
REPORT 1
(1215/11/IM)

MAYORAL TRAVEL – REPORT BACK ON UNITED NATION’S COPENHAGEN CLIMATE CONFERENCE DECEMBER 2009

1. Purpose of Report

To report back on my travel to Copenhagen to attend the C40 Climate Summit for Mayors in December 2009.

2. Executive Summary

Before the United Nations Climate Change Summit in Copenhagen, you may have heard the phrase ‘Hopenhagen’. As world leaders struggled to make progress, it became ‘Brokenhagen’.

I was in Copenhagen at the parallel Climate Summit for Mayors and I’m delighted to report that the event was anything but broken – it gave every reason for hope.

More than 80 Mayors from around the world attended. This was a unique opportunity to gain a global view of this global problem and practical responses to it. The overall message was “Cities act”.

While the international community has been struggling to agree on common objectives and targets to address global warming, a growing number of cities and regions have taken initiatives to reduce their energy use and CO2 emissions. Many cities have set targets for greenhouse gas (GHG) reductions, some beyond national commitments, or in the absence of national action. ICLEI, Local Governments for Sustainability, for instance, includes more than 1,074 local governments in their associations, representing more than 300 million people in 68 countries.

Mayors from across the world – both developed and developing cities – were all in agreement that cities must act. This is consistent with a recent United Nations (UN) message which has declared the battle against climate change will be won and lost in cities¹.

¹ IOP 2009: Climate Change: Global Risks, Challenges, Decisions, Copenhagen 10-12 March 2009. Available on-line at <http://www.iop.org/EJ/volume/1755-1315/6>.

The scientific evidence today overwhelmingly indicates that allowing the emission of greenhouse gases from human activities to continue unchecked constitutes a significant threat to the wellbeing and development of our cities and communities.

The challenge of climate change can at times seem overwhelmingly difficult. Whilst there is no single treaty or technological 'silver bullet' that will quickly and painlessly transform societies, cities are integral to success and early leadership in communities is critical. Cities represent both a challenge and an opportunity for climate change action and policy.

Community-level responses to the climate change challenge can be most effective if they are a blend of local knowledge and experience and expert input. This is why cities and local government are vitally important, particularly given the urgency for action.

Cities and local government are also key given the challenges presented for urban areas. Urban areas are highly vulnerable and susceptible to the impacts associated with climate variability and climate change.

Individual citizens play an important role in the response to climate change, especially when they make decisions to reduce their greenhouse gas emissions or adapt to climate change. Many of the low-cost reductions in greenhouse gas emissions are in the residential sectors, where the use of insulation, efficient appliances and lights, and information feedback from smart meters and utility bills can produce rapid reductions in energy demand at a net financial saving. At a city level, actions are focused on savings in energy use, retro-fitting buildings, renewable energy resources, public transportation, infrastructure design, land-use planning and zoning, and waste and green procurement programmes.

There is also growing recognition that the greening of cities can lead to new jobs. The argument is that the economic benefit associated with a large number of mitigation activities (energy-efficient devices, green buildings etc) act as an incentive to generate new markets for new technologies and new consumer markets in urban areas. A study by the UN, '*Green Jobs: Can the Transition to Environmental Sustainability Spur New Kinds and Higher Levels of Employment?*' suggests that a silver-lining in the climate change story will be the creation of millions of new green jobs in green manufacturing, green construction and green energy.

The C40 Climate Summit for Mayors showed cities worldwide face the same challenges, and are addressing them in similar ways. Emission reduction targets echo our target of 30 percent by 2020. Some are less ambitious, such as New York 30 percent by 2030; some more so such as London with 60 percent by 2025.

With few exceptions, there were no cities trying anything Wellington hasn't implemented or considered, although the scale and emphasis may differ.

3. Recommendations

Officers recommend that the Committee:

1. *Receives the information.*
2. *Note that Wellington's climate change actions are similar in approach to other larger cities. The priorities across the world can be summarised as:*
 - *accepting the scientific evidence and developing emission profiles (i.e. city, sectors etc)*
 - *local leadership – cities taking action*
 - *accessing affordable finance*
 - *cross-jurisdictional action.*
3. *Note that Wellington City Council's draft 2010 Climate Change Action Plan is consistent with international best practice with its focus on:*
 - *existing buildings and energy efficiencies*
 - *transport network investment*
 - *emerging technology development*
 - *Council operations leadership (e.g. buildings, procurement, fleet, energy etc)*
 - *dual focus on city and Council actions.*
4. *Note that officers will consider the ideas and issues from the C40 Climate Summit for Mayors in the draft Climate Change Action Plan to be considered as part of the Draft Annual Plan 2010-11.*

4. Background

In September, Council gave approval for me to undertake official travel to Copenhagen in December to attend the United Nations meetings and C40 Climate Summit for Mayors. Local Government New Zealand (LGNZ) also approved my attendance representing local government.

The C40 Climate Summit for Mayors took place from 14 to 17 December 2009 at the Copenhagen City Hall. The focus was on recognising the valuable contribution and effort of cities to respond to climate change. The Summit was attended by 80 Mayors from a range of cities including London, Los Angeles, Paris, Sydney and Tokyo, who are taking leadership in responding to climate change.

It was an opportunity for me to connect with colleagues and share best practice approaches, and to be part of a strong statement regarding the role of cities in climate change. This statement was presented to the United Nations climate change meetings – Copenhagen Communiqué.

A written request was made to Local Government New Zealand to cover a proportion of my costs, as I was representing New Zealand local government. A grant of \$3000 was made by LGNZ towards the cost of the travel.

5. Discussion

5.1 Study Tour: E.ON: Excursion to Malmö

This Mayors' study tour was an opportunity to see the solutions in reality, hear the true stories of what made it happen and learn more about successful private-public partnerships.

The tour visited the Western Harbour in Malmö, just next to Copenhagen, and part of the Øresunds region. The area was previously a shipyard and the Saab car factory. The Western Harbour District and the renewable biogas fuel system for buses in Malmö are two state-of-the-art projects. It was an opportunity to see 100 percent renewable biogas and the 100 percent locally-renewable energy system in the Western Harbour development.

A lunch was hosted by Mr Håkan Buskhe, CEO of E.ON Nordic. E.ON is a company of 6000 employees, 1.2 million customers and a business value €46 billion. The company is focused on the growing environmental challenges of cities through climate-smart and long-term infrastructure solutions.

The Mayor of Malmö, Ilmar Reepalu, presented at the lunch about his city's quest to become a sustainable/ecological city.

Malmö today has a population of 300,000 people and 3.5 million in the Øresunds region. It is the number one growth city in Sweden in terms of sustainability and economic growth. It was recently awarded the United Nations Scroll of Honour for its efforts to create an eco-city. About 500,000 people commute into the city each day. Fifty percent of the population is younger than 35, and 175 nationalities are represented in the city. About 200,000 tonnes of waste is collected each year with just five percent going into landfill.

The transformation of Malmö had been a significant challenge. During 1990-1995 the former industrial city experienced the loss of 26,000 jobs and the unemployment rate increased from two percent to 20 percent. A vision project involving everyone across the community – business, education, individuals – was initiated and people were asked where do you want Malmö to be in 15 years? Two key themes emerged from the work – energy use and production was important and the environment was a key issue for the younger generation. From this work, Malmö created its vision statement, '*Human capital comes and grows*'.

The Vastra Hamnen District – the City of Tomorrow in Malmö is an example of a sustainable city. It is a public-private partnership between Malmö City and E.ON. It is seen by both parties as a demonstration project and has received European Union funding (€20 million) for the energy initiatives. The

residential development has been undertaken by a private company. E.ON has contributed to the construction of the city district that is entirely self-sufficient, with renewable energy from water, wind, sun and compostable waste. The basic concept is that Vastra Hamnen's energy should be generated by commercially-accessible technology.

Some of the world's most famous architects have created landmarks and 'love marks' of Malmö. An example is the '*Turning Torso*' building (190m tall, 49 floors) designed by Spanish architect, Santiago Calatrava. The building is based on one of his sculptures which was inspired by the human form in motion

Some of the local renewable energy technologies used throughout the development included an aquifer which is used as a natural underground storage reservoir. Ten boreholes, each 90 metres deep, were sunk down to the limestone aquifer. They are located in two rows, 200 metres apart. In the Winter, water at a temperature of 15 degrees celsius is drawn up from one row of wells, known as the warm side. The water is used as a heat source in a heat pump and after cooling, it is pumped back into the aquifer through the wells of the other row, down on the cold side.

