Securing the Future

Responding to climate change, peak oil and food scarcity

MANNINGHAM

July 2012
Adaptation Plan

MESSAGE FROM THE MAYOR

Securing the future together

Our vision for Manningham is for a vibrant, safe and sustainable community now and into the future.

Over the coming decades our City and in fact the entire planet are going to be faced with a range of complex physical, environmental and financial challenges.

As a community we will be operating in an era characterised by fluctuating revenue and rising costs of materials, fuels and utilities and extreme weather events such as bushfires, storms, heatwaves and the potential for food scarcity.

Neither Council nor the community can meet these challenges on their own, so in order to secure our future we must work together to provide resources for appropriate self sufficiency within our homes and communities.

For Council to ensure continuity of services into the future we must plan for likely scenarios and minimising the risk to the community.

Many households may also choose to develop their own risk management and contingency plans, similar to those prepared in rural areas as part of bushfire planning. To be truly successful in securing the future, we will all be called upon to move beyond risk management and in many ways we may have to look 'back to the future' for the solutions.

In future decades as a community, we will need to work together to become more resourceful and resilient.

In fact the secure future we are hoping for may look very familiar and be just like the 'good old days' when we grew our own food, either in backyards or on local farms, then prepared it nearby.

As in those times, thinking local may provide most of what we need through local manufacture and services that are within walking, cycling or easy commuting distance − although now we have super smart technologies to help it all run more effectively.

The Securing the Future Adaptation Plan will support us in our transition as we work together to secure our future and meet the challenges of climate change, peak oil and food scarcity.

GEOFF GOUGH
Mayor

EXECUTIVE SUMMARY

We are living in times of great world change – where, in the future, the issues of climate change, peak oil and resulting food scarcity will impact significantly on our way of life.

Climate change, a significant global issue, is resulting in long-term changes to weather patterns. For current and future generations climate change will affect health, the economy and the environment (including biodiversity). It will impact global and local economies, social behaviour, health and well being, infrastructure, agriculture, our ability to grow food and more. The effects of climate change are already being felt in Victoria and other Australian states through increasing occurrence of extreme weather events such as drought, floods, heatwaves, severe storms and bushfires.

The term 'peak oil' refers to the point in time when the global production of conventional oil peaks, before it starts to decline. After conventional oil production has peaked, petrol and petroleum products will become increasingly expensive as demand outstrips supply. It is now known that the world's oil production peaked during 2006 and is now declining.

A vital part of our modern lifestyle, oil is used as fuel for transport and food production, to operate machinery and to produce many essential products, such as medicines, plastics, fabrics, paint and more. Manningham, with its heavy reliance on cars for transport, is quite vulnerable to the impacts of peak oil.

Food scarcity refers to the decreased availability of food and increasing food prices as a result of both climate change and peak oil. Australia is already experiencing some examples of food scarcity with the loss of crops from severe floods, drought and storm damage.

The challenges of climate change and peak oil, and the likelihood of food scarcity will impact significantly on Council's ability to continue to deliver services, ranging from health and aged care to emergency services, building and infrastructure maintenance.

The 'Securing the Future Adaptation Plan' will guide Council's response to the interacting issues of climate change, peak oil and food security. It explores the likely impacts on Council service delivery and the vulnerability of Manningham residents to each of these factors and provides an action plan to prepare the community for the challenges ahead.

The vision of the Adaptation Plan is Council and community securing the future together. The guiding principles of the plan are resourcing, relocalising and responding, to enable service continuity, growing resilience and leadership.

The goals of the plan include risk management, knowledge and advocacy, connecting and integrating, transition and innovation, empowering communities and responsive governance.

The strategies of the plan address elements of leadership, resilient communities, public health and wellbeing, environment, food security, local economy, mobility and transport, resilient city and responsive governance.

The objectives, actions and principles outlined in the Securing the Future Adaption Plan provide a long term vision and guide for responding to climate change, peak oil and food scarcity in Manningham.

CONTENTS

BEGINNINGS

1   OVERVIEW

This section first describes the questions that were asked in preparing the Securing the Future Adaptation Plan (Adaptation Plan). It then sets out the goals of the plan, the research and experience that informed its development, and the Strategic Framework that was created to fulfil the plan.

1.1   The questions

In preparing the Adaptation Plan, Council sought to address the following questions:

a)   In regard to Council service delivery and operations, how can Council ensure business continuity:

- in the short-term during disruptive events such as extreme storms, bushfire, power failures or a sudden interruption and severe reduction in oil and food supplies?

- in the longer term in the face of competing demands for potentially scarce resources; for example, a growth in demand for services accompanied by a decline in rates?

b)   How do we plan our city to meet future challenges better?

c)   How can Council and the community work together to make the transition to a secure future?

These questions touched upon:

- Community
- Council
- Planning for where we live
- Our infrastructure, services and assets
- Local economy – supplying the essentials, and employment
- Mobility – how we get from place to place
- Regional planning, action and response.

1.2   The goals

The goals for the Adaptation Plan are:

Risk management and assessment
Adopt an organisation-wide risk management approach that is firmly embedded within Manningham's existing Risk Management System.

Knowledge and advocacy
Know what Council can do to find solutions, seek assistance where there are gaps in knowledge, skills and resources, and actively influence external circumstances.

Connecting and integrating
Engage all Council and community stakeholders in working together to create and implement solutions to complex problems.

Transition and innovation
Acknowledge that business-as-usual is no longer a viable option and develop new and innovative approaches that increase adaptive capacity and build resilience.

Empowering communities
Engage communities in decision-making, particularly through the Communities in Transition program (CACiT), to realise the Generation 2030 Community Plan vision.

Responsive governance
Utilise and build on Council's governance structure, which engages and responds to communities. Decisions and actions by Council and officers will now take into consideration climate change, peak oil and food scarcity.

1.3   The research and experience

The Adaptation Plan addresses both community resilience and service continuity for Council.

1.3.1 Community

The elements of the Adaptation Plan relating to our diverse communities were informed by:

- The outcomes of the Generation 2030 Community Plan consultation process, which was being undertaken at the same time

- The experiences and learning gained through the CACiT program delivered through the Municipal Association of Victoria (MAV)

- Knowledge gained through many years delivering community education

- Strategic Plans and initiatives by Council that 'plan for where we live' across all disciplines including strategic resources (human and financial), public health and wellbeing, transport, urban development, climate, energy, water, asset management, municipal emergency planning, business continuity, economic development and the natural environment.

1.3.2 Council operations and service delivery

In developing the elements of the Adaptation Plan relating to Council operations and services, a participative action planning approach was adopted. This:

- engaged all stakeholders – from Councillors, directors and service unit managers to officers

- adopted a risk management approach

- incorporated a scenario-planning approach.

1.4   The strategic framework – a road map

Figure 1: Strategic framework for 'securing the future together'
A simple Strategic Framework – a road map developed to assist in taking this journey. It offers a long term vision, some simple guiding principles, objectives and roles for the way forward.

1.5   Vision

'Securing the future together' is the long term vision created to help Council and the community navigate safely through turbulent times ahead.

1.5.1   Guiding principles – 3 RRRs

Resourcing
Providing the necessary inputs and resources for human settlement, either locally or regionally. These resources include knowledge, skills and ingenuity, materials, food, housing, transport and utilities (energy, water, communications, waste and sewerage).

Relocalising
Re-designing urban systems and processes so that essential human needs can be met locally or regionally.

Responding
Increasing our 'response-ability' to make wise decisions and take effective action. This means anticipating the future; for example, through scenario planning, and ensuring that we have the human and financial capacity as well as adequate natural resources to respond.

1.5.2   Three objectives

Leadership – Council and the community lead the way as we make the transition together

Service continuity – for Council and business

Growing resilience – through the 3 RRRs, resourcing, relocalising and responding.

1.5.3   Council implementation roles

Council is to adopt the Goals of the Adaptation Plan (as described in Section 1.2) as appropriate implementation roles.

1.5.4   Strategies and actions

A number of strategies were identified that support the transition to a more resilient community and municipality. Actions and priorities to fulfil these strategies were also identified. These strategies and actions are set out in detail in Section 7, as the culmination of the Adaptation Plan. The complete set of actions identified to fulfil the plan is contained in Appendix 1.

2   TURBULENT TIMES

This section describes the intersecting impacts of climate change, peak oil and food scarcity in general – on our lives, economy, and the world in which we live.

> ***2 degree global warming budget 50% spent***
>
> *'To have a 50:50 chance of keeping human-induced average global warming below 2° C, it will be necessary to stop almost all CO_2 emissions before cumulative emissions reach one trillion tonnes of carbon. The world has already emitted more than half of this quota since the industrial revolution, and (at current growth rates for CO_2 emissions) the rest will be emitted by the middle of this century.*
>
> *'Climate change is a risk management issue – the longer we take to act and the weaker our actions, the greater the risk of dangerous outcomes.'*
>
> *Michael Raupach and Paul Fraser - CSIRO Marine and Atmospheric Research*

2.1   Climate change

Simply put, climate change is a significant and lasting change in weather patterns.

Climate change will affect health, the economy and the environment (including biodiversity) for current and future generations. It will affect global and local economies, social behaviour, health and wellbeing, infrastructure, agriculture and our ability to grow food, as well as other aspects of human existence. Changes are likely to develop gradually but could be abrupt. The effects of climate change are already being felt in Victoria and other Australian states through increasing occurrence of extreme weather events such as drought, floods, heatwaves, severe storms and bushfires.

In Melbourne the number of days over 35°C will increase from an average of nine days in 2008 to 12 days in 2030.

Projected number of days over 35°C for Melbourne

2008	2030	2070	2100
9 days	12 days	21 days	27 days

(Source: Climate Commission, 2011, *The Critical Decade: Climate Change and Health)*

2.2 Peak oil

The term 'peak oil' describes the point in time when the global production of conventional oil peaks before it starts to decline. After conventional oil production has peaked, petrol and petroleum products will become increasingly expensive as demand outstrips supply. In December 2010 the International Energy Agency announced that conventional oil (easy-to-reach and low-cost production) peaked in 2006.

Oil is a vital part of our modern lifestyle. Beyond its obvious use as a liquid fuel for transport such as cars, buses, trucks, motorbikes, ships and planes, oil is used for:

- Food production in the form of synthetic fertilisers, farm machinery, packaging, distribution and cooking

- The production of plastics, lubricants, synthetic fibres, fabrics, detergents, solvents and paint thinners

- The production of chemical bases for medicines, cosmetics and pharmaceutical products.
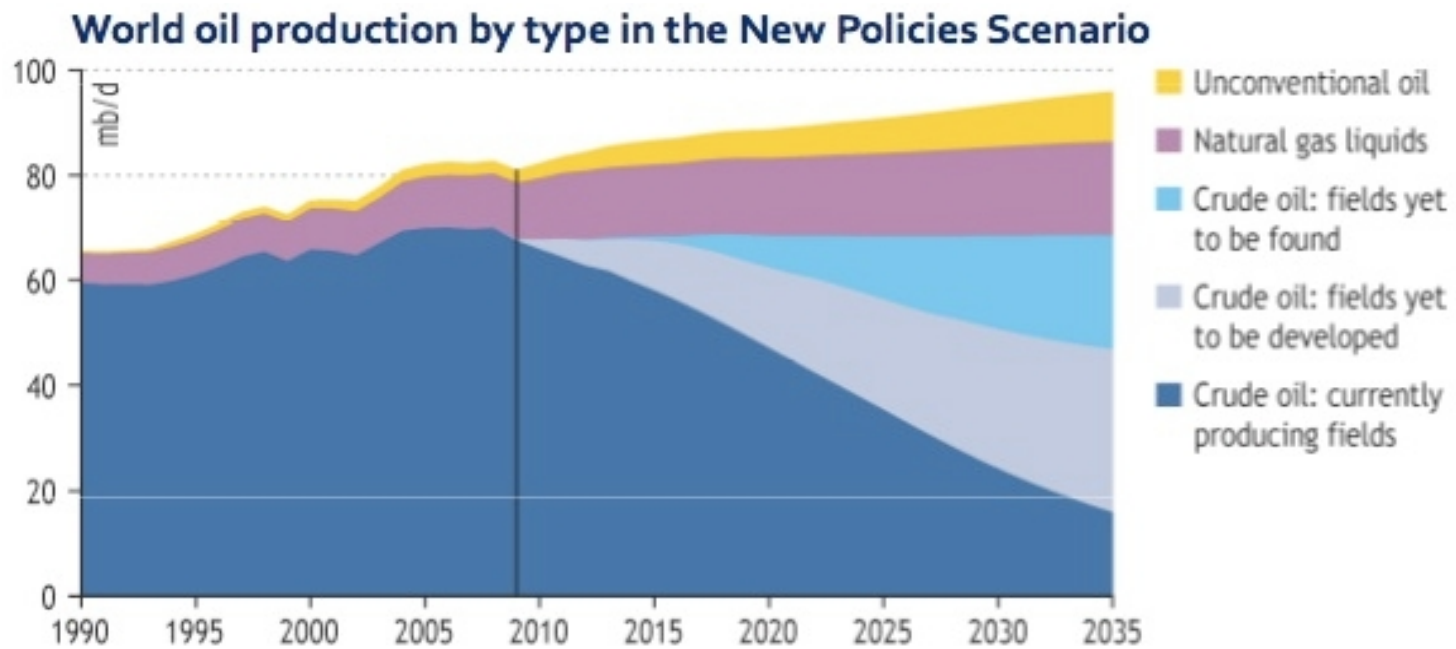
Figure 2: International Energy Agency 2010 prediction of future oil production

2.3   Food security and scarcity

Food security is closely linked to the economic and social health of nations, societies and individuals. As is the case in other industrialised countries, food security has recently been identified as an emerging issue in Australia for the following reasons:

- Rainfall in south eastern Australia is declining due to climate change, which produces significantly lower crop yields

- Extreme storms and floods are producing significant losses in the yields that are left

- Climate change will lead to the spread of agricultural pests and diseases into new areas

- Many of the world's fish stocks are fully exploited or overexploited due to a combination of factors including the increasing global human population

- Food is becoming scarcer and more expensive.

