




Office of
Environment
& Heritage

Application for a

Section 91 Licence

under the *Threatened Species Conservation Act 1995* to harm or pick a threatened species, population or ecological community* or damage habitat.

<p>1. Applicant's Name [^]: <i>(if additional persons require authorisation by this licence, please attach details of names and addresses)</i></p>	<p>Mr John Maretich</p>	
<p>2. Australian Business Number (ABN):</p>		
<p>3. Organisation name and position of applicant [^]: <i>(if applicable)</i></p>	<p>Port Stephens Council Civil Assets Manager</p>	
<p>4. Postal address [^]:</p>	<p>PO Box 42 RAYMOND TERRACE NSW 2324</p>	<p>Telephone [^]: </p>
<p>5. Location of the action <i>(including grid reference and local government area and delineated on a map).</i></p>	<p>Port Stephens LGA Campvale 390900, 6373900</p> <p>See Figures in attached 7-part test report</p>	

* A threatened species, population or ecological community means a species, population or ecological community identified in Schedule 1, 1A or Schedule 2 of the *Threatened Species Conservation Act 1995*.

[^]The personal details of all Section 91 licences will be displayed in the register of Section 91 licences required under Section 104 of the *Threatened Species Conservation Act 1995*. See notes.

<p>6. Full description of the action and its purpose (e.g. environmental assessment, development, etc.)</p>	<p><i>Maundia triglochinos</i>, growing alone and with other plants, traps debris and silt, requiring the occasional mechanical clearing of the drains in a regular maintenance program.</p>
<p>7. Details of the area to be affected by the action (in hectares).</p>	<p>Up to 3000 m of drain 3m wide containing 26 square metres of <i>Maundia triglochinos</i>.</p>
<p>8. Duration and timing of the action (including staging, if any).</p>	<p>Weed growth and siltation requires immediate drain clearing – will take less than three months.</p>
<p>9. Is the action to occur on land declared as critical habitat?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>* Critical habitat means habitat declared as critical habitat under Part 3 of the <i>Threatened Species Conservation Act 1995</i>.</p>	

<i>(tick appropriate box)</i>				
10. Threatened species, populations or ecological communities to be harmed or picked.	<u>Scientific name</u> <i>Maundia triglochinoides</i>	<u>Common name</u> <i>(if known)</i>	<u>Conservation status</u> <i>(i.e. critically endangered, endangered or vulnerable)</i> Vulnerable	<u>Details of no. of individual animals, or proportion and type of plant material</u> <i>(e.g. fertile branchlets for herbarium specimens or whole plants or plant parts)</i> Whole plants
11. Species impact: <i>(please tick appropriate box)</i> a) For action proposed on land declared as critical habitat; or b) For action proposed on land <u>not</u> declared as critical habitat.	an SIS is attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Items 12 to 25 have been addressed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

*N.B: Provision of a species impact statement is a statutory requirement of a licence application if the action is proposed on critical habitat.
The provision of information addressing items 12 to 17 is a statutory requirement of a licence application if the action proposed is not on land that is critical habitat. Information addressing any of the questions below must be attached to the application.*

<p>12. Describe the type and condition of habitats in and adjacent to the land to be affected by the action.</p>	<p>All habitat to be affected consists of open stormwater drains on land under the control of Port Stephens Council. Adjacent land is privately owned and varies from totally cleared to undisturbed native vegetation.</p>
<p>13. Provide details of any known records of a threatened species in the same or similar known habitats in the locality (include reference sources).</p>	<p>DECCW Threatened Species Database records <i>Maundia triglochoides</i> at: New Line Road Raymond Terrace (383395, 6378411) and at James Road Medowie (395389, 6375863). Neither population was able to be found. Current large population in the upper reaches of Campvale Drain.</p>
<p>14. Provide details of any known or potential habitat for a threatened species on the land to be affected by the action (include reference sources).</p>	<p>Any stormwater drain or detention basin in a clay soil area that has been newly cleared in a construction or maintenance program and permanently holds more than 150mm deep fresh water.</p>
<p>15. Provide details of the amount of such habitat to be affected by the action proposed in relation to the known distribution of the species and its habitat</p>	<p>The total area of habitat to be affected consists of approximately 26 sq.m and supports a population of <i>Maundia</i>. Photos of typical distributions of this plant in the works area and upstream are given in the seven-part test report. It is believed that the <i>Maundia</i> removed by these works represent more recent spread of this species downstream of the original site of colonisation at Ferodale Road Medowie.</p>

