

Sunshine Coast Council Invasive Weeds Project

Witta demonstration site



ENVIRONMENT LEVY FUNDED

Sharing *insights* with the Sunshine Coast community

From a young age, Melissa Hele has fostered an intimate understanding of the relationship between people, and the landscapes in which they live.

Growing up in southeast Queensland, her school holidays were spent tending the family's third-generation, 500-acre cattle farm.

Fencing, farming, and fireweed always seemed to go hand in hand. Pulling noxious weeds was just one of the many important jobs that needed to be done to ensure the farm animals remained healthy, and the natural ecosystems on the land could thrive .

With farm life shaping her formative years, it's no surprise that Melissa's love for the natural world would lead her to study environmental management at university, and she would go on to engage in various bush regeneration and integrated weed management projects. These have been the windblown seeds that were planted early and have taken root within her career.

Luckily for us, here on the Sunshine Coast, Melissa has once again found herself in amongst the weeds. This time as an experienced project manager, passionately working on the Sunshine Coast Council's Invasive Weeds Project. The project, funded through our Environment Levy, aims to explore weed management at a variety of demonstration sites and then generously share the learnings with the Sunshine Coast community so that we can better understand, and care for our own unique and precious landscapes.

Melissa believes an appreciation for different perspectives and understanding the different ways in which weeds fit into broader landscape management is important. After all, 'weeds are everywhere', so how can we become better at getting to know them and learn more about the best ways to manage them? The 3-hectare demonstration site near the rural township of Witta, on the corner of Maleny-Kenilworth Road and Curramore Road, has been the perfect place to explore these questions.



Fireweed
Senecio madagascariensis (invasive)

Witta demonstration site



This site is unique due to its steep terrain providing us with valuable insights into managing invasive weeds in challenging areas. The site has been divided into different revegetation zones, designed to trial a range of different **weed management treatments and revegetation techniques** that are best suited to the terrain.

Rich history of different land uses

Like much of the land that we have come to live on today, the Witta site has a rich history of different land uses creating a dynamic environment with plenty of weed infestations, and a wide variety of species. Examples of the weeds found at this site include invasive vine species such as **blue morning glory** and **madeira vine**, woody weeds such as **lantana** and **broad leaf privet**, and non-native grasses such as **molasses grass**.

If you are new to weed management and trying to understand how to tackle weeds on steep or inaccessible terrain, it can feel very overwhelming at first. Knowing that you want to create change but not knowing where to start is a common frustration.

For some of us, we also struggle to know what tools and management techniques are available and how to safely apply them. Melissa and the insights from the Invasive Weeds Project remind us that it's okay to feel this way, just don't let it stop you. Embrace the learning process, explore the innovative methods and tools on offer, and don't be afraid to just 'give it a crack'!

Blue morning glory

Ipomea indica



Madeira vine

Anredera cordifolia



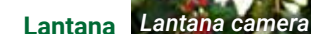
Melinis minutiflora

Molasses grass



Lantana

Lantana camera



Ligustrum lucidum

Broad leaf privet



Images credit: Michael Mills

4 simple steps

Approaching our wild and weedy areas with 4 simple steps can support us and help us know where to start.

Step 1 Have a goal in mind

The very first step is to have a goal in mind and know what you are working towards. We know that weed management is important to help maintain the balance of natural ecosystems, but what is important to you for your natural area? What are you trying to achieve? Are you wanting to increase native diversity or simply decrease the weed species? Are you trying to safeguard your agricultural productivity, or maintain the general health of your landscape? Each of us will have a different reason for engaging in weed management, resulting in a different approach. Having a goal in mind is an important first step.

“For the Witta demonstration site, our goal was to restore the demonstration site as closely as possible to the regional ecosystem within a three-year timeframe.”



Step 2 Read the landscape



The second step is reading the landscape. Reading the landscape typically refers to the process of observing the natural features, patterns, and changes in your natural area. There are so many physical characteristics and ecological dynamics that can influence weed management.

By reading the landscape you will gain a deeper understanding of your natural area which will then inform any decisions you might make. Is your area on a steep slope or a creek system? Is it drenched in sun or is it in permanent tree shade? Is the soil in good condition or does it need a little bit of help?

Reading the landscape is the second step that will guide your approach and help you to make good decisions throughout the different stages of your project.



“For the Witta demonstration site, reading the landscape proved to be a very important step. We knew we would be working on steep and difficult terrain with weeds that were very well established. The location and the unique natural features of this site provided perfect conditions for the weed species to thrive.”

There are areas with a 60-degree slope, which posed access challenges and the top story of vegetation sheltering and protecting the weeds beneath, we determined that this site would be an excellent opportunity to trial an integrated approach to weed management. This approach included remote management options, innovative technologies, and standard bush regeneration techniques.

