6 December 2011

Mr Nathan Bunt
Executive Officer
Outer Suburban/Interface Services and Development Committee
Parliament House
Spring Street
EAST MELBOURNE Vic. 3002

Dear Mr Bunt

**Melbourne Water submission to the “Growing the Suburbs: Infrastructure and Business Development in Outer Suburban Melbourne” Inquiry**

Please find attached Melbourne Water’s submission for the Committee’s consideration.

Our submission relates to the first three of the Inquiry’s Terms of Reference, where the Committee has been asked by the Parliament to:

- identify existing public and private infrastructure provision, including schools, hospitals, commercial and shopping precincts, transport and roads, telecommunications, water and power;
- assess the capacity of existing infrastructure to accommodate increased population growth;
- investigate options, based on intrastate, interstate and international evidence, which reduce pressures on infrastructure and essential services.

Melbourne Water would be pleased to assist the Inquiry in any way possible.

For any further information, please contact Dennis Corbett, Manager Development Planning, at email [dennis.corbett@melbournewater.com.au](mailto:dennis.corbett@melbournewater.com.au) or via phone on 9235 7256.

Yours sincerely

CHRIS CHESTERFIELD
GENERAL MANAGER WATERWAYS
Outer Suburban/Interface Services and Development Committee
Inquiry into “Growing the Suburbs: Infrastructure and Business Development in Outer Suburban Melbourne”
Submission by Melbourne Water
December 2011

Melbourne Water is pleased to be able to provide this submission to the Committee.

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Background

Melbourne Water manages Melbourne’s water supply catchments, removes and treats most of Melbourne’s sewage, and manages rivers and creeks and major drainage systems throughout the Port Phillip and Westernport region. Owned by the Victorian Government, Melbourne Water has an independent Board of Directors responsible for governance and the responsible Minister is the Minister for Water.
We are a significant business, managing approximately $9 billion in water supply, sewerage and drainage assets, as well as over 8,400 kilometres of waterways.

1. **Our role in infrastructure provision in urban growth areas**

In relation to infrastructure provision in new growth areas, Melbourne Water has a clear role to ensure that urban development achieves the appropriate standards of flood protection, protects waterway health and is sensitive to other environmental and social values of waterways.

These responsibilities for Melbourne Water arise from our role as the regional drainage and floodplain authority under the *Water Act 1989* and from our statutory referral authority under the *Planning and Environment Act 1987* and the *Subdivision Act 1988*.

Melbourne Water is responsible for preparing strategies and plans to identify and construct the infrastructure needed to service urban development. Developers make contributions to Melbourne Water based on the costs of providing the required infrastructure for each particular area across Melbourne.

Melbourne Water also has a key role in providing water and sewerage services to the new growth areas of Melbourne – either directly or implicitly as we cater for the population growth of Melbourne overall. In relation to planning for the future, Melbourne’s four water businesses - Melbourne Water, City West Water, South East Water and Yarra Valley Water - are currently developing a joint Water Supply and Demand Strategy (WSDS) for the next 50 years, which sets out a pathway for the future of water supply in Melbourne, and outlines our shared vision for the water supply system of 2060 - being a system which makes use of all water sources available to the city and encourages integration across water supply, drainage, sewerage and waterways. For these options to be cost effective, they need to be fully considered at the same time as the
urban land use planning work is being undertaken, and installed as part of the initial development of new suburbs rather than expensively retrofitted later on.

1.1 How Melbourne Water plans for growth - the key role of Development Services Schemes

Melbourne Water prepares costing and infrastructure plans known as Development Services Schemes which set out the required infrastructure and land requirements for the particular catchment, what the total costs are, and what developers will pay per developable hectare.

Development Services Schemes provide the orderly provision of infrastructure in growth areas such as underground drains, overland flow paths, retarding basins, wetlands and stormwater treatment measures and specify the appropriate treatment and protection of rivers and creeks and any related sites of significance. In smaller developments outside of Development Services Schemes, these outcomes are achieved through use of development consent conditions.

In 2010/11, some $92 million of new infrastructure was delivered by Melbourne Water to service the growth areas of Melbourne; including waterways, flood retarding basins, wetlands and drainage pipelines. Most of this infrastructure was funded by developer contributions collected through Development Services Schemes.