The heat from the heat pump is distributed to the district heating network. Over the course of a year, just over five million kWh of heat is produced; meeting 90 percent of the district's heating requirements.

During the Summer, the process is reversed, so that cooling is produced for the district cooling network. Over the course of a year, this provides about three million kWh of cooling.

In Vastra Hamnen, solar cells and solar collectors use solar energy in two different ways. The solar cells are made of semi-conductors, which can be manufactured from various kinds of material, usually silicon. With silicon, solar rays are converted directly into electrical energy. This is an expensive technology to produce energy, but it is hoped that manufacturing costs will decline significantly over the next few years. About 6000 kWh of electricity is produced annually from 120 square metres of solar cells.

Another way of using solar energy is with solar collectors. A solar collector heats the water; the water normally circulates in an enclosed system. In Vastra Hamnen, the 2600 square metres of solar collectors are connected to the district heating network. The total annual heat production is 650,000 kWh, equivalent to about 10 percent of the heating and hot water used in the area. One of the important lessons is that it is possible to integrate solar collectors in modern architecture by emphasising their function, rather than attempting to hide them.

The solar technology installed on roof tops and as part of the building design is owned by E.ON under a 30-year agreement. At the conclusion of this time period, the agreement will be renegotiated. An eight year payback period has been achieved on the technology used.

Through anaerobic digestion, the organic waste from Vastra Hamnen is converted to biogas which is fed into Malmö's natural gas network. The locally-produced biogas provides the housing area with energy.

The goal for total energy (electricity, heat and cooling) use in the properties was to use a maximum of 105 kWh per square metre annually. This was a tough goal, but has been achievable through building technologies and the right energy system.

Through effective planning and well-conceived design and construction, many of the properties have achieved the goal, in some cases by a good margin. However, in a number of properties, consumption exceeds the goal by a substantial amount. This has not been fully explained, and a number of surveys are currently underway to clarify this issue.

Following the visit to the sustainable city area in Malmö, we visited the upgrading facility for biogas and the biogas filling station for the city buses. At the bus filling station, buses are refilled overnight. The gas produced is provided to the electricity grid and buses take from the grid.

Biogas can be produced from raw materials such as sewage slurry, manure and energy-rich waste such as abattoir and vegetable waste. The advantage is a carbon dioxide-neutral eco-cycle. The carbon dioxide that is given off when biogas is burned is re-absorbed into vegetation, which needs it in order to grow. The vegetation becomes food and the waste becomes biogas. And the cycle starts again.

A major advantage of renewable biogas is that once filtered clean, it can be distributed in the same pipe as other gases, so there is no need to transport it by road. In Sweden, biogas today accounts for half of all the vehicle gas sold. Apart from hydrogen, biogas is the fuel that gives the lowest emissions of carbon dioxide and particles of all fuel.

I attended the United States Conference of Mayors (Washington D.C) reception dinner honouring Mayor Ritt Bjerregaard, Lord Mayor of Copenhagen.

Following this event, I attended a New Zealand Delegation function hosted by the NZ Consulate-General to Copenhagen, Mr Johan Schroeder. This was an opportunity to be updated on the New Zealand delegation negotiations and progress at COP 15. At the function, the NZ delegation youth ambassadors presented Ministers Tim Grossor and Nick Smith with a Sir Peter Blake spinnaker signed with messages from New Zealand youth.

5.2 World Cities Showcase Achievements

More than 80 mayors from all over the world attended the Climate Summit for Mayors and the overall message was that "*Cities act*". A press conference held emphasised that cities are not only planning to reduce greenhouse gas emissions in the future, but are already doing so.

To signify this commitment and united message of world mayors, the Copenhagen Climate Communiqué was launched and I signed this along with the other world city Mayors. The Communiqué was presented to COP 15 national governments at an event called *'Seal the deal in Copenhagen'* and asked for the pivotal role of cities in fighting climate change to be acknowledged. Cities and urban areas are estimated to be responsible for 75% of all greenhouse gas emissions worldwide².

Speakers at the event included Lord Mayor Ritt Bjerregaard (Copenhagen), Mayor Michael Bloomberg (New York), Environmental Minister of Hong Kong Tang-wah Yau, Mayor Adam O. Kimbisa (Dar Es Salaam) and Mayor Mauricio Macri (Buenos Aires).

In his opening speech, Mayor Bloomberg of New York City said:

"As mayors of cities around the world, we recognise the importance of national and international leadership on climate change. But we can't wait for national governments to act first, and they can't solve the problem on their own. As city governments, we too have an obligation to confront climate change..."

Mayors from a number of cities showcased how their cities are reducing greenhouse gas emissions. The purpose of the event was to show that 'Cities act', and to inspire other cities, as well as nations to do the same. The Future City speakers were:

- *Mayor Villaraigosa (Los Angeles)* *Energy efficient lighting by LED lights*
 - Over the past four years, Los Angeles has seen its renewable energy production increase from three percent to 15 percent. The short-term target is 40 percent.
 - 144,000 street lamps have been replaced with LEDs.
 - The city is conserving 19 times the energy it was using four years ago
 - Ambitious targets have been set for the use of clean fuels in the Council's waste fleet. Around 65 percent of vehicles currently use clean fuel and by 2013, 100 percent of vehicles will be using clean fuel.
- *Mayor Kassab (San Paulo)* *Waste Management*
- *Mayor Ebrand (Mexico City)* *Low carbon transport – bikes*
 - Transport main emission challenge for a city of 9.2 million people
 - Subway systems, rapid bus systems and bicycles are currently being implemented across Mexico City.

² Corfee-Morlot, Jan, Lamia Kamal-Chaoui, Michael G. Donovan, Ian Cochran, Alexis Robert and Pierre-Jonathan Teasdale (2009), "Cities, Climate Change and Multilevel Governance," *OECD Environmental Working Papers No. 14*, 2009, OECD publishing, OECD.

- One percent of the population uses bikes currently, with the aim of increasing this to five percent by 2011.
- In 2011, the city will be introducing an electric vehicle taxi fleet.
- *Mayor Bloomberg (New York) Energy efficient buildings*
 - Challenge for the city is the efficiency of existing buildings. New York City produces approximately 3.8 million metric tonnes of greenhouse gas emissions per year and consumes about 6.5 percent of New York City's total energy usage.
 - City will spend roughly US\$1 billion on energy costs for its buildings and operations for the 2009 financial year.
 - Around 85% of the city's current buildings have a lifespan of 20-30 years.
 - The city's plan is to reduce the energy consumption and greenhouse gas emissions of the city's municipal buildings and operations by 30 percent (or 1.68 million metric tonnes) by 2017.
 - A new building regulation has been introduced focused on upgrading lighting, installation of building sub-metering, publishing energy use online.
 - New York City Council is retro-fitting all its city buildings to improve energy efficiency – a US\$2.3bn commitment over the next nine years. The overall project has an average payback of 7.6 years or 13 percent return on investment.
- *Mayor Maseko (Johannesburg) Low carbon transport – hybrid buses*
- *Mayor Johnson (London) Low carbon transport – electric police cars*
 - London is working towards 1000 non-emergency vehicles being electric vehicles. Electric vehicles are currently in use in the Police Department.
 - Every Londoner will be no more than one mile from an electric charge point by 2015. The plan is to make London the electric capital of Europe.
 - There are 25,000 charging units being installed across London, including work being done in partnership with retailers.
 - By 2015 in London, the aim is for 22,500 charge points at workplaces, 500 on-street and 2000 in public car parks.
 - The aim is for 100,000 electric vehicles over the next few years. The 2012 Olympics is seen by London as an opportunity to achieve the momentum needed to achieve this goal.
 - The Mayor stressed the importance of exciting people about climate change action, rather than depressing them. He argued that cities need to appeal to consumers' egos to see technologies and actions implemented on a mass scale.
 - The Mayor emphasised that he wanted to pursue radical, yet practical, steps to cut energy waste. Electric vehicles are seen by London as an example of how technology can provide a solution to the biggest challenge of our generation.

- *Mayor Bjerregaard (Copenhagen)* *Clean energy by wind turbine*
- *Mayor Miller (Toronto)* *Carbon financing*

The emission reduction targets set by a range of cities were identified:

Los Angeles	35% by 2030 on 1990 base year
Sao Paulo	30% by 2012 on 2003 base year
Mexico City	12% by 2012 ³
New York	30% by 2030 on 2007 base year
London	60% by 2025 on 1990 base year
Copenhagen	carbon neutral by 2030 and 40% by 2015 on 2005 base year
Jakarta	30% by 2030 ⁴
Toronto	80% by 2050 and 30% by 2020 on 1990 base year

MIT SENSEable City Lab and the City of Copenhagen joined forces, in cooperation with Ducati Energia, and with support by the Italian Ministry for the Environment, Land and Sea to develop a step change sustainable transportation system for bicycles: **The Copenhagen Wheel**. It was launched at the Climate Summit for Mayors.