Reading the landscape at various stages of our project also informed what native species we would plant as we attempted to regenerate the area. Carefully observing the composition and the location of the natives already in the area helped us to choose what to plant and where to plant it. Reading the landscape became an important and emergent step at various stages of our project.”

Step 3 Identify your constraints

The third step is identifying your constraints. Constraints are the limitations or restrictions that you must consider when approaching your project. In weed management, it is important to be realistic about what your constraints might be. For example, how much time do you have? An hour per day, per week, or per month? What knowledge or resources are you lacking? Do you need support to identify the plants or to understand the different management tools that are on offer?

Understanding your constraints and taking proactive steps to manage them is your third step helping you to navigate challenges, leverage opportunities, and achieve your goal despite the limitations you might face.

“For the Witta demonstration site, we identified the steep terrain as our first constraint. Understanding this limitation helped us to determine what types of remote management methods may be required to ensure both the safety and effectiveness of the weed management at this site.

We also identified established trees, overhanging branches, and pockets of native vegetation as possible constraints for certain weed management techniques. These areas posed a potential risk to drone chemical application limiting us to manual chemical application in certain areas, to ensure spray drift would not impact the native vegetation we planned to nurture.

We also had to work within a strict timeframe for our weed management and restoration works. From contracting our bush regenerators, we had three years to create our desired ecosystem and build native resilience on our site. Typically, weed management is a long-term goal achieved by stages over the years. Our weed management techniques were guided by how best to achieve our goals within this time constraint.

In this instance we learned the importance of identifying constraints before you begin. This step helped us to prioritize our funds and consider the sequence of our weed management plan, while staying open to leveraging opportunities that might appear as part of the process. 🌱



Steep slope with layers of vegetation

Step 4 Choose your tool

The fourth step is understanding what tools are available in the weed management tool kit and choosing the appropriate tool for each stage of your project.

There is a wide variety of different management tools available, from mechanical and chemical management to hand pulling and planting. There is even innovative technology at our fingertips to help support us on our weed management journey. Choosing the right tool for each stage of your project is the fourth step, helping you to effectively manage your weeds.

“For the Witta demonstration site, trialing different tools and choosing the right one at various stages of the project was essential. We chose the remote mulcher as the perfect management tool to handle our steep slope. The remote mulcher is a remote controlled, tracked machine with a mulching head. The tool can be fitted with a variety of different cutting heads and can work on slopes up to 60-degrees. It is suitable for handling several vegetation types and works very well on woody weeds like lantana.

We chose this tool for its ability to enhance safety while managing the weeds on the steep slope, and for its powerful cutting capacity, allowing us to cut through the infested weed areas to reveal what was growing underneath. The mulcher creates mulch as it cuts, leaving behind a perfect base for new planting.

Our second remote management tool was drone chemical application. We chose the drone as an innovative option to determine if it is useful in weed management on difficult terrain. A remote-controlled drone is fitted with a container that carries both chemical and water. The chemical is then applied through nozzles and sprayed directly onto the target weed species.

Our third innovative technique was herbicide encapsulation. A small, sealed capsule containing granules of the herbicide are inserted directly into a drilled hole in the trunk of woody weeds. The hole is then sealed with a wooden dowel plug. We chose encapsulation as another new and innovative tool to trial. We wanted to explore if this method reduces risk to both the handler and the surrounding environment, compared to standard treatment methods.”



Drone aerial herbicide application



Remote controlled machinery

“Other management tools and techniques we applied to this site were hydromulch seeding, and standard bush regeneration techniques such as brush cutting, knapsack chemical applications, and manual hand weeding.

Hydromulch seeding is a planting process that uses a slurry of seed, mulch, and water. This weed management tool is often used for erosion control, and for planting grass, shrubs, or other types of vegetation over large areas.

The process involves mixing the seeds with water, fertilizer, and a protective mulch in a tank. This mixture is then sprayed onto the soil using a hose or a specialized spray machine. The mixture is designed to retain moisture, protect the seeds from erosion and to provide a medium for the seeds to germinate.

Choosing the right tool at each stage, and continually reading the landscape were key steps contributing to the success of our project. In this instance, we also learned the importance of watching how the natural area was responding to our management activities. Our chosen tools combined with our ability to be flexible and read the landscape gave our chosen methods and our native species the best possible chances to thrive!”

This simple, four-step approach coupled with the hard work of our bush regeneration crew, who provided the on-ground weed management and maintenance, allowed the Witta demonstration site to achieve its goal! The invasive weed species have been reduced and the area is progressing to reaching the restored regional ecosystem.

The Witta demonstration site generated significant community interest with the surrounding local landholders who were passionate about collaborating with the Sunshine Coast Council. This site is creating a resilient natural area that is connecting to the broader landscape.

