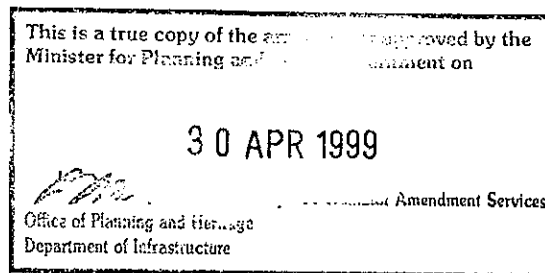


**UNIFORM LOCAL GOVERNMENT PLANNING CONTROLS  
FOR DRAINAGE WORKS  
IN THE  
SHEPPARTON IRRIGATION REGION**

**COMMON DOCUMENT**

**Operating in the municipalities of Shire of Campaspe, City of Greater Shepparton, and Shire of Moira.**



**(Incorporated Document in the Greater Shepparton Planning Scheme)**

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DRAINAGE WORKS  
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**Clause 1. What does this document do for you?**

The document explains the planning controls applied to drainage works in the three shires of the Shepparton Irrigation Region. It also explains the types of situations when planning permits are required.

The document sets minimum requirements for drainage works and operates together with the local section of the planning scheme.

**Clause 2. What are drainage works?**

Drainage works include any change to the natural or existing topography of the land which alters the direction or rate of water flow or changes the discharge point of water. It includes landforming, laser grading, levee banks and drains.

Drainage works are considered to be "minor" if they do not :

- change the direction of existing drainage flows ;
- change the point of drainage outfall over a property boundary ;
- change the flow of water across a property boundary.

In these situations, a formal planning permit is not required. However, landholders must seek advice from their council before commencing work.

There are also other situations outlined in this document where no planning permits are required. (Clause 5.) If uncertainty arises as to whether drainage works require a permit or not, a permit must be obtained.

**Clause 3. What area does the document apply to?**

The document applies to the three Shepparton Irrigation Region municipalities of Campaspe Shire, City of Greater Shepparton and Moira Shire.

**Clause 4. Why have a common document?**

The Shepparton Irrigation Region Land and Water Salinity Management Plan states that it is essential that the drainage system in the region be managed in a way that allows the reasonable flow of water through the region. This requires a consistent approach to drainage management regardless of municipal boundaries or whether land is within the irrigation region or not.

This common document is used by the three municipalities to ensure this occurs.

**Clause 5. When is a permit required?**

In many situations, a planning permit will not be required if certain conditions are met. If the conditions are not met a planning permit is required. A summary chart explains this process in Attachment 1. The requirements are set out in the table below :

**PART 1. No Permit Required**

<b>Works Proposed</b>	<b>Conditions To Be Met</b>
Minor Drainage Control Works	Must only include drainage control works that meet the conditions listed under Clause 2.
Drainage Control Works	In accordance with a certified farm plan. (see Clause 6.)
Drainage Control Works	In accordance with permission granted under a local law.
Drainage Control Works	In accordance with an approved surface drainage scheme or approved natural outfall.

**PART 2. Permit Required**

<b>Works Proposed</b>	<b>Conditions To Be Met</b>
Any drainage works where the conditions under Clause 2. are not met.	Proposed works can avoid the need for a planning permit if they can be modified to meet the conditions listed in part 1. of this table.

**Clause 6. What is a certified farm plan?**

A certified farm plan is a plan involving irrigation and drainage control works that has been certified by the responsible authority.

Certification of a farm plan may be obtained by submitting the 'Earthworks Planning Approval - Application Form' attached to this document, together with plans of the proposed works to the responsible authority.

In deciding whether to certify the farm plan, where the proposed works have complex drainage impacts the municipality may also need to seek technical advice from Goulburn-Murray Rural Water Authority. Plans may also need to be formally referred to other authorities. (see referral table under Clause 10.)

If the responsible authority and, where necessary, the advice and/or referral authorities are satisfied that the drainage works proposed on the farm plan are reasonable and will not adversely alter or will improve drainage in the area, it will be certified.

**Once certified, further planning approval is not required for any works carried out in accordance with the certified farm plan.**

If either the responsible authority and/or the advice or referral authorities are not satisfied, the farm plan can be re-drafted or an application can be made for a planning permit.

**Clause 7. How do you apply for a permit?**

You apply for a permit by completing an "Application for Planning Permit" form (available at the municipal office) and completing the 'Earthworks Planning Approval - Application Form'.

The application must be referred to the relevant authorities under the conditions set out in the schedule under Clause 10 of this document.

Referral is not required if the relevant referral authorities have stated in writing within the past three months that they do not object to the proposal.

**Clause 8. Do you have to notify anyone about the drainage works when a planning permit is required?**

No notification is required if one or both of the following applies:

- written evidence is provided showing adjoining landowners and occupiers agree with your proposal and do not object;
- the responsible authority is satisfied that your proposal will improve drainage in the area and will not cause material detriment to any person.

**Clause 9. Guide-lines for decisions on applications.**

In deciding on applications for drainage works the responsible authority must give consideration to:

- the document titled "Technical Guidelines", which has been written to assist in the administration of the planning controls as described in this common document ;
- the objectives of the Shepparton Land and Water Salinity Management Plan;
- the objectives and provisions of the Water Act; and
- the need to establish and maintain reasonable flow of water through the area.

The provisions of this common document in no way affects the liabilities of any party under existing legislation such as the Water Act.

**Clause 10. Referral Authorities**

The following authorities are Section 55 referral authorities under the Planning and Environment Act.

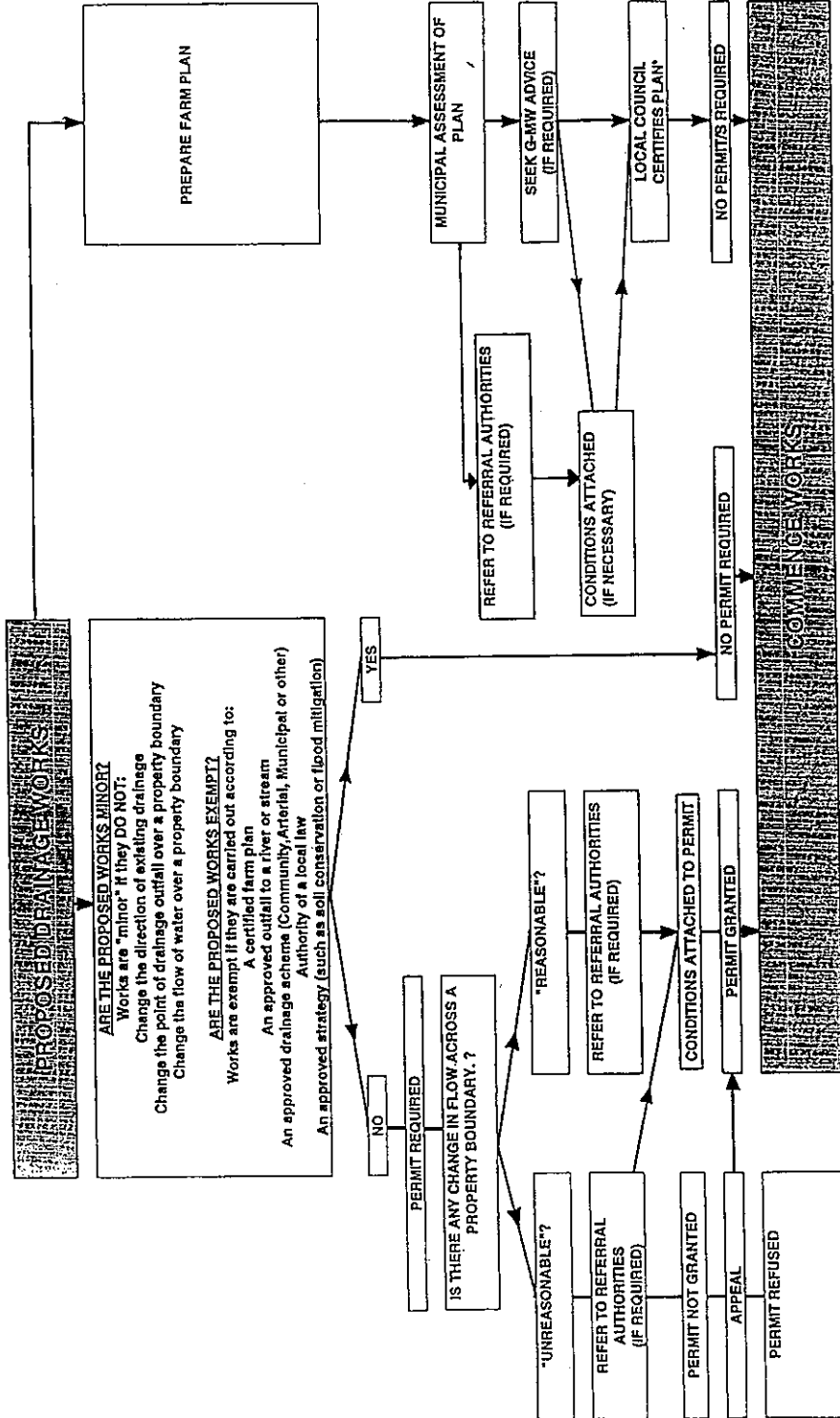
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<b>REFERRAL AUTHORITY</b>	<b>WHEN TO BE REFERRED</b>
Vic Roads	When the application involves works adjoining a VicRoads main road or highway.
Department of Natural Resources and Environment (DNRE)	When the application involves works on land that is liable to flooding.  When the application involves works that may impact on waterways or public land managed by DNRE.
Goulburn - Murray Rural Water Authority (G-MW)	When the application involves works that potentially impact on G-MW works or interests. (eg. pumping to channels, subways under G-MW channels etc.)

The assessing responsible officer shall refer the application to the relevant referral authority after considering the referral guidelines included in the document "Technical Guidelines", which have been written to assist in the interpretation and administration of these planning regulations.

**DRAINAGE CONTROL WORKS APPROVAL PROCESS - SUMMARY CHART**



\* PERMITS REQUIRED IF FARM PLAN HAS NOT BEEN CERTIFIED.

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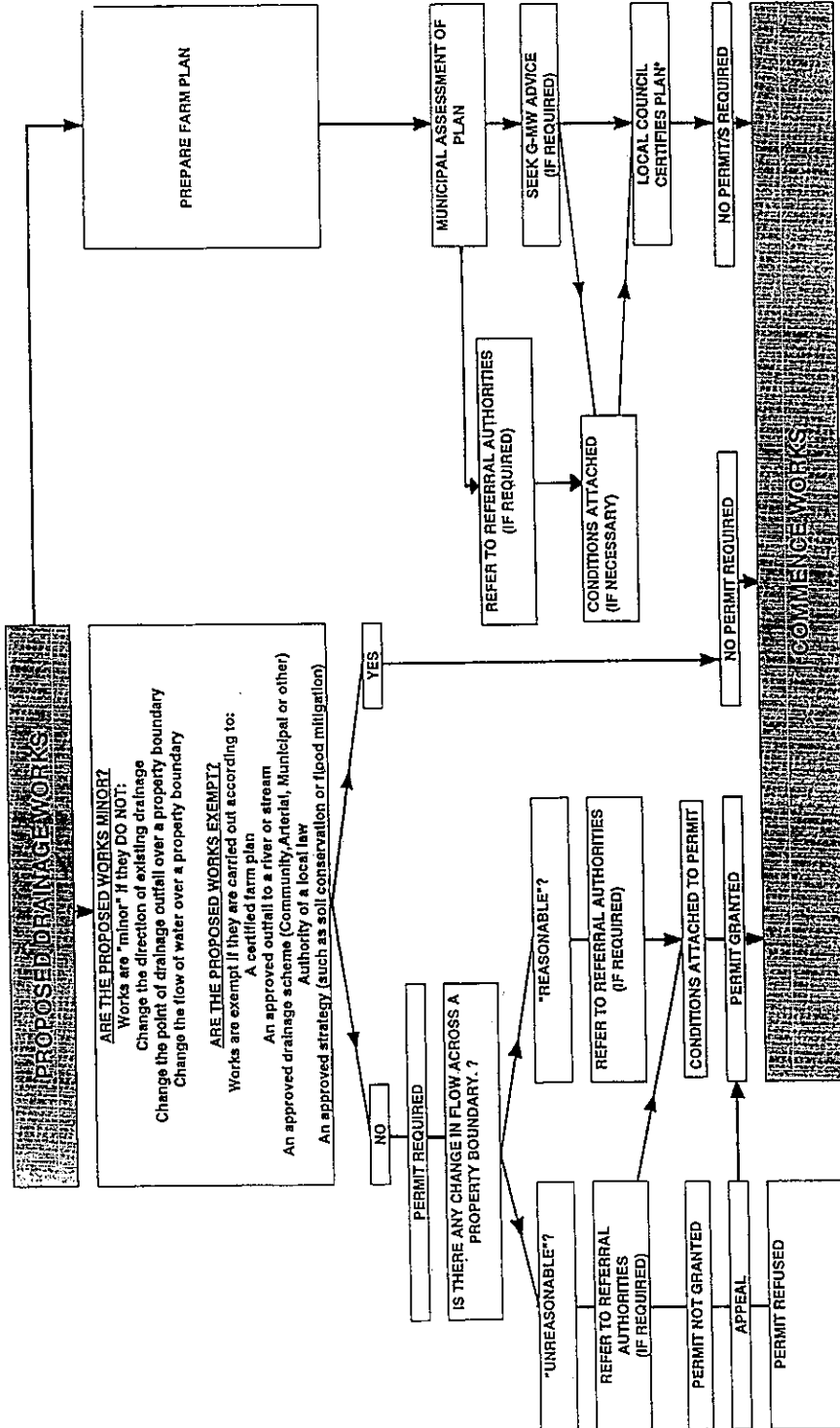
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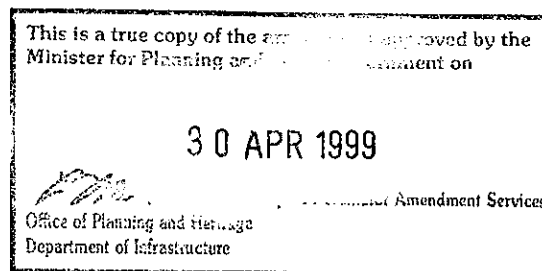


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PLANNING CONTROLS FOR  
EARTHWORKS IN THE SHEPPARTON  
IRRIGATION REGION  
Campaspe Shire Council  
City of Greater Shepparton  
Moira Shire Council

OPERATION AND APPLICATION TECHNICAL  
GUIDELINES

UPDATED : JUNE 1999

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# PLANNING CONTROLS FOR EARTHWORKS IN THE SHEPPARTON IRRIGATION REGION

## **1. BACKGROUND**

### **1.1 Earthworks Controls**

Privately owned drainage developments in the Goulburn/Broken Catchment need to be managed in a controlled and coordinated way so as to allow for the reasonable flow of water through the catchment, regardless of municipal boundaries.

