INTRODUCTION

Giant Parramatta Grass is a serious aggressive weed which continues to invade large areas of pasture on the North Coast and Hunter region of NSW.

This introduced pest are declared noxious weeds and continues to spread along the coast and inland, with the ability to infest large areas of Australia.

The aim of the control guidelines is to complement the Giant Parramatta Grass Agnotes and provide a consistent approach for the control of Giant Parramatta Grass in NSW.

Each infestation must be considered individually and assessed on its merits.

The most appropriate control program for each situation depends on:

- the degree of infestation

Infestations will be classified by weed inspectors as either:

1. Weed is rare or not yet found, can be spot sprayed or manually removed getting every plant.
2. Weed is marginal, can be spot, boom sprayed or wiped treating most plants.
3. Weed is core, can be boomed or treated with buffer zones established.
4. Weed is core and terrain, etc, renders area unable to be treated, buffer zones need to be established.

Properties could have a combination of both situations. Where infestations occur treatment programs will also need to consider:

- the resources available
- the lands capability
- the type of stock/Agricultural enterprise and its cash flow, and
- the type of pasture species present or proposed to be introduced.

NOTE: During inspections, Council’s Weeds Officer will take the opportunity to explain the reasons for the respective approaches to different infestation classification types. It is important to maintain a consistent approach throughout the Shire.

Where effective control measures are not being taken. Council will demonstrate an appropriate degree of commitment toward enforcing the Noxious Weeds Act 1993.

A positive identification of the Giant Parramatta Grass will be required prior to prosecution.
Roads/Council Reserves/Vacant Crown Land

Giant Parramatta Grass infestations identified on Council roadside reserves or vacant Crown Land which falls under Council’s care and control will be continually suppressed and destroyed utilising recognised control practices.

Government Authorities

National Parks and Wildlife Service, State Forests of NSW, Department of Lands, State Rail will be advised to suppress and destroy all Giant Parramatta Grass with particular emphasis on major roadways, picnic/camping areas and along boundaries.

Utilities such as Telstra/Optus, Country Energy will be subject to periodic updates by the Noxious Weeds Officer to maintain their awareness of Giant Parramatta Grass and the requirement to minimise the spread.

Protocols To Prevent The Spread Of Giant Parramatta Grass By Vehicles For Public Utilities and Contractors entering and working on private lands

- **Education/Awareness**

  1. Public Utilities and Government Authorities to liaise with Council’s Weed Inspector when planning works in the catchment.

  2. Public Utility and Government Authority staff are to be provided training in Giant Parramatta Grass identification, as well as best management work practices to limit the spread of Giant Parramatta Grass.

  3. Public Utilities and Government Authorities should liaise with Council’s Weed Inspector in relation to the location of weed infestations and update records regularly.

- **Vehicle Hygiene**

  1. Provide wash down facilities to clean vehicles and machinery when entering weed free areas.

  2. Use portable high pressure cleaners as a preference, air compressors or even brushing down vehicles is of use.

  3. Avoid weed seed contamination of vehicles and machinery.

  4. In some circumstances it may be possible to borrow wash down equipment from landholders.

Refer to NSW Agriculture AGNOTE “Control of Giant Parramatta Grass” for details on protocols for vehicles-machinery. (Appendix 2)
• **Work Practices**

1. Avoid travelling/working in weed infestations when seeding (January-June)

2. Only travel through seeding Giant Parramatta Grass and Giant Rats Tail Grass when it is absolutely necessary, eg, emergencies.

3. Immediately wash/clean down vehicles/machinery after working in weed infestation and before entering a clean property. This is particularly important if the weed is seeding.

4. Wash or clean down vehicle/machinery in or near as possible to the infested paddock (portable equipment). Avoid recontamination of the vehicle prior to entering a clean property.

