Knockalong
Tombong Road
Delegate 2633

Telephone: (02) 64588134
Mobile: 0427 588134
Fax: (02) 64588150
Email: knock@rowansweb.com
ABN: 66 318 215 242

Observations - African Lovegrass

These notes have been compiled in response to my concern about the spread of African Lovegrass (ALG).I have three adjoining paddocks with some small dense sites as well as light & scattered areas. I would hope that the work I have done and the notes I have made over the past 5 years may contribute to the findings of the NSW Department of Primary Industry on their planned work to determine if we "Can We Defeat Light/Scattered African Lovegrass?"

Infestation description
ALG was "discovered" here in March 2010 only after I had learnt to identify it. The "mother lode" was very dense with mature plants having bases of 20 to 30 cm in diameter and covering an area of 20 square meters. The density of plants outside of this area become less dense and spread relative to the slope.

It is unknown how the infestation started but it may have been from earth moving equipment used on the creation of an earth channel just above the main site. The attached mapping shows the position of infestations as I will now describe in more detail. I would estimate the plants being at least 5 years old at that time.

The original source just below the channel is situated on a slope of approximately 15^{o}. This slope, running NNW, leads to a grassed tussock gully 15 – 20m bellow running WNW. This gully in turn runs **down** to another earth channel (50m) and then 50 meters on to a dam and **up** 60 meters to a ridge top where a fence separates the next paddock. The slope from the original site up to the ridge top is approximately 10^{o} and runs in a westerly direction with the prevailing winds.

The lower earth channel also has some infestations on it and below which indicate either another machinery borne infestation or a water borne infestation from above. I would suggest the latter as the plants were not at all as mature as the main site. It seems the lower channel overflowed at certain points carrying the seed with it as it ran down the slope.

As can be seen on the map, a many plats have been found in large areas in sparse scattered form. It can only have been spread by stock and vehicles to these sites, most likely the sheep. In an adjoining paddock, "Corner", two separate dense sites were discovered with areas of 12 and 10 square meters. No other individual plants have been found in that paddock **yet**!

The paddock to the East from the original site, "House", has scattered plants consistent with wind-borne deposits as well as general downhill migration and surely stock.

Treatment
Initially the denser sites were sprayed with a mixture of Taskforce & Roundup. (Task force @ 2ml/litre & 2ml/L Glyphosate 360 mixture). Which has been the same mixture used for Serrated tussock. All seed heads present were harvested and taken to a secure site & destroyed by fire. Sparse plant were treated in the same way with the exception of chipping rather than spraying. This practice has changed where the plant is mature and the likelihood of seed may have been present at some stage. These sites are sprayed to give a residual effect to prevent seed germination.

I have noticed that there are still some green stems on the ALD sprayed in spring 2011 and have followed up in autumn 2012 with an increased chemical rate (Task force @ 3ml/litre & 3ml/L Glyphosate Biactive mixture and the use of a wetting agent). The area sprayed for each plant is relative to the possible area the seed may have been dropped. For example where the radial seed heads may have been dropped in a radius of 1 meter then that area plus some lower slope area is where I will spray. Plants that have not developed seed head deposits will only be sprayed on the plant itself unless it is part of a cluster of plants that have germinated from an earlier infestation and there may be viable seed in that area.

Marking
Dense sites are pegged to form a perimeter of the area while individual plants are pegged on the upper side of the infested sites. The pegs are colour coded to identify the weed type (red = ALG, Pink = Serrated tussock etc.)
The pegs used are 50cm long leaving 30cm protruding out of the ground, also half steel posts where a taller marker was required. While carrying out other activities on the property, mustering etc., then marker sprays, small flags, pegs are carried to mark new discoveries.

Mapping & Documentation
Maps are created on paper first and then digitally in Word. Land marks are drawn onto the map to use as reference points so as to easily find the site again. This is especially so now that the grass is so long. I mark fence lines, gullies, channels, dams tracks & trees. I write notes on the maps indicating new incursions giving a date & numbers of plants. A more detailed map may be required for dense infestations. The maps are continually updated.

I document where and when I have treated different weeds and I document the hours worked. At the end of the season I write a summary of the work done and observations made as way of analyzing the success of the work done and plan for improved weed management practices. Photographs are taken to note specific treatments or growth.

Observations
The work to planned by the NSW DPI will give an indication of best practices to control the plant but the bigger problem I believe is the dynamic movement of seed.