Some key reasons why it is necessary to have such controls are :

- In irrigation country and adjacent dryland areas, land forming and drain construction can cause significant change to drainage patterns and flooding.
- Local Government through the Planning and Environment Act have a legislative ability that can ensure private earthworks are carried out in accordance with local and regional drainage and flooding conditions. This is of assistance to achieving better catchment management.
- Earth moving has become a relatively cheap activity and more widely practiced.
- Victoria's responsibility as a contributor to Murray Darling Basin salt loads requires management of any works that increase saline discharge.
- Poorly planned earthworks have considerable potential to cause major social and liability problems.

Earthworks planning controls were initially developed to support the Shepparton Irrigation Region Land and Water Salinity Management Plan (1989) by the thirteen councils of the Shepparton Irrigation Region. These controls have operated since May 1994.

The development of new planning schemes coupled with better catchment management through development of the Goulburn Broken Catchment Strategy preserved the need for these controls. They have operated successfully for 5 years in the Shepparton Irrigation Region. With the development of the new municipal planning schemes across the state, the ability to control earthworks became an option in all municipalities.

### **1.2 Saline Groundwater Control.**

Due to the Victorian Government commitment to Murray Darling Basin Commission salinity management programs, there is a need to manage salt loads within the Murray River catchment. Victorian catchments north of the Great Dividing Range are subject to salinity in both dryland and irrigation areas. The objective of requiring planning permits for works that mobilise salt loads from groundwater sources is to minimise salinity increases in both local water supply systems and the Murray River (and consequently the South Australian water supply!)

The salinities of all Victorian rivers draining to the Murray River are showing a rising trend. This rise is due primarily to increasing groundwater discharge naturally entering the streams. However, increasing areas of shallow saline groundwater (high watertable) are occurring throughout the dryland and irrigation parts of the catchment. Private drainage developments, including tile drains, have the potential to further add to this rising salinity trend.



Sub-surface drainage systems like tile and mole drains and surface drains in high water table areas can mobilise significant salt loads. They therefore need to be controlled.

## **2. WHAT IS THIS DOCUMENT ABOUT?**

This document explains the operation and application of the earthworks planning controls applying to the three rural zones in the planning schemes operating in the Goulburn/Broken Catchment. It explains the types of earthworks to be controlled and the situations when planning permits are required.

These technical guidelines are primarily intended for the use of local government, agency officers and farm plan designers in considering applications and referrals for planning permits, but are available to anyone on request. A short form of this document is also available.

## **3. OBJECTIVES OF EARTHWORKS PLANNING CONTROLS**

Drainage needs to be managed in an orderly way to allow for the reasonable flow of water through the Catchment. Reasonable Flow includes such aspects as :

- controlling the rates of runoff so that water is not accelerated down the catchment
- protecting the function of natural drainage lines
- consideration of the environmental and water quality impacts of works
- protecting the water holding function of wetlands and depressions
- ensuring that points of entry and outfall across property boundaries are not unduly altered
- considering the impact of works on flood flows and combined flood peaks
- considering the impact of works on neighbouring properties
- ensuring works are carried out with regard to future drainage developments and the capacity of existing drainage systems
- consideration of the salinity impacts of works
- the 'cap' on water abstractions from the Murray Darling Basin

The planning scheme earthworks controls are designed to give Local Government the ability to work with the Catchment Management Authority, G-MW and agencies to control earthworks developments on private land. Any earthworks that have the potential to create an unreasonable change to surface drainage are therefore subject to control under the Planning and Environment Act.

## **4. DEFINITIONS**

### **4.1 What are earthworks?**

Earthworks include any change to the natural or existing topography of the land which alters the direction or rate of water flow across a property boundary, or changes the discharge point of water, or increases the discharge of saline groundwater. It includes land-forming, laser grading,

levee banks (see 4.4), lanes, tracks, aqueducts, water storages, surface and sub-surface drains and any associated structures.

#### **4.2 When Do They Cause Problems ?**

The principle by which these controls operate is performance based, where the potential impact of the proposed works is considered. This is consistent with the principles of the Victorian Planning Provisions.

In assessing whether any proposed works are acceptable or not, the potential for the works to cause :

- a change in the direction of existing drainage flows;
- a change in the point of drainage outfall over a property boundary;
- a change in the rate or volume of flow across a property boundary;
- an increase the discharge of saline groundwater.

is considered.

Earthworks that change any of the above four parameters by more than a 'reasonable' amount need a planning permit. This therefore requires that landholders make themselves aware of the potential impact of their works. They will need to seek the advice of their council planning office or the Catchment Management Authority if they are uncertain about the effect of their proposed works. Where uncertainty arises as to the potential impact of works, a planning permit must be obtained.

#### **4.3 Reasonable Change**

The term "reasonable" as applied in this planning document is determined using the same criteria as provided in Section 20 of the Water Act 1989.

Determining reasonable flow refers to a number of questions, in broad terms including : whether the works were authorised, conditions applying under the Water Act, compliance with ministerial guidelines for drainage of the area and whether proper consideration was given to the available information for that area.

To remain reasonable, any flow of water must not be increased to an unreasonable amount, or unreasonably redirected by the proposed works.

The assessment of reasonable change is also dependant upon whether the land is irrigated or dryland. This is due to the difference in runoff characteristics between wet and dry soil profiles.

#### **4.4 Levee Banks**

Where works obstruct the free flow of water or hold-up or prevent free movement of flood water across flood prone land, those works shall be considered to be a levee bank, regardless of how else they may be described.

For instance: if a "track" or "channel" built across a drainage path does not provide for a reasonable flow of water through or beneath the structure, the "track" or "channel" will be regarded as a levee bank.

#### **4.5 Salt Discharge (including tile and mole drainage)**

Where groundwater comes close to the surface, the resulting high watertable may often result in salinisation of the soil. In much of the low hilly country north of the Victorian Great dividing range, dryland salinity is a recognised problem. New planning scheme salinity overlay maps should indicate which areas in each municipality are subject to groundwater discharge.

The types of situation subject to these controls are :

- Surface drains cut into groundwater discharge areas where the salinity of the groundwater is significant
- Tile drains and mole drains (pipes or cavities running parallel to the surface at approximately one to three metres depth) where groundwater salinity is high and the volume of water drained creates a significant salt load that requires off site disposal.

Groundwater pumping is not subject to these controls as groundwater licensing is managed by Goulburn – Murray Water Authority.

### **5. WHEN DO EARTHWORKS NEED A PERMIT?**

#### **5.1 Earthworks need a permit when they:**

- change the direction of existing drainage flows;
- change the point of drainage outfall over a property boundary;
- change the rate or volume of flow across a property boundary;
- increase the discharge of saline groundwater.

If there is any uncertainty as to whether drainage works require a permit or not, a permit must be obtained.

An applicant does not need to obtain a planning permit if the works are already covered by an existing planning permit. For example, an approved drainage outfall, drainage scheme or an approved soil conservation or flood mitigation strategy (see section 5.2, Exemptions)

#### **5.2 Exemptions**

##### **5.2.1 Approved drainage scheme or approved drainage outfall**

Where works are carried out according to an approved drainage scheme or approved drainage outfall, individual planning permits are not required, but planning approval is necessary for the whole scheme or outfall.

*An "approved" drainage scheme may be:*

- a Goulburn Murray Water drain
- a registered community surface drainage scheme
- a private or municipal drain in which the applicant is an authorised participant and contributor and for which appropriate drainage outfall has been formally approved
- or it may be natural drainage to a river or stream as authorised by the appropriate authority, in particular the Department of Natural Resources and Environment.

### 5.2.2 Approved soil conservation or flood mitigation strategy

Where works are carried out according to an approved soil conservation or flood mitigation strategy, individual planning permits are not required, but planning approval is necessary for the whole flood mitigation strategy.

Common examples of these works are:

- Contour levee banks used to prevent hill-side erosion in soil conservation strategies developed with the Department of Conservation & Natural Resources and or a local LandCare Group.
- Contour levee banks and diversions specified in flood mitigation strategies developed in conjunction with the municipality, the relevant catchment management authority and/or Goulburn - Murray Water.

## 6. FARM PLANS

Landholders can avoid making multiple planning permit applications for a number of projects on the same property. This can be done by presenting a farm plan detailing all of the proposed earthworks. This provides benefits for both landholder and the municipality in reducing applications. There are also very sound business, farm management, efficiency and natural resources management reasons for developing a farm plan. Differences in Irrigation and Dryland area farm planning are described below.

### 6.1 Irrigation

Whole farm plans are actively encouraged under the Shepparton Irrigation Region Land and water Salinity Management Plan. They currently attract up to 50% subsidy, (up to set limits), through the Whole Farm Plan Incentive Scheme administered by the Department of Natural Resources and Environment.

Whole farm plans are increasingly required as a pre-requisite for government funding of salinity management and other environmental incentives.

The Department Natural Resources and Environment encourages landholders to include planning approval from their municipality in the development of their farm plans. Where the landholder agrees, the cost of planning approval *can also* receive a 50% subsidy, in addition to the DNRE subsidy for the development of the whole farm plan.

Municipal officers should encourage landholders to consider undertaking a whole farm plan as a basis of their planning application.

Whole farm plan designers are encouraged to consider local government planning requirements and discuss them with the landholder during the development of whole farm plans. They are also requested to actively try to design works that meet both the requirements of the landholders and the objectives of the Earthworks Planning Controls.

Information of great benefit to the design of acceptable works is available and should be made available though the council planning office to both landholders and farm designers. It includes:

- Surface Drainage Strategy plans for the Shepparton Irrigation Region
- Significant Drainage Lines maps covering the Shepparton Irrigation Region
- Planning scheme Flooding Overlay maps

Making contact with the relevant authorities and discussing the details of the proposed works during the design stage of the farm plan will greatly assist in meeting the planning requirements.

## **6.2 Dryland**

In dryland regions, whole farm plans are seen as an important component of sustainable natural resource management and an important farm management tool.

While there are no subsidies available for the development of whole farm plans or planning application subsidies, applicants are encouraged to submit a number of earthworks on one property, as a farm plan.

By presenting the proposed earthworks as one planning application, the applicant will reduce the cost of the planning approval by reducing the number of planning permits they need to obtain.

The types of earthworks that may be included on a dryland farm plan may include :

- dryland salinity control options, including surface or sub-surface drainage
- levees, contour banks, erosion control works
- water storage dams
- drainage works, especially straightening of drainage lines, wetland drainage.

Particular problems can be experienced where drainage works reduce water storage in the catchment and accelerate flows downstream. Typical examples in dryland areas include the draining of ephemeral or seasonal wetlands or the straightening of drainage lines. The impact of such works can have undesirable impacts on water quality and flows that can cause significant aggravation to people lower in the catchment !

Water storages also have potential to create problems. A storage that significantly reduces flows may contravene the Murray Darling Basin cap on water diversions. For storages on waterways, the key referral authority is Goulburn Murray Water.

## **6.3 Minimum Farm Plan Standards**

The plan must consist of a competent drawing of the area that provides enough information for the delegated municipal planning officer to properly assess the application.

A farm plan must consist of;

- Adequate indications of topography to establish existing directions of drainage and outfall points at property boundaries and/or drainage inlets. This may or may not include topographical survey data and/or field inspection, depending upon the degree of detail required to confirm these points.
- Adequate indication of proposed works and provision for dealing with drainage impacts.

Any additional information that can be provided by the applicant will also greatly assist the application. Aerial photographs, photographs of the relevant locations, topographic maps and any other material that describes the site is useful.

## 7. APPLYING FOR EARTHWORKS PLANNING APPROVAL

Applicants apply for a permit by contacting their council planning office and explaining what works they want to. The applicant will then be asked to completing an 'Earthworks Planning Approval - Application Form' and pay the required Planning Act administration fee.

Where a farm earthworks plan has been prepared, the process is the same. Planning approval is sought for all the works presented on the plan. If any aspect of that plan is considered to result in an unreasonable flow, the plan would need to be modified before it could be granted planning approval.

### 7.1 Fees

All fees associated with the planning application must be paid by the applicant.

#### Permit Application Fees.

The standard local government planning permit application fee current at the time of application shall apply. These fees currently are :

- |   |          |
|---|----------|
| • Works up to value \$5,000             | \$70.00  |
| • Works of value \$5,000 to \$250,000   | \$280.00 |
| • Works of value \$250,000 to \$500,000 | \$480.00 |

#### Referral Fee

Referral fees are not currently charged by any of the referral authorities.

#### Fees for the Provision of Advice

Goulburn Murray Water currently use internal staff and external consultants (Sinclair Knight Merz) for assessment and advice of permit and farm plan certification. While the salinity program currently covers some of the cost of this service, a charge could be levied if this funding is cut.

#### Planning Permit Fee Subsidies.

Where a farm earthworks plan in the Shepparton Irrigation Region is a Whole Farm Plan developed under the Department of Natural Resources and Environment Whole Farm Plan Incentive Scheme, the landholder is eligible for the 50% subsidy on planning approval fees. Officers should ensure landholders are aware of this.

