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2. Introduction

Cardinia Shire is experiencing a range of significant social and health challenges that negatively affect the health, wellbeing and quality of life of many residents. Tackling these challenges requires a cohesive and systematic approach, guided by a shared vision and shared sense of responsibility and commitment across all institutions, organisations and residents of Cardinia Shire.

Many of the serious challenges, such as high rates of obesity and chronic health issues, have their origins in the food system, as the extensive work of Healthy Together Cardinia Shire (HTCS) has documented in its work undertaken between 2012 -2016. The HTCS team, working in partnership with local food system stakeholders, has created a substantial knowledge base and supported a number of successful local projects and interventions that this project can learn from and build upon. Other projects such as the South East Food Hub, The Cardinia Western Port Green Wedge Management Plan and the Bunyip Food Belt Proposal show us that Cardinia's relationship with the food system extends beyond questions of consumer accessibility and food literacy and health, into the realm of economic development or decline, food production, food security and ecological vigour.

Cardinia Shire Council and *Sustain: the Australian Food Network* have come together to share collective experience and knowledge to find local solutions for tackling significant social, economic and environmental challenges that negatively affect the health and wellbeing of many Cardinia Shire residents by building local food system resilience and food literacy among shire residents.

As the first phase in an ambitious 10 year vision, this *Food System Background Report* has the following aim:

“To map the existing food system work through desktop document review and discussions with past and present council staff and partners.”

This Report will underpin the further development and implementation of the Cardinia Food Circles project. The Report comprises an examination of the work undertaken by the HTCS team and an analysis of council policy, action and strategy documents, as well as semi-structured interviews with key stakeholders and partners. On the basis of this data, the report presents an initial summary of the most significant critical issues that have emerged. Using a Food Systems approach, guided by and mapped against the Circles of Food methodology, this Report will inform the project's foundation by providing a preliminary assessment of the gaps and opportunities identified in the Cardinia Shire food system.

This Report will strategically inform the scope and direction of the next phases of the Cardinia Food Circles project, namely the creation of a Cardinia Food Systems profile, and the development of a Cardinia Food Plan through an extensive community and stakeholder engagement process. As a desktop review with insights from a small number of people who have worked to build a healthier Cardinia food system, it is by no means exhaustive but is an evidence-based starting point through which conversation and community action can emerge. Its purpose is to provide a snapshot of the Cardinia food system and its interrelated components.

Cardinia Shire Public Health and Wellbeing Plan and Liveability Indicators

The commencement of the Cardinia Food Circles project is taking place at the same time as Cardinia Shire Council is developing its Public Health and Wellbeing Plan (Cardinia's Liveability Health Plan 2017-2021) for adoption in 2017. All local governments in Victoria are required by the 2008 Public Health and Wellbeing Act to 'seek to protect, improve and promote public health and wellbeing within the municipal district', in particular by the preparation, implementation and periodic (four-yearly) review of the Municipal Public Health and Wellbeing Plan (MPHWP).

In support of this process, the Council is working with Community Indicators Victoria and researchers from Melbourne University in the development of a range of indicators across seven liveability domains, namely:

- Employment
- Food
- Housing
- Open Space
- Active Travel
- Health and Social Services
- Education

A Partnership Steering Group has been established by the Council, with representatives of several external organisations including *Sustain*, who will 'work together to plan, implement, monitor, evaluate and promote the [MPHWP]'.³ The draft plan is intended to be exhibited by June 2017, and launched in November 2017. The early phases of the Cardinia Food Circles project will help inform the development of 2017-2021 MPHWP, and subsequent project activities will support its implementation and the achievement of its key objectives.

Those objectives, and the measures to assess the extent of their realisation, will be set across the four sub-domains of the Food domain, namely:

- Availability
- Access
- Affordability
- Nutrition

The linkages with these sub-domains and the project objectives will be discussed in Section 3 below.

³ Cardinia Shire Council, Public Health and Wellbeing Plan: Community Engagement Summary, September 2016.

3. Cardinia Food Circles project: Vision and Objectives

Given the increasing levels of obesity and dietary related illness and Cardinia Shire and its extremely destructive impact on resident's quality of life and the economic productivity of the area there exists a strong sense of urgency in Cardinia Shire for a change in direction. An initiative is needed to address this complex health problem with sustained engagement and long term planning and action led by all sectors of the community and in tandem with government departments and the philanthropic sector.

Cardinia Food Circles will build upon the extensive work of HTCS. An ambitious 10 year vision and targets will be set, achievable if the Shire's collective energies are harnessed towards the realisation of the shared vision of a healthy and sustainable food system.

In the Circles methodology (see Section 7, below) this process begins with ascertaining a General Objective. In these terms we propose a framework of objectives for consideration: a **General Objective** and a series of **Critical Objectives**. These are organised through the four domains of the Circles approach – economy, ecology, politics and culture - and flow from the analysis undertaken in the preparation of this Report.

Proposed General Objective and Vision for Cardinia

The Cardinia Food Circles Project aims to support Cardinia Shire Council, community food leaders and shire residents in the establishment, promotion and expansion of a healthy, delicious, sustainable and fair food system for all shire residents.

The project has a 10 year vision to:

- Reduce the overweight and obesity rates by 30%
- Equalise the ratio of healthy to fast food outlets at 1:1
- Reduce the per capita visits to fast food outlets in the Shire by 20%
- 80% of the Shire's population are food and health literate
- 50% of the Shire's population has regular (i.e. weekly) access to fresh fruit and vegetable within a 1km walk from their home
- An increase in local jobs and business opportunities in food and agriculture

Within that General Objective a systematic set of objectives are offered below as potentially informing the development of the Cardinia Food Plan. They are presented here on the understanding that they are preliminary and advisory. More work should and will be done locally with the communities of Cardinia Shire to discuss, refine and seek broader commitment to the subsequently agreed Critical Objectives.

Preliminary proposed Critical Objectives for Cardinia

The development of the critical objectives is guided by the further elaboration of an integrated vision for a healthy, sustainable, delicious, fair and thriving Cardinia food system, across the four domains of social life, as follows:

- **Economically productive**, with multiple economic and employment benefits accruing to local residents and, in particular, with enhanced access to healthy and affordable food;
- **Ecologically sustainable**, laying the foundations for a transition to a low-carbon economy, and enhancing health and well-being;
- **Politically integrated** at a policy and program level, with high levels of active engagement from food-system stakeholders and local residents; and
- **Culturally vibrant**, which supports and expands a culture that appreciates diverse food traditions and the benefits of local, seasonal and healthy food more generally.

With that integrated vision as the guide, we propose the Critical Objectives as follows:

1. Economically productive

- a. To expand fair market access to local markets for Cardinia producers
- b. To support business innovation and local job creation in the Shire's food system
- c. To expand access, availability and affordability of fresh and healthy food for all, especially the Shire's most disadvantaged and vulnerable residents

2. Ecologically sustainable

- a. To support the transition to ecologically sustainable forms of food production and land management in Cardinia
- b. To diversify food distribution and consumption in the shire, with an emphasis on fresh, seasonal and where possible local produce

3. Politically integrated

- a. To build capacity amongst council staff and councillors by integrating food systems thinking across different business units and within key council plans and strategies
- b. To advocate to other levels of government through research and case studies for changes in planning policy for better control around density and proximity to vulnerable communities of fast food outlets

4. Culturally vibrant

- a. To establish a shared and widely understood definition and baseline of food literacy with shire residents and council officers
- b. To raise levels of food literacy across the shire, particularly amongst the youth
- c. To support improved health and wellbeing outcomes for all Shire residents, especially the most disadvantaged and vulnerable, through expanded access to fresh and healthy food

Linkages between Critical Objectives and Liveability Domain measures

The Food sub-domain is analysed and measured primarily by reference to research undertaken by Monash University regarding availability, access and affordability of a Healthy Food Basket, together with data regarding the average levels of consumption of fresh fruit and vegetables by Cardinia residents.

Availability

A key driver of the high incidence of obesity in Cardinia is the high prevalence of fast food outlets compared to fresh food outlets. Across the shire as a whole, the ratio is 6:1, while in the Port Ward, the ratio is 7:1.⁴ Over 80% of the food outlets in rural parts of the shire are classified as 'non-essential', which limits the availability of fresh and healthy food for rural residents. 31 localities in the shire currently have no essential food providers at all.⁵

This measure relates to Critical Objectives 1.a, 1.b, 1.c, 2.b and 3.b.

Access

Access concerns the physical location of healthy food retailers and their proximity to population areas, especially in the rural wards of the shire. Residents reliant on public transport are at a particular disadvantage, given that direct car journeys to fresh food retail outlets can often be greater than 20 minutes. A small number of supermarkets offer delivery services for nearby local residents.

This measure relates to Critical Objectives 1.a, 1.b, 1.c, 2.a and 2.b

Affordability

Food security (defined as running out of food at least once in the past 12 months and being unable to buy more) is estimated by Anglicare to affect up to 13% of children under the age of 12; and up to 18% of residents in Lang Lang and Koo Wee Rup, according to a survey conducted by Koo Wee Rup Regional Health Service.⁶

The table below (reproduced from the Cardinia Shire Social Health Data Profile), reveals that a family dependent on welfare benefits would need to be spending at least a third of their total income to access a healthy food basket, which is higher than the Victorian average and generally regarded as 'unaffordable'.⁷

This measure relates to Critical Objectives 1.c, 2.b and 4.c.

⁴ Cardinia Shire Liveability Plan 2017-2012, p110.

⁵ *Ibid.*, p111.

⁶ *Ibid.*, p113.

⁷ *Ibid.*, p113-4.

Table 1: Cost of Healthy Food Basket for Cardinia Shire Residents, 2016

Family Type	Total Cost (Average)	% of total income if welfare recipients	Central Ward	Port Ward	Ranges Ward
Family (2 adults and two dependent children)	451.50	33.27	433.18	475.78	454.07
Single Parent (with two dependent children)	307.65	29.07	295.45	324.78	308.59
Single Adult household	144.29	29.47	138.84	151.32	145.21
Single pensioner household	108.37	15.59	103.60	114.74	109.00

Nutrition

Over 90% of Cardinia residents do not eat the recommended daily servings of fresh vegetables, while approximately half consume the recommended two daily servings of fruit. Over 95% do not meet the recommended fruit and vegetable consumption guidelines.⁸ Over 70% of residents eat take-away meals or snack once a week, and more than a third consume sugar-sweetened beverages at least once or several times a week.⁹

This measure relates to Critical Objectives 1.c, 2.b, 3.b, 4.a, 4.b and 4.c.

⁸ *Ibid.*, p114-6.

⁹ *Ibid.*, p118-9.

4. Background

Healthy Together Victoria and Healthy Together Cardinia Shire

Between 2012 - 2016 the State Government of Victoria, in partnership with the Australian Federal Government, made an unprecedented investment in the use of systems thinking for obesity prevention in order to address the increasing rates of obesity and other diet-related diseases. This investment was made across communities, and workplaces, schools and early learning centres in 14 locally-led Healthy Together Communities operating in 12 prevention areas across Victoria, particularly through supporting the establishment of a strong preventative health workforce. The Healthy Together Victoria workforce, comprising a co-ordinating team at the Department of Health and Human Services and staff teams dispersed across the aforementioned 12 sites, led this investment and was charged with implementing a systems approach to prevention practice and policy development at a local level. Cardinia Shire was one of the Healthy Together Communities with over 20 positions created as a part of *Healthy Together Cardinia Shire* over the life of the project which was defunded by the new Federal Government in 2015. An evaluation of the program was undertaken in 2015.

Healthy Together Cardinia Shire (HTCS) focused on preventative measures aimed at “addressing the underlying causes of poor health in settings such as schools, early childhood services (ECS), workplaces and the wider community by encouraging healthy eating and physical activity, and reducing tobacco smoking and harmful alcohol intake.”¹⁰ As mandated by the State Government, schools, ECS and workplaces were approached to take part in a variety of initiatives which aimed to create environments that promoted health and wellbeing for children, workers and families and the broader community. Educational centres and workplaces alike were encouraged to sign up to the non-mandated benchmark driven ‘**Achievement Program**’ that listed its priority areas (depending on the particular setting) as healthy eating and oral health, physical activity, sun protection, tobacco control, mental health and wellbeing, safe environments, alcohol and other drugs and sexual health and wellbeing. Funding was also provided for staff from six schools to be trained and implement the Stephanie Alexander Kitchen Garden Program (SAKGP).

At the community level HTCS’s aim was to facilitate and participate in leadership networks and increase awareness of health issues and preventative measures via a public education, engagement and social marketing campaigns. Increasing access to fresh and healthy food was the priority of the Healthy Food Connect (HFC) model, which was implemented in partnership with Monash Health, Koo Wee Rup Regional Health Service and local business partners. The HFC model also supported the development of a number of Healthy Eating initiatives such as the Healthy Bites Program. Efforts were made to stimulate community leadership and networks by recruiting and supporting local Health Champions and funding and supporting Healthy Living Programs.

Evaluation of the HTCS was undertaken in 2015. The evaluation report of the ambitious but short lived program summarised the activities undertaken and the breadth of involvement and partnering organisations and agencies. It did not specify the ongoing operational status of the newly formed networks, projects or level of impact of programs at the household level. Semi-structured interviews were undertaken with selected staff from HTV, HTCS and key partner agencies only (not specified). Input

¹⁰ Healthy Together Cardinia Shire Progress Report 2012 - 2015

from the broader public was limited to 13 responses received from surveys sent out to 101 organisations that had been involved in the Achievement Program, Healthy Bites Program and the Healthy Living Programs. The relatively limited perspective obtained through the evaluations meant that the results largely reflected internal challenges relating to staff turnover, advocacy, team structure, strategic direction, branding and evaluation. While these challenges are very relevant to the success of the program and future planning of ongoing work, there is little reflection of the perspectives from broader communities or their perceived needs and understanding of the critical health issues and solutions. Another major limitation of the HTCS evaluation process and subsequent report was the fact that, as a state designed initiative, the evaluation design for any project or capacity building exercise was not defined until May 2015, three years after the project commenced. Feedback from staff who worked on the HTCS suggested that the breadth of the program limited its impact because of their stretched capacity to service such a large number of participant organisations.

Table 2: Summary of Activities Undertaken as a part of HTCS

Activity/Program	Context	Outcomes & Outputs	Ongoing status
Achievement Program	Schools, ECS	5 secondary schools, 17 primary schools & 42 ECS signed up. 2 schools and 2 ECS have submitted an action plan.	This program is delivered locally by Monash Health community
Achievement Program	Workplaces	32 Workplaces signed up for the program with 4 reaching the first level	This program is delivered locally by Monash Health community
Achievement Program	Schools, workplaces, Cardinia Shire Council	Changes at policy level in a couple of organisations and the council which has moved to an Activity Based Working model	Policies that have been influenced by the HTCS program ¹¹ <ul style="list-style-type: none"> • Recreation strategy • Child and family plan • Energy transition plan • Healthy food and

¹¹ Healthy Together Cardinia Shire Progress Report 2012 - 2015 - it is not clear the extent to which the policies have been influenced

			<p>beverage policy</p> <ul style="list-style-type: none"> • Smoking in the workplace policy • Health and wellbeing charter • Pakenham Structure Plan • Healthy by design - guidelines to provide safe and healthy outcomes for new neighbourhoods • Food security principles.
Healthy Communities	Facilitating and Participating in leadership networks in the community	<p>Regional Health Literacy Taskforce - collaboration of neighbouring municipalities & Monash Health. Developed Food Literacy Action Plan</p> <p>Cardinia Community Garden Network - (4 gardens)</p> <p>Schools Vegetable Gardens Network.</p> <p>Regional Leadership for Prevention group - Cardinia Shire, Dandenong & Monash</p>	<p>It has been suggested this may still be running, led by Enliven Primary Care Partnership and includes Cardinia, Casey and Dandenong Councils, Monash Health and Women’s Health in the South East (WHISE)</p> <p>This and the Schools Veg Gardens network was combined in 2015 including City of Greater Dandenong, City of Casey and Monash health. It’s uncertain as of this year the future of the network. SAKGP has indicated that school vegetable gardens network is still operating; however, former HTCS staff have suggested that it is not very active.</p> <p>This has been integrated and merged in Oct 2016 with Council’s Cultural leadership group and</p>

		<p>Health</p> <p>Health and Land Use Planning Network: Partnership with Regional Dept of Health.</p> <p>Bicycle User Group.</p> <p>Health & Wellbeing Business Network.</p> <p>Cardinia Shire Facebook Page.</p> <p>Healthy Cardinia Shire Facebook Page (no longer open) which cross promoted information from the 'Live Lighter' state wide social marketing campaign which also produced cookbook that was used to support local initiative in CS</p> <p>Activate your Family - HTCS Cardio activities Program</p> <p>Screening of 'That Sugar Film'- 301 people attended.</p>	<p>Staff relations consultative committee. Two members are H&W reps.</p> <p>No evidence has been found to suggest that any of these networks or activities are ongoing.</p> <p>This is ongoing www.facebook.com/livinghealthycardinia</p>
<p>Healthy Communities</p>	<p>Implementing Healthy Food Connect Across Cardinia Shire</p>	<p>Harvesting Health - Local fresh food network developed under HT Victoria in collaboration with Monash Health, Various council business units & Koo Wee Rup Regional Health service. During HTCS responsible for developing food security principles for the council, mapping stakeholders and hosting food forum.</p> <p>Food Forum - First attempt was targeted at farmers and eventually cancelled because of lack of registrations. Forum was eventually held and was targeted at people active in the local Cardinia food movement. Working groups emerged but not sustained.</p> <p>South East Food Hub - On hold. But in CS</p>	<p>This project is transitioning to Cardinia Food Circles.</p>

		<p>established 6 buying groups were formed with approximately 87 weekly orders)</p> <p>Fresh & Local - Bayles General Store in food desert piloted sale of fresh produce over 4 weeks. The store has committed to continuing the sale of fresh produce.</p>	
Healthy Communities	Implementing Healthy Eating Initiatives Across CS	<p>Healthy Bites Program- Pilot program with 16 local cafes where 'healthy bites' menu items were identified with a sticker. 68% of patrons said that the sticker changed their food choices and 80% would like to have more cafe involved. Positive feedback and impact from cafe owners and chefs.</p> <p>Jamie's Ministry of Food - mobile kitchen for cooking classes with 449 residents participating</p> <p>Food Revolution Day - Jamie Oliver Initiative</p> <p>Recruitment and support for Health Champions - By Oct 2015 there were 5 health ambassadors with 13 more completing training. Challenge of finding people who can commit to extra activities in addition to their busy work/life commitments</p>	<p>Ongoing – Monash Health</p> <p>One-off</p> <p>One-off</p> <p>Ongoing - Monash Health</p>
Healthy Communities	Funding and/or support for health and wellbeing programs and initiatives in CS	<p>Tiger PAW (Physical Activity and Wellbeing) - In partnership with Richmond Football club, piloted in 2 primary school with 90% student stating they would do something healthy after attending.</p> <p>Stephanie Alexander Kitchen Garden Program (SAKGP) - Six schools applied and got funding for teacher training (must be a part of Achievement Program to be eligible)</p> <p>Healthy Living Programs (HLPs) - Chronic disease prevention activities tailored to</p>	<p>Tiger Paw and SAKGP ongoing and expanding (SAKGP has recently received additional State government funding to subsidise the cost of schools joining the program).</p> <p>HLPs have finished but funded projects status</p>

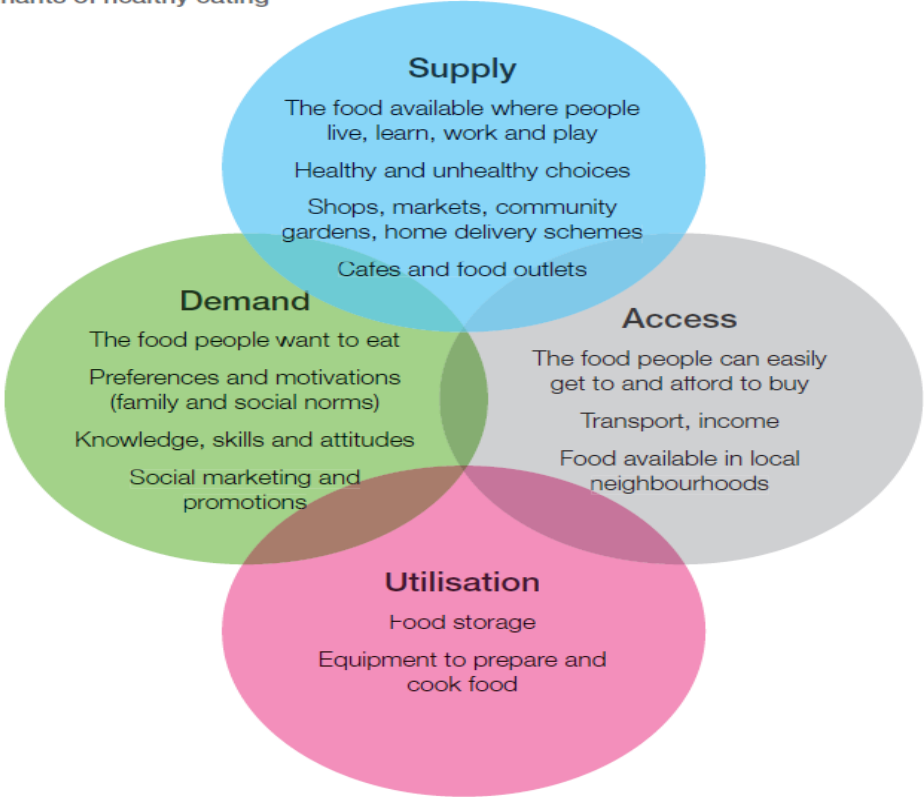
		<p>meet local needs. 26 HLP pilot programs funded with up to \$3000 - objectives had to be aligned with MPHWP priority areas. Very positive feedback and outcomes - 91% of participants who attended stated they would apply their learnings or keep doing their learnt behaviour.</p>	<p>not clear.</p> <p>Monash Health is funded to deliver HLPs through Integrated Health Promotion (DHHS) funding</p>
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Systems Thinking Approach

The HTCS was distinct from previous attempts to tackle complex health issues in that it took a ‘systems thinking’ approach. The HTCS Evaluation report explains that this approach “recognises that obesity is a complex issue with many causes including biology and behaviours but is also influenced by cultural, environmental and social factors”¹². This thinking is clearly shown in The *Healthy Food Connect* approach which is underpinned by what are considered to be the most important determinants of healthy eating, depicted in systems model Figure 3 (DOH 2014):

Figure 1. Determinants of Healthy Eating, Health Food Connect model

Determinants of healthy eating



¹² Healthy Together Cardinia Shire. Progress Report 2012 -215. Executive Summary.

While the potential for a ‘systems thinking approach to broaden your understanding of complex issues’ was generally recognised by HTCS staff, there were a number of challenges to this approach highlighted in the evaluation report. Some challenges mentioned included difficulty in explaining the concept of systems thinking to others in council and getting them to understand the connection of ‘healthy eating’ to other areas of council business. There were also challenges in successfully linking the food systems approach to existing council programs operating under traditional models. Many people interviewed acknowledged the potential of the new approach; however, after only three years, the food systems approach was only just starting to see some definitive change and cohesion. Given its relevance to the Cardinia Circles of Food Project, a more in-depth consideration of these challenges will be made in the *Discussion and Analysis* section of this report.

A Food Systems Approach

The Circles of Food methodology also uses a systems thinking approach, applying a ‘Food Lens’ through which to focus and better understand, in an integrated and holistic manner, the diverse impacts and influences of the food system on culture, the economy, politics and the local environment or ecology; and vice versa, i.e. the ways in which local and non-local culture, economy, politics and ecology impact on and influence the food system.

‘Food system’ is a term that has been used in order to develop an integrated understanding of a set of processes, institutions, practices and systems, all intimately linked to agriculture and food, yet which are typically thought of as separate and distinct, and commonly treated as such for governance and policy purposes.

Thus, a ‘food system’ is said to embrace the entirety of the practices and institutions connected with the five ‘spheres’ of the system: production (agriculture/horticulture), processing (manufacture/value-adding), distribution (transport/storage / wholesale), consumption (retail/markets/restaurants/cooking) and waste management (composting/recycling/land-fill). One example of a graphic representation of a food systems approach is set out in the diagram below:

Figure 2: Components and Interconnections of a Food System

Source: Tagtow and Roberts (2011)

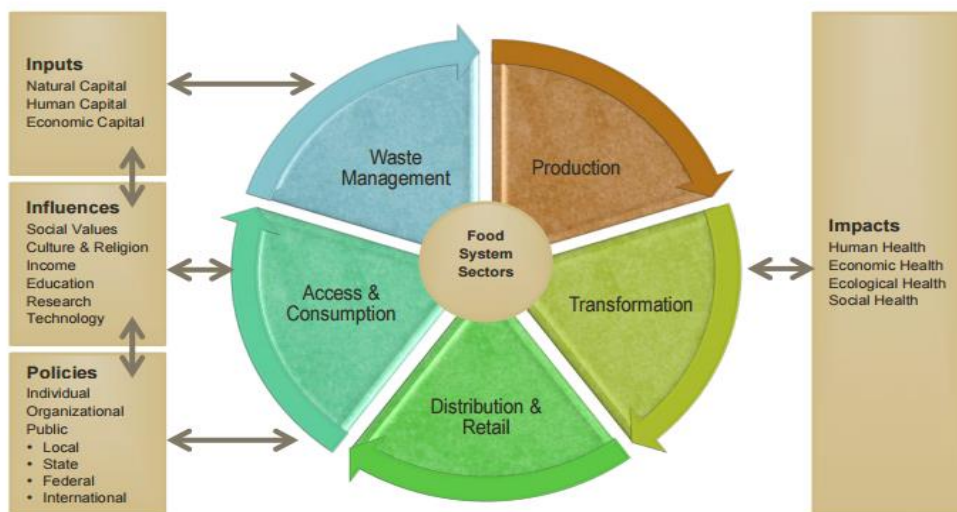


FIGURE 2. INTERCONNECTIONS OF THE FOOD SYSTEM

Each of the food system sectors relies on a series of inputs in order to operate. Additionally, there are a number of influences that affect the functionality and efficiency of a food system, especially policy. The food system also impacts in fundamental ways the overall state of human, economic, ecological and social health. The nature of a food system, the multiplicity of its components and the dynamic nature of their interactions, is captured by Figure 4.

In 2015 the **International Panel of Experts on Sustainable Food Systems** offered the following definition of ‘food system’ and what is involved with the application of a ‘food systems lens’:

“[A food system is] the web of actors, processes and interactions involved in growing, processing, distributing, consuming and disposing of foods, from the provision of inputs and farmer training, to product packaging and manufacturing, to waste recycling. A holistic food systems lens is concerned with how these processes interact with one another, and with the environmental, social, political and economic context. The food systems lens also brings to light reinforcing and balancing feedback loops, tensions between the different components and flows of food systems, and interactions that are cyclical, multilayered and multi-scale. It is a way of thinking about the world that seeks to identify the linear and non-linear relationships between the different components of the system.”¹³

A food systems approach to policy and program development and implementation has multiple benefits including:

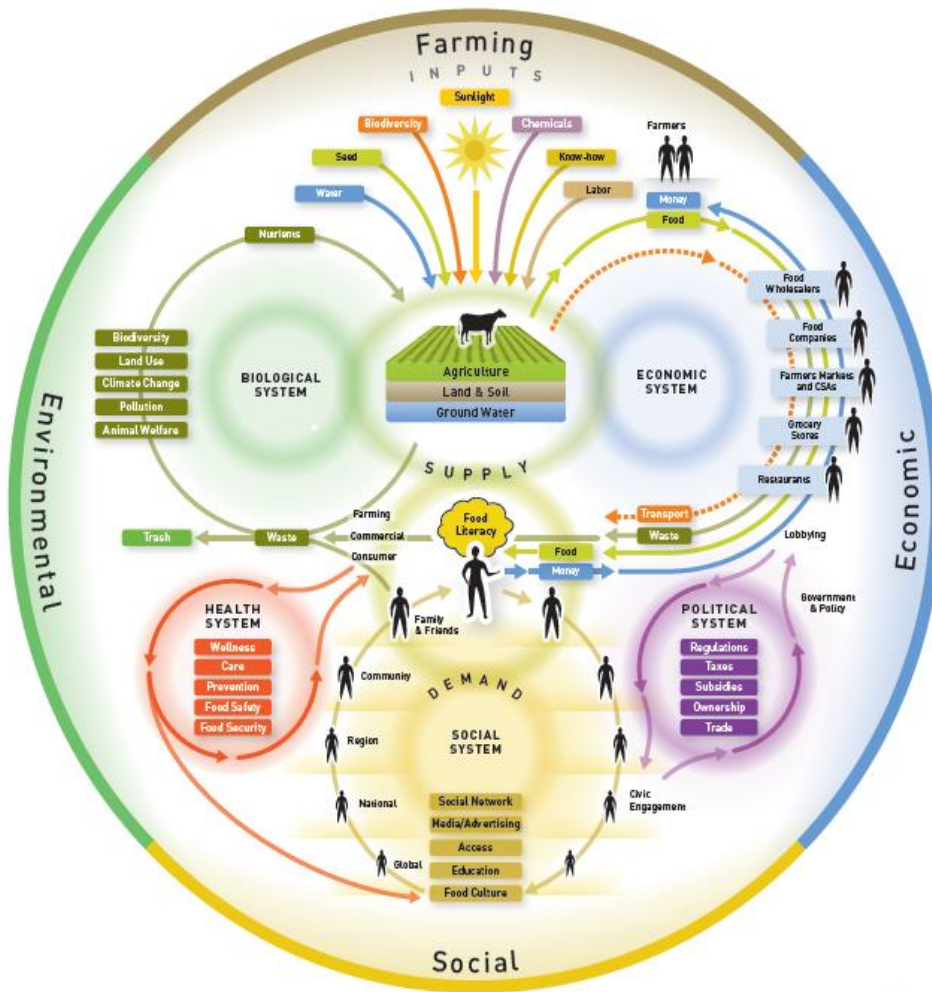
- improved health outcomes,
- enhanced soil and water quality,
- the maintenance and improvement of biodiversity,
- improved economic viability of producers, and a diversified and thus more resilient agri-food economy, and
- progressive maximisation of food security, especially for low income and vulnerable groups.