Many researchers believe that sustainable food production is *the* global scientific challenge of our era − more urgent even than the related problem of global warming. They believe that the food security of everyone in the world is endangered by global problems that face us today and potentially in the future.

The consequences of climate change and peak oil will result in higher prices for food as well as less plentiful and less varied food supplies. Australia as the driest inhabited continent on earth and as a net importer of oil is vulnerable to food scarcity.

What is food security?

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. It includes:

- *Adequacy of food supply and availability*

- *Stability of supply, without fluctuations or shortages from season to season or year to year*

- *Accessibility and affordability of food*

- *Quality and safety of food.*

Food & Agriculture Organisation

2.4   Oil and food prices, economic volatility and social unrest

Oil and food prices, economic volatility and social unrest are tightly interlinked.

Every step of modern food production is powered by fossil fuels and petrochemicals. Accordingly, oil and food prices are highly correlated (see Figure 3).

It is not only food prices that are linked to the price of oil. Economic volatility and social unrest are closely entrained with oil.

Rising food prices, crowned by a recent record high spike, played a role in triggering the social unrest that in 2011 spread from Tunisia to Egypt and beyond. Although most residents of rich countries can currently absorb higher food costs without much hardship, residents of poorer countries, especially those living in major urban areas such as Cairo, cannot do so. Higher food prices represent immediate threats to their health and in some cases their lives, especially those of the very young and the elderly.

The economic prosperity experienced by rich countries is underpinned by an industrial revolution largely fuelled by cheap, plentiful conventional oil. But what happens when oil is no longer cheap and plentiful?

In July 2008, the price of oil reached $US147 per barrel, an all-time high. The 'global financial crisis' occurred two months later in September 2008. Many observers believe that the increased fuel price was enough to tip mortgage-stressed homeowners in the United States into defaulting on their loans.

The well-regarded economic commentator Jeremy Rifkin said, 'We now know at what price oil will trigger economic meltdown. At $US147 per barrel, the old industrial engine stalled!'
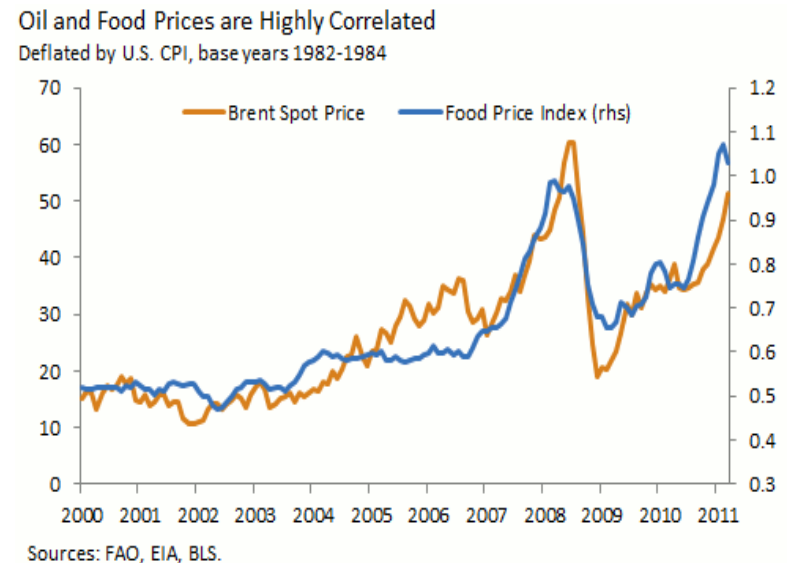
Figure 3: Oil and food prices are highly correlated
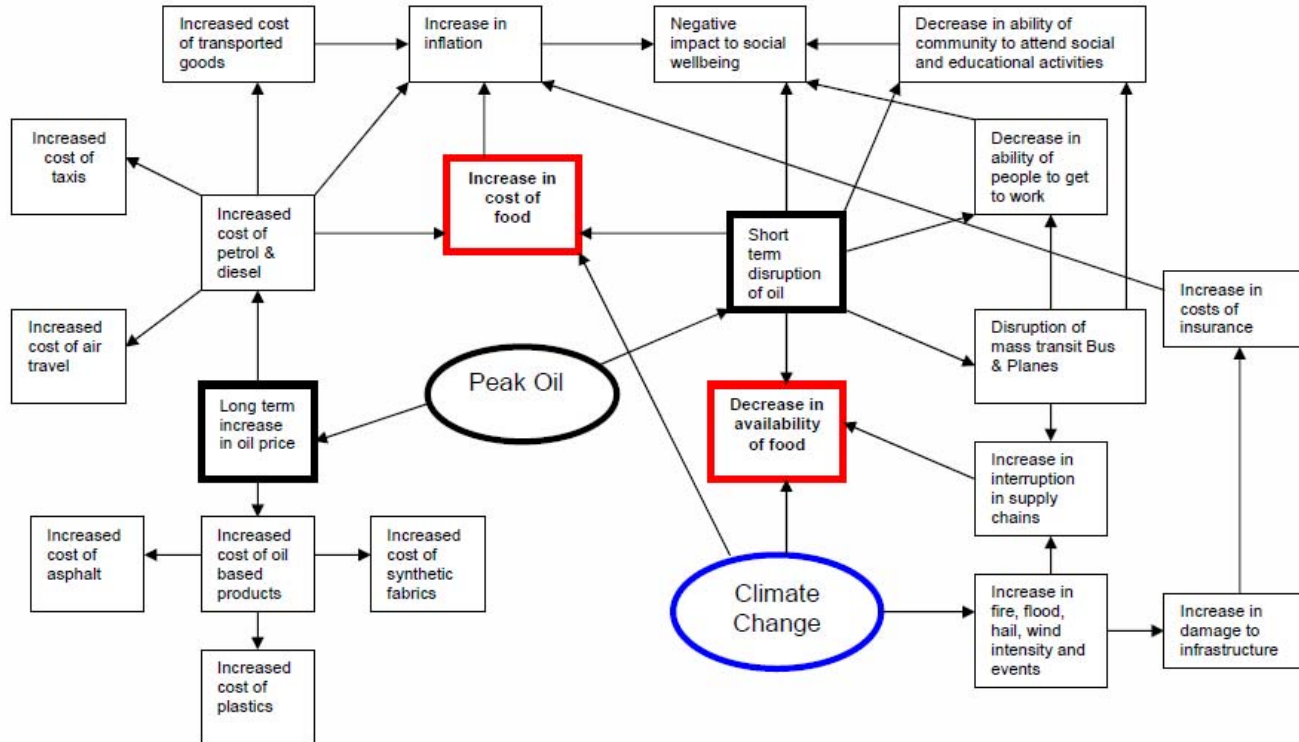
Figure 4: Inter-relationships between impacts of peak oil, climate change and food scarcity
(Source: Adapted from figure in Whitehorse Peak Oil Action Plan 2011)

Figure 4 above shows the effects of and the interrelationships between the risks posed by climate change, peak oil and food scarcity. As indicated, a solution for one issue can have a positive impact on another issue.

For maximum benefit, these three major risks should be considered together when determining actions, to ensure that optimum outcomes are achieved.

VULNERABILITY

3 MANNINGHAM'S VULNERABILITIES

This section considers aspects of life in Manningham that may be vulnerable to climate change, peak oil and food scarcity: our lifestyles, our homes, the city in which we live, the economy and how we get about.

It starts with a review of who we are, our travel patterns and our city, and then assesses Manningham's vulnerability. The main issues are:

- Income, housing and ageing
- Where Manningham residents work
- Manningham's high car ownership and car dependency
- Public transport
- Impacts and vulnerability assessment – peak oil mortgage stress and inflation.

3.1 Income, housing and ageing

While the community of Manningham is comparatively affluent, there are still many householders who have to watch their weekly budgets. These people include low income earners, mortgagees, parents with dependent children, pensioners, retirees and residents with a disability.

In comparison with greater Melbourne, Manningham has a larger proportion of 'high' income earners, but a similar proportion of 'low' income earners. Some relevant statistics follow:

- 41 per cent of residents earn less than $400 per week (ABS 2006 Census, enumerated data)
- 33 per cent of homes are being purchased on loan (mortgage), and 14 per cent are rented. Home ownership has decreased since 2001
- 64 per cent of households have children living at home, with 40 per cent caring for children 15 years old or younger
- There are 224 public housing dwellings in Manningham
- Manningham has an ageing population, with 37 per cent of residents aged over 50 years. This is higher than the Melbourne Statistical Division
- By 2031 it is predicted that 41 per cent of residents will be 50-years-old or older.

Rising costs from climate change, peak oil and food scarcity will have a particular impact on residents on fixed or low incomes and will further stretch families that are already mortgage-stressed.

3.2 Where do Manningham residents work?

In 2006, 20 per cent of Manningham's employed residents worked within the municipality, while another 16.5 per cent worked in Melbourne's city centre (the City of Melbourne). Most of Manningham's 23,000 registered businesses are micro-businesses concentrated in Doncaster, Doncaster East and Templestowe.
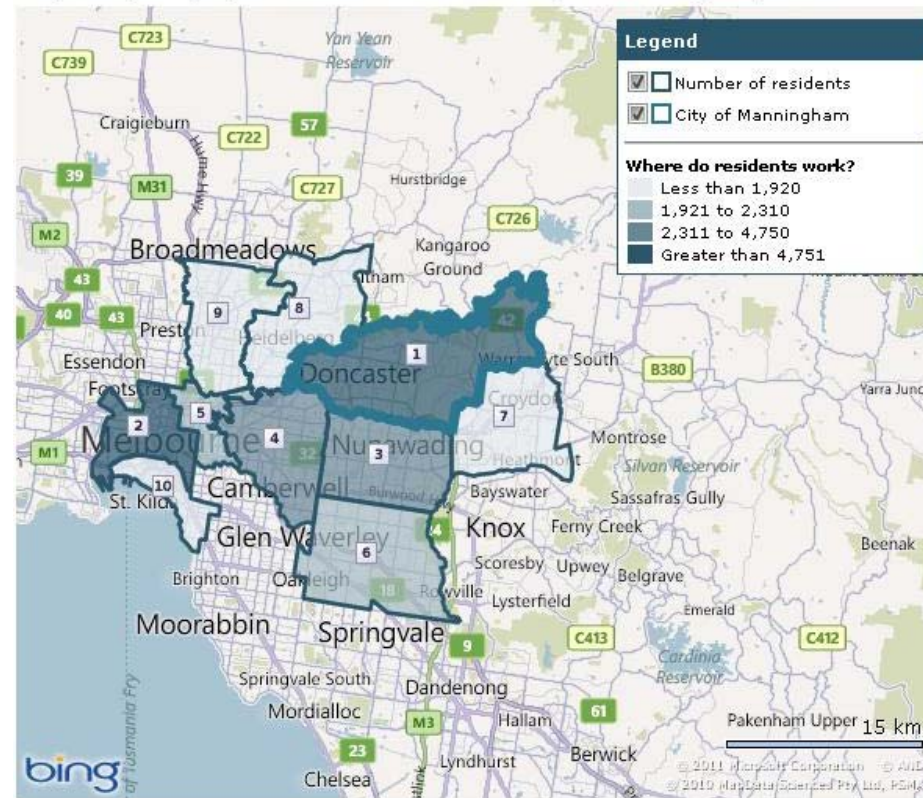
Figure 5: Map of top employment locations for Manningham residents, 2006

3.3   High car ownership and car dependency

Cars are the main mode of transport for Manningham residents.

There is a heavy reliance on the car for all types of commuting. Approximately 72 per cent of residents travel to work by car compared with the greater Melbourne average of 62.6 per cent. Most trips to the 30 local shopping centres and nine neighbourhood activity centres located in Manningham are via private vehicles. In 1970 about 2 per cent of children were driven to school, while in 2012 this is now about 70 per cent.

It is not surprising, therefore, that the Manningham community also has a higher car ownership than the Melbourne average:

- 91 per cent of Manningham households own at least one car, compared with 82.7 per cent in greater Melbourne
- 26.6 per cent of Manningham households own only one car (less than in greater Melbourne)
- 42.7 per cent per cent own two cars (more than in greater Melbourne)
- 21.6 per cent own three or more cars (significantly more than in greater Melbourne).

Transport fuels contribute 30 per cent of Manningham's total greenhouse gas emissions, compared with 63 per cent from gas and electricity and 6 per cent from waste.