Landholders wishing to take advantage of the subsidy should contact the Department of Natural Resources and Environment office administering their whole farm plan incentive before planning approval costs are incurred.

## 8. ASSESSMENT PROCEDURE

The following section (section 8.1) describes the main stages and issues to consider in approving or rejecting an earthworks planning application.

The Council is the responsible authority for issuing planning permits. This responsibility remains even if the Council is required to consult other organisations in the assessment of a planning application.

Wherever possible, applications for works should be granted approval 'over the counter' (but always in writing) by delegated officers with a minimum of time and cost.

Planning approval for earthworks is carried out in the same manner as other planning approvals.

### **8.1 Regional Plans and Reference Documents**

1. In deciding on applications for earthworks, the responsible authority must give consideration to:

- the objectives of the Goulburn/Broken Catchment Management Strategy;
- the objectives of the Shepparton Irrigation Region Land and Water Salinity Management Plan;
- the Shepparton Irrigation Region Surface Drainage Strategy;
- the objectives of the Goulburn/Broken Dryland Salinity Management Plan;
- the presence of significant drainage lines, salinity management overlays, flooding overlays, wetlands and retardation features.
- the objectives and provisions of the Water Act 1989. (The provisions of the Earthworks Planning controls through the Planning and Environment Act in no way affects the liabilities of any party under other legislation such as the Water Act.)
- the need to establish and maintain reasonable flow of water through the area.
- the need to maintain water quality down the catchment.
- whether vegetation clearance issues may arise from the development

### **8.2 Referral Authorities**

Where an application includes works that could impact upon the assets or responsibilities of another statutory body, the application must be referred to that body for approval. Typical examples include farm drainage or water supply works that impact on G-MW channels or drains, drainage outfalls to public lands (DNRE), works in floodways or land subject to inundation (Catchment Management Authority)

It is the responsibility of the planning applicant to provide enough information, documentation and other material required by a referral authority such that they can make an assessment of the proposed works.

Where an application has been discussed with relevant authorities and designed in accordance with their advice, approval will be made easier. However, submission of final designs for planning approval will still be required, especially where referral is required to ensure assets or other interests will not be affected by the proposal. In other words, obtaining pre-design advice is encouraged, but planning approval can only be given on final designs.

The following authorities are Section 55 referral authorities under the Planning and Environment Act.

### 8.2.1 Catchment Management Authority

Where an application has the potential to alter the drainage and flooding characteristics of an area of land classed as either floodway or subject to inundation, the application must be referred to the appropriate Catchment Management Authority for assessment.

Additional situations where referral to the CMA are appropriate are :

- where the proposed works are within a proclaimed water supply catchment
- where the proposed works are within 100 metres of a heritage river
- where the proposed works have implications for strategic catchment wide land and water management issues.

### 8.2.2 Vicroads

Applications for planning permits must be referred to the appropriate regional office if, in the opinion of the responsible authority, the proposed works could impact on water flow along or across VicRoads highways or main roads. Consideration should be given to the cumulative affects of individual drainage proposals which may impact on the future drainage flows in that location.

**Contact :**

VicRoads - North Eastern Region	or	VicRoads - Northern Region
P.O.Box 135,		P.O. Box 204
BENALLA VIC 3672		BENDIGO VIC 3550

### 8.2.3 Goulburn Murray Water Authority

Planning permit applications must be formally referred to G-MW where the application could interfere or impact on the interests of, or works managed by G-MW.

G-MW will assess earthworks proposals or whole farm plans for any impact on channels or drains and correct full supply level. G-MW will also comment if the proposal is in conflict with the surface drainage strategy or proposes obstructions to significant drainage lines or depressions.

Where an application is to be referred, it should be sent to :

Local Government Planning Referral Officer,  
Goulburn Murray Water,  
P.O. Box 165,  
TATURA VIC 3616  
Phone 58 335 500, or fax 58 335 501

Note that G-MW's role can be as both a formal referral Authority under Section 55 of the act and as an advice and assessment body as available under section 52. See section 8.3.1 of these guidelines which describes the situation where G-MW would be asked to provide technical advice about an earthworks proposal.



## 8.2.4 Department of Natural Resources and Environment

Where the proposed works impact on land managed by the Department of Natural Resources and Environment, Contact :

Statutory Planning Referrals officer  
LandVic- DNRE  
28 High Street,  
SEYMOUR 3660

## 8.3 Other Sources Of Advice.

Informal advice on other technical or policy matters may be made to other agencies, but as such these are not required to respond within a certain period, or even to respond at all. (ie section 52 referrals) One of the main reasons for seeking advice would be to ensure catchment management and coordination issues are addressed. The further reason for seeking non referral advice would be to help the responsible officer come to a decision as to the 'reasonableness' of the proposed works.

Agencies from which informal advice may be sought include:

### 8.3.1 Goulburn Murray Water Authority

Goulburn Murray Water have a formal role in the administration of these Earthworks planning controls by providing expert technical advice in drainage and salinity matters in the Shepparton Irrigation Region.

Advice on earthworks applications or certification of farm plans should be sought from Goulburn-Murray Water for the following purposes:

- Confirmation or calculation of available drainage outfall and recommendations on appropriate outfall structure/s.
- where there is insufficient information on drainage matters in an area. (eg at the fringes of the irrigation area)
- Recommendation on control measures for proposed works which have a potential to create an "unreasonable" change to flow across a property boundary.
- Recommendation on technical issues associated with water supply, drainage, salinity, groundwater or associated matters. This especially relates to applications involving works that have the potential to increase saline groundwater discharge to surface water in the catchment.
- Where a delegated officer requires further assessment and confirmation of technical information or conditions associated with the application.

#### **Advice from G-MW is not required if:**

- The delegated officer is satisfied the proposed works do not have a potential to create an unreasonable change in flow across a property boundary.

A copy of the earthworks planning application and any other relevant information will be required by G-MW in order to properly assess a planning application.

It is the responsibility of the planning applicant to provide all information required.

### **8.3.2 Catchment Management Authority**

Earthworks applications involving works that could impact on broader catchment management issues should be raised with the CMA. They may delegate responsibility for dealing with the issue to another body, but the objective is to ensure a coordinated response to issues. If particularly contentious issues arise, the CMA will look at the need to deal with the wider policy or legal aspects of the development.

### **8.3.3 Department of Natural Resources and Environment**

In cases where DNRE are not specifically a referral body, but the application may have environmental implications, DNRE are an advice body.

In dryland areas, DNRE can provide advice on a range of land protection issues including salinity, soil conservation and land capability. Other benefits could arise through alerting the landholder to incentives schemes or assistance in environmental enhancement opportunities.

Applications for advice should be made to the local DNRE office.

### **8.3.4 Aboriginal Affairs Victoria (A.A.V.)**

For matters involving cultural heritage sites, the contact point is :

Salinity Archaeologist,  
Aboriginal Affairs Victoria  
GPO Box 4057,  
MELBOURNE 3001  
telephone : 9616 2928 facs. : 9616 2954

### **8.3.5 Environment Protection Authority (EPA).**

General pollution. The contact point for the EPA is :

Environment Protection Agency  
GPO Box 4395Q  
MELBOURNE 3001  
telephone : 9628 5304 facs : 9628 5733

## **8.4 Notification**

If the responsible authority determines that the proposed works have the potential to create an unreasonable flow and the proponent is determined to proceed with the proposal, notification is required. (as per the routine planning procedure).

The principle involved is that there is an incentive for landholders to only carry out works that fall within the definition of reasonableness. Potential problems may arise where there is dispute as to the whether the works are reasonable. If there is uncertainty, notification should occur.

Persons likely to be affected by the proposed works may need to be notified, either directly in writing or, in the case of larger projects with less immediate impact, by public notice advertisement in local press. This lets affected persons know of their right to lodge a submission regarding the application.

## **8.5 Specific Issues**

Through five years of operation of Earthworks planning controls in the Shepparton Irrigation Region, considerable understanding of specific issues and how to deal with them has been gained. Items below discuss some of these issues. Some new aspects that are likely to arise out of application of these controls to dryland areas are also discussed.

### **8.5.1 Works in Natural Depressions**

Natural depressions are of greatest importance in low gradient country, particularly on the Riverine Plains adjoining major rivers in of the Murray Basin. A range of earthworks in natural depressions have the potential to cause unreasonable change. Particularly in the Shepparton Irrigation Region, channels, farm tracks, levees and fill associated with laser levelling can considerably alter the hydraulic characteristics of an area. Works that block or restrict the natural carrying capacity of depressions, especially of over design flows in depressions containing constructed drains can seriously compromise the designed operation of drains.

In dryland catchments, works that straighten or deepen the flow path or provide drainage to natural depressions can have serious consequences for downstream-properties by causing the acceleration of runoff. Banks that re-direct flows are another significant cause of unreasonable flows particularly on the fringes of the flat, riverine plains country.

In determining whether works are acceptable, a principle consideration is whether there is any restriction or enhancement of flow capacity or rate caused by the proposed works.

The flooding overlay should provide some indication of possible depressions, but in the Shepparton Irrigation Region, reference to the Significant Drainage lines mapping carried out by SKM for the Irrigation committee of the CMA is essential.

In addition, G-MW also prepared a document titled "Control of Works in Natural Depressions" 1997 that describes the issues involved.

### **8.5.2 Regional and Future Drainage**

Provision of drainage service for all irrigation properties is an objective of the Shepparton Irrigation Region Land & Water Salinity Management Plan. With less than 45% of the Shepparton Irrigation Region currently having drainage and a 25 year program to provide it, there is need for future drainage lines to be protected from inappropriate works. It is also in the interest of the landholder to know what drainage developments are likely in their area so that structures are not put in place that then require costly re-instatement when a future drain is constructed.

The key information source that allows consideration of future drainage lines in the Shepparton Irrigation Region is the Regional Drainage Strategy. This document and associated plans allow existing and future drainage lines to be determined. In areas where such information is unavailable, future drainage lines would be difficult to determine unless some local strategy or plan exists.

### **8.5.3 Flood Prone Land**

A major issue that these controls attempt to influence is the interference with the flow or storage character of flood prone land. The building of levee banks for the intention of limiting or diverting flood flows, no matter how else described (eg as channels, roads, check banks, dams )

is essentially an anti-social activity that leads to an ever increasing spiral of works and counter measures that results in flood plain management being made more and more difficult to achieve.

In essence, works proposed on flood prone land must not obstruct flood flows (ie in rural floodway overlay land) or reduce floodplain storage (on land subject to inundation). Where works are for a legitimate purpose, they must incorporate structures that allow the unimpeded flow of flood water. For example, a water supply channel would require a siphon of appropriate length relative to the size of the upstream catchment if crossing a flood way.

Situations where levees may be acceptable would be for the protection of a habitable dwelling, where a bank would protect only a small area (say 0.5 hectare only). In some flood prone areas, reference to flood plain management studies or specific flood prone land planning controls would govern the approval for some works.

#### **8.5.4 Outfalls Across Public Land**

Where a property adjoins public land along a drainage line and the property requires a drainage point through that public land, the environmental implications of that drain need to be considered. Situations such as this should be referred to DNRE who will assist the landholder in designing a system that minimises impact on the public land and stream.

Irrigation surveyors and designers can also design suitable outfalls according to recommended river management guidelines. In some situations, referral to the CMA's for River management expertise and assistance may be of benefit to both landholder and catchment. This would particularly apply where the applicant receives drainage from a number of upstream properties.

#### **8.5.5 Direction of Drainage**

Land-forming has the ability to significantly alter the direction of drainage flows. Laser grading and new farm drainage systems can increase the area of land draining to a property outfall point. In undrained areas, this could result in an unreasonable flow onto the adjoining property. In a drained area, the increase in flow to a community drain for example, could be of sufficient volume to impact on the design capacity of the drain.

Likewise, contour banks and levees can intercept overland flows, concentrate them and redirect them. In dryland areas, especially where hills meet plains, significant problems have resulted from landholders building banks around or along their boundaries causing unreasonable impacts on their neighbours.

Where such works could result in unreasonable flows through redirecting water, requiring a planning permit is a significant disincentive to the proponent and allows affected neighbours the opportunity to object.

#### **8.5.6 Salt Discharge**

Groundwater containing significant salt content needs to be left in the ground in preference to being passed down the catchment to the Murray River. Within the catchments that drain into the Murray River, salinisation of land is the major environmental problem that is the subject of long term management plans.

Earthworks that can intercept and collect saline groundwater require management due to the impact of that salt on downstream communities. Where landholders have properties that suffer from salinity, tile drainage or surface drains may be seen as a means to restore productivity to

that land. Some works will be acceptable on the basis of the groundwater being of low salinity and there being no off site discharge. The catchment management strategies of northern Victorian catchments contain dryland salinity management programs aimed at improving such sites. Landholders should be encouraged to participate in these programs and applications for works should in many cases be for works auspiced under such programs.

Two mechanisms are available (or soon will be) that allow applications containing potentially saline discharge activities to be noticed. Salinity overlays in each planning scheme should highlight groundwater discharge areas where works would be subject to these controls. It is also proposed to develop a list of parish names where potential saline discharge works require notification.

G-MW is the referral body for groundwater interception works applications and responsible if conditions are placed on the approval of the works

### **8.5.7 Increasing Runoff and new Irrigation Developments**

Change in land use from dryland farming to irrigated, or rural to urban, will result in increased runoff. In the irrigation area where a property is served by an existing drain, a significant increase in irrigated land will cause an increase in runoff that may or may not be reasonable. Where an existing drain serves the property, a significant increase in runoff could cause flooding on downstream properties served by that drain. Where a new or significantly increased irrigation area is proposed, seek advice from G-MW as to whether the increase is reasonable or not as such assessment should have been considered as part of the G-MW approval of the New Irrigation Development.