The Copenhagen Wheel is considered to be smart, responsive and elegant – quickly transforming your ordinary bicycle into a hybrid e-bike that also functions as mobile sensing unit. It is seen as a way of making cycling fun, desirable, efficient and scalable to the topography of different cities. The Copenhagen Wheel allows you to capture the energy dissipated while cycling and braking and save it for when you need a bit of a boost. It also maps pollution levels, traffic congestion, and road conditions in real-time.

Controlled through your smart phone, the Copenhagen Wheel becomes a natural extension of your everyday life. You can use your phone to unlock and lock your bike, change gears and select how much the motor assists you. As you cycle, the wheel's sensing unit is also capturing your effort level and information about your surroundings, including road conditions, carbon monoxide, NOx, noise, ambient temperature and relative humidity.

At this time, the bike has only been tested in Copenhagen, a very flat city. At the conference, I offered the MIT SENSEable City Lab the opportunity to test their technology in Wellington as it is a compact and hilly city. I have asked officers to follow this opportunity up directly with MIT SENSEable City Lab.

Several mayors presented case studies from their cities on reducing greenhouse gas emissions. These case studies included local projects with energy efficient buildings, waste management, low carbon transport, clean energy and several other initiatives.

³ Assumed base year 2007, however unable to confirm

⁴ Base year not quoted

The mayors discussed 'future urban challenges and solutions' and 'carbon financing for developing cities' in round table sessions. Each session was chaired by different mayors and moderated by well-known political journalists.

The topics covered by the sessions were:

- energy-efficient buildings
- adaptation
- waste management
- low carbon transport
- citizen engagement
- energy efficiency
- climate action plans
- clean energy

5.3 Public Private Partnerships

There was a panel discussion about public-private partnerships, with examples of innovative partnerships between cities and private partners. One successful partnership is between the founder and CEO of Better Place, Shai Agassi, and the Mayor of Los Angeles, Antonio Villaraigosa. They presented their visions and roll-out plans for boosting the use of electric-powered cars in cities.

At the Summit, the Mayor of Los Angeles announced a global electric vehicle partnership across a number of large cities – Sydney, Sao Paulo, London and Los Angeles. The partnership is a programme aimed at speeding up the introduction of electric vehicles through collective procurement, and installing charging units and converting car fleets. By 2010, Los Angeles is aiming to have 500 upgraded vehicle charging stations installed.

Shai Agassi spoke about creating convenient electric vehicle-refueling opportunities – making them more convenient than petrol. At this time, people think that electric vehicles are only suitable for short trips and need eight hours recharging.

This is not the case. Shai spoke about a 'battery switch' approach which provides a drive-in facility whereby the battery units are changed over in less than two minutes. To show the long-haul capacity of electric vehicles, Shai is deploying electric vehicles in Sydney, London, Copenhagen and Los Angeles and having them driven continuously for 100 days without recharging.

The panel discussion also included the challenges and opportunities for carbon financing for developing cities. It was presented by the Mayor of Dar es Salaam, Adam O. Kimbasa, and World Bank President, Robert Zoellick.

The opening plenary speakers were:

Governor Arnold Schwarzenegger (California)
Mr Angel Gurría (OECD Secretary General)
Mr Robert Zoellick (World Bank President)

Sir Richard Branson (Chairman of Virgin Group)
Ms Barbara Kux (Member of Managing Board, Siemens AG)
Mayor Kimbasa (Dar Es Salaam)
Mr Shai Agassi (CEO, Better Place)
Mayor Delanoë (Paris)
Mayor Villaraigosa (Los Angeles)
Mayor Stang (Oslo)

Some important messages from these speakers were:

Mr Gurria (OECD Secretary General): His message was around the important and central role cities must play. The OECD had recently released a paper, “*Cities, Climate Change and Multilevel Governance*”⁵ which highlights of the role of policy, cities and urban planning in responding to climate change. It concludes that climate change is a problem that can only be adequately addressed if action is taken at all levels of government: international, national, regional and local. Cities have the ability to design solutions that are adapted to the needs of local communities and that are consistent with local policy priorities.

Mr Zoellick (World Bank President): He highlighted that 53% of world’s population lives in cities of less than 500,000. It is estimated that more than 50% of population growth will happen in these secondary cities. Urban populations are estimated to double in South East Asia and Africa in the next 10 years. Cities are vulnerable to climate change. The World Bank has estimated that the annual cost of adaptation is US\$75-100 billion.

Sir Richard Branson: He has created a ‘*carbon war room*’ focused on climate change and the research, funding and effort required to bring about global solutions. He has become involved in climate change issues given the impacts on health, wealth and world stability. Sir Richard acknowledged that a significant challenge was energy use in existing buildings. His message was that great cities must be like strong companies: have a clear strategy: political will: and be led by entrepreneurial Mayors. He likened the challenge of climate change to his Virgin business model, whereby he looks for a gap in the market and then delivers outcomes by “turning things upside down”.

Governor Schwarzenegger’s message was simple: everyone needs to be involved in climate change action and cities must lead the way. For this to happen, actions and effort need to be ‘hip’. His example was that ‘carbon neutral’ products need to be demanded by the consumer to make them affordable to the mass market. This message was similar to London’s Mayor Johnson, who argued that the climate change message needs to be exciting, not depressing. In California, there has been a 34 percent increase in jobs in green technology. Sixty percent of venture capital in California is invested in green technology (solar/wind technology; electric cars; hydrogen cars).

⁵ Corfee-Morlot, Jan, Lamia Kamal-Chaoui, Michael G. Donovan, Ian Cochran, Alexis Robert and Pierre-Jonathan Teasdale (2009), “Cities, Climate Change and Multilevel Governance,” *OECD Environmental Working Papers No. 14*, 2009, OECD publishing, OECD.

5.4 Green Vehicles Parade

Ten mayors from leading cities were transported by highly-developed climate-friendly cars from City Hall Square to Copenhagen University.

Ten visionary cars were chosen to join the parade to illustrate how sustainable vehicles can have the same appearance and performance as traditional cars.

The world's first all-electric sports car Tesla was included in the parade, as well as the mini HUMMER H3, MINI E, BMW Hydrogen 7, Honda FCX Clarity, Mitsubishi iMiEV and Nissan Qashqai.

Several cities will be renewing their fleet of cars in the next couple of years, and this provided an opportunity for Mayors to get more acquainted with the benefits of electric and hybrid cars.

5.5 Research on Cities and Climate Change

We were the first to hear how research is supporting the city agenda at the presentation of the Urban Climate Change Research Network's (UCCRN) first Assessment Report on Climate Change in Cities (ARC3).

The report makes clear that urban areas are vulnerable to changing climatic conditions in ways which make the risks their populations face complex and multi-faceted. Understanding the nature of these threats, the strategies necessary to address them, and where information gaps exist is critical. Because urban areas are home to the majority of the world's population and critical centres of trade, commerce and political power, the ARC3 aims at filling a major gap in previous studies that have examined these issues only at national or international level.

Some of the key findings from the report were:

- The past decade, 2000-09, was the warmest since the recording of temperatures.
- Climate is a function of heat stored, not air temperature.
- Calculations estimate that the available atmospheric 'carbon waste facility' is 1-2 tonnes carbon dioxide per annum or less. At the moment, per capita emissions vary widely from country to country – for example USA over 20 tonnes; in the Nordic countries about 11 tonnes and in China four tonnes⁶.

The ARC3 is the product of more than a year's work by 45 researchers from the UCCRN, a global consortium of academic, NGO, private sector and government researchers who specialise in the impact, adaptation and mitigation of urban climate change.

⁶ University of Copenhagen (2009), Synthesis Report: Climate Change Global Risks, Challenges and Decisions, Copenhagen. Available on-line from www.climatecongress.ku.dk

The session started with an introduction to the key findings from the congress 'CLIMATE CHANGE Global Risks, Challenges and Decisions' held by the University of Copenhagen and IARU in 2009. The key messages were:

- Science needs to be accepted and used to inform policy development and review.
- Leadership is a must.
- Affordable finance needs to be available.
- Coordination across jurisdictions is essential.