<p>in the locality .</p>	
<p>16. Provide an assessment of the likely nature and intensity of the effect of the action on the lifecycle and habitat of the species.</p>	<p>Generally the mechanical removal of silt and vegetation is expected to leave behind sufficient remnants and seeds to ensure continuity of the plant's presence. It is also expected that the undisturbed large population upstream is likely to provide propagules to help re-establish these patches after completion of the works.</p>
<p>17. Provide details of possible measures to avoid or ameliorate the effect of the action.</p>	<p>Pre and post operational inspections are to be conducted in areas of mechanical removal. The post operational inspections are to be conducted immediately after the works and every six months for a period of two years. If there is no evidence of recolonisation after two years it is proposed that an application be made to transplant some stolons from an upstream colony.</p>
<p><i>N.B: The Director-General must determine whether the action proposed is likely to significantly affect threatened species, populations or ecological communities, or their habitats. To enable this assessment the Applicant is required to address items 18 to 24. Any additional information referred to in addressing these items must be attached to the application.</i></p>	
<p>18. In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.</p>	<p>The measures identified above are intended to ensure that the population of <i>M. triglochinooides</i> in Port Stephens is not driven to extinction.</p>

<p>19. In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.</p>	<p>Not applicable</p>
<p>20. In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:</p> <p>(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or</p> <p>(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.</p>	<p>Not applicable</p>

<p>21. In relation to the habitat of a threatened species, population or ecological community:</p> <p>(i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and</p> <p>(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and</p> <p>(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.</p>	<p>The mechanical clearing of the drains will not remove habitat but may actually restore habitat conditions necessary for the continued existence of this species by restoring suitable hydrological conditions.</p> <p>No area of habitat is likely to be fragmented or isolated as a result of this activity.</p> <p>This habitat is essential to the long term existence of this species as is the removal of competing plant species.</p>
<p>22. Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).</p>	<p>Not applicable</p>
<p>23. Whether the action proposed is consistent</p>	<p>Action is consistent with Priority Action Statement</p>

<p>with the objectives or actions of a recovery plan or threat abatement plan.</p>	
<p>24. Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.</p>	<p>The proposed action does not constitute a key threatening process.</p>

Important information for the applicant

Processing times and fees

The *Threatened Species Conservation Act 1995* provides that the Director-General must make a decision on the licence application within 120 days where a species impact statement (SIS) has been received. No timeframes have been set for those applications which do not require a SIS. The Director-General will assess your application as soon as possible. You can assist this process by providing clear and concise information in your application.

Applicants may be charged a processing fee. The Director-General is required to advise prospective applicants of the maximum fee payable before the licence application is lodged. Therefore, prospective applicants should contact the Office of Environment and Heritage (OEH) prior to submitting a licence application.

A \$30 licence application fee must accompany a licence application.

Protected fauna and protected native plants*

Licensing provisions for protected fauna and protected native plants are contained within the *National Parks and Wildlife Act 1974*. However, a Section 91 Licence may be extended to include protected fauna and protected native plants when these will be affected by the action.

* Protected fauna means fauna of a species not named in Schedule 11 of the *National Parks and Wildlife Act 1974*.

Protected native plant means a native plant of a species named in Schedule 13 of the *National Parks and Wildlife Service 1974*.

If you are applying for a licence to cover both threatened and protected species please provide the information requested in Item 10 as well as a list of protected species and details of the number of individuals animals or proportion and type of plant material which are likely to be harmed or picked.