The reliance on conventionally fuelled vehicles makes Manningham residents very vulnerable to rising petrol costs and the impacts of peak oil.

3.4   Public transport

Manningham residents' reliance on cars is due in part to the low density pattern of land use, making it difficult to provide effective public transport to all areas.

Recently, however, public transport options have improved, with the introduction of SmartBus and Doncaster Rapid Area Transit (DART) providing more than 40 bus routes. Nevertheless, Manningham is the only Melbourne municipality without tram or train services.

An important goal for Making Manningham Mobile (2010), Manningham's integrated transport strategy, was to identify actions to improve the quality and accessibility of public transport, walking, and cycling, and to encourage their use by Manningham residents and workers. As a key action to achieve this goal, Council requested secure funding for a Doncaster Rail Feasibility Study from the state government. This application was successful, and the study is due for completion in July 2013.

3.5 Social and economic impacts in Manningham

The main impacts of climate change, peak oil and food scarcity in Manningham relate to:

- Increased cost of living and doing business

- Public health and wellbeing

- Vulnerability to peak oil, mortgage stress and inflation.

Deluged by new premiums

'A disaster-strewn 2011 has left many policyholders feeling swamped financially - but it pays to shop around.

'Policyholders are opening the envelope to shockingly high premiums after a year in which eight natural disasters cost insurers an estimated $5 billion in Australia as people mop up from further floods this summer. The average increase is about 15 per cent to 20 per cent, 50 per cent isn't unheard of and, in some cases, the bill has gone up by many multiples.'

Sydney Morning Herald, 22 February 2012

3.5.1 Increased cost of living and doing business

Historically, the availability of cheap and abundant oil supplies has helped keep goods and services low-priced. A significant rise in oil prices will result in corresponding price rises for many common basics such as food and transport, with a flow-on to all areas of the economy.

For residents and businesses some of the cost impacts of climate change, peak oil and food scarcity are:

- Higher food prices due to failed or damaged crops, and an increased cost of petroleum-based fertilisers and services such as transportation and distribution

- Increased cost of petroleum-based fuels, materials, products and services

- Damage to property from severe weather events − floods, hail and wind

- Increased energy needs for air-conditioning as the number of warm days increases

- Increased insurance costs as a result of flood, storm and fire damage (see extract from the Sydney Morning Herald).

Additional costs for residents, such as rate rises, may also flow from extra costs incurred by Council.

3.5.2 Public health and wellbeing

The adverse health impacts of climate change, peak oil and food scarcity will be greatest among disadvantaged groups, such as people on low incomes, the elderly, the very young, people with a disability and the sick.

There will be increased health issues, including mental health and wellbeing issues. Increased hot weather is expected to result in more heat-related deaths. Poorer air quality from bushfires will result in more breathing problems, such as asthma. There will be more food-borne and vector-borne diseases. Incidences of malnutrition among the vulnerable will increase due to food scarcity and higher costs. All these health problems will lead to more visits to doctors and hospitals. Social isolation will also increase, brought about by higher fuel prices and more severe weather patterns. Pharmaceuticals needed to deal with increased disease will become more expensive as their main constituent is oil.

3.5.3 Vulnerability to mortgage, petrol and inflation risks

In Australia, the impact of rising fuel prices on households has been assessed for different urban regions using an index that correlates household exposure to mortgage interest rates and petroleum prices. This is known as the Vulnerability Assessment of Mortgage, Petrol and Inflation Risks and Expenditure (or VAMPIRE) index. It shows that Manningham has low to high levels of vulnerability and that households are particularly vulnerable to rises in mortgage and fuel costs where there is poor access to public transport. A VAMPIRE diagram for Manningham is depicted below. The dark red colouring indicates the most vulnerable areas in Manningham, which generally also have the worst access to public transport.

Figure 6: VAMPIRE diagram for Manningham (Source: Dodson and Sipe 2008)

0-9 (minimal	10-14 (Low	15-16 (Moderate	17-18 (High	19-20 (Very High	No Data

4   RISKS TO COUNCIL SERVICE DELIVERY

Council currently provides more than 100 different services and programs to residents, ratepayers, businesses and community groups across the municipality. Council's ability to continue to deliver these services will be severely compromised unless risks are identified and solutions implemented.

This section considers briefly how climate change, peak oil and food scarcity will affect Council's service delivery and assets.

4.1   Operations and service delivery

The direct outcomes of climate change most relevant to Manningham are:

- Reduced rainfall and drought
- Extreme weather events such as severe storms
- Extreme heatwaves and bushfires.

Climate change has already had significant direct and indirect impacts on Council operations and service delivery. For example, flooding, drought and severe weather events have resulted in an increased number of calls for assistance to Council and extra clean-up work.

Peak oil is a significant threat, as many of Council's core services are highly fuel-dependent; for example, waste management, Meals on Wheels and road maintenance.

Council is likely to experience difficulty keeping and attracting suitably qualified and experienced staff to deliver services, as most employees rely on private transport to travel to and from work. Home support workers in particular will feel the impact, as they visit their clients using their own vehicles.

Accordingly, higher fuel costs, food prices, general costs and food scarcity together with more demands for Council services due to climate change (including increased requests for assistance from vulnerable residents) will have a significant impact on Council's budget and ability to deliver services. At the same time, the ability of the community to pay rates is likely to decrease.

4.2 Infrastructure assets

Council is responsible for an extensive range of infrastructure assets including buildings, roads, bridges, parks, recreational facilities and drainage. The replacement value of these assets, including land, is estimated to be $1.781 billion (June 2011). The replacement value for infrastructure alone is $980 million. Council currently spends about $11 million per annum on the refurbishment and renewal of its infrastructure assets.

Climate change, particularly extreme weather events, has already started to have an impact on infrastructure assets, with requirements for more frequent maintenance (see the extract from *Manningham Matters* below). These impacts will continue to worsen causing ever-increasing damage to Council infrastructure.

> ***2011 Christmas floods impact Manningham residents***
>
> *'As a result of these (Christmas) storms the area is continuing to experience new and repeat flooding problems which Council is currently responding to. Council's drainage works team are working around the clock to resolve the new issues and continue to address old requests. Some of the issues are complex, which require investigation and long-term remedies. Council is dealing with them as quickly as possible and appreciates the understanding of residents.'*
>
> *Manningham Matters, February 2012*

List of infrastructure assets as at 30 June 2011

Asset	Quantity / Length
Local Roads (km) *	592
Footpaths on Roads (km)	765
Footpaths in Parks (km)	90
Kerb and Channel (km)	865
Underground Drainage Pipes (km)	1,033
Drainage Pits (No.)	46,463
Bicycle Paths (No.)	30
Car Parks (sqm)	271
Bridges/Major Culverts (No.)	16
Pedestrian Bridges (No.)	14

*562 kilometres of sealed roads and approximately 30 kilometres of unsealed roads

5 DEVELOPMENT OF THE ADAPTATION PLAN

This section first describes how the Adaptation Plan fits with Council's existing governance and risk management systems.

Then it describes the internal planning process Council used to develop the Adaptation Plan. The process was informed by the adaptation planning already undertaken by other local government authorities; in particular, similar projects by the Cities of Melbourne, Maribyrnong, Darebin and Whitehorse, and the South Australian Local Government Association Mutual Liability Scheme.

An important part of the process was a risk analysis, also described in this section. It provides useful information about how climate change, peak oil and food scarcity might actually manifest in Manningham.

5.1 Existing governance and management systems

The Securing the Future project aligns with the objectives of the Local Government Act (1989), the Council Plan and the Generation 2030 Community Plan. The relevant sections of the legislation and the plans are described below.

5.2 Local Government Act (1989)

The Act states that Council must have regard to the following relevant objectives.

Objectives of a Council:

(1) The primary objective of a Council is to endeavour to achieve the best outcomes for the local community having regard to the long-term and cumulative effects of decisions.

(2) In seeking to achieve its primary objective, a Council must have regard to the following facilitating objectives:

(a) To promote the social, economic and environmental viability and sustainability of the municipal district

(b) To ensure that resources are used efficiently and effectively and services are provided in accordance with the Best Value Principles to best meet the needs of the local community

(c) To improve the overall quality of life of people in the local community

(d) To promote appropriate business and employment opportunities

(e) To ensure that services and facilities provided by the Council are accessible and equitable

(f) To ensure the equitable imposition of rates and charges

(g) To ensure transparency and accountability in Council decision-making.

5.3 Council Plan

All Victorian Councils are required to produce a Council Plan of at least four years duration and to review it annually.

At Manningham each newly elected Council, as one of its first tasks, guides the preparation of the four-year Council Plan, which sets the strategic direction for their term.

In preparing the Council Plan, Council is guided by the Generation 2030 Community Plan; its vision, themes, goals and strategies. The Council Plan identifies key priorities required to deliver key outcomes. The actions are reviewed annually. The Strategic Resource Plan, a key element of the Council Plan, contains a forecast of the financial and human resources necessary to deliver the key outcomes.

It can be seen that the Adaptation Plan will be directly supported by the Council Plan's objectives. The 2009-2013 objectives are as follows:

Objective 1	Safe Community
Objective 2	Social Inclusion, Wellbeing and Affordability
Objective 3	Good Governance and Financial Management
Objective 4	Cultural Diversity and Harmony
Objective 5	Planning and Economic Development
Objective 6	Service Delivery
Objective 7	Assets and Infrastructure
Objective 8	Advocacy, Communication and Engagement
Objective 9	Environment and Global Warming
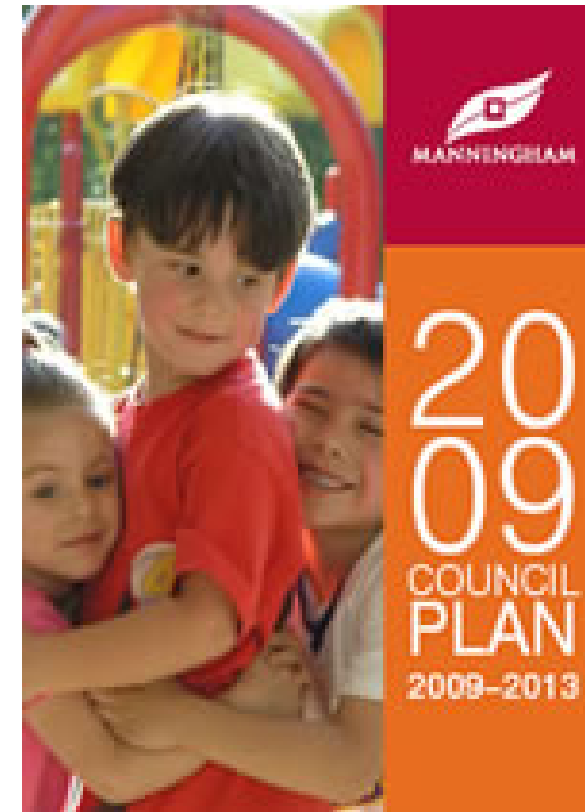
5.3.1 Management framework

Securing the Future will become a supporting plan within Manningham's Management Framework. Figure 7 (below) demonstrates how the Securing the Future Adaptation Plan is expected to fit into Manningham's management framework.
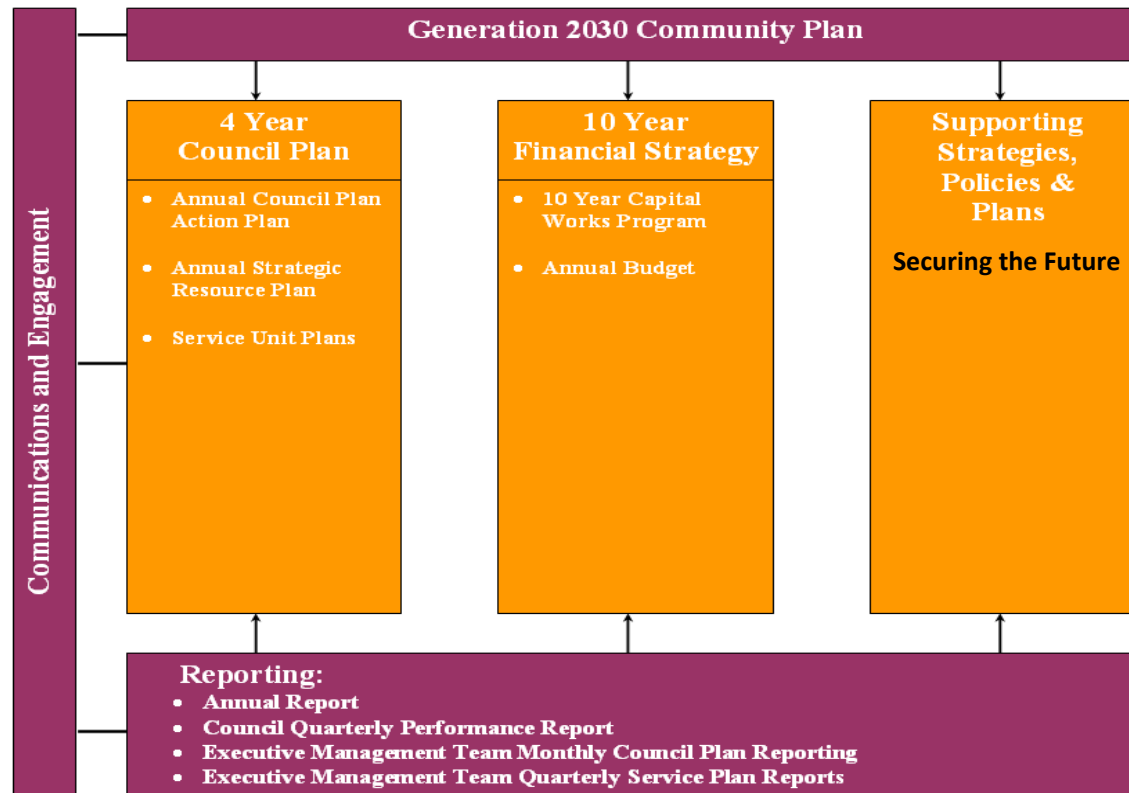
Figure 7: Manningham's Management Framework

5.4   Generation 2030 Community Plan

The Generation 2030 Community Plan is the Manningham community's shared vision for what it wants the community to look like, be like and feel like over the next 20 years. The Community Plan will guide the development of Council policies and strategies, and identifies innovative and exciting ways Council and the community can work together to achieve the plan.

