14 December 2017

DELWP – Rural Drainage Team

EAST MELBOURNE VIC 8002

By email:

Re: Draft Victorian Rural Drainage Strategy

I write in reference to the Draft Victorian Rural Drainage Strategy released in October 2017 and provide Warrnambool City Council’s response in relation to this document.

Warrnambool City Council currently has two drainage schemes located partly within the municipality both of which were formalised under previous legislation these being the Nullawarre and Merri Swamp schemes.

Since the repeal of the Drainage Areas Act of 1958, which was replaced in part by provisions in the Local Government Act 1989 and the Water Act 1989 responsibilities and powers in relation to rural drainage have become unclear.

In our particular case the two drainage schemes cross municipal boundaries and therefore management becomes complicated by the fact that two local government authorities are involved.

Council is concerned that the Draft Strategy has failed to adequately address and respond to concerns about the ability for rural drainage schemes to be administered with the necessary legislative capacity to address deficiencies, and safety risks posed by their infrastructure.

This concern was also clearly echoed in our recent regional workshop where attendees expressed general frustration about the absence of such powers and the fact that the Draft Strategy relies fundamentally on amicable agreement from all beneficiaries.

Council is also concerned about the proposal which would result in local government becoming the principal point of contact for landholders and creating it as the administrative support agency for scheme. Whilst Council understands the economic value associated with drainage schemes, the strategy does not detail how this function is to be resourced and what revenue options are available to cover any costs.

It is also significantly more complex for local government to administer these schemes particularly where they cross municipal boundaries. On this basis we believe that Catchment Management Authorities, who by their nature have a greater understanding of broader catchment characteristics, may be better placed to perform this function.

Warrnambool City Council remains deeply concerned that the strategy has failed in its endeavours to resolve rural drainage management.
We have appended our earlier 2012 submission to the then Environment and Natural Resources Committee – Inquiry into Rural Drainage in Victoria which clearly detailed the challenges and issues which should have been addressed in the draft strategy.

This prior submission clearly identifies the uncertainty in relation to ownership of infrastructure and ability to resolve disputes. We raise these issues again in the expectation that some further clarification on the deficiencies identified above can be incorporated into the final document.

Should you like to discuss this matter further please do not hesitate to contact me on

Yours sincerely

SCOTT CAVANAGH
Director City Infrastructure
21 December 2012

Dr Greg Gardiner
Executive Officer
Environment and Natural Resources Committee
Parliament House
Spring Street
East Melbourne 3002

Dear Greg,

INQUIRY INTO RURAL DRAINAGE IN VICTORIA

Please find enclosed Council's submission into the above inquiry.

We will be pleased to receive the results of this inquiry in due time.

Yours sincerely

PETER ROBERTSON
Director - City Infrastructure
INTRODUCTION

Warrnambool is located in south-western Victoria, about 260 kilometres from Melbourne. It is Victoria’s largest coastal city outside Port Phillip Bay, and is one of Victoria’s fastest growing regional cities, with a current population of approximately 34,500.

Population projections published in 2004 by the Victorian Government’s Department of Planning and Community Development forecast Warrnambool’s population to rise to around 38,000 by 2021. Council’s more recent analysis suggests that the city’s projected population could exceed 43,000 by 2021.

Warrnambool is considered the economic, cultural and social capital of south western Victoria, as well as being a popular tourist and retirement destination. Council attributes the significant growth of Warrnambool to the strength of its diverse regional economy and the liveability of the City and its region.

The strategic importance of Warrnambool is underpinned by its role as:

- The academic, cultural and commercial centre of South West Victoria.
- A location of emerging importance for green energy power production.
- A growing regional centre with the capacity to sustainably support further population growth and decentralisation.

The City of Warrnambool boundary covers both the urban area and surrounding rural areas, and is located entirely within the Glenelg Hopkins Catchment Management Authority (CMA) region. Two significant river systems flank the present edges of urban development within the City of Warrnambool. The Hopkins River passes the eastern edge of the city, while the Merri River wraps around the northern and western extent of development. The land surrounding the urban area is cleared and used for agriculture with a sharp transition between residential and farming land use. Dairy farming is a significant component of local primary production and industry with two large milk processing plants in the City (one to the east at Allansford and one to the West at Dennington).

As a result of the relatively intense agricultural land use in the region, existing overland drainage and waterways flow paths carry a significant load in terms of water quantity and quality in these two rivers through Warrnambool. In recent years there has been significant urban expansion, particularly to the north, which is expected to continue into the future. This brings the challenges of:

- Additional pressures on receiving drainage lines and waterways from urban development and the subsequent increase in runoff and pollutant loads
- Potential issues of urban populations being more exposed to the impacts of upstream rural drainage flowing into new residential areas.

