



Local Land
Services
Greater Sydney

Rural Living Handbook

A guide for rural and rural residential landholders



www.greatersydney.lis.nsw.gov.au

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*A guide for rural and
rural residential landholders*

Updated by Greater Sydney Local Land Services - February 2017.

Disclaimer

This handbook is not a comprehensive guide to managing your land. It is intended to help you find good advice. No legal liability is accepted for the information presented in this booklet.

Acknowledgements

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Welcome to the Greater Sydney Rural Living Handbook



Our offices

Penrith

Level 4, 2-6 Station Street

(PO Box 4515)

Penrith NSW 2750

Ph: 4725 3050

Wyong

3/34-36 Pacific Highway

(PO Box 600)

Wyong NSW 2259

Ph: 4352 5100

An introduction to rural living

There are many reasons people aspire to own a rural block. For some getting away from it all means finding a healthy environment to raise children or a place to retire away from the stress of the city. You may want to connect with nature or create a weekend escape, or you may want to farm the land for lifestyle or profit.

Local activities and changes to land use can impact on land condition, biodiversity and waterway health. We have a responsibility to ensure we care for and maintain a healthy natural environment whilst preserving the productivity of our farmland. We also need to get along well with our neighbours so we can all achieve our individual goals without affecting the pleasure of others. Rural lands often contain important areas of bushland and may be havens for wildlife including threatened species.

The rural and bushland areas of the Greater Sydney region also provide significant amenity to locals as well as visitors.

Owning a rural property has many benefits but can also be hard work! Many services may not be available or exist in a more limited form compared to the city.

Whatever your aspirations as a rural landowner you need to be aware of your rights and responsibilities. This handbook brings together some of the issues you will face in a rural environment. It provides details on managing water, soil, native plants and animals, fire, weeds and pests as well as advice on planning and managing your farming enterprise.

It also provides contact details of people, websites and organisations that can provide further advice and support.

All levels of government are pursuing the tenets of sustainable development in order to protect our environment into the future. Different agencies have different responsibilities to ensure land is managed well. They are important sources of information to help landowners and managers in rural and peri-urban areas get the most from their land whilst ensuring its viability into the future.



We have a responsibility to ensure we care for and maintain healthy rivers, streams and bushland.



Buying your rural property

Before you decide to buy a rural property take a few moments to consider the following questions. (You should also get legal advice before buying any property).

- Does the zoning of the land allow your proposed use or will you need to apply for a change of land use or other permit?
- What weeds are on the property? Are any of them declared as noxious weeds? Is there a Noxious Weed Notice (Section 18) on the property?
- Is there soil erosion on the property that will be time consuming and expensive to fix?
- Is there enough water to carry out the activity that you have in mind and is it of suitable quality?
- Are all required services provided to the property? If not can they be provided economically? Or is it an area that will always have limited services? Services include phone, gas, water, sewer, internet and electricity.
- Is the activity you plan for the property suited to the landscape and capability of the land?
- Do you know the history of the property? Request a property search from Greater Sydney Local Land Services to ensure there are no outstanding rates, levies, known chemical residues or animal health issues on the property.
- What stock did the previous owner have?
- Did they sow pastures and use fertilisers?
- Are there any rubbish dumps on the property you will need to remediate?
- Are there pest animals (such as rabbits, foxes) on the property?
- Do you know what the regulations and conditions are for building dams or that you may need approval for sinking bores? Do you know that digging near a watercourse may require a permit?
- Are you aware that in most instances you require approval to remove native vegetation? How might this affect your activities? Many vegetation types in Greater Sydney are subject to state threatened species legislation.
- Are there good quality pastures? Are they dominated by native or introduced species?
- Is the soil fertile and the pH appropriate for growing pasture, crops and any other produce that you want to grow?
- Are the fences in good repair and suitable for confining stock and the grazing management of the property?

- Are there any derelict mine shafts on the property? If so, are they fenced to ensure your safety?
 - If there is no existing dwelling and you want one, does the land have a building entitlement?
 - Are there existing or proposed adjacent land uses that will affect your enjoyment of the property? For example are there legitimate rural uses nearby such as farming, quarries, mines and forestry that produce dust, odours or noise?
 - Is there a Property Vegetation Plan (PVP), or conservation agreement or covenant, management plan or condition of consent over part of the property that requires you to undertake specified management actions or limits
- land uses on part of the property?
 - Are any threatened species of flora and fauna known to live on the property?
 - Ask council if there are:
 - any development applications current for the nearby area
 - other developments that have been approved but not commenced
 - any restrictions on developing certain desired land uses.
 - Have you examined the Section 149 planning certificate from council closely and discussed any potential constraints with council and your conveyancer or solicitor?
 - Is the land prone to flood or bushfire? Will you need to undertake any management
- activities to minimise these impacts?
 - Are there any rights-of-carriageway or other easements on the property which need to be maintained and/or which may allow neighbours access?
 - Is there enough shade and water for stock?
- After considering all these questions, will the property provide the rural lifestyle you are looking for?



Anyone thinking of purchasing a rural property should realistically and honestly assess their expectations and capabilities. Owning a property can be a lot of work. It is important to be fully aware of the responsibilities and commitments required and the ramifications if these are not met.

Living in the region

Greater Sydney

With a population of some 4.4 million people in an area of 12,474 square kilometres, the Greater Sydney region is diverse, extending from densely urbanised cities and coastal waterways through to rural lands and extensive World Heritage wilderness areas.

The region extends to the Central Coast in the north, Blue Mountains in the west, Wollondilly in the south and incorporates metropolitan Sydney.

The interweaving of built, bush and beach environments is a distinguishing feature of the Greater Sydney region.

The region consists of a central shale/clay basin surrounded by elevated sandstone escarpments. The basin is drained by the Hawkesbury–Nepean, Parramatta, Georges, Cooks and Wyong rivers.

On the coast these rivers form some 100 kilometres of estuaries including Tuggerah Lake, Brisbane Waters, Pittwater, Narrabeen Lagoon, Port Hacking and the Ramsar-listed Towra Point.

The Greater Sydney region includes important Indigenous sites and sites of early European settlement. Six Local Aboriginal Land Councils operate within the region.

Although it covers just 1.5 per cent of the land area of NSW, the Greater Sydney Local Land Services region accounts for seven per cent of the state's agricultural production.

This includes high value intensive industries such as market gardens, poultry and mushrooms.

Preservation of agricultural land in close proximity to the urban market is an important consideration for the region.

About Greater Sydney Local Land Services

We work with land managers and the community to improve primary production and the natural environment within healthy landscapes.

We help people make better decisions about the land they manage by connecting people with groups, information, support and funding.

Playing your part in the region

Good practices on your property will benefit you, the environment, and the prosperity of the region.

By looking after water, soil, plants and animals you will not only benefit the natural environment but also your livestock, other agricultural activities and other landholders in the local area.

Neighbours and other landholders in the region can also help you.

Talk to them, join groups such as Landcare or local bushfire brigades and contact local authorities such as council and state government agencies for advice.

Get to know the local agricultural, business, tourism and industry activities. These businesses combine to support the society and economy of the region.

You can play your part in your local community as a rural landholder.



Landsmart App

Local Land Services has developed the '[Landsmart App](#)' to help land managers - particularly city-based landholders - look after their land sustainably and responsibly. The app provides information about smart land management practices on rural properties including links to local landcare groups, upcoming events and your nearest Local Land Services office.



Natural resources

Water

Managing water is a vital part of successfully managing your property. You want to use water efficiently to minimise costs and maximise water quality to benefit you, your property, your stock and downstream users.

Water law

Water NSW manages surface and groundwater in NSW under the Water Act 1912 and the Water Management Act 2000. Section 52 of the Water Management Act 2000 defines basic domestic and stock rights. The Farm Dams Policy also applies to the rural landholder.

Streams and rivers

All NSW landholders with property frontage to any river, estuary or lake have a basic right to take water for domestic use and to water stock.

This basic right does not apply where the property frontage is

Crown Land or where there is a reserve between the property frontage and rivers or creeks. You may need a licence from the Department of Primary Industries (DPI) Water to extract water in these situations. For more information visit www.water.nsw.gov.au.

Many activities can impact on water quality in nearby rivers and creeks and on other water users. Many responsibilities discussed in this handbook come from the need to protect water quality.

Any excavation or work in or within 40 m of the watercourse bed or bank may be classed as a "controlled activity" and could require a licence from DPI Water.

Irrigation

Many agricultural practices require viable irrigation. You can contact Greater Sydney Local Land Services for information about how to best irrigate. You need a licence from DPI Water to draw any water from a stream or groundwater source for irrigation. This includes dam water that has been pumped from a stream or groundwater source.



Riparian zones

A 'riparian zone' is the area directly influenced by a river (the river bank), creek, watercourse or drainage line. The zone generally extends from the normal water level to the floodplain.

Healthy riparian vegetation – trees, shrubs and groundcovers along waterways - will make your creek banks more stable and help prevent erosion. The vegetation will also filter out nutrients from surrounding paddocks and support and create habitat for native wildlife.

Native vegetation is declining along some streams and river banks, leaving them vulnerable to erosion and weed infestation.

Where stock rely on streams and rivers to access water, disturbance to the soil and vegetation can be avoided by actions such as limiting stock access areas and pumping water to troughs located away from the waterway.