Within the local community these benefits may be realised in a variety of forms, including:

- Increased access and affordability of local produce,
- more people growing their own food in backyard, community or school kitchen gardens,
- farmers markets being established and supported,
- more farmers embracing low-input production methods,
- diversifying business models for producers embracing farmgate and other direct and short value chain sales, and
- ‘buy local’ and regional food branding strategies adopted by restaurants, grocery stores and supermarkets.

¹³ See IPES, 2015, *The New Science of Sustainable Food Systems: Overcoming barriers to food systems reform*, at http://www.ipes-food.org/images/Reports/IPES_report01_1505_web_br_pages.pdf

Figure 3: Food System Map as Depicted by Nourish¹⁴



The food system approach also links closely to the concept of a 'local food economy'. By 'local food economy', we mean:

Food production, and related economic and social activities close to where people live, ideally resulting in higher levels of trust and more intimate connections between producers and purchasers.¹⁵

This approach may be desired by some, but a range of factors, including capacity, resources and time, influence whether and to what extent this ideal can be achieved. For more detail on the benefits of local food economies, and experience overseas, see Appendix 6.

¹⁴ www.nourishlife.org/pdf/Nourish_Food_System_Map_11x14.pdf

¹⁵ From Sustain 2017, *The State of Greater Bendigo's Local Food Economy – a pilot study*, Bendigo.

For the purposes of this Report, the term ‘local’ is used from a context of Council influence, and as such refers to any food system activity or opportunity within the boundaries of the Cardinia Shire. While our concern is with the Cardinia Shire, we are mindful that the integrity and sustainability of its local food system is dependent on the integrity and sustainability of broader food systems operating at the level of Victoria, Australia and the world. It must be acknowledged that there are factors outside the control of the local food system and the Council and these include state and national legislation and policy, climate change, costs of inputs and labour, and prices paid for goods and services.

The *Circles of Social Life* Approach

Circles of Social Life is an approach that guides engaged and collaborative practice in making our cities, locales and organisations more sustainable, resilient, adaptable and liveable. This framework provides practical tools for creating sustainable cities and communities and is further discussed in section 7, Research Methodology. By taking part in this methodology, Cardinia Shire is embarking on an innovative and leading practice, to adapt the *Circles of Social Life* framework to address food systems issues.

To date, a handful of other Victorian local governments have developed a whole-of-system and health-oriented food policy and/or strategy, namely the City of Melbourne, the City of Greater Dandenong, the City of Hume, the City of Greater Geelong and (with a specific focus on urban agriculture) the City of Yarra and the City of Darebin. Several other Victorian local governments are in the process of developing food policies and strategies. The work being undertaken by the Cardinia Shire Council will position it as one of the world leaders in food systems thinking and practice.

5. Cardinia Shire Context

The Cardinia Shire is located about 50 km south east of Melbourne’s Central Business District (CBD) and has a current population of approximately 99,000 people. The Shire covers a geographically diverse area of 1,300 square km of both residential and rural land. Cardinia is one of the fastest growing councils in Australia, with a population forecast to reach 180,308 by 2036.¹⁶ Similar to other peri-urban interface councils, Cardinia identifies as both a metropolitan and rural council, with approximately 70 per cent of its land classified as rural and 30% per cent as urban¹⁷.

Figure 4. Map of Cardinia Shire



As in many other regions experiencing rapid growth, Cardinia is undergoing significant change. This dynamics of urban growth are transforming the interrelated economic, ecological, political and cultural landscapes of Cardinia. This context Cardinia brings with it numerous and diverse opportunities and issues, which have increased the need for council to be proactive in planning for a resilient, healthy, economically thriving and connected community into the future. Below we present an overview of the different social domains that may influence and impact future action in the Cardinia Shire.

¹⁶ <http://forecast.id.com.au/cardinia>

¹⁷ Strategic Directions Paper - for development of the Cardinia Shire Municipal Public Health and Wellbeing Plan 2013-17

Economic Profile

An urban-rural interface council, Cardinia Shire is crossed by the Princes Highways and Gippsland Rail Corridor running east-west providing key road and rail links to Melbourne and West Gippsland. The western end of this corridor includes the Shire's urban growth area comprising the townships of Beaconsfield, Officer and Pakenham. The recent expansion of the urban growth boundary and exponential population growth¹⁸ has brought with it increased pressure on local infrastructure and demand for local employment and training opportunities that are currently not being met. This discrepancy between local employment demand and opportunities means that up to 60% of the working population are forced to commute to other regions to work with many travelling more than 50km a day. Cardinia Shire's Gross Regional Product is estimated at \$2.48 billion¹⁹ with leading employment industries identified as construction (11.2%) and retail trade (11.7%).²⁰ While education and training, and health care and social assistance have each seen a small rise in local job opportunities, agriculture as an economic sector is declining in terms of employment. Agriculture in Cardinia employs 1289 people (2014/5), a decline of over 500 workers from the 1810 employed in the sector in 2009/10.²¹ The number of agriculture, forestry and fisheries businesses fell to 804 in 2014-5; a drop of 59 from 863 in 2012.²² At the same time, agriculture's total sales rose to \$383 million in 2014/5, a rise of nearly \$60 million from 2009/10.²³ Of the total sales of agriculture, more than half (\$204.3 mn) were 'local sales'; that is, 'sales to local customers, businesses and other organisations'.²⁴

Despite rising energy and fuel costs²⁵ and limited number of fresh food retailers across the region means that the economic affordability and consumption of healthy food is compromised, not only for low-income families but also increasingly for higher income families as well.²⁶ With an average income of \$40,000 most residents regard fresh food too expensive to buy regularly, with families reliant on welfare benefits having to spend more than a third of their income on food to access a healthy food basket.²⁷ As noted earlier, over 95% of the Shire's residents do not consume the recommended daily amounts of fresh fruit and vegetables.²⁸

Ecological Profile

Cardinia Shire's rural land from the hills to the Port Ward is important to the economy at a local, state and national level, representing a very significant asset of 30,000 acres of viable farmland.²⁹ Ongoing loss of agricultural land to housing threatens the local and regional sustainability and food security in future decades. Driving this loss is speculation by developers (banking on the extension of the UGB) pushing up the cost of land to a rate that is uneconomical to farm. The extent of such threats was documented by the recently published *Foodprint Melbourne* report, which revealed that while

¹⁸ Environmental Scan 2015 - South East Learning and Employment Network estimates that more than 100 people moving to Casey Cardinia Shire area a week

¹⁹ <http://economy.id.com.au/cardinia>

²⁰ <http://economy.id.com.au/cardinia/employment-by-industry>

²¹ <http://economy.id.com.au/cardinia/employment-by-industry?>

²² <http://economy.id.com.au/cardinia/number-of-businesses-by-industry>

²³ <http://economy.id.com.au/cardinia/output-by-industry>

²⁴ <http://economy.id.com.au/cardinia/local-sales-by-industry>

²⁵ Cardinia Shire Council 2014, Aspirational Energy Transition Plan 2014-2024.

²⁶ Healthy Food Connect Report 2013

²⁷ Cardinia Shire Liveability Plan Research and Data Profile 2016.

²⁸ *Ibid.*

²⁹ Land Capability Assessment 2013

Melbourne's 'foodbowl' areas, of which Cardinia is a major one, can currently supply more than 40% of the city's total food requirements, this will drop to less than 20% by 2050 with anticipated population growth and loss of peri-urban farmland.³⁰ Urban growth is putting pressure on existing infrastructure and is already causing transport congestion, which will only worsen unless mitigated by the generation of more local employment and business opportunities. Lack of reliable public transport and infrastructure means there is a high level of car dependency in Cardinia, with an average of 2.1 vehicles per dwelling and 91% of residents making journeys to work by car.³¹ 17% of residents face a daily commute by car of two hours or more.³² Cardinia shire residents are notably dependent on fuel and vulnerable to rising energy costs and potential shortage.³³ With increasing population, greenhouse gas emissions have continued to rise in the shire with an increase in annual emissions of 44% between 1996 and 2012.

Within the Cardinia boundaries are 615 square kilometres of the Western Port Green Wedge, which extend from the western neighbouring City of Casey. Being on the edge of the Melbourne metropolitan area, there is significant pressure on the green wedge to accommodate new areas for housing through the continuous expansion of Melbourne's urban growth boundary (UGB). Though generally prone to flooding, the green wedge is one of Victoria's most productive and valuable agricultural areas, providing much of Victoria's asparagus, celery, leek, herbs and silverbeet. There is however relatively few opportunities for local residents to connect with local growers and buy this produce, due in part to policy restrictions regarding selling produce at the farm gate, as well as the market share characteristics of new retail spaces which tend to favour the large corporate food retailers over smaller independent grocery stores.³⁴ The Cardinia Western Port Green Wedge also has high biodiversity value, covering protected areas that are vulnerable to rising sea levels, areas with Aboriginal heritage significance and internationally recognised wetlands and habitats for endangered species.

Access to reliable water supplies, and the impact that subdivisions and non-regenerative intensive production can have on soils and ecosystems, are critical constraining factors on future agricultural production capacity. Regarding the important issue of water availability, increased development will also mean a vast increase in the availability of Class A retreated water, potentially from the Eastern Treatment plant³⁵, which is suitable for many agricultural uses. In terms of sustained soil fertility, the fact that Cardinia Shire Council does not currently collect household organic food waste for recycling through the community represents a major opportunity: to develop healthy urban and rural townships recycling and waste management is very important.³⁶ However Cardinia does collect garden waste at an added cost to households, which is composted. There is an opportunity for markets to be tested and developed further to allow municipal food waste as soil conditioner.

Cardinia Shire population faces particular challenges in relation to the ecology of human health. Nearly 54% of the population is overweight and close to one-quarter are obese, compared to the Victorian

³⁰ Carey, R., Sheridan, J., and Larsen, K., 2016, *Melbourne's Food Future: Planning a resilient city foodbowl*, http://www.ecoinnovationlab.com/project_content/foodprint-melbourne/.

³¹ Healthy Food Connect Report 2013; Cardinia Shire Liveability plan 2014-2024, p74.

³² *Ibid.*

³³ Cardinia Shire Council 2014, Aspirational Energy Transition Plan 2014-2024

³⁴ Healthy Food Connect Report 2013

³⁵ Bunyip Food Belt- Land Capability and Environment and cultural Heritage Assessment 2010. A project investigating the opportunity to utilise recycled class A water for food production in conjunction with Mornington Peninsula Shire.

³⁶ Cardinia Shire Strategic Directions Paper 2013-17

average of 18.8%.³⁷ According to the national diabetes map, diabetes affects 5.1% of Cardinia's residents, which is the same as the State average.³⁸

Political Profile

The local food system in Cardinia Shire is impacted by the policy context at multiple levels: local, state, federal and global. While the present focus is about the local food system, interactions with the broader state and federal policy contexts are important to bear in mind. In particular, the Federal policy context bears directly on some of the critical determinants of affordable access to healthy food as regards the competition framework that favours large supermarkets; and the State government planning framework which permits the proliferation of fast food outlets in residential areas, amongst other critical issues.

Relevant policy context for Cardinia Shire

Cardinia Shire Council plans to develop a Local Food Systems Strategy. Building on the work of Healthy Communities and the HTCS, we recommend that council take the appropriate steps to embed a food systems approach across all relevant Council plans, policies and strategies with the most relevant documents listed below. Such plans, policies and strategies will range from the highest-level strategic documents, in particular the Municipal Strategic Statement and the Municipal Health and Well-being Plan, to those plans, policies and strategies that may appear to have only a tangential connection with the food system, such as the *Healthy By Design* Guidelines.

- *Cardinia Shire Council Plan 2017-21*
- *Municipal Public Health and Wellbeing Plan 2017-21*
- Stormwater management plan
- Economic Development Strategy
- Tourism Strategy
- Integrated Transport Strategy
- Youth Strategy
- Precinct Planning Strategies
- Environmental Sustainability Strategy
- Cardinia Planning Scheme (Municipal Strategic Statement)
- Waste management and resource recovery strategy
- Community Gardens Guidelines 2013
- Growth Area Plans
- Housing Strategy Strategic Action Plan 2013 -2018
- Aspirational Energy Transition Plan 2014 - 2024
- Cardinia Shire Reconciliation Action Plan 2015 - 2019
- Cardinia Western Port Green Wedge Management Plan (Adopted 2016)
- Creating an Accessible Future Access and Inclusion Action Plan 2014–17
- Cardinia Food Security Principles 2015
- Healthy By Design Cardinia 2015
- Cardinia Shire Council Cultural Diversity Policy (Adopted 2012)
- Healthy food and beverage (Catering) policy 2012–17

³⁷ Cardinia Shire Liveability plan 2014-2024, p64.

³⁸ <http://www.diabetesmap.com.au>

Potentially facilitating this cross sectoral collaboration has been the creation of Cardinia Food Security Principles (See Appendix 3) that were developed with input from key internal stakeholders and relevant business units and eventually signed off at all levels of council in 2014. Such a level of engagement makes these principles eligible to be embedded in the 2017-2021 Municipal Health and Wellbeing Plan as well as the Municipal Strategic Statement.

Cultural Profile

The Cardinia Shire region has an Aboriginal history stretching back 40 millenia. Migration to the area until recently has been primarily by European populations although predictions and recent migration patterns suggest that the Shire is likely to experience an influx of CALD populations groups similar to that experienced by the City of Casey and Greater Dandenong. Thus between 2002 - 2013 Cardinia Shire saw the settlement of primary migrants from the UK, India, Philippines, Sri Lanka, South Africa, China, Sudan, Mauritius and Fiji.

Broadly speaking and on the basis of the desktop research and the interviews conducted, it appears to us at this point that in general terms Cardinia Shire residents do not have a particularly strong connection to local and seasonal produce, with apparently little household or community garden food production activities. According to the 2013 Healthy Food Connect Research report, the 'high economic costs of food are a significant barrier to accessing fresh fruit and vegetables, particularly for families dependent on government assistance and individuals / families experiencing financial hardship'.³⁹

³⁹ *Op cit.*

6. Policy Context: National, State and Local

As discussed, the local food system in Cardinia Shire is impacted by the policy context at multiple levels: local, state, federal and global. Here we briefly discuss the first three. In Appendix 10 we provide a brief overview of some policy shifts to support for local food economies in North America.

National Practice – Federal and State

At the Federal level, Australian food and agriculture policy retains a strong focus on commodity production, free trade and export orientation. This was reflected in the previous Federal government's National Food Plan⁴⁰, and in the current Federal government's Agricultural Competitiveness White Paper.⁴¹ Some elements of such high-level Federal policy actually and potentially impact on the Cardinia context, such as the roll-out of the National Broadband Network; and long-term investments in transport and water infrastructure. There are also high-level overviews on topics relating to food waste, food industry innovation research and development, and food security (*see* Table 3 below).

In relation to health, the Victorian legacy of the National Preventative Healthcare Taskforce and the resultant funding was the creation of Healthy Together Victoria (and the related municipal level staff teams, including HTCS) and in turn the Healthy Food Connect model, which of course strongly informs the development of this report (*see* Sections 4 above and 7 below). Thus the health departments at both the Federal and State levels have been especially strong shapers of the shift towards a food systems approach in terms of policy and practice. This is reflected in Victorian government reports and plans listed in Table 3 (*below*).

In New South Wales, the Department of Environment, through the NSW Environmental Trust, has also played a significant role in enabling innovation at the local level, with a series of local food grants to collaborations of local councils from 2008-2011.⁴² Similarly the Environment Protection Authority ran a successful *Love Food Hate Waste* food waste avoidance education program⁴³, which is now been replicated in Victoria through Sustainability Victoria.⁴⁴

Table 3: Key Australian Documents: Federal, and State (Victoria)

Key Australian Documents Related to Food System Issues	
Federal Government	<ul style="list-style-type: none"> ● National Waste Policy: Less Waste, More Resources, 2010–2020 ● Food Industry Innovation Precinct National Research Investment Plan, 2013–2018 ● National Food Plan 2013 (now superseded) ● Agricultural Competitiveness White Paper 2015 ● State of the Environment Report 2011

⁴⁰ See http://www.agriculture.gov.au/ag-farm-food/food/publications/national_food_plan/white-paper.

⁴¹ See <https://agriculturalcompetitiveness.dpmc.gov.au/>.

⁴² See <http://www.environment.nsw.gov.au/grants/2008usm.htm>

⁴³ See <http://www.lovefoodhatewaste.nsw.gov.au/>.

⁴⁴ See <http://www.lovefoodhatewaste.vic.gov.au/about-us>.

State
Government

- *Australia and Food Security in a Changing World*. The Prime Minister's Science, Engineering and Innovation Council 2010
- *Eat for Health – The Australian Guide to Healthy Eating*
- Food to Asia Action Plan: Putting Victorian Food and Beverages on Asian Tables 2014
- Victorian Public Health and Wellbeing Plan 2015-19
- Science Policy People. Victoria: State of the Environment 2013
- Report on Climate Change and Greenhouse Gas Emissions in Victoria 2012
- A Fairer Victoria 2010
- State Planning Scheme references to protection of the State's agricultural base (Clause 17.05)
- The Impacts of a Localised Food Supply: What is the Evidence? 2010
- Fruit and Vegetable Consumption and Waste in Australia 2009
- Getting Full Value: The Victorian Waste and Resource Recovery Policy 2013
- Victorian Organics Resource Recovery Strategy 2015
- Environmental Sustainability Action Statement 2006
- Healthy Eating - Food Security Investment Plan 2005-2010
- Food for All 2005-2010 Report
- Planning for Food Report 2012
- Victorian State Planning Provisions

Local Government Practice – Victoria

It is at the local government level where policy and practice development is most notable as regards food systems in general and local food systems in particular. It is possible to detect what amount to successive waves of policy, research and practice development, dating back to the commencement of the VicHealth-funded Food for All program in 2005, as follows:

- **Food Security (2005-2010):** mapping research / policy / interventions - selected LGAs in Victoria funded through the Food for All program
- **Community gardens guidelines and policies (2008-ongoing):** responding to growing community interest and participation in community gardening, especially in inner urban areas of Melbourne but increasingly spreading throughout metropolitan Melbourne and into regional and even rural areas
- **Food policies (2012-ongoing):** providing a whole-of-system approach to food, embracing the multiple drives of health, sustainability, resilience and fairness; City of Melbourne being the leading example; but a new wave of food policies and strategies (2014-ongoing), and associated programs and projects, resulting from the Healthy Together Victoria funding of staff teams in 14 LGAs (2011-present)
- **Urban agriculture and urban food production strategies (2012-ongoing):** taking forward the earlier work on community gardens policies, and integrating it into the broader framework of urban agriculture (City of Yarra and City of Darebin being the lead examples)
- **Local food strategies and regional food plans (2012-ongoing):** With the key driver being economic development and job creation, these initiatives represent a conscious effort to foreground the role of local government as an enabler of expanding and thriving local food economies (Mornington Peninsula Shire Council being the lead example)

With the exception of the first wave of food security policies, which very much reflected the policy orientation and funding of VicHealth, the majority of these policies and strategies have responded to a growing community sentiment for Councils to become more involved in the local food system at the level of both policy and practice. The most recent wave of Healthy Together Victoria-linked food systems policies might on the one hand be said to reflect a top-down, State government-led approach. On the other, the Healthy Food Connect model (*see* Section 3 above and Section 7 *below*) anticipates the formation of a Local Food Network / Coalition, comprised of local food system stakeholders; and in many regions throughout Victoria, both within Healthy Together sites and elsewhere, there are already multiple active food networks and collaborations. Such existing engagement demonstrates the high levels of interest in and enthusiasm for local food systems work, and the values and principles that it represents as regards (for example) the prioritisation of healthy, fresh, local food for all. It is hoped and expected that these local Networks and Coalitions will work closely with local governments to drive forward food systems actions and projects.

See Appendix 8 for a table analysing some of the most relevant local government food policies and strategies in Victoria.

7. Research Methodology

This report is the first step in the Cardinia Food Circles project (2016-2026). Its purpose is to *map existing food system work through desktop document review and discussions with past and present Council Staff and partners.*

This Report can be seen as the first step in the *Assessment Phase* in the *Circles of Social Life* methodology (see below and Appendix 11 for details). Under the Process Pathway contemplated by this methodology (see below), the assessment of the food system comprises three phases, with the analysis of data and observations described in this Report. Next, key strengths, issues, and opportunities for Cardinia Shire will be analysed through a *Critical Issues Identification* process with key community stakeholders, which will allow for the generation of a Cardinia Food Systems profile. Subsequently, the development of a Cardinia Shire Community Food Plan will take place through extensive community engagement utilising a kitchen table methodology.

This preliminary research was conducted by a *Sustain* Consultant between November 2016 and January 2017, working under the supervision of *Sustain's* Executive Director. The research included the following:

1. A literature review of the local health data and investigation of work undertaken as a part of the HTCS 2012-2015 (e.g. programs, processes, partnerships, outcomes and cases studies as well as data re. access and intake of fruit and vegetables, vulnerable community groups; local services and programs to support vulnerable communities)
2. A broader food policy analysis and literature review of global to local experience
3. A review of key Council documents and a series of discussions with a small number of internal and external Cardinia Shire food system stakeholders (to explore opportunities to collaborate and strengthen the focus on the local food system in Council documents)
4. Mapping of relevant data highlighting key issues and information gaps against the Circles of Food domains and subdomains.

Data Sources and Key Informant Selection

Data was collected from a range of documents and websites shared with *Sustain* by the Cardinia Shire Healthy Communities Coordinator and other key informants. *Sustain* also undertook an online independent search for documentation and data to attain maximum coverage and understanding of the contexts and issues. Some documents were not available as they were in the process of being developed such as the Sustainable Environment Strategy. In particular, the child and family plan were under review; and the biodiversity and urban forest plan, while forming part of the council workplan, are yet to be developed.

Local land use policies can be found at <http://planningschemes.dpcd.vic.gov.au/schemes/cardinia>

Population statistics, including residents' place of work, housing affordability, and economic profiles, can be found at http://www.cardinia.vic.gov.au/Page/Page.aspx?Page_Id=1254&nc=9

Documents reviewed as a part of the desktop review of local health data, HTCS program evaluation and key policy document and supporting documentation are listed in Table \$ below.

Table 4: Documents reviewed for the Background Mapping Report

Council Plans and Policy Documents	Healthy Together Cardinia Shire Documents	Supporting Documentation
<ul style="list-style-type: none"> ● Aspirational Energy Transition Plan 2014 - 2024 ● Cardinia Shire Reconciliation Action Plan 2015 - 2019 ● Cardinia Western Port Green Wedge Management Plan (Adopted 2016) ● Creating an Accessible Future Access and Inclusion Action Plan 2014–17 ● Cardinia Food Security Principles 2015 ● Healthy By Design Cardinia 2015 ● Cardinia Shire Council Cultural Diversity Policy (Adopted 2012) ● Healthy food and beverage (Catering) policy 2012–17 ● Housing Strategy Strategic Action Plan 2013 -2018 ● Integrated Water Management Plan 2015 ● Cardinia Shire Community Gardens Guidelines 2013 ● Strategic directions paper – for development of the Cardinia Shire Municipal Public Health and Wellbeing Plan 2013–17 	<ul style="list-style-type: none"> ● 10,000 Steps Case Study ● Charlotte on Main Case study (2014) ● Hillview Aged Care Vegetable Garden Case Study ● Food Security Fact Sheet ● Healthy Bites Evaluation Report 2015 ● Healthy Food Connect Research Report ● Healthy Together Cardinia Shire Progress Report 2012 - 2015 ● Cardinia Preliminary Social Marketing Profile ● Oral Health Program Evaluation Report 2013-2014 ● Regional Food Network TOR 	<ul style="list-style-type: none"> ● Cardinia Shire Council Social Health Research March - April 2016 (incorporating Growth Area Social Research and Rural and Townships Social Research 2016) ● Attracting Employment & Investment to the Casey-Cardinia Region Summary Paper (2011) ● Bunyip Food Belt. Land Capability and Environment and Cultural Heritage Assessment 2010 ● Casey and Cardinia Regional Agricultural Audit and Action Framework 2004 ● Community Food Project. Background Paper (201?) ● Environmental Scan 2015 - South East Local Learning and Employment Network 2015 ● Food-sensitive planning and urban design (FSPUD) Summary Report 2011 ● Mapping Melbourne for land capability: Assessing the agricultural capability of Melbourne’s peri-urban area. ● Victorian Public Health and Wellbeing Plan 2015 - 2019 ● Melbourne’s Food Future. A Foodprint Melbourne Report November 2016 ● Review of the 2003 Cardinia Pedestrian and Bicycle Strategy (2007)

The key informants were identified utilizing a snowballing effect. Those who were recommended by the Healthy Communities Coordinator were then asked to recommend key people who either currently or previously worked in collaboration or alliance with the Cardinia Shire to improve health outcomes and

food access for its residents. Interviewees were asked broad questions relating to their area of expertise on the local data and information available, relevant policies and procedures as well as gaps in the existing data.

Conversations were held with over the phone or in person with:

- Former Cardinia Shire Health Promotion Coordinator
- Former Healthy Together Cardinia Shire Steering Committee Member
- Koo Wee Rup Regional Health Service worker
- Former Healthy Bites and Achievement Program Health Promotion officers
- Monash Health representatives who had worked previously with HTCS
- Former SouthEast Food Hub Manager

As a part of the preliminary assessment process these discussions served as at a point of reference to interrogate and compliment the document findings and uncover any undocumented or emerging work, partnerships or players.

Collective Impact Model

The partnership between Sustain and Cardinia Shire Council is based on the shared view that collective impact will provide a long term opportunity to address the issue of food sustainability and food literacy in the community through a community action approach. It's anticipated that other partners will join this collective approach over time, as we build the new Cardinia Food System.

A collective impact approach is whereby a group of stakeholders from different sectors commit to a common agenda for solving a complex social problem. There are five conditions of success that together lead to meaningful results. These being:

- common agenda;
- shared agreement on the ways success will be measured and reported on;
- mutually reinforcing activities;
- continuous communication; and
- backbone support (an independent, funded staff resource dedicated to the initiative to coordinate the activities).

As the project progresses into its following phases and future partnerships and collaboration potential and community perspectives and vision are explored, Council and *Sustain* have agreed, in accordance with the principles of the Collective Impact model to continuously monitor and evaluate the data and progress against the baseline, and ensure that this information is fed back to the community in order to facilitate change. *Sustain* and Council have also agreed to be open to new ways of doing things and new approaches during this agreement period.

Key principles of working will include:

- Food Circles Collective Impact targets and outcomes will be developed through consultation with the community.
- Sustain and Cardinia Shire Council will acknowledge the value of the range of organisations that are contributing to the agreed outcomes in the Shire; and work collaboratively to ensure they are stakeholders in the Food Circles project.
- An independent evaluation framework will be developed, implemented and evolved throughout the life of the project - with key findings disseminated across community in order to inform learning and change.
- That the partnership is based on shared understanding, willingness and commitment to work within the methodology, values and principles of Collective Impact.

Circles of Social Life approach

The methodology used to complete mapping the Cardinia Food System is based on the *Circles of Social Life* approach, developed by the UN Global Compact Cities Programme and Metropolis (World Association of Major Metropolises). This approach offers an integrated method for practically responding to complex issues of sustainability, resilience, adaptation, liveability and vibrancy. The approach takes an urban or regional area, city, community or organization through the difficult process of responding to complex or seemingly intractable problems and challenges.

The *Circles* approach builds on and complements the *Healthy Together Victoria* model. As discussed in section 4 above, the *Healthy Together Victoria* model proceeds from a food systems approach, which centres on understanding the nature and complexities of the multiple interactions across the diverse components of the food system. This approach acknowledges that it is imperative to understand factors beyond the individual and take into account the broader ecological, economic, political and cultural factors, including policies at global, regional national and local levels (Slade 2013).

The *Circles of Social Life* framework complements and enriches the *Healthy Together Victoria* food systems-informed model, because it offers a practical methodology to collaboratively investigate and address the totality of complex issues across a system and the interactions and tensions between them. This *Circles* framework builds upon practical work done by the UN Global Compact Cities Programme, Metropolis, World Vision and a number of cities around the world including Porto Alegre, Melbourne, San Francisco, Berlin and Milwaukee.⁴⁵

In the next phase of the Cardinia Food Circles project, the key strengths, issues, and opportunities for Cardinia Shire will be identified through the Circles of Social Life Process Pathways *Critical Issues Identification* process. Guided by the indicative critical objectives outlined in the Cardinia Food Circles project (see section 3 above), the focus will be to explore, in an assets-based approach, the key enabling and constraining factors that can contribute to a local food system that aspires to being:

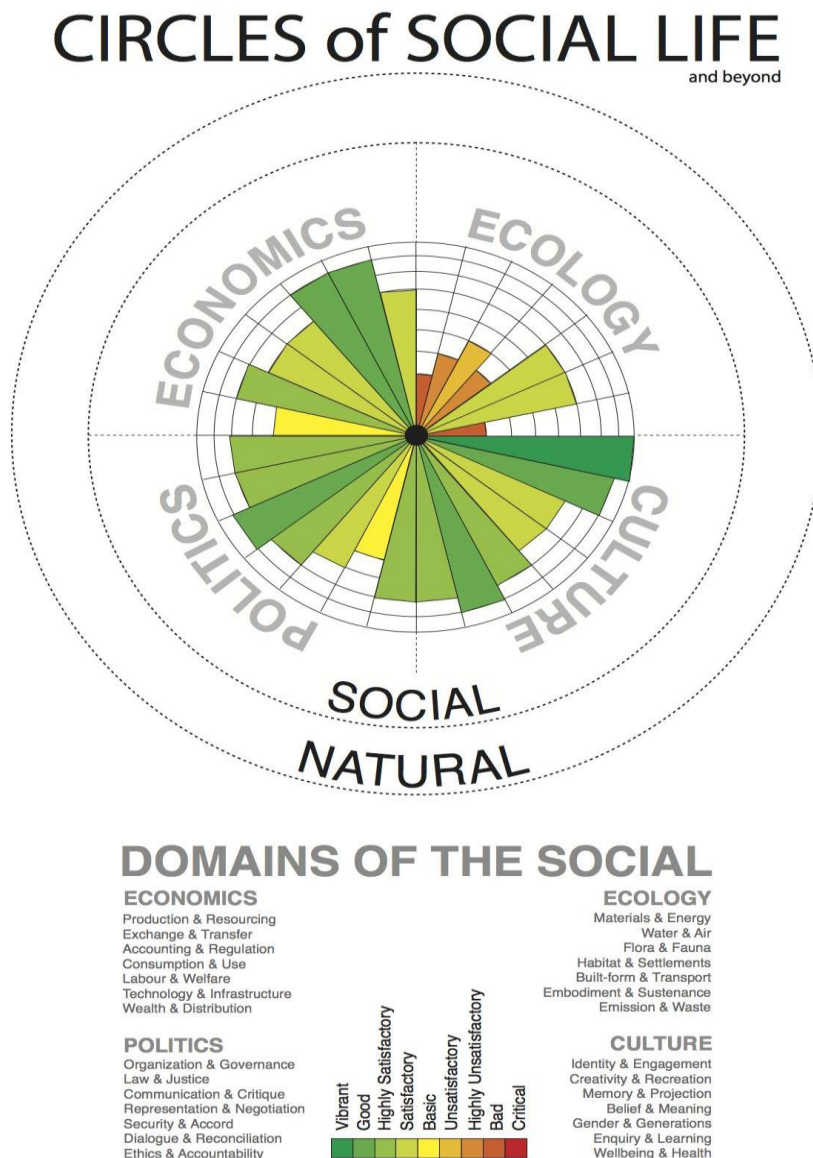
⁴⁵ See <http://www.circlesofsustainability.org>

- *Economically productive*, with multiple economic and employment benefits accruing to local residents and, in particular, with enhanced access to healthy and affordable food;
- *Ecologically sustainable*, laying the foundations for a transition to a low-carbon economy, and enhancing health and well-being;
- *Politically integrated* at a policy and program level, with high levels of active engagement from food-system stakeholders and local residents; and
- *Culturally vibrant*, which supports and expands a culture that appreciates diverse food traditions and the benefits of local, seasonal and healthy food more generally.