Note that the application for earthworks planning approval form requires the applicant to record existing and proposed irrigated areas.

Where a transferable water right is brought on to a property and/or additional land is irrigated, particular attention should be paid to the assessment of reasonable flow. If increased flows result from the development, the inclusion of a drainage re-use system and flow retardation or restriction into the design can allow development to proceed.

New irrigation developments are also subject to meeting guidelines developed by G-MW. The key points in the G-MW policy include:

- New irrigation developments must produce minimal on-site and off-site impacts
- Proponents must demonstrate that the development will not adversely impact on the environment or other parties.
- Water transfer must be both feasible and meet salinity and drainage criteria.
- They won't be approved unless other statutory requirements are met (ie planning approval)

Where it becomes apparent that an application is subject to the new irrigation development guidelines as well as the Earthworks Planning Controls, both the councils and G-MW should ensure coordination of response and requirements.

### **8.5.8 Irrigation Water Storages**

Incentives for diversion of surface drainage water and low allocation years have caused an increase in the number of large water storages being built in the irrigation area. Water harvesting storages in dryland areas are also increasingly being developed. Most planning schemes require permits for dams or storages over 3 ML in size. Where a storage is proposed, its impacts need to be considered whether it is part of a whole farm plan or not. Due to the cap of extractions from

the Murray Darling Basin, Goulburn - Murray Water must provide approval and conditions for storages on any waterway. Water quality improvements are also recognised benefits arising from drain diversion storages.

### **8.5.9 Vegetation Clearance Issues**

Vegetation clearance is not part of the earthworks provisions and is dealt with under another part of the planning scheme. However, Planning Officers should be aware of the potential connection between property development and vegetation clearance and ensure the landholder is aware of the Native Vegetation Retention Controls and the need to seek approval for native vegetation clearance under the relevant provisions. A question on the permit application form requires the applicant to state whether vegetation is to be removed.

## **9. PERMIT CONDITIONS**

Approval of an earthworks planning application may be subject to various conditions. Appropriate conditions with which to deal with some specific issues raised in section 8.5 are provided below. Appendix D is a list of conditions that have been developed by the Shepparton Irrigation Region councils for a range of issues relevant to the approval of property earthworks plans.

### **9.1 Provision of on farm storage, re-use systems and Flow Retardation**

Where proposed works have a potential to create an unreasonable increase in flow across a property boundary, conditions may be imposed requiring measures to reduce the change in flow to a reasonable level. A calculation sheet is available that allows a determination of whether the increase is reasonable or not and a method for calculating re-use storage size to control or restrict any unreasonable flows.

If on farm storage is required as a condition of certification, its purpose is to provide a flow "buffer" that is able to control rainfall rejection flows during the irrigation season. To perform this function it must be operated such that it is empty **after** each irrigation during the season. In practice, this would mean pumping the storage out during irrigation to restore capacity in the event of rainfall or over irrigation. A summary sheet describing recommended drainage re-use systems best management practices is available to assist landholders achieve this.

Installation of and proper use of a drainage re-use system provides nutrient control by reducing the chance of farm runoff entering regional drains during the irrigation season.

In dryland areas, there is potential for the construction of dams to create downstream tensions by diverting more runoff that would have previously supplied a downstream property. These earthworks controls are not specifically intended to control such developments. Dams require a permit in their own right if they are over a scheduled capacity, on a permanent water course or divert water from a permanent water course.

### **9.2 Native Vegetation**

Where works are proposed that cause the removal or destruction of remnant vegetation, conditions may be imposed to protect that native vegetation. This may occur through the native vegetation retention controls which require councils to protect remnant native vegetation through the planning approval process. Impounding water around an area of remnant vegetation is a

known cause of destruction that although difficult to detect and prevent nonetheless should be identified if possible.

Conditions on approval could include compensatory planting's, retention of specific trees, protection of specified areas or other conditions as determined by DNRE, preferably in consultation with the proponent.

### **9.3 Erosion**

Proposals in erosion risk areas, proclaimed water supply catchments, within 100 metres of rivers and streams require consideration of the erosion impacts. If approved, works would generally have conditions attached covering the need to prevent sediment from entering surface water. Leaving vegetated buffer strips, remediation of erosion features, erosion control structures or tree planting could be contained in an approval for earthworks.

### **9.4 Salt Discharge**

The most common situation involving saline discharge management would be for the proponent to enter into a registration and monitoring agreement with G-MW. Such monitoring would be to determine on an ongoing basis whether salt loads were increasing. Other conditions may relate to retaining all groundwater on site, or for significant salt loads, penalties for breach of conditions.

### **9.5 AAV Heritage**

It is the responsibility of Aboriginal Affairs Victoria to facilitate the effective management of Victoria's Aboriginal Cultural Heritage. It should be noted that Aboriginal sites, places and objects which may be impacted on by proposed earthworks are protected under both State and Federal legislation. A condition of any planning approval would require the protection of the site from any disturbance.

### **9.6 Future Drainage Systems/Regional Drains**

Where future drainage systems are known, approval would generally only be given for the proposal if allowance is made for the future drain. In the irrigation area, this is usually a voluntary easement to leave land aside for a drain. Where a definite drainage line is not known, future drainage need could be highlighted by including a condition that requires all property drainage to enter any future drainage system, or limiting the types of work that are able to be put in depressions suitable for drains.

INCREASING RUNOFF - ASSESSMENT PROCEDURE.DO THE PROPOSED WORKS INCREASE THE OUTFLOW FROM THE PROPERTY TO AN UNREASONABLE FLOW?

The Water Act (1989) assigns liability to persons causing an unreasonable flow of water from their land that results in damage or loss to other persons.

Examine the application to determine whether the outflow will increase and whether the increased flow is reasonable. Use the proposal assessment sheet provided in appendix D to determine whether the flow will be reasonable or not and whether an unreasonable flow can be compensated for by inclusion of a water storage.

Calculation of Flow

Increased flows from rainfall will be caused mainly by changing dry land to irrigation.

"Reasonable flow" is assessed by calculating the runoff from the existing farm and multiplying by the following factors to obtain the allowable runoff.

if property is inside irrigation region	1.20
if property is outside irrigation region	1.10

Runoff from the proposed farm is calculated and compared with the allowable runoff.

Runoff is calculated as follows:-

- assume the whole farm is in its natural unirrigated state i.e. dry land and  
Calculate runoff at 0.15ML/ha total area
- add the additional runoff due to irrigation  
Calculate at 0.20ML/ha of area irrigated

i.e.  $\text{Runoff} = (\text{Total area} \times 0.15) + (\text{Irrigated area} \times 0.20) \text{ ML}$

**Not e:** For planning control purposes, permeable soils are considered to produce zero runoff. In the Shepparton Irrigation Region, permeable soils are often mapped in a yellow colour and described as either a sand, a sandy loam or fine sandy loam.

Approval

The application should be assessed for questions one and two (above) as the first step in determining whether to either grant the planning permit or certify the farm plan. Even if the proposal satisfies the requirements of questions one and two, it may still need to be referred to the relevant authorities as per the referral table under section 10 in the common document. In assessing the factors which determine whether advice from G-MW needs to be sought first, the proposal can be more efficiently dealt with if it also needs to be sent to G-MW for referral as well.

- Where soils are permeable - **May be Approved**
- Where the proposed runoff does not exceed the allowable runoff - **May be Approved**
- Where the proposed runoff exceeds the allowable runoff - **May be Approved subject to:-**
  - (a) a storage of capacity equal to the excess runoff being included in the farm design; or,
  - (b) reduction in the proposed irrigated area to meet the allowable runoff limit; or,
  - (c) adjustment of the storage capacity and area irrigated to meet the allowable runoff limit, as may be suitable to the applicant.

Goulburn Murray Water Advice

Only when satisfactory assessment cannot be carried out using the above procedure and assessment sheet should advice be requested from Goulburn Murray Water.



WORKED EXAMPLE  
PROPOSAL ASSESSMENT SHEET TO BE USED BY DELEGATED MUNICIPAL OFFICER

**PROPERTY DETAILS**

DESCRIPTION: CA or Lot : ..... SEC: ..... PARISH: .....

OWNER .....

LOCATION: Inside Irrigation region / Outside Irrigation region

SOIL TYPE: Permeable  / Impermeable

AREAS: Total: \_\_\_\_\_ ha : Existing Irrigation: \_\_\_\_\_ ha : Proposed Irrigation: \_\_\_\_\_ ha

**Question 1:** Requirements are not met - Request advice G-MW   
 Requirements are met - Proceed to Question 2

**Question 2:**

- **Allowable runoff increase factors:-**
  - Inside irrigation region - 1.20
  - Outside irrigation region - 1.10

- **Runoff factors:-**
  - Permeable soil - zero - **May be Approved**
  - Unirrigated land - 0.15ML/ha total farm area
  - Irrigated land - 0.20ML/ha irrigated land

- **Runoff calculation:-**
  - (i) Existing Runoff = (Total Area x 0.15)+(Exist. Irrig Area x 0.20)  
 = (..... x 0.15) + (..... x 0.20)ML = ..... ML
  - (ii) Allowable runoff = Existing Runoff x Runoff Increase Factor  
 = ..... x ..... ML = ..... ML
  - (iii) Proposed runoff = (Total Area x 0.15)+(Proposed Irrig. Area x 0.20)  
 = (..... x 0.15) + (..... x 0.20) = ..... ML

Result: No Excess - **May be Approved**   
 Excess ..... ML - **Proceed to Conditions**

- **Conditions for Approval:**
  - (a) Provide storage capacity of .....ML, or
  - (b) Reduce area irrigated:-

A = [Allowable runoff - (Total Area x 0.15)] ÷ 0.20   
 = [..... - (..... x 0.15)] ÷ 0.20 = ..... ha, or

- (c) Adopt storage volume (say) .....ML:-   
 A = [(Allowable runoff + Storage)-(Total Area x 0.15)] ÷ 0.20  
 = [(..... + .....) - (..... x 0.15)] ÷ 0.20 = ..... ha

**DECISION**

APPROVE:   
 APPROVE SUBJECT TO CONDITIONS:  .....

REQUEST ADVICE G-MW:  (delegated officer)  
 NOT APPROVE:   
 APPROVE SUBJECT TO REFERRAL:  Date .... / .... / .....

PROPOSAL ASSESSMENT SHEET TO BE USED BY DELEGATED MUNICIPAL OFFICER**PROPERTY DETAILS**

DESCRIPTION: CA or Lot : ..... SEC: ..... PARISH: .....

OWNER .....

LOCATION: Inside Irrigation region  / Outside Irrigation region SOIL TYPE: Permeable  / Impermeable 

AREAS: Total: \_\_\_\_\_ ha : Existing Irrigation: \_\_\_\_\_ ha : Proposed Irrigation: \_\_\_\_\_ ha

**Question 1:** Requirements are not met - Request advice G-MW   
 Requirements are met - Proceed to Question 2

**Question 2:**

- **Allowable runoff increase factors:-**
  - Inside irrigation region - 1.20
  - Outside irrigation region - 1.10

- **Runoff factors:-**
  - Permeable soil - zero - **May be Approved**
  - Unirrigated land - 0.15ML/ha total farm area
  - Irrigated land - 0.20ML/ha irrigated land

- **Runoff calculation:-**
  - (i) Existing Runoff = (Total Area x 0.15)+(Exist. Irrig Area x 0.20)  
 = (..... x 0.15) + (..... x 0.20)ML = ..... ML
  - (ii) Allowable runoff = Existing Runoff x Runoff Increase Factor  
 = ..... x ..... ML = ..... ML
  - (iii) Proposed runoff = (Total Area x 0.15)+(Proposed Irrig. Area x 0.20)  
 = (..... x 0.15) + (..... x 0.20) = ..... ML

Result: No Excess - **May be Approved** Excess ..... ML - **Proceed to Conditions** 

- **Conditions for Approval:**
  - (a) Provide storage capacity of .....ML, or
  - (b) Reduce area irrigated:-

A = [Allowable runoff - (Total Area x 0.15)] ÷ 0.20 

= [..... - (..... x 0.15)] ÷ 0.20 = ..... ha, or

- (c) Adopt storage volume (say) .....ML:-  
 A = [(Allowable runoff + Storage)-(Total Area x 0.15)] ÷ 0.20  
 = [(..... + .....) - (..... x 0.15)] ÷ 0.20 = ..... ha

**DECISION**

APPROVE:

APPROVE SUBJECT TO CONDITIONS:  .....

REQUEST ADVICE G-MW:  (delegated officer)

NOT APPROVE:

APPROVE SUBJECT TO REFERRAL:  Date ...../...../.....

WATER ACT 1989 SECTION 20 (part) - REASONABLE FLOW

**Matters to be taken into account in determining whether flow is reasonable or not reasonable.**

20. (1) In determining whether a flow of water is reasonable or not reasonable, account must be taken of all the circumstances including the following matters;

- (a) Whether or not the flow, or the act or works that caused the flow, was or were authorised;
- (b) The extent to which any conditions or requirements imposed under this Act in relation to an authorisation were complied with;
- (c) Whether or not the flow conforms with any guidelines or principles published by the Minister with respect to the drainage of the area;
- (d) Whether or not account was taken at the relevant time of the likely impact of the flow on drainage in the area having regard to the information then reasonably available about the cumulative effects on drainage of works and activities in the area;
- (e) The uses to which lands concerned and other lands in the vicinity are put;
- (f) The contours of the lands concerned;
- (g) Whether the water which flowed was -
  - (i) brought onto the land from which it flowed; or
  - (ii) collected, stored or concentrated on that land; or
  - (iii) extracted from the ground on that land-

and if so, for what purpose and with what degree of care this was done;

- (h) Whether or not the flow was affected by any works restricting the flow of water along a waterway;
- (i) Whether or not the flow is likely to damage any waterway, wetland or aquifer.

(2) In taking account of the matters specified in sub-section (1), greater weight must be attached to the matters specified in paragraphs (a),(b),(c) and (d) than to other specified matters.