You may require approval to clear native vegetation in riparian zones (contact Greater Sydney Local Land Services in the first instance).

In addition, clearing exotic trees within 20 m of major streams and rivers may also require approval.

Causes of riparian zone degradation include:

- recreational activities
- invasion and competition from pest species (for example, rabbits) and weed species (for example, willows and blackberries)
- land management practices such as grazing and cropping without a buffer zone
- erosion.

Effects of riparian zone degradation include:

- flow restriction
- weed invasion
- loss of topsoil
- reduced water quality
- reduced biodiversity of aquatic and terrestrial plants and animals
- reduced aesthetic value;
- loss of windbreak and shelter
- unstable banks.

Some methods to control degradation and loss of riparian vegetation include:

- encouraging the growth of a native vegetation/buffer zone along the water course

- revegetating degraded and eroded riparian areas with native vegetation
- minimising the number of tracks and trails leading through your riparian area
- minimising ground disturbance during weed removal activities in the riparian zone
- minimising herbicide and pesticide use in the riparian zone - ensure that pesticides and herbicides are registered for use in or near waterways
- protecting riparian areas from stock by fencing and providing alternative water sources and shade areas.

For information and advice on funding available to landholders for river restoration work and on seeking approval to clear riparian vegetation contact [Greater Sydney Local Land Services](#).

Stock control near creeks, rivers and streams

Wherever possible, you should keep your livestock away from rivers and streams. You can pump water to troughs placed away from the stream to water stock. This will prevent erosion and degradation of the riparian zone and waterways.

Stock should also be kept out of watercourses because they:

- eat, trample and destroy the vegetation that protects banks from erosion
- compact the soil making plant growth difficult
- push soil off steep banks
- make tracks that cause erosion
- stir up mud that can destroy aquatic habitat and reduce water quality
- add excess nutrients with manure
- impact native fish and other aquatic life.

Best practice to provide drinking water for stock involves:

- a pump and trough in the paddock



- a dam in the paddock
- a bore and tanks in the paddock
- a paved ramp down to the water, preferably on the inside of a bend
- controlling weeds along watercourses and in the surrounding paddocks.

Farm dams

Landholders use farm dams to provide water for stock and domestic purposes. If not properly managed, farm dams can impact on the water quality of your property and downstream.

Under the NSW Farm Dams Policy landholders have a harvestable right. This allows landholders to capture 10 per cent of the rainfall runoff from their properties into dams and use it for any purpose without needing a licence.

The amount you are entitled in megalitres or dam capacity is calculated by a formula known as the Maximum Harvestable Rights Dam Capacity (MHRDC). This formula involves your property size, area specific rainfall and runoff calculations.

Any existing dams have to be factored into your overall entitlement. You can calculate your own specific MHRDC by visiting www.farmdamscalculator.dnr.nsw.gov.au

Farm dam licensing

Dams that conform to previous legislation and were built before January 1999 do not need to be licensed. You need a licence to build a new farm dam in excess of the MHRDC or one located on a larger (third order or higher) stream. Dams built on smaller (first or second order) streams only need a licence if the stream is perennial or if the dam is in excess of the MHRDC.

Further information can be gained by phoning DPI Water on 1800 353 104.



All dams, new and existing, should be managed to maximise the benefits to stock safety and health and minimise the impacts on the environment.

Groundwater

You will need to get a licence prior to drilling a bore in NSW. Licences are issued by DPI Water with conditions that specify how much water you can use and for what purpose.

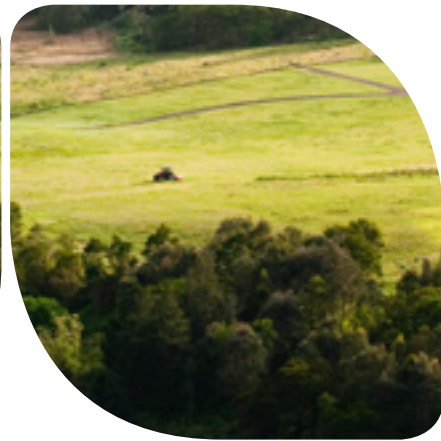
Further information can be gained via the DPI Water website www.water.nsw.gov.au/Water-management/Groundwater or phone 1800 353 104.

Managing farm dams

All new and existing dams should be managed to maximise benefits to stock safety and health and to minimise environmental impacts. Some hints to improve dam health include:

- use fencing to limit stock to one or two locations on the dam. Alternatively fence stock out altogether and pump dam water to troughs. This prevents stock from fouling the water and minimises erosion, resulting in higher water quality and increasing the longevity of the dam

- prevent nutrients from entering the dam by leaving an unfertilised strip where water flows into the dam. This will help minimise the chances of blue-green algae outbreaks
- avoid using fertilisers, herbicides and pesticides in areas around dams
- encourage native plants to grow in the dam and along the water's edge. Reeds, sedges and rushes at the water's edge and grasses and shrubs on the banks. Vegetation filters out sediments and nutrients
- encourage grass to grow on the spillway to prevent erosion
- don't plant trees along the dam wall as their roots may weaken it
- plant shade trees, but plant them away from dams so stock do not rely on dam water to keep cool in summer
- dam spillways are crucial to the stability of dam walls and stock access to the spillway should be limited.



Reducing household water

Saving water in and around your home saves you money and helps the environment. There are many ways to use less water at home.

People who live in rural areas have developed water saving methods through necessity and experience. Some methods require a development application, for example if you are building a new house or commercial venture.

You can use the following tips to use less water in existing houses:

- install dual flush toilets with a minimum four-star rating
- use water saving shower heads with a minimum three-star rating
- only use washing machines and dishwashers when full or if they can be adjusted for part loads
- buy water efficient washing machines and dishwashers with a high star rating - aim for four stars or higher
- ensure that there are no leaks in your plumbing system and repair any dripping taps

- install water efficient taps and tap aerators
- re-use grey water on your garden where Council regulations allow.

Outside water use

Outside water use for gardens, lawn and stock for an average rural residential block (for example 2 ha) can be 125,000–250,000 litres per year. Before you purchase stock it is important to know how much water they will need and to ensure you have appropriate water sources in place so your stock do not dehydrate.

Stock requirements

Stock usually need the following amounts of water as a minimum:

- Horse - 12,000 litres a year
- Sheep - 1,230 litres a year
- Beef Cattle - 13,500 litres a year
- Dog - 3,000 litres a year
- Pig - 9,000 litres a year.

These amounts may vary depending on factors such as the life stage of the animal (for

example a lactating cow on grass may need up to 100 litres per day), the time of the year, the moisture in the pasture, water quality (for example animals drink more water if it is salty) and climate conditions (for example drought or hot windy conditions).

Garden requirements

Gardens can potentially use a lot of water. There are many ways to conserve water in the garden, such as:

- mulch all garden areas to a depth of 75 millimetres
- water plants in the early morning or evening to reduce evaporation
- compost household and garden waste and use it to improve the soil
- keep higher maintenance garden and lawn areas to a minimum
- consider allowing lawn to brown off in summer – this needs to be considered in association with your fire protection regime
- lawn kept at around 5 cm in height reduces evaporation as the blades shade each other
- plant drought tolerant species - use local natives where possible
- water less often but for longer periods at slow rates
- install a drip irrigation system
- install a rainwater tank or grey water treatment system.

Soil

Your soil is a valuable resource. It supplies the nutrients for your pastures, crops, and for the growth of native species.

A healthy soil is one that balances the relationship between good soil fertility, good soil physical properties and good soil biology. Understanding each of these components is important for the health of your soil but also the health of our landscapes and catchments.

Soil fertility refers to the amount of available nutrients and the soil's chemistry, such as pH and soil salinity.

The physical nature of the soil can have a huge influence on the water holding capacity of a soil.

Soil structure and texture also affects a property's ability to be used for different agricultural uses.

Soil biology includes the range of organisms living in the soil which can also influence the soil's physical and chemical nature. Soil health can be improved by the application of organic matter.

You can help to minimise erosion and retain topsoil on your property by using the following practices.

- Ground vegetation should provide at least 70 per cent groundcover at all times. Groundcover should be as high as possible, especially around riparian areas or steep slopes.
- Rotate stock to rest the land and maintain continuous grass cover in grazing paddocks.
- Plant windbreaks and establish native plants along creeks and farm roads to help filter out sediment and nutrients and protect stock.
- Protect and enhance existing native bushland. When choosing plants, consider species native to your area. Consider joining a local Landcare group.
- Cultivate and plant along contour lines, not up slopes. Do not cultivate steeply sloping land. Where possible, leave a vegetated strip 10-30 m wide alongside rivers and creeks which will help slow water runoff, reduce soil loss and maintain bank stability.
- Construct access roads along the contour on gentle slopes wherever possible and avoid wet areas.
- Find out about your land's capabilities. There are eight classes defined by the Office of Environment and Heritage that outline the capability of land to undertake particular activities.

Erosion

Erosion results in topsoil and other matter being washed or blown from your property, meaning the loss of valuable nutrients and organic matter.

There are various forms of erosion including sheet, rill, gully, stream bank, in-stream and wind erosion. The main forms of erosion on your property are likely to be hill slope, gully and stream bank erosion.

Soil erosion caused by wind and water can be exacerbated by animals, vehicles and vegetation removal. It reduces the productivity of your land and pollutes creeks and dams.