The Circles of Social Life Methodology

Circles of Social Life treats all complex problems as necessarily affecting all domains of social life: economics, ecology, politics, and culture. This can be expressed in a visual figure that treats all domains as being interconnected through the centre of the circle.

Figure 5: Circles of Social Life Domains



The *Circles* approach provides a way of responding to a series of questions that are of fundamental importance to policy makers and professionals across all levels of government and society.

Firstly, how are we best to understand and map the sustainability of the food systems within our cities, communities and organisations in all their complexity — economic, ecological, political and cultural?

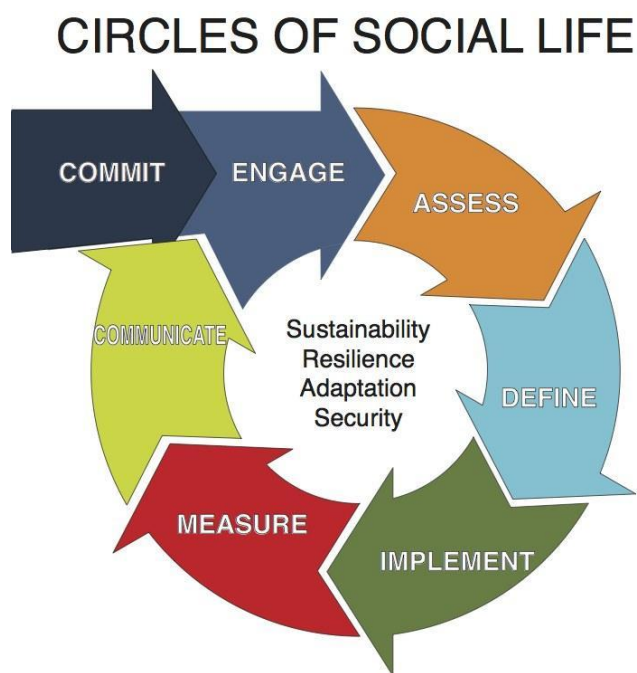
Secondly, what are the central critical food system issues that relate to making the city or community more sustainable?

Thirdly, what should be measured and how? Instead of designating a pre-given set of food system indicators, the approach provides a process for deciding upon indicators and analysing the relationship between them. Thus it supports progressive monitoring and evaluation and a reporting process.

Fourthly, how can a positive response be planned? The approach provides a series of pathways for achieving complex main objectives. It offers a deliberative process for negotiation over contested or contradictory critical objectives and multiple driving issues in relation to those main objectives.

The approach proceeds through layers of engagement and action research, as summarised in Figure 6. A table detailing the seven steps of the Process Pathway as they apply to the development of a Local Food Systems Strategy for the Cardinia Shire is set out in Appendix.... Here we describe the nature of the approach in briefest and most general terms.

Figure 6: *Circles of Social Life Process Pathway*



The *Circles* approach provides a way of achieving sustainability and resilience that combines qualitative with quantitative indicators. It sets up a conceptual and technology-supported framework for investigating problems faced by communities, and is intended to be applicable across the very different contexts of a neighbourhood, city or region.

It is sensitive to the need for negotiation from the local to the global. It takes the data seriously — both pre-existing data and data that may be generated through the process — but the data doesn't drive the interpretation. Rather, the methodology allows for multiple feedback loops to be created from the data to the community, allowing the system to evolve in real-time.

The key to the whole approach is that it is community-engaged, responding to concrete community needs and priorities that the community itself has identified and prioritised. An initial snapshot of the Cardinia Shire food profile has been created (as presented throughout this document) but more work is needed from Sustain and Council with plans to get broader input by key stakeholders more Council staff and community members.

8. Discussion and Observations

This report analyses the food systems work undertaken to date by staff on the HTCS, as well as reflecting on some other relevant experiences by local stakeholders and institutions. As such, the report is both a literature review and provides a snapshot of the Cardinia Shire food system. It is a starting point for broader discussion and analysis, proceeding from our interpretation of documented information related to work undertaken by the HTCS team and other local organisations and government sectors, relating to the Cardinia Shire food system. Through the implementation of Circles of Social Life Process Pathways methodology, the discussion and analysis of the data will be an ongoing and iterative process throughout the life of the project. In this way, *Sustain* aims to ensure that the Cardinia Food Circles project is deeply grounded in the broader Cardinia community, and is accordingly responsive to concrete community needs and priorities that the community itself has identified and prioritised.

For clarification purposes the key discussion and observations highlighted here have been set against the CFC key objectives with the most closely relevant Food Circles domain defined in brackets. It is important to keep in mind that issues, gaps and observations raised are rarely defined by one domain - this is part of the purpose of the critical issues definition process; to build greater appreciation of the complexity of any given situation and the need to take an integrated approach, sensitive to the factors and actors that impact on and influence the various domains and sub-domains, and the relationships between them. For example, economic issues (such as the pressure on growers to increase yields) may well impact on soil and water systems; the reasons for an obesity crisis may be found in political issues (e.g. the planning framework) as well as cultural factors (questions of food literacy, relationship to food, etc.)

Many of the key objectives of Cardinia Food Circles project can be linked back to the HTCS evaluation recommendations. As well as the background literature and desktop review, the conversations had with key individuals have provided additional insight to the findings and reflections of the reports and evaluations.

In what follows, we set out our principle findings and recommendations

1. To diversify food distribution and consumption in the shire, with an emphasis on fresh, seasonal and where possible local produce (Economy)

- Based on the Bunyip Food Belt Land Capability Assessment and preliminary interviews, there appears to **be a considerable opportunity to get greater produce diversity and extended production seasons in the Cardinia area**. In neighbouring South Gippsland, the Grow Lightly Food Hub (Korumburra) is experimenting with growing more diverse foods. Grow Lightly has also begun a conversation with local producers about diversifying and extending crops to increase produce diversity for food hubs. It is important to tap into and support existing research and networks.

- **There is a significant economic pressure on Cardinia residents that negatively affects their eating patterns and overall health and wellbeing.** This situation is not limited to people who are unemployed and / or on fixed low incomes, as demonstrated by the growing number of ‘working poor’ who are accessing emergency food relief. Part of this pressure is due to the limited local employment and postsecondary educational opportunities in Cardinia, and the subsequent financial and temporal cost of commuting daily. This means that less time, energy and money is available for pursuing healthy eating and active living – which is a major part of the liveability challenge facing the Shire as a whole. Efforts to change eating habits in the shire must look beyond access and food literacy to get to the root of the problem.
- **Government regulatory barriers mean that farmers are not able to sell directly at the farm gate.** Current market share characteristics that favour large supermarkets do little to support the local economy, the local food system and community health. On the contrary, the continued concentration of retail market power tends to undermine broad-based local economic development, and jeopardises the integrity of local food systems and community health. On this point, the food security principles, which have been endorsed by the council, commits the council to support locally accessible healthy food production. Commitment to the Cardinia Food Circles project demonstrates Council’s commitment to these principles.

2. To support business innovation and local job creation in shire’s food system (Economy)

- **The Cardinia Western Port Green Wedge Management Plan and Bunyip Food Belt Proposal reflect a deep understanding of the significance of the ecological values of Cardinia region and the importance of preserving it for its biodiversity, agricultural, horticultural and heritage values.** Both proposals highlight potential avenues for economic development and building a strong agricultural sector. With a rural area representing 70% of the shire and a significant portion of that identified as productive land, as well as a market of more than four million people on the doorstep, opportunities abound for a thriving agricultural sector far into the future. Support must come from political policies that prioritise local food movement.
- **Former HTCS staff considered the lack of consistent program branding a lost opportunity that undermined the impact of projects.** Lessons from the SE Food Hub highlight the importance of being clear about objectives and realistic about the capacity needed to achieve them – including access to adequate funding and the necessary commercial and marketing expertise to make a business like a food hub viable. What is it you are trying to sell? - An experience, convenience, story...? There are huge opportunities to build a Cardinia Shire / Bunyip Food Belt fair food brand, given the municipality’s proximity to Melbourne and the growing popular preference for local, sustainably sourced food.

3. To build capacity amongst council staff and councillors by integrating food systems thinking across different business units and within key council plans and strategies (Politics)

- **Systems thinking is new to most people and an emerging approach to organisational planning and strategy. The HTCS evaluation report and conversations with former staff highlighted the lack of clarity and confidence in its communication as an ongoing challenge.** Applying a ‘food lens’ to Council strategies and programs will help build understanding, focus engagement and generate support for integrated action. A more in-depth understanding of the amount of work already done in systems thinking across council would be beneficial so that a definitive foundation is laid for the Cardinia Food Circles project. Change takes time, and can be greatly facilitated by senior staff support for projects.
- **Healthy eating is mentioned in a number of policies as a result of the food security principles, but this is not properly reflected in strategic design or the coordination of sectoral KPIs & mutually supportive policies.** Any community food plan will need a systems perspective that works with council stakeholders to clearly outline the relationship and role of each area of government so that they are reflected in strategic planning and action. It will take time to build a shared vision, which is something that should be allowed to evolve over time. Support for building this vision can be found in other local or global case studies that help demonstrate the possibilities in integrated and systemic approach.
- **Building the capacity of staff to increase the sustainability of projects will be enhanced with the appropriate investment of time and energy.** Equally important to the sustainability of these projects, from the project management perspective of the Cardinia Food Circles project, is a realistic appreciation for the amount of time and resources needed to build up and support certain activities over such a culturally and geographically diverse area for the long term. HTCS staff and collaborators offered clarification about why so many of the HTCS projects and networks struggled to get off the ground or sustain themselves. The message was not to underestimate the capacity (time, energy and resources) needed to sustain an active community network or the capability of network managers to facilitate a network or community initiative. They also highlighted the fact that, in more successful cases, it has been invaluable having someone assigned the by high level staff and not letting “it sit with one person!”

4. To advocate to other levels of government through research and case studies for changes in planning policy for better control around density and proximity to vulnerable communities of fast food outlets (Politics)

- **Evaluation processes and priorities in place from the outset of the project is key.** It is also important to consider how to evaluate/share the unexpected outcomes.
- **A major challenge is presented by the different levels of government and their powers in localised regional affairs.** There is a need to be strategic. One key piece of feedback is that the general public is not clear on the roles and responsibilities of different areas of government. How could they be better informed? The food security principles *Our council will respond to*

community driven demand to support opportunities for the access and exchange of healthy food, for example marketplaces, food swap locations and portable community gardens - what are the processes in place that facilitate community input/feedback to food systems change?

- **Advocacy for change and accountability greatly benefit from vision, inspiration and living examples of possibilities.** A food forum is a good opportunity to share experience and stimulate conversations and networks.

5. To build a shared understanding of the Cardinia food systems, and its challenges and opportunities amongst a diverse and representative group of stakeholders (Culture)

- **The general public and local government employees are generally sceptical of investing too heavily into new programs because of the likelihood of change or disruption to previous health programs linked government funding election cycles.** This pattern is reflected in a sense of mistrust for government programs and unwillingness to over invest, particularly in schools and other organisation that are so often targeted by community wellbeing programs.
- **Conversations with key stakeholders revealed that engagement and sustainability of future projects would be greatly enhanced if they were designed with community input in a ‘bottom up’ way.** This contrasts with the ‘top-down’ approach which was perceived to be the case with Healthy Together Victoria. HTV was designed at a state government level with relatively little consideration or awareness of the contextually nuanced drivers of critical issues in the Cardinia Shire health system. This observation was also raised numerous times in the HTCS 2012-2015 program evaluation report and was echoed in the conversations.

6. To establish a shared and widely understood definition and baseline of food literacy with shire residents and council officers (Culture)

- **Evaluation and iterative community engagement processes worked into the life of the project but especially at the outset are essential.**

7. To raise levels of food literacy across the shire, particularly amongst the youth (Culture)

- **Eating habits and healthy lifestyles are learnt.** There is little indication from the council documents reviewed that there is an understanding of the importance of healthy food culture and healthy eating. Interviewees suggested that schools were enthusiastic participants in some of the work done to date, and opportunities for further engagement with schools will be presented with the likely expansion of the SAKGF program as well as the introduction of the VCE Food Studies curriculum in 2017.

Identified Gaps

Ecology

- Given the high vulnerability of the Cardinia food system to rising fuel prices and its impact on climate change greater attention will need to be given to creating the conditions for responding appropriately to the challenges to an ecologically sustainable food system in the Cardinia Shire and to support the Council and stakeholders to prepare for and adapt to the challenges of a low-carbon future by informing the ecological content and direction of the Local Food System Strategy.
- The Aspirational energy plan has potential to be closely linked to the Cardinia Food Circles project. Food and its associated energy costs from paddock to plate are not specifically highlighted as causes of rising energy outputs in the contextual analysis. The plan though deals with energy security and identifies the link between food security and energy security, and hence contains many actions around changes to the food system. A significant contribution to the systemic change needed to achieve greenhouse gas emissions and energy reduction targets can be made if the realistic effect and mitigation of food systems energy costs (production, transport, processing, waste) are factored into Cardinia economic and development planning when it is within their power to do so.

Political Accountability

- Political change and insecurity can undermine new projects. This affects the energy and enthusiasm of staff and target participants and their willingness to engage. Under HTCS, staff did not feel secure in their positions with staff turnover a challenging and seemingly inevitable issue in all areas of work. 'Buy-in' by senior management staff can help mitigate the impact of any change including by project design and and their assignment of work to more than one person to that if one leaves the project will not stagnate. **is an** issue of political accountability for the long term future and can be mitigated by building autonomy and sustainability into projects.

Sustainability

- Sustainability and evaluation were only factored into the HTCS project. Sustainability has to be built into the strategic design. If it is bottom up--that is, owned and driven by the community in which it targeting--then it is more likely to be sustainable. This is because it is less vulnerable to political change and fickle upheaval. A clear effect of not undergoing proper community consultation in the early stages of the HTCS program was that it was very 'top down'. While it was designed to target the causes of obesity and other dietary related problems, it was designed at a state government level and with little consideration or awareness of the contextually nuanced drivers of critical issues in CS health system. This observation was raised in the 2012-2015 program evaluation report and was echoed in the conversations.

Networks

- There has and is already lot of work has been done across different sectors related to building a healthy and fair food systems in Cardinia Shire. All conversations held with key informants highlighted the importance of tapping into existing networks and community organisations (such as the township and progress committees, see Appendix 6). There are some very active people and networks who are keen to support the growth of a healthy and fair Cardinia Food System. Accordingly, the collective impact model upon which the Cardinia Food Circles project is based is well placed to support and work with and through these existing networks.

There is much to be learned from the experience and approach of the HTCS. While many of these observations and recommendations are more processed and project implementation focused, it is not the purpose of this report to define future projects. Rather it is to highlight the existing gaps and issues that currently exist and the lessons from these experiences.

9. Data Collation and food system profiles

The profiles of the four principal domains of the Cardinia Food System that are offered in this section of the report are very much **preliminary in nature**. They are based on our assessment of the data provided and the small number of interviews conducted on which this report is based. They are intended merely to serve as a starting point for the in-depth discussions and debate that need to take place amongst the knowledgeable group of local stakeholders from across the Cardinia food system, who will be invited to participate in the workshops that will form the first assessment of the sustainability and integrity of the Cardinia Food System as a whole. This in itself will be an initial assessment, serving as the Project baseline, and will be revised on an annual basis with the same or similar groups of stakeholders in order to track progress towards meeting the Project's goals and objectives.

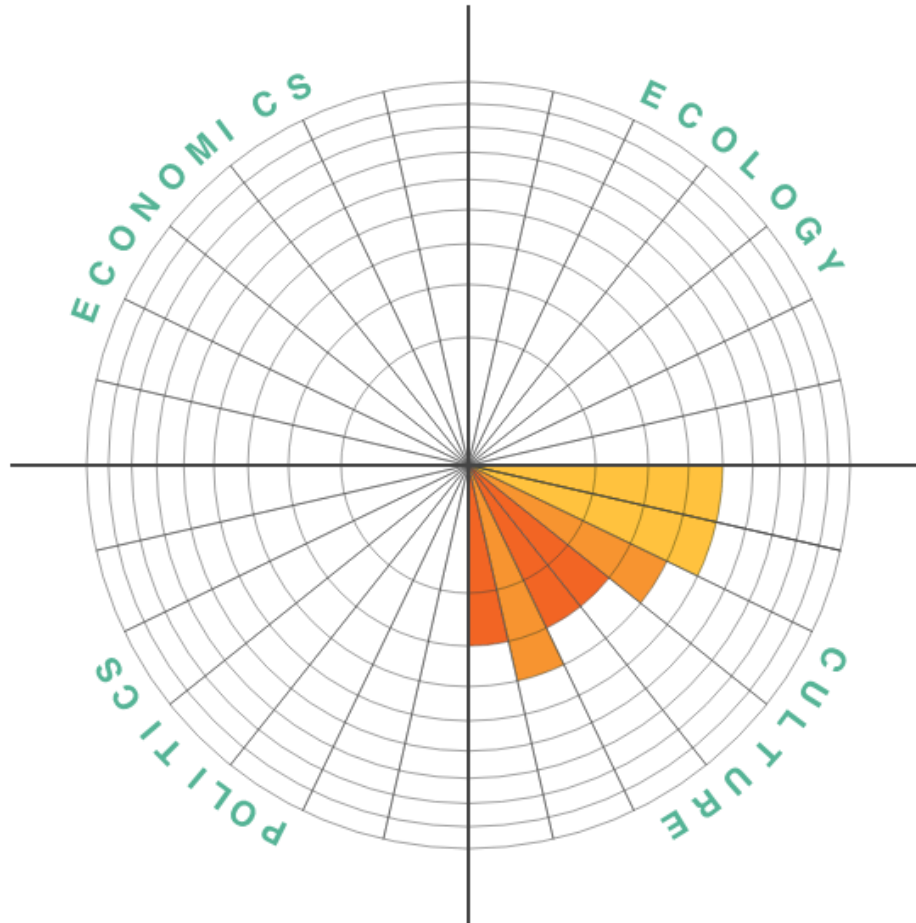
As such, we wish to stress to all readers of this report that this work is ongoing and iterative: the picture that emerges of the integrity and sustainability of the Cardinia food system will be one that unfolds over time as more connections are made, as more relationships are formed, and as project activities and related initiatives take place.

In terms of **reading and making sense of the food system profile domains** on the following pages, bear in mind that the colour-coding corresponds to the state of sustainability / vibrancy of the respective domain and the seven sub-domains that comprise it (each of the four sub-domains has seven sub-domains, which are detailed on the following pages). The colour coding corresponds to the numerical value allocated to each sub-domain, based on the assessment of the state of vibrancy and sustainability of that sub-domain, according to the knowledge and data available. The colour **red** (corresponding to the number 1) means that the sub-domain is in a critical state and requires immediate attention and intervention, while the colour **deep green** (corresponding to the number 9) indicates a state of flourishing vibrancy and sustainability. The shades of yellow, orange and green in between indicate varying levels of vibrancy and sustainability, from bad to acceptable to good and very good.

The **purpose** of these profiles is both to serve as a quick reference for readers and policy makers regarding the level of sustainability of the food system, as well as a guide to action. In particular, it highlights which issues are critical and should be prioritised for immediate action, as well as indicating where the strengths and assets of the food system lie, and can be further enhanced and developed.

9.1 Culture

Initial Food Circles Profile Mapping of Cardinia Shire Food Culture



The Scale of Assessment

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

A Definition of Culture

The cultural is defined as a social domain that emphasizes the practices, discourses, and material expressions that over time express the continuities and discontinuities of *social meaning* of a life held-in-common.

In other words, culture is 'how and why we do things around here'. The 'how' is how we practice materially, the 'why' emphasizes the meanings, the 'we' refers to the specificity of a life held-in-common, and 'around here' specifies the spatial, and also by implication the temporal particularity of

culture. The concept of ‘culture’ had its beginnings in agriculture and cultivation, with subsidiary senses of ‘honour with worship’ of *cultura*, which in the sixteenth century were linked to understanding of human growth and development. This is of course directly relevant to issues of food. Across the recent past the concept of ‘culture’ has been relegated to the soft outside of political and economic concerns. Certainly issues of power are ever-present in the cultural domain in relation to contested outcomes over social meaning, but this is to too quickly bring in questions of politics.

This has profound implications for thinking about the culture of food. It means that culture involves much more than the arts and aesthetics. The culture of food concerns us all. Each of the aspects below were developed to describe the cultural human condition in general. By addressing each and all of these aspects in relation to the culture of food, we begin to comprehend the complexity of all food systems

Domains	Perspectives or Subdomains	Possible issues to consider
	(Moving Clockwise)	
Culture	<ul style="list-style-type: none"> • Identity and Engagement • Creativity and Recreation • Memory and Projection • Belief and Meaning • Gender and Generations • Enquiry and Learning • Wellbeing and Health 	<ul style="list-style-type: none"> • Ethnicities, identities, public engagement • Celebrations, events and rituals, meals • Indigenous history, museums, monuments • Religions and spiritualities, ideologies • Gender relations, family life, generations • Education and training systems, advice, skills • Emotional and mental health and wellbeing

Table 5: Data Collation for Mapping Assessment of Issues and Gaps

Sub Domain	Issues	Data Source	Gaps	Potential Data Sources to Complete Gaps
Identity & Engagement	People in council could not see the relevance of health to their sector and were hard to engage because of limited understanding of HTCS ‘systems	HTCS Progress Report 2012-2015	Methodology that demonstrates relevance of food system challenges to all social sectors and govt bodies	

	approach' in HTCS			
	Key deliverables of HT program designed at state government level very 'top down'	HTCS Progress Report 2012-2015 (Improvements & Recommendations)	Community designed & responsive health and wellbeing program	
	Important to identify and engage key driver or champion for HTCS activities but this could take time to establish relationships and educate others	HTCS Progress Report 2012-2015	More time to develop programs	
	No mention of role and significance of food with regards to cultural diversity, social inclusion and building 'social connectedness' & access in the CS Cultural Diversity Policy or CS Access and Inclusion Plan	CS Cultural Diversity Policy and CS Access and Inclusion Plan	Deeper understanding as to the cultural significance of food	
	91% of participants under HLP Program (community responsive initiatives) stated they would apply and keep up their learnings. Under non mandated 'benchmarking' state designed 'Achievement programs' out of 22 schools, 42 ECS and 32 workplaces - 8 reached first level of recognition (minimal impact)	HTCS Progress Report 2012-2015	Limited opportunities under HTV for local communities to design and run local food initiatives	

	Growing level of cultural diversity in CS	Social Marketing Profile DOH 2012	Local food production may not be culturally appropriate for increasing migrant populations (food literacy implications)	
	Challenge to sustain SE Food Hub customer base and compete with the convenience and flexibility required to meet commercial distribution standards expected by hospitality groups	Conversation with former HTCS Health Promotion Officer who worked alongside SE Food Hub	Evaluation and adaptation of Food Hub model to meet objectives	
	Need to be clear on objectives and definitions “what is it you are trying to sell (an experience? Convenience? A story?...) How local is local?	Conversation with former SE Food Hub Manager & former HTCS Health Promotions Officers		
	Hard to engage people to travel to be a part of activities/larger network events not taking place in their community especially people who should be main target group i.e. lower socioeconomic background & time poor	Conversations with former HTCS Health Promotion Officers	Flexible timing and location options for program to maximise accessibility	
	HTCS Food Forum - First attempt was	Conversations with	Community engagement	

	targeted at farmers and eventually cancelled because of lack of registrations. (Little prior engagement and invitations advertised and sent out by letter). Another forum was eventually held and was targeted at people active in the local Cardinia food movement. Working groups emerged but not sustained.	former HTCS Staff	processes and capacity to support working group sustainability	
Creativity & Recreation	Opportunities for visitation (tourism) are low in the Cardinia Western Port Green Wedge; has scope to build a successful visitor industry based on its fresh and healthy local produce.	Cardinia Western Port Green wedge Management Plan (pp 31)	Encourage opportunities for recreation and tourism that are linked to local strengths including food, trails and education with minimal impact on the green wedge environment.	
	Currently, the townships in the green wedge are connected only by road. Connectivity and livability could be improved with a shared paths. 75% of people survey suggested they would get around more by cycling or walking if trails and paths	Cardinia Western Port Green wedge Management Plan (pp 32) Review of the 2003 Cardinia Pedestrian & Bicycle Strategy	Walking & bike paths is good for tourism but also improves the liveability of the green wedge as alternative transport and recreation options, for commuting, employment & social and education purposes.	

	were adequate	2004		
	<p>Strongest predictors (amongst others) of inadequate vegetable consumption and inadequate vigorous moderate physical activity is “a lack of time” -</p> <p>as of 2006 70% of residents left the region to work every day spending up to 300 or more hours a year in the car to get to work (negatively impacting on stress levels and health and less time for family and recreational activities)</p>	<p>Social Marketing Profile DOH 2012</p> <p>&</p> <p>Attracting Employment & Investment to the Casey-Cardinia Region Summary Paper (2011)</p>	Lack of local employment opportunities	
	(Community/ school) gardens allows for more innovation in approach (to therapy, education, community connectedness etc) and partnerships to form.	<p>Conversations with former HTCS Staff & Koo Wee Rup Regional Health;</p> <p>Hillview Aged Care Garden Case study</p>	More community/school gardens that build on positive experiences and collaborations	
Memory & Projection	The land was well watered and was managed to provide plentiful food resources and shelter for its numerous inhabitants for over	Cardinia Western Port Green wedge Management Plan (pp 14 & 19) & Cardinia Shire Reconciliation Action Plan 2014 -	Active recognition of the original custodians of the land and their customs relating to food and land management? Reconciliation	

	40 millennia before white settlement but now needs to recognise the impact of intensive farming on the region	2019	Action Plan does not identify learning from Aboriginal people, culture, foods and land management practices as an opportunity - despite this activity supporting the outcomes of other action plan opportunities no - 12 to 18.	
	Public support for promoting greater knowledge of Aboriginal Heritage and more effort to celebrate KooweeRup swamp and its settlements	Cardinia Western Port Green wedge Management Plan (pp24)	Undertaking a Cultural Landscape Assessment of the former Koo Wee Rup and Dalmore swamps in order to identify landscape features and sites of both historical and Aboriginal significance.	
Beliefs & Ideas	No reference to food role and significance with regards to cultural diversity, social inclusion and building 'social connectedness' & mitigating food illiteracy due to limited culturally appropriate food choices access in the CS Cultural Diversity Policy or CS Access and Inclusion Plan	CS Cultural Diversity Policy and CS Access and Inclusion Plan	Systems approach. Both reports have guiding principles that would be enhanced if the role of food in the environment, economy, community & people was recognised	
	Common belief amongst CS residents that fresh food is too	Social Marketing Profile 2012, Oral Health Program 2014,	'Healthy Food Basket' is only available at 2 sites outside UGB. Need	

	expensive to buy		for greater understanding of health & economic costs of 'cheap' foods and the effects of rising fuels prices in areas where there are limited/no public transport available	
	Consumer behaviour i.e. people are used to going to supermarkets to buy what they want when they want it	South East Food Hub - Jodie Clarke Interview 7/12/16		
Gender & Generations	More time is needed to communicate and realise the full potential of systems approach to bring about lasting change	HTCS Progress Report 2012-2015		
	<p>Parents perception to barriers to change in children's oral health:</p> <p>Participants Feedback -</p> <p>H: It is difficult to get the kids to eat well when their friends and others are making poor food choices around them</p> <p>I: Foods that are good for our teeth cost too much</p> <p>J: The kids can access poor food</p>	Oral Health Program Evaluation Report 2013-2014 (pp21)	Time and food culture must be broadly addressed - 'children can learn dietary behaviours from observation and imitation of family and friends and other social cues around them (Bandura, 2001).'	