5.6 Study Tour: Copenhagen Waste Facility

The Copenhagen Recycling Centre (CRC) is approximately 100 hectares and was opened by the City of Copenhagen in 1996. The area was reclaimed around World War II and was used for military purposes until 1996. The site is ideal for a waste facility, given that it is close to source; has no immediate neighbours; water pressure is upwards (below sea level).

The main activities at the facility are contaminated soil deposits and ensuring capacity for soil deposits in the future. All soil from Copenhagen and across Denmark is considered to be contaminated, given the significant reclamation. In addition, the centre rents out areas for waste treatment plants, undertakes inspections and day-to-day management of the area. The facility receives 800,000 tonnes per year, which equates to one truck per minute.

Regarding construction and demolition waste, the profile is:

- receives 400,000 tonnes per year
- receives both mixed and separated waste
- 91 percent of material reused
- six percent incinerated
- three percent landfill.

The facility also undertakes soil remediation:

- receiving 30,000-35,000 tonnes per year
- oil components of soil are petrol, light fuel oil
- use indigenous micro-organisms. Rain and surface water is collected and used to water the soil heaps.

5.7 Meetings with other Copenhagen parties

City of Copenhagen - Planning

I met with representatives from the City of Copenhagen planning department - Claus Bjorn Billehøj (Programme Manager Nordhavn urban development and Large Urban Development projects), Marc J. Jørgensen (Specialist Advisor) and Casper Marrott (Scientist).

The City of Copenhagen has 55 members elected for a four-year term. The Lord Mayor is the Chairman of the City Council and is appointed by the majority party on Council. There are seven fulltime Mayors who have responsibility for the following committees:

- Finance
- Culture and Leisure
- Children and Youth
- Health and Care
- Social Services
- Technical and Environmental
- Employment and Integration.

A copy of the Council's political structure is attached (see **Attachment 1**).

The meeting with City of Copenhagen provided an opportunity to understand:

- regional perspectives and challenges for Copenhagen
- Copenhagen's planning journey over the past 30 years
- city challenges and solutions
- major urban development projects.

Meeting with Professor Jens Hoff

I attended a meeting hosted by Professor Jens Hoff and the CIDEA project team at the University of Copenhagen. This was an opportunity for me to find out further information on this project, and to present on the actions and initiatives being undertaken by Wellington City Council and local government across New Zealand in response to climate change.

CIDEA is a partnership project between the University of Copenhagen (represented by the Department of Computer Science, Department of Anthropology, LIFE Faculty – two different departments – Department of Political Science) and the municipalities of Odense, Middelfart, Skanderborg, Kolding, the 'Green House' in Køge, the city of Copenhagen and DHI, Water, Environment and Health.

The municipalities asked to participate in the study have been deliberately chosen (Copenhagen, Odense), as well as middle-sized (Køge, Kolding) and smaller municipalities (Middelfart, Skanderborg). The municipalities were also representative of different regions in Denmark and in the composition of citizenry (occupation, gender, age etc).

The project has two purposes:

- to find out which cognitive and behavioral factors determines how citizens get informed, motivated and activated in relation to the environment; in particular climate change and

- to develop new solutions based on information and communication technology, which can be used by local authorities in informing, motivating and activating citizens to make a personal effort to improve the environment; especially by saving energy and reducing private, motorised traffic.

The project will review Danish, Australian and New Zealand local authority actions to engage the public on climate change action. Professor Jens Hoff will be a visiting scholar at Victoria University in Wellington, New Zealand, from 1 January to 1 May 2010.

The results of the project will be disseminated at the ICLEI Global Conference in 2012 and the CEMR EU Conference in 2013.

Presentations were made by the Municipality of Middelfart, Municipality of Køge, and City of Copenhagen. A summary of the presentations is outlined below:

Municipality of Middelfart

Concerning CO₂ reductions, the focus of the municipality has been on renovating existing buildings, and among other things the municipality has renovated its own buildings using the ESCO (Energy Service Company) concept.

It is the assumption of the municipality that conversations with the community will lead to common action, such as common procurement of energy-saving windows, thereby saving money. This will lead to the creation of a new type of public-private partnership. The municipality's key messages to its community have been around emissions reduction, attractive indoor climate and payback periods.

Municipality of Køge - The 'Green House'.

Established in 1997, the municipality has created a house where citizens can get information and/or get involved in environmental issues. It is a self governing institution with its own Board. One-eighth of its funding is from the Municipality of Køge and the remainder is from other sources. The house has 17 employees and is open every day. Examples of the projects include green diplomas for small business; low energy houses; and EU transport projects such as promoting cycling as a daily means of transportation.

City of Copenhagen

The city provided an overview of a recent climate campaign – Climate Copenhageners – which was started in 2008. Around 10,000 Copenhageners (CPH) signed up to the web site by the end of 2009 and 1000 CPH had a visit from a climate consultant, who for cost reasons was a trained student.

In terms of the campaign approach, the city found the following:

Campaign element	Outcome
Banner advertising in the city	Did not work
Completing a climate plan online	Did not work
Earning 'climate points'	Did not work
Attendance at local events	Worked
Climate Consultant visit	Worked
Local media stories	Worked

Meeting with Director Copenhagen City Museum

I met with the Director of City of Copenhagen Museum to discuss the museum's activities, exhibitions and the Vaeggen project, which has a Wellington connection. The museum's activities are fully funded by the City of Copenhagen.

The museum is undergoing a transformation to attract new audiences and to bring the urban environment to all Copenhageners. The current exhibitions were aimed at bringing children to the museum through an interactive maze display and toy story cabinets, and a COP 15 work showing the history of bicycles. The bicycle exhibition showed the history of cycling in Copenhagen and bicycles in its many forms – cycling, artwork and sport.

As part of the Copenhagen City Ring Metro, the City of Copenhagen Museum will be launching a world-first media installation – *Vaeggen: The Copenhagen interactive history wall* (see **Attachment 2**).

The technology features banks of ultra-bright, high-definition 103" plasma screens – 2.3 metres wide each, with an entirely new multi-touch interface that allows a number of users to work collaboratively on the same screen. The cost of the installation is NZ \$4 million. Early discussions have been undertaken across the international museum network to gauge interest in bringing cities and their history to the streets. The response to date has been positive.

The excavations for the City Ring Metro will be the largest archaeological dig ever undertaken in Northern Europe. Internationally, only a few excavations at this scale have ever been attempted in the centre of a major city. As the institution for interpreting the cultural history of the Metro excavations, the Museum of Copenhagen is turning the excavations and the attendant archaeological investigations into a high profile, highly-visible attraction. In key inner city locations, the excavations will be flanked by a large outdoor interactive wall called the Vaeggen.

The Gibson Group (Gibson is a Wellington-based company) will create a spectacular wall of large format multi-touch screens which will enable the public to explore the findings of the archaeologists, to link these findings with the vast historic collections of the museum, and to create their own personalised pathways of history and present day community. Vaeggen will be one of the

first large scale multi-media interactive experiences to be driven entirely and in real time by a central media database.

In February 2010, a new web portal for the Museum of Copenhagen will be launched for this project.

The Vaeggen technology is impressive and could potentially be an exciting installation in Wellington, for example, as part of Rugby World Cup 2011, as a means of showcasing Wellington's capital city status to school children across New Zealand. I will discuss this project and potential opportunities with relevant government Ministers and others in Wellington.

By & Havn – Tour of Nordhavnen

I had the opportunity to take a guided boat tour of the Copenhagen waterfront redevelopment. Right now, two new districts are rising in Copenhagen. Nordhavnen, in the middle of the Sound, offers marine possibilities, and Orestad, is close to Copenhagen City, the airport and bridge to Sweden. When fully developed, the two new districts will have 60,000 inhabitants and more than 100,000 jobs.

Nordhavnen's sites are expected to be developed over the next 50 years. Altogether the Nordhavnen areas total two million square metres.

The City of Copenhagen owns 55 percent of By & Havn and the Danish Government (the Ministry of Transport) owns 45 percent. By & Havn is responsible for the management of Copenhagen Harbour. As owner of the harbour area, By & Havn also maintains the infrastructure of the commercial harbour and invests in buildings and facilities. Currently, 300 cruise ships berth in Copenhagen each year and the number is growing.

Nordhavnen was constructed on reclaimed land. Its history reflects the changing needs for space and transport and different building styles. Today, the main functions of the Nordhavnen area are industrial and harbour-related. In 2008, By & Havn launched an open international ideas competition for a structure plan for the whole of Nordhavnen, as well as a development plan for Phase 1. The idea is to split up Nordhavnen into small, independent 'islets', each featuring its own identity. The islets will make Nordhavnen a whole and connect to the rest of Copenhagen. The city district will be designed as a dense and low city with characteristic towers, like Copenhagen in general.