5. Do not travel through seeding Giant Parramatta Grass areas when it is raining or when the grass is wet from rain or dew. (The seed has a sticky coat when wet which readily adheres to smooth surfaces). Wait till the Giant Parramatta Grass dries.

6. Where possible only work in Giant Parramatta Grass infested areas from June to December (June to December is the relative seed free period)

7. If working in clean and infested areas work from the clean towards the infested areas and not the other way round.

8. If soil is disturbed, eg, trench or roadside works, immediately plant a suitable ground cover pasture or vegetation species. This should be done in consultation with the landowner and NSW agriculture.

9. Where possible, contact the landowner and liaise with them in terms of your proposed activities

**A: ISOLATED, MARGINAL INFESTATIONS**

Weed is rare - marginal can be spot sprayed or manually removed getting every plant or can be boom sprayed or wiped treating most plants.

Giant Parramatta Grass in the early stages of infestation will be categorised equivalent to a Class 3 Weed, that being:

“The weed must be fully and continuously suppressed and destroyed”.
It must be emphasised to landholders with isolated plants/clumps, the urgent need to remove them before Giant Parramatta Grass gains a firmer foothold resulting in future loss of income from their properties and the region in general. Immediate removal and/or spot spraying will be enforced. Pasture improvement should be implemented as a crucial component of combating Giant Parramatta Grass encroachment. Landholders who do not take appropriate eradication or control measures will be served with a notice to control (under Section 18 and/or Section 20 of the Noxious Weeds Act 1993) and prosecuted, if necessary.

**Removing Light Infestations**

* Dig out or spot spray (as per the Giant Parramatta Grass Control Agnote (Appendix 2) recommendations) any Giant Parramatta Grass as soon as you find it. Cut seedheads and put them in a bag for destruction before digging out or spraying the plant. After digging out plants it is good practice to fill the divot with Kikuyu runners or seed of grasses that will compete with Giant Parramatta Grass seedlings.

* Don’t overdo your spot spraying, only direct the herbicide onto the crown and green leaves. Spraying the seedheads is ineffective and only spreads the herbicide further, often killing surrounding desirable species. (You should be close enough to put your foot on the plant before you spray)

* The use of pressurised Wickwipers has proven to be successful in controlling light/scattered infestation - refer to Agnote Giant Parramatta Grass control - the pressurised Wickwiper.

**NOTE:** Pasture manipulation (grazing of desirable species to provide a height differential between such species and target species) is essential prior to wiping.

**B: CORE (HEAVY) INFESTATIONS**

(Regularly occurring - too thick to spot spray)

The strategy that will apply to Giant Parramatta Grass in the more advanced stage of infestation, where terrain and the size of the infestation make eradication impractical will be:

“The weed must be prevented from spreading and its numbers and distribution reduced”.

The first priority must always be containment. To prevent further spread, a control buffer zone of a minimum of ten (10) metres around yards, along fence lines, roadways and tracks, power and cable lines and other easements. Quarantine areas will be enforced where necessary. Buffer zones may be established by spraying with a selective herbicide where there are existing competitive pasture species present or where competitive species are to be sown.

Council weed officers will supply landholders with the two main control options for well established endemic infestations:
OPTION 1
(Applicable to arable land higher return enterprises)

(i) Remove the Giant Parramatta Grass by spraying or cultivation and if possible, grow a series of crops in rotation to reduce the reserve of Giant Parramatta Grass seed. A vigorous permanent pasture should then be established.

Note

- Most of Giant Parramatta Grass seed should germinate in the first two years, but it is possible that seed may last up to about ten years.

ii) Replacing Existing Pasture (a Higher Cost Approach for Arable Land or Better Class Country)

Ultimately a vigorous, permanent, summer growing, grass-based pasture must be established to provide competition. This can be done as soon as the Giant Parramatta Grass has been removed or, preferably, it can be done after the rotation of a series of winter and summer crops has reduced the Giant Parramatta Grass seed reserves in the soil. The crops also have the advantage of producing extra green feed or a cash crop of grain, oilseed, etc.

iii) Winter Crop Options:

* Cultivate or boom spray with glyphosate, 2,2-DPA or other knockdown herbicide.