The effective management of these issues into the future is compromised by uncertain roles and responsibilities for drains and drainage impacts in peri-urban areas.

Terms of Reference

The terms of reference for the Environment and Natural Resources Committee (ENRC) of the Parliament of Victoria in the inquiry into rural drainage in Victoria are:

1. The historical basis for the establishment and operation of former drainage schemes including management arrangements;
2. The status of rural drainage across Victoria, including effectiveness, regulation, ownership, responsibility and maintenance on both public and private land;
3. The benefits of rural drainage for both productive land and environment together with community expectations for rural drainage programs;
4. The impacts of rural drainage, including on other land holders and the environment including waterways, wetlands, flora, fauna and water quality;
5. Options for improved rural drainage management across Victoria, including regulation, institutional and funding arrangements, operation, responsibility and maintenance on both public and private land; and

Basis of Submission

This submission has been prepared by Water Technology on behalf of Warrnambool City Council, and has been approved by Peter Robertson, Director City Infrastructure at Warrnambool City Council.

The following Acts of Parliament, documents and information sources have been referred to in the preparation of this submission:

- Drainage Areas Act 1958 (repealed 1992)
- Local Government Act 1989
- Water Act 1989
- Environmental Protection and Biodiversity Conservation Act 1999 (federal)
- Flora and Fauna Guarantee Act 1988
- Catchment and Land Protection Act 1994
- The Victoria Planning Provisions and Warrnambool City Council Planning Scheme
- Warrnambool Drainage Strategy, 2003, prepared by Hyder Consulting for Warrnambool City Council
- Report on Inquiry into Flood Mitigation in Victoria, Environment and Natural Resources Committee (2012)
- Transcript from the Inquiry into flood mitigation infrastructure in Victoria from Kevin Wood
- Interview with Bruce Holloway, Landowner, Nullawarre Drainage Area
- Discussions with Brad Henderson and Kevin Wood, Glenelg Hopkins CMA

Legislative Framework

The three major acts of state parliament governing the way drainage areas have been managed historically are summarised below. Other legislation including the federal Environment Protection and Biodiversity Conservation Act, and the state Flora and Fauna Guarantee Act, Planning and Environment Act and Environment Protection Act can be triggered by applications for drainage maintenance works.

Drainage Areas Act 1958

The Drainage Areas Act 1958 (and its prior versions from 1898) allowed the establishment of drainage areas and contained particulars of management arrangements, approvals, maintenance responsibilities and funding arrangements. The following broad points were addressed in the act:
- Drainage areas were set up by petition to the council by a majority of the landowners within the area. The council could then by Order in Council, constitute a drainage area. The Order in Council was then published in the Government Gazette to come into effect on the day of its publication.
- The management of each drainage area was directed by an advisory committee made up of representatives of the council and landowners in the drainage area. The function of the advisory committee was to liaise with council on issues and works in the drainage area and the levying of rates and charges.
- The act was very free with the powers it provided to council with regard to land and lease purchasing, drain construction, drain maintenance and levying of charges and rates. Little regard was given to the potential environmental impact of diverting water from wetlands and waterways and altering existing waterways.

**Water Act 1989**

The Water Act 1989 provided Catchment Management Authorities with the power to provide, operate and protect drainage systems (Section 199). Its drainage functions under the act are enabling rather than requiring and there is no clear mandate for CMAs to take charge of rural drainage systems. Under Section 259 Catchment Management Authorities are given the power to impose tariffs for drainage purposes, however this has never been done successfully.

Section 16 states that if there is an unreasonable flow from a person's land onto any other land, or if a person interferes with a reasonable flow of water onto any other land, that person is liable for any injury, property damage or economic loss caused by that flow or interference with flow.

**Local Government Act 1989**

The Local Government Act 1989 provides the powers and responsibilities of Local Government. There is no specific mention of rural drainage, however the act provides Local Government the power to raise a special rate or charge for a particular purpose. This is currently being used to raise special rates for drainage areas in other Local Government Areas in Western Victoria.

**RESPONSE TO TERMS OF REFERENCE**

**TOR 1: The historical basis for the establishment and operation of former drainage schemes including management arrangements**

There are two drainage schemes located partly within the City of Warrnambool that were formalised under previous legislation - Nullawarre and Merri Swamp. The establishment of these drainage areas was enabled by the enactment of the Drainage Areas Act in 1898, and its subsequent revisions until 1958. The Drainage Areas Act provided very clear guidance on management, funding arrangements and council powers with respect to rural drainage. Under the Drainage Areas Act Local Governments had responsibility for the establishment, management and administration of drainage areas, and could levy rates or charges from landowners to undertake maintenance.