The plan also fosters partnerships with local neighbourhoods, community organisations and government to achieve the vision.

The Generation 2030 Community Plan objectives are:

- Our Community Spirit

- Enjoy and Protect Our Natural Spaces

- Getting from Place to Place

- Planning for Where We Live

- Everything We Need is Local

- Council Leadership

These objectives clearly align with the objectives of the Securing the Future Adaptation Plan.

Expanded descriptions of each of the Generation 2030 Community Plan objectives are provided overleaf.

Six objectives of the Generation 2030 Community Plan

Our Community Spirit

We are a collection of communities, each with a distinct character. We proudly embrace our diversity, drawing strength from our differences. We value and recognise the need to preserve our rich history as an important part of our identity. We believe a well-connected and involved community is vital in creating harmonious neighbourhoods where everyone feels safe and secure.

Planning for Where we Live

An innovative and progressive Council that actively seeks partnerships and opportunities to expand its knowledge base. Council leads through transparent processes and mechanisms, effective planning, advocacy and accountability. We strive for best practice in engaging our local community in the decision making process. We believe an empowered community is one that actively participates to influence decisions that affect their lives.

Enjoy and Protect Our Natural Spaces

We value our unique natural environment and acknowledge it as a valuable community resource to maintain and protect. Our unique balance of City and Country is one of our community's defining traits and will be safeguarded into the future. We will ensure our green open spaces, parklands and bushlands are valued and preserved for future generations. We will endeavour to protect Indigenous plants and wildlife and educate the community on the importance of preservation. We seek proactive solutions to address the impacts of climate change through more sustainable living practices and protecting the environment.

Everything We Need is Local

Our communities are energised, well resourced and sustainable, providing all the relevant services and facilities we need within reach. All community members have equal access to vital services that meet their needs. We envision a self-sufficient collection of communities, where local resources and local food production are supported. Our distinct local villages and activity centres are cherished and cultivated, retaining their charm while supporting businesses and traders to build a resilient local economy.

Getting from Place to Place

As a community we place high importance on an integrated and efficient transport network, with a variety of accessible, safe and affordable transport options, enabling travel, in, out and around the area. The provision of alternate modes of transport is a priority for the municipality, significantly reducing the reliance on cars. Pedestrian and bicycle routes are well integrated with connections to public transport and the City.

Council Leadership

We strive for an innovative and progressive Council that actively seeks partnerships and opportunities to expand its knowledge base. Council leads through transparent processes and mechanisms, effective planning, advocacy and accountability. Council pursues best practice in engaging our local community in the decision making process. We believe an empowered community is one that actively participates to influence decisions that affect their lives.

5.5   Risk management system

The Securing the Future project also utilises Council's existing risk management system. This has been beneficial on a number of levels. Managers and staff are familiar with the risk assessment system. This allowed for the project to be simply integrated into service unit planning and the overall risk governance system (refer insert).

This method generated greater ownership of the project by the individual service units and officers.

Each service unit, including the Executive Management Team, was responsible for completing a matrix relating to their service areas. Project officers responsible for mandatory corporate plans such as the Municipal Public Health Plan, Municipal Strategic Statement, Municipal Emergency Management Plan and Strategic Asset Management Plan also completed a risk matrix against the corporate plan for which they were responsible. The Mayor on behalf of the Council completed a risk matrix against the Council Plan. (See Appendix 2 for a summary of Manningham's Service Unit Hazard and Risk Analysis.)

Risk management at Manningham

Manningham's risk management system adopts a governance approach. Staff are provided tools, systems and training to undertake their own risk analysis for their service area. Regular internal, external and compliance audits help to ensure that risk registers are complete and assessed appropriately. In addition, ten High or Severe risks are nominated as Corporate Risks and must be considered when preparing yearly service unit plans and reports to Council.

5.6   Key consultation steps

Consultation was important in developing the 'Securing the Future Adaptation Plan'.

Some of the key steps were:

1. Recognition of Risk

   Peak oil was recognised as a corporate risk to Council operations and service delivery

2. Endorsement by Council, Chief Executive and Executive Management Team

   The decision was endorsed to develop the Adaptation Plan for three interconnected hazards: climate change, peak oil and food scarcity

3. Raising Awareness

   The initiative was given an identity and brand – *Securing the Future.* A staff survey was conducted and presentations were made at various staff forums

4. Information Phase

   Information sessions were delivered to Councillors, the Executive Management Team, all service units, at senior officer forums, staff briefings and lunchtime learning sessions

5. Risk Matrices completed and actions/adaptation options developed

   Risk matrices were completed by Councillors, the Executive Management Team and service units. Separate risk matrices were carried out for strategies required by the Local Government Act (Council Plan, Municipal Emergency Management Plan, Municipal Health Plan, Municipal Strategic Statement, and Strategic Asset Management Plan) and Generation 2030 Community Plan

6. Whole-of-Council review and peer learning

   A summary risk matrix of high and severe risks across all Council services and key strategies was produced. Senior officers were given the opportunity to review the summary matrix and identify opportunities, gaps and inconsistencies. This process facilitated peer learning and was a first step towards 'harmonising' assessment of risk across the organisation

7. Continuous improvement

   This will be achieved through scenario planning, group review and harmonising of risks, regular audits and assessment

8. Community Consultation

   The Draft Securing the Future Adaptation Plan was released to the community for a consultation period

9. Council Endorsement

   The Final Draft Securing the Future Report was delivered to Council for ratification.

5.7   Risk analysis

The hazards and risks most appropriate to Manningham's circumstances were clustered under two broad categories:

1.   Short-term – disruptive events of up to six months duration

2.   Long-term – emerging trends, the background emerging mega-forces shaping our environment, society and economy with an emphasis on climate change, peak oil and food scarcity.

Each of Council's service units, including the Councillors and the Executive, were given a presentation on the issues of peak oil, climate change and food scarcity. The units then completed a risk matrix using a risk assessment tool, which ranked risk as being serious, high, medium or low. (See Appendix 3, particularly Tables 2.1 and 2.2 for a summary of risk identification undertaken by service delivery areas.)

The serious and high risks were then extracted to identify areas in most need of action. These are described and analysed below as a series of risk scenarios.

Short-term – Disruptive Events

Disruptive events are short-term significant changes to business-as-usual that only last a few months; for example, the 1998 Longford gas explosion. The Securing the Future risk analysis considered the sudden reduction in availability of oil, extreme weather events and sudden food shortages, such as occurred during the UK truck strike over fuel costs in 2000.

Long-term – Emerging Trends

Emerging trends are significant changes to business-as-usual that increase over time. The Securing the Future risk analysis considered the increasing cost of oil and its products, increase in intensity and frequency of climatic weather events and the effect of both these scenarios on food security.

5.8 Oil shock – sudden disruption to oil supplies

This scenario involves a sudden disruption of oil supply (shock) with a return to 'normal' supply within six to 12 months. This could easily occur under a number of other scenarios such as:

- Conflict in the Middle East or another oil producing area

- A political decision in an oil-producing country. For example, Vietnam could decide to keep its oil for its own needs instead of exporting

- An accident, for example, in the Straits of Malacca.

We have already seen a number of smaller scale shocks since the first oil shock in the 1970s when petrol had to be rationed in Australia and overseas.

With a sudden disruption to oil supply, Council services most dependent on oil would naturally suffer the worst impact. These would include:

- Garbage collection by contractors, as Manningham's hard waste is disposed of in Hallam while green waste is sent to Mt Gambier in South Australia in back filled trucks

- Delivery of Meals on Wheels, and home support for the more vulnerable members of the community

- Diesel digging operations for drainage

- Mowing and maintenance of Manningham's parks and gardens

- The ability of staff to travel to and from work or on Council business.

In preparing for the advent of a future oil shock, Council should consider advocating to state government to prepare an 'oil shock plan' that might include fuel rationing, prioritising fuel supplies for emergency services and public transport, and dealing with the flow-on effects to the general economy including the effects on superannuation of a volatile share market.

1970s oil shocks

Long lines of cars waited for hours to fill up with petrol. People hoarded fuel – so that they could keep driving. Alternating odd and even number-plate days were declared in order to ration fuel supplies. Petrol stations hastily drew up 'Out of Petrol' signs, which were displayed once fuel ran out. Not only was mobility restricted, but when available fuel was a lot more expensive than before.

5.9 Peak oil – long-term trend

This scenario involves continuously rising oil costs, again due to a number of factors − primarily increasing demand for and a decreasing supply of oil. It will be a struggle to maintain Council services, especially garbage services and general transport, without a viable supply of alternative fuels. To maintain existing infrastructure, alternative non-petroleum based materials and methods of construction will be needed.

Rising oil costs will create instability in the economy, share market and financial system, with flow-on effects for jobs, employment, salaries, superannuation, pension funds and business viability.

Council would be wise to consider alternatives for strengthening our local economy and implement innovative measures that offer a buffer to the instabilities in global economic and financial systems.

As a protection against global economic volatility, it may be worthwhile for Council to consider developing a local currency, local exchange trading system and banking, as residents' ability to pay rates, meet costs of living, and banking in general will be compromised. Under this scenario, in times of severe economic turmoil, rate payments could be a combination of traditional forms of payment and local exchange.

5.10 Climate change – sudden disruption

Extreme weather events, such as heatwaves, storms and associated flooding, wind and hail damage cause sudden disruption. The frequency and intensity of extreme weather events is increasing, as climate change scientists have predicted.

As a consequence of climate change the intensity and frequency of bushfires in Victoria is also increasing. The CSIRO is expecting a 5-40 per cent increase in the number of extreme fire days by 2020. While the increasing number of bushfires is an emerging trend, the consequences of bushfire in or close to Manningham would cause sudden disruption to some of Council's services, such as Meals on Wheels, and the ability of some staff to come to work.

5.11 Climate change – emerging trends

Over the last two years, Manningham and its surrounds have been hit by seven significant weather events, causing wind and flood damage. Cleaning up has cost Council a significant amount of money, which it has had to divert from other projects.

The emerging trend, already quite evident, is further extreme weather such as bushfires, drought, more hot days in summer, and rain events of higher intensity. Our winters are also becoming milder.

Climate change already has an impact on residents' health and wellbeing. For example, during the recent 10-year drought, many sporting ovals were closed to avoid injuries from the hard ground.

More high-temperature days impact the very young and the elderly in particular. These people are more likely to become dehydrated and suffer from heat stress with potentially fatal consequences. A heat wave also places greater demands on Council's home support staff to provide an adequate response and ensure the wellbeing of their clients.

Warmer and more humid weather conditions will bring diseases generally found further north than Melbourne, including vector-borne diseases such as malaria and Ross River fever. Council already has a Business Continuity Pandemic Plan, which is essential to deal with any pandemic. The plan may now need to be reviewed to ensure it deals with the spread of tropical diseases to Victoria.

Other trends associated with climate change include increasingly heavier rainfall events, which will put more pressure on the drainage system and increase maintenance costs. Extreme weather events are already causing insurance costs to rise. It is possible that residents or businesses in some flood-prone areas of Manningham will not be able to obtain insurance. This will put further pressure on Council to deal with flood damage and may affect the outcome of planning permit applications in these areas.

Another outcome of climate change is 'brownouts': losses of power supply due to high demand such as the use of air-conditioning in hot weather. Brownouts will, of course, have an impact on the ability of Council, the community and businesses alike to continue normal operations.

Flooding in Wonga Park, 11 February 2012

5.12 Food shocks – sudden disruption to food supply

A sudden disruption to food supply can occur from either a sudden shortage of oil or extreme weather events. In Victoria we have already experienced partial sudden disruption to our food supply. The 2011 floods in Queensland devastated banana plantations. Bananas became hard to obtain and, when available, very expensive. In another example, the 2007 flooding of Gippsland wiped out most of Victoria's cauliflower and broccoli crops for a season. Prices can rise by as much 500 per cent after such events.