Request for additional information

The Director-General may, after receiving the application, request additional information necessary for the determination of the licence application.

Species impact statement

Where the application is not accompanied by a SIS, the Director-General may decide, following an initial assessment of your application, that the action proposed is likely to have a significant effect on threatened species, populations or ecological communities, or their habitats. In such cases, the *Threatened Species Conservation Act 1995* requires that the applicant submit a SIS. Following initial review of the application, the Director-General will advise the applicant of the need to prepare a SIS.

Director-General's requirements for a SIS

Prior to the preparation of a SIS, a request for Director-General's requirements must be forwarded to the relevant OEH Office. The SIS must be prepared in accordance with section 109 and 110 of the TSC Act and must comply with any requirements notified by the Director-General of OEH.

Disclosure of Personal Information in the Public Register of s91 Licences

The Public Register provides a list of licence applications and licences granted. A person about whom personal information is contained in a public register may request that the information is removed or not placed on the register as publicly available.

Copies of all applications and licences issued under section 91 and certificates issued under section 95 of the Act are available on the OEH website at www.environment.nsw.gov.au/threatenedspecies/S91TscaRegisterByDate.htm or in hardcopy form from The Librarian, OEH, 59 Goulburn St, Sydney.

Certificates

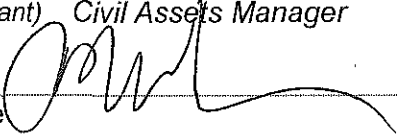
If the Director-General decides, following an assessment of your application, that the proposed action is not likely to significantly affect threatened species, populations or ecological communities, or their habitats, a Section 91 Licence is not required and the Director-General must, as soon as practicable after making the determination, issue the applicant with a certificate to that effect.

N.B: An action that is not required to be licensed under the Threatened Species Conservation Act 1995, may require licensing under the National Parks and Wildlife Act 1974, if it is likely to affect protected fauna or protected native plants.

I confirm that the information contained in this application is correct. I hereby apply for a licence under the provisions of Section 91 of the *Threatened Species Conservation Act 1995*.

Applicant's name *John Maretich*
(Please print)

Applicant's Position & *Port Stephens Council*
Organisation (if relevant) *Civil Assets Manager*
(Please print)

Applicant's signature 

Date *20/11/13*

For more information or to lodge this form, contact the nearest branch of OEH's Conservation and Regulation Division:

Metropolitan Branch

P: 02 9995 6802
F: 02 9995 6900
PO Box 668
Parramatta
NSW 2124

North East Branch

P: 02 6640 2500
F: 02 6642 7743
PO Box 498
Grafton
NSW 2460

North East Branch

P: 02 4908 6800
F: 02 4908 6810
PO Box 488G,
Newcastle
NSW 2300

North West Branch

P: 02 6883 5330
F: 02 6884 8675
PO Box 2111
Dubbo
NSW 2830

South Branch

Biodiversity Conservation Section

P: 02 6122 3100
F: 02 6299 3525
PO Box 622 Queanbeyan
NSW 2620

Office of Environment and Heritage (NSW)
PO Box A290, Sydney South NSW 1232
Phone: 131 555 (Environment Line) Fax: 9995 5999
Email: info@environment.nsw.gov.au

SEVEN PART TEST
covering the impact of
DRAIN MAINTENANCE

on

MAUNDIA TRIGLOCHINOIDES

at

CAMPVALE

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1.0 INTRODUCTION

Campvale drain is generally a channel about 3m wide and up to 1.2 m below the natural land surface. Spoil from the drain construction and maintenance has been placed on one side of the drain and this bank has become the means of access for machinery undertaking drain maintenance. It runs from the residential areas near the northern parts of Medowie, to a pumping station at the weir forming Grahamstown Dam (Figure 1). Port Stephens Council undertakes the regular maintenance of Campvale Drain by removing silt that would reduce the efficiency of stormwater removal from its catchment.

A situation has now arisen whereby vegetation facilitated silt accretion is preventing the efficient flow of water to the pumping station and water is backing up along the drain. Removal of the silt is urgently required.