	<p>choices at school</p> <p>K: We/I run out of time to cook or prepare healthy food</p> <p>L: We/I use foods that are bad for oral health as treats or rewards in our household</p>			
	Succession Planning for farmers and decrease in agricultural activities	Cardinia Western Port Green Wedge Management plan & ABS	Incentives and support for new/next generation farmers to learn and feasibly access land	
Enquiry & Learning	Lack of sustainability of HTCS programs once funding disappeared. Stakeholder engagement to 'ensure sustainability' only took place after project designed by government.	HTCS Progress Report 2012-2015	Lack of community 'buy in' in identifying and driving health objectives and deliverables.	
	HTCS evaluation limited to reflections of program staff & their challenges. Stakeholder survey had 12% response rate.	HTCS Progress Report 2012-2015	Lack of broader community perspective on the challenges, lessons and impact of HTCS	
		HTCS Case studies, Conversation with HTCS steering committee member	Horizontal learning opportunities from positive experiences (canteens, community gardens	

			HTCS case studies)	
	Need to acknowledge the capacity (time resources and personnel capability of coordinators) needed to sustain community networks (gardening, cooking etc)			
	HTCS Evaluation Process had limited number of respondents. Methods set by HTV with no consistent data collection approach set until 2015	HTCS Progress Report 2012-2015	No pre-determined evaluation methods at start of HTCS Program. As such limited data on the success/challenges of different HTCS programs and outcomes	
	Schools are under a lot of pressure to incorporate external programs and their agendas into an already busy and demanding schedule	Conversations with former HTCS Health Promotion Officers		
	Some local food hub models are economically viable while others are not	Conversation with former SE Food Hub Manager and former HTCS Health Promotion Officers	Research and shared learning from food hubs in Cardinia and neighbouring regions (and Australia)	
	More successful engagement at schools and in council when senior staff acknowledge	HTCS Progress Report 2012 -15, Conversation with former HTCS health promotions officer	Lasting community 'food/health' networks	

	the benefits of program and allocate staff and time to undertake work. Timing of meetings is critical but challenging ('after school work better')			
Wellbeing & Health	53% of Cardinia Shire adult population is overweight or obese	HTCS Progress Report 2012-2015	Deeper understanding of Food Insecurity influencing factors beyond food access and food literacy	
	Causes of dietary related poor health increasing access to fresh food and healthy eating (food literacy).	HTCS Progress Report 2012-2015	Key deliverables, settings and program structure & set at state level (i.e. top-down) health objectives/deliverables rather than responding to community led initiative & needs through an holistic systems approach	
	Tooth decay were identified as the top non-communicable disease in Cardinia Shire (Department of Health 2001)...but research proves it can be prevented - in part - through healthy eating (Royal Australasian College of Physicians 2012).	Oral Health Program Evaluation Report 2013-2014		
	Discretionary eating accounts for up to 41 per cent of daily diet among 14-18	Oral Health Program Evaluation Report 2013-2014		

	<p>year olds.....17.5 per cent of Cardinia Shire residents consume soft drink on a daily basis, in comparison to 12.4 per cent of people in Victoria (Community Indicators Survey Victoria, 2011).</p>			
	<p>8 out of every 10 Cardinia Residents fit into the social marketing classification of Victorians of distinct types related to overweight, obesity and chronic disease risk with proportion of males consuming fast food at least weekly was approximately 12% higher than for females.</p>	<p>Cardinia Preliminary Social Marketing Profile</p>		
	<p>Time, energy and financial constraints listed as main barriers to healthy eating</p>	<p>Cardinia Preliminary Social Marketing Profile</p>	<p>No link is made in the constraints of inadequate vegetable consumption to the disproportionate number of junk food outlets to fresh food outlets in Cardinia Shire, or the costs (time, \$, energy and mental stress)of having to commute long distances out of the region to work every day</p>	

9.2 Ecology

Initial Food Circles Profile Mapping for Cardinia Shire Food Ecology



The Scale of Assessment

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

A Definition of Ecology

The ecological is defined as the practices, discourses, and material expressions that occur across the intersection between the social and the natural realms, focussing in this case on the important dimension of human engagement with and within nature, ranging from the built-environment to the 'wilderness'.

In other words, the ecological domain is treated as narrower than the natural realm. While the ecological, from the Greek concept of *oikos*, is grounded in the natural and includes a spectrum of

environmental conditions from the the profoundly modified, through the relatively untransformed, the natural realm includes all of that, and much more. It includes nature beyond the reach of the Anthropocene: the infinitely big and infinitesimally small. The distinction between the social realm and the natural realm, with the natural as a ‘context’ for human action, is common in traditional (cosmological) and modern (scientific) understandings, but we are adding a further dimension.

Our definition recognizes these understandings without being confined to them. It lays ‘the ecological’ across both terms — that is, across ‘the natural’ and ‘the social’ — as naming the connections of human and non-human engagement with and within nature, ranging from objects and bodies to zones of engagement. This means that the ecological domain pertains to questions of social-environmental interconnection, including the unintended consequences of humans living on the planet. The ecological is thus not treated as a background context for human action but rather a place of being human and non-human.

This has profound consequences for thinking about the ecology of food. It takes seriously the meaning of the aphorism ‘we are what we eat’. Each of the aspects below were developed to describe the ecological human condition in general. By addressing each and all of these aspects in relation to the ecology of food, we begin to comprehend the complexity of all food systems.

Domains	Subdomains	Possible issues to consider
	(Moving Clockwise)	
Ecology	<ul style="list-style-type: none"> • Materials and Energy • Water and Air • Flora and Fauna • Habitat and Settlements • Built-form and Transport • Embodiment and Sustenance • Emission and Waste 	<ul style="list-style-type: none"> • Sources of energy, fertilizer, soil • Air quality, climate change, water adequacy • Edible plants and gardens, animal welfare • Habitat destruction, land-use • Food outlets, cooking/storage • Physical human health, nutrition • Pollution, recycling, and waste disposal

Table 6: Data Collation for Mapping Assessment of Issues and Gaps in the domain of Culture

Sub Domain	Issues	Data Source	Gaps	Potential Data Sources to Complete Gaps
Materials & Energy	<p>Everyday life in CS is very dependent on fossil fuels</p> <ul style="list-style-type: none"> - fuel used to transport our food and products • fertilisers, herbicides and pesticides used to produce our food • plastic used to wrap and store food and other items • fuel used to power our cars and farm machinery 	Aspirational Energy Transition 2014-2014	Government mechanisms incentives and regulation to support for farmers and food business transition to less energy dependent practices, or utilise less carbon intensive forms of energy.	
	<p>Vulnerability Assessment for Mortgage, Petrol and Inflation Risks and Expenditure (VAMPIRE) developed by Griffith University 2006 set Cardinia Shire between moderate and Very High Risk of being affected by rising fuels prices</p>	Aspirational Energy Transition 2014-2014	Failure to consider reduction in energy use and consumption rather than just transition to more renewable energy	
		Aspirational Energy Transition 2014-2024 (Quote pp11 Felheim (Germany) uses biogas plant that uses cattle and	Is there a role for the transformation of household food, ag and livestock waste to play in the aspirational energy	

		pig slurry as well as maize silage”.	transition plan?	
	Council’s emissions reduction target under the Greenhouse Reduction Strategy (20% by 2010 on 1996 levels) was not met because se of rapid population growth in the Shire and the provision of services to a growing community.	Aspirational Energy Transition 2014-2024 (pp14)	Potential for soil regeneration and carbon sequestration via sustainable agriculture	
	Soil is a finite natural resource and therefore requires sustainable management. The soils in Cardinia Green Wedge area are recognised for their productivity and capability for extractive industry, intensive agriculture, as well as for their role in maintaining and supporting biodiversity.	Cardinia Western Port Green wedge Management Plan - (pp35)	It is acknowledged that this assessment work referenced is now more than 20 years old and a review of the soil types and the extent of the Special Use Zone - Horticultural Preservation (SUZ1) are required.	
	There are gaps in the availability of data needed to evaluate potential loss of high quality land in Cardinia	Land Capability Assessment 2013	Up to date research on Cardinia land capability and funding to undertake it	
	The Cardinia Western Port Green Wedge is a highly productive agricultural area and plays a vital role	Cardinia Western Port Green wedge Management Plan (pp43)	Given this long-term strategic value to Melbourne and to agriculture, the area should be recognised as an	

	in providing food for Victoria's population and food security. Concerns about loss of productive land due to urban expansion, climate change, mining and coal seam gas extraction	& Land Capability Assessment 2013	area of strategic farming importance for Melbourne and every effort should be made to protect it as such.	
Water & Air	Access to and the quality of water supply is a critical issue for biodiversity & agriculture but the Regional River Health Strategy 2007 has classified the quality of all four water catchments in the Cardinia Western Port Green Wedge as poor. Targets are set in that strategy are modest and include a target of 'poor' for one sub-catchment (Dalmore Outfalls).	Cardinia Western Port Green wedge Management Plan (pp40)	Need to prioritise waterway health in this system including managing urban growth, and balancing multiple waterway management objectives such as flood mitigation, habitat protection and/or social uses.	Rural Land Program & Westernport Catchment Landcare Network (WPCLN) & Integrated Water Management Plan 2015–25 (September 2015) Bunyip Food Belt 2010 (Section 3.2.7 River Health)
	27.2% of persons living in Cardinia were in households that collect wastewater, compared to 38.7% in the Southern Metro Region and the Victorian State average of 41.3%.	2011 Vic Health Community Indicators Survey - http://www.communityindicators.net.au/wellbeing_reports/cardinia	Water harvesting to be mandated in all new housing developments	
	Flooding in the Cardinia Western Port Green Wedge continues to be an issue that needs to	Cardinia Western Port Green wedge Management Plan (pp41)		

	be appropriately managed.			
	Council's operational emissions reduction target for 2010 under Greenhouse Reduction Strategy was not met with emissions rising 56% (76% above the target or 20% reduction target). This occurred due to rapid population growth in Shire and provision of services.	Aspirational Energy Transition 2014-2024 (pp14)	No analysis of food system impact/ benefits on waste and energy reduction and resilience building despite most actions re. Peak oil of the AET 2014 - 2024 focuses on the relocalisation of the food system with action plans and financial strategy directly targeted to food and agriculture ⁴⁶	Aspirational Energy Targets 2014 - 2024
	Climate change incidents causing increased food insecurity through extreme weather conditions causing crop damage, economic stress on farming communities, increase in food	Healthy Food Connect Report 2013		

⁴⁶ Aspirational Energy Transition Plan 2014-2024 (pp49) – Table 16, Peak Oil recommendations:

- Continue to encourage community waste reduction through composting and worm farms, reducing rubbish collection requirements (Ongoing work in Environment and Engineering Dept)
- Encourage local food production through community education and establishing and supporting community gardens. (Ongoing work in Health Promotion Dept)
- Locating high density housing and local food retailers close to rail stations through the planning process (Ongoing Strategic Planning Dept).
- Explore the opportunity of supporting a waste digestion facility regionally to produce energy from municipal waste (Ongoing Environment and Engineering Dept).
- Supporting local suppliers to provide economically accessible locally produced food (Ongoing Economic Development)
- Supporting local agriculture to provide food for the Shire and region. The Bunyip food belt project, which aims to increase the intensity of farming in the Bunyip, Koo Wee Rup and Lang Lang region, is a key part of this initiative (Ongoing Strategic Planning Dept)
- Establish a local food security coalition of food producers, distributors and consumers to strengthen food security (From 2014–15 Health Promotion Recommendations)

	prices and increased reliance on imported goods			
	Pressure on food production from Climate change and growing demand for water from households and agriculture	Cardinia Western Port Green wedge Management Plan (pp14), Bunyip Food Belt 2010	Additional agricultural production due to access to Class A Recycled water available from Eastern Treatment Plant	FoodPrint Melbourne 2016, Bunyip Food Belt 2010
	Currently, just over half of the shire's stormwater comes from agricultural areas. Agricultural land use is also the most significant contributor to pollutant loads to receiving waters.	Integrated Water Management Plan 2015 (pp38)	Stormwater action plan (pp42) does not list engagement with farmers to mitigate runoff and pollution	
	Projected climate warming of .2C - 1.4C by 2030 and .7C - 4.3C by 2070 for Western Port	Bunyip Food Belt 2010		
Flora & Fauna	Health of Cardinia Green Wedge depends heavily on healthy ecosystem so that all urban growth agricultural and extractive industries must implement mitigation strategies to minimise negative impact on biodiversity values of the area	Cardinia Western Port Green wedge Management Plan (pp56)	Map biodiversity assets of the region	
	Environmental management in	Bunyip Food Belt Final Report 2010	Incentives and support for farmers	

	agriculture is encouraged but generally not enforced	(pp2)	to promote improved environmental management of the region	
	Erosion caused by agriculture has led to an increase in sediment and nutrient runoff into Western Port Bay affecting water quality and causing sea grass loss and declining fish stocks	Bunyip Food Belt 2010 (pp 22)	Prioritisation of revegetation and nutrient management in the area	
Habitat & Settlements		Aspirational Energy Transition 2014-2014 (pp14)	Does the Sustainable Design Assessment in the Planning Process (SDAPP) that CS is planning to adopt incorporate the benefits of leaving space for growing food?	
	Soils in the CS are rich and productive resource but as Melbourne's population continues to grow, the inevitable urban development pressures on the Western Port Green Wedge will continue.	Cardinia Western Port Green wedge Management Plan (pp20)	Need for permanent urban growth boundary and higher density ingrowth development planning	
	Pressure from urbanisation and reduced rainfall reliability as well as the demand from the economy for more intensified farming practises	Cardinia Western Port Green wedge Management Plan (pp43)	Support for farmers to maintain production using sustainable farming practices	

	<p>and the ability for farmers to</p> <p>generate a higher scale of production and efficiency</p>			
	<p>Very limited local food production in urban areas</p>	<p>CS Healthy Design</p>	<p>Food Growing (i.e. backyard, community gardens, food forests, fruit trees) is not incorporated into the CS Healthy Design plan despite research that proves its benefits to enhancing liveability, health, community strengthening</p>	
	<p>Strategic priorities for housing amenity include...</p> <p>“maximise health and wellbeing outcomes for residents”</p> <p>“...provide flexibility for future changes in use, lifestyle and demography”</p> <p>“ensure that peak oil and food security issues are considered when planning”</p> <p>“encourage the provision of land for community gardens in new residential developments”</p>	<p>Housing Strategy Strategic Action Plan 2013 -2018 (pp24)</p>	<p>Space for food production at a household (design) level in strategic action plan - good opportunity to support strategic actions</p>	

Built Form & Transport	Lack of infrastructure investment in essential utility transport links industrial and smaller towns. Reduced competitiveness and increased costs of basic food and services	Parliamentary inquiry into Local Economic Development 2012	Limited fresh food outlets or purchasing points in more rural and remote communities	
	Lack of local fresh food retailers & public transport in more remote (food deserts) regions of the shire means over dependence on cars There are no bus routes connecting residents in Port Ward with major food centres and limited routes in the Ranges Ward	Healthy Food Connect Report 2013	Local Fresh Food retailers/options are only available in 2 location outside the UGB with 50% ⁴⁷ of the population having to travel 30 minutes or more to access food. 4C's advise that petrol costs are an issue for some families they support	
	National Growth Alliance (2010) found that Cardinia Shire residents face transport issues with lack of footpaths, walkways and public transport connections 75% of people survey suggested	Healthy Food Connect Report 2013 (pp9)	Many CS built environments are not conducive to cycling, walking i.e. active lifestyles with 30.4% of people in Cardinia not meeting physical activity guidelines	Cardinia Shire Council Healthy By Design - 2015

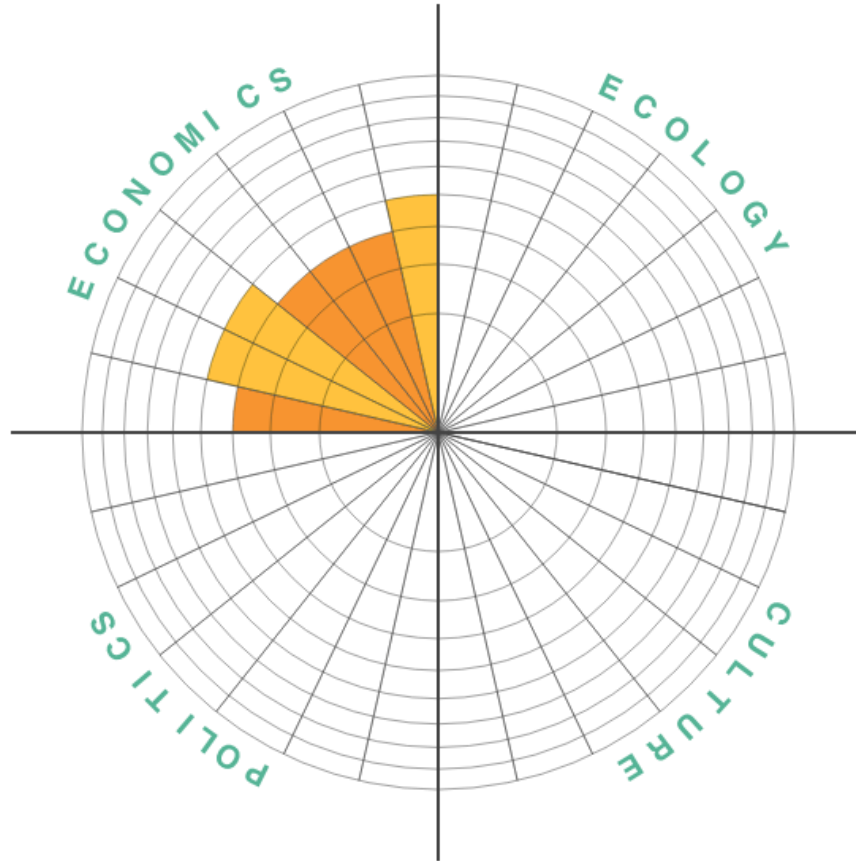
⁴⁷ Healthy Food Basket Report 2013 (pp8) Participants' responses from the South Coast Food Access Survey conducted by Koo Wee Rup Regional Health Service demonstrated this. Travel times to access food ranged from 1-10 mins (20.59%), 11-20 minutes (35.29%), 21-30 minutes (29.41%), 31-40 minutes (11.76%) to more than 40 minutes (2.94%).

	they would get around more by cycling or walking if trails and paths were adequate	Review of the 2003 Cardinia Pedestrian & Bicycle Strategy 2004		
	High level of car dependency in CS with an average of 2.1 motor vehicles per household - this is good for food access bad for environment, health and finances	Healthy Food Connect Report 2013		
	Proliferation of fast food outlets in built areas	Healthy Food Connect Report 2013	State government regulation to control this issue (local government advocate for change)	
Embodiment Sustenance	High levels of obesity and dietary related ill health levels in part caused by the lack of fresh food outlets (food deserts) across the shire & low levels of food literacy	HTCS Progress Report 2012-2015		
	Only 3.4% of Cardinia residents meet both fruit and veg daily intake requirements	HTCS Progress Report 2012-2015		
Emission & Waste	32% of waste in the garbage bin in Cardinia was food waste - major cause	Stats provided by Pieta Bucello 1/12/16) and taken from 'recent bin	Limited data in this space but opportunity to capture and utilise	

	of methane gas production	audit'	this valuable resource in agriculture or local food production	
			Do local farmers work to close the on farm nutrient cycle? How could they be supported to do this?	
	39% of household waste collected in kerbside collections was recycled in 2010/11, compared to Vic state average of 45%	2011 Vic Health Community Indicators Survey - http://www.communityindicators.net.au/wellbeing_reports/cardinia		
	Green Waste kerbside collection and bundled green waste only collected at additional cost	Waste & Recycling. Cardinia Shire Council Website - http://www.cardinia.vic.gov.au/Page/Page.aspx?Page_Id=14	Incentives to encourage household food and green waste recycling so as to capture this resource	

9.3 Economics

Initial Food Circles Profile Mapping of Cardinia Shire Food Economics



The Scale of Assessment

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

A Definition of Economics

The economic is defined as a social domain that emphasizes the practices, discourses, and material expressions associated with the production, use, and management of resources.

Here the concept of ‘resources’ is used in the broadest sense of that word, including in settings where resources were/are not instrumentalized or reduced to a means to other ends, including accruing exchange value. Although the domain of economics was only abstracted as a named area of social life and self-consciously practiced as a separate domain in the modern period, this definition allows the

concept to be used across different places and times. Questions of power are ever-present in the economic domain in relation to contested outcomes over the use of resources. This brings questions of [politics](#) into contention. And as soon as we ask questions about the meaning of economic practices, discourses, and material expressions we have brought questions of [culture](#) into contention.

This has profound consequences for thinking about the economics of food. It means that economics is much more than production, and food is only reduced to a commodity at certain times within certain economic systems. Each of the aspects below were developed to describe the economic human condition in general. By addressing each and all of these aspects in relation to the economics of food, we begin to comprehend the complexity of all food systems.

Domains	Perspectives (or Subdomains)	Possible issues to consider
	(Moving Anti-Clockwise in profile graphic)	
Economics	<ul style="list-style-type: none"> • Production and Resourcing • Exchange and Transfer • Accounting and Regulation • Consumption and Use • Labour and Welfare • Technology and Infrastructure • Wealth and Distribution 	<ul style="list-style-type: none"> • Availability, supply, portion-size • Trade in food; subsidies, taxes • Food standards and labels, regulatory policy • Food consumption patterns, use of goods • Labour markets, economic provision • High-tech to low-level technologies • Poverty, inequality

Table 7: Data Collation for Mapping Assessment of Issues and Gaps in the domain of Economics

Sub Domain	Issues	Data Source	Gaps	Potential Data Sources to Complete Gaps
Production & Resourcing	Public consultation highlighted a need to support farmers to improve local land management and environmental practices such as soil protection, water recycling and	Cardinia Western Port Green wedge Management Plan (pp44)	Agribusiness extension services that support farmers transition to more ecological and regenerative production methods	

	revegetation.			
	Challenge of managing succession planning for farmers and flexibility to subdivide or to undertake complementary activities such as farm gate sales or food tourism	Cardinia Western Port Green wedge Management Plan (pp23)		
			Data on Local food value adding/ processing industry	
	Limited crop diversity impacted on South East Food Hub ability to meet customer needs	Conversations with Former HTCS officers & SE Food Hub Manager		
	Land in CS is suitable to a greater diversification of crops that do not require large economies of scale due to relatively high gross unit and farmgate value	Bunyip Food Belt 2010	Farmgate sales	
Exchange & Transfer	The cost of purchasing a 'Healthy Food Basket' is higher than the Victorian average despite being a major food producing area for Melbourne.	Cardinia Food Security Principles 2015	Why is local food not more available or accessible?	
	The 'traffic light system' in CS Healthy Food &	Healthy food and beverage (Catering) policy 2012–17	Procurement policies have been hugely successful in	

	Beverage policy does not include a 'local food' colour (category)		leading food systems changes enhance local food economy and minimising climate footprint	
	South East Food Hub markup on produce of 25% in contrast to the standard markup of up to 80% made business sustainability challenging	Conversation with former SE Food Hub Manager	Business opportunities that offer better returns to farmers	
Accounting & Regulation	Local businesses unclear of planning and decisionmaking processes. Extended delays in processing (red tape) and state government involvement over riding local govt priorities	Healthy Together Cardinia Shire. Progress Report 2012 -15		
	Need for clear zoning based on land capability, soil and commodity status	Cardinia Western Port Green Wedge Management Plan (pp23)		
	Marketshare characteristics such as exclusion criteria are shaping the development of new retail spaces with agreements between developers and major food retailers limiting the quantity and type of food retailers that	Healthy Food Connect Research Report 2013	Government regulation that monitors economic regulatory systems so as to remove barriers to the growth of local food systems and economy	

	occupy the same space. In Pakenham and Lakeside Square retail Woolworths and Bakers Delight are the only essential food providers			
Consumption & Use	Most rural townships in CS lack availability of essential foods and a complete "Healthy food Basket"	'Getting food in Cardinia Shire' HFC Research Summary		
	Only 8.7 of adults and 37.3% children in CS eat enough fruit and vegetables	'Getting food in Cardinia Shire' HFC Research Summary		
	People are becoming more reliant on food relief services with many households not being able to afford a healthy and nutritious diet	'Getting food in Cardinia Shire' HFC Research Summary		
	About 50.4% of the Cardinia adult population is overweight or obese because they consume too much junk food	Cardinia Food Security Principles 2015	Local Government has limited impact on resident access to takeaway outlets	
	Healthy eating is the second most important health need in Cardinia shire but residents believe vegetables are too expensive to buy regularly	Cardinia Food Security Principles 2015 (Consultation results)	Affordable local food options	

	Cost and access barriers to healthy food is key ongoing challenge for cafe owners to grapple with - Need to support food retailers to find ways to access cost effective healthy food	Healthy Bites Evaluation Report 2015 - Recommendations for Future Expansion	Local food network (with branding) that connects local producers with local retailers so as to feeding to Healthy Bites type model with added 'local & healthy' sticker	
	70% of people surveyed said they would like to see more healthy options when they eat out and 82% said they would be more likely dine/buy from a business that offered healthy food	Healthy Bites Evaluation Report 2015	Lack of healthy food take away/ dining options	
	School management very reluctant to approach canteen managers to make healthy food options despite positive feedback and experiences when changes made	Interviews with port HTCS staff and Charlotte's on Main Case Study	Opportunities for horizontal learning and sharing of positive experiences - trouble shooting challenges (Healthy Canteen Network?)	
	Average 6:1 ratio of unhealthy to healthy food retailers in CS	Healthy Food Connect Report 2013	Insufficient quantities of healthy food available to meet daily needs	
Labour & Welfare	Risk of Economy becoming focused on population driven industries with 70% of CS residents leaving the region for work every day because	Parliamentary inquiry into Local Economic Development 2012	Lack of sustainable local employment options	

	of lack of local employment opportunities.			
	Cardinia Agricultural employment sector has declined 26.2% from 2006 - 2011 while accommodation and food services has increased by 10.36%	Environmental Scan 2015 (South East Local Learning and Employment Network) pp166	Connections between food service businesses and local food producers (what are they buying/need - what can be grown?)	
Technology & Infrastructure	Lack of infrastructure investment in essential utility transport links industrial and smaller towns. Reduced competitiveness and increased costs of basic food and services	Parliamentary inquiry into Local Economic Development 2012		
	Integrated Sustainable Transport Strategy for Cardinia Shire targets not developed	Aspiration Energy Transition 2014-2024 (pp 15)	Not prioritised or funded despite sustainable transport infrastructure role in building sustainable, resilient and healthy communities especially in places like Cardinia where more than 70% of the population commutes significant distances daily & economic development implications	
	Need for greater support for producers of including incentives	Cardinia Western Port Green Wedge Management Plan	Sustainable agriculture extension officers and training needed	

	for farmers to stay on the land and to improve access to information on regenerative farming practices	(pp68)	to support farmers implement more ecological farming methods and generating additional incomes through innovative programs	
	Important to maintaining infrastructure for agriculture is a critical mass of growers to support ag industries. The number of growers is in decline	Bunyip Food Belt 2010 (pp10)		
Wealth & Distribution	Cardinia Combined Churches Caring (4C's) are increasingly providing food relief to families with working parents	Cardinia Food Security Principles 2015	Local employment options	
	The prevalence of diet related illness is concentrated in low income communities where Fresh food outlets to non-essential food outlets is 6:1	Healthy Food Connect Research Report 2013	More support and encouragement for healthy food retailers in developing retail space	
	Online digital Exclusion. Senior members of the CS are less likely/able to engage with online services and support. Ie. could not order food through SE Food Hub because only possible online	Conversations with former HTCS Health Promotions officers	Local food retailers and face to face support options	

	<p>Cardinia Shire resident an average family can expect to pay 33.27% on purchasing a Healthy Food Basket - Food Costs exceeding 30% total income are considered unaffordable</p>	<p>Healthy Food Connect Research Report 2013</p>	<p>More households/communities growing food and more locally accessible and affordable fresh food retailers</p>	
	<p>Small towns vulnerable to losing key public and private facilities (i.e. banks) and infrastructure</p>	<p>Parliamentary inquiry into Local Economic Development 2012</p>		
	<p>Trends indicate that the price paid for lifestyle properties is higher than its productive agricultural value restricting ability for commercial farmers to grow in the area.</p>	<p>Bunyip Food Belt 2010</p>	<p>To remain profitable in the future agricultural business will require access to affordable land</p>	
		<p>Conversation with former HTCS Health Promotions officer in school program.</p>	<p>No data on how many schools need or provide breakfast programs for kids or how many children are going to school without breakfast or lunch</p>	

9.4. Politics

Initial Food Circles Profile Mapping of Cardinia Shire Food Politics



Table 4. The Scale of Assessment

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

A Definition of Politics

The political is defined as a social domain that emphasizes practices and meanings associated with basic issues of social power as they pertain to the organization, authorization, legitimation and regulation of a social life held-in-common.

The parameters of this area thus extend beyond the conventional sense of politics to include social relations in general. They cross the public/private divide, itself in formal terms a modern construct. The

key related concept here is a ‘social life held-in-common’. While it is true that not everything that is done in the private or public realm is political just because it may have possible consequences for issues of the organization, authorization, legitimation and regulation of a social life held-in-common, where questions of power are directly involved in a pattern of practices or set of meanings this is political.

This has profound consequences for thinking about the politics of food. It means that politics involves much more than the activities of governments, and the politics of food concerns us all. Each of the aspects below were developed to describe the political human condition in general. By addressing each and all of these aspects in relation to the politics of food, we begin to comprehend the complexity of all food systems.