After two years of dealing with ALG I found that the perimeters I have pegged have moved down-hill by 5 to 12 meters. This is predictable but what is more unpredictable is the number of plants that I have discovered this autumn that are sparse (5 to 10 meters between plants). This may be attributed to the wet seasons we have had and it has germinated seed that has been deposited (by stock) years before. It has meant that I have had to "grid" walk areas to be sure of finding (all?) as many plants as possible. If plants are not found and they develop seed than they are likely to be carried by stock and vehicles to other sites and other paddocks. This is where the biggest problem exists, seed transfer.

Paddocks need to be destocked until the weed is treated (spring, possible summer & autumn), and vehicles banned from cross paddock travel. Anything other than that will guarantee seed transfer, and a prolonged and costly weed management program. ALG will not go away and all land holders need to be proactive and avoid procrastination.

Expect the worst case scenario from your management actions. Expect that there are seeding plants in that paddock, that stock will carry the seed in their fleece or gut and that they will deposit it in another site/paddock. Expect that your vehicles will pick up seed and deposit it elsewhere and that you may need to arrange a wash-down bay. If you think this is all very impractical than I suggest you travel to Bredbo and have a closer look at that landscape and reevaluate what that will cost you and your neighbors in ten years time!

One year since the dense areas were "blanket" sprayed no re-growth of ALG was present. A variety of basically broad-leaf "recovery weeds" had begun to colonize the area. This autumn, two years after the initial spraying there are ALG plants that have germinated in that area. Once again the wet may have had some leaching effect on the residual chemical but certainly viable seed has been present. These areas have again been sprayed and time will tell of the effectiveness of these practices.

The most expensive component of weed control is labour. The greatest labour resource exists with the landholders. So it would seem to me that the administrative bodies need to activate landholders positively so as to empower the individual with a optimistic view so they can act to fulfil the goals of the region.

While the "big stick" may be needed in some cases the most efficient and economical use of recourses is education & activation. I would welcome any interested parties to visit the sites on this property in the future.

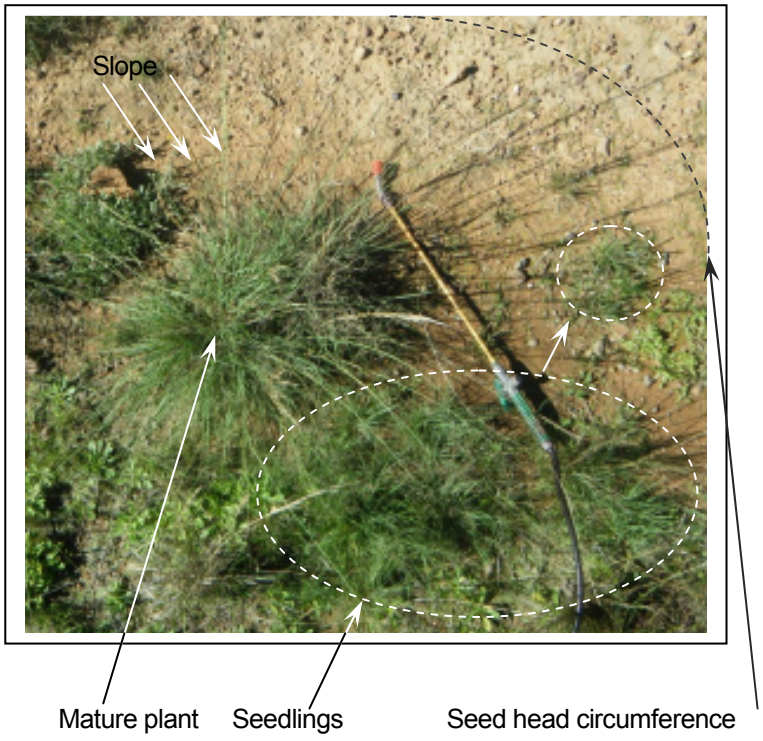
Regards,
Rowan Wright

Notes on Identification of ALG

African Lovegrass (ALG) has a varied form. In wet areas where the sorrounding growth is tall the seedhead stems can be more vertical and in lower, drier areas they can be horizontal and close to the ground. The seed head is the most distinguishable feature of the plant with its symetrical, pine tree-like form when fully developed.