Food production and distribution are highly dependent on oil products, as they usually require oil-powered machinery, pesticides and fertilisers produced from oil. In developed nations like Australia, food travels farther to reach consumers, and the international food trade is increasing more rapidly than increases in population or food production. The CERES report on 'food miles' in Australia estimates that the total road transportation distance travelled by a typical Melbourne food basket is 21,073 kilometres. This is almost the same length as Australia's coastline. The total distance for all national and international transportation travelled by a typical food basket is 70,803 kilometres, which is equivalent to three times the length of Australia's coastline.

The vulnerable in the community will be compromised in a time of increasing demand for food, with resulting increased food costs, poor food quality and malnutrition. Local Laws will be under pressure to detect drops in food quality standards. Community Services will experience more calls for food and financial assistance and increased cases of malnutrition. Council's ability to continue to deliver Meals on Wheels, and Council's Function Centre will be severely affected if Council is unable to continue to source good quality and varied food supplies.

5.13 Food scarcity – long-term trends

Long-term food scarcity has recently been recognised as an important issue by many policy-makers at state and federal government levels.

The long-term problems will, in many cases, simply extend the short-term ones associated with a sudden or temporary disruption to food supplies. Increasing costs of food production due to peak oil and other factors, together with more extreme weather events, will create an unstable food supply system. This will put increasing and ongoing pressure on Council's food delivery services, such as Meals on Wheels, and charities to provide food for the most vulnerable in the community.

Council should consider developing a Food Security Strategy that would include asking the state government to develop similar measures – in order to prevent social unrest and the creation of food refugees.

Food security planning would include:

- Measures to be activated in times of food scarcity such as food rationing, food coupons and food kitchens, in partnership with state government agencies

- State government assistance to Councils to provide a framework for urban food production

- Preservation of agricultural land for food production.

TRANSITION

6 MOVING TO A SECURE FUTURE – SERVICE CONTINUITY AND RESILIENCE

This section addresses the challenge of making the transition, for both Council and the community, to a more secure future.

First, programs that are currently underway are described. The concept of resilience is then explored. The general broad operational areas of local government are then highlighted, and strategies are discussed for enhancing the resilience of Council services over the long-term. Growing resilience means, of course, moving beyond business-as-usual. Also acknowledged is the importance of fostering service continuity for businesses and households.

6.1 Council leadership in climate adaptation

Initiatives currently underway through the implementation of Climate 2020 and Integrated Water Management plans include encouraging energy and water efficiency, integrated water cycle management, local energy generation and reduction of peak demand. Accelerating the implementation of these action plans will increase resilience in the community and Council as the transition is made to a more secure future.

In particular, Council's leadership role is exemplified by:

- The new community hub MC^2, a leading energy and water efficient building that includes a tri-generation system and a third pipe for recycled water

- Doncaster Hill Principal Activities Area's designated Smart Energy Zone and Water Sensitive City

- District Energy Studies for Doncaster Hill, to be undertaken by two service providers

- Third pipe and mini-waste water treatment to be implemented across Doncaster Hill in order to reduce potable water use by 60 per cent

- Memoranda of Understanding signed with energy and water agencies to develop innovative and resilient infrastructure. These agencies include United Energy, Yarra Valley Water and Melbourne Water

- Promotion of clean energy solutions to householders in Manningham, including residential bulk-buy programs for photovoltaic arrays, solar hot water systems and electric bikes

- Doncaster Rail advocacy.

6.2   Growing resilience through the 3 RRRs

According to the grassroots movement Transition Towns, resilience means 'being more prepared for a leaner future, more self-reliant, and prioritising the local over the imported'.

Resourcing, Relocalising, Responding - these 3 RRRs are the guiding principles for 'securing the future together' and echo the Transition Town's definition of resilience. (See Section 1.4 above for an explanation of the 3 RRRs.)

6.3   Council areas of operation

Local government has seven broad areas of operation:

1.   Development Planning
2.   Asset and Infrastructure Management
3.   Emergency Management
4.   Sustainability and Environment Management
5.   Community Services and Recreation Services
6.   Health and Wellbeing
7.   Council Prosperity.

The challenge is to continue to deliver services across all Council's operational areas as we move through the *turbulent times* described in Section 2. This will play a pivotal role in securing the future for the residents of Manningham.

Council already has a strong commitment to and culture of triple-bottom-line decision-making and has developed a number of innovative strategies and projects designed to achieve positive environmental, social and economic outcomes. It is important that Council continues to strengthen these programs, as necessary, to achieve the Adaptation Plan.

6.4 Business and household services

Although this section deals primarily with continuity of Council services, it is important to acknowledge the key role of the business sector in delivering a range of necessary services to the community. Households also deliver a range of 'services' such as shelter and, in some instances, food, water, waste treatment and energy.

Consequently, in addition to service continuity for Council operations, Council seeks to foster service continuity for both businesses and households through the Resilient Communities Program.

7 STRATEGIES AND ACTIONS FOR SECURING THE FUTURE TOGETHER

Nine main strategies have been developed to fulfil the Adaptation Plan's Strategic Framework.

1. Leadership – Council and community leading the way

2. Resilient communities – empowerment, education and capacity building; households and neighbourhoods that are smart and self-reliant

3. Public health and wellbeing – continuing social development

4. Environment – cool, green and natural

5. Food security – plentiful nutritious food available locally

6. Local economy – thriving, green and resilient

7. Mobility and transport – on the move with reduced oil dependency

8. Resilient City – planning and engineering for where we live

9. Responsive governance by Council

    i. Risk management and assessment

    ii. Strategic resourcing – financial, non-financial and human resources

    iii. Knowledge and advocacy – Knowing what Council can do and when to seek assistance

    iv. Response-ability

    v. Empowering communities

This section describes the strategies together with priority actions designed to fulfil them. (Refer to Appendix 1 for all the actions identified to achieve each of the strategies).

The strategies reflect the multi-disciplinary approach adopted by Council as it seeks to continuously improve quality of life and service delivery for Manningham's residents.

Development of Securing the Future strategies was informed by consultation undertaken with staff and the community over a number of years. This consultation largely related to:

- Generation 2030 Community Plan
- Sustainability Accord Priority Statement (Review 2010)
- SHE Q RMS Sustainability Commitments
- Climate 2020 Action Plan (August 2009)
- Doncaster Hill Smart Energy Zone Action Plan (August 2009)
- Resilient City Cross Organisational Group
- The Environmental Advisory Committee.

Making the transition to a more secure future will call upon each area to re-assess its strategic planning to reflect the challenges ahead and improve resilience to ensure that social development, prosperity and wellbeing continue.

7.1 Leadership – Council and community leading the way

Leading the way as we make the transition together.

This strategy provides the context and motivating force for the other strategies. Priority actions to achieve this strategy will contribute to achieving all of them and are therefore, in many ways, the most urgent and important actions contained in the Adaptation Plan. Some of these actions are also listed under other strategies where they are specifically relevant.

Priority Actions

- Implement the Securing the Future program, which refocuses existing resources to achieve the vision, objectives and actions of the Adaptation Plan

- Review all Council planning activities that are required by the Local Government Act (1989), in order to achieve the objectives of the Adaptation Plan. Where necessary advocate for state government leadership and support, and additional resources

- Investigate the development of a Food Security Plan for Manningham to ensure the community has access to a reliable, affordable and nutritious food supply

- Investigate development of a Strategic Resilience Plan to promote an integrated approach to assets, infrastructure, engineering, energy, water, mobility/transport, waste, and information and communications technology. This will offer opportunities for identifying synergies, strategic partnerships and external funding.

- Foster and support grassroots initiatives through delivery of a Resilient Communities Program that would help achieve the Generation 2030 Community Plan and encourage and support resilient households and neighbourhoods

- Continue to evaluate and implement best practice resource-efficiency programs that enable waste to be treated as a resource. In particular investigate alternatives for waste treatment that reduce greenhouse gas emissions and dependency on oil-based transportation, such as a new transfer station or waste-to-energy facility

- Continue to implement Making Manningham Mobile (2010) including ongoing advocacy for rail to Doncaster. Encourage alternatives to the private car for travelling for residents (particularly to and from work), such as green travel plans and ride or walk to school programs. Continue to develop effective bicycle paths, pedestrian paths and facilities providing links to destinations within and outside Manningham

- Continue to make progress towards achieving the vision for Doncaster Hill as 'a 21st Century sustainable urban village'.

7.2 Resilient communities – empowerment, education and capacity building; households and neighbourhoods that are smart and self-reliant

Foster grassroots initiatives and design and deliver programs that facilitate strong, informed, capable, self-reliant, connected and willing communities. Facilitate the growth of households and neighbourhoods that are more self-sufficient and psychologically resilient. Develop resilience in the following important resource areas:

- **Energy**:
  - Efficiency
  - Significant local generation of renewable energy
  - Backed up by buying green energy
- **Water**:
  - Efficiency
  - Harvested and re-used in laundries, toilets and gardens
  - Low-water gardens
  - Healthy rivers
  - Lawns replaced
- **Food**:
  - Locally or home grown and prepared
  - More farmers' markets and food swaps
  - Less food miles
  - Reduced meat in diets
- **Waste**:
  - Waste minimised in landfill
  - Re-use, reduce and recycle

Priority Actions

- Identify and leverage synergies with the Generation 2030 Community Plan; in particular those initiatives designed to engage the community by tapping into passion and vision, as well as particular strategies that also address similar priority areas and issues

- Continue to support 'Know your neighbour' and community houses

- Continue to support the MAV Council and Communities in Transition (CACiT) program by encouraging and supporting the formation of grass roots initiatives such as Transition Towns, Sustainability Streets and Backyard PermaBlitz. Appoint a Program Officer for two days per week. By funding this position Council and the community may be able to attract an equivalent amount of funding to make progress towards resilient communities.

7.3 Public health and wellbeing – *continuing social development*

Continue to foster the conditions that support social wellbeing and health for Manningham residents.

Priority Actions

- Investigate what more can be done in planning and operations to address challenges for public health and wellbeing caused by climate change, peak oil and food scarcity

- Develop strategies to mitigate climate change, peak oil and food scarcity risks to vulnerable communities and clients of services delivered by Community Services

- Investigate ways to continually empower the community and that support psychological resilience.

7.4 Environment – cool, green and natural

Protect and enhance Manningham's natural environment. Value and provide habitat for wildlife and fauna including habitat corridors and healthy waterways across the urban landscape. Value trees for cooling and shade – nature's air conditioners. Lessen 'heat island' effects by reducing impermeable surfaces.

Priority Actions

- Continue the implementation of the Green Wedge Action Plan 2020 to ensure the health of the natural environment and local waterways for future generations

- Continue to integrate fire management and biodiversity goals to achieve mutually beneficial outcomes

- Foster and encourage sustainable gardens in urban areas to maintain environmental amenity and ecosystem services.

7.5 Food security – plentiful nutritious food available locally

Develop strategies to ensure that residents at all times have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

Priority Actions

- Consider the development of a Food Security Plan for Manningham and make recommendations to Council based on findings

- Investigate strategic planning role in the location of accessible fresh food outlets, to consider concepts such as FSPUD (Food Sensitive Planning and urban design).

7.6 Local economy – thriving, green and resilient

Continue the development of a local economy and innovative businesses that provide essential products and services with plenty of local jobs. Nurture local prosperity and explore mechanisms that could provide a buffer against instability in the world economic and financial systems.

Priority Actions

- Continue the implementation of the Economic Development Strategy, which emphasises relocalisation: meeting our needs locally and strengthening our local economy

- Investigate and trial local exchange, banking and currency systems designed to provide a financial buffer.

7.7 Mobility and transport – on the move with reduced oil dependency

Promote and enable residents to live, work, learn and play locally. Foster and encourage walking and cycling. Otherwise use carbon-neutral and oil-free transport such as effective and innovative public transport systems and green electric cars.

Priority Actions

- Continue to implement Making Manningham Mobile (2010) including ongoing advocacy for rail to Doncaster

- Continue to foster and promote forms of transport and mobility that reduce dependency on oil-based fuels

- Encourage alternatives to the private car for travelling for both residents and Council staff

- Continue to develop effective bicycle paths, pedestrian paths and facilities providing links to destinations within and outside Manningham

- Encourage and support car pooling and the introduction of electric car share businesses.

7.8 Resilient City – planning and engineering for where we live

Promote, support and facilitate best practice in resilient and sustainable urban development, assets, engineering, utilities and infrastructure. This includes:

- **Urban design and development** that:
  - makes walking and cycling easy
  - deals sensitively with energy, water and food security
  - provides local access to services

- **Fixed assets**
  - roads, paths, bridges and buildings that are designed to be weather-proof against drought, storm, heat, cold, wind, and flood

- **Services and utilities** that:
  - do not require oil
  - are modular and resilient
  - facilitate distributed networks for energy, water, food and waste systems
  - leverage information and communication technology
  - encourage the use of services and materials that are resource-efficient and non-toxic.

Priority Actions

- Investigate the development of a Strategic Resilience Plan promoting an integrated approach to assets, engineering, infrastructure, energy, water, mobility/transport, waste, and information and communications technology. This will offer greater opportunity for identifying synergies, strategic partnerships and external funding

- Continue to work towards sensitive and sustainable urban design and development. Investigate and foster alternative patterns of urbanisation that deliver improved sustainability and resilience, such as higher densities combined with open space suitable for urban food production

- Continue to evaluate and implement best practice resource-efficiency programs that enable waste to be treated as a resource. In particular investigate alternatives for waste treatment that reduce greenhouse gas emissions and dependency on oil-based transportation, such as a new transfer station or waste-to-energy facility

- Continue to make progress towards achieving the vision for Doncaster Hill as 'a 21st Century sustainable urban village'.