Domains	Perspectives or Subdomains <small>(Moving Anti-clockwise in profile graphic)</small>	Possible issues to consider in each sub-domain
Politics	<ul style="list-style-type: none"> • Organization and Governance • Law and Justice • Communication and Critique • Representation and Negotiation • Security and Accord • Dialogue and Reconciliation • Ethics and Accountability 	<ul style="list-style-type: none"> • Legitimacy, current system of governance • Legal system; political order, the right to food • The press, media, news, dissent, advertising • Participation by citizens in food politics • Political tensions, food security • Customary rights, reconciling with nature • Corruption issues, public ethics, fair food

Table 8: Data Collation for Mapping Assessment of Issues and Gaps in the domain of Politics

Sub Domain	Issues	Data Source	Gaps	Potential Data Sources to Complete Gaps
Organization & Governance	There is a lot of confusion on the roles and responsibilities or state and municipal governments	Conversation with Former HTCS Food Systems Team Health Promotion Officer		

	More work and engagement is needed with all council sectors (especially high level) to build capacity and understanding in systems approach to building health and food security in CS	HTCS Progress Report 2012-2015	Prioritisation of Food Security across all sectors	Cardinia Shire Food Security Principles 2015
	Hard to get engagement because of lack of trust in political system and government programs after 'Go for your life' program. Schools are burnt by the political game that sees a lot of 'new' programs that only last until the funding is cut with new governments.	Conversation with former HTCS Schools program Officer		
	The 'traffic light system' in CS Healthy Food Identification (program & policy guidance) does not include a 'local food' colour (category)	Healthy Bites Evaluation & Healthy food and beverage (Catering) policy 2012-17	Procurement policies have been hugely successful in leading food systems changes enhance local food economy and minimising climate footprint	
Law & Justice	Many CS rural townships lack fresh food outlets and public transport options to be able to travel to purchase food but junk food is readily	<i>Getting Food In Cardinia Shire - Fact Sheet</i>	The right to adequate food is not being upheld in all local CS areas	

	available.			
Communication & Critique	Widespread opposition to further expansion into and subdivision in the green wedge	Cardinia Western Port Green Wedge Management Plan (pp24 Key finding in public consultation)	Are local communities concerns and needs well represented/recognised at state level? Is infill and higher density living being considered in peri urban developments?	
	Local Government has limited powers on issues that threaten local food security & health i.e. the positioning and number of fast food outlets and the urban growth boundary eating into farmlands	Cardinia Food Security Principles & Cardinia Western Port Green Wedge Management Plan		
Representation & Negotiation	The HTC School and Workplace Achievement Program had limited impact/ involvement. Up to 10 priority areas and close to 100 sites - staff struggled to provide program support	HTCS Progress Report 2012-2015		
	Difficult to engage with workplaces due to (initially) incomplete data on workplaces & businesses within the shire	HTCS Progress Report 2012-2015	Limited civil engagement and representation in political processes	
	Key deliverables of HT program	HTCS Progress Report 2012-2015	Community representation and	

	designed at state government level very 'top down'	(Improvements & Recommendations)	input into health program design	
	In response to questions about "Barriers to healthy lifestyle" - Ranges Ward residents were more likely than Port Ward residents to cite time constraints, while Port Ward residents were more likely to state financial constraints	Cardinia Shire Council - Social Health Check Research (Results of a March-April 2016 telephone survey)	Need for tailored responses to food insecurity issues that respond to local issues and needs	
Security & Accord	Need to recognise, understand and prepare for the projected impacts of climate changes and rising sea levels on food production capacity in Cardinia Westernport Green Wedge	Cardinia Western Port Green wedge Management Plan (pp 48)		
	CS Resident are very vulnerable to rising fuel prices. National and State governments are inactive regarding 'peak oil' planning and strategy	Aspirational Energy Transition 2014-2014	Local government advocacy and innovation to lead action	
	Working poor (people with regular income) are increasingly accessing food relief services	Healthy Food Connect Research Report 2013, Conversations with former HTCS Health Promotions Officer		
Dialogue & Reconciliation	There is a largely undefined Aboriginal	Cardinia Shire Reconciliation Action Plan 2014 -		

	population in CS and more work is needed to better understand the history, demographics and needs of local populations	2024		
Ethics & Accountability	HTCS partners (i.e. schools) were/are skeptical about longevity of new programs due to past experience with government funded programs that were cut or changed with each election and this undermined engagement outcomes and hence impact	HTCS Progress Report 2012-2015 (Engagement Challenges)	Accountability of government to program participants to provide ongoing support or planning for sustainability of programs	

Appendix 1: Extract from Healthy Together Cardinia Shire Evaluation Report 2012-2015

Executive Summary

The purpose of this report is to present the evaluation findings of the Healthy Together Cardinia Shire (HTCS) initiative, a part of the Healthy Together Victoria (HTV) initiative funded by the Department of Health and Human Services (DHHS). The report presents the evaluation findings after implementing the initiative from 2012-2015. The findings are reported as at 31 October 2015 to align the reporting timelines with the Municipal Public Health and Wellbeing Plan.

HTCS aims to improve people's health and wellbeing where they live, learn, work and play. HTCS focuses on addressing the underlying causes of poor health in settings such as schools, early childhood services (ECS), workplaces and the wider community by encouraging healthy eating (increasing fruit and vegetable consumption) and physical activity, and reducing tobacco smoking and harmful alcohol intake. It should be noted that prior to the HTCS initiative Council had a health promotion team that were conducting some programs with the community and in schools. The HTCS initiative leveraged off these existing relationships to implement a new approach to health promotion, systems thinking. This approach recognises that obesity is a complex issue with many causes including biology and behaviour but is also influenced by cultural, environmental and social factors. Systems theory articulates a number of building blocks are required to support the approach including leadership, partnerships, information systems, financing and workforce.

A variety of sources of information were used to inform the evaluation including reach table, staff interviews, stakeholder survey, document review, reflective practice logs and case studies. The evaluation was guided by the HTV evaluation framework and sought to address the following questions:

- To what extent have sites been successful in achieving their intended system impacts?
- What have been the key learnings, adaptations and developments within sites?
- To what extent has systems thinking been embedded within sites?

The evaluation highlighted early indications of success in employing the systems approach with the initiative reaching approximately 46% of residents in Cardinia Shire. Activities were conducted in a number of settings including schools, early childhood services, workplaces and community. HTCS targeted different elements of the 'obesity system' including food, physical activity, environments and mental health and wellbeing. The evaluation highlighted that a number of the system building blocks were utilised to support the initiative in Cardinia Shire. A key element of the success of the initiative in Cardinia Shire was the development of new partnerships and collaborative relationships to support the initiative. Further, leadership played an important role in supporting the initiative both internally within Council and externally in the community and in other organisations. Financing was utilised to support other organisations to implement tailored health and wellbeing initiatives within the community through the provision of health and wellbeing grants. This activity was successful in broadening the reach of initiatives within the shire. These grants have subsequently been incorporated into the Council's grants process so that there is a focus on health and wellbeing in the community. Many of the activities focused on up skilling the workforce in Cardinia Shire through various workshops and activities targeting staff in early childhood services, schools, workplaces, restaurants and cafés. These activities promote health and wellbeing in the community and broaden the reach of the key messages of the initiative in various settings. Despite the general success of the initiative, staff reported a number of operational challenges during the interview process, which broadly affected the implementation of HTCS. These challenges have been themed and relate to funding, staff turnover, advocacy, team structure, strategic direction, branding and evaluation.

The evaluation highlighted a number of improvements and recommendations relating to funding consistency, partnerships, state level improvements, Achievement Program and internal improvements. A summary of these improvements is presented below.

- Funding consistency – Staff identified the need for long term and consistent funding in order to implement the systems approach, realise its full potential and to minimise staff turnover.
- Partnerships – Staff highlighted a need to formalise an agreement with Monash Health Community specifically in relation to goals and objectives for the partnership, strategic plan, accountability, roles and responsibilities, recognition of the partnership at events/resources and evaluation requirements. Since the interview process has completed an MOU has been signed between Cardinia Shire Council and Monash Health Community till June 2016. This will assist to address some of the concerns of staff however, other issues outlined above should also be considered. Further, in relation to partnerships, staff highlighted that it would be beneficial to focus on building partnerships and initiatives within Cardinia Shire Council boundaries before implementing a regional approach (e.g. City of Casey and City of Greater Dandenong). However, there is direction from the Department of Health and Human Services to work regionally in this approach. Additionally, staff noted the need to further strengthen the involvement of other business units within Council in promoting and delivering some aspects of the initiatives in order to make them sustainable.
- State level improvements – Staff offered a number of improvements related to the state implementation of the Healthy Together Victoria initiative. These improvements centred on the need for DHHS to be regionally based to understand the issues ‘on the ground’ and the need for the initiative to operate in all local government areas. Further, staff noted that there needed to be greater strategic alignment between the Achievement Program (a key activity under the HTCS initiative) and the Department of Education. Further, staff highlighted some of the resources required review as they weren’t appropriate for the audience in terms of language and jargon. Additionally, a more coordinated and planned approach to social marketing was required in order to strengthen recognition of HTV and the various initiatives.
- Achievement program – There were a number of recommendations by staff in relation to improvements related to the Achievement Program. These recommendations related to re-naming the Achievement Program as it doesn’t align to the systems approach. Further, in terms of engaging with local ECS and schools it was suggested that it would be useful to work collectively on key issues (e.g. mental health) to assist with progression through the initiative’s benchmarks. Further, it was noted that focusing on progression within the Achievement Program may be more beneficial as a target rather than registrations.

A number of internal improvements were suggested by staff during the course of the evaluation. These concerned team operations, workforce development, evaluation planning, and communications and engagement. A summary of these recommendations is presented below:

- Team operations - There was consensus amongst the team that a greater strategic focus was needed particularly for the remaining time of the HTCS initiative and in the transition to a reduced capacity team post June 2016. Recommended areas for improvement included a strategic plan covering: shared goals and objectives; identifying priority areas, a focus on sustainability of existing operations (either within the team, internally with Council, community members or with partner organisations) and involving key internal and external partners with this plan. Staff recognised the importance of needing to work more collectively as a team on the systems approach, through stepping out of their portfolios and identifying gaps and opportunities for greater collaboration and systems change.
- Workforce development – It was identified that there needed to be greater development of systems thinking within Council at the senior management level, with new staff and existing staff that may not have had the opportunity to attend systems training previously. Workforce development in systems thinking will be particularly important in the future as the Municipal Public Health and Wellbeing Plan includes a system approach to prevention.
- Evaluation - There was consensus amongst staff for the need to plan evaluation prior to activities being implemented. It was suggested that having an evaluation plan either at the initiative level or for the team would be useful in order to clarify expectations and ensure success is measured. It was also noted that capacity to do evaluation is a challenge, which may become more challenging as team capacity reduces post June 2016.

- Communications and engagement – Staff identified the need to have a dedicated communications person to promote the health promotion work that is being undertaken within Council. Additionally, it was suggested that branding should be consistent, which has arisen from having some HTCS health promotion initiatives and other externally funded health promotion activities.

This report highlights the early impacts of the HTCS initiative implemented from 2012 - 2015. A key finding of the evaluation is that more time is needed to realise the full potential of the systems approach, as staff noted that they are only just starting to see progression and changes within the system. Staff highlighted the need to work more strategically both within Council and with external partners to ensure change at a systems level. It will be vital for Council to continue the momentum of this initiative as Council have been leading this initiative since 2012, have developed good working relationships with key partners and are in the best position to influence change within the shire. A key focus should be on transition arrangements for the remaining time of the HTCS initiative to the reduced capacity team post June 2016, with reference to the recommendations of this report and a focus on strategic planning, sustainability and partnerships.

Appendix 2: Summary of activities undertaken as part of Healthy Together Cardinia Shire

Activity/Program	Context	Outcomes & Outputs	Ongoing status
Achievement Program	Schools, ECS	5 secondary schools, 17 primary schools & 42 ECS signed up. 2 schools and 2 ECS have submitted an action plan.	The program has been taken over by the Cancer Council and has funding until June 2017
Achievement Program	Workplaces	32 Workplaces signed up for the program with 4 reaching the first level	Unclear
Achievement Program	Schools, workplaces, Cardinia Shire Council	Changes at policy level in a couple of organisations and the council which has moved to an Activity Based Working model	<p>Policies that have been influenced by the HTCS program⁴⁸</p> <ul style="list-style-type: none"> • Recreation strategy • Child and family plan • Energy transition plan • Healthy food and beverage policy • Smoking in the workplace policy • Health and wellbeing charter • Pakenham Structure Plan • Healthy by design - guidelines to provide safe and healthy outcomes for

⁴⁸ Healthy Together Cardinia Shire Progress Report 2012 - 2015 - it is not clear the extent to which the policies have been influenced

			<p>new neighbourhoods</p> <ul style="list-style-type: none"> • Food security principles.
Healthy Communities	Facilitating and Participating in leadership networks in the community	<p>Regional Health Literacy Taskforce (collaboration of neighbouring municipalities & Monash Health. Developed Food Literacy Action Plan</p> <p>Health and Land Use Planning Network: Partnership with Regional Dept of Health.</p> <p>Regional Leadership for Prevention group - Cardinia, Dandenong & Monash Health</p> <p>Cardinia Community Garden Network - (4 gardens)</p> <p>Bicycle User Group.</p> <p>Schools Vegetable Gardens Network.</p> <p>Health & Well being Business Network.</p> <p>Cardinia Shire Facebook Page.</p> <p>Healthy Cardinia Shire Facebook Page (no longer open) which cross promoted information from the 'Live Lighter' state wide social marketing campaign which also produced cookbook that was used to support local initiative in CS</p> <p>Activate your Family - Cardio activities</p> <p>Screening of 'That Sugar Film'- 301 people attended</p>	SAKGP has indicated that school vegetable gardens network is still operating.
Healthy Communities	Implementing Healthy Food Connect Across Cardinia Shire	<p>Harvesting Health - Local fresh food network developed under HT Victoria in collaboration with Monash Health, Various council business units & Koo Wee Rup Regional Health service. During HTCS responsible for developing food security principles for the council, mapping</p>	Not ongoing

		<p>stakeholders and hosting food forum.</p> <p>South East Food Hub - On hold. But in CS established 6 buying groups were formed with approximately 87 orders)</p> <p>Fresh & Local - Bayles General Store in food desert piloted sale of fresh produce over 4 weeks. The store has committed to continuing the sale of fresh produce.</p>	
Healthy Communities	Implementing Health Eating Initiatives Across CS	<p>Healthy Bites Program- Pilot program with 16 local cafes where ‘healthy bites’ menu items were identified with a sticker. 68% of patrons said that the sticker changed their food choices and 80% would like to have more cafe involved. Positive feedback and impact from cafe owners and chefs.</p> <p>Jamies Ministry of Food - mobile kitchen for cooking classes with 449 residents participating</p> <p>Food Revolution Day - Jamie Oliver Initiative</p> <p>Recruitment and support for Health Champions - By Oct 2015 there were 5 health ambassadors with 13 more completing training. Challenge of finding people who can commit to extra activities in addition to their busy work/life commitments</p>	
Healthy Communities	Funding and/or support for health and well being programs and initiatives in CS	<p>Tiger PAW (Physical Activity and Wellbeing) - In partnership with Richmond Football club, piloted in 2 primary school with 90% student stating they would do something healthy after attending.</p> <p>Stephanie Alexander Kitchen Garden Program (SAKGP) - Six schools applied and got funding for teacher training (must be a part of Achievement Program to be eligible)</p>	Tiger Paw and SAKGP ongoing and expanding. HLP’s has finished but funded projects status not clear.

		<p>Healthy Living Programs (HLPS) - Chronic disease prevention activities tailored to meet local needs. 26 HLP pilot programs funded with up to \$3000 - objectives had to be aligned with MPHWP priority areas. Very positive feedback and outcomes - 91% of participants who attended stated they would apply their learnings or keep doing their learnt behaviour.</p>	
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Appendix 3: Cardinia Shire Food Security Principles

Food Security Principles

HPRM number	INT1573691		
Policy owner	Community Strengthening		
Adopted by	Please select appropriate		
Adoption date	Click to select date	Scheduled review date:	Click to select date
Publication	Please select		
Revision/version number	Update with each formal review and adoption – Version 1.0, 2.0. Draft versions and revisions 0.1, 0.2		

1 Policy alignment

Implementation of the action is in line with Council Plan priority area: "Our people", improved health and wellbeing for all. "Develop food security principles" is an action contained in the Municipal Public Health and Wellbeing 2013-14 Action Plan.

2 Purpose

Council's Food Security Principles outline our commitment to enhancing the long term food security for Cardinia Shire residents and provides a framework for action across the organisation.

3 Scope

These principles span activities across the Socio-cultural, Economic, Built and Natural environments for health.

4 Background

Food security has been defined by the World Food Summit (1996) as “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”.

Food insecurity arises when people cannot afford or access sufficient, safe and nutritious food at all times.

Food security may be affected by changes and instability in the food supply such as natural disasters or changes in weather patterns which then affects customers. If stock becomes limited or unavailable due to occurrences such as flooding, the price may increase making it unaffordable for some people and may increase reliance upon imported rather than local produce. A plan for a food secure Cardinia Shire must therefore include measures to increase food system resilience to changes in the natural environment. Availability, access and the appropriate use of food are integral elements of food security. Cardinia Shire should be a place where residents have easy access to the fresh, local and nutritious food which is necessary to maintain a healthy diet. In order to do so, the entire food system must be considered including production, processing, access and utilisation, and waste/reuse to determine where council can intervene to improve the system.

Information from the 2008 Victorian Population Health survey found that that 9.4 per cent of people living in Cardinia Shire ran out of food and could not afford to purchase more on at least one occasion in the previous 12 months. Note: This figure relates to affordability of a minimum quantity of food, and doesn't take into account whether the food is nutritionally adequate. This figure was measured at 3.8% in 2011, which is likely to be inaccurate due to a small sample size and an insufficient cross section of different wards within the shire which face different circumstances.

Other information available relating to food security is the increase in demand for assistance from emergency food relief services across Victoria (Foodbank Victoria 2012). Foodbank Victoria (2012) advises that the unemployed are vulnerable to food insecurity, but that they are also assisting a high percentage of low income households and single parents. At a local level, Cardinia Combined Churches Caring (4Cs) can attest to supporting a growing proportion of households with working parents. Despite being employed and having a regular income, many are experiencing financial hardship. These are important considerations as the (perceived or actual) cost of healthy food is a major determinant of what we purchase and consequently consume as part of our daily diet (Burns & Friel 2007).

Places in Cardinia Shire where you can purchase a full 'Healthy Food Basket[1]' are limited outside of the large urban centres such as Pakenham, Officer, Beaconsfield, Emerald, Gembrook, Cockatoo, Koo Wee Rup, Bunyip and Lang Lang. Many rural townships lack availability of essential foods and a complete 'Healthy Food Basket.' These include: Avonsleigh; Bayles; Caldermeade; Cardinia; Catani; Clematis; Cora Lynn; Dalmore; Dewhurst; Heath Hill; Iona; Guys Hill; Koo Wee Rup North; Labertouche; Lang Lang East; Longwarry; Maryknoll; Menzies Creek; Monomeith; Mount Burnett; Nar Nar Goon North; Pakenham South; Pakenham Upper; Rythdale; Tonimbuk; Tynong; Tynong North; Vervale; and Yannathan.

Average food basket costs in Victoria compared to the Cardinia Shire (2014)

	Family	Single parent	Elderly pensioner	Single male
Mean	\$447.10	\$305.63	\$107.70	\$141.51
Standard Deviation	33.19	22.21	8.0	10.91
Cardinia Shire	+\$15.11	+\$8.15	+\$4.01	+\$3.90

As depicted in the above graph, the cost of purchasing a ‘healthy food basket’ is higher in Cardinia Shire than the Victorian average. For a family or single parent family receiving government assistance to purchase a full healthy food basket they must spend around 30% of their total income. For both types of families, the cost of a Healthy Food basket has increased by an average of \$10 per fortnight between 2012 and 2014. Taking into account that the overall cost of living involves many other costs including transport, rent/mortgages and bills this may have a significant impact on the capacity of Cardinia Shire residents to maintain access to a nutritious diet.

Cardinia Shire residents are also eating too much fast food, and drinking too much soft drink. About 17.5 per cent of the adult population consumes soft drink on a daily basis. This is higher than the state of Victoria at 12.4 per cent (VicHealth, 2011). Poor diets are causing many health problems for residents, including overweight and obesity, diabetes, and poor mental health and wellbeing. About 50.4 per cent of our adult population is overweight or obese (Department of Health, 2013). In Cardinia Shire, the consumption of fast foods is the main risk factor leading to becoming overweight or obese (Department of Health 2012). Healthy Food Connect (Department of Health, 2014) recognises that local government has a limited impact on resident access to takeaway outlets. However, through Cardinia Shire’s Healthy Bites program, partnerships with retail outlets have increased the quantity of healthy alternatives offered on menus as well as identifying these healthier options through colourful stickers and signs to assist with educating residents.

Council services can assist in decreasing the health impacts of food insecurity, reducing pressure on local emergency relief agencies, increasing resident’s capacity to become more self-reliant and connected within the community, and reducing waste in landfill, by proactively addressing food security. Cardinia Shire’s position in the urban fringe provides access to both metropolitan Melbourne and a large food growing region, allowing for food production and distribution. These principles endorse Cardinia Shire Council’s reputation as one of Victoria’s leading local governments in embracing prevention and working to improve the food system for residents.

5 Consultation

In the community consultation conducted during the development stage of the 2013-17 Municipal Public Health and Wellbeing Plan (MPHWP), healthy eating emerged as the second most important health need in Cardinia Shire. Participants reported that accessing food is problematic as they believe that vegetables are too expensive to buy regularly. Thus changing this perception and creating a system where residents have access to affordable, fresh and seasonal vegetables is currently being addressed as a priority by Cardinia Shire Council.

The Food Sensitive Planning and Urban Design (FSPUD) principles were the basis for discussion with key internal stakeholders to assess their relevance to be included in a food policy. Consultation was undertaken with relevant business units including those who participated in the Healthy Food Connect research and the FSPUD workshop in a 'Food Security Principles' workshop. Further consultation was conducted after the workshop and the principles were updated continually until all relevant business units came to a consensus on the most important and relevant principles for Cardinia Shire Council to adopt.

6 Food Security Guiding Principles

Council supports continued utilisation of our recreational, open space and community facilities for growing and sharing food to promote a connected and healthy community.

- Our council will respond to community driven demand to support opportunities for the access and exchange of healthy food, for example marketplaces, food swap locations and portable community gardens.

Council will lead culture change, making available more healthy and sustainable food choices at council run events and facilities for our community and educating the community about interesting and nutritious food choices.

- Our council will work across all relevant business units to make this happen.

Council recognises and rewards healthy food and drink choices, in particular promoting small businesses that offer healthy choices to the community.

- Our partnerships with local business are important. Council supports programs such as Healthy Bites and our upcoming Healthy Parma competition with pubs and clubs.

Council recognises the importance of social inclusion for all Cardinia Shire residents and community groups when supporting programs which promote access to healthy food.

- Our community engagement processes will ensure we deliver responses in a way that meet the diverse needs of our community and include them in solutions to address local area issues.

Council supports the principles of a local food system and will advocate for and promote healthy and sustainable food production for primary food producers.

- Our connection to the horticultural Bunyip Food Belt is important for producing fresh food, contributing to our regions food security, and supporting the needs of our growers.

7 Compliance

These principles will serve as an addendum for the Municipal Public Health and Wellbeing Plan and have an integral role in linking food security work across the organisation. Actions in the MPHWP will be assigned to individual business units which will serve to ensure these principles are followed across the organisation.

8 References

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<p>VicHealth 2011, <i>Indicators Survey: Selected findings</i>, viewed 1st July 2015, www.vichealth.vic.gov.au/.../VicHealth_IndicatorsSurvey_SelectedFindings</p>	<p>VicHealth 2011, <i>Indicators Survey: Selected findings</i>, viewed 1st July 2015, www.vichealth.vic.gov.au/.../VicHealth_IndicatorsSurvey_SelectedFindings</p>
<p>World Food Summit 1996, 'Trade, foreign policy, diplomacy and health: food security', <i>World Health Organisation</i>, viewed 25th June 2015, http://www.who.int/trade/glossary/story028/en/</p>	<p>World Food Summit 1996, 'Trade, foreign policy, diplomacy and health: food security', <i>World Health Organisation</i>, viewed 25th June 2015, http://www.who.int/trade/glossary/story028/en/</p>

[1] The Healthy Food Basket (designed by Monash University) is a grocery list of food items we need to meet 80% of our nutritional and at least 95% of energy needs.

Appendix 4: Index of Relative Socio-Economic Disadvantage for the Cardinia Shire

Area	IRSED index score
Beaconsfield Precinct	1075.9
Beaconsfield Upper and District	1108.6
Bunyip	1027.9
Cardinia Road Precinct	1049.3
Cockatoo - Nangana	1024.5
Emerald - Clematis - Avonsleigh - Menzies Creek	1058.2
Garfield	1018.9
Gembrook	1017.5
Koo Wee Rup	967.3
Lang Lang	960.4
Nar Nar Goon - Tynong	1017.0
Northern Rural	1077.9
Officer Precinct	1058.3

Pakenham Balance	1047.5
Pakenham Precinct	984.2
Southern Rural	1023.6
Pakenham suburb	999.5
Growth Area Subregion	1011.4
Hills Subregion	1060.7
Rural (South and East) Subregion	1003.3
Pakenham Central	857.1
Cardinia Road East	1046.7
Cardinia Road West	1069.6
Pakenham North East	992.2
Pakenham North West	980.1
Pakenham South West	1007.5
Cardinia Shire	1024.3
Greater Melbourne	1020.3
Victoria	1009.6
Australia	1002.0

(Source: Australian Bureau of Statistics, Census of Population and Housing 2011. Via <http://atlas.id.com.au/cardinia/maps/socio-economic-disadvantage#MapNo=10013&SexKey=3&datatype=2&themtype=2&topicAlias=socio-economic-disadvantage&year=2011>)

Appendix 5: Neighbourhood Houses in Cardinia Shire

Source: Cardinia Shire Council Website

Beaconsfield Neighbourhood Centre

Description: Arts and Crafts Health and Wellbeing Occasional Child care Playgroup Toy Library Children's dance Midway Group - 50s plus group

Main phone: 8768 4400

Locality (township): Beaconsfield

Address (street): 8 O'Neil Rd

Postal address: PO Box 2

Postal town: Beaconsfield

Postcode: 3807

Contact name: Co-ordinator

Fax number: 8768 4432

Hours of operation: Monday - Thursday 9am-3pm Friday 9am -1pm

Bunyip and District Community House

Description: Social inclusion for the community art, computer, cards, craft, dance, information, company, printing, emails, permaculture and gardening.

Main phone: 5629 5877 (leave message)

Locality (township): Bunyip

Address (street):27 Main St

Postal address:27 Main St,

Postal town:Bunyip

Postcode:3815

Contact name:Co-ordinator

Hours of operation: Monday - Friday 10am-4pm

Cockatoo Neighbourhood House

Description: Computers available, free Internet access Playgroup, Belly dancing, Circus skills, Arts and crafts, Book club, Cooking, Exercise for young mothers, Exercise for people over 50, Homework group

Main phone: 5968 9031

Locality (township): Cockatoo

Address (street): 23 Bailey Rd

Postal address: PO Box 697
Postal town: Cockatoo
Postcode: 3781
Contact name: Hanny Schoen
Fax number: 5968 0261
Hours of operation: Monday-Thursday 9.15am-3.15pm

Emerald Community House

Description: Emerald Community House provides Before & After School Care Monday to Friday for Emerald Primary School children during school terms. Morning sessions - children are to be dropped off at Emerald Community House and are walked over to Emerald Primary School at 8.45am each morning. Afternoon sessions - children meet outside the School office and are walked over to Emerald Community House. Children are to be collected from Emerald Community House. A substantial and nutritious breakfast and afternoon tea is provided within the fees. Fun activities include arts & crafts, books, board games, outdoor activities, games and lots more. Computer and internet are also available for use.

Main phone: (03)5968 3881
Locality (township): Emerald
Address (street): 356-358 Belgrave-Gembrook Road
Postal address: P O Box 328
Postal town: Emerald
Postcode: 3782
Contact name: Mary Farrow, Co-ordinator
Hours of operation: 3.30pm - 6.00pm and Cost \$17 per child 7am to 9.00am and cost \$15 per child

Lang Lang Community Centre

Description: Public internet access, computer tuition by arrangement, Leisure and craft classes and workshops, Healthy lifestyles, Diabetes group, Strength training, Yoga, Playgroup, Hey Dee Ho, Book library exchange and reading room, Strong sisters cancer support group, mens shed, walking group, video library, fundraising and social activities, Lang Lang Community Singers, Photocopying and fax service Centrelink access point, Maternal & Child Health Service and Medical Centre all by appointment.

Main phone: 5997 5704
Locality (township): Lang Lang
Address (street): 7 Westernport Rd
Postal address: PO Box 222
Postal town: Lang Lang
Postcode: 3984
Contact name: Marg or Michelle
Fax number: 5997 5728

Hours of operation: Monday Thursday 9.30am-4.30pm Friday 9.30am-1.30pm

Living Learning Pakenham

Description: Accredited training Lifestyle courses Community support programs

Main phone: 5941 2389

Locality (township): Pakenham

Address (street): 6b Henry St

Postal address: PO Box 457

Postal town: Pakenham

Postcode: 3810

Contact name: Tammy Lobato

Hours of operation: 9am - 5pm Mon-Fri during school term.

Outlook Community Centre

Description: Providing lifelong learning and skills development to individuals, families and business groups, Outlook Community Centre courses are conducted in a friendly and supportive environment.

Main phone: 5940 4728

Locality (township): Pakenham

Address (street): 24 Toomuc Valley Rd

Postal address: PO Box 90

Postal town: Pakenham

Postcode: 3810

Contact name: Alison Ryan, Coordinator

Fax number: 5940 1063

Upper Beaconsfield Community Centre

Description: * Courses are run on site or at appropriate venues * The Early Learning Centre is open from 7.30am to 6.30pm. Casual bookings are accepted subject to places being available. * Courses are held during school terms, both during the daytime and in the evenings. * Classes and activities include Accredited training, computer classes, health and well being, lifestyle and arts and crafts courses. * We also offer a Toy Library, Community Garden and Men's Shed. * We receive ACFE funding to offer Pre-accredited training in a variety of areas. * Venue Hire is available. * Each Term program can be found on our website

Main phone: 5944 3484

Locality (township): Upper Beaconsfield

Address (street): 10-12 Salisbury Rd

Postal address: PO Box 2

Postal town: Upper Beaconsfield

Postcode: 3808

Contact name:

Fax number: 5944 4179

Hours of operation: Office hours are 8.30am to 4.30pm Monday to Friday.

Appendix 6: Township and progress committees

Beaconsfield Progress Association

Description: A community action group seeking the wellbeing of Beaconsfield. Membership available to Beaconsfield residents only.

Main phone: Contact by email.