The "Review of Drainage Area Schemes in the Shire of Moyne" (Allen, 1955) provides information on their management and funding arrangements. Nullawarre Drainage Area was gazetted in 1952, and was managed by an Advisory Committee consisting of 7 landowners, with representatives from the Shire. The drainage area crossed local government boundaries and it is unknown whether the committee representatives were from Warrnambool City Council or the former Shire of Warrnambool or both. Maintenance was funded by special charges which were raised by the council, apportioned based on area of land owned in the declared drainage area. The Merri Swamp Drainage Area is located partly in the City of Warrnambool. It was gazetted in 1955 but does not appear to have ever had a formal management structure or funding scheme.
The Drainage Areas Act 1958 was repealed in 1992 following enactment of the Local Government Act 1989 and the Water Act 1989, which now provide for the management of rural drainage in Victoria. However these acts are less clear in their statement of responsibilities and powers than the Drainage Areas Act 1958, which has contributed to the decline of coordinated management of rural drainage in Victoria.

The structure and function of Drainage Area Advisory Committees was addressed in the Drainage Areas Act, but no equivalent was included in the Local Government Act 1989 or Water Act 1989. Since the repeal of the Drainage Areas Act 1958, the advisory committee of the Nullawarre Drainage Area has lapsed and special charges are no longer collected. The drainage area now lies across the City of Warrnambool and Shire of Moyne. Without a legislated requirement to manage or administer drainage areas, the involvement of local governments in rural drainage management has declined.

TOR 2: The status of rural drainage across Victoria, including effectiveness, regulation, ownership, responsibility and maintenance on both public and private land

There are three broad issues with the current status of Rural Drainage in the City of Warrnambool.

1. Maintenance of the Nullawarre Drainage Area
2. Interaction between urban and rural drainage
3. Drainage of the Merri River impacting on South Warrnambool and rural properties

These issues are described in detail below. All are caused or exacerbated by the lack of clear policy framework for managing rural drainage areas in Victoria.

**Maintenance of the Nullawarre Drainage Area**

The Nullawarre Drainage Area is the only drainage area in the City of Warrnambool that had a formalised management structure and rating scheme under the former Drainage Areas Act 1958.

Since the repeal of the Drainage Areas Act 1958 and the amalgamation of the Shires, no coordinated maintenance has been undertaken in the Nullawarre Drainage Area. Neither Moyne Shire or the City of Warrnambool are now responsible for coordination or maintenance within the drainage area, and special rates and charges are no longer collected. Moyne Shire Council suggests that Catchment Management Authorities could now be considered the lead agency to provide, operate and protect rural drainage systems in their respective districts [http://www.moyne.vic.gov.au/page/nape.asp?page_id=831&h=0]. The CMAs were granted enabling powers in the Water Act 1989 to provide, operate and protect drainage systems, however there was never a clear policy backing or funding for them to take up this role.

Since the early 1990s significant maintenance issues have developed in the Nullawarre Drainage Area, including:

- Vegetation growth in drains
- Silt build-up in drains
- Landowners upstream extending drains or undertaking paddock-scale drainage, increasing the drainage density and drainage efficiency, leading to higher flows in the downstream drainage area
- Unstable banks and structures

The drains upstream of Lake Gillear were found to be well-grassed, regular depressions in the "Scoping Study for Best Management Options for the Eumeralla and Nullawarre Drainage Areas" (Water Technology 2007). The drain downstream of Lake Gillear is a steep cutting with unstable banks and a heavy growth of vegetation, including woody shrubs and trees (Figure 1). This drain has not received significant maintenance since 1992-3 and prior to that since 1957. As a result the
drainage of Lake Gillear is ineffective and private land in the low lying areas around Lake Gillear is affected by increased inundation frequency and duration. The scoping study recommended to clear vegetation from the Lake Gillear Drain between Allans Flats Road and Lake Gillear, and between Lake Gillear and the Hopkins River. These actions were never implemented due to a lack of funding and a lack of agreement between all parties.

In other drainage areas in the region, the funding of maintenance works usually relies on an agreement from all landowners on what needs to be done and who should pay. In the Nullawarre Drainage Area such an agreement has not been possible. The drainage area is large, covering almost 15,000 ha. The majority of landowners in the area benefit from effective drainage in the upper landscape, whilst a smaller number of landowners in the lower landscape (where the larger constructed drains receiving water from the upstream area are located) experience the dis-benefits of increased flow volumes and subsequent increased inundation frequency and duration. The number of landowners is unknown, however anecdotal evidence provided by Bruce Holloway, a landowner in the downstream area, suggests that most landowners in the upper landscape have functional drainage and are not affected by or concerned about the maintenance issues. About six landowners in the low-lying areas are significantly affected by flooding, and these landowners have been unsuccessful in trying to gain agreement from upstream landowners to contribute to maintenance.