EXAMPLE CONDITIONS THAT CAN BE ATTACHED TO PLAN CERTIFICATION.

(Updated January 1997)

The following are some typical conditions being attached to certification of farm plans by the three shires. Conditions applicable to all cases are marked with \*

Attachment of conditions requires judgement to be made by the assessing planning officer or engineer.

Questions may arise as to what value these conditions may have if the current or subsequent landholder fails to observe the applied conditions. The value in applying them is only in that if a problem does arise in the future, it is on record and it gives greater strength to the authority in forcing the landholder to comply with direction that resolves any problems.

1. To retain irrigation runoff on the property so as to avoid downstream neighbour complaints or nuisance flows onto roads and to potentially retard the faster flows off laser graded land. (also becoming increasingly important for nutrient retention). It would be rare for a whole farm plan not to include drainage re-use :  
see also No. 4.
  - *\*The applicant shall undertake whatever civil works are necessary and operate them in such a way so as to retain all irrigation waters emanating from the proposed works within the property*
2. To prevent flows from entire drained property ending up on road reserves. (may run into difficulties where there is no formal drainage system and water has always drained to the road) Approved pumping may be granted by shires if requested during wet conditions and water would not cause nuisance further on.
  - *\*The council will not permit the discharge of concentrated drainage onto the local road drains or culverts without the approval of the Responsible Authority.*
3. To protect council assets :
  - *\*Any damage to council assets (ie sealed roads, table drains etc) shall be repaired at the cost of the applicant to the satisfaction of the responsible authority.*
  - *A road opening permit is required where works cross public roads.*
4. To try to prevent situations where laser graded land's more rapid runoff is not slowed before leaving the property due to the grading works taking place first :
  - *\*Storage facilities, farm drains and channels must be installed and functioning before any other works are undertaken and they must be maintained in a condition that is considered satisfactory by the Responsible Authority*
5. To place responsibility on applicant for adhering to the design as approved :
  - *\* The layout of the site and the size of the proposed works as shown on the approved plans shall not be altered or modified (whether or not to comply with any Statute, Statutory Authority of Local Law or for any other reason) without the consent in writing of the Responsible Authority.*
6. To ensure landowner is aware of the future provision of a regulated drainage :
  - *Outfall from the tenement shall be to any community or drainage authority drain once such drainage becomes available to the tenement.*
  - *the pumped outfall to the channel will cease to be used once the tenement becomes serviced by a community or authority drain.*

7. To try to prevent problems occurring through future subdivision of the property :
- *an amended outfall arrangement and redevelopment of the endorsed plans will need to be approved by the Responsible Authority in the event that any part of the existing tenement is subdivided and/or changes hands.*
8. To try to protect flood storage capacity in depressions, especially loops that may be cut off by constructed drains but that are still required to carry water in greater than drain design events :
- *No earthworks shall be permitted to restrict the flow of water entering or leaving the depression and low lying land indicated on the plan.*

The objective in applying conditions is to make the landowner aware of their responsibility in water management and to reduce council liability if problems emerge in the future.

9. As a general cover-all to deal with potential unforeseen problems in the future, the following condition may be useful.
- *\*If problems emerge in the future, due to actual or possible consequence of carrying out works as proposed on the endorsed plan, the landholder will be required to enter into negotiations with the responsible authority in order to rectify the problems.*



PLANNING CONTROLS FOR  
EARTHWORKS IN THE SHEPPARTON  
IRRIGATION REGION  
Campaspe Shire Council  
City of Greater Shepparton  
Moira Shire Council

OPERATION AND APPLICATION TECHNICAL  
GUIDELINES

UPDATED : JUNE 1999

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# PLANNING CONTROLS FOR EARTHWORKS IN THE SHEPPARTON IRRIGATION REGION

## **1. BACKGROUND**

### **1.1 Earthworks Controls**

Privately owned drainage developments in the Goulburn/Broken Catchment need to be managed in a controlled and coordinated way so as to allow for the reasonable flow of water through the catchment, regardless of municipal boundaries.

Some key reasons why it is necessary to have such controls are :

- In irrigation country and adjacent dryland areas, land forming and drain construction can cause significant change to drainage patterns and flooding.
- Local Government through the Planning and Environment Act have a legislative ability that can ensure private earthworks are carried out in accordance with local and regional drainage and flooding conditions. This is of assistance to achieving better catchment management.
- Earth moving has become a relatively cheap activity and more widely practiced.
- Victoria's responsibility as a contributor to Murray Darling Basin salt loads requires management of any works that increase saline discharge.
- Poorly planned earthworks have considerable potential to cause major social and liability problems.

Earthworks planning controls were initially developed to support the Shepparton Irrigation Region Land and Water Salinity Management Plan (1989) by the thirteen councils of the Shepparton Irrigation Region. These controls have operated since May 1994.

The development of new planning schemes coupled with better catchment management through development of the Goulburn Broken Catchment Strategy preserved the need for these controls. They have operated successfully for 5 years in the Shepparton Irrigation Region. With the development of the new municipal planning schemes across the state, the ability to control earthworks became an option in all municipalities.

### **1.2 Saline Groundwater Control.**

Due to the Victorian Government commitment to Murray Darling Basin Commission salinity management programs, there is a need to manage salt loads within the Murray River catchment. Victorian catchments north of the Great Dividing Range are subject to salinity in both dryland and irrigation areas. The objective of requiring planning permits for works that mobilise salt loads from groundwater sources is to minimise salinity increases in both local water supply systems and the Murray River (and consequently the South Australian water supply!)

The salinities of all Victorian rivers draining to the Murray River are showing a rising trend. This rise is due primarily to increasing groundwater discharge naturally entering the streams. However, increasing areas of shallow saline groundwater (high watertable) are occurring throughout the dryland and irrigation parts of the catchment. Private drainage developments, including tile drains, have the potential to further add to this rising salinity trend.

Sub-surface drainage systems like tile and mole drains and surface drains in high water table areas can mobilise significant salt loads. They therefore need to be controlled.

## **2. WHAT IS THIS DOCUMENT ABOUT?**

This document explains the operation and application of the earthworks planning controls applying to the three rural zones in the planning schemes operating in the Goulburn/Broken Catchment. It explains the types of earthworks to be controlled and the situations when planning permits are required.

These technical guidelines are primarily intended for the use of local government, agency officers and farm plan designers in considering applications and referrals for planning permits, but are available to anyone on request. A short form of this document is also available.

## **3. OBJECTIVES OF EARTHWORKS PLANNING CONTROLS**

Drainage needs to be managed in an orderly way to allow for the reasonable flow of water through the Catchment. Reasonable Flow includes such aspects as :

- controlling the rates of runoff so that water is not accelerated down the catchment
- protecting the function of natural drainage lines
- consideration of the environmental and water quality impacts of works
- protecting the water holding function of wetlands and depressions
- ensuring that points of entry and outfall across property boundaries are not unduly altered
- considering the impact of works on flood flows and combined flood peaks
- considering the impact of works on neighbouring properties
- ensuring works are carried out with regard to future drainage developments and the capacity of existing drainage systems
- consideration of the salinity impacts of works
- the 'cap' on water abstractions from the Murray Darling Basin

The planning scheme earthworks controls are designed to give Local Government the ability to work with the Catchment Management Authority, G-MW and agencies to control earthworks developments on private land. Any earthworks that have the potential to create an unreasonable change to surface drainage are therefore subject to control under the Planning and Environment Act.

## **4. DEFINITIONS**

### **4.1 What are earthworks?**

Earthworks include any change to the natural or existing topography of the land which alters the direction or rate of water flow across a property boundary, or changes the discharge point of water, or increases the discharge of saline groundwater. It includes land-forming, laser grading,

levee banks (see 4.4), lanes, tracks, aqueducts, water storages, surface and sub-surface drains and any associated structures.

#### **4.2 When Do They Cause Problems ?**

The principle by which these controls operate is performance based, where the potential impact of the proposed works is considered. This is consistent with the principles of the Victorian Planning Provisions.

In assessing whether any proposed works are acceptable or not, the potential for the works to cause :

- a change in the direction of existing drainage flows;
- a change in the point of drainage outfall over a property boundary;
- a change in the rate or volume of flow across a property boundary;
- an increase the discharge of saline groundwater.

is considered.

Earthworks that change any of the above four parameters by more than a 'reasonable' amount need a planning permit. This therefore requires that landholders make themselves aware of the potential impact of their works. They will need to seek the advice of their council planning office or the Catchment Management Authority if they are uncertain about the effect of their proposed works. Where uncertainty arises as to the potential impact of works, a planning permit must be obtained.

#### **4.3 Reasonable Change**

The term "reasonable" as applied in this planning document is determined using the same criteria as provided in Section 20 of the Water Act 1989.

Determining reasonable flow refers to a number of questions, in broad terms including : whether the works were authorised, conditions applying under the Water Act, compliance with ministerial guidelines for drainage of the area and whether proper consideration was given to the available information for that area.

To remain reasonable, any flow of water must not be increased to an unreasonable amount, or unreasonably redirected by the proposed works.

The assessment of reasonable change is also dependant upon whether the land is irrigated or dryland. This is due to the difference in runoff characteristics between wet and dry soil profiles.

#### **4.4 Levee Banks**

Where works obstruct the free flow of water or hold-up or prevent free movement of flood water across flood prone land, those works shall be considered to be a levee bank, regardless of how else they may be described.

For instance: if a "track" or "channel" built across a drainage path does not provide for a reasonable flow of water through or beneath the structure, the "track" or "channel" will be regarded as a levee bank.

#### **4.5 Salt Discharge (including tile and mole drainage)**

Where groundwater comes close to the surface, the resulting high watertable may often result in salinisation of the soil. In much of the low hilly country north of the Victorian Great dividing range, dryland salinity is a recognised problem. New planning scheme salinity overlay maps should indicate which areas in each municipality are subject to groundwater discharge.

The types of situation subject to these controls are :

- Surface drains cut into groundwater discharge areas where the salinity of the groundwater is significant
- Tile drains and mole drains (pipes or cavities running parallel to the surface at approximately one to three metres depth) where groundwater salinity is high and the volume of water drained creates a significant salt load that requires off site disposal.

Groundwater pumping is not subject to these controls as groundwater licensing is managed by Goulburn – Murray Water Authority.

### **5. WHEN DO EARTHWORKS NEED A PERMIT?**

#### **5.1 Earthworks need a permit when they:**

- change the direction of existing drainage flows;
- change the point of drainage outfall over a property boundary;
- change the rate or volume of flow across a property boundary;
- increase the discharge of saline groundwater.

If there is any uncertainty as to whether drainage works require a permit or not, a permit must be obtained.

An applicant does not need to obtain a planning permit if the works are already covered by an existing planning permit. For example, an approved drainage outfall, drainage scheme or an approved soil conservation or flood mitigation strategy (see section 5.2, Exemptions)

#### **5.2 Exemptions**

##### **5.2.1 Approved drainage scheme or approved drainage outfall**

Where works are carried out according to an approved drainage scheme or approved drainage outfall, individual planning permits are not required, but planning approval is necessary for the whole scheme or outfall.

*An "approved" drainage scheme may be:*

- a Goulburn Murray Water drain
- a registered community surface drainage scheme
- a private or municipal drain in which the applicant is an authorised participant and contributor and for which appropriate drainage outfall has been formally approved
- or it may be natural drainage to a river or stream as authorised by the appropriate authority, in particular the Department of Natural Resources and Environment.

### 5.2.2 Approved soil conservation or flood mitigation strategy

Where works are carried out according to an approved soil conservation or flood mitigation strategy, individual planning permits are not required, but planning approval is necessary for the whole flood mitigation strategy.

Common examples of these works are:

- Contour levee banks used to prevent hill-side erosion in soil conservation strategies developed with the Department of Conservation & Natural Resources and or a local LandCare Group.
- Contour levee banks and diversions specified in flood mitigation strategies developed in conjunction with the municipality, the relevant catchment management authority and/or Goulburn - Murray Water.

## 6. FARM PLANS

Landholders can avoid making multiple planning permit applications for a number of projects on the same property. This can be done by presenting a farm plan detailing all of the proposed earthworks. This provides benefits for both landholder and the municipality in reducing applications. There are also very sound business, farm management, efficiency and natural resources management reasons for developing a farm plan. Differences in Irrigation and Dryland area farm planning are described below.

### 6.1 Irrigation

Whole farm plans are actively encouraged under the Shepparton Irrigation Region Land and water Salinity Management Plan. They currently attract up to 50% subsidy, (up to set limits), through the Whole Farm Plan Incentive Scheme administered by the Department of Natural Resources and Environment.

Whole farm plans are increasingly required as a pre-requisite for government funding of salinity management and other environmental incentives.

The Department Natural Resources and Environment encourages landholders to include planning approval from their municipality in the development of their farm plans. Where the landholder agrees, the cost of planning approval *can also* receive a 50% subsidy, in addition to the DNRE subsidy for the development of the whole farm plan.

Municipal officers should encourage landholders to consider undertaking a whole farm plan as a basis of their planning application.

Whole farm plan designers are encouraged to consider local government planning requirements and discuss them with the landholder during the development of whole farm plans. They are also requested to actively try to design works that meet both the requirements of the landholders and the objectives of the Earthworks Planning Controls.

Information of great benefit to the design of acceptable works is available and should be made available through the council planning office to both landholders and farm designers. It includes:

- Surface Drainage Strategy plans for the Shepparton Irrigation Region
- Significant Drainage Lines maps covering the Shepparton Irrigation Region
- Planning scheme Flooding Overlay maps

Making contact with the relevant authorities and discussing the details of the proposed works during the design stage of the farm plan will greatly assist in meeting the planning requirements.

## **6.2 Dryland**

In dryland regions, whole farm plans are seen as an important component of sustainable natural resource management and an important farm management tool.

While there are no subsidies available for the development of whole farm plans or planning application subsidies, applicants are encouraged to submit a number of earthworks on one property, as a farm plan.