7.9 Responsive governance by Council

Continually improve Council's 'response-ability' to make wise decisions and take effective action, individually as Councillors and officers, and collectively.

Six sub-strategies have been developed to achieve this main strategy, as follows:

(i) Emergency planning

Council's response to short-term extreme disruptive events, often regional in nature and involving multiple agencies, is outlined in the Municipal Emergency Management Plan, Business Continuity planning and other related plans and procedures.

Priority Action

- Re-evaluate all emergency plans including the Municipal Emergency Management Plan, Business Continuity Planning, Pandemic Planning and Emergency Management Procedures.

(ii) Risk management and assessment

Continuously improve risk management practice relating to:

- Short-term disruptive events such as extreme climate events, bushfire, disruption to oil supply and disruption to food supply

- Long-term trends associated with climate change, peak oil and food scarcity

- Compliance with Occupational Health and Safety (OH&S) responsibilities towards Councillors, employees, contractors and volunteers, generally and in particular during extreme climate situations and bushfire.

Priority Actions

- Develop, resource and implement a Securing the Future Program that includes regular review and auditing of service unit risk matrices, whole-of-Council review of the risk matrix summary to enhance peer learning, and congruence of risk assessments across the organisation

- Continue to educate and update staff on peak oil, climate change and food scarcity to ensure that all decision-making, policies and planning address these issues

- Include peak oil in Council's top ten Corporate Risks as a risk which must be addressed by all service unit Managers when preparing their Service Plans

- Update the TEA Report template so that all reports to EMT and Council give consideration to Corporate Risks (which include climate change and peak oil)

- Schedule annual audits for 33 per cent of service units to determine how the units are responding to climate change, peak oil and food scarcity issues

- Continue to monitor work-related health issues noting any trends related to climate change, peak oil and food scarcity impacts

- In all policies and strategic planning documents, consider responses to climate change, peak oil and food scarcity either at time of writing for new documents or when existing documents are reviewed.

(iii) Strategic resourcing – financial, non-financial and human resources

Council is required by the Local Government Act (1989) to prepare a Strategic Resource Plan covering both the financial and non-financial resources required to achieve objectives contained in the Council Plan.

Long-term strategic resource planning – financial and non-financial, including human resources – will need to incorporate an assessment of how climate change, peak oil and food scarcity factors will affect both Council and whole-of-sector business.

Priority Actions

- Advocate for state government leadership to provide local government authorities with the necessary resources, tools and knowledge to enable Council plans and strategies to respond to the challenges of climate change, peak oil and food scarcity. These plans include:

  - Council Plan

  - Strategic Resource Plan

  - Financial Plan

  - Municipal Public Health Plan

  - Municipal Strategic Statement

  - Strategic Asset Management Plan

  - Municipal Emergency Management Plan.

- Continue to advocate for financial and non-financial resources to meet the extra demands placed on Council and the community as a result of climate change, peak oil and food scarcity

- Continue to advocate for application of the 'polluter pays' principle as a means of providing necessary resources to respond to the impacts of climate change, peak oil and food scarcity and to minimise pressures on ratepayers and Council service continuity.

(iv) Knowledge and advocacy – knowing what Council can do and when to seek assistance

Actively address gaps in knowledge, skills and resources and advocate changes in external circumstances.

Priority Actions

- Continue to advocate on issues that address the root causes of climate change, peak oil and food scarcity and on issues that support Council and communities in transition in a world constrained by climate change, peak oil and food scarcity

- Advocate for the state government to fund an adaptation program in response to climate adaptation/peak oil/food scarcity planning program for Victorian local government authorities similar to that undertaken in South Australia, Queensland and Western Australia by JLT Insurance.

(v) Response-ability

Increase Council's response-ability to make wise decisions and take effective action, individually as Councillors and officers by:

- **Connecting and Integrating**
  Engage all Council and community stakeholders in working together to create and implement solutions to complex problems. Employ participatory action planning methods to identify synergies and deliver integrated outcomes

- **Transition and Innovation**

  Acknowledge that business-as-usual is no longer a viable option and develop new and innovative approaches that increase adaptive capacity and build resilience.

Priority Actions

- Identify and foster the conditions that support rapid transition for Council and the community

- Each year give consideration to scheduling a Scenario Planning activity prior to preparation of the annual Council Plan Action Plan

- Continue to support cross-organisational groups that facilitate peer learning, connection, integration, transition and innovation such as:

  – Resilient City (officers only)

  – Health and Wellbeing (officers only)

  – Environment Advisory Committee (Councillors and officers)

  – Transport Advisory Committee (Councillors and officers)

  – GOGO – Green Office, Green Organisation (officers only)

  – Let's Get Engaged (officers only)

- Continue to support regional alliances that facilitate peer learning, connection, integration, transition and innovation such as:

  – Northern Alliance for Greenhouse Action

  – Metropolitan Waste Management Group Forum

  – MAV Councils and Community in Transition (CaCiT)

  – Water Sensitive Cities

  – Middle Yarra Land Management

  – Eastern Transport Coalition (ETC)

  – Metropolitan Transport Forum (MTF)

  – Regional Development Australia – Melbourne East (RDA-ME)

  – Eastern Affordable Housing Alliance (EAHA).

(vi) Empowering communities

Continue to strive for best practice in engaging Manningham's diverse local communities in decision-making processes. Council believes that an empowered community is one that actively participates to influence decisions that affect their lives.

Priority Action

- Identify and leverage synergies with the Generation 2030 Community Plan; in particular those initiatives designed to engage the community and tap into passion and vision.

8   APPENDICES

1. Action Plan

2. Summary of Manningham Service Unit Hazard and Risk Analysis

3. Manningham's Risk Assessment Framework

4. Resilient Communities Program

5. Securing the Future Program

Appendix 1: Action Plan

	Description	Action	Responsible Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	2018 +	Funding	PO	CC	FS
1. Leadership – *Council and community leading the way*													
1.1	Assets & Engineering	Consider accelerating drainage capital works program	ETS	M	M	M	R	-	-	Core		√	
1.2	Flexible office	Fully implement the virtual desktop system when practical	IT	L	M	H	R	-	-	Core	√	√	
1.3	Home support workers	Aim to reduce the number of kilometres travelled by Home Support workers where possible	ADSS	-	L	M	H	R	-	Core	√		
1.4	Insurance	Investigate alternative insurance options for Council	RM EMT	L	L	M	H	R	-	Core		√	
1.5	Local energy generation	Continue identifying and implementing localised power generation for council activities	STP EEP	M	M	M	R	-	-	Core	√	√	
1.6	Peak oil	Track petrol prices & food cost index – petrol crude price of $US147 barrel proposed as a predictor of financial/economic health and cost of food increases	EEP EMT	L	L	L	R	-	-	Core	√		√
1.7	Peak oil	Continue investigating alternative fuel options for the council fleet	EO	L	M	H	R	-	-	Core	√		
1.8	Emergency support service	Support and encourage staff and residents to be involved in CFA & State Emergency Service support agencies	MEM EEP	-	L	L	L	R	-	Core		√	
1.9	Sustainable Council buildings	Implement the Internal Sustainable Buildings Policy for Council's own building assets when approved	STP	H	H	H	R	-	-	Core		√	
1.10	Waste	Investigate undertaking scenario planning issues with waste collection companies in light of peak oil, climate change and food scarcity issues	EO	-	L	M	H	R	-	Core	√		
2. Resilient communities – *empowerment, education, capacity building; households and neighbourhoods that are smart and self-reliant*													
2.1	Synergies with Generation 2030	When designing community education programs, identify and leverage synergies with the Generation 2030 Community Plan. In particular those initiatives designed to engage community by tapping into community passion and vision for progressing resilience	RCP EEP CP	H	O	O	O	O	O	Core + Non core	√	√	√
2.2	CACiT Resilient Neighbourhoods	Continue to support the MAV Council and Communities in Transition (CACiT) program by encouraging and supporting formation of grass roots initiatives such as Sustainability Streets, Transition Towns, and Backyard PermaBlitz so as to foster the growth of resilient households and neighbourhoods. Appoint a program officer – 2 days per week. It is believed that by funding this position Council and community will be able to attract an equivalent amount of funding to progress resilient communities	RCP	H	H	H	R	-	-	$37,720	√	√	√
2.3	Education	Continue to design and deliver programs that facilitate strong, informed, capable, self reliant, connected and willing communities especially in response to climate change, peak oil and food scarcity. Support neighbourhood houses and their relevant programs	EEP RCP	O	O	O	O	O	O	Core + Non core	√	√	√

Appendix 1: Action Plan

	Description	Action	Responsible Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	2018 +	Funding	PO	CC	FS
2.4	Community grant fund	Allocate $20,000 of the Community Grants program to support local self sufficiency, sustainability and resilience and link to a yearly community forum	RCP CP	H	H	H	R	-	-	Core + Non core	√	√	√
2.5	Connecting and integrating	Enhance community connectedness and synergies by hosting a yearly community forum using an empowering group method eg Open Space Technology, Future Conference, Appreciative Inquiry or World Café. Enable synergies and linkages to emerge amongst participants and applicants to the Community Grants program	RCP CP	H	H	H	R	-	-	$4,000	√	√	√
2.6	Connecting and integrating	Facilitate local connections and social inclusion eg by fostering farmers' markets, community gardens, clothing & food swaps and other community based initiatives	RCP EEP	L	M	M	R	-	-	Core + Non core	√	√	√
2.7	Energy security	Continue to support 'Delivering Clean Energy Solutions' (DCES) programs to homes in Manningham	RCP	L	L	L	R	-	-	Non-core	√	√	
2.8	Energy security	Support householders in having more control over their energy use by providing timely and useful information via energy portals, internet and smart meters	RCP	H	H	H	R	-	-	Non-core	√	√	√
2.9	Resilient neighbourhoods	Develop a 'Securing the Future' Home Risk Management Plan template for householders	RCP	H	M	M	R	-	-	Non-core	√	√	√
3. Public health and wellbeing – *ensuring social development continues*													
3.1	Social wellbeing	Advocate for state government leadership to provide council the necessary tools and knowledge to enable the Municipal Public Health Plan to respond to the challenges of climate change, peak oil and food scarcity	SCS STF	H	H	-	-	-	-	Core	√	√	√
3.2	Vulnerable communities	Develop strategies to mitigate climate change, peak oil and food scarcity risks to vulnerable communities, clients and services delivered by Aged and Disability Social Services and Social and Community Services	RCP ADSS SCS	-	H	-	-	-	-	Core	√	√	√
3.3	Heat waves	Continue strengthening heatwave planning so that staff, contractors, volunteers and community health and wellbeing is supported with a focus on the more vulnerable groups such as the very young, the elderly and the disadvantaged	ADSS SCS EO ETS PR	-	H	-	-	-	-	Core		√	
4. Environment – *cool, green and natural*													
4.1	Raise awareness	Continue to raise awareness of the importance and value of the natural environment and sustainable gardens in urban areas, to maintain environmental amenity and ecosystem services	EEP	L	L	L	R	-	-	Core	√	√	√
4.2	Fire management & biodiversity	Continue to integrate fire management outcomes with biodiversity outcomes striving to achieve mutually beneficial outcomes	EEP	H	H	-	-	-	-	Core		√	
4.3	Green Wedge	Continue to implement the Green Wedge Action Plan 2020 to ensure the health of our natural environment and local waterways for future generations	EEP	H	H	H	H	H	H	Core		√	√
5. Food security – *plentiful nutritious food available locally*													

Appendix 1: Action Plan

	Description	Action	Responsible Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	2018 +	Funding	PO	CC	FS
5.1	Manningham food security plan	Investigate the development of a Manningham Food Security Plan to ensure the community has access to a reliable, affordable and nutritious food supply; Give consideration to resources required, methods and advantages, if any, to investigate and develop: — an understanding of the local food supply and factors influencing food security including access, population groups and their behaviours, cost and geographic areas; — risks to vulnerable communities, clients and services delivered by Aged and Disability Services and Social and Community Services — Food Sensitive Planning and Urban Design(FSPUD) for Manningham: how it might be included in the Local Planning Scheme; report on the findings — provision of fresh food shops in all shopping areas across the municipality to provide access to fresh food for all, and to reduce private cars trips — alternative patterns of urbanisation that deliver improved sustainability and resilience outcomes eg higher densities combined with open space suitable for urban food production such as the Greening the Greyfields model (Newton and Newman) — encourage and support the community to establish grass roots initiatives such as food forests, and to participate in community farm gardening in consultation with council	STF SCS	-	H	H	-	-	-	Core Non-Core	√		√
5.2	Green Wedge food production	Provide support for heritage aspects of and new opportunities for agribusiness in the Green Wedge while protecting agriculturally productive land for food production	EEP SP	M	M	M	R	-	-	Core	√		√
5.3	Local food production	Promote use of local / regional food produce in local business outlets	EEP (ECDEV)	-	H	H	-	-	-	Core	√		√
5.4	Local food production	Promote and encourage household food production; educate community on food production methods	EEP RCP	M	M	H	R	-	-	Core	√		√
5.5	Health & local food production	Continue to promote positive food habits through a network of community farm gardens and other initiatives	SCS EEP RCP	L	L	L	R	-	-	Core	√		√
5.8	Local food production	Continue to promote farmers' markets, fresh produce markets and food swaps in Manningham	EEP (L&L) RCP	L	L	L	R	_	_	Core	√		√
5.7	Victorian food security plan	Advocate to the state Government to develop a Victorian Food Security Plan including: — in partnership with state government agencies, measures to be to be activated in times of food scarcity such as food rationing, food coupons, food kitchens; — assistance to councils to provide a framework for urban food production; and — preservation of agricultural land for food production	SCS STF	L	M	H	-	-	-	Core			√
6. Local economy – thriving, green and resilient													
6.1	Local prosperity	Continue to implement the Economic Development Strategy which has an emphasis on relocalisation, meeting our needs locally and strengthening the local economy	EEP	H	H	H	H	H	H	Core	√		
6.2	Business continuity planning	Investigate and develop / advocate for a program for business called 'Securing the Future Risk Management and Business Continuity'	RCP / EEP		M	M	-	-	-	Non-core	√	√	√