Melbourne Water works with the Growth Areas Authority to ensure that appropriate infrastructure is provided and associated land identified and set aside in the areas where development will be occurring. Melbourne Water provides significant input into the Growth Areas Authority's planning processes, especially into the preparation of Precinct Structure Plans as the overall masterplan for the development of new suburbs and communities.
Consultation with all interested parties such as councils, landowners and agencies, including VicRoads, occurs before works begin.

A Development Services Scheme comprises a drainage strategy for an area together with a pricing arrangement that allows Melbourne Water to require developers to contribute to the cost of the construction of works by Melbourne Water in connection with a development. The strategy ensures that planning for urban development is conducted on a catchment basis and meets appropriate standards for flood protection and environmental performance, including protection and enhancement of waterway and biodiversity values. The infrastructure within the scheme is funded by financial contributions from developers or landowners when development occurs, with all developable properties contributing on the basis of land area and land zoning. Income from developer contributions is designed to equal planned expenditure of drainage infrastructure over the expected life of a Development Services Scheme (typically 25 years).

Development charges serve two main purposes:
- they provide price signals regarding the cost of provision of drainage infrastructure for development. Reasonable development charges should reflect the cost of servicing developments including identifiable upstream and downstream effects, minimise cross subsidies and signal the relative costs of providing drainage infrastructure for growth;

- they provide an equitable means of sharing costs of drainage infrastructure required for urban development.

Implementation of schemes is funded by financial contributions from land developers in accordance with principles agreed with the land development industry and described in the publication Principles for Provision of Waterway and Drainage Services for Urban Growth (Melbourne Water 2007), available at http://www.melbournewater.com.au/content/planning_and_building/information_for_developers/information_for_developers.asp
In summary, developers pay for the creation of the new drainage and waterway assets required for their development and Melbourne Water becomes responsible for ongoing maintenance, operation and renewal of the assets. Local government also plays a role in the asset management of some of this new infrastructure.

Currently, Melbourne Water has around 160 active Development Services Schemes operating across the greater Melbourne area. Regular financial reviews and engineering reviews are carried out to ensure that expenditure on the required drainage growth infrastructure is matched by contributions.

In relation to the standards that developers are required to meet, Development Services Schemes ensure that:

- all new developments will be provided with 1-in-100 year flood protection;
- the minor drainage system will have a capacity to cater for at least the 1-in-5 year storm event;
- stormwater quality treatment to ‘Best Practice’ (currently 45% reduction in total nitrogen and phosphorous, 80% reduction in total suspended solids) will be achieved;
- protection of the environmental, social, cultural heritage and economic values of waterways will occur.

Since the mid 1990s, Melbourne Water has worked to incorporate higher levels of stormwater treatment and environmental protection in our schemes and drainage systems – now, approximately 25% of the cost of infrastructure in new areas is for protecting waterways and water quality. This has helped maintain water quality in Port Phillip Bay over the past 15 years in the face of urban growth.

Melbourne Water believes that the current system whereby developers are required to fund the infrastructure required to ensure that their development
achieves the appropriate standards of flood protection and environmental performance is a fair and reasonable one.

2. **Our role in assessing the capacity of existing infrastructure to accommodate increased population growth**

In planning for the infrastructure required in new development areas, Melbourne Water’s *Development Services Schemes* plan for the full development of the particular catchment area, as forecast for example in the Precinct Structure Plan prepared by the Growth Areas Authority. This ensures that infrastructure is put in place that can accommodate all the development planned for the area. This generally means that the existing drainage system comprising natural waterways, rural drains etc will need to either be modified or enlarged eg by building underground drainage pipelines and constructed waterways and floodways, or mitigated by runoff control facilities such as flood retarding basins.

Another possible option is the harvest and reuse of some of the stormwater runoff, thereby reducing the extent of runoff control facilities required.

All the required assets and infrastructure are identified in Melbourne Water’s *Development Services Schemes*.