The best protection against erosion is adequate groundcover. Native grasses can often provide the most durable protection for your soil.

In some parts of the region introduced species are very much naturalised and play an important role in holding the soil together.

Carefully consider the need for cultivation and pasture improvement that can permanently kill areas of native grasses.

Herbicides should be carefully used to control weeds and maintain grass cover.

Some soils are very susceptible to erosion. Factors such as slope, rainfall intensities and natural groundcover can all influence erosion rates.

Over stocking or over cultivating paddocks can also lead to erosion.

You can prevent soil loss and erosion by controlling water run-off with devices such as contour banks, sediment traps, flumes, straw bales and mulches however the best option is always to maintain good groundcover.

There may be erosion control structures already on your property. If so these structures should be maintained and not disturbed to ensure continuing operation.

It is important to obtain technical advice from the relevant authorities before constructing any works.

Contact your local Greater Sydney Local Land Services office for more assistance.

Soil acidity

The pH of the soil is a measure of its relative acidity or alkalinity. Many of our soils are naturally acidic.

Some effects of soil acidity are:

- reduced agricultural viability and production rates
- increased production costs i.e. need to add lime
- groundcover decline, increasing the likelihood of erosion and declining water quality
- reduced water use by vegetation contributing to salinity.

Some causes of soil acidity include:

- natural pH decline through leaching
- past and present land use
- removal of alkaline plant and animal produce and waste products
- nitrate leaching - lack of deep rooted grasses to catch nitrogen before it leaches

- continuous application of ammonium fertilisers.

It is important to get technical advice from the relevant authorities such as Greater Sydney Local Land Services or NSW DPI before treating your soil.

Dryland salinity

Dryland salinity occurs when the ground is over watered or groundwater seeps to the surface bringing soil salts with it.

Salt can also be drawn to the surface by capillary action. When the water balance is disturbed by the removal of deep rooted perennial vegetation, dryland salinity is accelerated.

Dryland salinity can cause vegetation loss and stream salinity and can be a precursor to soil erosion.

Over recent decades there has been an increase in the area of land affected by salinity in NSW.

Some properties are particularly prone due to natural factors such as rock/sediments containing high levels of salt, salt in rainfall and landform and hydrogeology characteristics.

Causes of dryland salinity in these areas include:

- removing deep-rooted perennial vegetation such as trees and shrubs and replacing it with shallow rooted pastures and crops – this raises the water table, which brings salt to the surface
- over-watering of gardens and paddocks
- blocking natural groundwater flow, for example by roads or dams.

Some effects of dryland salinity include:

- loss of desirable vegetation
- growth of salt-tolerant species
- reduced crop and pasture production
- water logged soil
- soil erosion

- increased salt loads in rivers and streams
- reduced surface and groundwater quality
- declining soil structure
- damage to buildings, roads, septic systems and pipes.

It is important to get technical advice from the relevant authorities (DPI; Greater Sydney Local Land Services) when considering methods to manage dryland salinity.

Sodicity

Sodic soils are soils that contain enough exchangeable sodium to adversely effect soil stability and plant growth. As a result clay particles in the soil lose their tendency to stick together when wet.

This leads to unstable soils that may erode or become impermeable to both water and plant roots. Local landholders sometimes use the term 'spewy' to describe sodic soils.

Compared to salinity, sodicity is a more widespread form of land degradation. Sodicity affects nearly one third of all soils in Australia causing poor water infiltration, surface crusting, erosion and water logging.

Runoff from sodic soils carries clay particles into waterways. Sodic soil runoff is more likely to carry higher levels of nitrogen and phosphate contributing to algal blooms in waterways.

Applying gypsum to the affected soil can treat sodicity of topsoil. You may need large quantities of gypsum to have more than a short-term affect.

The best way to treat sodic subsoil is to stop the subsoil from being exposed by retaining good vegetation cover.

Seek advice from the relevant authorities (DPI; Greater Sydney Local Land Services) before treating your soil.

More information

For more information on soil management visit the NSW Soil Conservation Service website at www.scs.nsw.gov.au, the NSW DPI website at www.dpi.nsw.gov.au or the Greater Sydney Local Land Services website.

NSW DPI also conducts a workshop series called LANDSCAN (Landscape and Soil Test Interpretation for Sustainable Farm Management) which teaches you how to understand soil tests, landscape limitation, soil fertility, acidity, salinity, and to match livestock to landscape.

Details can be found at www.dpi.nsw.gov.au/agriculture/profarm.

Three basic strategies to manage acid soils:

- 1. use deep-rooted perennial pastures to improve nitrogen recycling and slow the rate of acidification**
- 2. use a soil ameliorant such as lime or dolomite to raise pH. Some organics can also raise pH**
- 3. use plants that are tolerant of acid soil conditions.**



Native plants & animals

Remnant native vegetation

Remnant native vegetation refers to the area's remaining indigenous vegetation, including forests, woodlands and native grasslands.

Since European settlement, much of the original native vegetation of the region has been cleared. This has resulted in problems such as soil erosion, loss of soil structure, weed invasion, salinity, reduced water quality and loss of biodiversity.

Trees can enhance the value of your property and increase productivity by providing shade and shelter for stock, windbreaks for crops and pasture, habitat for native wildlife and by stabilising soils.

Thick strips of native trees and shrubs can also improve the survival of lambs and ewes, provide protection against drying winds, moderate temperature extremes, reduce extreme frosts, prevent pollution of streams by nutrient runoff and provide effective barriers against windblown weed seeds.

Remnant vegetation can also protect an area from rising water tables and salinity.

Native trees, shrubs and most native grasses are deep-rooted perennials that keep saline groundwater well below the surface.

Your rural block may be entirely forested or still have areas of remnant woodland or forest, or contain only isolated paddock trees.

This vegetation should be left intact as it may form part of a vegetation community that is now extensively cleared or be part of a corridor connecting two larger areas of native vegetation.

Re-establishing native vegetation

Re-establishing native vegetation helps to restore and link remnant patches of native vegetation on private and public lands, enhancing



Trees can enhance the value of your farm and increase productivity by providing shade and shelter for stock, windbreaks for crops and pasture, habitat for native wildlife and by stabilising soils to reduce erosion.

their value as wildlife corridors and biological reserves.

The main options for revegetation are encouraging natural regeneration, planting seedlings and direct seeding.

What can you do?

- fence remnant vegetation with fauna friendly fencing to protect them from livestock grazing. See www.wildlifefriendlyfencing.com
- plant sections of your property with local native plants
- by planting species local to your area you can help increase the amount of habitat available for native species as well as using species already adapted to your local environment.

When planning a revegetation program always try to:

- use seed sourced locally wherever possible
- use plants grown locally to ensure they acclimatise to local conditions
- choose species that reflect

the vegetation type at the site. Your local council may have a community nursery that can help

- plant during the season you are most likely to get reliable rainfall.

Join [your local Landcare group](#), talk to your neighbours about forming one or talk to Greater Sydney Local Land Services for advice.

How good is that bush block?

As a rule of thumb any patch of native vegetation is valuable. Across a rural residential development or farm, a minimum of 30 per cent cover of native vegetation will help productivity and maintain ecosystems.

Together with your neighbour's bush and others nearby, there may also be a viable local core habitat area or 'corridor' of vegetation.

Remember to:

- avoid fragmenting existing areas of native vegetation, including remnant grasslands. If you are building new fence

lines, roads or services, build them around areas of native vegetation rather than through them

- ensure that plant species are correctly identified when spraying weeds (many native grasses such as Poa are easily confused with weeds such as Chilean Needle Grass).

Looking after native vegetation

There is a range of ways you can receive assistance to look after native vegetation and wildlife habitats on your property.

Inspections and advice are available through programs such as Land for Wildlife and Wildlife Refuge programs.

Greater Sydney Local Land Services and NSW Environmental Trust may also provide incentive funding for protection and rehabilitation programs on your land.

If you have high quality remnant vegetation on your land, you can ensure its protection by reserving it through a Conservation Covenant.

For more information on these initiatives, contact the NSW Office of Environment and Heritage www.environment.nsw.gov.au/cpp/ConservationAgreements.htm.

Guide to native plants

Though the natural areas in the Greater Sydney have seen the effect of human impacts, many native plants can still be found.

By planting species local to your area you can help to increase the amount of habitat available for native species, provide shelter and shade for livestock and improve the amenity of your property. Local native species are already adapted to the local environment.

Plants for your property

Soils, rainfall, temperature and weather can vary remarkably across the region and some species are better suited to particular sites than others.

To find out which plants suit your specific location, determine what type of soil you have (start by talking to your neighbours or Greater Sydney Local Land Services) and then talk to your local community nursery.

Removing native vegetation

The clearing of native vegetation and habitat loss is a key threatening process for many plants and animals.

Clearing native vegetation in NSW may require consent.

You should talk to Local Land Services or the NSW Office of Environment and Heritage before clearing any native vegetation. Council regulations may also apply.

Clearing in association with a development will need consent and you may need to undertake an assessment to determine the impact of the clearing on resident flora and fauna.

Clearing without approval can result in substantial fines being issued. To ensure your clearing is classed as an approved activity, contact Greater Sydney Local Land Services or the NSW Office of Environment and Heritage or your local council.