	Description	Action	Responsible Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	2018 +	Funding	PO	CC	FS
6.3	Local prosperity	Investigate and trial local exchange, banking and currency systems to provide a buffer against instability in the world economic and financial systems and to support greater productive use of local wisdom and human energy	STF EEP	-	-	M	-	-	-	Core	√	√	√
7. Mobility and transport – *on the move with reduced oil dependency*													
7.1	Rail advocacy	Continue to implement Making Manningham Mobile (2010) including ongoing advocacy for rail to Doncaster	STP	H	H	H	-	-	-	Core	√		
7.2	Walking & cycling	Continue to develop effective bicycle paths, pedestrian paths and facilities providing links to destinations within and outside of Manningham	STP EEP	H	H	H	-	-	-	Core	√		
7.3	Reduced oil dependency	Continue to foster and promote forms of transport and mobility that reduce dependency on oil based fuels	STP EEP	H	H	H	R	-	-	Core	√		
7.4	Private car use	Encourage alternatives to the private car for both residents and staff for travelling to and from work, shopping, leisure etc. eg through — green travel plans - car pooling — ride to school - car share schemes (including electric car share)	STP EEP	M	M	M	R	-	-	Core	√		
8. Resilient city – *planning and engineering for where we live*													
8.1	Resourcing	Resourcing - adopt innovative approaches to providing necessary inputs / resources to ensure healthy, sustainable and resilient human settlements eg food, energy, water, knowledge, human ingenuity, funds, materials and shelter	EEP STP SCS All units	L	L	L	R	-	-	Core	√	√	√
8.2	Strategic resilience plan	Investigate developing a Strategic Resilience Plan to progress an integrated approach as it applies to assets, engineering, infrastructure, energy, water, mobility/transport, waste, information and communications technology. This will offer greater opportunity for identifying synergies, strategic partnerships and external funding	AE STF	H	H	H	-	-	-	Core	√	√	
8.3	Transition & innovation	Investigate and prioritise resilient solutions including: — services and utilities that are oil independent, low carbon, modular and resilient; — distributed networks for energy, water, food and waste systems; — leveraging information and communication technology; and — encouraging the use of services and materials that are resource efficient and non-toxic	AE STF	H	H	-	-	-	-	Core	√	√	√
8.4	Asset management	Continue to consider the impacts of climate change, peak oil and food scarcity in strategic planning and management of Council's assets	AE	M	M	M	O	O	O	Core	√	√	√
8.5	Doncaster East activity centre	Utilise the opportunity provided by the redevelopment of Doncaster East Activity Centre to exemplify best practice urban planning in transition - walkable, food sensitive, affordable and resilient	EEP SP STP	H	H	H	-	-	-	Core	√	√	√
8.6	Eastern golf course	Facilitate the development of the Eastern Golf Course as a sustainable and resilient precinct	EEP SP STP	H	M	-	-	-	-	Core	√	√	√

Appendix 1: Action Plan

	Description	Action	Responsible Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	2018 +	Funding	PO	CC	FS
8.7	Food sensitive urban design	Investigate the development of Food Sensitive Planning and Urban Development (FSPUD) for Manningham: how it might be included in the Manningham Planning Scheme; the resources required to undertake such an investigation and preparation of Guidelines; report on the findings	EEP STF	-	M	M	-	-	-	Core			√
8.8	Housing	Identify and deliver pilot projects that provide the conditions to enable a diverse range of affordable and accessible housing options to accommodate the changing needs of our community while transitioning to a more sustainable and resilient future	EEP SP STP STF	M	M	M	R	-	-	Core	√	√	√
8.9	Planning development	Continue to prioritise urban design and development that is walkable, cyclable, energy/water/food sensitive, that provides local access to services, improves resilience and sustainability outcomes and that is integrated with transport planning	EEP STP	H	H	H	R	-	--	Core	√	√	√
8.10	Planning development	Investigate and foster alternative patterns of urbanisation that deliver improved sustainability and resilience outcomes eg higher densities combined with open space suitable for urban food production such as the Greening the Greyfields model (Newton and Newman)	STF EEP SP STP GIS	H	H	H	R	-	-	Core	√	√	√
8.11	Planning development	Foster sustainable and resilient urban development through the Manningham Planning Scheme and land use strategies such as the Green Wedge Strategy, Residential Strategy and Doncaster Hill Strategy	EEP SP	H	H	H	R	-	-	Core	√	√	√
8.12	Resource efficiency	Foster and encourage a faster transition from waste management to resource efficiency and recovery	EO	H	H	H	H	H	H	Core	√	√	√
8.13	Doncaster Hill	Continue to progress the vision for Doncaster Hill as a '21st century sustainable urban village'	EEP STP	H	H	H	H	H	H	Core	√	√	√

9. Responsive Governance *by Council*

9. 1 Emergency planning

	Description	Action	Responsible Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	2018 +	Funding	PO	CC	FS
9.11	Responding	Re-evaluate all emergency plans including: Municipal Emergency Management Plan, Business Continuity Planning, Pandemic Planning and Emergency Management Procedures having regard to climate change, peak oil and food scarcity	MEM RM All units	H	H	M	M	R	-	Core	√	√	√

9.2 Risk management & assessment

	Description	Action	Responsible Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	2018 +	Funding	PO	CC	FS
9.21	Responding	Develop, resource and implement a Securing the Future Program that includes: regular review and auditing of service unit STF risk matrices, whole-of-council review of STF risk matrix summary to enhance peer learning and congruence of STF risk assessments across the organisation	STF RM	H	H	H	R	-	-	Core	√	√	√
9.22	Audits	Schedule annual audits for 33% of service units to determine how the units are responding to climate change, peak oil and food scarcity issues	STF RM	H	H	H	R	-	-	Core	√	√	√
9.23	Corporate risks	Include peak oil as one of council's top ten corporate risks. Require this risk to be addressed by all service unit managers when preparing their service plans	OD (RM) CP	H	H	H	R	-	-	Core	√		
9.24	Tea report template	Update TEA report template so that all reports consider Council's corporate risks (including climate change and peak oil)	OD (RM) CS EMT	H	-	-	-	-	-	Core	√	√	

	Description	Action	Responsible Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	2018 +	Funding	PO	CC	FS
9.25	Service unit plans	Service units to continue to assess peak oil, climate change and food scarcity risks to operations and service unit delivery	STF All units	H	H	H	R	-	-	Core	√	√	√
9.26	Staff education	Continue to educate and update staff on peak oil, climate change and food scarcity to ensure that: • All decision making responds as appropriate • All council policies, strategies and plans address these challenges, risks and solutions either at time of writing or during review	STF	M	M	M	R	-	-	Core	√	√	√
9.27	Strategic plans	All policies and strategic plans to consider STF Risks at time of writing or periodical review; TEA Report section 'Corporate Risk' to summarise findings	All SU	H	H	H	R	-	-	Core	√	√	√
9.28	Staff health	Continue to monitor work-related health issues noting any trends related to climate change, peak oil and food scarcity impacts such as stress, nutrition, loss of staff, injuries due to increased work demands	OD (RM)	M	M	M	R	-	-	Core	√	√	√
9.29	Service continuity	Develop a food security plan to ensure council can continue to deliver services eg Meals on Wheels, internal catering and viability of Function Centre, particularly in the event of a sudden disruption to food supply and/or food shortages	STF EEP SCS CS	-	-	H	-	-	-	Non-core	√		√
9. 3 Strategic resourcing													
9.31	Advocacy	Continue to advocate for financial and non-financial resources to meet the extra demands placed on Council and community as a result of climate change, peak oil and food scarcity	EMT All units	L	M	H	R	-	-	Core		√	
9.32	Resourcing	Develop strategies for resourcing – consider both traditional and innovative resourcing solutions	EMT All units	L	M	H	R	-	-	Core	√	√	√
9.4 Knowledge and advocacy - *knowing what Council can do and when to seek assistance*													
9.41	Adaptation program	Advocate for state government to fund an adaptation plan to respond to Climate Adaptation/Peak Oil/Food for Victorian local government authorities similar to that undertaken in South Australia, Queensland and Western Australia by JLT Insurance	Council/ EMT/ STF Program	L	H	H	R	-	-	Core	√	√	√
9.42	Assets	Continue advocating to MAV, state and federal governments for improved tools and responses for strategic asset management in relation to the impacts of climate change	Council/ EMT/ Asset Manager	L	M	H	R	-	-	Core		√	
9.43	Cost shifting	Continue to advocate for the 'polluter pays' principle to providing necessary resources to respond to the impacts of climate change	Council/ EMT/ STF	M	H	H	R	-		Core		√	
9.44	Council planning	Advocate for state government leadership to provide council the necessary tools and knowledge to enable the: • Council Plan • Strategic Resource Plan • Financial Plan • Municipal Public Health Plan • Municipal Strategic Statement • Strategic Asset Management Plan and • Municipal Emergency Management Plan to respond to the challenges of climate change, peak oil and food scarcity	Council/ EMT/ CE/ EEP/SCS	H	H	H	R	-	-	Core	√	√	√

	Description	Action	Responsible Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	2018 +	Funding	PO	CC	FS
9.45	Greenhouse reduction	Continue to advocate on issues that address the root causes of climate change	Council/ EMT/ STF	H	H	H	R	-	-	Core		√	
9.46	Planning development	Advocate for state government to amend the • Planning and Environment Act 1987 • State Planning Policy Framework of the Victoria Planning Provisions (VPP's) • VPP's to include a food production overlay to plan for the use, development and protection of land in Victoria for the long-term interests of all Victorians in response to the challenges of peak oil, climate change and food scarcity	Council/ EEP	L	M	H	R	-	-	Core	√	√	√
9.47	State government oil shock planning	Consider advocating to state government to prepare a 'Victorian Oil Shock Plan' that might include: fuel rationing, prioritising fuel supplies for emergency services and public transport, dealing with the flow on effects to the general economy, and the effect on superannuation in a volatile share market in order to prepare for the advent of a future Oil Shocks	Council/ EMT/ STF	L	L	M	H	R	-	Core	√		
9.5 Response-ability													
9.51	Connection & integration	Continue to support cross organisational groups that facilitate peer learning, connection, integration, transition and innovation, generally and in particular: • Resilient City Cross Organisational Group (officer only) • Health and Wellbeing Cross Organisation Group (officer only) • Environment Advisory Committee (Councillors and officers) • Transport Advisory Committee (Councillors and officers) • GOGO (Green Office, Green Organisation) Cross Organisational Group (officer only)	Council/ EMT/ STF / all SU	O	O	O	O	O	O	Core	√	√	√
9.52	Connection & integration	Continue to support regional alliances that facilitate peer learning, connection, integration, transition and innovation, generally and in particular: • Northern Alliance for Greenhouse Action • Metropolitan Waste Management Group Forum • Melbourne Transport Coalition (MTC) • Eastern Transport Coalition (ETC) • **The Council Alliance for a Sustainable Built Environment (CASBE)** • MAV Councils and Community in Transition (CaCiT) Group • Water Sensitive Cities • Middle Yarra Land Management • ECO-Buy	Council/ EMT/ STF / all SU	O	O	O	O	O	O	Core	√	√	√
9.54	Culture	Strengthen council culture to embed consideration of peak oil, climate change and food security issues into all council processes and operations, eg: • Ensure when engaging stakeholders that these issues are considered and addressed • Prepare all tenders and contracts to ensure these issues are considered and addressed	STF All SU	M	M	M	R	-	-	Core	√	√	√

Appendix 1: Action Plan

	Description	Action	Responsible Unit	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	2018 +	Funding	PO	CC	FS
9.55	Scenario planning	Incorporate scenario planning into professional development activities at least once every two years across the whole organisation for Council, EMT, EMCG (internal group), service unit managers and senior officers Schedule the scenario planning prior to preparation of annual Council Plan Action Plan	STF CP	H	H	H	R	-	-	Core	√	√	√
9.56	Strategic partnerships	Maximise resources and adaptive capacity by developing/strengthening regional and local relationships (eg with other councils, business etc)	EEP SEP SCS All units	L	L	L		L	L	Core	√	√	√
9.57	Transition & innovation	Develop new and innovative approaches that increase adaptive capacity and build resilience	STF All units	L	L	L	L	L	L	Core	√	√	√
9.6 Empowering communities													
9.61	Grass roots initiatives	Investigate how Council can better respond to community grass roots initiatives that foster resilience	STF	H	H	H	H	H	H	Core			