Port Stephens Council has applied for a licence under Section 91 of the Threatened Species Conservation Act to give blanket approval for the possible impacts on specimens of *Maundia triglochinos*, a threatened plant species, during routine drain maintenance and weed spraying. In refusing that application OEH has suggested that a Species Impact Statement (SIS) containing a Property Management Plan be undertaken to cover this species, and that a section 91 application be made for any specific urgent works in the mean time. This application is seen to be an instance where such an application is appropriate.

1.1 GENERAL DESCRIPTION OF THE LOCALITY

The Medowie/Campvale catchment covers approximately 30 km² (Figure 1) of relict sediments at altitudes up to 40 m, consisting of loams, weathered clays and deep podzols. The natural drainage is in a southerly direction to Permian sands containing swampy areas at Campvale. The Medowie catchment is drained by an extensive drain network terminating at Campvale, at the base of the bund wall forming Grahamstown Dam, from where the water is pumped up into the dam (Figure 2).

1.2 DESCRIPTION OF THE ACTIVITY

The maintenance works to be covered by this assessment include the following:-

- Removal of silt obstructing the drain with an excavator bucket or by mowing.
- Incorporation of spoil from the drain clearance into the slope of the bank above the drain.

The situation within the lower reaches of the drain where the flows are being restricted are shown in Figure 3 with the desired unrestricted flow situation shown in Figure 4. It should be noted that the portion of the drain in Figure 4 is overfull and not flowing due to the downstream restriction.

2.0 IMPACTS CONSIDERED

The potential negative impacts of the drainage maintenance works on *Maundia triglochinos* are seen to be the physical destruction of species occurring as a result of the use of the machinery for excavating within the drain or the destruction of habitat that may result from the same mechanisms.