Figure 1  Lake Gillear Drain downstream of Lake Gillear

The difficulties for Warrnambool City Council with respect to the management of the Nullawarre Drainage Area are:

1. Warrnambool City Council receives requests for assistance from landowners to coordinate drain maintenance. Landowners expect local government to be able to do something about rural drainage, as they were traditionally responsible for it under the Drainage Areas Act 1958. However under current legislation the Council is not required to manage rural drainage, nor does it receive any funding to do so.

2. The cut drain downstream of Lake Gillear is considered a liability to the City of Warrnambool – it has steep and potentially unstable banks with no barrier or other safety measures. A limestone
tunnel under Buckleys Road (Figure 2) is unstable and presents a significant safety issue. There is public access to the area via the Lake Gilboar Motocross Track on Buckleys Road.

3. The drainage area discharges to the Hopkins River estuary, a significant natural asset of the City of Warrnambool. It is important to ensure the flow and nutrient inputs from the drainage area do not have a detrimental impact on the environmental values and beneficial uses (such as recreation and tourism) of the estuary.

![Figure 2  Buckleys Road Tunnel](image-url)

**Interaction between urban and rural drainage**

Drainage in urban areas is the responsibility of Local Government, but where rural and urban drainage interact, the responsibilities are more ambiguous. In the City of Warrnambool, the following issues have been identified:

- Poorly defined roles and responsibilities for open drains in urban areas and drainage outfalls in green field developments
- Rural drains discharging into a residential area (with an increased flow rate resulting from drain maintenance), or
- Urban drains discharging into a rural drain or waterway, producing increased flow with erosion and/or inundation issues
- Lack of regulation of drainage impacts from urban and rural drainage on private land
- Lack of dispute resolution process to assist landowners to settle drainage disputes

In the absence of a defined "drainage authority", it is unclear who owns and is responsible for open drains and drainage outfalls in urban areas in Warrnambool. This is contrasted with the Greater Melbourne Area, where Melbourne Water is the drainage and floodplain management authority, and is responsible for the provision and maintenance of main drains and the management of stormwater overflows from its drainage system and inundation from rivers and creeks. Melbourne Water is the referral authority for approval of internal drainage of an urban development which discharges to a waterway, but also has responsibility for the health and maintenance of that waterway. Hence waterway issues such as potential erosion risk or inundation due to increased flows can be dealt with in a holistic way. In addition, Melbourne Water is able to collect a Waterways
and Drainage Charge on all water bills that provides a steady income stream to fund works on drains and waterways to address these issues. In Warrnambool, the Glenelg Hopkins CMA is the floodplain and waterway management authority, the Council is responsible for minor drainage, and the interaction between the two does not come under the jurisdiction of either.

It is noted that where interactions between urban and rural drainage are not dealt with adequately, conflicts may arise. This is evidenced through disputes brought by landowners drawing on Section 16 of the Water Act 1959. Under this section of the Act, if there is an unreasonable flow from a person's land onto any other land, or if a person interferes with a reasonable flow of water onto any other land, that person is liable for any injury, property damage or economic loss caused by that flow or interference with flow. In reality, there are no guidelines or standards to determine reasonable or unreasonable flow, and this provision must be determined on a case by case basis in civil disputes.

Under the City of Warrnambool Planning Scheme, the Schedule to the Farming Zone states that a planning permit is required to perform "earthworks with change the rate of flow or the discharge point of water across a property boundary". In reality, the lack of awareness among farmers of this requirement and the lack of an authority with the responsibility and the resources to make a determination on these issues means that the provision is not enforced. The conversion of farmland to raised-bed cropping, the extension of drainage networks, laser levelling and road construction are all examples of on-farm earthworks that can cause increased flows and altered flow paths crossing property boundaries.

As towns encroach into rural areas, small drains are built from the new industrial and residential developments which discharge into the urban waterways. Clause 56.07-4 of the Victoria Planning Provisions requires all subdivisions within residential zone and township zone to demonstrate that the subdivision minimises increases in stormwater run-off and protects the environmental values and physical characteristics of receiving waters from degradation by urban run-off. The "Urban stormwater best practice environmental management guidelines" (CSIRO 2006) requires urban stormwater to be treated to at least a minimum 80% reduction of suspended solids, 45% reduction of total phosphorus and total nitrogen, and 70% reduction of gross pollutants. In practice, the current regulation of these issues is ineffective, and it is generally only the larger developments that are required to demonstrate the impacts on downstream flow and water quality. Each small development may only have a minor impact on the waterway, but when you have many of these developments side by side, each contributing to the same drain or waterway, the cumulative impact can be significant.

Outside the Melbourne Water area, there are presently no institutional arrangements that can satisfactorily address these issues.