By presenting the proposed earthworks as one planning application, the applicant will reduce the cost of the planning approval by reducing the number of planning permits they need to obtain.

The types of earthworks that may be included on a dryland farm plan may include :

- dryland salinity control options, including surface or sub-surface drainage
- levees, contour banks, erosion control works
- water storage dams
- drainage works, especially straightening of drainage lines, wetland drainage.

Particular problems can be experienced where drainage works reduce water storage in the catchment and accelerate flows downstream. Typical examples in dryland areas include the draining of ephemeral or seasonal wetlands or the straightening of drainage lines. The impact of such works can have undesirable impacts on water quality and flows that can cause significant aggravation to people lower in the catchment !

Water storages also have potential to create problems. A storage that significantly reduces flows may contravene the Murray Darling Basin cap on water diversions. For storages on waterways, the key referral authority is Goulburn Murray Water.

## **6.3 Minimum Farm Plan Standards**

The plan must consist of a competent drawing of the area that provides enough information for the delegated municipal planning officer to properly assess the application.

A farm plan must consist of;

- Adequate indications of topography to establish existing directions of drainage and outfall points at property boundaries and/or drainage inlets. This may or may not include topographical survey data and/or field inspection, depending upon the degree of detail required to confirm these points.
- Adequate indication of proposed works and provision for dealing with drainage impacts.

Any additional information that can be provided by the applicant will also greatly assist the application. Aerial photographs, photographs of the relevant locations, topographic maps and any other material that describes the site is useful.

## 7. APPLYING FOR EARTHWORKS PLANNING APPROVAL

Applicants apply for a permit by contacting their council planning office and explaining what works they want to. The applicant will then be asked to completing an 'Earthworks Planning Approval - Application Form' and pay the required Planning Act administration fee.

Where a farm earthworks plan has been prepared, the process is the same. Planning approval is sought for all the works presented on the plan. If any aspect of that plan is considered to result in an unreasonable flow, the plan would need to be modified before it could be granted planning approval.

### 7.1 Fees

All fees associated with the planning application must be paid by the applicant.

#### Permit Application Fees.

The standard local government planning permit application fee current at the time of application shall apply. These fees currently are :

• Works up to value \$5,000	\$70.00
• Works of value \$5,000 to \$250,000	\$280.00
• Works of value \$250,000 to \$500,000	\$480.00

#### Referral Fee

Referral fees are not currently charged by any of the referral authorities.

#### Fees for the Provision of Advice

Goulburn Murray Water currently use internal staff and external consultants (Sinclair Knight Merz) for assessment and advice of permit and farm plan certification. While the salinity program currently covers some of the cost of this service, a charge could be levied if this funding is cut.

#### Planning Permit Fee Subsidies.

Where a farm earthworks plan in the Shepparton Irrigation Region is a Whole Farm Plan developed under the Department of Natural Resources and Environment Whole Farm Plan Incentive Scheme, the landholder is eligible for the 50% subsidy on planning approval fees. Officers should ensure landholders are aware of this.

Landholders wishing to take advantage of the subsidy should contact the Department of Natural Resources and Environment office administering their whole farm plan incentive before planning approval costs are incurred.

## 8. ASSESSMENT PROCEDURE

The following section (section 8.1) describes the main stages and issues to consider in approving or rejecting an earthworks planning application.



The Council is the responsible authority for issuing planning permits. This responsibility remains even if the Council is required to consult other organisations in the assessment of a planning application.

Wherever possible, applications for works should be granted approval 'over the counter' (but always in writing) by delegated officers with a minimum of time and cost.

Planning approval for earthworks is carried out in the same manner as other planning approvals.

### **8.1 Regional Plans and Reference Documents**

1. In deciding on applications for earthworks, the responsible authority must give consideration to:

- the objectives of the Goulburn/Broken Catchment Management Strategy;
- the objectives of the Shepparton Irrigation Region Land and Water Salinity Management Plan;
- the Shepparton Irrigation Region Surface Drainage Strategy;
- the objectives of the Goulburn/Broken Dryland Salinity Management Plan;
- the presence of significant drainage lines, salinity management overlays, flooding overlays, wetlands and retardation features.
- the objectives and provisions of the Water Act 1989. (The provisions of the Earthworks Planning controls through the Planning and Environment Act in no way affects the liabilities of any party under other legislation such as the Water Act.)
- the need to establish and maintain reasonable flow of water through the area.
- the need to maintain water quality down the catchment.
- whether vegetation clearance issues may arise from the development

### **8.2 Referral Authorities**

Where an application includes works that could impact upon the assets or responsibilities of another statutory body, the application must be referred to that body for approval. Typical examples include farm drainage or water supply works that impact on G-MW channels or drains, drainage outfalls to public lands (DNRE), works in floodways or land subject to inundation (Catchment Management Authority)

It is the responsibility of the planning applicant to provide enough information, documentation and other material required by a referral authority such that they can make an assessment of the proposed works.

Where an application has been discussed with relevant authorities and designed in accordance with their advice, approval will be made easier. However, submission of final designs for planning approval will still be required, especially where referral is required to ensure assets or other interests will not be affected by the proposal. In other words, obtaining pre-design advice is encouraged, but planning approval can only be given on final designs.

The following authorities are Section 55 referral authorities under the Planning and Environment Act.

### 8.2.1 Catchment Management Authority

Where an application has the potential to alter the drainage and flooding characteristics of an area of land classed as either floodway or subject to inundation, the application must be referred to the appropriate Catchment Management Authority for assessment.

Additional situations where referral to the CMA are appropriate are :

- where the proposed works are within a proclaimed water supply catchment
- where the proposed works are within 100 metres of a heritage river
- where the proposed works have implications for strategic catchment wide land and water management issues.

### 8.2.2 Vicroads

Applications for planning permits must be referred to the appropriate regional office if, in the opinion of the responsible authority, the proposed works could impact on water flow along or across VicRoads highways or main roads. Consideration should be given to the cumulative affects of individual drainage proposals which may impact on the future drainage flows in that location.

**Contact :**

VicRoads - North Eastern Region	or	VicRoads - Northern Region
P.O.Box 135,		P.O. Box 204
BENALLA VIC 3672		BENDIGO VIC 3550

### 8.2.3 Goulburn Murray Water Authority

Planning permit applications must be formally referred to G-MW where the application could interfere or impact on the interests of, or works managed by G-MW.

G-MW will assess earthworks proposals or whole farm plans for any impact on channels or drains and correct full supply level. G-MW will also comment if the proposal is in conflict with the surface drainage strategy or proposes obstructions to significant drainage lines or depressions.

Where an application is to be referred, it should be sent to :

Local Government Planning Referral Officer,  
Goulburn Murray Water,  
P.O. Box 165,  
TATURA VIC 3616  
Phone 58 335 500, or fax 58 335 501

Note that G-MW's role can be as both a formal referral Authority under Section 55 of the act and as an advice and assessment body as available under section 52. See section 8.3.1 of these guidelines which describes the situation where G-MW would be asked to provide technical advice about an earthworks proposal.

## 8.2.4 Department of Natural Resources and Environment

Where the proposed works impact on land managed by the Department of Natural Resources and Environment, Contact :

Statutory Planning Referrals officer  
LandVic- DNRE  
28 High Street,  
SEYMOUR 3660

## 8.3 Other Sources Of Advice.

Informal advice on other technical or policy matters may be made to other agencies, but as such these are not required to respond within a certain period, or even to respond at all. (ie section 52 referrals) One of the main reasons for seeking advice would be to ensure catchment management and coordination issues are addressed. The further reason for seeking non referral advice would be to help the responsible officer come to a decision as to the 'reasonableness' of the proposed works.

Agencies from which informal advice may be sought include:

### 8.3.1 Goulburn Murray Water Authority

Goulburn Murray Water have a formal role in the administration of these Earthworks planning controls by providing expert technical advice in drainage and salinity matters in the Shepparton Irrigation Region.

Advice on earthworks applications or certification of farm plans should be sought from Goulburn-Murray Water for the following purposes:

- Confirmation or calculation of available drainage outfall and recommendations on appropriate outfall structure/s.
- where there is insufficient information on drainage matters in an area. (eg at the fringes of the irrigation area)
- Recommendation on control measures for proposed works which have a potential to create an "unreasonable" change to flow across a property boundary.
- Recommendation on technical issues associated with water supply, drainage, salinity, groundwater or associated matters. This especially relates to applications involving works that have the potential to increase saline groundwater discharge to surface water in the catchment.
- Where a delegated officer requires further assessment and confirmation of technical information or conditions associated with the application.

### Advice from G-MW is not required if:

- The delegated officer is satisfied the proposed works do not have a potential to create an unreasonable change in flow across a property boundary.

A copy of the earthworks planning application and any other relevant information will be required by G-MW in order to properly assess a planning application.

It is the responsibility of the planning applicant to provide all information required.

### **8.3.2 Catchment Management Authority**

Earthworks applications involving works that could impact on broader catchment management issues should be raised with the CMA. They may delegate responsibility for dealing with the issue to another body, but the objective is to ensure a coordinated response to issues. If particularly contentious issues arise, the CMA will look at the need to deal with the wider policy or legal aspects of the development.

### **8.3.3 Department of Natural Resources and Environment**

In cases where DNRE are not specifically a referral body, but the application may have environmental implications, DNRE are an advice body.

In dryland areas, DNRE can provide advice on a range of land protection issues including salinity, soil conservation and land capability. Other benefits could arise through alerting the landholder to incentives schemes or assistance in environmental enhancement opportunities.

Applications for advice should be made to the local DNRE office.

### **8.3.4 Aboriginal Affairs Victoria (A.A.V.)**

For matters involving cultural heritage sites, the contact point is :

Salinity Archaeologist,  
Aboriginal Affairs Victoria  
GPO Box 4057,  
MELBOURNE 3001  
telephone : 9616 2928 facs. : 9616 2954

### **8.3.5 Environment Protection Authority (EPA).**

General pollution. The contact point for the EPA is :

Environment Protection Agency  
GPO Box 4395Q  
MELBOURNE 3001  
telephone : 9628 5304 facs : 9628 5733

## **8.4 Notification**

If the responsible authority determines that the proposed works have the potential to create an unreasonable flow and the proponent is determined to proceed with the proposal, notification is required. (as per the routine planning procedure).

The principle involved is that there is an incentive for landholders to only carry out works that fall within the definition of reasonableness. Potential problems may arise where there is dispute as to the whether the works are reasonable. If there is uncertainty, notification should occur.

Persons likely to be affected by the proposed works may need to be notified, either directly in writing or, in the case of larger projects with less immediate impact, by public notice advertisement in local press. This lets affected persons know of their right to lodge a submission regarding the application.

## **8.5 Specific Issues**

Through five years of operation of Earthworks planning controls in the Shepparton Irrigation Region, considerable understanding of specific issues and how to deal with them has been gained. Items below discuss some of these issues. Some new aspects that are likely to arise out of application of these controls to dryland areas are also discussed.

### **8.5.1 Works in Natural Depressions**

Natural depressions are of greatest importance in low gradient country, particularly on the Riverine Plains adjoining major rivers in of the Murray Basin. A range of earthworks in natural depressions have the potential to cause unreasonable change. Particularly in the Shepparton Irrigation Region, channels, farm tracks, levees and fill associated with laser levelling can considerably alter the hydraulic characteristics of an area. Works that block or restrict the natural carrying capacity of depressions, especially of over design flows in depressions containing constructed drains can seriously compromise the designed operation of drains.

In dryland catchments, works that straighten or deepen the flow path or provide drainage to natural depressions can have serious consequences for downstream properties by causing the acceleration of runoff. Banks that re-direct flows are another significant cause of unreasonable flows particularly on the fringes of the flat, riverine plains country.

In determining whether works are acceptable, a principle consideration is whether there is any restriction or enhancement of flow capacity or rate caused by the proposed works.

The flooding overlay should provide some indication of possible depressions, but in the Shepparton Irrigation Region, reference to the Significant Drainage lines mapping carried out by SKM for the Irrigation committee of the CMA is essential.

In addition, G-MW also prepared a document titled "Control of Works in Natural Depressions" 1997 that describes the issues involved.

### **8.5.2 Regional and Future Drainage**

Provision of drainage service for all irrigation properties is an objective of the Shepparton Irrigation Region Land & Water Salinity Management Plan. With less than 45% of the Shepparton Irrigation Region currently having drainage and a 25 year program to provide it, there is need for future drainage lines to be protected from inappropriate works. It is also in the interest of the landholder to know what drainage developments are likely in their area so that structures are not put in place that then require costly re-instatement when a future drain is constructed.

The key information source that allows consideration of future drainage lines in the Shepparton Irrigation Region is the Regional Drainage Strategy. This document and associated plans allow existing and future drainage lines to be determined. In areas where such information is unavailable, future drainage lines would be difficult to determine unless some local strategy or plan exists.

### **8.5.3 Flood Prone Land**

A major issue that these controls attempt to influence is the interference with the flow or storage character of flood prone land. The building of levee banks for the intention of limiting or diverting flood flows, no matter how else described (eg as channels, roads, check banks, dams )

is essentially an anti-social activity that leads to an ever increasing spiral of works and counter measures that results in flood plain management being made more and more difficult to achieve.

In essence, works proposed on flood prone land must not obstruct flood flows (ie in rural floodway overlay land) or reduce floodplain storage (on land subject to inundation). Where works are for a legitimate purpose, they must incorporate structures that allow the unimpeded flow of flood water. For example, a water supply channel would require a siphon of appropriate length relative to the size of the upstream catchment if crossing a flood way.

Situations where levees may be acceptable would be for the protection of a habitable dwelling, where a bank would protect only a small area (say 0.5 hectare only). In some flood prone areas, reference to flood plain management studies or specific flood prone land planning controls would govern the approval for some works.