Environmental Planning & Assessment Act 1979 and Regulations

The objective of this legislation is to encourage proper management, development and conservation of the natural and built environment including on agricultural land, forests, waters, cities and towns.

It is intended to promote social and economic growth whilst maintaining

community values and the environment.

The Act requires developers to take potential impacts on the natural and built environment into consideration. Under the Act, vegetation cleared for a development (i.e. a new house site or road) is not permitted without first gaining consent from the appropriate authority.

In most instances the appropriate regulatory authority for such developments would be your local council.

Developments in inappropriate or sensitive areas may not be permitted and illegal clearing may result in fines, remediation of sites and removal or relocation of infrastructure.

For more information talk to your local council planning or environment staff.

More information

For information on Landcare, funding to protect and enhance remnant native vegetation and revegetation advice, contact Greater Sydney Local Land Services office on 1300 795 299.

Your Local Land Services office can also assist with inspections by native vegetation professionals to help develop a vegetation management program.

Native animals

All native animals in NSW are protected. This means it is illegal to trap, kill or harm them.

Although we would like to live in unison with native animals, sometimes they can pose a threat to our safety or activities. It is



important to understand how to manage these situations on your property.

A few native animals can become a nuisance if not managed appropriately. For instance swamp wallabies can often graze on garden plants. It is wise to fence off prized plants, such as roses and vegetables, in rural areas.

Brush-tail possums can become nuisances in roofs. In such cases, it is best to provide nest boxes for possums away from the house, remove them from the roof and seal possible entrance holes.

Several species of venomous snake may live in your area. Most snake bites recorded in NSW happen to people who try to catch or kill them. Give snakes some space and they will generally leave the area.

The snake season usually lasts from October to early March. The following actions can reduce the chance of snake bite:

- remove loose sheets of tin and other cover from around the house
- keep frequently trafficked areas and those around buildings mown
- wear enclosed leather shoes when walking in long grass or near creeks or farm dams
- do not walk outside in thongs or bare feet on warm nights
- let snakes pass through and away from your house or paddock, but if they decide to take up residence call WIRES (NSW Wildlife Information and Rescue Service) on 1300 094 737 to have them relocated
- avoid taking dogs for walks near long grass or river sides in the warmer months when snakes are likely to be breeding.

Providing a fauna-friendly home

If you would like to encourage small birds and other wildlife, such as sugar gliders, around your home there are some ways to attract them:



- leave large trees with hollows intact
- plant a variety of local native shrubs, especially dense or prickly ones. Use mainly white, pink or yellow flowering shrubs and keep red flowering shrubs in smaller numbers. Large numbers of red flowering shrubs can attract Noisy Miners and other larger honeyeaters that actively exclude other smaller birds from an area
- provide bird baths and other watering points
- build and maintain appropriately designed nest boxes where few hollow trees remain. Monitor the nest boxes to ensure they are not being taken up by pest species such as Indian Mynahs or Starlings
- leave fallen timber and hollow logs where fire is not a major threat
- keep a belt of native trees to connect bushland areas. These will provide habitat and stepping stones for small birds and mammals that can not travel larger distances across open country

- do not remove mistletoes - they are an excellent source of food and habitat for a range of animals and removing them can damage the tree.

It is not recommended to provide artificial feed for native birds and other animals.

If you would like to provide food for wildlife, talk to your local garden nursery about the type of plants you can grow to provide seeds, fruit, nectar or attract feed insects.

Your local Office of Environment and Heritage, council or Landcare group may have more information about creating habitats for wildlife.

Frogs are desirable animals to have living on your property. Encourage frogs to stay or colonise your property by:

- using ponds or pools as part of your garden landscaping. Some pond habitats may also attract snakes, so place them away from buildings or lawn areas
- placing large rocks or boulders around one end of a dam for shelter and over-wintering

- putting logs or other large offcuts around the edge of a few dams with half in the water and half out
- planting some emergent vegetation like Eleocharis, Juncus or Carex species in clumps around a dam's margins (Typha, while suitable from a frog perspective may cause problems around the dam and is less suitable)
- planting tussock-forming vegetation like Lomandra or Dianella species at a short distance from the dam for sheltering and foraging.

Fish and other aquatic animals can be a desirable addition to rural living. If you are going to stock farm dams with fish, you need to carefully consider the following:

- only native fish from the catchment area are generally permitted to be released
- depending on numbers and site specifics, you may need a permit from the NSW DPI or [NSW Fisheries](#)
- if your dam or pond is already infested with the introduced pest Plague Minnow / Gambusia then it would be best to eradicate it. Contact NSW Fisheries for assistance
- yabbies from the local stream system might be another desirable addition. Suppliers or NSW Fisheries can provide more information
- be aware that tortoises and platypus may be local residents and that yabbie traps are illegal in streams east of the Newell Highway, as they may drown these air-breathing animals. NSW Fisheries can provide more information about fishing in streams and rivers
- eels and aquatic insect life (for example, dragonflies, backswimmers) will colonise on their own if a healthy pond/dam or creek system is established and maintained

- if there are none available on site consider adding round river stones that make it more attractive to aquatic life.

A pond, dam or creek full of life not only creates a healthy environment but may provide many peaceful hours for you and your family as you explore this fascinating environment and the animals attracted to it.

Benefits of biodiversity

Biodiversity is all life on earth and the systems that interact with and support it. Supporting a range of species, habitats and systems helps to maintain the ecosystem services of the landscape.

This includes:

- maintaining soil stability and reducing erosion
- increasing water infiltration and maintaining water quality
- ensuring water, carbon, nutrients and oxygen is cycled through the landscape
- pollination of plants, and reducing pest animals and plants
- creating an aesthetically pleasing environment.

The best way to support biodiversity is retain native vegetation and increase habitat for native animals.

Reducing grazing pressure in remnant vegetation and leaving shrubs, dead wood and leaf litter in place will go some way to supporting biodiversity.

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Threatened species

Many species in NSW are listed under threatened species legislation. This legislation aims to prevent the extinction and promote the recovery of threatened species, populations and ecological communities in NSW. If you are considering land clearing, subdivisions or other actions that may impact threatened species, you may require council approval, or approval from the NSW Office of Environment and Heritage.

Threatened species may not be obvious to you on your property. If you are considering developing your property or clearing land, you may need to have a threatened species survey undertaken.

Report sightings of threatened species to the NSW Office of Environment and Heritage or your local council.

Information about threatened species can be found on the threatened species section of the NSW Office of Environment and Heritage website www.threatenedspecies.environment.nsw.gov.au

Cultural heritage

There are two types of historical sites that may be present on your property: Aboriginal and European.

These sites may be listed on local, State or National registers or you may discover something new. You have certain responsibilities under legislation to protect these areas.

Aboriginal cultural heritage

Aboriginal people are considered the custodians of country.

Aboriginal cultural heritage not only encompasses objects but also the broader landscape: the water, plants, animals and the land.

Amendments to the Aboriginal Heritage provisions under the National Parks and Wildlife Act (1974) introduced two types of offenses for harming Aboriginal objects. The offenses relate to harming or desecrating an Aboriginal object, either knowingly or unknowingly.

It also clearly states it is the land managers' responsibility to ensure cultural sites on any land tenure are recorded within a reasonable time frame.

Assistance can be provided to land owners and managers to identify and protect sites on a property.

European cultural heritage

European Cultural Heritage is protected by the NSW Heritage Act 1977. The Heritage Act states any works undertaken on a property must cease if a potential artifact is located, and the [NSW Office of the Environment and Heritage](#) contacted immediately.

European cultural heritage artifacts help tell the history of towns, cities and surrounding areas. Within rural areas, European Cultural Heritage can include farmhouses, barns, agricultural equipment, property markers and mining sites.

NSW Office of Environment and Heritage will assess the works and determine whether further approvals are required.

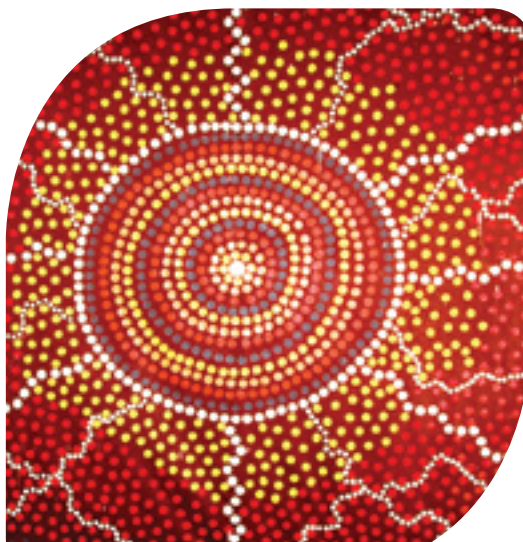
The Heritage Act also includes provisions for offenses for harming archaeological artifacts as well as works without consent on State Heritage Items.

Where an item is locally listed the NSW Environmental Planning and Assessment Act 1979 provides similar provisions.

More information

If you think you may have sites of Aboriginal or European cultural importance on your property please contact your local council or the NSW Office of the Environment and Heritage.

More information about protecting heritage can be found at <http://www.heritage.nsw.gov.au>



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Fire

Fire is a part of the Australian landscape and bushfire management in NSW involves the whole community.