**Merri River and Kelly's Swamp – South Warrnambool**

Immediately south of Danella, the Merri River flows into a low-lying wetland/marsh area, Kelly's Swamp. The natural outlet from Kelly's Swamp to the Southern Ocean is via Rutledge's Cutting, some 7 km west of Warrnambool. Non-flood flows however, generally discharge to the east at Stirling Bay (near the breakwater) via the Merri Cutting. The cutting is an artificial channel constructed to provide a permanent outlet for the Merri River. Flooding along this channel impacts on residential property in South Warrnambool and is an example of rural drainage impacting on urban areas. The way in which this drain performs has a significant impact on the flooding of land in the Kelly's Swamp area, mostly within the Moyne Shire.
TOR 3: The benefits of rural drainage for both productive land and environment together with community expectations for rural drainage programs

Benefits of rural drainage

The primary benefit of rural drainage in the City of Warrnambool is to increase the productivity or value of land by reducing the extent, severity and/or duration of inundation and water logging.

The benefit to productive land is difficult to quantify in dollar terms, however attempts have been made to determine the increase in land value or agricultural income due to drainage. Based on the Glenelg Hopkins Strategy for Existing Rural Drainage Areas 2004-2007 and the Strathdownie Drainage Control Board General Strategy Report for 1985, (Garlick and Stewart Pty Ltd 1985), the following estimates have been made:

- Annual income of $200-600 per hectare for drained agricultural land (at 2003)
- Increase of drained land values by 250-1000% on pre-drainage values

Less tangible benefits, including the development of rural communities, have flowed from drainage areas. The operation of the drains has a significant impact on the financial security of the farming communities that have grown around the drainage areas. In the peri-urban context, drainage of land allows for urban development and higher value land uses.

The benefits to the environment from drainage are difficult to quantify, however they could include the following:

- Riparian corridors along some drains
- Wetland and stream habitat in drains
- Increased environmental flows to receiving waters

With increased consumptive use of water from rivers, the inflow from the Nullawarre drainage area could potentially provide a key source of environmental flows to the Hopkins River estuary. No studies or data have been identified that could help to quantify this benefit.

While these environmental benefits may now exist, it is assumed that the net long-term impact on the environment by rural drainage has been negative, due to the significant loss of wetland habitat.

Community expectations for rural drainage programs

A community questionnaire was undertaken during the Scoping Study for Best Management Options for the Eumeralla and Nullawarre Drainage Areas (Water Technology 2007). Just under half of the Nullawarre community supported a compulsory rating scheme, and 40% of respondents supported a rating scheme that was based on land area improved by drainage. There was no clear consensus on who should be included in the rating scheme. The two most popular options in this category (30% and 25% respectively) were “all landowners who benefit from drainage maintenance”, and “all landowners whose land is improved by drainage”.

Community expectations with respect to drain maintenance standards were also investigated in this study. Through consultation it was found that a maintenance regime of clearing the Lake Gillear drain every 4 to 6 years would be acceptable. Landowners in drainage areas accept that their properties flood regularly, however they expect the land to be drained quickly to prevent die-off of pasture grass.

Discussions with landowners in major drainage areas in the Glenelg Hopkins region reveal that most believe the management arrangements worked well under the Drainage Areas Act, and would like to see a return to a formalised management structure and rating scheme.
As a regional city, the expectations of the Warrnambool community with respect to rural drainage are also important. In areas where urban development puts pressure on drainage in rural areas, and in areas where flows from rural drains impact on urban areas, there is an expectation from the community that a central authority should regulate these impacts and assist to resolve conflict. This has resulted in various requests to Warrnambool City Council and the Gippsland Hopkins CMA, neither of whom have the mandate or the resources to resolve these issues. Any major rural city such as Warrnambool deals with the same issues as Melbourne’s growth areas, but with little funding and policy backing to implement and regulate works.

**TOR 4: The impacts of rural drainage, including on other land holders and the environment including waterways, wetlands, flora, fauna and water quality**

The principal detrimental impact of rural drainage is the loss of wetlands. Major losses occurred in the 1950s when the Nullawarre area was drained, and the wetland area continues to be eroded by paddock and farm scale drainage, and drainage or filling of urban development areas.

The impacts of the continued operation of rural drains include (Earth Tech 2002):

- Erosion of downstream creeks and rivers due to increased flows
- Effects on in-stream flora and fauna due to changes in flow regimes
- Effects on in-stream flora and fauna due to increased turbidity, nutrient levels or salinity
- Increased nutrient levels leading to algal blooms
- Fish passage blocked by weirs and other structures

These impacts depend partly on the environmental condition of the drains and drained land, and partly on the value of the receiving water body. Where the receiving water body has high environmental value, the quality and quantity of water entering it becomes much more important.