The development strategy for Nordhavnen is based on six themes:

- islets and canals
- identity and history
- five-minute city
- blue and green city
- CO₂-friendly city
- intelligent grid.

Phase 1 of the development plan allows for 2000 dwellings and 200,000 square metres for business purposes. In the long term, the capacity of Nordhavnen is 40,000 inhabitants and 40,000 jobs. As part of the Phase 1 development, the City of Copenhagen has created a public beach in the small bay north of Svaneknoppen.

Meeting with Mayor of Frederiksberg

I met with the Mayor Jorgen Glenthoj, Deputy Manager, Bjorn Thomsen and Frederiksberg media representative Morten Friis Outsen-Jensen. Mayor Jorgen Glenthoj hosted a traditional Danish lunch for me, while we discussed issues of local democracy, changing and growing cities and innovative new initiatives.

The City of Frederiksberg is a modern, metropolitan local authority of 100,000 people with the characteristics of a major city. Mayor Jorgen Glenthoj is the Chairman of the City Council, which has 25 members and is the city's highest authority. Six political parties are represented on the Council. The current Council is politically right-wing, with the remainder of Copenhagen socialist.

Frederiksberg's area is nine square kilometres, which makes it the smallest and the most densely-populated local authority in the country, with a density of about 10,000 inhabitants per square kilometre. Nationwide, the density is 126 inhabitants per square kilometre.

Other key statistics include:

- tax base per inhabitant: DKK 187,000 (nationwide tax base per inhabitant DKK 142,000)
- 17% have a higher education (national average: 5%)
- 62% have graduated from upper secondary school (national average: 37%)
- 33% are self-employed/top executives/specialists (national average: 22%)
- 40% are employed in the private sector and trade, 34% in the social welfare, health and public service
- 7000 staff in Frederiksberg local authority
- 40% of population within five kilometres of Town Hall cycle.

I also had an opportunity to discuss Frederiksberg's e-democracy initiatives and ice skating rink technology.

Regarding e-democracy, among the interesting initiatives implemented in Frederiksberg have been e-voting through digital signatures and a youth election for 16-17 year olds. Voter turn-out is around 60 percent. Throughout the conference, Frederiksberg was reviewing the use of Twitter by politicians. The Mayor of Toronto, Mayor Miller was 'tweeting' at around one per hour and had about 11,000 followers at his peak.

The natural ice skating season is short in Denmark and the skating rinks are dependent on artificial cooling. An artificially-cooled skating rink usually entails substantial CO2 emissions, given the significant consumption of energy. Now, the municipality of Frederiksberg has opened a climate-friendly outdoor

skating rink made of wax! This is an authentic alternative to traditional ice rinks and runs without electricity or water.

This year, the traditional skating rink in Lindevangsparken has been replaced by Denmark's first outdoor wax skating rink, saving the environment from about 50 tonnes of CO₂. The secret is a surface consisting not of ice, but of a new non-toxic, reusable mixture of two types of wax – one of which is also used for chocolate and candles; the other is the type used for modelling clay.

The wax skating rink is a joint initiative of Frederiksberg municipality, the Danish Foundation for Culture and Sports Facilities, and Virklund Sport. If the project proves a success, the municipality is planning an even larger, environmentally-friendly skating rink and prolonging the season.

5.8 Meeting Governor Taipei County

I met with Mr Chou His-Wei, Governor of Taipei County and other representatives.

The administrative area of Taipei County consists of 10 country-controlled cities, four urban townships, and 15 rural townships. The area of Taipei County is 2052 square kilometres and currently has a population of approximately 3.78 million.

The meeting was an opportunity to discuss what Taipei County and Wellington City Council were achieving in terms of climate change initiatives. We also discussed a range of other topics including:

- Shanghai Expo 2010
- film industry activities
- international relationships
- tourism opportunities.

We agreed to continue discussions on these matters and share our knowledge and learnings.

5.9 Meeting Jan Gehl

I had an opportunity to meet with Jan Gehl and Henriette Vamberg and be guided on a walking tour of the Copenhagen streets. Jan shared with me the work he is undertaking across the world (Sydney, Melbourne, Adelaide, Hobart, New York, London, Copenhagen) on helping cities create new city life.

'New City Life' is the title of a book Jan and Kirkneaes & Søndergaard have written. Jan was kind enough to give me a copy. An interesting idea we discussed, and included in the book (page 9), was a diagram called the Development of City Life from 1880 to 2005, which Jan and his team have nicknamed the 'whale diagram' (see Attachment 3).

The diagram shows a couple of key ideas:

- necessary work-related activities dominate around 1900. The streets are crowded with people, most of whom have to use city space for their daily activities
- the picture changes dramatically in 2000; necessary activities play only a limited role because the exchange of goods, news and transport has moved indoors
- in contrast, optional recreational activities have grown exponentially
- where the city once provided a framework almost exclusively for work-related daily life, it now hums with leisure-and consumer-related activities in 2000.

I had an opportunity to share with Jan the progress that Wellington City Council has made on the 94 recommendations in his 2004 report (see Attachment 4). During the discussion, I also raised with Jan the ideas being expressed about pedestrianising the Golden Mile and Council's recent decision to re-open Manners Mall to bus traffic. Jan's comments in summary were:

- a city's greatest attraction is its people
- whilst cultures and climates are different, the way people inhabit and use space is universal
- the public realm is heavily influenced by the quality of streets
- the quality of streets is influenced by design standards, public art, streetscape materials, coordinated street furniture, different uses – weekday and weekends
- transport options need to be intuitive and clear for users. That is why many city's with population density favour trams
- the golden mile route shown in the 2004 report was that just approved by Council, not the existing situation
- cities have been responding in their own unique way to common challenges:
 - Copenhagen – A better city step by step
 - Melbourne – unified policy for high quality public streets
 - Lyon – coordinated public space policy
 - Barcelona – pioneering public space policy.

During the guided walking tour of Copenhagen, Jan explained the history and changes of several public spaces and squares. Many of these areas had been formerly used as car parking areas. Several observations were made during the tour:

- the public realm – quality of paving along the Strøget was initiated by a local business wanting to enhance the amenity around its business
- outdoor eating space is not always weather-dependent – many cafes and restaurants in Copenhagen are providing outdoor eating opportunities, even in December
- less is really more – along Strøget and Straedet there was very little in terms of signage, street furniture and public art. Even the lights were hung on overhead wires to reduce intrusions for pedestrians
- shared space worked well – cars travelled at slow speeds and pedestrians were the priority
- Wellington's public spaces need to be right for Wellington.

5.10 Costs of travel

The trip to Copenhagen was budgeted to cost \$21,300 and the actual cost was \$19,867, inclusive of the cost of carbon credits to offset my travel emissions. Local Government New Zealand (LGNZ) supported my attendance as New Zealand's local government representative in Copenhagen, with a grant of \$3,000.

As noted in the 17 September 2009 Council report, accommodation in Copenhagen was more expensive than usual due to high demand for the UN meetings and Mayors' Summit, and a range of other parallel events occurring alongside these.

6. Conclusion

Attendance and participation in the C40 Climate Summit for Mayors was an opportunity to benchmark Wellington and New Zealand against other world cities.

The Summit showed cities worldwide face the same challenges, and are addressing them in similar ways. With few exceptions, others were not trying anything Wellington has not implemented or considered, although scale and emphasis may differ.

The challenges of climate change can at times seem overwhelmingly difficult. Action is needed to address simultaneously both adaptation to potential climate change effects and mitigation of cities' impact on climate.

Cities are uniquely well-placed to help deliver on climate action. In particular, cities have the ability to design solutions that are adapted to the needs of local people and that are consistent with local priorities.

Contact: Mayor Kerry Prendergast

Supporting Information

1) Strategic Fit / Strategic Outcome

The travel supported Council's overall vision of Creative Wellington-Innovation Capital and the International Relations Strategy. The recommendations in the paper support the development of the Council's climate change policy work and implementation of the Environment Strategy.