#### **8.5.4 Outfalls Across Public Land**

Where a property adjoins public land along a drainage line and the property requires a drainage point through that public land, the environmental implications of that drain need to be considered. Situations such as this should be referred to DNRE who will assist the landholder in designing a system that minimises impact on the public land and stream.

Irrigation surveyors and designers can also design suitable outfalls according to recommended river management guidelines. In some situations, referral to the CMA's for River management expertise and assistance may be of benefit to both landholder and catchment. This would particularly apply where the applicant receives drainage from a number of upstream properties.

#### **8.5.5 Direction of Drainage**

Land-forming has the ability to significantly alter the direction of drainage flows. Laser grading and new farm drainage systems can increase the area of land draining to a property outfall point. In undrained areas, this could result in an unreasonable flow onto the adjoining property. In a drained area, the increase in flow to a community drain for example, could be of sufficient volume to impact on the design capacity of the drain.

Likewise, contour banks and levees can intercept overland flows, concentrate them and redirect them. In dryland areas, especially where hills-meet plains, significant problems have resulted from landholders building banks around or along their boundaries causing unreasonable impacts on their neighbours.

Where such works could result in unreasonable flows through redirecting water, requiring a planning permit is a significant disincentive to the proponent and allows affected neighbours the opportunity to object.

#### **8.5.6 Salt Discharge**

Groundwater containing significant salt content needs to be left in the ground in preference to being passed down the catchment to the Murray River. Within the catchments that drain into the Murray River, salinisation of land is the major environmental problem that is the subject of long term management plans.

Earthworks that can intercept and collect saline groundwater require management due to the impact of that salt on downstream communities. Where landholders have properties that suffer from salinity, tile drainage or surface drains may be seen as a means to restore productivity to

that land. Some works will be acceptable on the basis of the groundwater being of low salinity and there being no off site discharge. The catchment management strategies of northern Victorian catchments contain dryland salinity management programs aimed at improving such sites. Landholders should be encouraged to participate in these programs and applications for works should in many cases be for works auspiced under such programs.

Two mechanisms are available (or soon will be) that allow applications containing potentially saline discharge activities to be noticed. Salinity overlays in each planning scheme should highlight groundwater discharge areas where works would be subject to these controls. It is also proposed to develop a list of parish names where potential saline discharge works require notification.

G-MW is the referral body for groundwater interception works applications and responsible if conditions are placed on the approval of the works

### **8.5.7 Increasing Runoff and new Irrigation Developments**

Change in land use from dryland farming to irrigated, or rural to urban, will result in increased runoff. In the irrigation area where a property is served by an existing drain, a significant increase in irrigated land will cause an increase in runoff that may or may not be reasonable. Where an existing drain serves the property, a significant increase in runoff could cause flooding on downstream properties served by that drain. Where a new or significantly increased irrigation area is proposed, seek advice from G-MW as to whether the increase is reasonable or not as such assessment should have been considered as part of the G-MW approval of the New Irrigation Development.

Note that the application for earthworks planning approval form requires the applicant to record existing and proposed irrigated areas.

Where a transferable water right is brought on to a property and/or additional land is irrigated, particular attention should be paid to the assessment of reasonable flow. If increased flows result from the development, the inclusion of a drainage re-use system and flow retardation or restriction into the design can allow development to proceed.

New irrigation developments are also subject to meeting guidelines developed by G-MW. The key points in the G-MW policy include:

- New irrigation developments must produce minimal on-site and off-site impacts
- Proponents must demonstrate that the development will not adversely impact on the environment or other parties.
- Water transfer must be both feasible and meet salinity and drainage criteria.
- They won't be approved unless other statutory requirements are met (ie planning approval)

Where it becomes apparent that an application is subject to the new irrigation development guidelines as well as the Earthworks Planning Controls, both the councils and G-MW should ensure coordination of response and requirements.

### **8.5.8 Irrigation Water Storages**

Incentives for diversion of surface drainage water and low allocation years have caused an increase in the number of large water storages being built in the irrigation area. Water harvesting storages in dryland areas are also increasingly being developed. Most planning schemes require permits for dams or storages over 3 ML in size. Where a storage is proposed, its impacts need to be considered whether it is part of a whole farm plan or not. Due to the cap of extractions from

the Murray Darling Basin, Goulburn - Murray Water must provide approval and conditions for storages on any waterway. Water quality improvements are also recognised benefits arising from drain diversion storages.

### **8.5.9 Vegetation Clearance Issues**

Vegetation clearance is not part of the earthworks provisions and is dealt with under another part of the planning scheme. However, Planning Officers should be aware of the potential connection between property development and vegetation clearance and ensure the landholder is aware of the Native Vegetation Retention Controls and the need to seek approval for native vegetation clearance under the relevant provisions. A question on the permit application form requires the applicant to state whether vegetation is to be removed.

## **9. PERMIT CONDITIONS**

Approval of an earthworks planning application may be subject to various conditions. Appropriate conditions with which to deal with some specific issues raised in section 8.5 are provided below. Appendix D is a list of conditions that have been developed by the Shepparton Irrigation Region councils for a range of issues relevant to the approval of property earthworks plans.

### **9.1 Provision of on farm storage, re-use systems and Flow Retardation**

Where proposed works have a potential to create an unreasonable increase in flow across a property boundary, conditions may be imposed requiring measures to reduce the change in flow to a reasonable level. A calculation sheet is available that allows a determination of whether the increase is reasonable or not and a method for calculating re-use storage size to control or restrict any unreasonable flows.

If on farm storage is required as a condition of certification, its purpose is to provide a flow "buffer" that is able to control rainfall rejection flows during the irrigation season. To perform this function it must be operated such that it is empty **after** each irrigation during the season. In practice, this would mean pumping the storage out during irrigation to restore capacity in the event of rainfall or over irrigation. A summary sheet describing recommended drainage re-use systems best management practices is available to assist landholders achieve this.

Installation of and proper use of a drainage re-use system provides nutrient control by reducing the chance of farm runoff entering regional drains during the irrigation season.

In dryland areas, there is potential for the construction of dams to create downstream tensions by diverting more runoff that would have previously supplied a downstream property. These earthworks controls are not specifically intended to control such developments. Dams require a permit in their own right if they are over a scheduled capacity, on a permanent water course or divert water from a permanent water course.

### **9.2 Native Vegetation**

Where works are proposed that cause the removal or destruction of remnant vegetation, conditions may be imposed to protect that native vegetation. This may occur through the native vegetation retention controls which require councils to protect remnant native vegetation through the planning approval process. Impounding water around an area of remnant vegetation is a



known cause of destruction that although difficult to detect and prevent nonetheless should be identified if possible.

Conditions on approval could include compensatory planting's, retention of specific trees, protection of specified areas or other conditions as determined by DNRE, preferably in consultation with the proponent.

### **9.3 Erosion**

Proposals in erosion risk areas, proclaimed water supply catchments, within 100 metres of rivers and streams require consideration of the erosion impacts. If approved, works would generally have conditions attached covering the need to prevent sediment from entering surface water. Leaving vegetated buffer strips, remediation of erosion features, erosion control structures or tree planting could be contained in an approval for earthworks.

### **9.4 Salt Discharge**

The most common situation involving saline discharge management would be for the proponent to enter into a registration and monitoring agreement with G-MW. Such monitoring would be to determine on an ongoing basis whether salt loads were increasing. Other conditions may relate to retaining all groundwater on site, or for significant salt loads, penalties for breach of conditions.

### **9.5 AAV Heritage**

It is the responsibility of Aboriginal Affairs Victoria to facilitate the effective management of Victoria's Aboriginal Cultural Heritage. It should be noted that Aboriginal sites, places and objects which may be impacted on by proposed earthworks are protected under both State and Federal legislation. A condition of any planning approval would require the protection of the site from any disturbance.

### **9.6 Future Drainage Systems/Regional Drains**

Where future drainage systems are known, approval would generally only be given for the proposal if allowance is made for the future drain. In the irrigation area, this is usually a voluntary easement to leave land aside for a drain. Where a definite drainage line is not known, future drainage need could be highlighted by including a condition that requires all property drainage to enter any future drainage system, or limiting the types of work that are able to be put in depressions suitable for drains.

INCREASING RUNOFF - ASSESSMENT PROCEDURE.DO THE PROPOSED WORKS INCREASE THE OUTFLOW FROM THE PROPERTY TO AN UNREASONABLE FLOW?

The Water Act (1989) assigns liability to persons causing an unreasonable flow of water from their land that results in damage or loss to other persons.

Examine the application to determine whether the outflow will increase and whether the increased flow is reasonable. Use the proposal assessment sheet provided in appendix D to determine whether the flow will be reasonable or not and whether an unreasonable flow can be compensated for by inclusion of a water storage.

Calculation of Flow

Increased flows from rainfall will be caused mainly by changing dry land to irrigation.

"Reasonable flow" is assessed by calculating the runoff from the existing farm and multiplying by the following factors to obtain the allowable runoff.

- if property is inside irrigation region            1.20
- if property is outside irrigation region            1.10

Runoff from the proposed farm is calculated and compared with the allowable runoff.

Runoff is calculated as follows:-

- assume the whole farm is in its natural unirrigated state i.e. dry land and  
Calculate runoff at 0.15ML/ha total area
- add the additional runoff due to irrigation  
Calculate at 0.20ML/ha of area irrigated

i.e.       $\text{Runoff} = (\text{Total area} \times 0.15) + (\text{Irrigated area} \times 0.20) \text{ ML}$

**Not e:** For planning control purposes, permeable soils are considered to produce zero runoff. In the Shepparton Irrigation Region, permeable soils are often mapped in a yellow colour and described as either a sand, a sandy loam or fine sandy loam.

Approval

The application should be assessed for questions one and two (above) as the first step in determining whether to either grant the planning permit or certify the farm plan. Even if the proposal satisfies the requirements of questions one and two, it may still need to be referred to the relevant authorities as per the referral table under section 10 in the common document. In assessing the factors which determine whether advice from G-MW needs to be sought first, the proposal can be more efficiently dealt with if it also needs to be sent to G-MW for referral as well.

- Where soils are permeable - **May be Approved**
- Where the proposed runoff does not exceed the allowable runoff - **May be Approved**
- Where the proposed runoff exceeds the allowable runoff - **May be Approved subject to:-**
  - (a) a storage of capacity equal to the excess runoff being included in the farm design; or,
  - (b) reduction in the proposed irrigated area to meet the allowable runoff limit; or,
  - (c) adjustment of the storage capacity and area irrigated to meet the allowable runoff limit, as may be suitable to the applicant.

Goulburn Murray Water Advice

Only when satisfactory assessment cannot be carried out using the above procedure and assessment sheet should advice be requested from Goulburn Murray Water.

**PROPOSAL ASSESSMENT SHEET TO BE USED BY DELEGATED MUNICIPAL OFFICER**

**PROPERTY DETAILS**

DESCRIPTION: CA or Lot : ..... SEC: ..... PARISH: .....

OWNER .....

LOCATION: Inside Irrigation region  / Outside Irrigation region

SOIL TYPE: Permeable  / Impermeable

AREAS: Total: \_\_\_\_\_ ha : Existing Irrigation: \_\_\_\_\_ ha : Proposed Irrigation: \_\_\_\_\_ ha

**Question 1:** Requirements are not met - Request advice G-MW   
 Requirements are met - Proceed to Question 2

**Question 2:**

- Allowable runoff increase factors:-
  - Inside irrigation region - 1.20
  - Outside irrigation region - 1.10

- Runoff factors:-
  - Permeable soil - zero - May be Approved
  - Unirrigated land - 0.15ML/ha total farm area
  - Irrigated land - 0.20ML/ha irrigated land

- Runoff calculation:-
  - (i) Existing Runoff = (Total Area x 0.15)+(Exist. Irrig Area x 0.20)  
 = (..... x 0.15) + (..... x 0.20)ML = ..... ML
  - (ii) Allowable runoff = Existing Runoff x Runoff Increase Factor  
 = ..... x ..... ML = ..... ML
  - (iii) Proposed runoff = (Total Area x 0.15)+(Proposed Irrig. Area x 0.20)  
 = (..... x 0.15) + (..... x 0.20) = ..... ML

Result: No Excess - May be Approved

Excess ..... ML - Proceed to Conditions

- Conditions for Approval:
  - (a) Provide storage capacity of .....ML, or
  - (b) Reduce area irrigated:-

A = [Allowable runoff - (Total Area x 0.15)] ÷ 0.20   
 = [..... - (..... x 0.15)] ÷ 0.20 = ..... ha, or

- (c) Adopt storage volume (say) .....ML:-
  - A = [(Allowable runoff + Storage)-(Total Area x 0.15)] ÷ 0.20
  - = [(..... + .....) - (..... x 0.15)] ÷ 0.20 = ..... ha

**DECISION**

APPROVE:

APPROVE SUBJECT TO CONDITIONS:  .....

REQUEST ADVICE G-MW:  (delegated officer)

NOT APPROVE:

APPROVE SUBJECT TO REFERRAL:  Date ...../...../.....

WATER ACT 1989 SECTION 20 (part) - REASONABLE FLOW

**Matters to be taken into account in determining whether flow is reasonable or not reasonable.**

20. (1) In determining whether a flow of water is reasonable or not reasonable, account must be taken of all the circumstances including the following matters;

- (a) Whether or not the flow, or the act or works that caused the flow, was or were authorised;
- (b) The extent to which any conditions or requirements imposed under this Act in relation to an authorisation were complied with;
- (c) Whether or not the flow conforms with any guidelines or principles published by the Minister with respect to the drainage of the area;
- (d) Whether or not account was taken at the relevant time of the likely impact of the flow on drainage in the area having regard to the information then reasonably available about the cumulative effects on drainage of works and activities in the area;
- (e) The uses to which lands concerned and other lands in the vicinity are put;
- (f) The contours of the lands concerned;
- (g) Whether the water which flowed was -
  - (i) brought onto the land from which it flowed; or
  - (ii) collected, stored or concentrated on that land; or
  - (iii) extracted from the ground on that land-

and if so, for what purpose and with what degree of care this was done;

- (h) Whether or not the flow was affected by any works restricting the flow of water along a waterway;
- (i) Whether or not the flow is likely to damage any waterway, wetland or aquifer.