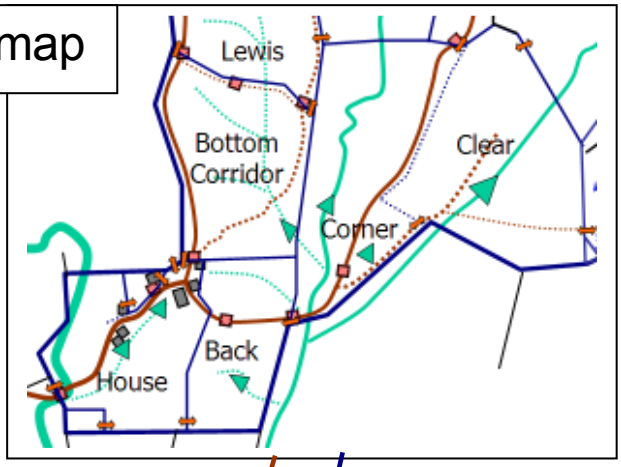
Without the seed head the next most distinguishting feature is the slender,pointy leaf with a curley leaf tip. The curley tip seems to form as the dryer season approaches.

The last identifying trait is the blue green colour of the leaf. A combination of the above points usualy makes for easy identification. It just a matter of practice so that you avoid spraying the sorrounding beneficial plants.



When the seed is realeased the seed head becomes light in colour so if you have a light coloured seed head the seed has been droped at the point of its seedhead circumference and is migrating downhill from there with the aid of water and gravity, it may migrate lateraly with the wind or it may have even been carried by stock or vehicles.