2) LTCCP/Annual Plan reference and long term financial impact

The travel was funded out of the International Relations Budget (COST01 and C145)

3) Treaty of Waitangi considerations

There were no Treaty of Waitangi considerations

4) Decision-Making

This was not a significant decision in terms of the Local Government Act 2002

5) Consultation

No consultation was needed

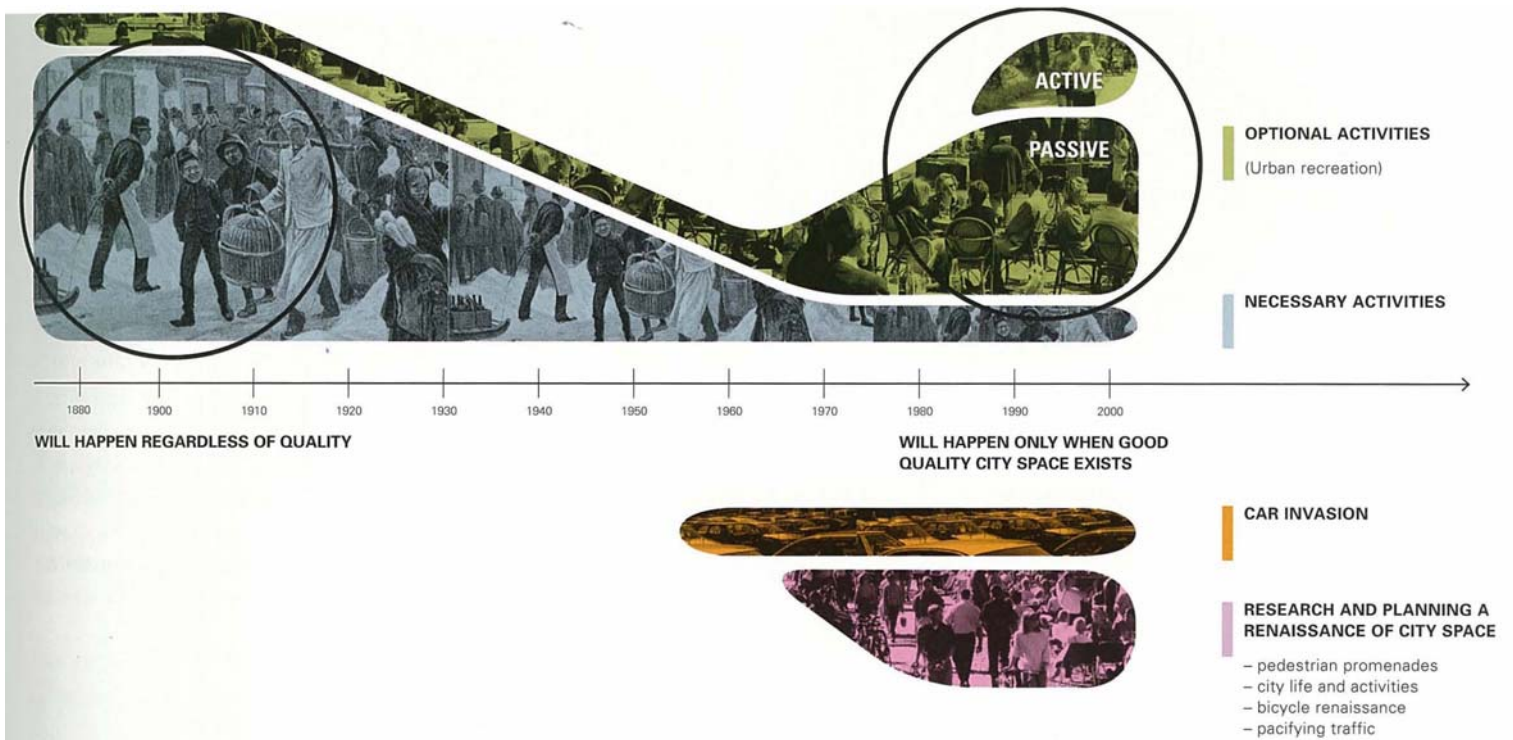
6) Legal Implications

There were no legal implications

7) Consistency with existing policy

The trip was consistent with the Council's International Relations and travel policies

Attachment 3



Explanatory text for the above:

A graphic illustration of the dramatic changes in the character of city life during the 20th century. Necessary work-related activities dominate around 1900. The streets are crowded with people, most of whom have to use city space for their daily activities. The picture has changed appreciably by the year 2000. Necessary activities play only a limited role because the exchange of goods, news and transport has moved indoors. In contrast, optional recreational activities have grown exponentially. Where the city once provided a framework almost exclusively for work-related daily life, the city hums with leisure- and consumer-related activities in 2000. Recreational activities set high standards for the quality of city space, and can be roughly divided into two categories: 1) passive staying activities such as stopping to watch city life from a stair step, a bench or a café, and 2) active, sporty activities like jogging and skating. The timeline also shows when the car invasion hit Denmark in the mid-1950s. The pressure of car traffic and functional planning in the 1960s triggered a counter-reaction to reclaim city space. In the following 40 years this reaction was reinforced, and developed nationally and internationally in an ongoing process.

Source: Gehl, Gemzoe, Kirknaes & Sondergaard, (2006) *New City Life*, Danish Architectural Press, Copenhagen.

Major Challenges	Gehl recommendation	Initiatives⁷
		The major strategic project; Wellington 2040 will be evaluating issues and providing an overarching strategic direction as to the future of the central city. This will provide an integrated vision and give greater mandate to many of Gehl's recommendations. It is expected this work will be completed in 2011.
Taming vehicular traffic		
	Reduce through traffic	Inner City Bypass constructed Street hierarchy guides where traffic should go
	Introduce green waves at stoplights to increase street capacity and avoid idle	To be considered
	Make medians in streets to curb traffic and facilitate safe pedestrian crossings	Addressed in Greening the Quays and will be included when considering the enhancement of Taranaki Street
	Reduce amount of parking to control traffic coming into city centre	Not supported in the Parking Policy
	Parking policy to clarify city's vision for parking. Need goals for reducing parking in the central city	Parking Policy has been developed
	Improve traffic safety to allow disabled, the elderly and families with younger children to move more freely	Safer Roads project has implemented improvements to traffic safety

⁷ These refer to both future initiatives and/or those that have been implemented since the Gehl report was released in 2004.

<p>Improve the visibility and accessibility of public transport to encourage more bus use and walking. Dedicated bus and pedestrian streets can improve the bus system e.g. Golden Mile</p>	<p>Golden Mile Public Transport Upgrade project being undertaken</p>
<p>Improve conditions for walking and encourage people to walk Create pedestrian priority streets where many people already walk to improve conditions for walking and city life, as well as to reduce traffic</p>	<p>Walking Policy developed</p>
<p>Develop a strong and clear street hierarchy</p>	<p>Defined in District Plan – further evaluation to be undertaken as part Wellington 2040</p>
<p>Convert urban mini-highways (e.g. Kent and Cambridge Tce) into city boulevards with improved visual and physical quality. Planting trees tend to soften the street. Wide streets for cafés, cycle lanes etc</p>	<p>Greening the Quays completed; Memorial Park, Taranaki Street upgrade and Cobblestone Park to be undertaken. Cobblestone Park will be completed early 2010 and Memorial Park Stage 1 prior to RWC 2011, pending Government funding commitments.</p>
<p>Lower speed limits – will reinforce the idea that streets are streets and not thoroughfares</p>	<p>Lowered speeds in Willis Street and Lambton Quay introduced</p>

Supporting alternative transport modes	Higher priority to pedestrians in the centre in general	To be reviewed as part of Wellington 2040
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	<p>Create a cycle policy, setting out goals to be achieved</p> <ul style="list-style-type: none"> • Create a strategy for a gradual development of cycle facilities • Create a coherent cycle network of good, connected routes • Create safe, raised cycle lanes, separated from traffic by kerbs • Run campaigns to encourage cycling and to create greater awareness about cyclists in traffic – critical mass • Provide clear markings at intersections • Provide cycle signals at intersections • Establish good and convenient bicycle parking facilities • Offer up-hill cycle transport by public transport • Link city cycle routes with existing suburban cycle tracks 	<p>Cycling Policy developed</p>
	<p>Free public transport within the centre – keep suburban buses out of the centre with informative bus drivers, connections to major transport hubs and pedestrian desire links like museums etc</p>	<p>Work at this time has focused on the bus route from the cruise ship terminal to CBD and city attractions (e.g. botanic gardens).</p>
	<p>Electronic devices have been installed at every bus stop in Copenhagen to show when the next bus will arrive, this technology can also help control buses on the street so they run like “pearls on a string”</p>	<p>Greater Wellington is introducing real time information.</p>