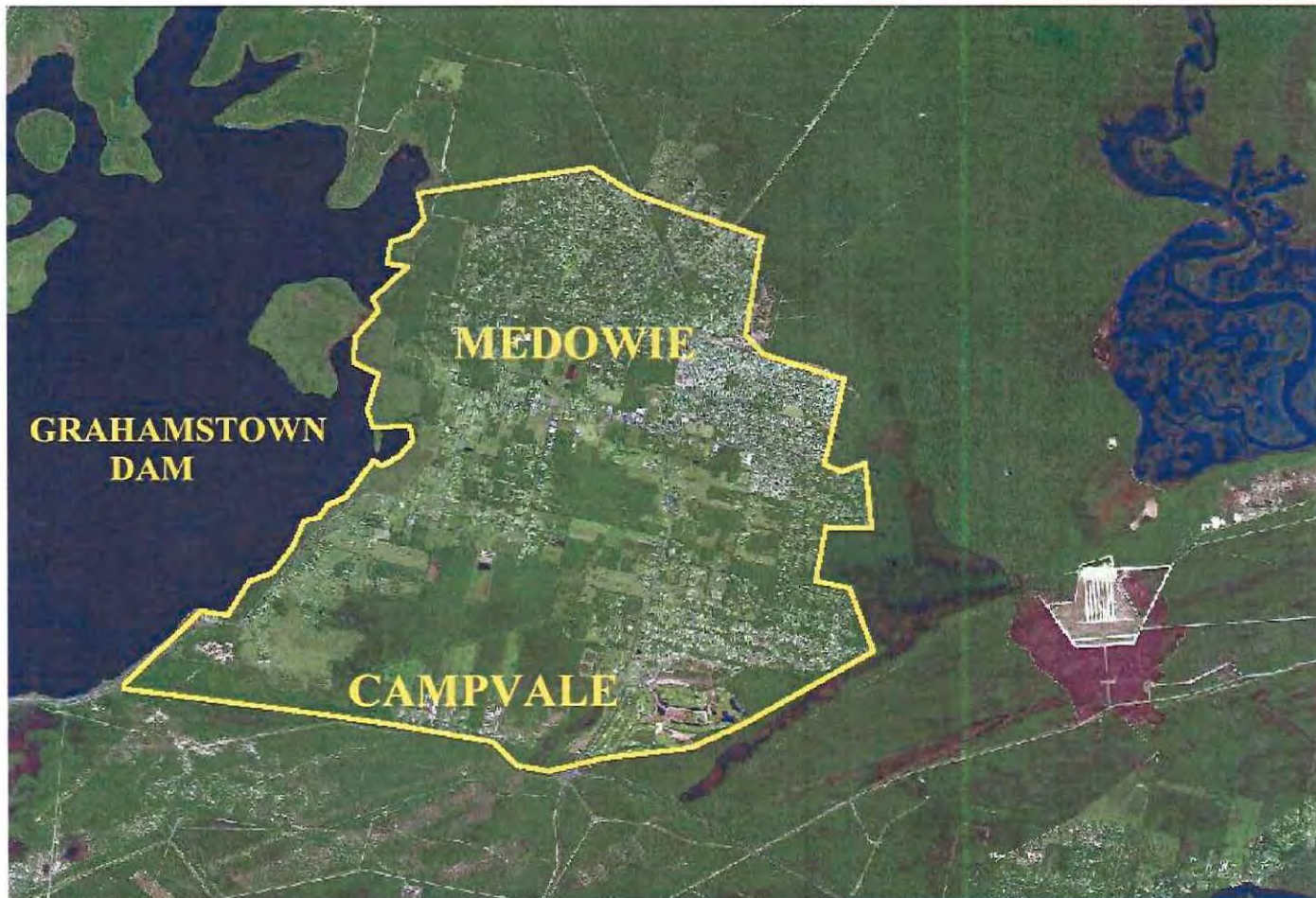


Figure 1 – Medowie Campvale drainage catchment

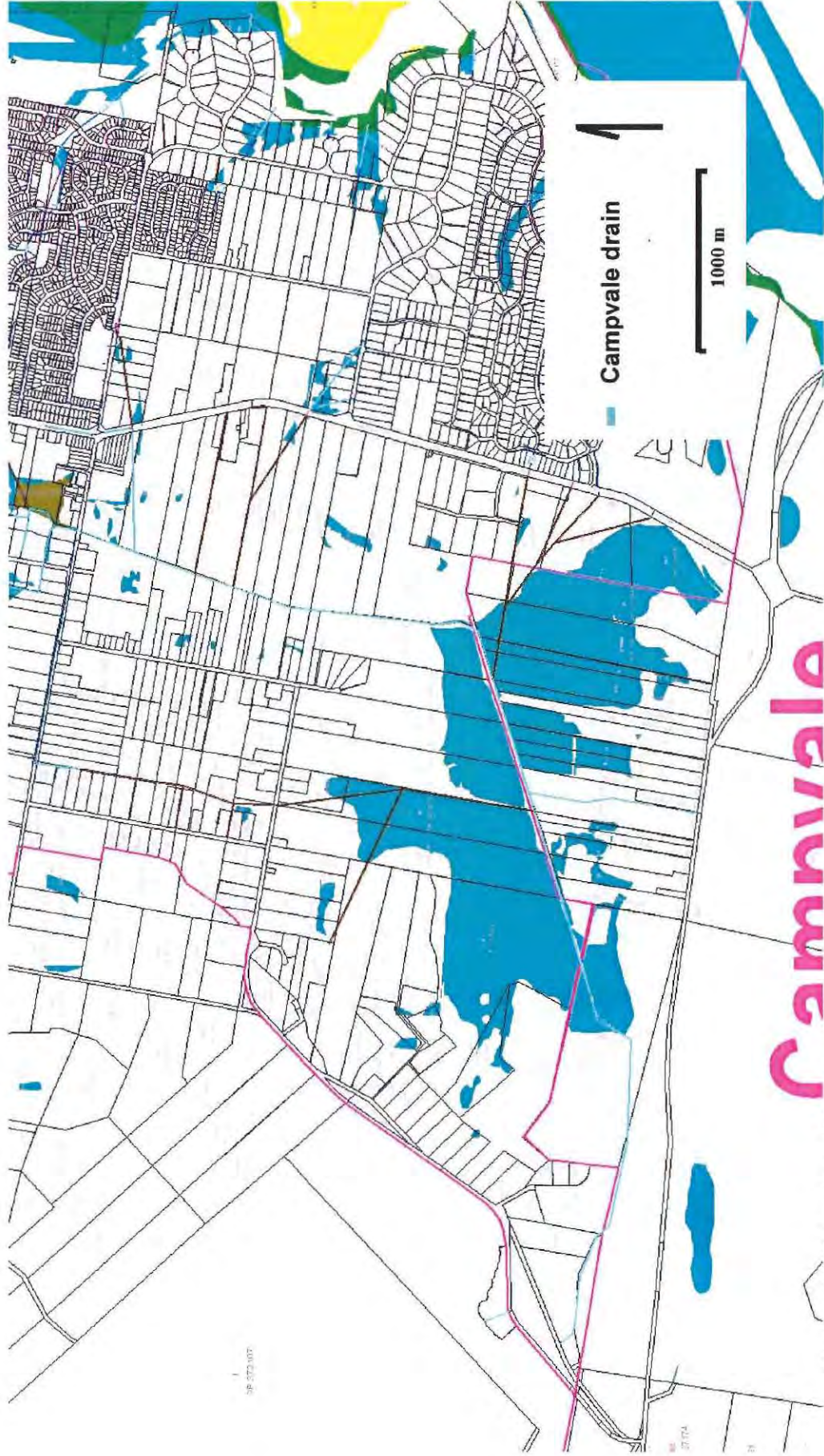


Figure 2 – Location of Campvale drain



Figure 3 – restricted water flow situation in the lower reaches of Campvale Drain.



Figure 4 – Unrestricted flow situation in the middle reaches of Campvale drain

The proposal may have a positive impact by preserving the long established existing hydrology which supports the present habitat attributes but it is the negative impacts that must be given consideration.

2.1 IMPACT MANAGEMENT

The impacts described above are currently subject to management procedures designed to minimise them. These procedures applicable to impacts consisting of the physical destruction of species and EEC components and habitat are:

- excavation is generally undertaken using a 'reed bucket' that removes in-drain vegetation and sediment while allowing the escape of frogs and other aquatic fauna,
- spoil is placed on the side of the bank above the drain allowing the escape of frogs and other aquatic fauna.

3.0 SEVEN PART TEST

The potential impacts described above have been assessed under Section 5A of the EPA Act. The following is a Seven-Part Test assessment of the significance of these impacts on *Maundia triglochinooides*, a threatened plant species, recorded from Campvale Drain in Medowie.

For the purposes of the Environmental Planning and Assessment Act 1979 and, in particular, in the administration of Sections 78, 79 and 112, the following factors have been taken into account in deciding whether there is likely to be a significant effect on this threatened species.

- a) *in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.*

It has been estimated that the proposal may cause the removal of an estimated less than 2% of the local population of this plant (See Appendix A). This is not considered to represent a threat to the life cycle of the local population of this species such that it might place it at risk of extinction.

- b) *in the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.*

Not Applicable.

- c) *in the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:*
- (i) *is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or*
 - (ii) *is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.*

Not Applicable.

- d) *in relation to the habitat of a threatened species, population or ecological community:*

- (i) *the extent to which habitat is likely to be removed or modified as a result of the action proposed, and*

The proposal may result in the removal of a very small amount of vegetation with minimal effect on the habitat attributes of the locality. Removal of competing plant species may actually be advantageous to the *Maundia*.

- (ii) *whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and*

No area of habitat will become fragmented or isolated as a result of the proposal.

- (iii) *the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.*

The small amount of habitat to be modified is unlikely to affect the long-term survival of the threatened species due to the relative abundance of similar habitat in the drain.

- e) *whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).*
None of the locality has been designated 'critical habitat' under Part 3 of the TSC Act.