* Sow to ryegrass, ryegrass/oats, or ryegrass/oats/clover (see local sowing guides or district Agronomist for details)

iv) Summer Crop Options:

Summer legume crop (lab lab, cowpeas, soybeans)

* Cultivate, then spray and incorporate trifluralin as a pre-emergent herbicide to control grass, including Giant Parramatta Grass seedlings in the crops.

* Post-emergent herbicides are available for seedling grass control in soybeans, lab lab and cowpeas.

* Soybeans and other summer legume crops can also be established by direct drill methods using glyphosate before sowing and then following up with one of the pre or post-emergent grass herbicides.
iv) Permanent Pasture Establishment Steps:

- Cultivate or boom spray with glyphosate, 2-2DPA or other “knockdown Herbicide” at suitable rates to kill existing competition including Giant Parramatta Grass.

- Sow down to a vigorous, summer growing, grass based pasture such as Kikuyu, Rhodes grass, Setaria and Paspalum grass (NOTE: Bahia may be considered a weed on fertile country).

- Sow between September and March depending upon local conditions.

- Include well adapted legumes such as Haifa White clover and Maku Lotus (consult local sowing guide or agronomist for ideal species, sowing time and situation suitability).

- A sowing technique that has worked well is to broadcast the seed and fertiliser into glyphosate sprayed Giant Parramatta Grass then mulch the dead grass covering the seed. It is important that the mulch cover is light, as mulch can increase pasture seedling disease and also reduce establishment.

- If needed, spray with Fluproponate based herbicides (except where used for lactating dairy animals) in later years, if giant Parramatta Grass starts to re-invade from seed reserves, or utilise pressurised wick-wipers. Note: Pasture manipulation is essential prior to wiping.

OPTION 2
(Applicable to inaccessible or poorer grazing country)

Improve the pasture to provide more competition for Giant Parramatta Grass. This option can be used in combination with herbicide spot spraying to contain or reduce Giant Parramatta Grass infestations.

Pasture improvement involves oversowing improved pasture species (if not already present) and the application of fertilizer to maximise the growth of the useful pasture species. This lower cost strategy involves living with the Giant Parramatta Grass while trying to contain and reduce its presence.

Council weed officers will assess if the individual landholders control measures are appropriate.

Under these circumstances you need to decide whether to:

1. Keep the existing pasture base and manage the Giant Parramatta Grass to minimise its effects, or

2. Remove the existing pasture and replace it with more competitive and productive species.
(i) Managing Giant Parramatta Grass in a Pasture

If you decide that removal is not economical or is physically impossible, then your emphasis should be on containment and getting the best out of the pasture. How you do this depends on the type of country and other pasture species present.

For low fertility country, the main improved pasture option to reduce the impact of Giant Parramatta Grass is to undertake a minimal cost pasture program involving the following steps:

♦ graze hard or slash/mulch in summer/autumn;
♦ consult a local pasture sowing guide or district agronomist and surface sow or direct drill well adapted pasture legumes (e.g., Haifa white clover, Maku Lotus) with appropriate fertiliser;
♦ follow up with appropriate fertiliser top dressings to promote good legume growth, and;
♦ as the pasture develops the option of using fluproponate based herbicide at a later stage may be feasible but not for pasture used by lactating dairy stock.

For country containing improved tropical grasses (e.g., Kikuyu, Setaria, Rhodes grass or Paspalum), the recommendation is the same as for improving pasture on low fertility country, but with further options of:

♦ using high rates of nitrogen fertiliser (up to 300 kg N/ha in three to six split applications from October to March) to increase growth of the improved tropical grasses;
♦ alternately use legumes to build up soil nitrogen levels;
♦ using the fluproponate based herbicides to selectively kill Giant Parramatta Grass in Kikuyu, Setaria, or Paspalum pasture if it is not being used for lactating dairy animals.