Locality (township): Beaconsfield

Address (street): Meeting held at Beaconsfield Community Complex

Postal address: PO Box 217

Postal town: Beaconsfield

Postcode: 3807

Contact name: Margaret Boon Secretary

Hours of operation: Meet 3rd Tuesday at 7.30pm

Cardinia Ratepayers and Residents Association

Description: Resident action group

Main phone: 0414 270564

Locality (township): Officer

Postal address: PO Box 161

Postal town: Officer

Postcode: 3809

Contact name: Secretary

Other phone: 0419135712

Cockatoo Township Committee

Description: To represent all residents in the 3781 post code and to provide a strong local voice for all local and Council issues.

Main phone: 0421 219 899

Locality (township): Cockatoo

Address (street): Cockatoo Scout Hall, Pakenham Rd

Postal address: PO Box 654

Postal town: Cockatoo

Postcode: 3781

Contact name: President: Brett Barker Secretary: Sue Wales

Hours of operation: 1st Tuesday bi-monthly start Feb at 7.30pm.

Emerald Village Committee

Description: To communicate with Council and the community to protect and enhance the unique character of Emerald as a place of great natural beauty and a caring community where residents live and work in happiness and safety.

Main phone: 5968 6665

Locality (township): Emerald

Address (street): Emerald Library

Postal address: PO Box 276

Postal town: Emerald

Postcode: 3782

Contact name: Graham Dunstan

Hours of operation: Meetings: 4th Tuesday at 7.30 pm Emerald Library

Gembrook Township Committee

Description: To provide the Cardinia Shire Council with a link to the Gembrook Community. To act on behalf of local organisations and private citizens. To create and maintain a life style required by people living in Gembrook.

Main phone: (03) 5968 1400

Locality (township): Gembrook

Postal address: PO Box 222

Postal town: Gembrook

Postcode: 3783

Contact name: John Cascone

Hours of operation: Meet 2nd Tuesday of month at 7.30pm

Heritage Springs Residents Association

Description: Community Action Group

Main phone: 0422053008

Locality (township): Pakenham

Address (street): Meetings held at Heritage Springs Primary School

Contact name: Allan Shillman

Hours of operation: Meetings held 1st Monday of month at 7pm

Heritage Springs Residents Group

Description: Community Group

Main phone: 0427723271

Locality (township): Pakenham

Koo Wee Rup Township Committee

Description: Koo Wee Rup residents get together at a monthly meeting to discuss and action issues facing the township and to maintain a strong contact with Local, State and Federal Governments.

Main phone: 0428 245 613

Locality (township): Koo Wee Rup

Postal address: PO Box 64

Postal town: Koo Wee Rup

Postcode: 3981

Contact name: Ray Brown President

Mobile phone: 0428 245 613

Hours of operation: 1st Wednesday of month at 7.30pm

Lakeside Community Development Forum Inc.

Description: Established to conduct events and communicate with residents of Lakeside. The Forum has issued a Vision Statement and set of Objectives available from committee

Main phone: 0402 757 885

Locality (township): Pakenham

Address (street): Meetings held at Lakeside Luthern College, Senior Building

Postal address: PO Box 142

Postal town: Pakenham

Postcode: 3810

Contact name: Clair Tomlinson

Hours of operation: 3rd Wednesday of month at 7 pm

Lang Lang Town Committee

Description: Group of residents representing a variety of groups, interests and busines in and around Lang Lang.

Main phone: 5997 5019

Locality (township): Lang Lang

Address (street): meetings held at Lang Lang Memorial Hall

Postal address: 52 Westernport Rd

Postal town: Lang Lang

Postcode: 3984

Contact name: Secretary

Mobile phone: 0422237456

Hours of operation: Meet 4th Thursday of month at 7.30pm

Maryknoll Progress Association

Description: Core organisation to help maintain reserves, township planning matter and general business of township.

Main phone: 5942 9030

Locality (township): Maryknoll

Address (street): Meet at Maryknoll CFA

Postal address: c/o General Store

Postal town: Maryknoll

Postcode: 3812

Contact name: Neil Matthews

Hours of operation: Meet 2nd Wednesday of the month at 8pm

Nar Nar Goon Progress Association

Description: Community Action Group

Main phone: 5942 5295

Locality (township): Nar Nar Goon

Address (street): Nar Nar Goon Fire Station

Postal address: 260 Longwarry Road

Postal town: Nar Nar Goon

Postcode: 3812

Hours of operation: Meet 4th Tuesday every second month

Officer Community Association

Description: Community Progress Association

Main phone: 5943 2351

Locality (township): Officer

Address (street): Meet at Officer Hall

Postal address: 103 Starling Rd

Postal town: Officer

Postcode: 3809

Contact name: Secretary - Mike Petrovich

Mobile phone: 0408 565 846

Hours of operation: Meet last Wednesday bi-monthly starting January at 8pm

Pakenham South Progress Association

Description: Progress Association

Main phone: 0433378530

Locality (township): Koo Wee Rup
Address (street): Meet at Pakenham South Hall
Postal address: 275 Five Mile Rd
Postal town: Koo Wee Rup
Postcode: 3981
Contact name: President Danny Holohan
Hours of operation: Meet 1st Thursday of month at 7.30pm

Timbertop Estate Residents Group

Description: The residents group are there for the residents of Timbertop Estate providing networking session, special event gatherings, new resident welcome kits with offers & info & assisting with issues that occur in the Estate within reason.
Main phone: na
Locality (township): Officer

Toomuc Valley Residents Association

Description: A residents' association working towards the amenity of Toomuc Valley, including the maintenance of the Toomuc Valley Hall
Main phone: 5942 7482
Locality (township): Pakenham
Address (street): Meet at Toomuc Valley Hall
Postal address: 650 Toomuc Valley Rd
Postal town: Pakenham
Postcode: 3810
Contact name: Don Petty
Mobile phone: 0439427298
Hours of operation: When issues arise

Tynong Progress Association

Description: Tynong Progress Association is a forum where residents and ratepayers of Tynong 3813 can meet to discuss Tynong town and district issues, also to keep communication channels open with Cardinia Shire Council.
Main phone: 5629 2488
Locality (township): Tynong
Postal address: C/- Post Office
Postal town: Tynong
Postcode: 3813
Contact name: Pauline Preston President
Hours of operation: Meet 3rd Wednesday bi monthly at 7.30 pm

Upper Beaconsfield Association

Description: Upper Beaconsfield township community organisation. Publishes the Village Bell community paper

Main phone: 59443219

Locality (township): Upper Beaconsfield

Postal address: PO Box 86

Postal town: Upper Beaconsfield

Postcode: 3808

Contact name: Secretary Helen Smith

Other phone: 59443219

Mobile phone: 59443219

Hours of operation: Meet 1st Wed of even months at 7.30 pm

Appendix 7: Community Gardens, Community Kitchens and Farmers Markets in Cardinia Shire

From *Healthy Connect Research Report 2013*

“Informants from the internal consultation reported that Farmers Markets in are not always well received by the community, who perceive the cost of produce too high and purchase their food goods elsewhere. As a result, there have been a number of Farmers Markets established in the past which are now discontinued. The sustainability and feasibility of Farmers Markets is thus problematic.”

Farmers Markets	Description	Date
Emerald craft and produce market	Monthly market with home grown food goods	The third Sunday of every month from 9am-3pm
Pakenham Rotary Farmers Market (Formerly Cardinia Ranges Farmers Market)	Farmers market	Lakeside at the Cultural centre once monthly. CLOSED Feb 20 2012. Contact: Tim Ahern 0427 057 908
Gembrook Market	Features locally produced plants, craft and produce.	Main Street Gembrook held on the fourth Sunday of each month from 9am-2pm

Table 13: Farmers markets in Cardinia Shire (*unclear if they are still continuing - but what lessons could be learned and what networks were formed and could be tapped into?*)

Community Kitchens -

Dig In Community Cafe -

Dig-In Community Cafe provides a great community meal and is open to everyone. So come for the food, volunteer in the kitchen, enjoy a great dinner and come back for the friendships. Donations gladly accepted!

Held on the last Friday of every month.

LOCATION:

Emerald Community House, 356–8 Belgrave–Gembrook Road, Emerald (Melway ref: 127 F4)

CONTACT NAME: ECH Reception

PHONE: 0359683881

EMAIL: echsupport@inet.net.au

WEB: www.emeraldcommunityhouse.org.au

Community Gardens

Source: Cardinia Shire Council Website

<http://www.cardinia.vic.gov.au/Directory/Printer.aspx?S1Key=3&S2Key=40&S3Key=507>

Emerald Garden Club

Description: Garden information and display

Main phone: 59684459

Locality (township): Emerald

Address (street): Emerald Arts Society Hall Corner Church and Anne St

Postal address: PO Box 174

Postal town: Emerald

Postcode: 3782

Contact name: Barbara McNaughton

Hills Community Gardens

Description: A community garden consisting of approx 20 beds for individual or group use. Also an indigenous garden and sensory garden to be constructed.

Main phone: 5968 9642

Locality (township): Cockatoo

Address (street): Alma Treloar Reserve, Pakenham Rd

Postal address: PO Box 243

Postal town: Cockatoo

Postcode: 3781

Contact name: Shirley Phillips
Other phone: 59687000 - Cockatoo CHS

Koo Wee Rup Community Garden

Description: Community Garden individual and communal plots available. Group meets regularly each week. Tools available for use in garden.

Main phone: 5997 9687

Locality (township): Koo Wee Rup

Address (street): Koo Wee Rup Regional Health Service, Rossiter Road

Postal address: P O Box 53

Postal town: Koo Wee Rup

Postcode: 3983

Contact name: Brian Harlow

Hours of operation: Monday to Saturday 9.00am to 4.00pm

Lang Lang Community Gardens

Description: The garden is made up of communal garden beds and is open to the whole community

Main phone: 59975704

Locality (township): Lang Lang

Address (street): Whitstable St

Postal address: 7 Westernport Rd

Postal town: Lang Lang

Postcode: 3984

Contact name: Lang Lang Community Centre

Hours of operation: Open during community centre hours

Outlook Community Centre

Description: Providing lifelong learning and skills development to individuals, families and business groups, Outlook Community Centre courses are conducted in a friendly and supportive environment.

Main phone: 5940 4728

Locality (township): Pakenham

Address (street): 24 Toomuc Valley Rd

Postal address: PO Box 90

Postal town: Pakenham

Postcode: 3810

Contact name: Alison Ryan, Coordinator

Fax number: 5940 1063

Pakenham Community Garden

Description: A community garden featuring fruit trees, vegetables, herbs and a childrens garden. Plots are available for individuals and groups for a small fee. New members are welcome.

Main phone: 59412389

Locality (township): Pakenham

Address (street): Henry St

Postal address: 6b Henry St

Postal town: Pakenham

Postcode: 3810

Contact name: Living & Learning Co-ordinator

Pakenham Garden Club

Description: Group of keen gardeners, visit gardens, exchange plants and gardening ideas. Garden expo in September at Pakenham Racecourse.

Main phone: 5941 1306

Locality (township): Pakenham

Postal address: 315 Pakenham Rd

Postal town: Pakenham

Postcode: 3810

Contact name: Meryl Waterhouse

Mobile phone: 0419411358

Hours of operation: 1st Tuesday every month

St Thomas Garden Club

Description:

Main phone: 5629 5320

Locality (township): Bunyip

Postal town: Bunyip

Postcode: 3815

Contact name: Max Carlisle

Fax number: 5997 4325

Appendix 8: Online Home Delivery Fruit and Vegetable Services

From Healthy Food Connect Research Report 2013 (pp11)

“Food retailers themselves show awareness of some residents’ difficulty accessing food and respond accordingly. Some supermarkets offer to deliver food goods to the homes of particularly vulnerable customers, for example “known customers who don’t have a car”.

Supermarkets which offer home delivery

Supermarket	Ordering	Cost to customer
Foodworks (Lang Lang)	Phone or fax orders	No charge for regular delivery in the local area. Would need to explore costs for smaller or once-off shops.
Foodworks (Bunyip)	Phone or fax orders	No charge to local areas such as Bunyip or Garfield.
Ritchies Stores (Emerald)	Phone or fax orders	Cost to customers of \$5.00. Discounted rate of \$4.00 for senior citizens
Ritchies Supermarket (Pakenham)	Phone or fax orders	No charge to local areas.

Safeway (Pakenham)	Online shopping	Unknown.
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Appendix 9: Local Government Food Policies and Strategies: A Selection

Local Government	Type of policy etc.	Summary	Link
City of Maribyrnong	Food security policy	The policy focuses on: <ul style="list-style-type: none"> · Intergovernmental collaboration, · Advocacy, · Community capacity building and resilience, · Integrated planning for supportive environments, [and] · Research, monitoring and evaluation 	http://www.maribyrnong.vic.gov.au/Page/Page.aspx?Page_id=319
City of Melbourne	Food policy	The policy aims to establish “a food system that is secure, healthy, sustainable, thriving and socially inclusive through partnerships, leadership, advocacy, education, community development, regulation, infrastructure management and research.” It outlines strategies under five key policy themes that correspond to its key aims: food security, health, sustainability and resilience, economic issues, and food culture. It proposes that effective urban food systems must address each of these issues simultaneously. The policy provides “an overarching vision and framework that will guide coordinated action and decision-making to improve our food system	http://www.melbourne.vic.gov.au/CommunityServices/Health/FoodPolicy/Pages/FoodPolicy.aspx
City of Darebin	Urban Food Production Strategy	The City of Darebin’s <i>Urban Food Production Strategy 2014 – 2018</i> aims to build upon existing urban food initiatives and improve the ability of the Darebin community to access nutritious, sustainably sourced food. Council aims to establish partnerships with the community in order to generate “local food initiatives which enhance health, wellbeing and community connectedness, improve the environment and regenerate natural resources.”	http://www.darebinfoodharvestnetwork.org.au/wp-content/uploads/2014/11/Urban-Food-Production-Strategy-FINAL-for-printing.pdf
City of Yarra	Urban Agriculture Strategy	The City of Yarra has developed an <i>Urban Agriculture Strategy</i> to connect the community with local food, improve health, reduce waste and contribute to environmental sustainability. The key purpose of the <i>Urban Agriculture Strategy</i> is for Council to provide training and education on urban agriculture issues, assist in the development of community initiatives, and establish “partnerships between council, community and external agencies and groups in support of urban agriculture.	http://www.yarracity.vic.gov.au/environment/Community-gardens/draft-urban-agriculture-strategy/
City of Greater Dandenong	Regional Food Strategy	The City of Greater Dandenong’s <i>Food Strategy in Action</i> aims to develop a local food system that supports economic growth, fosters connections between different stakeholders, and provides opportunities for urban and peri-urban food production and supply. The objectives of the Strategy are organized under three pillars (Food Industry, World Food, and Food Health), and seek “to better connect the food production, processing, retail, consumption and	http://greaterdandenong.com/document/27240/food-strategy-2014

		waste systems so as to increase interrelationships and generate shared value from both an economic and eco-sustainability perspective.” Overall, the Strategy addresses food security, economic opportunities in the Greater Dandenong region’s food sector, community health and food access, sustainable food production, and waste reduction	
Mornington Peninsula Shire Council	Local Food Strategy	<p>The main purpose of Mornington Peninsula Shire’s <i>2013 Local Food Strategy</i> is to “develop an awareness, industry connections, and branding strategy to promote Mornington Peninsula Food.” Promotion of Mornington Peninsula’s food industry and identity will involve:</p> <ul style="list-style-type: none"> · Acknowledging the role of the local climate and environment in determining the region’s produce; · Building stronger networks among local food industry representatives; and <p>Creating effective awareness and branding that improves the visibility of Mornington Peninsula produce</p>	http://www.mornpen.vic.gov.au/files/12a11535-024b-41d9-8bb7-a27d00e4d5cc/Local_Food_Strategy_final_2013_A4763202.pdf
Hobson's Bay City Council	Food Security Policy	Hobson’s Bay City Council’s <i>food security policy</i> aims to improve “access to food for vulnerable populations in Hobson’s Bay, within a Human Rights based framework	http://www.hobsonsbay.vic.gov.au/files/e9a1195a-dcc2-4f05-97ce-9fdb00a51714/FINAL_Food_Security_Policy_Statement.pdf
City of Moreland	Genetically Modified Food Plan Policy	Moreland City Council’s <i>Genetically Modified (GM) Food Plan Policy</i> outlines how Council will promote GM-free food within the municipality. It raises concerns about public health, the environment, and consumer rights relating to GM food and represents a tool for advocacy to higher levels of government to address these issues	http://www.moreland.vic.gov.au/health-safety-and-wellbeing/health-moreland/gmfood.html

Appendix 10: Global Perspectives on the Benefits of the Local Food Economies

In the most general terms, global, national and in many cases state-level policy and governance frameworks are oriented towards support of the ‘non-local’ food economy. Indeed, large sums of money and government resources are dedicated to analysing and measuring what we might term the ‘macro food and ag economy’; that is, large volume and highly mechanised production in the main commodity sectors (grains, meat, dairy, sugar cane, cotton, timber), the majority of which is destined for export markets. Because food and agriculture is conceived in primarily economic and financial terms, it is to be expected that this would be the emphasis and principal concern.

However, because of the many tensions and vulnerabilities within this macro food and agricultural economy (i.e. decreasing health and well-being across the general population linked to unhealthy eating, ecological degradation, declining levels of farm viability, over-reliance on non-renewable inputs & high levels of greenhouse gas emissions), there is a growing awareness that the beneficial multi-dimensionality and multi-functionality of what we call the ‘local food economy’ needs to be recognised and supported. As detailed below, these benefits are both directly ‘economic’ (e.g. job creation, support for local producers and businesses) and ‘beyond economic’, especially in terms of the promotion of healthy eating, living and reduced rates of obesity and dietary related ill-health.

Benefits for Adopting a Local Food Economy Approach

There is impressive evidence of the economic benefits of local food economies in terms of revenues, job creation, business development, and diversification. This is despite this sector being at an early stage of its intentional development.

The impact of a series of emerging innovations are yet to be seen, including a serious focus on reducing carbon emissions and energy costs, quantification of improvements to the health of children and adults, and the expansion of programs to minimise wasted food. Local food economies in Australia are significantly less mature than those in the USA and Europe, as well as seriously under-researched. The figures below are drawn from results elsewhere and are indicative of the scale and benefits that could be expected from a strategic research and policy focus on this sector.

Table 1. Increasing Size of Local Food Economies (USA)

Region	Indicator	Timeframe	No. Years	Percentage Increase
PUSA	Direct-producer-to-consumer sales	1997/98–2007, total \$US1.2 billion in 2007; \$US4.8 billion for all local food sales (2008).	10	54 per cent
USA	No. farms selling some or all produce in local /regional markets	2010–2012, 136,000 farms involved.	2	19 per cent
	Farmers’ Markets	2001–2010, 7000 in total by 2008.	9	59 per cent
	No. of farm to school programs	2004/5–2007, 2095 by 2007, up from 400 in 2004.	3	81 per cent

The key findings from a variety of analyses of the economic benefits of local food economies are summarised in Table 2.

Table 2. Economic Benefits of Local Food Economies

Benefit	Findings
Job Creation	<ul style="list-style-type: none"> ● [F]ruit and vegetable farms [in the US] selling into local and regional markets employ 13 fulltime workers per \$US1 million in revenue earned, for a total of 61,000 jobs in 2008. In comparison, fruit and vegetable farms not engaged in local food sales employed 3 fulltime workers per \$US1 million in revenue.”⁴⁹ ● Farms under 100 acres provide five times more jobs per acre than those over 500 acres.⁵⁰ ● Employment growth in Toronto’s creative food cluster rose from 45,000 in 1999, to 58,000 in 2008 – expected to reach 10 per cent per annum over the next decade.⁵¹ (Contrast with 180,000 jobs lost in the traditional food economy since 1990)
Multiplier Effect	<ul style="list-style-type: none"> ● Percentage of money spent in local businesses that is retained in the local economy is typically in excess of 50 per cent, compared to around 15-30 per cent of money spent in non-local businesses.⁵² ● Spending in smaller independent local food outlets supports three times the number of jobs than at national grocery chains: outlets selling significant to high percentages of local food support on average one job for every £46,000 of annual turnover; by comparison, at three national chains one job is supported per £138,000 to £144,000 of annual turnover⁵³
Farm Viability	<ul style="list-style-type: none"> ● USA - of the 110,000 farms selling into local and regional markets in 2010, such sales accounted on average for 61 per cent of total sales (for nearly 2/3 of these local sales > 75 per cent of total sales ● Especially important for horticulture: ‘nearly 40 percent of all vegetable, fruit and nut farms in the US sell their products in local and regional markets.’⁵⁴ ● Increased prices ranged from 50 per cent for apples to 649 per cent for salad mix ● Changing the incentive to farm: USA 2002-7, 300,000 new farms had commenced operation, with a net increase of 75,810 farms. Nature of the new farms: smaller, more diversified production, being ‘run by younger operators’.⁵⁵

⁴⁹ USDA Economic Research Service, 2011. “Direct and Intermediated Marketing of Local Foods in the United States”. November 2011, ERS Report No.128.

⁵⁰ <http://www.localfutures.org/publications/online-articles/bringing-the-food-economy-home>.

⁵¹ Ajayi et al 2010

⁵² See <http://www.ilsr.org/key-studies-walmart-and-bigbox-retail/#1>.

⁵³ CPRE 2012

⁵⁴ ‘Local Foods Are Working for the Nation’, Nov 2011 - <http://blogs.usda.gov/2011/11/08/new-report-local-foods-are-working-for-the-nation/>.

⁵⁵ USDA, 2009, *News Release No.0036.09*, 4.2.09, available at <http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2009/02/0036.xml>.

Legislative and financial support

In recognition of such benefits, local food economies and initiatives have increasingly received legislative and financial support from federal, state and local governments in the United States and Canada. Here is a small sample of some recent legislative and policy initiatives in recent years:

- Between 2002 and 2013, 46 US states proposed or enacted legislation to support farm-to-school programs, which typically have an explicit purpose to promote higher consumption of fresh fruit and vegetables, while supporting local producers at the same time;⁵⁶
- In 2009, the State of Illinois passed the *Local Food, Farms and Jobs Act* which funded and created the Local Food, Farms and Jobs Council, whose mandate is to build partnerships across the public, private and civic sectors to expand local food networks;⁵⁷
- In 2011, the Leopold Centre for Sustainable Agriculture developed and published the Iowa Local Food and Farm plan, based on discussions with over 1000 stakeholders, recommending greater support for Iowa's local food economy;⁵⁸
- In October 2013, the Governor of California signed into law three bills to support the expansion of local food production and consumption, covering community-supported agriculture standards, the creation of Urban Agriculture Incentive Zones, and a certification program for farmers' markets;⁵⁹
- In November 2013, the US Federal Department of Agriculture (USDA) announced grants for 71 projects in 42 states to 'connect school cafeterias with local farmers and ranchers' through the Federal Farm-to-School program, covering 13,000 schools and 2.8 mn students;⁶⁰ and

In November 2013, the legislature of the Canadian province of Ontario passed the Local Food Act, which is aimed at supporting local food networks, raising levels of food and nutrition literacy amongst children and adults, and supporting job creation through boosting local food economies. These objectives are backed with a \$C30 million Local Food Fund.⁶¹

⁵⁶ State Farm to School Legislative Survey 2002-2013, Vermont Law School (Center for Agriculture and Food Systems) and the National Farm to School Network, January 2014, available at: <http://www.farmtoschool.org/downloads/state-policy.pdf>.

⁵⁷ See <http://foodfarmsjobs.org/2011/06/28/ilffjc-council-2009/>.

⁵⁸ See <http://www.leopold.iastate.edu/sites/default/files/pubs-and-papers/2011-01-iowa-local-food-and-farm-plan.pdf>.

⁵⁹ "California Governor Jerry Brown signs "Farm to Fork" legislation": <http://goldrushcam.com/sierrasuntimes/index.php/news/mariposa-daily-news-2013/158-september/10235-california-governor-jerry-brown-signs-qfarm-to-forkq-legislation>.

⁶⁰ See <http://www.usda.gov/wps/portal/usda/usdahome?contentid=2013/11/0218.xml>.

⁶¹ See <http://www.omafra.gov.on.ca/english/about/localfood.htm>.

Appendix: 11

CIRCLES OF FOOD ASSESSMENT TOOL

Circles of Food

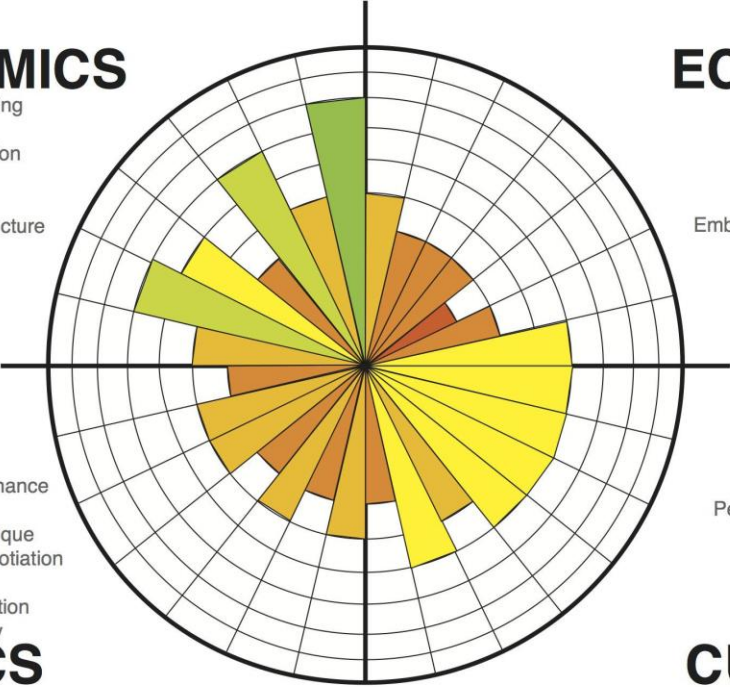
Version 3.4

ECONOMICS

- Production & Resourcing
- Exchange & Transfer
- Accounting & Regulation
- Consumption & Use
- Labour & Welfare
- Technology & Infrastructure
- Wealth & Distribution

ECOLOGY

- Materials & Energy
- Water & Air
- Flora & Fauna
- Habitat & Settlements
- Built-Form & Transport
- Embodiment & Sustenance
- Emission & Waste

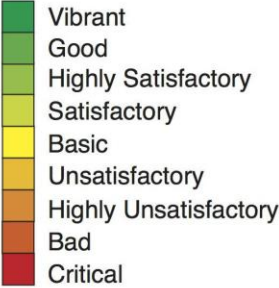


- Organization & Governance
- Law & Justice
- Communication & Critique
- Representation & Negotiation
- Security & Accord
- Dialogue & Reconciliation
- Ethics & Accountability

POLITICS

- Engagement & Identity
- Performance & Creativity
- Memory & Projection
- Belief & Meaning
- Gender & Generations
- Enquiry & Learning
- Wellbeing & Health

CULTURE



CIRCLES OF FOOD

Table 1. The Locality or Region being assessed

The name of local area in question: (That is, the name of the city, town, or municipality, etc., that is being assessed.)	Please fill in
Geographical spread of the area in km ² .	Please fill in
Population of the area.	Please fill in
Date or period of the assessment: Month(s), Year	Please fill in

The *Circles of Food* profile process is intended as a way of developing an interpretative description of the quality of the food system of a local area and its immediate region or hinterland. Here the determination of quality is understood in relation to local, national, and global processes: ecological, economic, political and cultural. The *Circles of Food* profile process is part of the more general *Circles of Social Life* assessment process, which includes considerations of:

1. communication,
2. learning,
3. productivity,
4. reconciliation,
5. relationality,
6. resilience, and
7. sustainability.

These seven core conditions are treated as basic social capacities that humans need to live in relation to place, people and the planet.⁶²

The profile template is intended as way of developing a more comprehensive understanding of a local area—city, metropolis, town, municipality, or village, etc. By responding to the questions in the profile process it is possible to generate a clear and simple graphic representation of the food profile of that

⁶² See Paul James, et al. *Urban Sustainability in Theory and Practice: Circles of Sustainability*, Routledge, London, 2015.

area/region. Examples are shown in Figure 2 (below) for the sustainability of representative cities around the world.

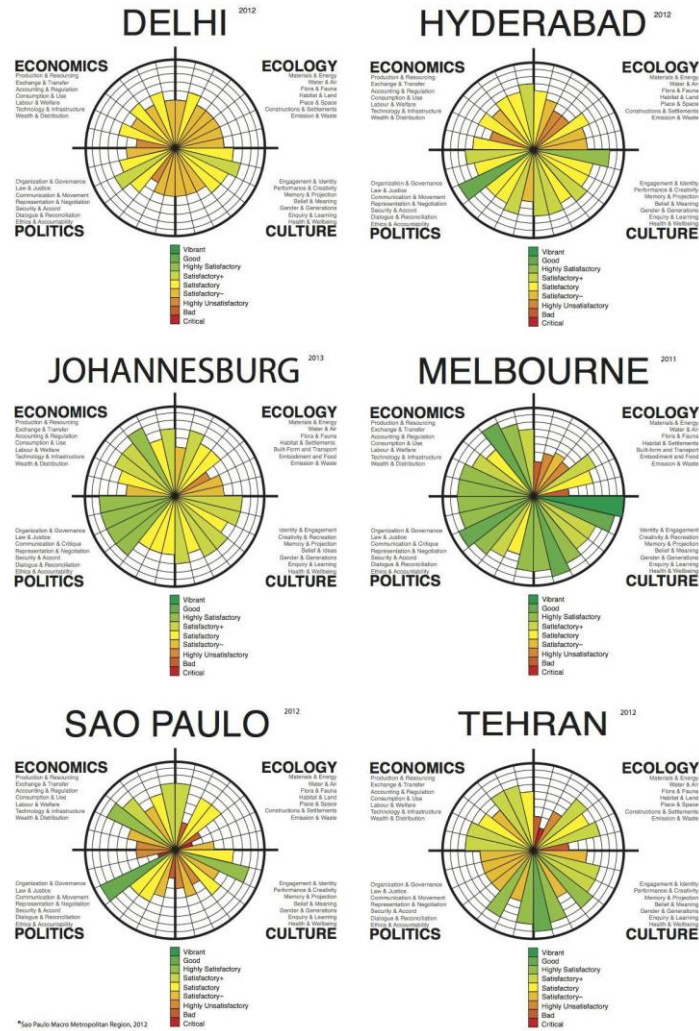


Figure 2. Circles of Sustainability Assessments

Each of these diagrams in Figure 2 represents a qualitative self-assessment by local and other experts of the sustainability of the respective urban areas.⁶³ The assessment group should define the precise geographical extent of the area in question before the assessment begins (see Table 1 above). For example, in Figure 2 above 'Sao Paulo' refers to the greater Sao Paulo Metropolitan region. Similarly 'Melbourne' in this case is assessed across the larger metropolitan region of Melbourne rather than the Municipality of Melbourne, which is much smaller geographically and demographically.