Not only does bushfire pose a risk to personal safety and property, it can also have major impacts on biodiversity and water quality.

Effective bushfire management involves fire authorities, landowners, land managers and planning authorities, council and the local community. The work you do to prepare your own property is a critical component of bushfire management.

Bushfire management involves a risk planning process. You will need to:

- understand your bushfire zoning and risk – talk to your council
- identify the location of bushfire hazards (such as high fuel loads)
- identify the location of your assets (buildings and environmental

- assess the hazard in terms of threat to your built and environmental assets and personal safety.

As well as using information available from the Rural Fire Service, you may also consider joining the local Rural Fire Brigade.

While most older farmhouses are built on cleared farmland there has been an increasing tendency to build on bush blocks.

The most important issue for a house on a bush block is to create an asset protection zone that breaks the continuous canopy of trees.

This will usually mean removing some trees and reducing fuel loads of dry undergrowth and dead branches. This should be done with guidance from the local Rural Fire Service and council.

Since 2002 legal standards have been in place for the safe construction of buildings in bushfire prone areas of NSW. The standards include:

- adequate setbacks from bushland

- inclusion of reduced fuel areas (asset protection zones)
- correct placement of buildings
- provision of standing water supplies for fire fighting purposes
- good access roads for fire fighters and residents.

Strategically planned asset protection zones and regular maintenance to remove fuel greatly enhances the ability of your home to be protected in an emergency.

Wherever possible, new houses and sheds should be located in existing cleared areas to reduce the amount of clearing required for construction and new buildings should be constructed from fire resistant materials.

If you have stock you can use them to manage pasture near your home during late spring and early summer to reduce fuel levels.

The [Rural Fire Service website](#) makes these suggestions for fire protection measures around your home.

- clear leaf litter from gutters and install fire-rated gutter guards
- firmly fix the roofing so there is less chance for embers to enter the roof space
- install screens or shutters and enclose areas under the floor, if possible
- ensure vents in the roof space are screened with wire mesh
- remove all flammable items from around the house (for example, the wood pile, and paper, boxes, crates, hanging baskets and wooden garden furniture)
- direct the relief valves on LPG tanks away from the house
- buy a portable pump to use water from dams and swimming pools
- fit a gate valve to water tanks with a 38-millimetre Storz

coupling which will assist the Rural Fire Service

- consider reserving water supplies from tanks, dams or swimming pools as mains water will be in high demand during bushfire
- you may need to install a dedicated fire fighting tank
- write the emergency 000 telephone number next to the telephone
- have a bushfire action plan and make sure you know it.

The following actions in your garden can also help to protect your property:

- clear away ground fuels around the house (for example, remove long, dry grass, dead leaves and branches, thick undergrowth)
- take a trip to the tip with general rubbish that could catch fire, and mulch and compost green waste
- prune low tree branches two metres from the ground and trim to separate tree crowns.
- prepare firebreaks (a well watered lawn can act as a firebreak)
- ensure vegetation around the house does not provide a path for fire – plant vegetation in clumps, rather than continuous rows.

More information

The Rural Fire Service website has valuable information about managing properties in bushfire prone areas www.rfs.nsw.gov.au.

The NSW DPI website also has information on preparing for and responding to bushfires in rural areas www.dpi.nsw.gov.au/agriculture/emergency/bushfire.

The Rural Fire Services has valuable information about managing properties in bushfire prone areas. Ensure you have a Bushfire Survival Plan for your family and property.

Download the template from the Rural Fire Service website. Also considering downloading the 'Fires near me' app to monitor bushfires in your local area.

Weeds

A weed is a plant 'in the wrong place at the wrong time'. Plants are weeds if they degrade the natural environment or harm agricultural production.

Most weeds were introduced from other countries – some arrived by accident while others were brought for specific purposes.

The natural competition that kept these plants in control in their native countries are not present in Australia so their spread is not naturally restrained.

Weeds often have a high level of seed production with easy dispersal mechanisms and highly competitive growth patterns.

Weeds can be a major problem to rural properties because of the impact they have on pastures, crops, native vegetation and stock.

Weeds can be introduced and/or spread to your property in a variety of ways, including:

- seed bought for sowing, stock feed, on stock, machinery, water, wind or through garden escapes
- deliberate introduction, for example, willows planted for bank stabilisation
- poor land management, for example, overgrazing resulting in bare soil
- herbicide resistance due to over-reliance on particular chemicals.

Noxious Weeds

In 2017 the Noxious Weeds Act will be replaced by the NSW Biosecurity Act and Regulation which establishes Regional Priority Weeds and the General Biosecurity Duty.

Regional Priority Weeds are those weeds that have been declared a priority for regional control in the Regional Strategic Weed

Management Plan. These weeds have been identified because of their impact and feasibility of control at a regional scale.

The General Biosecurity Duty means that any person dealing with plant matter must take reasonable measures to prevent, minimise or eliminate the biosecurity risk. In general, if you deal with or carry plant matter as part of a commercial, professional, volunteer or recreational activity or lifestyle, you would be considered to know or ought to know the risks.

Plant matter includes plants, parts of plants and seeds, living or dead.

Weed Control

The aim of weed eradication is to remove the weed, deplete the weed seed reservoir and prevent further replenishment of the weed seed store.

Weed control is a complex and on-going management problem.

An integrated approach to weed management may include strategic grazing, pasture management, avoiding bare soil, herbicides, biological control agents, cultivation, slashing, mulching and hand pulling.

More information

Contact the weeds officer at your local council or Greater Sydney Local Land Services for advice on how to manage weeds.

The effects of poor weed management are:

- *loss of native species and their habitat*
- *reduced land productivity*
- *increased control costs as weeds spread*
- *soil degradation and erosion.*

Pest animals

Pest animals and insects cause serious economic losses to agricultural production, contribute to the risk of exotic diseases, threaten the survival of many native species and cause environmental degradation.

Landholders have a legal obligation under the Local Land Services Act 2013 to eradicate noxious pest animals on land they own, occupy or manage.

Pests such as wild dogs, rabbits, feral pigs, foxes, feral cats and feral goats can introduce disease and out-compete native animals for food and shelter, as well as injuring or killing livestock and damaging crops and pastures.

Local Land Services Biosecurity Officers can provide advice and help to eradicate declared pest species from your property.

Activities may include putting out poisoned baits, trapping, or initiating education programs.



Landholders (both public and private) have a legal obligation to eradicate noxious pest animals on land they own, occupy or manage.

They also work with private and government stakeholders to develop vertebrate pest management plans and co-operative management programs.

When conducting any pest animal control program such as baiting, it is important you follow the manufacturer's or government recommendations so your control does not harm or kill other species on your farm.

More information

For more information and for fact sheets about the control of rabbits, feral pigs, wild dogs, locusts and foxes, visit the Greater Sydney Local Land Services website or the public information site at www.feral.org.au.

Domestic dogs and cats

Domestic dogs and cats can also have negative affects on the environment and farming practices.

Dogs and cats kill and maim many native animals, while dogs may also injure or kill livestock.

Wandering animals can cause conflict with neighbours. You are liable for any damage or stock losses your pets cause. Under the NSW Companion Animal Act 1998, domestic animals found wandering on properties with stock can be destroyed by the owner of that property or another authorised officer. You are responsible for your animal at all times, even if it has escaped from your property.

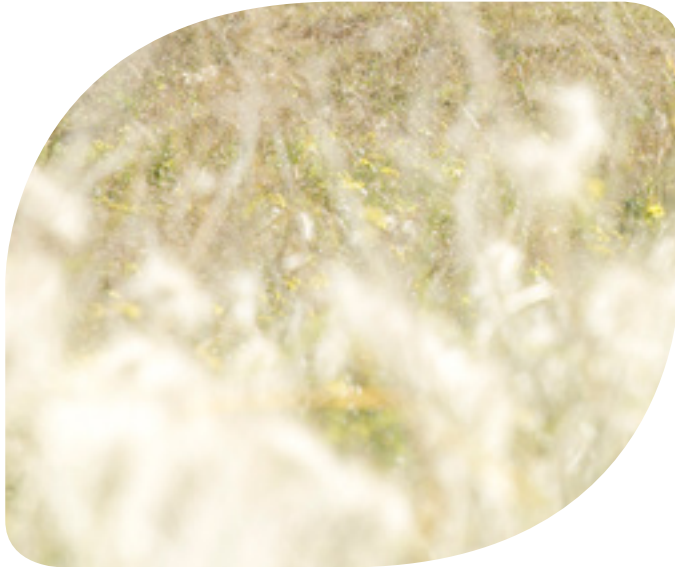
To reduce this risk keep your cat indoors especially at night and keep dogs within a secure yard.

In public areas dogs and cats must be kept on a leash.

Depending upon where you live, there may be restrictions on the ownership or management of pets, especially where there are known threatened species residing on your property. Your council can provide more information.

You must register all dogs and cats through your local council. Dumping or releasing domestic animals is an offence. Unwanted animals should be taken to your local animal pound or your veterinarian.

Bury dead animals promptly and away from watercourses so they do not cause pollution.



Property management

Planning and managing your rural property

Property plans can help you achieve your rural living goals by creating a platform for efficient and sustainable property management. This will help you in supporting a healthy landscape and prosperous region.

Property plans take a whole-of-property approach and are useful for both farmers and rural residential landholders.