Stepping up pedestrian priority	Public transport – potential to improve: <ul style="list-style-type: none"> • Expansion of bus lanes • Bus priority • Higher quality rolling stock • Real time info (see Copenhagen e.g. above) • Easy ticketing • Improve pedestrian landscape to transport nodes – link pedestrian network and public transport 	Golden Mile Public Transport Upgrade Project Greater Wellington is reviewing integrated ticketing.
	Introduce a new balanced traffic culture including walking	To be reviewed as part of Wellington 2040
	Develop coherent pedestrian network with new/enhanced public spaces	To be reviewed as part of Wellington 2040
	Step up pedestrian priority city-wide	To be reviewed as part of Wellington 2040
	Introduce pedestrian priority streets	To be reviewed as part of Wellington 2040
	Introduce more walking routes with pedestrian priority, good crossings, good quality surfaces; same pavement and same lighting throughout route, clear markings of “gateways”, where one street succeeds another (e.g. Golden Mile)	Lambton Quay/Golden Mile Upgrade Chews Lane development Public Space Design Manual
	Take footpaths across under-used side streets and delivery lanes in main streets	Public Space design Manual
	Regulate for good, attractive ground floor frontages and soft edges along main streets	District Plan Change 48-Central Area Provisions introduced stronger active edge conditions
	Supply good quality surfaces on footpaths	Public Space Design Manual
	Ensure free vistas and interesting views	District Plan Change 48-Central Area Provisions

	Develop a distinct coherent design for walking routes e.g. the Golden Mile	Public Space Design Policy Public Space Design Manual Lambton Quay/Golden Mile Upgrade, Manners Mall and Street upgrade
	Provide “green waves” for pedestrians as has been done in Portland (related to phased traffic light accommodated to normal pedestrian speed in order to ensure minimal waiting periods at crossings)	To be reviewed
	Provide places to rest in squares and along streets with reasonable intervals	Public Space Design Manual Lambton Quay/Golden Mile Upgrade, West Courtenay
	Identify key city streets and create primary pedestrian links through some of these e.g. the links between the city and the water	Public space Design Policy Lambton Quay/Golden Mile Upgrade, Kumutoto Public Space
	Provide wider and better footpaths on central city streets e.g. Lambton Quay	Footpath Management Policy Lambton Quay/Golden Mile Upgrade
	Create good walking routes by making routes with few interruptions and short waiting times at traffic lights	To be reviewed as part of Wellington 2040 Walking Policy
	Develop an inviting pedestrian network that connects important destinations by limiting traffic in certain streets in order to encourage more diverse activities	Walking Policy
	Provide good quality lighting for the city streets to improve safety and upgrade the quality	Public Space Design Policy Lambton Quay/Golden Mile Upgrade Courtenay PI lighting project
	Improve pavements, making a paving strategy following a street hierarchy system	Public Space Design Policy Public Space Design Manual
	Enforce the clear zone from the building line for street furniture to free a walking zone for pedestrians e.g. Lambton Quay	Footpath Management Policy

	Remove the push buttons at pedestrian crossings (pedestrians should be allowed to cross the street without applying). Pedestrian lights in China display the length of time until the next cross signal	No plan to do this.
	Proposed pedestrian network: create strong links along the Golden Mile, improved connections and walking routes along the water. Point out primary streets to the water as high priority walking routes to be upgraded	Wellington 2040 Public Space Design Policy
Missing links along Golden Mile	Improve poor Ghuznee and Vivian Crossings	Completed as part of the Inner City Bypass
	These need to be strengthened at pedestrian level. More emphasis needs to be made to identify the Golden Mile	Lambton Quay/Golden Mile Upgrade
	Courtenay/Taranaki: reduce parking in western part of Taranaki St to a more simple street layout, more space will be available for outdoor cafés etc.	West Courtenay Park project completed
	Manners Mall/Manners St: a more fluent route along the Golden Mile can be achieved and a small urban space created by a closer look into the crossing	Golden Mile Public Transport upgrade – Manners/Cuba St
	Manners/Victoria St and the PO site at Manners Mall	This was investigated but there is no viable proposal at present

Improving Lambton Quay	Missing links include: Lambton/Willis, Willis/Mercer, Willis/ Manners, Manners St/Manners mall, Manners Mall/manners St, Manners St/Courtenay pl	Proposed as part of the Golden Mile Transport upgrade project
	Improved street section: it is suggested to upgrade Lambton Quay to reflect the top class retail street it is expanding the western footpath and limiting car access to the evenings after closing hours. A combined bus / pedestrian street can provide space at street level for benches, outdoor cafés street vendors, buskers etc and as such expand the options for public life.	Lambton Quay upgrade project undertaken
	A general upgrade of paving, lighting, street furniture and planting is also needed.	Lambton Quay upgrade project undertaken
	High quality materials are preferable and as such a granite paving can prove durable as well as emphasising Lambton Quay as THE main street	Lambton Quay upgrade project undertaken
	Upgrading the eastern footpath: is it suggested to take footpaths across all the side streets of Lambton Quay to improve walking quality and create possibilities for utilising the eastern footpath with points for resting for e.g.	Lambton Quay upgrade project undertaken
	Upgrading side streets: a general upgrade of the side streets along Lambton Quay will add to the activity and attractiveness of the whole area. Upgraded streets can be developed following different themes and as such present themselves as gateways to various habitats along Lambton Quay. Connection streets lack functional hierarchy. Need to prioritise and improve crossings	To be reviewed as part of Wellington 2040 Public Space Design Policy

	Utilising ground floors: gradually outdoor serving areas have been moved upstairs and insides arcades. This tendency needs to be turned around to maintain street life at street level and extend opening hours into the evening along Lambton Quay. It is suggested to widen footpaths to make room for outdoor serving and avoid large scale units at ground floor. In other cities, banks, insurance companies etc have moved upstairs leaving more room for active units at the ground floor	Lambton Quay upgrade project undertaken District Plan Change 48-Central Area Urban Design Guide Footpath Management Policy
	Clearly visible public connections to the Terrace: the public walkways between the Terrace and Lambton Quay need to be of better quality and more visible. Agreements need to be made with private developments in order to create more visible walkways. Existing small scale under-utilised buildings can be removed to make room for new walkways	Public Space Design Policy
	Sandwich boards create obstacles	Footpath Management Policy
Improving City Squares	Jaywalking also a problem at times	
	Make the squares integrated parts of a general pedestrian network	There are no specific projects planned however, the designs of new spaces and upgrades such as Lambton Quay, west Courtenay and Cobblestone Park consider the safety of users, flexibility and adaptability of use and appropriate features that make users feel welcome and comfortable
	Upgrade the squares to create a sense of ownership and pride and give people a feeling that the city is being carefully looked after	As above
	Create possibilities for a multitude of uses, sports, recreation, music, resting, talking, meeting etc	As above

	Strengthen the squares as lunch time plazas with many different food outlets, outdoor cafés and public benches	As above
	Utilise the street frontages surrounding the squares to create a safe night time area	As above
	Provide good quality lighting	As above
	Integrate functional and recreational pedestrian activities by offering good conditions to stay where people pass on their way to do necessary activities. This can tempt people to engage in social activities and use more time than they originally planned	As above
	In a good people city children should feel welcome. Possibilities for play should be offered and in close connection to public spaces where the parents are most likely to stay.	As above
	Children and teenagers use the public spaces very extensively and enrich the city environment with their joy and energy.	As above
	Water, in any form, appears worldwide to be the number one attraction for young city visitors as well as public art to be played with, climbed upon etc	As above
Railway Square	Unify the public space in front of the station and create an effective bus pick up + kiss and ride location in Bunny Street <ul style="list-style-type: none"> • Reduce vehicle access • Improve areas pedestrians sit 	Some work was done as part of the Transport Interchange but there are no plans to do any further work here
Post Office Square	Develop Jervois Quay into a city boulevard and re-unite the square with the surrounding façades towards the square where possible	Greening the Quays project completed 2007

Civic Square	Create strong connections to and from Civic square. Unify the square by removing changes of level. Create lively and open façades towards the square where possible	Civic Square Management Plan addresses this although there are no specific current projects
	Civic square is currently introverted with weak links to city, lack of visual connection to the water and a lack of night time activities	Issue to be looked at further through Wellington 2040
Midland Park	Not well utilised – issues around present design, different levels restricting people to sit at edges	Park to be upgraded 2010
Creating an integrated Waterfront	The planning of the waterfront needs to be comprehended as a spatial and architectural holistic space stretching from the surface of the water across Jervois Quay to the building façades facing the water/edge of the city	Waterfront Framework implementation
	Jervois Quay is a important borderline between the city and waterfront and the building front along its border needs to be continuous	Proposed Music School on Jack Illot Green will contribute to improving the built edge
	Upgrade of Jervois Quay essential to make the waterfront work	Greening the Quays completed in 2007
	New developments along the waterfront need to be structured following the links of the existing city. Given the vast spaces along the water there are plenty of opportunities to introduce dwellings, retail and cultural institutions along the water.	Waterfront Framework implementation
	Buildings need to recognise the unique location and special scale and detailing required when building by water. Different themes could be developed for various parts of the harbour introducing a cultural precinct, residential precinct, workshops, water activities etc	Waterfront Framework implementation