Overview map



Corner Clear – Weeds

Updated 7/01/12

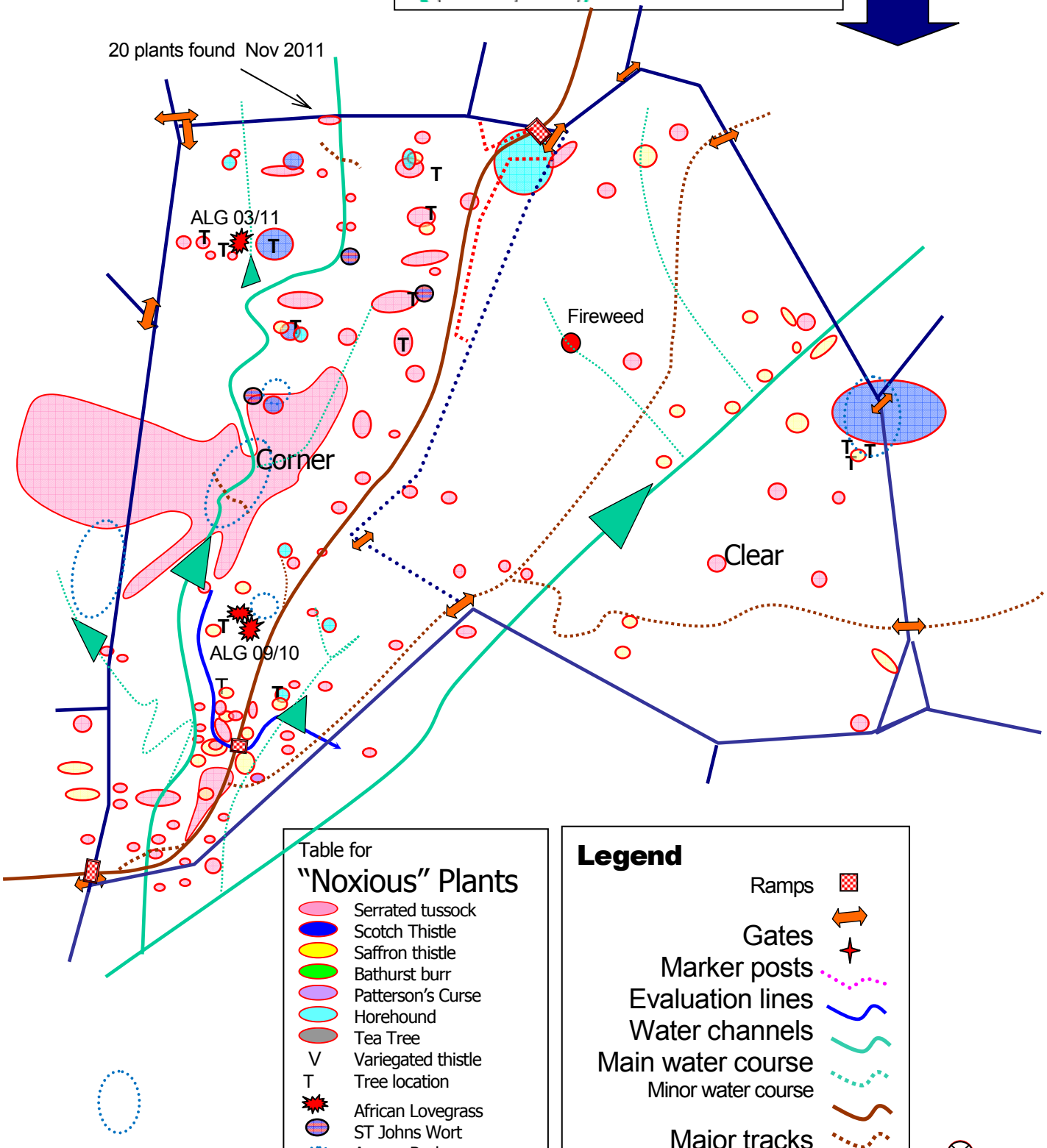


Table for

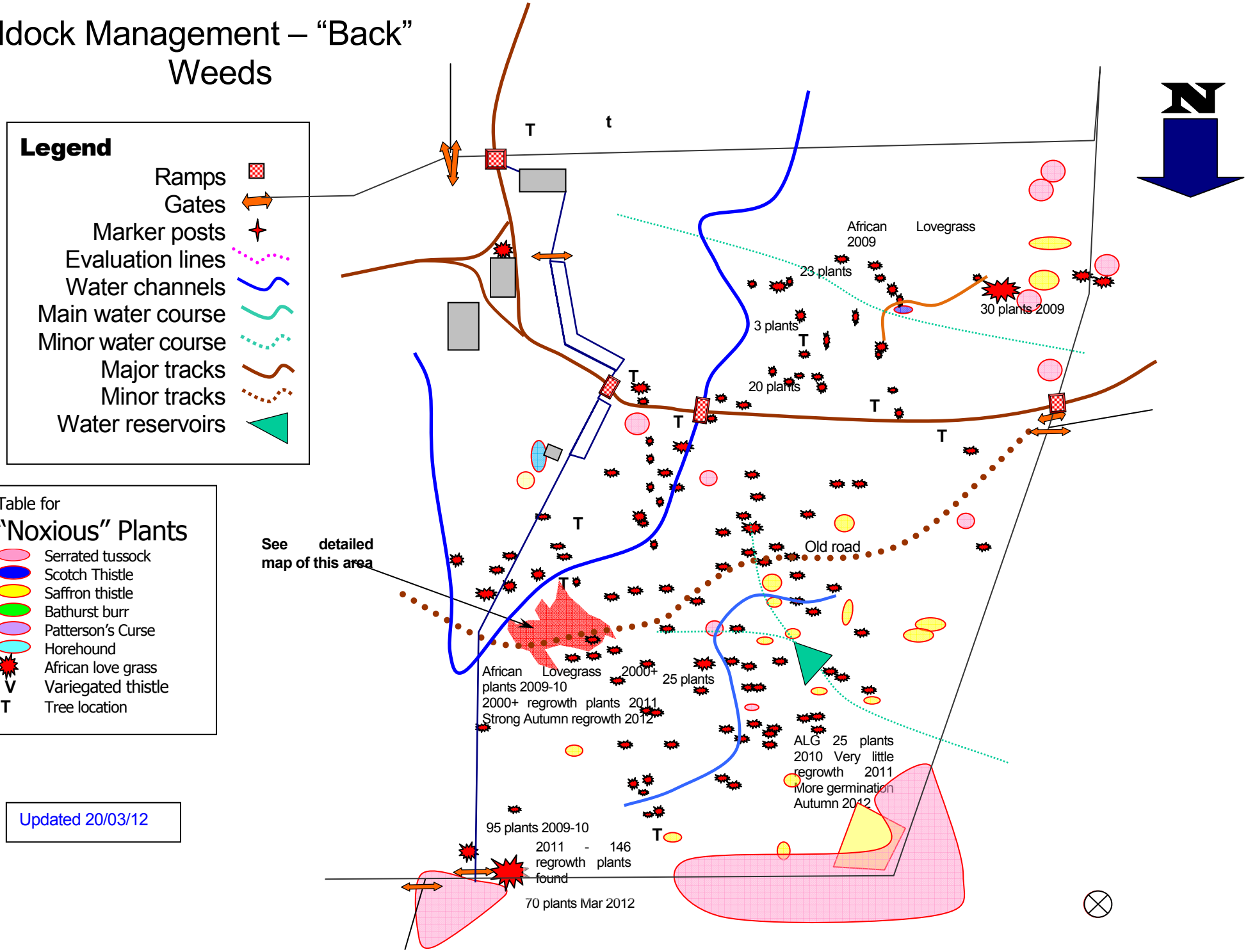
"Noxious" Plants

- Serrated tussock
- Scotch Thistle
- Saffron thistle
- Bathurst burr
- Patterson's Curse
- Horehound
- Tea Tree
- V Variegated thistle
- T Tree location
- African Lovegrass
- ST Johns Wort
- Aarons Rod