A basic property plan guide is provided below to help get you started.

Your property plan guide

What do you want to achieve on your property? What is your vision?

Obtain a good map of your property. Aerial photographs are very useful as well as surveyor's

boundary plans, topographic and cadastral plans.

The map will need to be to a metric scale of a large enough size to clearly show the features of the property.

You should to identify the following:

- soil types and soil characteristics (e.g. pH, salinity, erodibility, phosphorus and nitrogen content)
- slope
- areas of natural vegetation and vegetation type
- streams, gullies, drainage lines and dams
- flood prone land
- erosion and salinity prone areas
- water and shade areas for stock;
- rock outcrops
- water supply
- climate, rainfall and seasonality

- landscape types and physical features
- current land uses.

Carry out a SWOT (strengths, weaknesses, opportunities and threats) analysis of the property's capabilities as follows:

- what strengths does the property have that you can take advantage of (for example, areas of high quality soils)?
- what weaknesses will need attention before they cause problems (for example, existing weed infested areas)?
- what opportunities are there to develop your resources further (for example, moving fence lines to improve management)?
- what threats exist that could affect the property (for example, potential erosion areas)?

On an overlay of the map, illustrate the permanent features such as the property boundary, waterways, bushland, structures and land types (i.e. the most productive soils to the least) and contours.

Use this information as a base. On another layer, sketch where features are wanted, for example, fences, productive paddocks, shelterbelts, woodlots, dams, troughs, lanes and gates. Rearranging fences according to land features can help you to use the land more efficiently.

Work out where planting needs to go to achieve maximum effectiveness for windbreaks, erosion control and repair, shelter, salinity reduction and to provide habitat for native birds and animals.

Write notes about:

- proposed land use
- planning for houses, sheds, stockyards, windbreaks, dams, roads and fence alignments
- methods to control and prevent weeds and pest animals
- methods to sustain or improve

water quality for stock and downstream users

- methods to control stormwater movement and prevent erosion
- reducing bushfire hazard, conserving soil, preserving trees
- treating and disposing of effluent and rural rubbish
- legal and planning requirements
- methods to improve water sources for stock
- methods and timing for proposed revegetation of disturbed areas.

Use the map, your notes, and information in this handbook to set goals and actions. Make a plan for how you can achieve these goals.

Prioritise your actions and then do them. Remember certain activities (for example, tree planting) should be timed to take into account seasonal conditions.

Constantly monitor, improve and reshape your goals as necessary along the way.

More information

To purchase or view aerial photographs of your property

visit the NSW Land and Property Information website at www.lpi.nsw.gov.au.

Free imagery (of lesser quality) can also be obtained through Google Earth www.earth.google.com or via the Department of Lands Spatial Information Exchange website www.six.nsw.gov.au.

Greater Sydney Local Land Services can be contacted by visiting its website or calling your local office.

Agricultural advice

Establishing and managing an agricultural enterprise whether it is as a hobby or a primary source of income can be a daunting and complex task.

There are many agricultural opportunities suitable for the Greater Sydney region and with the right approach they can be very rewarding in terms of both profitability and lifestyle.

Getting the right advice for your individual production system is vital.

There are many private and public sources of information, ranging from private agronomists and livestock consultants, DPI staff to Local Land Services Officers.

Improving your skills

Knowledge about sustainable land management is growing rapidly. Getting up-to-date, accurate information will help you manage your land effectively and avoid problems.

Landcare and producer groups provide a good way of building knowledge and sharing experience and there are many quality publications available.

Government departments are also an excellent source of information.

Think about what training you need to manage your land appropriately.

Many courses are available covering animal and horticultural production, farm and environmental management, chemical use,



There are many agricultural opportunities suitable for the Greater Sydney region and with the right approach can be very rewarding in terms of both profitability and lifestyle.

property management planning and fencing techniques.

TAFE conducts rural studies courses including:

- wool classing
- sheep shearing
- horticulture
- viticulture
- agriculture (including crop and livestock management)
- aquaculture
- natural resources and environmental management
- forestry.

Greater Sydney Local Land Services also run regular one-day courses and field days on a variety of topics.

NSW DPI also offers a large range of courses. With topics and focuses changing all the time, the best place to find information is on the DPI Profarm website: www.nsw.dpi.gov.au/agriculture/profarm.

Stock

Stocking rates

Overstocking can be a quick route to destroying your pastures and bushland and depleting the health of your animals.

When starting out, seek advice from your Local Land Services Office or NSW DPI and consider the whole environment of your block.

Always keep at least 70 per cent pasture cover (more if possible) to avoid erosion and degradation. If feed is scarce fence your trees so that stock do not ringbark them.

You should make an effort to correctly identify appropriate stocking rates for your property.

This takes into account the pasture or vegetation composition, type of production system, local climate, geography of your property and your property layout.



Animal welfare

The RSPCA promotes 'Five Freedoms of Animal Welfare', as follows:

- freedom from hunger and thirst
- freedom from discomfort
- freedom from pain, injury or disease
- freedom to express normal behaviour
- freedom from fear and distress.

Owners can be prosecuted by the RSPCA if they do not meet the needs of their animals.

If you have stock you should ensure they always have access to water and feed and shelter from wind, rain and hot sun.

Animal nutrition

Animals need a balanced diet to maintain health and a good level of production. The following section is an overview of the basics but if further information is required contact your Greater Sydney Local Land Services District Veterinarian or an animal nutritionist.

Energy provides the body's ability to do work. It is mainly produced when carbohydrates (in plants and grains) are broken down. Fats and protein also provide some energy. It is needed for maintenance, growth and reproduction.

Too much energy in feed can lead to animals becoming overweight which is not ideal especially if they are pregnant. Not enough energy can lead to starvation.

Protein is used for the building blocks of the body. It is most important for growth, reproduction and production of muscle tissue (meat), wool, milk and immunity.

Fibre/roughage is needed to aid digestion. No nutritional value is gained from the indigestible fibre but is still an essential component of the diet which keeps the gastrointestinal tract healthy.

Vitamins and minerals are required for various body functions and processes. Amounts required vary with the animal's stage of production and if minimum levels are not met, this may result in decreased production, reduced fertility and possibly metabolic problems and disease.

Toxic plants and weeds

There are many plants which can poison or cause disease in animals. Even some normal pasture species may be toxic in one part of their life cycle.

Animal diseases can have a wide range of clinical signs ranging from skin problems to death. It is advantageous to have a broad knowledge of toxic plants and your district vet can help identify samples if you are unsure.

Pigs and poultry

There are many proprietary products developed to feed pig and poultry species which eliminate much of the guess work.

If you are going to design your own food mix you must ensure it is properly balanced. It is wise to contact an animal nutritionist, livestock officer or Local Land Services District Veterinarian to ensure the right food balance for the species.

Swill feeding of pigs is illegal in Australia. Swill consists of meat products, carcasses or part of any bird or mammal carcass, the excrement of any bird or mammal, household, commercial or industrial

waste or anything that has been in contact with a prohibited substance.

Feeding swill to pigs can lead to the outbreak of serious diseases.

Ruminants

Ruminant animals are defined by the structure of their gastrointestinal system. They include animals such as cattle, sheep and alpacas and have an organ called a rumen, which allows the animal to process fibrous foods such as pasture.

A good quality pasture will provide all of the nutritional requirements of ruminants.

However not all pastures can be classified as good quality. Poor quality pasture will require supplementation.

Try to match the supplement to the deficiency occurring. The supplement could be an energy supplement (for example, grain or roughage), a protein supplement (for example, protein meals, protein/oil seeds like lupins or cottonseed), vitamin/mineral supplements (for example, for deficiencies) or a combination.

With most supplements, especially grain, animals must be gradually accustomed to the ration to prevent

digestive upsets. Before embarking on a supplementary feeding regime you should contact your local NSW DPI officer, animal nutritionist or veterinarian.

Horses

As large grazing animals, horses can have a significant impact on your property if not well managed.

Horses require constant access to feed to avoid developing ulcers and other health problems. However they are also prone to obesity if over fed or fed the wrong type of feed.

Horses are best suited to low sugar, high fibre pastures. Pasture, soil and manure management are key to providing the best environment for your horse.

Many regions with high numbers of horse properties are starting equine specific landcare programs. Contact your Local Land Services office for more information.

Pastures

Getting the right, productive and biodiverse pastures are vital to any grazing system.

Often the best pasture mix is made up of native grasses, 'naturalised' grasses and legumes such as clover.

While this sounds simple, managing pastures is often very complex. There are however many sources of information.

Greater Sydney Local Land Services can give you advice on where to find the best information on pasture composition based on your individual agricultural system including geological constraints, climate and soil conditions.

Fences

Fences are vital to successfully managing your property.

You should consider the layout of fences in your property plan.

You can use fences for a range of purposes, including:

- defining the boundaries of your property
- managing stock



- protecting the environment, for example, to keep stock out of native vegetation or away from rivers and streams
- controlling pest animals
- increasing the value of your property
- erosion and vegetation rehabilitation.

There are different fence construction methods depending on what the fence is for. For fences to do their job properly, you need to maintain them and keep gates shut and secured.

What can you do to make fences more wildlife friendly?