Increased population growth and the development of new communities also means an additional requirement for water for open space management and for the provision of healthy, attractive and sustainable recreational areas. Melbourne Water works with the water retail authorities, local government and the development industry to help provide sustainable and liveable communities, eg the provision of alternative water sources for open space irrigation and other non-potable uses. This could involve, for example, stormwater being harvested from a Melbourne Water wetland or constructed drainage system and then being provided by the water retailer or local government as a source of alternative water for community open space. Melbourne Water believes that
there is a need to plan these activities well in advance of development and that the recent Integrated Water Management Practice Note developed by the Growth Areas Authority provide an excellent opportunity for all the relevant players including water authorities, local government and the development industry, to plan and implement more integrated water management solutions for new growth areas.

In addition to our role in the new suburban areas of outer Melbourne, Melbourne Water also has a strong role in ensuring that drainage, flood protection and stormwater issues are addressed in “infill” developments in existing suburban areas. The challenge in these areas is to ensure that the greater density of development does not cause problems from a drainage and flood protection point of view – and to minimise the need for a major drainage upgrade to cater for the increased run off from these developments. The role of Water Sensitive Urban Design – as explained below – is critical to address these issues.

3. **Our role in investigating options, based on intrastate, interstate and international evidence, which reduce pressure on infrastructure and essential services**

In working to ensure that urban development achieves the appropriate standards of flood protection, protects waterway health, is sensitive to other environmental and social values of waterways, contributes to healthy and sustainable communities, and reduces pressure on existing natural and man made assets and infrastructure, Melbourne Water believes that there is much to be learned from the experience of other areas, both within Australia and internationally.

For some years, Melbourne Water has been involved in advocating for and implementing a system known as “water sensitive urban design” (WSUD). WSUD is a land planning and engineering design approach which integrates the urban water cycle, including stormwater, into urban design to minimise environmental degradation, especially of waterways.
WSUD provides the best opportunity to reduce pressure on our valuable natural infrastructure, being the waterways of Melbourne, and to provide an alternative source of water to be used in our communities for irrigation to ensure vibrant and sustainable open space areas.

The particular focus to date has been on the stormwater aspects of WSUD. These aim to reduce the negative impacts of excess stormwater runoff on waterways by putting in place small scale infrastructure to mimic the natural hydrologic cycle. This infrastructure aims to detain runoff close to its source, and then have it stored and used, or filtered through the soil, or evaporated. The overall aim is to capture pollutants, restore the base flows of waterways and remove some of the peak flows generated by the traditional drainage infrastructure existing in most areas.

Melbourne Water believes that the key WSUD goal of reducing stormwater runoff and pollutant loads from urban development by using local detention measures and minimising impervious areas can help protect waterways, provide water for community use and maintain green streetscapes to mitigate urban heat extremes.

WSUD has been growing in popularity in Australia and around the world in recent years; in North America it is referred to as “Low Impact Development” and in Europe as “Sustainable Urban Drainage”.

In February 2012, Melbourne will host the “7th International Conference on Water Sensitive Urban Design”, and this will provide a further opportunity for Melbourne to showcase its achievements in WSUD and to also hear more about the best examples from around the world.

The Conference Chair is Professor Tony Wong, Director and Chief Executive, Centre for Water Sensitive Cities at Monash University. This Centre plays a key role in research into new ways of helping cities become “water sensitive”, ie a city in which water is managed to provide maximum value for a range of functions and users, including the natural environment; a city that is resilient
and is able to cope with extended periods of drought and intense rainfall, and
where the community appreciates the scarcity and value of potable water
supplies and supports the use of other water sources to enhance amenity,
minimise heat island effects and improve their quality of life.

As part of our philosophy of innovation and seeking new ideas, Melbourne
Water is a funding partner of the Centre for Water Sensitive Cities at Monash
University. Melbourne Water is currently involved with a number of other
partners from across Australia in the research projects being delivered by the
Centre.

In November 2011, the Federal Minister for Innovation, Senator Kim Carr,
announced that $30 million of funding will be provided to establish the
Cooperative Research Centre for Water Sensitive Cities at Monash University
and that this Centre will deliver the socio-technical urban water management
solutions, education and training programs, and industry engagement required
to make Australian towns and cities water sensitive. Melbourne Water looks
forward to continuing to work with Monash University in this expanded and
exciting research area.