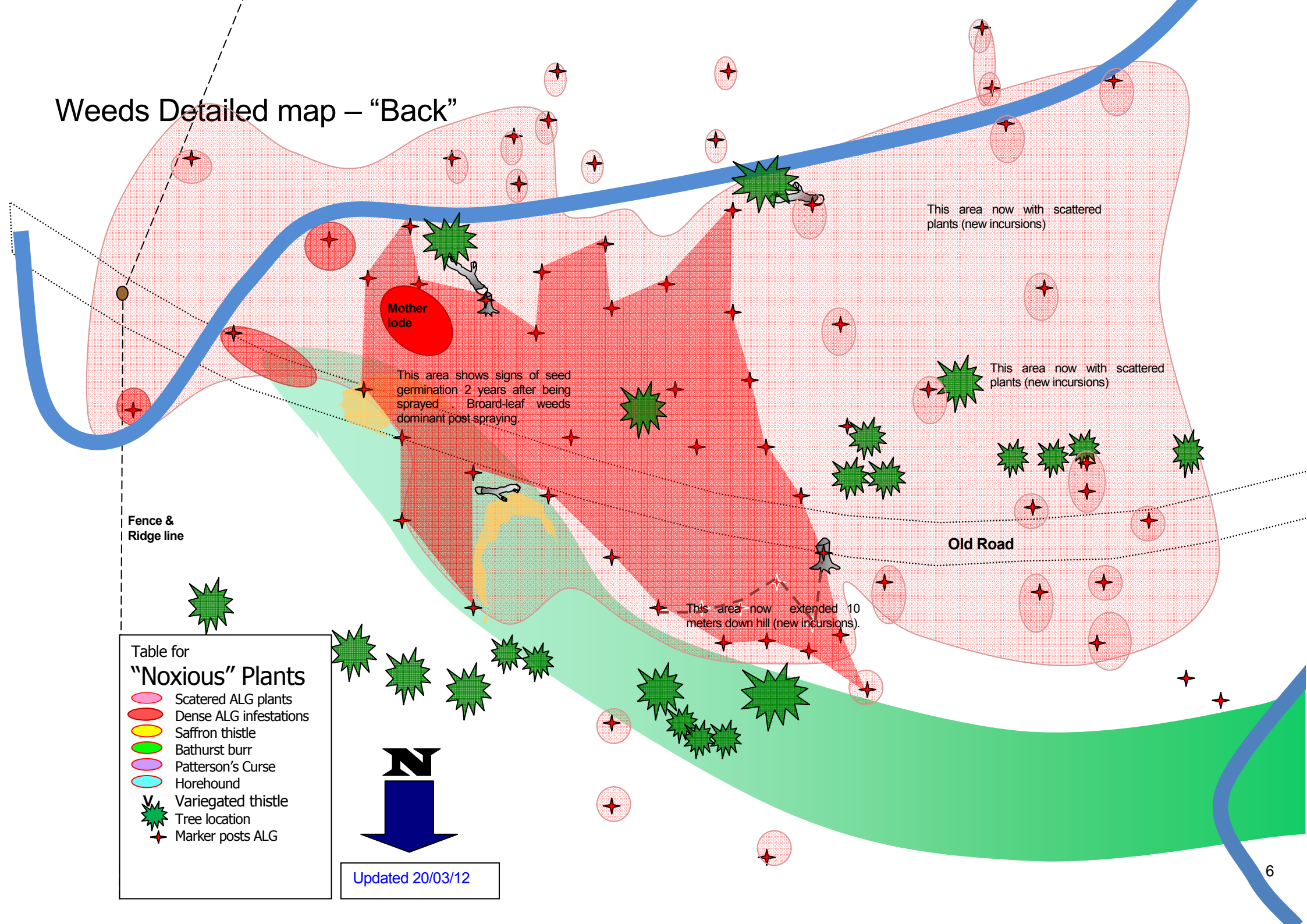
Legend

- Ramps
- Gates
- Marker posts
- Evaluation lines
- Water channels
- Main water course
- Minor water course
- Major tracks
- Minor tracks
- Water reservoirs

Paddock Management – "Back" Weeds



Weeds Detailed map – “Back”



Paddock Management
”House” - Weeds