In the City of Warrnambool, the major receiving waters for rural drainage are the Hopkins River and the Merri River, both of which have significant social and environmental value. The Hopkins estuary, which receives discharge from the Nullawarre drainage area (and other smaller areas further upstream), is a popular location for fishing and recreation, and the Merri River discharges to a number of nationally significant wetlands including Kelly’s Swamp, Saltwater Swamp and the South Warrnambool Wetlands.

In the peri-urban setting of the City of Warrnambool, drainage can impact on private land, including rural and urban properties. Such impacts include:

- Drainage of urban areas delivering increased flow to rural properties, drains and waterways, increasing flooding impacts on rural property
- Drainage of urban areas delivering poor water quality to rural drains and waterways
- Rural drain outfalls in urban waterways, delivering increased flows with poor water quality
- Farm or paddock scale drainage upstream of urban areas, delivering increased flow to urban drainage systems

The social impacts of these issues are significant, as conflicts arise between neighbours, and between urban and rural communities, that cannot easily be resolved by Council.

**TOR 5: Options for improved rural drainage management across Victoria, including regulation, institutional and funding arrangements, operation, responsibility and maintenance on both public and private land**

*Formalised Drainage Areas*

In order to effectively address the maintenance issues in the Nullawarre Drainage Area, the roles, responsibilities, ownership and funding arrangements around rural drainage need to be clarified.
Once a suitable policy framework and funding model is in place, the maintenance issues will be relatively straightforward to resolve.

The major steps required by the State Government to make such a framework possible include:

1. Clarify the roles and responsibilities of State Government, Local Government and CMAs
2. Decide on funding arrangements for Rural Drainage
3. Review legislation in light of rural drainage policy and revise where necessary

Warrnambool City Council believes the Glenelg Hopkins CMA is best placed to be the lead agency to manage rural drainage areas. The Nullawarre Drainage Area is shared between Moyne Shire and the City of Warrnambool, and therefore any involvement from Local Government will be difficult to coordinate between the two. Under current legislation both Local Government and CMAs are empowered to manage rural drainage, however neither is required or given adequate resources to take on that role. With the changes to legislation and the establishment of Catchment Management Authorities in the 1990s, it was understood that the management of rural drainage would be phased out of local government responsibilities and at the same time transferred to CMAs. However the resources and the necessary policy framework were never established to make this transfer possible, and as a result the governance, planning and works for rural drainage areas have languished over the last two decades.

Warrnambool City Council’s preferred concept for the roles and responsibilities of the two local governments and the CMA for rural drainage is outlined in Table 1.

Table 1: Preferred concept for agency roles and responsibilities for rural drainage areas

<table>
<thead>
<tr>
<th>Agency</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
</table>
| Glenelg Hopkins CMA     | • Lead agency to manage rural drainage  
                          | • Community consultation  
                          | • Investigations and data collection  
                          | • Inception and co-ordination of landowner committee  
                          | • Preparation of a management plan  
                          | • Engineering advice  
                          | • Regulation of works and environmental impacts  
                          | • Possible administrative role in collecting drainage tariffs |
| Warrnambool City Council | • Hand over historic data to CMA  
                          | • Assist with inception by providing landowner contact details  
                          | • Possible administrative role in collecting special rates  
                          | • Possible involvement in advisory committee |
| Moyne Shire Council     | • Hand over historic data to CMA  
                          | • Assist with inception by providing landowner contact details  
                          | • Possible administrative role in collecting special rates  
                          | • Possible involvement in advisory committee |

Funding for rural drainage could come from a variety of sources, including:

- State Government funding
- Council rates
- Drainage area tariffs or special rates

Warrnambool City Council’s preferred concept for funding arrangements is via collection of a special drainage rate or tariff as shown in Table 2.
A key recommendation of the inquiry into flood mitigation infrastructure in Victoria was that the "beneficiary pays" principle should be applied when developing a policy for funding arrangements for rural drainage. In this case, the beneficiaries are the farmers whose water drains into community drains, and who benefit from the coordination and the physical maintenance of the system. The beneficiaries would be included in a formalised drainage scheme, and a drainage area tariff or special rate would be collected by the CMA or Council. The apportionment of the tariff would need to be determined based on the benefit of drainage to each property, as determined in the initial drainage area investigations and/or drainage management plan. The tariffs would also need to include a contribution towards the mitigation of downstream impacts of the drainage area (e.g. poor water quality, increased flood flows and damage to environmental values).

Planning and regulatory functions that do not directly benefit farmers (e.g. environmental improvement and regulatory administration) should be funded by the State Government.