	<p>Strong links between the city and the water:</p> <ul style="list-style-type: none"> • Views, visual connections, limited obstacles • Traffic regulations – speed limits, one/two lanes, limited turning options, limited street parking • Walking quality: room for walking comfortably, plane surfaces, no obstacles, access for all • Prioritised crossings: short waiting periods, clearly marked crossings, short distances to cross, footpaths taken across minor street • Functions at street level: prioritise shops at ground level, avoid first floor shops, invite outdoor cafés / regulate serving area • Ground floor frontages: introduce small units at ground floor, create a diversity of functions, avoid closed or passive units, insist on transparency, encourage a high quality of materials and detail design • Design quality: design the street as a whole, apply lighting policy, introduce one series of street furniture, introduce good quality paving • Resting options: provision of benches, provisions of outdoor serving area 	<p>This issue is addressed in these plans and programmes: Public Space Design Policy Public Space Design Manual District Plan Change 48-Central Area Provisions Waterfront Framework</p>
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<p>Willeston Street: potential for development</p>	<p>It has views, minimal vehicle flow. Walking quality is low due to lack of interesting façades and the presence of a tall building causing a wind problem. Low pedestrian priority at eastern crossings (approx 10% rd/green period), functions are few and scattered, ground floor frontages are dominated by large units presenting closed façades towards the street; design quality is low, paving is mixed and not much high quality street furniture has found its way to Willeston St; resting options are only offered on a private raised level away from the street</p>	<p>Some work has been completed to improve the pedestrian amenity of this street.</p>
<p>Other Waterfront issues</p>	<ul style="list-style-type: none"> • Poor accessibility • Poor relationship to surrounding city • Lack of fns along Jervois Quay, both city and waterfront lack continuous promenade • Queens wharf, provide for multitude of activities • Jervois Q barrier • Quality of pedestrian crossings • Lack of façades – at present closed and uninteresting • Te Papa exterior defensive • Poor “entrance points” to w/front • Parking • Lack of access to water • Poor surface treatment differentiating between pedestrians and vehicles 	<p>Waterfront Framework</p>
<p>Upgrading public space quality</p>	<p>A good city has fine details</p>	<p>Public Space Design Policy</p>
	<p>Introduce a local design profile which can create a strong city image and a sense of ownership of the public spaces</p>	<p>Public Space Design Manual</p>

	Choose a city colour for the street furniture and create a design series of benches, lampposts, bins etc	Public Space Design Manual
	Improve the quality of street signs and street furniture around the city	Public Space Design Manual
	Create a policy for the design of streetscapes	Public Space Design Policy
	Encourage better standards in the shop signs and lettering	There are no plans to address this
	Create a policy for the use of the paving materials and look after these. Use paving of high, durable quality reflecting NZ identity	Public Space Design Manual Golden mile to be completed in clay pavers to complete the Golden Mile 'look – future options will be evaluated
	E.g. Melbourne have a uniform set of street furniture and outdoor serving establishments either lease or purchase “approved” furniture from the municipality	
	<p>Improving climate a ground floor:</p> <ul style="list-style-type: none"> • Plan public spaces carefully to make the most of the natural conditions • Supply protection against the wind or drafts • Avoid footbridges • Avoid long stretches of slick façades and tall buildings 	District Plan Change 48-Central Area Provisions

<p>Strengthen the history and architectural heritage:</p> <ul style="list-style-type: none">• Require that new buildings fit in with their neighbours, by considering relations to scale, building heights and relationship to the surrounding public spaces• Replace heavy canopies along building fronts with light elegant canopies• Remove out of place vertical signs on the older buildings and signs which obscure the details of the architecture of the buildings• Develop regulations for signage, canopies etc in order to prevent unfortunate elements destroying the architecture and the street environment• Encourage awareness and promote sensitive re-use of heritage buildings. Re-use old buildings for new purposes if possible.	<p>District Plan Change 43-Heritage Provisions District Plan Change 48-Central Area Provisions</p>
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Creating a lively city	<p>Improve ground Floor frontages:</p> <ul style="list-style-type: none"> • A uniform building line, as buildings built up to the edge of the street or public space makes a more clearly defined space. • No shops or offices must be without visual contact with the footpath (at least 60% of the total length of the façade along the footpath transparent, with displays and/or visual contact to the work being done on the ground floor) • No parking garages or other passive uses in the ground floor of buildings facing the footpaths • Shop and office windows lit up until midnight • Good details and fine materials at eye level – making them more interesting to move along and more conducive to stop and stand by • Ledges and shelves at sitting heights could be included in the designs 	District Plan Change 48-Central Area Urban Design Guide addresses these matters
	<p>Activities in the city:</p> <ul style="list-style-type: none"> • A variety of organised and spontaneous events should be encouraged. 	Recreation and Events Programme

	<p>Safety:</p> <ul style="list-style-type: none"> • Much of the centre of Wellington is comparatively safe. • The public transport system is not so good however, as anyone leaving a busy area or night venue may feel insecure walking to another busy area or a bus stop. • Safe routes which meet all safety criteria should be developed between night time areas of the city, public spaces, night venues and transport stations, car-parks and other public destinations 	<p>Safer City initiative and the lighting upgrades address this</p>
	<p>Encourage more people to live in the city centre:</p> <ul style="list-style-type: none"> • By establishing new housing of a high quality in attractive locations. • Redevelopment of old office buildings to serve as apartment blocks or student accommodation. • Start a process of re-development and renovation of buildings in the city centre to update existing flats. • Invite more students to live in the city centre. • A general improvement of the public spaces will make it more attractive to live in the city centre 	<p>Generally achieved through private initiatives District plan Change 48 has objectives in place to facilitate.</p>
	<p>Create a lively city:</p> <ul style="list-style-type: none"> • Stimulate the activity which can happen through a general strengthening of the pedestrian network. • Ensure more attractive and lively street fronts. • Make better provisions for pedestrians, cyclists and other forms of transport that add life to the city 	<p>The Walking and Cycling Policies consider this District Plan Change 48-Central Area Provisions</p>

	<p>Create a lively and safe city at night time:</p> <ul style="list-style-type: none"> • Increase the number of dwellings in the city centre and invite more life in the city streets. • Ensure the city is free of dark areas, heavy shrubbery and earth mounds which make concealment possible and raise fear. • Close off hidden, lost or forgotten spaces, especially at night • Ensure new developments are designed to overlook public spaces, thus provide “eyes on the street” • Ensure there are enough continuous, safe walking routes through the city, especially at night • Strengthen evening activities in LQ area • “policy” to encourage and extend evening activities to other parts of city 	<p>District Plan Guidelines for design against crime and central area design guides specifically address most of these matters to the extent that Council can influence.</p> <p>.</p>
	<p>Strengthen the educational institutions:</p> <ul style="list-style-type: none"> • Maintain a high level of students in the city centre. Students use the squares and parks extensively and contribute valuably to a diverse public life • Create a good mix off different uses: • ensure integration of shops, offices and dwellings in each city area and preferably in the individual buildings • shops can be located on the ground floor, offices on the first floor and dwellings on the upper floors • a mix of used can secure life in the city streets and squares at all times of the day 	<p>The Council works in partnership with Universities and supports dispersed campus development. Public spaces adjacent to education facilities take into these users.</p>
	<p>make good city events:</p>	<p>There has been some consideration of a formal street market but there are no specific</p>

	<ul style="list-style-type: none"> • by encouraging spontaneous, popular street entertainment, by staging a number of important annual festivals in the public spaces around the city • by making street markets with different themes – antiques, books, arts and crafts etc 	plans.
<p>Integrating the parliamentary precinct with the city</p>	<p>In order to utilise the northern part of the city a general plan needs to be developed to upgrade the streets and building blocks in the northern precinct (marked on map pg 65). This area could offer possibilities of developing a diverse attractive area in close proximity to vital city functions by intensifying functions and the building mass in the area. Through a general re-development of this area important results can be obtained such as creating strong links from the city to the Parliamentary precinct and to the Railway Station</p>	Capital City Project launched September 1