- f) *whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.*

A priority action statement is available for this species and the proposal is not inconsistent with it.

- g) *whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.*

The applicable 'Key Threatening Processes' currently listed under Schedule 3 of the TSC Act have been listed in bold below followed by an assessment of the applicability of the threatening process in regards to the proposal and the species considered.

- **Clearing of Native Vegetation:** The clearing of vegetation is listed as a major factor contributing to the loss of biological diversity. Examples of the potential impact of the clearing of native vegetation on biological diversity include the destruction of habitat resulting in the loss of local populations of individual species. The native vegetation to be removed consists of a small amount of aquatic herbs and sedges removed by the reed bucket during silt removal. This vegetation has regenerated since the last drain clearing activity and it is not believed that will reduce the existing level of biodiversity.
- **Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands:** many of the drains follow courses that were originally natural watercourses. These have been altered long ago and there will be no further alteration to the natural flow regimes of any river or stream under this proposal.
- **Predation by *Gambusia holbrooki* (Plague Minnow):** This species is commonly found in drains throughout the East Coast and it is considered that the presence of this fish will not be further spread or enhanced by the maintenance program.

Consideration of these matters leads to the conclusion that the activities described will not have a significant impact upon this threatened species such that a extinction of a viable local population would occur.

APPENDIX A

Estimation of the Population size of *Maundia* in Medowie

Despite historical records of *Maundia triglochinooides* from Moffatts Swamp, Medowie, New Line Road, Raymond Terrace and Nelson Bay Road Williamtown, it is now believed to be restricted to Campvale Drain at Medowie. Where this plant occurs in dense stands it is difficult to distinguish individual plants due to the rhizomatous nature of its growth. Comparative estimates of the population may only be based on the area covered and a subjective differentiation into dense and sparse density classes.

In the Campvale Drain the main centre of population is found for approximately 750 m downstream of Ferrodale Road (Figure A1). In this section of the drain it is estimated that the *Maundia* occupies about 25% of its 3m width, constituting approximately 940 m². In this locality it is generally present as dense beds of relatively pure stands (Figure A2) For the next 750 m the *Maundia* is present as scattered thick beds usually less than 25 m² in area or much sparser beds parallel to the bank (Figure A3). In this locality it is estimated that the *Maundia* occupies about 10% of the drain area giving a coverage of approximately 225 m². These estimates indicate that the main population of the *Maundia* occupies approximately 1175 m² of the drain area.

There are two other occurrences of this species in the Campvale Drain catchment. One is less than 10 m² of sparse *Maundia* growing amongst grass where the drain is crossed by Kirrang Drive Medowie and the other is two sparse clumps estimated as being 10 m² and 16 m² respectively at approximately 2 km downstream of the main population (Figure A4 and Figure A5). It is these two clumps that are likely to be impacted by the drain maintenance procedure and it is estimated that the 26 m² represents 2.2% of the total area supporting *Maundia* but since it is so sparse in this locality, the number of plants to be affected is fairly certain to be much less than 2% of the total.

From consideration of the reduction in density of the *Maundia* moving downstream from the Ferrodale Road bridge, it would appear that the original colonisation of the drain occurred at, or just upstream of, this bridge and has slowly spread downstream by seed or by vegetative dispersal. If this is the case the two clumps of *Maundia* to be affected most likely represent an extension of the main population rather than a separate population resulting from a new colonisation from some distant source.