(iii) Chemical Control

Herbicides are very effective on Giant Parramatta Grass but are not appropriate for all situations. They will only kill the existing plants; the seed reserve in the ground is largely unaffected. This means that Giant Parramatta Grass is capable of rapid regeneration from seed after the herbicide eliminates or reduces the cover. When used, herbicides should only be part of a total program.

A range of herbicides have been tested for Giant Parramatta Grass control. Flupropanate, Glyphosate and 2,2-DPA were found most effective. (2,2-DPA refers to 740 grams active ingredient of 2,2-DPA per kg of product as sodium or magnesium salt. It is sold under the trade names of Pro-pon® or Atlapon®). (It is essential when using 22DPA and glyphosate products that the plants be actively growing.)
Glyphosate is less effective on Giant Parramatta Grass, but is widely used for spot spraying or suppression of existing pasture for sowing of crops or improved pasture. Glyphosate is better suited than 2,2-DPA in preparing chemical seed beds for pasture or crop establishment.

Glyphosate can be used in pressurised wick wipers for control and manipulation of Giant Parramatta Grass for improved grazing. (Refer to “Control of Giant Parramatta Grass” Agnote.

**OPTION 3**
*(Management option for large dense areas (the live with it approach))*

This management option can be adopted in areas of large dense infestations, where economics do not justify other control options. In such areas there would be many hectares of dense Giant Parramatta Grass and the cost of control would exceed the value and production from the land. These areas would be assessed and nominated at Council’s discretion according to the level of infestation. The aims of this option are to minimise the spread from the area, adoption of management techniques to best utilise the plant and to, over time, reduce the overall Giant Parramatta Grass infestation.

The management options available are:

- Improved grazing management for better utilisation
- Giant Parramatta Grass growth manipulation for increased utilisation, eg, wick wiping, slashing and mulching at strategic times
- Supplementary feeding of additional protein meal to stock to increase Giant Parramatta Grass utilisation
- Reafforestation of appropriate lands

(See the Control of Giant Parramatta Grass Agnote, for Management and Utilisation of Giant Parramatta Grass)

**MINIMUM REQUIREMENTS**

The following are the minimum requirements for landowners and managers for this category infestation. These control requirements are aimed at reducing the potential spread of Giant Parramatta Grass by:

- Maintaining at least a 10m buffer zone around property boundaries, along road frontages, along and surrounding cattle yards, internal roads, tracks, dwellings and service easements.
- Council to maintain Giant Parramatta Grass free roadsides, parks, reserves and vacant land.
- Government departments such as National Parks and Wildlife Service, State Forests and Department of Lands should maintain 10m buffer zones along their boundaries, internal roads, tracks, around picnic areas, carparks and other day visiting areas.
GIANT PARRAMATTA GRASS CONTROL FLOW CHART

ASSESS DEGREE OF INFESTATION (Pg 1 CSG)

Marginal or isolated outbreaks (1 & 2) (page 3&4 CSG) (The weed must be fully and continuously suppressed and destroyed.)

Core infestation, large areas or steep terrain (3 & 4) (page 4 CSG) (The weed must be prevented from spreading and its numbers and distribution reduced.)

**ISOLATED PLANTS/CLUMPS**

**CORE (Regularly Occurring)**

**OPTION 1**
Applicable to arable land higher return enterprises (page 5 CSG)

**Crop Rotation**

**Permanent Pasture Establishment**

**OPTION 2**
Applicable to poorer grazing country (page 6 CSG)

**Pasture Improvement**

**OPTION 3**
Management options for large dense areas & steep terrain (page 8 CSG) (The Live With It Approach)

**Selective Chemical Removal**

**ENFORCE REMOVAL (Suppress & Destroy) (page 4 CSG)**