The quality and standing of the assessment depends upon the expertise of the persons who are conducting the assessment. Optimally, we suggest that the Assessment Panel should comprise three to ten people with different and complementary expertise about the urban area in question. Table 2 below is intended for recording the names and expertise of the persons on the Assessment Panel. It can be expanded as necessary.

Table 2. Profile Assessors on the Assessment Panel

<p>The profile mapping process can be done by different kinds of respondents. Different people have different knowledge sets, all of which can be valuable in making an assessment. In order to understand the nature of the assessment, we just need to know what kind of knowledge held by each respondent in the Assessment Panel.</p>	<p>Please indicate which kind of respondent(s) you are by adding names in the boxes below.</p> <p>Add more lines or more space to the list if necessary.</p>	
<p>1. Internal Expert Assessors Individuals who live in the locality or region in question and have expert knowledge of that region or a significant aspect of that region, particularly relating to food. Here 'expert knowledge' is defined as either being trained in some aspect of the food system, or working in that</p>	<p>Name</p>	<p>Position and/or Training</p>

⁶³ Pilot studies for Circles of Sustainability have been conducted in a number of cities across the world using the various parts in draft form. Some of those are represented in Figure 2. In 2011, for example, the research team were invited by Metropolis to work with the Victorian Government and the Cities Programme on one of their major initiatives. The methodology is central to the approach used by the 'Integrated Strategic Planning and Public-Private Partnerships Initiative' organized by Metropolis, 2012–2013 for Indian, Brazilian and Iranian cities. A workshop was held in New Delhi in 2012, and senior planners from New Delhi, Hyderabad and Kolkata used the two of the assessment tools in the *Circles of Sustainability* toolbox to map the sustainability of their cities as part of developing their urban-regional plans. Other cities to use the same tools have been Tehran (in relation to their mega-projects plan) and Sao Paulo (in relation to their macro-metropolitan plan).

capacity for some time.		
2. External Expert Assessors Individuals who do not live in the area in question, but have expert knowledge of that area or a significant aspect of that area, particularly relating to food.	Name	Position and/or Training
3. Lay Assessors Individuals who live in the area in question, and who have extensive local knowledge of the area or an aspect of the area, particularly relating to food (without necessarily either being trained in planning, administration, or working in the field of food systems).	Name	Length of time having lived in the urban region

The Assessment Panel should either meet for a sustained period to conduct the assessment or respond individually to the assessment questions and then bring those individual responses together for collation and synthesis. The amount of time taken depends upon the nature of the assessment. (See Table 3 below.) Two hours is achievable for a Rapid Assessment; four hours is minimal for a group-based Aggregate Assessment, but a day is ideal. This can be speeded up by each individual in the group first conducting the assessment by themselves and then either coming together to debate the assessment scores, or simply collating the scores of each of the individual assessments. Ideally, individuals on the

panel should read through the questions before meeting as a panel and where necessary seek information about issues with which they are not familiar. An Annotated Assessment will take considerably longer. And a comprehensive assessment could take from a month to a year depending upon how much dedicated time is given to it.

Table 3. The Level of the Assessment Process

<p>Each of the first four levels can be done as a registered assessment. This involves registering the assessment with the Food Alliance, including a description of the process that your team went through to complete the assessment. Registration verifies that the process was conducted thoroughly and well.</p>	<p>Please indicate which profile exercise you intend to complete by ticking the box or boxes below.</p>
<p>The profile mapping process can be done at five levels:</p>	
<p>1. Rapid Assessment Profile By responding to the single ‘general question’ under each ‘perspective’ by marking the 9-point scale.</p>	<p><input type="checkbox"/> and/or</p>
<p>2. Aggregate Assessment Profile By responding to the ‘particular questions’ under each ‘perspective’ by marking the 9-point scale).</p>	<p><input type="checkbox"/> and/or</p>
<p>3. Annotated Assessment Profile By completing the exercise at Level 2 <i>and</i> writing detailed annotations about how the points on the scale were derived.</p>	<p>and/or</p>
<p>4. Comprehensive Assessment Profile, I By completing the exercise at Level 3 <i>and</i> writing a major essay on the urban area using the questions to guide the writing.</p>	<p>and/or</p>
<p>and/or</p>	
<p>Comprehensive Assessment Profile, II By completing the exercise at Level 3 and assigning metrics-based indicators to each point on the scale.</p>	<p>and/or</p>
<p>5. A Certified Assessment By completing an Assessment Profile at one of the previous levels, and then negotiating with the <i>Food Alliance</i> to have their Global Advisors critical respond and certify that assessment.</p>	<p>and/or</p>

If you are conducting a *Rapid Assessment* only the *General Question* in each set needs to be answered. That question works as a proxy question for that whole area of sustainability. If you are conducting an *Aggregate Assessment* at least six of the questions in each set of seven questions need to be answered. If one of the questions in each set is deemed to be particularly inappropriate for your urban area, you can either choose to replace that one question by alternative question that you formulate for yourself or choose not to answer that question and leave the assessment blank. In most cases, the questions will be weighted equally in finalizing the assessment—that is, unless a prior round of assessment is done to rank-and-weight the questions in each perspective in relation to each other.



Table 4. The Mode of the Assessment Process



<p>The profile mapping process can be done in three modes:</p> <ol style="list-style-type: none"> 1. Non-Registered Profile This is a self-assessment done within the urban region by a person or group of persons (including, if relevant, invited outside experts) without any involvement of the Food Alliance or its collaborating partners. All of the <i>Circles of Social Life</i> tools are open-source and open-use. 2. Registered Profile This is a self-assessment that has been lodged with the Food Alliance and verified for the thoroughness and proper conduct of the assessment. 3. Certified Assessment Profile This is a self-assessment that has been critically assessed and, where necessary, amended by a group of expert advisors to the Food Alliance. (Mode 3 thus begins by an assessment done in Mode 1 or 2) 	<p>Please indicate which profile exercise you intend to complete by ticking the box or boxes.</p>
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Definitions for the Purposes of this Questionnaire

- **Local area or area**, as used in the profile questionnaire, means the area that you have defined as the basis for making this assessment. Whether or not food production is local should be assessed as a relative question. For example, meat consumed locally that was husbanded locally but processed in an abattoir outside of the immediate region is only partly local. But it is more local than meat sourced from a local abattoir that imports its animals from outside the *broader region*.
- **Immediate region** means the local area and its immediate hinterlands, including its peri-urban extensions, adjacent agricultural and rural land, and its water catchment areas if they are in the immediate vicinity of the area in question.
- **Broader region** is taken to mean within two-to-three hour's land transport from the area in question. Sometimes the term will appear in different forms: for example, in the phrase 'the broader regional food system'. This means the same spatial reach—two-to-three hour's land transport from the area in question.
- **Food system** refers to all aspects of the processes of producing, processing, exchanging, and consuming food: ecological, economic, political and cultural. Unless in the current document the concept is used with the adjective 'local', it refers the food system of the area in question across all relevant lines of extension from the immediate locale to the global. For example, if a tomato consumed in the local area is imported from a global source, then that global sourcing should be considered part of the material world of local area. When as experts you cannot answer a question about a particular dimension of the food system across its global reach—for example, the sustainability of the production process pertaining to that imported tomato—this is an indication of both a knowledge deficit and sourcing problem; and the assessment cannot therefore be higher than 'Unsatisfactory'.

NB. When the adjective 'local' is added (viz. '**local food system**') it emphasizes the proximate consequences in the local area of the local and immediate regional dimension of the food system.

- **Food production** as used in this questionnaire includes all those activities—from commercial to small-scale or informal—that grow, husband, or process food for consumption.
- Concepts such as **good, appropriate** and **balanced** are to be defined in terms of the values of the assessment respondents, but in an Annotated Assessment these are the sorts of issues that would need to be defined by the Assessment Panel.

The Scale for Assessment

The questionnaire asks for critical judgement on a nine-point scale of quality from critical to vibrant. The period in question is the present (unless otherwise specified), and the limits of projection are the next 30

years or one generation, using the United Nations’ definition of ‘sustainable development’ as development that meets the needs of the people now, without compromising the needs of the next generation.

Table 4. The Scale of Assessment

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

Critical is at the negative end of the spectrum, referring to an aspect of the food system that requires critical or urgent change *now* in order to be assured of continuing basic viability over the next thirty years and thus into the adult lives of the next generation.

Vibrant is at the positive end of the spectrum, referring to an aspect of the food system that is currently active in reproducing vibrant social and environmental conditions that augur well for long-term *positive* flourishing for the next generation and beyond.

Basic, the mid-point on the scale, signifies a quality that allows, all other pressures being equal, for a basic equilibrium over the coming period meeting the ‘needs’ of the next generation. See Table 5 below.

Final Notes on the Framing Considerations

For the purposes of the questionnaire the assessment is biased towards considerations of the seven core capabilities of social life mentioned earlier: to communicate with others, to learn from practice and experience, to produce the conditions of existence, to sustain what is good; to respond with resilience to difficult challenges; and to reconcile and live relationally with others and with nature.

In relation to these conditions it contended that, all things being equal, healthy food and locally produced, processed and meaningfully consumed food is more conducive to a flourishing sustainable and resilient social life than, for example, imported mass food delivered through franchised outlets. However, this is not always so in all aspects of the food system, and therefore answering the questions is a matter for interpretation by local experts as they consider the context of local food practice and meaning.

In reading the questions in the profile process keep in mind that each question is attempting to analytically distinguish different parts of the food system (see Table 7 at the end of this document for a full list). This means, for example, while we are intensely interested in the theme of *food security* there

are very few questions below in which this concept explicitly appears (see in particular the section in the domain of Politics called ‘Security and Accord’). This does not mean that food security does not permeate the other sections. The same can be said for themes such as *planning* and *health*. They permeate the questions rather than are marked off in separate areas.

The Issues in Contention

The Food Profile process works on the basis of a four-domain model (see Appendix 1 below for a discussion of the basis of the Circles approach). Each domain is divided into seven perspectives (as set out in Table 5 below), and seven questions are asked about each perspective (see the questionnaire below).

Table 5. Summary of the Structure of the Profile Process for Food

Domains	Perspectives (or Subdomains)	Possible issues to consider
Ecology	<ul style="list-style-type: none"> • Materials and Energy • Water and Air • Flora and Fauna • Habitat and Settlements • Built-form and Transport • Embodiment and Sustenance • Emission and Waste 	<ul style="list-style-type: none"> • Sources of energy, fertilizer, soil • Air quality, climate change, water adequacy • Edible plants and gardens, animal welfare • Habitat destruction, land-use • Food outlets, cooking/storage • Physical human health, nutrition • Pollution, recycling, and waste disposal
Economics	<ul style="list-style-type: none"> • Production and Resourcing • Exchange and Transfer • Accounting and Regulation • Consumption and Use • Labour and Welfare • Technology and Infrastructure • Wealth and Distribution 	<ul style="list-style-type: none"> • Availability, supply, portion-size • Trade in food; subsidies, taxes • Food standards and labels, regulatory policy • Food consumption patterns, use of goods • Labour markets, economic provision • High-tech to low-level technologies • Poverty, inequality
Politics	<ul style="list-style-type: none"> • Organization and Governance 	<ul style="list-style-type: none"> • Legitimacy, current system of governance

	<ul style="list-style-type: none"> • Law and Justice • Communication and Critique • Representation and Negotiation • Security and Accord • Dialogue and Reconciliation • Ethics and Accountability 	<ul style="list-style-type: none"> • Legal system; political order, the right to food • The press, media, news, dissent, advertising • Participation by citizens in food politics • Political tensions, food security • Customary rights, reconciling with nature <ul style="list-style-type: none"> • Corruption issues, public ethics, fair food
Culture	<ul style="list-style-type: none"> • Identity and Engagement • Creativity and Recreation • Memory and Projection • Belief and Meaning • Gender and Generations • Enquiry and Learning • Wellbeing and Health 	<ul style="list-style-type: none"> • Ethnicities, identities, public engagement • Celebrations, events and rituals, meals • Indigenous history, museums, monuments • Religions and spiritualities, ideologies • Gender relations, family life, generations • Education and training systems, advice, skills • Emotional and mental health and wellbeing

Ecology

1. Materials and Energy

General Question: How sustainable is the use of materials and energy across the food system?⁶⁴

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactor y	Unsatisfactor y	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. How sustainable is the use of resources to grow food in the immediate region? ⁶⁵	
2. How adequate are the areas of arable soil in the immediate region suitable for growing a variety of food produce?	
3. How sustainable is the use of fabricated metals, such as steel and aluminium, in the food system across the broader region?	
4. Is the electricity used in the various stages of the food system produced through ecologically appropriate and/or renewable means? ⁶⁶	
5. Is the local food system overly dependent on fossil fuels?	
6. Does the local food system use recyclable materials?	
7. Does local monitoring of resource-use result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative questions:</i>	

2. Water and Air

General Question: What effect does the food system have on carbon neutrality?

⁶⁴ This includes all materially relevant processes from the local to the global.

⁶⁵ Remember here that ‘immediate region’ here means the area in question and its hinterlands. ‘Material resources’ includes all resources from water, food, and energy to concrete and steel.

⁶⁶ Keep in mind here and elsewhere that, unless qualified by the adjective ‘local’, the concept of the ‘food system’ refers to the whole system upon which the local area depends, from the local to the global.

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>1-9</i>
1. Does the food system adversely affect bodies of water in the immediate region, including through chemical run-off or processing waste?	
2. Is suitable water readily available and delivered with minimum energy-use for the food system in the immediate region?	
3. Does food production in the immediate region adversely affect air quality?	
4. How conducive is the local climate to growing food without energy-intensive support?	
5. Does the local food system expel high volumes of greenhouse gases?	
6. Does the local food system mitigate or capture of greenhouse gases?	
7. Does local monitoring of air and water quality result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question</i>	

3. Flora and Fauna

General Question: To what extent is plant and animal biodiversity sustainable in the immediate region?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. How resilient is the eco-system in the immediate region in relation to the food system?	
2. Is biodiversity now adversely affected by the food system?	
3. Has the food system affected native plant and insect species viability in the immediate region?	
4. Has tree coverage in the immediate region been adversely affected by the food system?	
5. Has the food system affected the continuing viability of native species of birds and animals in the immediate region?	
6. Is animal husbandry conducted with ethical care including, for example, through free-range grazing and humane slaughtering?	
7. Does local monitoring of flora and fauna result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

4. Habitat and Settlements

General Question: How well does the local food system relate ecologically to the landscape of the immediate region?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number</i> 1–9
1. Does the local topography support sustainable food production, from small plots to commercial operations?	
2. Is indigenous habitat viable in relation to food production and other related land-uses in the immediate region?	
3. To what extent is a balanced proportion of local parks and open spaces used to grow food?	
4. Does the built-environment leave public space for food growing?	
5. Is it common for local people to use private space in and around their homes to grow food?	
6. How much retrofitting or relocation of local infrastructure is necessary for developing a balanced proportion of public land for the food system?	
7. Does local monitoring of habitat and land-use result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

5. Built-Form and Transport

General Question: How sustainable is transport across the local area in relation to the food system?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions:</i>	<i>Number 1–9</i>
1. How readily accessible are healthy food outlets across the local area?	
2. Can households, businesses and institutions easily access food from local producers?	
3. Can local people readily access local food suppliers through public transport?	
4. How dependent is the food system on motorized transport and roads?	
5. Do people use non-motorized transport such as bicycles and walking paths to engage with the food system?	
6. How much does the local food system depend upon air-and-sea transport for food provision?	
7. Does local monitoring of transport result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

6. Embodiment and Sustenance

General Question: Does the food system adequately support the physical health of local people?⁶⁷

1	2	3	4	5	6	7	8	9
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⁶⁷ Here in the ecological domain the emphasis is on physical health. Mental health is considered in the cultural domain.

Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant
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<i>Particular Questions</i>	<i>Number 1-9</i>
1. Is the general physical health of local residents enhanced by what they eat?	
2. Are local people dying earlier than expected due to their diets?	
3. Are there places for people to access healthy food near to where they engage in active living, physical recreation or exercise?	
4. How hygienic are people's practices in relation to eating?	
5. Do local people generally have high levels of nutrition in their diet?	
6. Do local people consume fresh food produced locally, including from their own gardens?	
7. Does local monitoring of physical health and nutrition result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

7. Emission and Waste

General Question: How ecologically sustainable is the way that the food system deals with emissions and waste?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. What level of pollution is generated by the whole food system?	
2. How much hard waste is produced by the local food system, from households to industry?	
3. How effective is the sanitation infrastructure in relation to the local food system, including ensuring that untreated sewerage is not used for food production?	
4. Are adequate storm-water drainage systems in place for all local food-growing and processing areas?	
5. Do most households use some kind of composting system?	
6. Are materials used by the food system recycled or reused?	
7. Does local monitoring of emissions and waste result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

Economics

1. Production and Resourcing

General Question: To what extent is the local food system contributing to creating a resilient, mixed economy in the immediate region?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. Does the food production system contribute to local prosperity and resilience?	
2. How strong is the food-processing base in the immediate region?	
3. Are fresh food products harvested in the immediate region?	
4. Are there significant artisan and craft dimensions to the local food system?	
5. Are there design and innovation dimensions being incorporated into the local food system?	
6. Are there sufficient labour resources with the right skills in the local area to sustain the local food system?	
7. Does local monitoring of economic production result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

2. Exchange and Transfer

General Question: Does the food system achieve a fair economic return for local food producers, processors, and suppliers?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. Are all parties benefitting fairly from the exchange in the food system?	
2. Is it possible for all people, regardless of economic status, to afford good food?	
3. Does the financial system support local producers and traders to grow or market good food?	
4. Can local people trade effectively and efficiency across different sectors of the food system?	
5. Are there any financial programs or incentives in place to support the local food system?	
6. Are the levels of debt and liability carried by people in the local food system economically sustainable?	
7. Does local monitoring of economic exchange and supply systems result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional additional question:</i>	

3. Accounting and Regulation

General Question: How effective are local/national frameworks for regulating the food system?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1-9</i>
1. How transparent is the regulatory framework for the food system?	
2. Is appropriate regulation provided for the financial dimensions of the food system—for example, subsidies, taxation, reporting, and auditing?	
3. Do regulations pertaining to goods and services adequately address the long-term provision of good food—for example, differential taxation?	
4. Do regulations pertaining to land-use and zoning support the local food system, including the spatial needs of producers and suppliers?	
5. Is there appropriate regulation of the labour market relevant to the local food system—for example, health-and-safety regulations?	
6. Is there an appropriate set of taxes and levies operating in relation to the local food system?	
7. Does local monitoring of economic regulatory systems result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

4. Consumption and Use

General Question: How economically sustainable and affordable are current levels of healthy food consumption in the local area?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. Is the consumption of healthy food occurring at sufficient levels for the economic sustainability of that part of the food system?	
2. Are people in the local area able to access sufficient quantities of healthy food for their daily needs?	
3. Do local food services offer sufficient healthy food at affordable prices for all needs?	
4. Is the provision of basic utilities—such as water, electricity, and gas—adequate for the local food system?	
5. What is the capacity of the local food system to respond to peak-oil issues, including possible rising costs of energy?	
6. Is there appropriate marketing of food sources so that community members are attuned to their food options?	
7. Does local monitoring of consumption patterns result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

5. Labour and Welfare

General Question: How economically sustainable are fair livelihoods in the local food system?

1	2	3	4	5	6	7	8	9
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Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant
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<i>Particular Questions</i>	<i>Number 1-9</i>
1. What levels of secure and fairly remunerated work exist within the local food system?	
2. What levels of meaningful and personally productive vocations exist in the local food industry?	
3. Is there a relative equity of access to secure work in the local food production system across differences of gender, age and ethnicity?	
4. Does the local workforce have the capacity to work productively at the skill levels required by a sustainable local food system?	
5. Does the local food system provide safe conditions for work?	
6. Does the local food system support and care for its labour force?	
7. Does local monitoring of labour practices result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

6. Technology and Infrastructure

General Question: How appropriate are technologies and infrastructure in the local food system for supporting long-term economic sustainability?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. Are technologies in the food system appropriately used (or restricted) to support the sustainable development of the local area?	
2. Are information technologies used appropriately to support the local food system?	
3. Does the local food system use relevant sustainable technologies in transport—from bicycles to hybrid vehicles and intelligent transport systems?	
4. How resilient are construction technologies associated with the local food system?	
5. Are food and agriculture training providers in the broader region resourced with appropriate technologies and infrastructure?	
6. Are health practitioners in the broader region, including doctors, dietitians and nutritionists, resourced with appropriate technologies and infrastructure?	
7. Does local monitoring of technological practices result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

7. Wealth and Distribution

General Question: Is the food wealth of the local area distributed in way that benefits all?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number</i>

	1-9
1. Are there processes in place that mobilize food for people in the community who are at risk?	
2. Is the inherited social wealth of the food system—for example, land where food was once grown or could be grown—maintained in a way that maximizes its benefits into the future?	
3. Are wages and disbursements within the local food industry comparable (in national terms) with other areas of livelihood requiring comparative expertise and experience?	
4. Does the configuration or quality of local housing—for example, the size of houses in relation to land—lend itself to informal food production close to home?	
5. Are vulnerable members of the community readily able to access healthy food and local food services?	
6. Is potentially wasted nutritious food effectively redistributed to those who might need it most?	
7. Does local monitoring of wealth and distribution patterns result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

Politics

1. Organization and Governance

General Question: How well does food-system governance work to maximize benefits for all?⁶⁸

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>1–9</i>
1. Do the existing governance processes relevant to the local food system have legitimacy and respect in the community?	
2. What levels of capacity and skill do political leaders have in relation to the local food system?	
3. How compelling are the visions for the future food system projected by the relevant levels of government?	
4. What levels of capacity and skill do administrative or support-staff have within the various levels of governance relevant to the food system?	
5. How much authority do the various levels of governance have to carry out food-related policy?	
6. To what extent are decision-making processes appropriately transparent in relation to the food system?	
7. Does local monitoring of administrative practices result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

2. Law and Justice

General Question: How well does the dominant legal system work to promote the protection and enjoyment of the right to food?⁶⁹

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

⁶⁸ Here the ‘current system of governance’ includes nationally, regionally, municipally and locally.

⁶⁹ Here the ‘dominant legal system’ includes the national, municipal, and local levels of law, and their intersection.

<i>Particular Questions</i>	1–9
1. Is the right to <i>adequate</i> food being protected in the local area? ⁷⁰	
2. Does the level of civil order in the local area enable people to access adequate food?	
3. Do local residents support each other in making sure that adequate food is available for all?	
4. Does the legal system take into account different legal understandings of food—for example, customary law or different relevant traditional understandings such as Jewish <i>Kashrut</i> or Islamic <i>Sharia</i> , which requires <i>halal</i> food?	
5. Are legal measures to protect the right to adequate food in place and fair to all?	
6. Do legal judgements relating to the food system carry appropriate levels of penalty and punishment?	
7. Does local monitoring of rights and legal practices result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

⁷⁰ Here the definition of ‘adequate’ comes the UN ESCR Covenant: ‘The availability of food in a quantity and quality sufficient to satisfy ... dietary needs ... free from adverse substances, and acceptable within a given culture.’

3. Communication and Critique

General Question: How well do social communications and media work to support the local food system?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. What capacity do local people have to express their concerns relating to the food system?	
2. Is there a range of newspapers, broadcasters and public communications systems circulating information about the food system relevant to people living in the local area?	
3. Do local people actively access information about the full range of food issues—for example, through radio, television, the Internet, and other social communications?	
4. What is the quality of public political analysis about the food system accessible in the local area — both mainstream and alternative?	
5. Can the governance and control of the local food system be legitimately and effectively contested?	
6. Do local people and institutions respect the private choices of others to consume food that does not accord with dominant discourses of what is proper to eat?	
7. Does local monitoring of communication and media practices result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

4. Representation and Negotiation

General Question: How well are citizens of the local area represented politically in relation to the local food system?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number</i> <i>1–9</i>
1. Are local residents active members of non-governmental organizations and advocacy groups related to the food system?	
2. Are local residents active participants in the political processes of the food system, including, for example, in community, council and/or business processes?	
3. Do locals have the power to affect political decision-making processes relevant to the food system as it affects the local area?	
4. Are local citizens readily able to consult relevant municipal and other political representatives in relation to the food system as it affects the local area?	
5. Is there an active ongoing possibility for civil negotiation between groups with different interests in relation to the local food system?	
6. Can current dominant practices in the food system be legitimately contested and negotiated?	
7. Does local monitoring of public participation in decision-making result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

5. Security and Concord

General Question: How politically secure is the local food system?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. What level of food security would local people have in times of crisis?	
2. Is involvement in the local food system as a worker or consumer physically safe?	
3. To what extent does involvement by local people in the local food system contribute to their personal or familial food security?	
4. Is food grown in private and public spaces relatively protected from theft or vandalism?	
5. Does the community provide places of physical support and provision in the local area for disadvantaged locals experiencing food insecurity?	
6. Are there affordable insurance processes supporting the local food system?	
7. Does local monitoring of food insecurity result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

6. Dialogue and Reconciliation

General Question: Is meaningful dialogue possible between groups with significant political differences in relation to the local food system?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number</i> 1–9
1. Are differences of identity positively recognized in relation to food politics—including recognition of how the original inhabitants lived off the land?	
2. Are different understandings of past events and histories of conflict taken into account in relation to the local food system?	
3. Are there adequate processes—formal and informal—for handling tensions that arise between different people over food politics, distinguished by ethnic, racial, religious, class, gender or sexual difference?	
4. What levels of social trust in others exist in relation to the local food system?	
5. To what extent does publicly sharing food contribute in the local area to rituals and processes of remembrance and renewal?	
6. Is food an active part of local practices—formal and informal—for welcoming new arrivals?	
7. Does local monitoring of public dialogue about food result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

7. Ethics and Accountability

General Question: How ethically managed is the local food system?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. To what extent are food policies grounded in clearly enunciated ethical principles such as justice and fairness?	
2. Are powerful figures in the local-to-national food systems publicly accountable?	
3. Are day-to-day transactions and interactions in the local food system conducted with integrity?	
4. Do members of local communities play an active role in ensuring the ethical integrity of the local food system?	
5. Is there meaningful public debate in the local area concerning ethical principles relevant to the food system?	
6. Are there processes in place for responding consequentially to breaches in accountability in the local food system?	
7. Does local monitoring of ethics issues result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

Culture

1. Identity and Engagement

General Question: Do people in the local area respect a diversified food culture in a way that brings people together?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly	Good	Vibrant

		y	y			Satisfactory		
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<i>Particular Questions</i>	<i>Number</i> <i>1–9</i>
1. Does the local food system enable active cultural diversity across different local communities and groups?	
2. Do local people have amenable public places where they can congregate to enjoy food, providing a sense of belonging regardless of differences of identity?	
3. Is food available across a range of ethnic backgrounds, allowing all local people to appreciate the cultural diversity of their immediate region and beyond?	
4. Do community members have ready access to food that is of specific religious importance to them?	
5. Does the local food culture support friendships, personal connections and affinity groups?	
6. Does the local food culture provide a sense of place?	
7. Does local monitoring of community identity and inter-community engagement result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

2. Creativity and Recreation

General Question: How active and sustainable are creative pursuits in local food production and consumption?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number</i> <i>1–9</i>
1. Are local eating-places aesthetically attractive contexts for eating?	
2. Do local eating-places inspire people through creative cooking and presentation of food?	
3. Do local people welcome innovation in practices relating to the food culture?	
4. Are there local events that specifically relate to the celebration of food?	

5. Is there adequate provision of healthy food at or near sporting events for participants and spectators?	
6. Is healthy food a meaningful part of people's creative leisure?	
7. Does local monitoring of creative engagement with food result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

3. Memory and Projection

General Question: How well does the local area both understand its past and project visions of possible food futures?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. Are there strong traditions of food culture in the local area that respect older cultural ways?	
2. Are important heritage places for the local food system protected and preserved for the future?	
3. Are historical records kept and/or public markers erected that show the historic importance of food practices in the local area?	
4. Is there an active recognition of the original custodians of the land and their customs relating to food hunting, gathering and preparation?	
5. Is there a sense of hope for a positive future for the local food system of the area?	
6. What is the level of public discussion that actively explores possible food futures?	
7. Does local monitoring of the history of local food practices result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

4. Belief and Meaning

General Question: Do local people have a strong sense of the cultural purpose and meaning of food?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. What is the level of local understanding of the current food system?	
2. Are local people open to new ideas concerning the food system?	
3. Are decisions relating to the food system based on rational considerations?	
4. Do those people with spiritual connections to food have a comfortable place in the local culture?	
5. Does food hold symbolic significance for local people?	
6. How passionate are local people about their local food?	
7. Does local monitoring of local ideas about food result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

5. Gender and Generations

General Question: To what extent is there equal opportunity across gender and generational differences for positive engagement with food in the local area?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

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<i>Particular Questions</i>	<i>Number 1-9</i>
1. Is there a culture of equal opportunity for men, women and children to engage in the food system, both in public and private life?	
2. Is healthy eating desired as a key dimension of social life?	
3. Do members of families commonly eat their meals together as a family (where conviviality is not challenged by distractions such as television)?	
4. Does the culture support the breast-feeding of babies for the first few months of life?	
5. Is a culture of good food promoted in all childhood and youth facilities?	
6. Are persons in aged-care afforded a vibrant choice of food alternatives?	
7. Does local monitoring of food practices across gender and generations result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

6. Enquiry and Learning

General Question: How accessible and actively pursued in the local area are formal and informal learning activities relating to food?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number 1–9</i>
1. Are local people curious about food in all its manifestations, from its cultural origins to its science and technology?	
2. Is there ample opportunity for all community members to engage in deliberation and debate over ideas relevant to the food system?	
3. Are local people able to access and understand research—both formal and informal—about food and the food system?	
4. Is there active participation of all people, across gender, generation, ethnicity, and class differences, in learning about and acquiring skills for contributing to the food system?	
5. Are there local cultures of writing about food—from recipes and personal stories to philosophical and scientific writing?	
6. Is time set aside in the various education processes for considered reflection on the importance of the food system?	
7. Does local monitoring of educational practices in relation to food result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

7. Wellbeing and Health

General Question: Does food play a significant role in enhancing the general sense of wellbeing across different groups of residents?