This demonstration site is currently at a 'maintenance stage until June 2026' where the Sunshine Coast will monitor the success of the techniques that were implemented and continue to engage with stakeholders

and the community to share the information and the lessons learned.

If you are a landowner, and you want to make a difference on your landscape, but you're not quite sure where to start, we invite you to make the most of our learnings. Instead of just seeing the weeds, try to see the environment the weeds are sitting within and the possibilities that are sitting within you to create change.

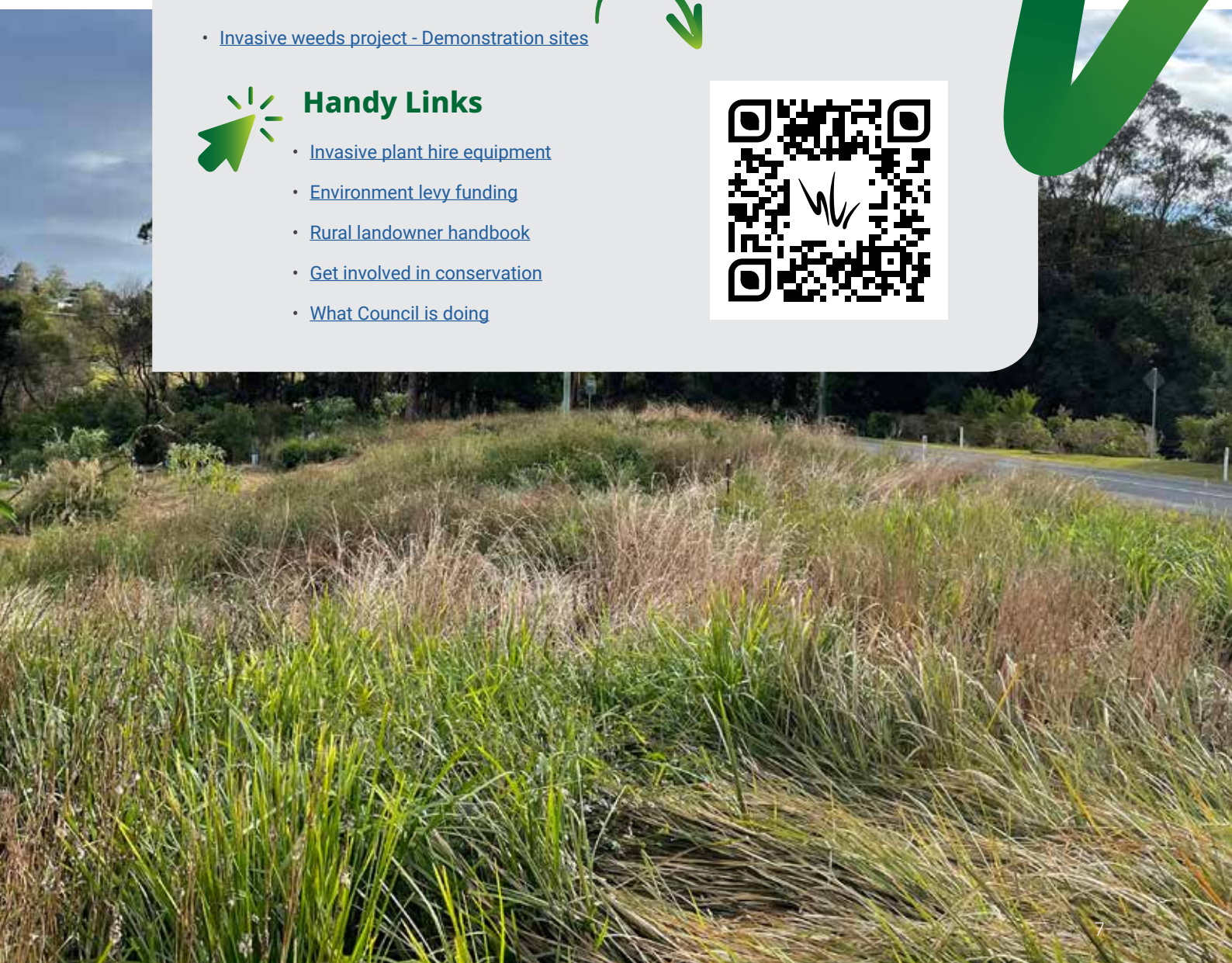
To learn more visit us at

- [Invasive weeds project - Demonstration sites](#)



Handy Links

- [Invasive plant hire equipment](#)
- [Environment levy funding](#)
- [Rural landowner handbook](#)
- [Get involved in conservation](#)
- [What Council is doing](#)



Sunshine Coast Council acknowledges the Kabi Kabi and Jinibara peoples as the traditional custodians of the Sunshine Coast, and wishes to pay respect to their elders past, present and emerging.



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