It could be argued that the development of a drainage management plan and the associated background investigations directly benefit the drainage area landowners by providing clarity around the extent of the drainage system, the effectiveness of drainage, maintenance requirements and environmental regulation requirements, preventing disputes and regulatory issues down the track. However, the development of a drainage management plan is a significant up-front cost and, if landowners are required to pay for this, could be a major impediment to drainage schemes being realised. Therefore it is considered that drainage schemes are far more likely to be embraced by rural communities if State Government provides the initial injection of funds for the inception of schemes, with subsequent management and maintenance costs funded by drainage area tariffs or special rates.

There are two options for the administration of drainage area funding:

1. Administration by CMAs as a drainage tariff under Section 159 of the Water Act 1989
2. Administration by Local Government as a special rate or charge under Section 163 of the Local Government Act 1989

Either option is acceptable to Warrnambool City Council, provided that resources to cover administrative costs will be available. It is noted that significantly greater compliance/administrative effort is involved with the second option, which requires coordination between Moyne Shire Council, Warrnambool City Council and the Glenelg Hopkins CMA to collect and transfer rates. However, the second option is a proven method (it was used under the Drainage Areas Act and is still in use in some drainage areas in Western Victoria) and is expected to be more politically acceptable to landowners to pay rates to local government rather than CMAs (based on the contentious nature of CMA rate proposals in the past).

<table>
<thead>
<tr>
<th>Funding Component</th>
<th>Source of Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inception and Community Consultation</td>
<td>State Government funding via CMA</td>
</tr>
<tr>
<td>Investigations, Data Collection and Modelling</td>
<td>State Government funding via CMA</td>
</tr>
<tr>
<td>Management Plan</td>
<td>State Government funding via CMA</td>
</tr>
<tr>
<td>Advisory Committee Administration</td>
<td>Time of landowners not remunerated Time of CMA/Council staff could be paid for by Drainage area tariffs/rates or otherwise covered by CMA/council funds.</td>
</tr>
<tr>
<td>Drain maintenance</td>
<td>Drainage Area tariffs/rates</td>
</tr>
<tr>
<td>Regulatory administration</td>
<td>State Government funding via CMA</td>
</tr>
<tr>
<td>Funding Component</td>
<td>Source of Funds</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Environmental improvement works</td>
<td>State Government funding via CMA</td>
</tr>
</tbody>
</table>

**Peri-urban and Informal Drainage**

The key issues around peri-urban and informal drainage in the City of Warrnambool are:

- Uncertain ownership and responsibility for open drains in urban areas
- Ineffective planning and regulation of drainage of green field developments
- Ineffective planning and regulation of farm or paddock scale drainage
- Lack of funding for planning, regulation and maintenance of drainage

The City of Warrnambool understands that the arrangements in place in the Greater Melbourne area, between Melbourne Water and Local Government are highly effective, and we would use that as a model for drainage in regional cities. The issues faced by the City of Warrnambool with regard to development pressure in infill and green field areas, the balance between river health and the protection of private land from flooding and water quality impacts of urbanisation are the same as those in metropolitan areas. However, the City of Warrnambool has never had a clear management framework or adequate funding to address these issues.

In the Greater Melbourne area, Melbourne Water is the drainage, waterway and floodplain authority. It collects a waterways and drainage charge (via water retailers) from all properties in its area of responsibility. Melbourne Water is generally responsible for the installation and maintenance of drainage systems with catchments greater than 60 Ha. Council is generally responsible for the installation and maintenance of drainage systems with catchments smaller than 60 Ha.

In the City of Warrnambool, Glenelg Hopkins CMA is the waterway and floodplain authority, but there is no drainage authority. The CMA’s responsibilities could be extended to give it the same areas of responsibility as Melbourne Water. Given that the CMA is already responsible for waterways and river health, and has expertise in the area of flooding and drainage, it seems natural to assign a drainage role to the CMA. Alternatively, the Council could be responsible for all urban drainage in the City of Warrnambool. Either way, the funding arrangement for drainage responsibilities needs to be formalised. We suggest that a “drainage charge” could be levied for all urban properties, similar to the Melbourne Water funding model. The 2003 Drainage Strategy for Warrnambool City Council suggested implementing a drainage contribution, but it was never adopted.

The planning and regulation issues around drainage of green field developments and farm or paddock scale drainage can be addressed by a combination of best practice guidelines, education campaigns and better enforcement of the planning scheme provisions.

Under Section 16 of the Water Act 1989, if there is an unreasonable flow from a person’s land onto any other land, or if a person interferes with a reasonable flow of water onto any other land, that person is liable for any injury, property damage or economic loss caused by that flow or interference with flow. We want to ensure that unreasonable flow or interference with flow is proactively avoided through application of the planning scheme and oversight by the CMA in terms of the interactions with and impacts of urban development on rural waterways.