Some fences can adversely affect native wildlife. To minimise impacts:

- use plain wires instead of ring lock or hinge joint
- if possible use white horse sighter wire on the top strand and white caps on steel posts, or treated pine posts
- leave 30 cm between the top wire and the next one down. This is important to avoid kangaroos trapping their legs between the two top wires
- don't use barbed wire as birds and gliders are often caught and killed on them. If existing fences have barbed wire, consider taking that wire out, particularly the top strand
- keep fences at a moderate height, for example, approximately 1.2 m
- keep the bottom wire 15 cm above the ground level
- avoid permanent electric fencing. It can form a significant barrier to wildlife movement, and electrocute native animals on low-level live wires
- structures such as wombat gates and pipe underpasses can help wildlife to pass without damaging fences. Check where wildlife is moving through before installing new fences
- see www.wildlifefriendlyfencing.com.

Flood-prone fencing designs

In flood-prone areas you should consider the following:

- design paddocks to avoid fencing across waterways where possible
- try to place fences above the floodplain and flood-prone areas
- use temporary electric fencing instead of permanent fencing
- minimise the use of vertical structures (plain wire fences tend to need less maintenance in flood-prone areas than ring lock or mesh as debris is less likely to get caught).

Dividing fences

The Dividing Fences Act 1991 sets out how the cost of a dividing fence is shared between adjoining landowners where an owner wants to erect a dividing fence or wants to work on an existing dividing fence.

The Act sets out minimum requirements and owners may agree to arrangements exceeding these requirements.

The Act also sets out the procedure to resolve disputes about the cost, type and position of a fence.

NSW Land and Property Information administer the Dividing Fences Act 1991.

However this responsibility is limited to administration matters.

The Department does not provide advice about fencing disputes and it does not provide legal advice about the provisions of the Act.

You should seek advice about these matters from other sources including Legal Aid Services, the Chamber

Magistrate at the local courthouse, LawAccess NSW, Community Justice Centres or private lawyers.

More information

Grants may be available to help with fencing and off-stream water provision. Contact NSW Land and Property Information, Greening Australia, Greater Sydney Local Land Services or your local Landcare Coordinator for more information.

References for fence building, including the publication 'Fencing', are available on the internet at www.tocal.nsw.edu.au/publications.

The National Heritage Trust publication, 'Cost effective feral animal exclusion fencing for areas of high conservation value in Australia', is available at the Department of Environment website at www.environment.gov.au/biodiversity/publications.

For more information on dividing fences see the NSW Land and Property Information website at <http://www.lpi.nsw.gov.au/>.



Council rates

Rates are a tax levied on a community to meet the cost of services provided by the council. Rates are not a charge for individual services supplied. In this way, they are similar to income tax, as well as in the way they are determined.

Council rates depend on the valuation assessed on your property and on the rate per dollar set by the council when it finalises its annual budget.

The valuation process

The Valuer General's Department regularly values all houses, shops, factories and rural properties in NSW. The basis for valuation is the same for all properties. The valuation is made at a common date, for instance 30 June 2011.

This means that the values determined are based on prices, rents and conditions that prevail on that date.

The valuation does not create value and it does not create rates.

The valuation is a way to equitably share council's rate requirements among all ratepayers based on the value of their property.

Valuations are updated every four years, as required by state legislation.

Other supplementary valuations take place between those dates where some change has occurred to the property that affects its value, such as extensions or subdivision of land.

For more information about land valuation see the NSW Land and Property Information website at www.lpi.nsw.gov.au.

Any problems

If you have any questions about what appears on your rates notice call your local council. You also have the right to object to the valuation and ultimately appeal.

Local Land Services rates

Greater Sydney Local Land Services assists in the management of animal health, noxious pest animal and insect control, travelling stock reserves, stock movement, stock identification, livestock and disease management.

Besides council rates, some owners of rural holdings must also pay Local Land Services rates.

Rates are charged on a two-tier basis, involving a general rate paid by all landholders and a supplementary animal health rate.

Each region has a minimum rating area for properties.

If you own or occupy rateable land you must:

- pay rates which are levied on rural land over a certain number of prescribed hectares
- lodge an Annual Return on Land and Stock by 31 August each year
- advise your relevant Local Land Services office if you change your postal address.

Greater Sydney Local Land Services rates are used to:

- control pest animals and declared pest insects
- identify stock – Greater Sydney Local Land Services supports the National Stock Identification System through the administration of Property Identification Codes and saleyard inspections;
- Manage outbreaks of notifiable livestock diseases
- document stock movements
- control stock on roads
- manage the natural environment and catchment health
- provide agricultural advice
- provide veterinary assistance to livestock owners.

More information

For more information regarding Local Land Services rates visit greaterSydney.Local Land Services.nsw.gov.au/about-Local Land Services/annual-rates

Property Identification Codes

It is a requirement in NSW for owners of livestock such as cattle, sheep, horses, goats and pigs to have a Property Identification Code (PIC) when trading or moving animals. A PIC is a unique eight-character number assigned by Local Land Services to properties with livestock.

Obtaining a PIC

To obtain a PIC you must complete and lodge an application form, available on the Local Land Services website

Why do I need a PIC?

PICs are fundamental to the operation of the National Livestock Identification System (NLIS).

PICs provide traceability of stock to specific properties, which is important in the event of a disease outbreak or emergency such as bushfire.

NLIS is a part of federal and state government biosecurity strategies to trace meat from paddock to plate and to safeguard our domestic and export markets.

All states and territories have a PIC system to identify properties where livestock are kept.

More information

All the information required for landholders regarding PICs can be found at <http://www.lis.nsw.gov.au/livestock/pics>

NSW DPI also provides more information on the national Livestock Identification System at www.dpi.nsw.gov.au/agriculture/livestock/nlis

Stock on roads

You need a permit from Local Land Services to move your stock along a public road whether on foot or transported by vehicle.

Routine movements on a more frequent basis are covered by an Annual Stock Movement Permit.

Straying stock on public roads can be very dangerous. If there is an immediate threat to the public from straying stock (such as cattle on highways) the police should be notified. In other circumstances the local council is responsible.

Absentee landholders

As a landholder you are responsible for looking after the environment of your property and making sure you do not contribute to problems on your land or surrounding properties.

People often come to properties not understanding what land management involves and they may over-extend themselves and end up damaging the land and environment.

Many rural properties do not have permanent residents.

These properties may have been purchased as weekend retreats and can be left vacant for large portions of the year.

This absence raises potential management problems including:

- increases in weeds and pest animals
- unmanaged erosion
- boundary fence failures
- failure of the effluent management system due to lack of use
- fuel build up causing a potential bushfire hazard
- straying stock
- inadequate care of stock.

These problems can also impact neighbouring properties causing land degradation and tension between neighbours.

Council may also place notices and fines on such properties. If you are an absentee property owner, to avoid these potential problems, consider some of the following options:

- visit your property on a regular basis
- make arrangements with farm contractors or a farm manager to care for your land while you are absent
- negotiate with surrounding landholders to carry out work on your property, perhaps in return for agistment rights.

More information

Greater Sydney Local Land Services has a program specifically for absentee landholders. Your local Council or Weeds Authority can also help.

Chemicals

Chemicals such as fuel, fertiliser and pesticides are commonly used to help in the process of managing rural properties.

These chemicals can be dangerous. Some are flammable, most are poisonous and all can be harmful to the environment if used incorrectly.

They can pollute land and waterways, particularly if they are stored or used near creeks and rivers.

There is a legal requirement to read the label on all chemical substances and follow the directions provided.

This is necessary to ensure the safety of you, your family and your stock. Considerable fines can be imposed for failure to transport, store, apply and dispose of chemicals and containers properly.

There are also requirements under the NSW Pesticides Act 1999 to keep records of pesticide use and for pesticide users to undergo training.

Advice is available from the NSW Office of Environment and Heritage (transport and disposal training), NSW WorkCover (use and storage)

and local council (general information).

Storing chemicals

A farm chemical store needs to have the following features:

- a separate, well-ventilated cupboard or building used only for this purpose located away from houses, pumps, tanks, waterways and animals and preferably fire proof
- copies of labels and Material Safety Data Sheet (MSDS)
- a cool, dry storage place
- some form of spillage containment or bunding
- shelving made of impervious materials - for small quantities of chemicals place containers in drip trays
- liquids should not be stored above solids
- a locked storage area
- clearly sign-posted storage area, for example, 'Chemical Store – Keep Out' and a no smoking sign.

Transporting farm chemicals

Everyone transporting chemicals has a duty of care and responsibility to carry out tasks in a manner that will not cause harm or injury to themselves, other people, their property, animals and the environment.

Before moving chemicals, read information on the transport

All livestock owners/ managers, and occupiers of land which carries cattle, sheep, goats, pigs, deer, camelids, equines (i.e. horses and donkeys) and poultry must have a PIC regardless of whether the livestock are moved or not.

requirements which are found on the label or Materials Safety Data Sheet. When collecting new containers of chemicals, check them carefully for damage and tighten lids to prevent leaks.

Make sure your vehicle is roadworthy and can safely transport chemicals. Put chemicals inside a tray of some kind that will contain any spillage.

Do not put chemicals in the same compartment as the driver and passengers, food, drinks or animals. Vapours and spills can cause illness.

Do not transport items classified as dangerous goods in large quantities. Private vehicles should transport less than 100 kilograms or 100 litres of farm chemicals at a time.