(2) In taking account of the matters specified in sub-section (1), greater weight must be attached to the matters specified in paragraphs (a),(b),(c) and (d) than to other specified matters.

EXAMPLE CONDITIONS THAT CAN BE ATTACHED TO PLAN CERTIFICATION.

(Updated January 1997)

The following are some typical conditions being attached to certification of farm plans by the three shires. Conditions applicable to all cases are marked with \*

Attachment of conditions requires judgement to be made by the assessing planning officer or engineer.

Questions may arise as to what value these conditions may have if the current or subsequent landholder fails to observe the applied conditions. The value in applying them is only in that if a problem does arise in the future, it is on record and it gives greater strength to the authority in forcing the landholder to comply with direction that resolves any problems.

1. To retain irrigation runoff on the property so as to avoid downstream neighbour complaints or nuisance flows onto roads and to potentially retard the faster flows off laser graded land. (also becoming increasingly important for nutrient retention). It would be rare for a whole farm plan not to include drainage re-use :  
see also No. 4.
  - *\*The applicant shall undertake whatever civil works are necessary and operate them in such a way so as to retain all irrigation waters emanating from the proposed works within the property*
2. To prevent flows from entire drained property ending up on road reserves. (may run into difficulties where there is no formal drainage system and water has always drained to the road) Approved pumping may be granted by shires if requested during wet conditions and water would not cause nuisance further on.
  - *\*The council will not permit the discharge of concentrated drainage onto the local road drains or culverts without the approval of the Responsible Authority.*
3. To protect council assets :
  - *\*Any damage to council assets (ie sealed roads, table drains etc) shall be repaired at the cost of the applicant to the satisfaction of the responsible authority.*
  - *A road opening permit is required where works cross public roads.*
4. To try to prevent situations where laser graded land's more rapid runoff is not slowed before leaving the property due to the grading works taking place first :
  - *\*Storage facilities, farm drains and channels must be installed and functioning before any other works are undertaken and they must be maintained in a condition that is considered satisfactory by the Responsible Authority*
5. To place responsibility on applicant for adhering to the design as approved :
  - *\* The layout of the site and the size of the proposed works as shown on the approved plans shall not be altered or modified (whether or not to comply with any Statute, Statutory Authority of Local Law or for any other reason) without the consent in writing of the Responsible Authority.*
6. To ensure landowner is aware of the future provision of a regulated drainage :
  - *Outfall from the tenement shall be to any community or drainage authority drain once such drainage becomes available to the tenement.*
  - *the pumped outfall to the channel will cease to be used once the tenement becomes serviced by a community or authority drain.*

7. To try to prevent problems occurring through future subdivision of the property :
- *an amended outfall arrangement and redevelopment of the endorsed plans will need to be approved by the Responsible Authority in the event that any part of the existing tenement is subdivided and/or changes hands.*
8. To try to protect flood storage capacity in depressions, especially loops that may be cut off by constructed drains but that are still required to carry water in greater than drain design events :
- *No earthworks shall be permitted to restrict the flow of water entering or leaving the depression and low lying land indicated on the plan.*

The objective in applying conditions is to make the landowner aware of their responsibility in water management and to reduce council liability if problems emerge in the future.

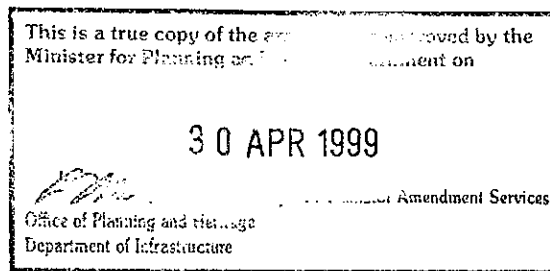
9. As a general cover-all to deal with potential unforeseen problems in the future, the following condition may be useful.
- *\*If problems emerge in the future, due to actual or possible consequence of carrying out works as proposed on the endorsed plan, the landholder will be required to enter into negotiations with the responsible authority in order to rectify the problems.*



**UNIFORM LOCAL GOVERNMENT PLANNING CONTROLS  
FOR DRAINAGE WORKS  
IN THE  
SHEPPARTON IRRIGATION REGION**

**COMMON DOCUMENT**

**Operating in the municipalities of Shire of Campaspe, City of Greater Shepparton, and Shire of Moira.**



**(Incorporated Document in the Greater Shepparton Planning Scheme)**



**UNIFORM LOCAL GOVERNMENT PLANNING CONTROLS FOR  
DRAINAGE WORKS  
IN THE SHEPPARTON IRRIGATION REGION.**

**COMMON DOCUMENT**

**Clause 1. What does this document do for you?**

The document explains the planning controls applied to drainage works in the three shires of the Shepparton Irrigation Region. It also explains the types of situations when planning permits are required.

The document sets minimum requirements for drainage works and operates together with the local section of the planning scheme.

**Clause 2. What are drainage works?**

Drainage works include any change to the natural or existing topography of the land which alters the direction or rate of water flow or changes the discharge point of water. It includes landforming, laser grading, levee banks and drains.

Drainage works are considered to be "minor" if they do not :

- change the direction of existing drainage flows ;
- change the point of drainage outfall over a property boundary ;
- change the flow of water across a property boundary.

In these situations, a formal planning permit is not required. However, landholders must seek advice from their council before commencing work.

There are also other situations outlined in this document where no planning permits are required. (Clause 5.) If uncertainty arises as to whether drainage works require a permit or not, a permit must be obtained.

**Clause 3. What area does the document apply to?**

The document applies to the three Shepparton Irrigation Region municipalities of Campaspe Shire, City of Greater Shepparton and Moira Shire.

**Clause 4. Why have a common document?**

The Shepparton Irrigation Region Land and Water Salinity Management Plan states that it is essential that the drainage system in the region be managed in a way that allows the reasonable flow of water through the region. This requires a consistent approach to drainage management regardless of municipal boundaries or whether land is within the irrigation region or not.

This common document is used by the three municipalities to ensure this occurs.

**Clause 5. When is a permit required?**

In many situations, a planning permit will not be required if certain conditions are met. If the conditions are not met a planning permit is required. A summary chart explains this process in Attachment 1. The requirements are set out in the table below :

**PART 1. No Permit Required**

Works Proposed	Conditions To Be Met
Minor Drainage Control Works	Must only include drainage control works that meet the conditions listed under Clause 2.
Drainage Control Works	In accordance with a certified farm plan. (see Clause 6.)
Drainage Control Works	In accordance with permission granted under a local law.
Drainage Control Works	In accordance with an approved surface drainage scheme or approved natural outfall.

**PART 2. Permit Required**

Works Proposed	Conditions To Be Met
Any drainage works where the conditions under Clause 2. are not met.	Proposed works can avoid the need for a planning permit if they can be modified to meet the conditions listed in part 1. of this table.

**Clause 6. What is a certified farm plan?**

A certified farm plan is a plan involving irrigation and drainage control works that has been certified by the responsible authority.

Certification of a farm plan may be obtained by submitting the 'Earthworks Planning Approval - Application Form' attached to this document, together with plans of the proposed works to the responsible authority.

In deciding whether to certify the farm plan, where the proposed works have complex drainage impacts the municipality may also need to seek technical advice from Goulburn-Murray Rural Water Authority. Plans may also need to be formally referred to other authorities. (see referral table under Clause 10.)

If the responsible authority and, where necessary, the advice and/or referral authorities are satisfied that the drainage works proposed on the farm plan are reasonable and will not adversely alter or will improve drainage in the area, it will be certified.

**Once certified, further planning approval is not required for any works carried out in accordance with the certified farm plan.**

If either the responsible authority and/or the advice or referral authorities are not satisfied, the farm plan can be re-drafted or an application can be made for a planning permit.

**Clause 7. How do you apply for a permit?**

You apply for a permit by completing an "Application for Planning Permit" form (available at the municipal office) and completing the 'Earthworks Planning Approval - Application Form'.

The application must be referred to the relevant authorities under the conditions set out in the schedule under Clause 10 of this document.

Referral is not required if the relevant referral authorities have stated in writing within the past three months that they do not object to the proposal.

**Clause 8. Do you have to notify anyone about the drainage works when a planning permit is required?**

No notification is required if one or both of the following applies:

- written evidence is provided showing adjoining landowners and occupiers agree with your proposal and do not object;
- the responsible authority is satisfied that your proposal will improve drainage in the area and will not cause material detriment to any person.

**Clause 9. Guide-lines for decisions on applications.**

In deciding on applications for drainage works the responsible authority must give consideration to:

- the document titled "Technical Guidelines", which has been written to assist in the administration of the planning controls as described in this common document ;
- the objectives of the Shepparton Land and Water Salinity Management Plan;
- the objectives and provisions of the Water Act; and
- the need to establish and maintain reasonable flow of water through the area.

The provisions of this common document in no way affects the liabilities of any party under existing legislation such as the Water Act.

**Clause 10. Referral Authorities**

The following authorities are Section 55 referral authorities under the Planning and Environment Act.

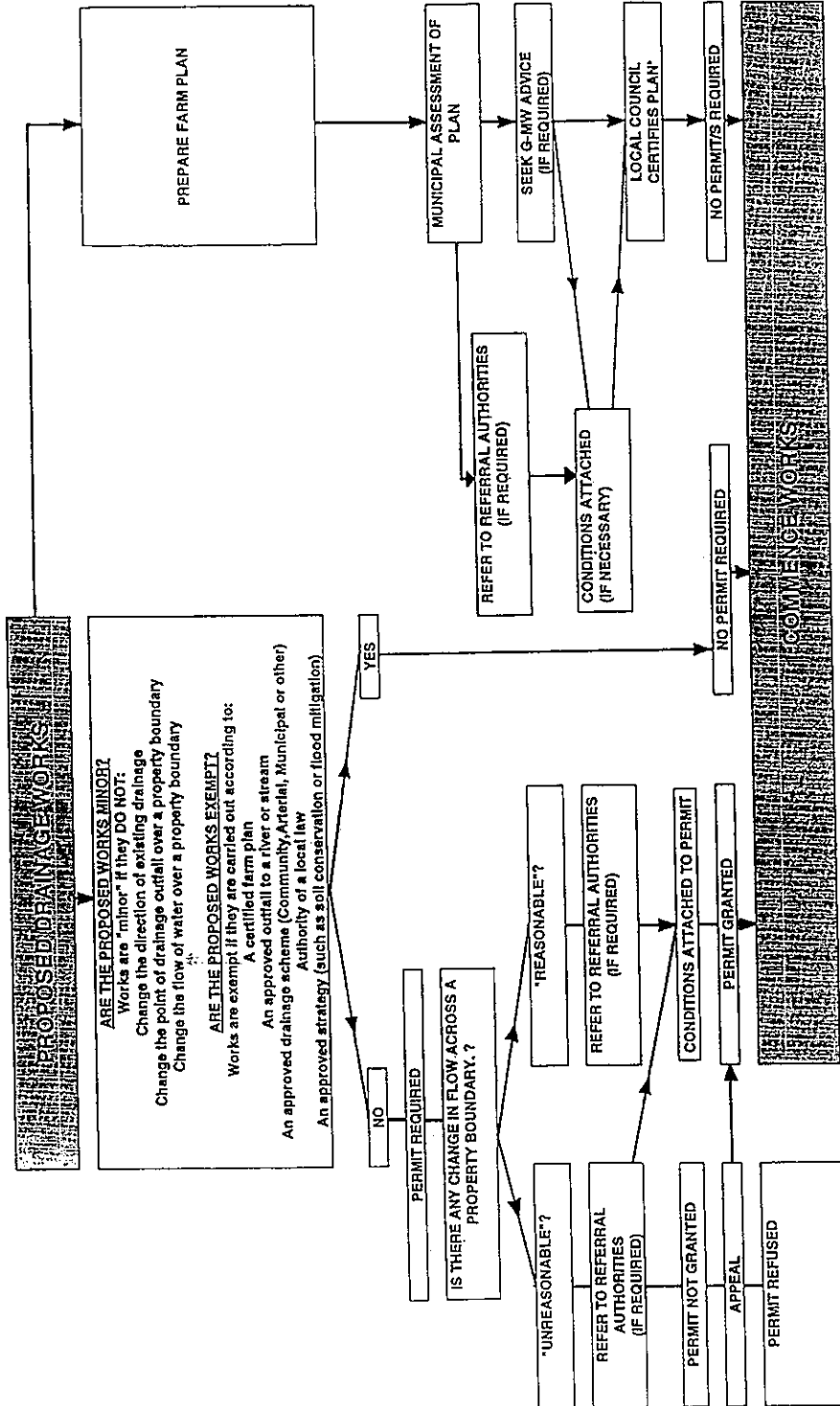
The application must be referred to the relevant referral authority in accordance to the conditions described in the following schedule.

**REFERRAL AUTHORITY SCHEDULE**

<b>REFERRAL AUTHORITY</b>	<b>WHEN TO BE REFERRED</b>
Vic Roads	When the application involves works adjoining a VicRoads main road or highway.
Department of Natural Resources and Environment (DNRE)	When the application involves works on land that is liable to flooding.  When the application involves works that may impact on waterways or public land managed by DNRE.
Goulburn - Murray Rural Water Authority (G-MW)	When the application involves works that potentially impact on G-MW works or interests. (eg. pumping to channels, subways under G-MW channels etc.)

The assessing responsible officer shall refer the application to the relevant referral authority after considering the referral guidelines included in the document "Technical Guidelines", which have been written to assist in the interpretation and administration of these planning regulations.

**DRAINAGE CONTROL WORKS APPROVAL PROCESS - SUMMARY CHART**



\* PERMITS REQUIRED IF FARM PLAN HAS NOT BEEN CERTIFIED.