Under the City of Warrnambool planning scheme, the Schedule to the Farming Zone states that a planning permit is required for “earthworks with change the rate of flow or the discharge point of water across a property boundary”, however it is rarely enforced. An education campaign targeting farmers and earthmovers about the permit requirements for on-farm earthworks. State-wide best
practice guidelines for on-farm drainage should be developed to assist farmers to plan earthworks in a responsible way, and to provide a basis for permit approval.

In an urban setting, all subdivisions within residential zone and township zone are required under Clause 56.07-4 of the Victoria Planning Provisions to demonstrate that the subdivision minimises increases in stormwater run-off and protects the environmental values and physical characteristics of receiving waters from degradation by urban run-off. The "Urban stormwater best practice environmental management guidelines" (CSIRO 2006) should be enforced for planning permit approval, and state-wide best practice guidelines on retention of flows should also be developed. In large growth areas which would benefit from a communal approach to drainage and stormwater treatment, consideration should be given to developing drainage services schemes, whereby developers pay a contribution for the mitigation of any flow and water quality from their development by the scheme. Implementation of integrated Water Management practices, such as stormwater harvesting, would contribute to better management of stormwater in these development areas. These measures will benefit through co-operation with the Living Victoria initiative.

A summary of our options to address peri-urban and informal drainage issues is given in Table 3.

Table 3  Summary of options to address peri-urban and informal drainage issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
</tr>
</thead>
</table>
| Uncertain ownership and responsibility for open drains in urban areas | • Clarify the roles and responsibilities for drainage in urban areas. The Melbourne Water model could be followed:  
  o Empower CMAs with responsibility for drainage of catchments greater than 60 ha  
  o Council to remain responsible for drainage of catchments smaller than 60 ha  
  • Where drains from formalised rural drainage areas enter or outfall into urban areas, ensure the maintenance of that section of drain remains the responsibility of the drainage area  
  • Develop a collaboration model between CMA and Council to improve stormwater management in the City |
| Ineffective planning and regulation of drainage of greenfield development | • Develop state-wide standards/guidelines on drainage from urban developments  
  • Ensure planning scheme provisions for the control of flow and water quality impacts of urban developments are followed  
  • Consider developing drainage services schemes in growth areas and collecting a drainage contribution from developers |
| Ineffective planning and regulation of farm or paddock scale drainage | • Undertake an education program for farmers and developers on their responsibilities with respect to drainage  
  • Develop state-wide standards/guidelines on drainage from farms  
  • Ensure planning scheme provisions for the control of earthworks that change the flow of water are followed |
| Lack of funding for planning, regulation and maintenance of drainage   | • Implement a waterways and drainage charge for regional urban centres to fund CMA or Council management of large drains and urban waterways  
  • Require developers to fund any increase in flow or nutrient from their development. Alternatively, consider larger-scale drainage services schemes in growth areas and collect a drainage contribution from developers within the scheme. |
TOR 6: The Committee's report on the Inquiry into flood mitigation infrastructure in Victoria

The key outcomes of the Committee's report on the Inquiry into flood mitigation infrastructure in Victoria relevant to rural drainage were:

- There is considerable uncertainty around the responsibility for clearing debris and vegetation after a flood event. It is now understood that CMA's have responsibility for removing debris around critical public infrastructure. This is to be clarified in state policy and CMA statements of obligation
- The coordinated management of rural drainage has been in decline since the Drainage Areas Act 1958 was repealed. There is considerable uncertainty about roles and responsibilities in the former drainage areas.

Recommendation 5.9 of the report addressed the need for a clearer legal and management framework for rural drainage:

> The Department of Sustainability and Environment will develop clear policy for the coordinated management of rural drainage, clarifying the legal framework, and identifying authorities with responsibility for the management and ongoing maintenance of formal schemes, and their development:

- where appropriate, an expedited approvals process for works be applied in line with recommendation 5.4; and
- a central component of policy will be the principle of beneficiary pays.

Warrnambool City Council believes that such a policy is the key to addressing the rural drainage issues in our City. With a clear policy and legal framework then many of the other issues would be easily solved.

While we agree the beneficiary pays principle is the best long-term funding solution, it is anticipated that an injection of public funding will be required in initial stages to set up institutional arrangements and undertake drainage investigations and management plans. The "beneficiary pays" principle requires considerable clarification. For example, if maintenance is required in only one section of the drains, is it only the beneficiaries of that section of drain who must pay, or all landowners in the drainage area or all ratepayers in the City? If not properly clarified such a principle might encourage selfish behavior rather than a coordinated approach for the common good.

It also needs to be considered whether a "polluter pays" component of funding is required. For example where a new development or upstream property discharges additional water to the catchment of a drain, we would argue that it should contribute to the maintenance of that drain, even though it doesn't directly benefit from it.