Service Unit Abbreviations

ADSS	Aged and Disability Services
BS	Building Services
CM	Communications and Marketing
CP	Community Planning
CS	Corporate Support
CLS	Cultural Services
EEP	Economic and Environmental Planning
EMT	Executive Management Team
EO	Engineering Operations
ETS	Engineering and Technical Services
FIN	Finance
HLL	Health and Local Laws
IT	Information Technology
OD	Organisational Development
PR	Parks and Recreation
SCS	Social and Community Services
STP	Strategic Projects
SP	Statutory Planning

Other Abbreviations

AE	Assets and Engineering Directorate
CE	Chief Executive
EMCG	Emergency Management Co-ordination Group
EMT	Executive Management Team
GIS	Geographic Information System
H	High Priority
L	Low priority
M	Medium priority
MEM	Municipal Emergency Management
O	Ongoing priority
R	Review
RCP	Resilient Cities Program
RM	Risk Management
STFP	Securing the Future Program
STF	Securing the Future
SU	Service Unit

Appendix 2: Summary of Manningham Service Unit Hazard and Risk Analysis

2.1 Short term - Disruptive events

Extreme climate events (hazard)	*Oil Shock - sudden oil shortage (hazard)*	*Food Shock – sudden interruption to food supply (hazard)*
- Extreme flood events - Extreme fire events - Extreme heat events - Extreme wind events - Extreme hail events	- Shortage of oil 'Volatile share market' - Temporary and sudden increase in costs – food, fuel, products, services - Scarcity – food, fuel, products, services - Economic instability	- Little or no fresh food available - Little or no frozen food available - Lack of diversity of produce - Job losses in food industries
Council Risks - Regulatory changes (e.g. building standards) - Unbudgeted costs of clean ups - Contaminated water supplies - Community events and programs and arts and Cultural services - increased risk of unexpected weather events that affect the delivery of outdoor events and festivals - Increased level of public awareness requiring information - Structural industry changes to building industry affecting capital costs and building starts - Changing knowledge and level of certainty	**Council Risks** - Drainage maintenance services compromised - relies on contractors - Increased demands on after hours service - Hard for volunteers delivering food per day - Contractor attendance on site - Materials availability- supply side logistics - Contract management - Waste collection compromised (in-house and contract) - Staffing shortages - Staff getting to work - Staff getting to clients/site visits/offsite meetings - Change of corporate responsibilities in response to needs - Increase in phone calls - Community events & programs /seminars - suppliers may pull out of their involvement in events and festivals - Increase community expectations for response - Increase in demand for services especially shopping/food services	**Council Risks** - Increase in demand for food services - Income from private functions reduced (Function Centre) - Vulnerable residents at risk e.g. elderly, disabled, economically disadvantaged and very young

2.2 Long Term - Emerging Trends

Climate change (hazard)	*Peak Oil (hazard)*	*Increasing food costs (hazard)*
• Increase in intensity and number of flood events • Increase in size and number of hail events • Increase in intensity and number of damaging winds • Reduction in rainfall/drought • Increased fire risk • Reduction in biodiversity • Increase number of high temp days • Increase spread of disease - pandemic • Economic pressures	• 'Volatile share market' • Increase in costs – food, fuel, products, services • Scarcity – food, fuel, products, services • Economic instability • No supply of some products • Economic uncertainty	• Increase in food costs • Scarcity of certain foods • Failure of large scale farms

Council Risks
  o Increased insurance costs/unavailability
  o Unstable power supply/brown outs
  o Infrastructure damage
  o Inability of residents to pay rates
  o Structural industry changes
  o Regulatory changes (e.g. building standards)
  o Community events and programs AND arts and cultural services – increased risk of unexpected weather events that affect the delivery of outdoor events and festivals
  o Rising water means more flood areas
  o Increased damage to houses
  o Drainage system capacity inadequate
  o Increased level of public awareness
  o Higher construction costs
  o Staff vulnerable for infection due to lack of personal protection equipment
  o Staff difficulty getting to work
  o Staff difficulty doing their job due to high oil prices
	Council Risks
	  o Caterers unable to service functions
	  o Downturn in building activity
	  o People not able to afford services e.g. internet, telephone
	  o Fleet/plant and equipment availability compromised
	  o Waste collection compromised (in-house and contract)
	  o Drainage maintenance services compromised
	  o Depot store
	  o Workshop operations
	  o Higher fuel prices impacting clients/volunteers
	  o Recruitment
	  o Increase in phone calls to ADSS Office
	  o Increase in demand for all ADSS services
	  o Increase in demand for financial assistance
	  o Pressure on rate base
	
	  o Community events and programs - Increased
		Council Risks
		  o Community events and programs compromised due to increased cost to secure food suppliers for events and festivals
		  o Increase in demand for food services
		  o Increase in request for financial assistance
		  o Increase in phone calls
		  o Community events and programs - community organisations applying for funding for essential items such as food parcels to feed the less advantaged
		  o Malnutrition
		  o Spread of diseases and pests
		  o Political instability
		  o Residential social unrest
		  o Large numbers of refugees (internal and external) as in the great depression

Climate change (hazard)	Peak Oil (hazard)	Increasing food costs (hazard)
o Staffing shortage o Transitioning skills o Pressure on public transport o After hours service	cost of materials and suppliers for events and festivals due to increased cost of fuel for people o Arts and cultural services - increased cost of materials for programs due to increased cost of fuel o Arts and cultural services - increased cost of tutors to deliver programs due to increased cost of fuel o Builders may go out of business o Increase price of heating and cooling o Municipal infrastructure (Council) o Infrastructure servicing municipality (other agencies)	

Appendix 3: Manningham's Risk Assessment Framework

Consequence Check each applicable consequence	MINOR 1	MAJOR 2	EXTREME 3	CATASTROPHIC 4
☐ Business Interruption	Brief service interruption.	Temporary, recoverable service failure.	Service or provider needs to be replaced. All operational areas of a location compromised.	Essential service failure or key revenue generating service removed. Total system dysfunction and / or shutdown of operations.
☐ Environmental	Remote, Temp pollution. E.g. discharge of pollutants within local area.	Residual pollution requiring clean up work.	Harm requiring restorative work	Irreversible Damage. Extensive detrimental long term impacts on the environment and community.
☐ Financial	< $1M	< $3M	< $5M	> $5M
☐ Property Damage	< $15,000	< $100,000	< $1M	> $1M
☐ Management Corporate Operational	Staff & Mgmnt dissatisfaction. - Broader basis. Dissatisfaction disrupts services.	CEO's dissatisfaction. Likelihood of legal action. Significant disruption to operations	CEO & Council dissatisfaction. Legal Action. Qualified Audit report to Council naming particular Managers.	Council, CEO OR Service Unit Managers' resignation / removal. Resignation / removal of key staff.
☐ Public Image & Reputation	Customer Complaint	Local Community concern / exposure.	Sustained adverse publicity. State wide concern / exposure.	Complete loss of public support and replacement of Council with formal administration. CEO Resigns
☐ Security	Localised incident. No effect on operations.	Localised incident. Significant effect on operations.	Significant incident effecting multiple locations	Critical incident effecting Council's survival.
☐ Health & Safety Compliance	Injury	Single minor disablement / multiple temporary disablements.	Single Death Multiple long term or critical injuries.	Death(s) / Many critical injuries

LIKELIHOOD LEGEND

1 - Unlikely
The event is not expected to occur; Once every 30 years.

2 - Possible
The event might occur at some time; Once every 10 years.

3 - Likely
The event will probably occur at least once; Once every 3 years.

4 - Almost Certain
The event will occur in most circumstances; Annually or more frequently.

Likelihood	Consequence			
	Minor 1	Major 2	Extreme 3	Catastrophic 4
4 - Almost Certain	Medium	High	Serious	Serious
3 - Likely	Low	Medium	High	Serious
2 - Possible	Low	Medium	High	High
1 - Unlikely	Low	Low	Medium	High

Risk	Control
Low	No senior management approval is required prior to taking action. Implementation of simple and cost effective controls is required. Review every two years.
Medium	Risk requires management oversight on an ongoing basis. Management to review controls on an annual basis.
High	Risk requires management oversight on an ongoing basis. Management to review controls on a six-monthly basis.
Serious	The risk is intolerable to the organisation. Risk brought to the attention of the EMT and requires management oversight on an ongoing basis. Management to review controls on a quarterly basis.

Business Interruption Risk Level: [▼]

Environmental Risk Level: [▼]

Financial Risk Level: [▼]

Property Damage Risk Level: [▼]

Management Risk Level: [▼]

Public Image & Reputation Risk Level: [▼]

Security Risk Level: [▼]

Health & Safety Compliance Risk Level: [▼]

Appendix 4: Resilient Communities Program

Objective

To facilitate the implementation of the Resilient Communities Program and to progress the vision and objectives of the Securing the Future Adaptation Plan.

Resilient communities - *empowerment, education, capacity building: households and neighbourhoods that are smart and self-reliant*

Description
Foster grassroots initiatives and design and deliver programs that facilitate strong, informed, capable, localised, self reliant, connected and willing communities.

Facilitate the growth of households and neighbourhoods that are more self-sufficient and psychologically resilient:

Energy: efficient, generating significant renewable energy locally backed up by buying green energy

Water: efficient, harvesting and re-used in laundries, toilets and gardens, low-water gardens, healthy rivers, lawns replaced

Food: locally or home grown and prepared, more farmers' markets and food swaps, less food miles, reduced meat in diets

Waste: minimise waste to landfill, re-use, reduce and re-cycle.

Priority Actions
- Identify and leverage synergies with the Generation 2030 Community Plan. In particular those initiatives designed to engage community by tapping into community passion and vision.
- Continue to support the MAV Council and Communities in Transition (CACiT) program by encouraging and supporting formation of grass roots initiatives such as Sustainability Streets, Transition Towns and Backyard PermaBlitz, so as to foster the growth of resilient households and neighbourhoods. Appoint a Program Officer – 2 days per week. It is believed that by funding

this position Council and community will be able to attract an equivalent amount of funding to progress resilient communities.

Scope

Working with the diverse communities of Manningham, local business and other stakeholders to 'secure the future together' as we respond to climate change, peak oil and food scarcity.

Outcomes/Outputs
* More resilient communities – empowered, psychologically strengthened, informed and with increased self reliance.
* A 'Securing the Future Risk Management Plan' template for households.
* Attraction of funding for delivery of community programs by Council.
* Enabling grassroots community groups to attract increased funding.
* Annual progress report on implementation of adaptation actions – refer Appendix 1: Action Plan.
* Progress towards respective visions for Generation 2030 and Securing the Future.

Budget

$41,720 per year for three years

Future and ongoing initiatives including in kind contributions by Council to be further investigated.

References

1. Securing the Future Adaptation Plan (July 2012)

2. Generation 2030 Community Plan (July 2012)

Appendix 5: Securing the Future Program

Objective

To ensure Council achieves the Securing the Future objectives of Service Continuity, Growing Resilience and Leadership, both internally and for the community. The Securing the Future (STF) Program focuses on facilitating the outcomes and actions of the strategy "*Responsive Governance by Council*".

Responsive Governance by Council

Description

Responsive governance can be defined as "increasing our response-ability to make wise decisions and take effective action, individually and collectively as community, councillors and officers." These six sub-strategies facilitate the desired outcome of 'responsive governance by Council':

Sub-strategies

1. Emergency planning
2. Risk management and assessment
3. Strategic resourcing – financial, non-financial and human resources
4. Advocacy
5. Response-ability
6. Empowering communities

Scope

Working with Councillors and officers to progress the Securing the Future Adaptation Plan.

Priority Actions

- Develop, resource and implement a Securing the Future Program that includes regular review and auditing of Service Unit risk matrices, whole-of-council review of risk matrix summary to enhance peer learning and congruence of risk assessments across the organisation

- Continue to educate and update staff on peak oil, climate change and food scarcity

- Schedule annual audits for 33% of service units to determine how the units are responding to climate change, peak oil and food security issues

- All policies and strategic planning documents to consider responses to climate change, peak oil and food security either at time of writing for new documents or when existing documents are reviewed

- Each year give consideration to scheduling a Scenario Planning activity prior to preparation of the annual Council Plan Action Plan.

Outcomes/Outputs

- Continues to enhance Council's leadership role;

- Develops Council's capacity to provide for ongoing service continuity and necessary resilience within community and Council;

- Identify and foster the conditions that support rapid transition for Council and community

- Attraction of funding for delivery of community programs by Council;

- Annual progress report on implementation of adaptation actions – refer Appendix 1: Action Plan

- Progress towards respective visions for Generation 2030 and Securing the Future;

Budget

Core budget – will be incorporated into existing roles within EEP and RM

References

1. Securing the Future Adaptation Plan (July 2012)

2. Generation 2030 Community Plan (June 2012)