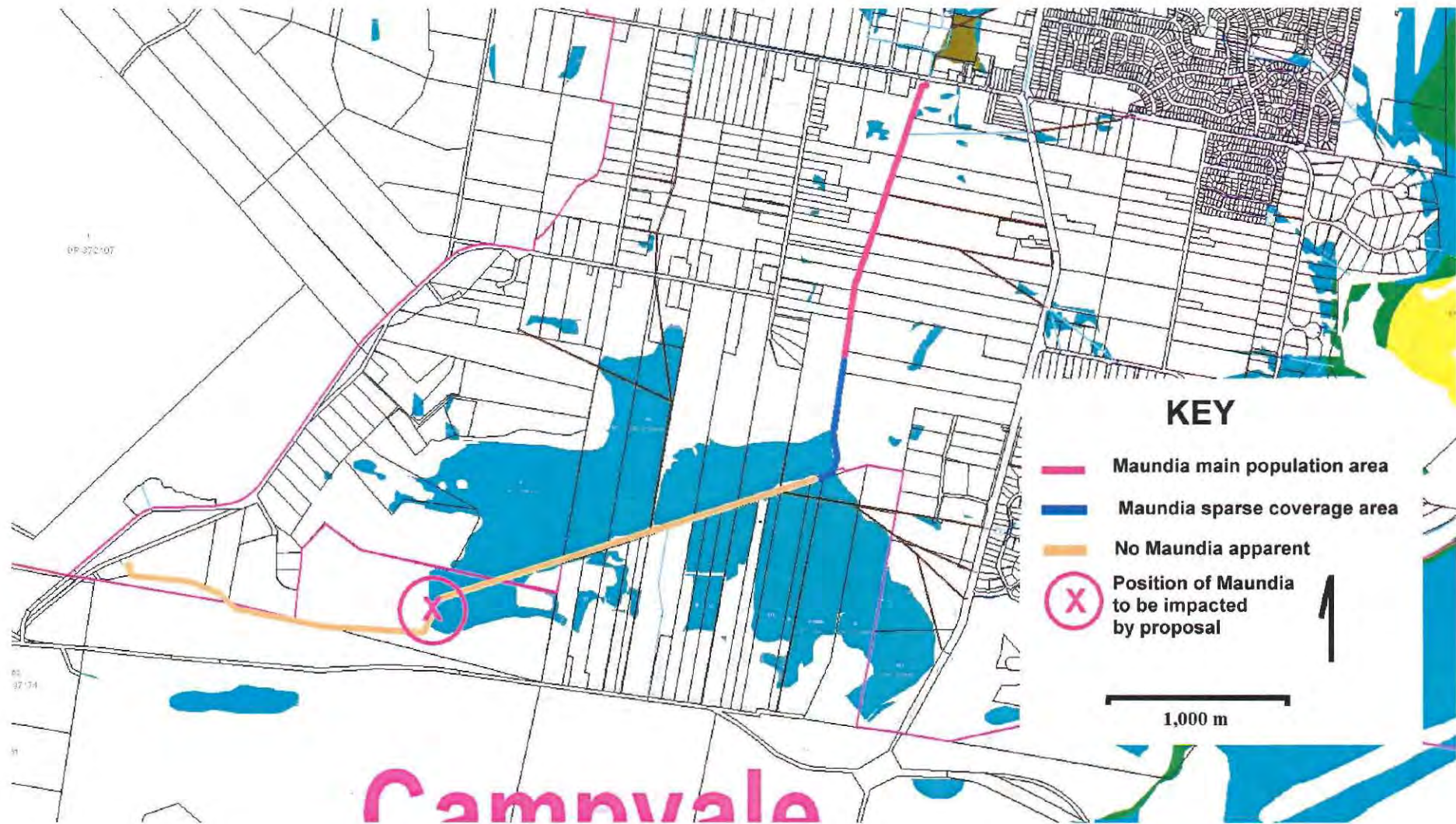


Figure A1 – Campvale drain showing the distribution of the main population of *Maundia triglochinooides*.



Figure A2 – Dense and extensive *Maundia* in the main centre of population just downstream of Ferrodale Road.



Figure A3 – Isolated clumps and sparse bankside beds of *Maundia* downstream of the main population area.



Figure A4 – The proposal would remove this small sparse bed of Maundia alongside of the cleared bank of the drain.
Note that the persisting high water level here has almost inundated the *Maundia*.) a



Figure A5 – The proposal would remove a small sparse and almost totally inundated bed of *Maundia* alongside of the cleared bank of the drain.