1	2	3	4	5	6	7	8	9
Critical	Bad	Highly Unsatisfactory	Unsatisfactory	Basic	Satisfactory	Highly Satisfactory	Good	Vibrant

<i>Particular Questions</i>	<i>Number</i> 1–9
1. Do local people have a comfortable sense of bodily integrity when it comes to questions of eating?	
2. What level of knowledge do local people have regarding the importance of fresh food for one’s sense of bodily health?	
3. Is there a general understanding of the benefits of eating nutritious food for mental health?	
4. Is the provision of culturally appropriate food a normal part of the care of the sick and hospitalized?	
5. Do local people actively participate in food practices that promote personal wellbeing?	
6. Does the local area actively support a culturally rich cuisine?	
7. Does local monitoring of health practices in relation to food result in the implementation of positive strategies relevant to the local food system?	
• <i>Optional alternative question:</i>	

Appendix A. Technical Notes: Domains, Perspectives and Aspects

Defining Social Domains

Defining such fundamental terms as *economy*, *ecology*, *politics* and *culture* is extraordinarily difficult. It is not because they are *essentially contested concepts* such as ‘democracy’, ‘justice’ or ‘aesthetics’.⁷¹ Rather it because they have become taken for granted as the fields across which we walk, the basis of our understanding of our world. Everybody assumes that they know what is meant by economy or culture, and we are rarely called upon to define them. It is increasingly rare for even academics to actually try to define these basic terms. The classic text *Keywords*, for example, only explores one of these four concepts.⁷²

In summary then, the approach presented here begins with the social. For example, if positive sustainability is defined as practices and meanings of human engagement that project an ongoing life-

⁷¹ The notion of ‘essentially contested concepts’ comes from Walter Gallie, ‘Essentially Contested Concepts’, *Proceedings of the Aristotelian Society*, vol. 56, 1955, pp. 167–198.

⁷² Raymond Williams, *Keywords: A Vocabulary of Culture and Society*, Fontana/Croom Helm, Glasgow, 1976. Politics, ecology and economics do not appear in his list. The key to understanding why Williams leaves out politics, economics and ecology is that he is living in a period where, already, the vocabulary has already separated out the domain of the cultural, and his book is presented as a vocabulary of cultural concepts.

world of natural and social flourishing, then sustainability is a *social* phenomenon long before it is an economic or even just an ecological phenomenon. It is analytically possible to divide ‘the social’ into any number of domains. Social domains are dimensions of social life understood in the broadest possible sense. In this case we have chosen the minimal number of domains that are useful for giving a complex sense of the whole of social life: namely, ecology, economics, politics and culture.

Each of the subdomains constitutes a placeholder. The particular words that we use to name each of the domains are less important than the social space that the combinations of those words evoke. The ‘social domains’, as we name and define them here, are analytically derived by considering the human condition broadly across time, across different places, and across different ways of life. In practice, the four domains remain mutually constitutive.

Defining Social Domains

Taking into account the many earlier controversies over defining these concepts, here are our definitions:

Ecology

The ecological is defined as a social domain that emphasizes the practices, discourses, and material expressions that occur across the intersection between the social and the natural realms.

The ‘natural realm’ includes a spectrum of environmental conditions from the relatively untransformed to the profoundly modified. The distinction between the social realm and the natural realm, with the natural as a *context* for human action, is common in traditional (cosmological) and modern (scientific) understandings, but we are adding a further dimension. Our definition recognizes this usage but lays across both terms the important dimension of human engagement with and within nature, ranging from the built-environment to so-called ‘wilderness’ areas. This means that the ecological domain focuses on questions of social-environmental interconnection, including human impact on, and place within, the environment from the unintended consequences of living on the planet to issues of the built-environment. The ecological is thus not treated as a background context but a place of being.

Economics

The economic is defined as a social domain that emphasizes the practices, discourses, and material expressions associated with the production, use, and management of resources.

Here the concept of ‘resources’ is used in the broadest sense of that word, including in settings where resources were/are not instrumentalized or reduced to a means to other ends, including accruing exchange value. Although the domain of economics was only abstracted as a named area of social life *and* self-consciously practiced as a separate domain in the early modern period,⁷³ this definition allows it to be

⁷³ Charles Taylor provides a good summation of this process: ‘perhaps the first big shift wrought by this new idea of order, both in theory and in social imaginary, consists of coming to see our society as an “economy”, an interlocking set of activities of production, exchange and consumption, which form a system with its own laws and

used across different places and times. Questions of power are ever-present in the economic domain in relation to contested outcomes over the use of resources.

Politics

The political is defined as a social domain that emphasizes practices and meanings associated with basic issues of social power as they pertain to the organization, authorization, legitimation and regulation of a social life held-in-common.

The parameters of this area thus extend beyond the conventional sense of politics to include social relations in general. They cross the public/private divide; itself in formal terms a modern construct. The key related concept here is a ‘social life held-in-common’. While it is true that not everything that is done in the private or public realm is political just because it may have consequences for issues of the organization, authorization, legitimation and regulation of a social life held-in-common, many issues of politics bear directly on the sustainability of a city.

Culture

The cultural is defined as a social domain that emphasizes the practices, discourses, and material expressions, which, over time, express the social meaning of a life held-in-common.

In other words, culture is ‘how and why we do things around here’. The ‘how’ is how we practice materially, the ‘why’ emphasizes the meanings, the ‘we’ refers to the specificity of a life held-in-common, and ‘around here’ specifies the spatial, and also by implication the temporal particularity of culture. The concept of ‘culture’ had its beginnings in agriculture and cultivation, with subsidiary senses of ‘honour with worship’ of *cultura*, which in the sixteenth century were linked to understanding of human growth and development.⁷⁴ Questions of power are ever-present in the cultural domain in relation to contested outcomes over social meaning.

By way of background, the *Circles of Social Life* approach, developed across the period from 2007 to the present, suggests that social life should be understood holistically across these intersecting domains. This bypasses either the dominant triple-bottom-line approach or narrower carbon accounting approaches. Our alternative is intended to offer an integrated method for deciding on the critical issues associated with responding to complex problems and then acting upon them. It takes a city, community or organization through the difficult process of deciding on the terms of its approach and guides the engagement. It allows for an understanding of competing issues and tensions. It then provides continuing feedback and monitoring in relation to implementation difficulties and successful outcomes. And it supports a reporting process, including a graphic presentation of the sustainability of a city or locale (Figure 1 above).

its own dynamic. Instead of being merely the management, by those in authority, of the resources we collectively need, in household or state, the “economic” now defines a way in which we are linked together, a sphere of co-existence which could in principle suffice to itself, if only order and conflict didn’t threaten. Conceiving of the economy as a system is an achievement of eighteenth-century theory, with the Physiocrats and Adam Smith’ (*A Secular Age*, Harvard University Press, Cambridge, 2007, p. 181.

⁷⁴ Williams, *Keywords*.

The approach provides a way of achieving urban sustainability, resilience and adaptation, etc., that combines qualitative with quantitative indicators. It sets up a conceptual and technology-supported approach with guiding tools for investigating problems faced by communities, and does so in such a way as to be flexibly applicable across the very different contexts of a city, community, or organization. It is particularly sensitive to the need for negotiation from the local level to the global.

Domains, Perspectives and Aspects

Each of the social domains—ecology, economics, politics and culture—can analytically be divided in the ‘perspectives’. These perspectives were called ‘subdomains’ in an earlier stage of our thinking, but the less formalistic metaphor of perspectives works better to register the interconnected nature of any of these provisional subdivisions. It emphasizes the issue that the subdivisions are *points of view*; not categorically separate or standalone categories. For example, the cultural perspective of ‘Enquiry and Learning’ reaches out to all the other domains in relation to enquiring about economics, politics and ecology, even though we have located its primary home in the domain of culture. This can be seen graphically in the figure of the Circle of Sustainability (Figure 1). All perspectives are inter-related through the centre-point of the circle, sometimes tellingly in mathematics called ‘the origin’ of the circle’.⁷⁵ Each of the perspectives such as ‘organization and governance’ or ‘habitat and settlements’ is analytically derived using the same process that is used for working through broad considerations of the human condition to derive the four social domains.

Table 6. Social Domains and Perspectives

Economics	Ecology
<ol style="list-style-type: none"> 1. Production and Resourcing 2. Exchange and Transfer 3. Accounting and Regulation 4. Consumption and Use 5. Labour and Welfare 6. Technology and Infrastructure 	<ol style="list-style-type: none"> 1. Materials and Energy 2. Water and Air 3. Flora and Fauna 4. Habitat and Settlements 5. Built-Form and Transport 6. Embodiment and Sustenance

⁷⁵ The philosophical history of the centre-point of the circle is extraordinarily rich, and for our purposes provides a way of qualifying the modern tendency to treat geometrical ordering as a simple technical exercise. For classical Greek philosopher from Euclid to Aristotle a ‘point’ is both the most abstract and the particular of entities. The tenth-century Persian mathematician, Al-Nairzi, who wrote commentaries on Euclid and Ptolemy, responded that ‘If any one seeks to know the essence of a point, a thing more single than a line, let him, in the sensible world, think of the centre of the universe and the poles’. (Cited from the notes by Thomas L Heath, accompanying *Euclid, The Thirteen Books of the Elements*, Dover Publications, Mineola, 1956, p. 157.) For the thirteenth-century Andalusian Sufi writer, Ibn Arabi, the centre point of a circle is the point of ‘necessary being’ while the circumference is the circle of ‘possible’ or contingent existence. ‘The “possible” is the space between the point of the real and the circumference’. (Cited from Mohamed Haj Yousef, *Ibn Arabi: Time and Cosmology*, Routledge, Abington, 2008, p. 120.

7. Wealth and Distribution	7. Emission and Waste
Politics <ol style="list-style-type: none"> 1. Organization and Governance 2. Law and Justice 3. Communication and Critique 4. Representation and Negotiation 5. Security and Accord 6. Dialogue and Reconciliation 7. Ethics and Accountability 	Culture <ol style="list-style-type: none"> 1. Identity and Engagement 2. Creativity and Recreation 3. Memory and Projection 4. Belief and Meaning 5. Gender and Generations 6. Enquiry and Learning 7. Wellbeing and Health

Perspectives and Aspects

Each of the *perspectives* is divided in seven *aspects*. The rationale for this is to generate a finer assessment process. While the figure of the circle, coloured according to levels of sustainability (Figure 1), gives a simple graphic representation of the outcome of an assessment process, there are a series of background considerations that need to be brought to the fore.

A primary consideration involves having a way of assessing why, from a particular perspective, a city or locale is judged to have a certain level of sustainability. In the background to the graphic circle are sets of questions linked to social indicators. To decide systematically on what is a good range of questions the ‘Circles of Sustainability’ approach entails analytical dividing the perspectives into different aspects. For example, one aspect of the economic perspective of ‘production and resourcing’ is ‘manufacture and fabrication’.

All of this is laid out below. See Table 7 on the next page.

Table 7. Summary of the Matrix of the Profile Processes

Domains	Perspectives	Aspects
<p>Ecology</p> <p><i>The ecological domain is defined as the practices, discourses, and material expressions that occur across the intersection between the social and the natural realms, focussing on the important dimension of human engagement with and within nature, ranging from the built-environment to the 'wilderness'.</i></p>	<p>1. Materials and Energy</p>	<p>1. Availability and Abundance</p> <p>2. Soil and Fertility</p> <p>3. Basic Materials and Metals</p> <p>4. Electricity and Gas</p> <p>5. Petroleum and Biofuels</p> <p>6. Renewables and Recyclables</p> <p>7. Monitoring and Reflection</p>
	<p>2. Water and Air</p>	<p>1. Vitality and Viability</p> <p>2. Water Quality and Potability</p> <p>3. Air Quality and Respiration</p> <p>4. Climate and Temperature</p> <p>5. Greenhouse Gases and Carbon</p> <p>6. Adaptation and Mitigation Processes</p> <p>7. Monitoring and Reflection</p>
	<p>3. Flora and Fauna</p>	<p>1. Complexity and Resilience</p> <p>2. Biodiversity and Ecosystem Diversity</p> <p>3. Plants and Insects</p> <p>4. Trees and Shrubs</p> <p>5. Wild Animals and Birds</p> <p>6. Domestic Animals and Species Relations</p> <p>7. Monitoring and Reflection</p>
	<p>4. Habitat and Settlements</p>	<p>1. Topography and Liveability</p> <p>2. Original Habitat and Native Vegetation</p> <p>3. Parklands and Reserves</p> <p>4. Land-use and Building</p> <p>5. Abode and Housing</p>

		6. Maintenance and Retrofitting
		7. Monitoring and Reflection
	5. Built-Form and Transport	1. Orientation and Spread
		2. Proximity and Access
		3. Mass Transit and Public Transport
		4. Motorized Transport and Roads
		5. Non-motorized Transport and Walking Paths
		6. Seaports and Airports
		7. Monitoring and Reflection
	6. Embodiment and Sustenance	1. Physical Health and Vitality
		2. Reproduction and Mortality
		3. Exercise and Fitness
		4. Hygiene and Diet
		5. Nutrition and Freshness
		6. Agriculture and Husbandry
		7. Monitoring and Evaluation
	7. Emission and Waste	1. Pollution and Contamination
		2. Hard-waste and Rubbish
		3. Sewerage and Sanitation
		4. Drainage and Effluence
		5. Processing and Composting
6. Recycling and Re-use		
7. Monitoring and Evaluation		

Economics	1. Production and Resourcing	1. Prosperity and Resilience
		2. Manufacture and Fabrication
		3. Extraction and Harvesting

<i>Defined as the practices, discourses, and material expressions associated with the production, use, and management of resources</i>		4. Art and Craft
		5. Design and Innovation
		6. Human and Physical Resources
		7. Monitoring and Reflection
	2. Exchange and Transfer	1. Reciprocity and Mutuality
		2. Goods and Services
		3. Finance and Taxes
		4. Trade and Tourism
		5. Aid and Remittances
		6. Debt and Liability
		7. Monitoring and Reflection
	3. Accounting and Regulation	1. Transparency and Fairness
		2. Finance and Money
		3. Goods and Services
		4. Land and Property
		5. Labour and Employment
		6. Taxes and Levies
		7. Monitoring and Reflection
	4. Consumption and Use	1. Appropriate Use and Re-use
		2. Food and Drink
		3. Goods and Services
		4. Water and Electricity
		5. Petroleum and Minerals
		6. Promotion and Dissemination
		7. Monitoring and Reflection
	5. Labour and Welfare	1. Livelihoods and Work
		2. Connection and Vocation
		3. Participation and Equity
	4. Capacity and Productivity	

		5. Health and Safety
		6. Care and Support
		7. Monitoring and Reflection
	6. Technology and Infrastructure	1. Appropriateness and Robustness
		2. Communications and Information
		3. Transport and Movement
		4. Construction and Building
		5. Education and Training
		6. Medicine and Health Treatment
		7. Monitoring and Reflection
	7. Wealth and Distribution	1. Accumulation and Mobilization
		2. Social Wealth and Heritage
		3. Wages and Income
		4. Housing and Subsistence
5. Equity and Inclusion		
6. Re-distribution and Apportionment		
7. Monitoring and Reflection		

<p>Politics</p> <p><i>Defined as the practices, discourses, and material expressions associated with basic issues of social power, such as organization, authorization and, legitimation.</i></p>	1. Organization and Governance	1. Legitimacy and Respect
		2. Leadership and Agency
		3. Planning and Vision
		4. Administration and Bureaucracy
		5. Authority and Sovereignty
		6. Transparency and Clarity
		7. Monitoring and Reflection
	2. Law and Justice	1. Rights and Rules
		2. Order and Civility
		3. Obligations and Responsibilities
		4. Impartiality and Equality
		5. Fairness and Prudence
		6. Judgement and Penalty
		7. Monitoring and Reflection
	3. Communication and Critique	1. Interchange and Expression
		2. News and Information
		3. Accessibility and Openness
		4. Opinion and Analysis
		5. Dissent and Protest
		6. Privacy and Respect
		7. Monitoring and Reflection
	4. Representation and Negotiation	1. Agency and Advocacy
		2. Participation and Inclusion
		3. Democracy and Liberty
		4. Access and Consultation
		5. Civility and Comity
		6. Contestation and Standing
		7. Monitoring and Reflection

	5. Security and Accord	1. Human Security and Defence
		2. Safety and Support
		3. Personal and Domestic Security
		4. Protection and Shelter
		5. Refuge and Sanctuary
		6. Insurance and Assurance
		7. Monitoring and Reflection
	6. Dialogue and Reconciliation	1. Process and Recognition
		2. Truth and Verity
		3. Mediation and Intercession
		4. Trust and Faith
		5. Remembrance and Redemption
		6. Reception and Hospitality
		7. Monitoring and Evaluation
	7. Ethics and Accountability	1. Principles and Protocols
		2. Obligation and Responsibility
		3. Integrity and Virtue
		4. Observance and Visibility
		5. Prescription and Contention
		6. Acquittal and Consequence
		7. Monitoring and Reflection

<p>Culture</p> <p><i>Defined as the practices, discourses, and material expressions, which, over time, express continuities and discontinuities of social meaning</i></p>	1. Identity and Engagement	1. Diversity and Difference
		2. Belonging and Community
		3. Ethnicity and Language
		4. Religion and Faith
		5. Friendship and Affinity
		6. Home and Place
		7. Monitoring and Reflection
	2. Creativity and Recreation	1. Aesthetics and Design
		2. Performance and Representation
		3. Innovation and Adaptation
		4. Celebrations and Festivals
		5. Sport and Play
		6. Leisure and Relaxation
		7. Monitoring and Reflection
	3. Memory and Projection	1. Tradition and Authenticity
		2. Heritage and Inheritance
		3. History and Records
		4. Indigeneity and Custom
		5. Imagination and Hope
		6. Inspiration and Vision
		7. Monitoring and Reflection
	4. Belief and Meaning	1. Knowledge and Interpretation
		2. Ideas and Ideologies
		3. Reason and Rationalization
		4. Religiosity and Spirituality
		5. Rituals and Symbols
		6. Emotions and Passions
		7. Monitoring and Reflection

	5. Gender and Generations	1. Equality and Respect
		2. Sexuality and Desire
		3. Family and Kinship
		4. Birth and Babyhood
		5. Childhood and Youth
		6. Mortality and Care
		7. Monitoring and Reflection
	6. Enquiry and Learning	1. Curiosity and Discovery
		2. Deliberation and Debate
		3. Research and Application
		4. Teaching and Training
		5. Writing and Codification
		6. Meditation and Reflexivity
		7. Monitoring and Reflection
	7. Wellbeing and Health	1. Integrity and Autonomy
		2. Bodies and Corporeal Knowledge
		3. Mental Health and Pleasure
		4. Care and Comfort
		5. Inclusion and Participation
		6. Cuisine and Nourishment
		7. Monitoring and Reflection

The approach is based on a three driving concerns:

1. It should be principled and linked to contested and negotiated normative concerns about how we should live;
2. It should be based on processes that facilitate reflexive learning; and
3. It should be practical, issue-driven, locally adaptable and tied to outcomes.

Within those driving concerns, the method aims to have the following features:

- *Accessible* — At one level, the approach should be readily interpretable to non-experts, but at deeper levels it needs to be methodologically sophisticated enough to stand up against the scrutiny of experts in assessment, monitoring and evaluation and project management tools;
- *Graphic* —The approach needs to be simple in its graphic presentation and top-level description, but simultaneously have consistent principles carrying through to its lower, more complex, and detailed levels;
- *Cross-locale* —The approach needs on the one hand to be sufficiently general and high-level to work across a diverse range of cities and localities, big and small, but at the same time sufficiently flexible to be used to capture the detailed specificity of each of those different places;
- *Learning-based* —The approach should allow cities to learn from other cities, and provide support and principles for exchange of knowledge and learning from practice;
- *Comparable* —The approach should allow comparison between cities, but not locate them in a league table or hierarchy;
- *Tool-generating* —The approach needs to provide the basis for developing a series of tools—including web-based electronic tools (compatible with various information and communications technology platforms). These range from very simple learning tools to more complex planning, assessment, and monitoring tools;
- *Indicator-generating*—The approach needs to provide guidance for selecting indicators as well as methods for assessing their outcomes;
- *Relational* — The approach needs to focus not only on identification of critical issues, indicators that relate to those critical issues, but also the relationships between them;
- *Cross-domain* — The approach needs to be compatible with new developments that bring ‘culture’ in serious contention in sustainability analysis—such as the United Cities and Local Governments four pillars of sustainability. The approach therefore uses a domain-based model which emphasizes interconnectivity of economic, ecological, political, and cultural dimensions, each of which are treated as social domains;
- *Participatory* — Even if it is framed by a set of global protocols, the approach needs to be driven by stakeholders and communities of practice;
- *Cross-supported* — The approach needs to straddle the qualitative/quantitative divide, and uses just enough quantification to allow for identification of conflicts.
- *Standards-oriented* — The approach (and its methods) should connect to current and emerging reporting and modelling standards.

- *Curriculum-oriented*—The approach needs to be broad enough to provide guidance for curriculum development, and therefore useful for training.

Appendix B. Comprehensive Assessment Exercise, I

A Comprehensive ‘Urban Social Profile’ builds upon the questionnaire above and is intended as an interpretative description of a city or urban area and its immediate hinterland in relation to local, national, and global processes. It has two aspects:

- A narrative essay of the city and its sustainability
- A graphic representation of the sustainability profile of the city

The Urban Social Profile essay will be used alongside the ‘Urban Project Profile’ (see the associated Urban Project Profile template) to highlight the uniqueness of each city and to provide a background to its sustainability. Each finalized written profile will appear on the UN Cities Programme website.

The style of the writing should be clear and discursive. It should be written as a detailed and interesting introduction to the city while avoiding the style of a tourist brochure. In other words, the profile is not intended to extol the virtues of the city as much as paint a bold picture, qualified by care about analytical connections, attention to local nuances, and rendering of idiosyncratic colour. We want to know what it means to live in the city, and therefore the profile will need to recognize local differences. We want the profiles to be critically interpretative without being awkwardly judgemental. They should seek to understand the sustainability of the city—including questions of liveability, resilience, and vibrancy—across the domains of economics, ecology, politics and culture.

- The essay will be refereed, reviewed and edited by an experienced writer or writers with knowledge of the city. That editor may write into your profiles and add more material, but any changes will be checked with the original author(s) before publication. That editor, depending on the level of contribution, might become named as a co-author of the essay;
- Authorship will be acknowledged;
- As with most United Nations reports, authorship will rarely be singular. The list of authors will include the names of those who have made a significant contribution to the final writing of the profile, with the authors of each version noted. In other words, additional authors may be added over time to write a more developed version. This will require consultation with the original authors, but not necessarily their agreement. If the Executive of the Cities Programme invite them, and they agree to be part of the new negotiated version, then they will be added as current authors. Otherwise, they will be acknowledged as authors of a previous draft.
- The inclusion of citations and references to other existing publications is encouraged, as is a bibliography. (A style-guide is available for referencing and bibliography); and
- The overall word length of the city-profile essay can vary, but we suggest something between 3,000 and 8,000 words.

The template is intended as helpful guides rather than a set of strictures, but please keep to it as much as possible to allow for comparability across the essays.

The entry will appear in the following form on the UN Cities Programme website:

1. Urban Area (Name of the metropolis, city, town, village or urban region in question)

2. Country (Name of the nation-state in which the urban area is located)

3. Urban Area in Brief (A brief ‘headline’ description of the urban area—a paragraph describing the basic nature of the area, its history, and its place within the country and region, etc.)

4. Urban Social Profile (The Profile is organized around themes and domains that ideally should become the sub-headings of the report. It should be noted that these themes and domains include the four domains of the ‘Circles of Sustainability’ method to developing a comprehensive understanding of sustainability issues and for selecting indicators. The task of writing the Urban Profile essay can thus be aligned with setting up the indicators of sustainability in the city.)

Table 8. Summary of the Structure of the Comprehensive Urban Profile

	Introductory Themes	Possible issues to consider	Word count
Introduction	Urban Environment	<ul style="list-style-type: none"> • Location and size of the city • Neighbouring/regional cities 	200–1,000

		<ul style="list-style-type: none"> • Terrain and climate • Natural resources <ul style="list-style-type: none"> • Land-tenure system 	
	Demography	<ul style="list-style-type: none"> • Demographic profile and population trends • Global movements of people, including migrants, refugees, tourists etc. • Main languages spoken in the city 	
	Past and Present	<ul style="list-style-type: none"> • Changes across the history of the city, including the place of the city in global changes—e.g., colonial history if relevant; place in global events and processes 	
Domains	Subdomains	Possible issues to consider	
Ecology	<ul style="list-style-type: none"> • Materials and Energy • Water and Air • Flora and Fauna • Habitat and Settlements • Built-form and Transport • Embodiment and Sustenance • Emission and Waste 	<ul style="list-style-type: none"> • Sources of energy, food, other materials • Climate change and urban adaptation • Parks and gardens in the city; trees • Habitat destruction; land-use • Urban spatial form, mobility, access • Physical human health, nutrition • Pollution, recycling and waste disposal 	500-5,000
Economics	<ul style="list-style-type: none"> • Production and Resourcing • Exchange and Transfer • Accounting and Regulation • Consumption and Use • Labour and Welfare • Technology and Infrastructure • Wealth and Distribution 	<ul style="list-style-type: none"> • Industry and commerce; resources • Money; trade in goods and services • Regulatory systems • Consumption patterns; use of goods • Labour markets; economic provision • High-tech to low-level technologies • Poverty; unemployment; slums; inequality 	500–5,000
Politics	<ul style="list-style-type: none"> • Organization and Governance • Law and Justice • Communication and Critique 	<ul style="list-style-type: none"> • Legitimacy, current system of governance • Legal system; political justice, order • The press, media, news; dissent, protest 	500–5,000

	<ul style="list-style-type: none"> • Representation and Negotiation • Security and Accord • Dialogue and Reconciliation • Ethics and Accountability 	<ul style="list-style-type: none"> • Participation by citizens, voting; civility • Political tensions; military presence • Customary rights; Truth Commissions • Corruption issues; public ethics 	
Culture	<ul style="list-style-type: none"> • Identity and Engagement • Creativity and Recreation • Memory and Projection • Belief and Meaning • Gender and Generations • Enquiry and Learning • Wellbeing and Health 	<ul style="list-style-type: none"> • Ethnicities; identities; public engagement • Celebrations; events and rituals • Indigenous history; museums; monuments • Religions and spiritualities; ideologies • Gender relations; family life; generations • Education and training systems • Health and medical systems; mental health 	500–5,000

The table on the previous page (Table 8) is intended as a template for writing the Urban Profile. However, if it is more helpful to have the same framework of themes and subthemes elaborated a little and expressed as a series of questions then the following list may be useful as a supplement. The questions are only indicative of the many possible questions that might fall under the different perspectives. There is no expectation that researchers/respondents will be able to answer them all.

Basic Urban Profile

Introduction

Geography

- What is the physical location of the city within the overall state territory?
- What is the geographical area of the city (in square kilometres for the area of continuous built-up and/or area of metropolitan municipality or regional authority jurisdiction)?
- What is the relation of the city to other relevant urban or provincial centres?
- What is the terrain and climate of the region in which the city is located?
- Are there any geographical or environmental constraints to urban growth?
- What is the relation of the city to its hinterland, including access to basic natural resources such as food and water, energy, etc.?
- What is the land-tenure system in the city and its immediate hinterlands (for example, property rights, proportion of state-owned, privately-owned and customary land)?

Demographics

- What is the total population of the greater metropolis at its most recent count (daytime/ night-time)?
- What are the population trends of the greater metropolis (e.g., 1990, 2000, projected growth to 2030)?
- Are there significant movements of people through the city such as migrants, refugees, and tourists?
- Where in the city do new inhabitants tend to settle?
- What are the main languages spoken in the city and what percentages of people speak those languages as their primary or secondary language?

History

- What major changes have occurred across the history of the city, including the place of the city in global changes, (e.g., colonial to postcolonial history)?
- What is the history of the city in relation global and regional movements of people?

- What major global events and processes (e.g., Hurricane Katrina, fall of the Berlin Wall, etc.) have most significantly informed the nature of the city across recent history?

Thereafter the questions inside each of the domains (see the 'Urban Profile Questionnaire' above) can be used to guide the writing.

Notes

* The *Profile Process for Food* was developed by the Food Alliance, a Melbourne-based group. The core individuals involved in drafting the profile were Robert Aitkenhead, Kate Archdeacon, Lucy Gaylard, Paul James, Julia Laidlaw, Kathy McConell, Di McGrath, Nick Rose, Harin de Soysa, and Zainil Zainuddin. *Circles of Food* is part of the more comprehensive *Circles of Social Life* approach. There were numerous consultants involved in setting up this broader method. For Metropolis, the Framework Taskforce comprised Paul James (Melbourne), Barbara Berninger and Michael Abraham (Berlin); Tim Campbell (San Francisco), Emile Daho (Abidjan), Sunil Dubey (Sydney), Jan Erasmus (Johannesburg), Jane McCrae (Vancouver), and Om Prakesh Mathur and Usha Raghupathi (New Delhi). In Australia, we would particularly need to acknowledge Peter Christoff, Robin Eckersley, Mary Lewin, Howard Nielsen, Christine Oakley, and Stephanie Trigg. In Brazil helpful responses came from Eduardo Manoel Araujo (UN Cities Programme Advisor), Luiz Berlim, Marcia Maina, Luciano Planco and Paulo Cesar Rink. In the United States important suggestions for reworking came from Jyoti Hosagrahar (New York) and Giovanni Circella (Davis, California). The Cities Programme Working Group which worked to develop the matrix comprised Paul James, Liam Magee, Martin Mulligan, Andy Scerri, John Smithies and Manfred Steger with others.