Pack the load securely so items can not move or fall over and store different classes of chemicals apart. Take the most direct route.

If any spills occur clear the vehicle immediately. The main steps for dealing with a spill are to isolate, contain, decontaminate and dispose.

If chemicals enter drains, you should contact the local fire brigade and council immediately. Make sure you use appropriate clothing and gear to protect your skin and face and to avoid inhaling vapours.

On arrival put containers straight into the chemical store. Make sure containers are not damaged.

Cleaning containers for disposal

You should rinse containers on fallow ground away from drains and waterways and always wear personal protective equipment as specified on the label for applying, mixing and loading the pesticide.

To ensure your containers are suitable for delivery to a collection centre always follow these procedures:

- Triple or pressure rinse your containers immediately after

use and pour the rinse water back into the spray tank

- Thoroughly clean the container thread and outside surfaces with a hose into the spray tank. Rinse all caps separately into a bucket of clean water and pour rinsate into the spray tank
- Inspect the container, thread and screw neck to ensure all chemical residue has been removed
- Puncture metal containers through the neck/pouring opening and through the base of the container.
- Allow containers to drain completely and air dry them over a number of days.

DO NOT DISPOSE OF CHEMICALS IN ANY FORM DOWN DRAINS, GULLIES OR WATERCOURSES.

Safe disposal of non-returnable containers and on-farm chemicals

Disposal of non-returnable crop production and on-farm animal health chemical containers is a significant problem for farmers. If you use agricultural chemicals you are legally responsible for ensuring empty containers and unwanted chemicals are disposed of safely.

National programs like drumMUSTER and ChemClear have been set up to help landholders safely manage their farm chemicals. The drumMUSTER program collects and recycles cleaned eligible containers.

You can store rinsed containers in a safe location until the next drumMUSTER collection is advertised in your area. The rinsed containers can also be taken to some council landfill depots.

For more information about drumMUSTER call 1800 008 707 or go to www.drummuster.com.au.

The ChemClear service collects and disposes of unwanted currently registered rural chemicals. This program features a web based booking system and free call number 1800 008 182.

Keep all chemicals in an area specially designed for this purpose. Safe storage maximises the life of pesticides and protects people, animals and the environment.

More information can be found at www.chemclear.com.au or by contacting your local council.

More information

The NSW DPI has leaflets and booklets available to guide farmers in the safe handling of chemicals.

The 'Spray Sense' leaflets offer advice on reading pesticide labels, transporting and storing chemicals, and disposing of empty containers.

These documents are also available online at www.dpi.nsw.gov.au/agriculture/farm/chemicals.

Information and codes of practice are also available from NSW WorkCover at www.workcover.nsw.gov.au.

Training in chemical use

Training courses are available through ChemCert NSW. The two day Accreditation (AQF 3) course for farm chemical users covers topics such as integrated pest management, the product label, chemical formulations and residues, personal safety, transport, storage and handling, environmental safety, legislation, risk management and record keeping.

More information is available at www.chemcert.org.au. TAFE NSW offers Smartrain Certification courses which cover storage, transportation, mixing and use of chemicals in accordance with the Code of Practice for the Safe Use and Storage of Chemicals in Agriculture (which can be downloaded from www.workcover.nsw.gov.au).

For more information contact TAFE NSW on 131 601.

Information about training for the safe handling of chemicals is also available at www.epa.nsw.gov.au/pesticides/training.htm.

Farm Safety

Rural properties can be dangerous places to live and work.

Potential hazards include vehicles, tractors and attachments, motorcycles and all-terrain vehicles, working from heights and the potential for manual handling injuries.

Farming is the third most dangerous occupation in Australia.

More than 80 people die from farming related injuries each year. The number of non-fatal injuries is much greater - several thousand.

Injuries to part-time farmers are a concern. Often part-time farmers do not have the skills or equipment of full-time farmers and can be injured as a result.

Preventing rural injuries

Just like any work environment, there are legal requirements on a farm under the Workplace Health and Safety Act 2000 to ensure a safe workplace.

Be aware that ordinary home and contents insurance does not cover public liability or workers compensation which is compulsory if you employ anyone to work on your property.

The WorkCover website www.workcover.nsw.gov.au has information on preventing injuries on rural properties.

Two key documents available from the website are:

- Farm Safety - Starter Guide



- 15-minute Farm Safety Checklist.

Some of the tips from the Farm Safety – Starter Guide include:

- map the hazards on your property. You can use the map as an induction tool for new employees and casual workers or contractors who come to the property
- identify the dangers on your property. Use this four step approach:
 1. identify the dangers (identifying the hazards)
 2. work out what harm the hazard can cause (assess the risks)
 3. get rid of the hazard or control it (control the risks)
 4. review your risk assessment on a regular basis.

It is important all workers and all family members are included in the process. When something on the property changes, repeat the four steps.

Is your farm safe for kids?

Farms are great places for kids when we create the right environment, but safety for children on farms is a major concern.

On average, one child under 16 years is fatally injured on an Australian farm every 10 days and many more are injured across rural Australia. The major causes of child deaths and injuries on farms are dams, farm vehicles, machinery, motorcycles and horses.

You need to identify hazards



and risks specific to the farm for children as well as visitors. As well as safety behaviours, you should reduce hazards and design for safety wherever possible.

Key recommendations for child safety on farms include:

- create a securely fenced house yard for children to play
- have safety rules everyone knows and follows
- children should stay in the safe play area unless an adult can closely supervise them on the farm
- wear seatbelts and restraints when in cars, utes and trucks
- children should not ride on tractors, all-terrain vehicles or in the back of utes
- always wear helmets when riding bikes and horses.

More information

Further information and resources can be found at the Farmsafe NSW website www.farmsafe.org.au.

Further information about farm safety can be found on the NSW DPI website www.dpi.nsw.gov.au/agriculture/farm/safety.

Safety on rural roads

Road condition

Road surfaces in rural areas are often less predictable than highways and city streets. Be alert at all times as the road surface may change without warning, sharp corners may not always be sign-posted, and the crests of hills may reduce visibility. Always be on the look out for stock and native animals.

Scan the road ahead. You are likely to have shorter lines of sight and will require faster reaction times to evade unexpected situations.

Be aware tyres of other vehicles may throw up stones that crack your windscreen.

Drivers need to use different skills on gravel and unsealed roads. Dust can reduce visibility and it takes longer to stop when braking.

Bends and curves can have a build up of loose dirt or stones which reduce traction and roads are often narrow. Slow down and be on the look out for other vehicles.

Anti-lock braking systems are not as effective on loose surfaces and it is recommended you turn off the cruise control, reduce your speed and give yourself a lot more stopping space when driving on rural roads.

Keep left, slow down, and take extra care on crests and corners to avoid collisions.

Other road users

School buses, cyclists, trucks, slow moving farm machinery and animals use rural roads. All are legitimate road users so be patient when you come across them.

Most drivers will recognise when they are holding traffic up and pull over when safe to do so for vehicles to pass. Take care when approaching rail crossings. Not all crossings are fitted with safety lights and boom gates.

Livestock on roads

With a permit it is legal for livestock to walk along roads and graze on roadside vegetation, provided they are not left unattended and the stretch of road where they are grazing is sign-posted at each end.

Rural injuries can be largely prevented by paying attention to 7 major risk areas:

- **tractor and machinery safety**
- **farm vehicle safety**
- **farm motorcycle safety (including all terrain vehicles)**
- **working from heights safety**
- **chemical safety**
- **manual handling safety and strain injury prevention**
- **farm animal handling.**

Livestock often need to be moved, so you can expect to be sharing the road with farm animals from time to time.

All rural landowners who own even just a few livestock must ensure their roadside fences are kept in good condition.

Domestic livestock are not allowed to roam unattended. Straying stock on public roads may be dealt with by council, the police or RSPCA.

Roadside vegetation and wildlife

There are many large trees located close to rural roads, which are easily hit when drivers lose control of their vehicle.

Remember to slow down and drive to the conditions.

Native vegetation adjacent to many rural roads often acts as a wildlife habitat and refuge. This can be a problem for drivers from dusk to dawn when native animals, such as kangaroos and wombats, are out looking for food.

If you hit an animal, check if it is alive and if it has any young. Contact an animal care organisation such as WIRES if the animal/s can be rehabilitated or need to be euthanised. You can contact WIRES on 1300 094 737.

If the animal is dead, move it to the side of the road if you can. Be careful of your own safety with traffic while moving the animal.

Remember to always wear a seatbelt and a helmet no matter how far you are driving or riding, even if just across the paddock.

Local information

More information about rural road safety can be found at the Roads and Maritime Services website at www.rms.nsw.gov.au/.

Mental health

Living and working in regional, rural or remote Australia can be a very rewarding and challenging way of life.

People living in regional, rural and remote areas are known for being down-to-earth, practical and resilient.

But living away from metropolitan areas can be difficult and sometimes isolating and it is important to ask for help during tough times.

If you are feeling stressed, are down or know someone who is, help can be found at www.lifeline.org.au or by calling 13 11 14.

Waste management

It is important to dispose of waste in an environmentally responsible way. Dumping waste in eroded gullies is not acceptable.

Rural properties produce a wide range and significant amount of waste and its successful and environmentally-friendly disposal requires good management.

Rural waste typically includes domestic waste, solid waste (for example, wire or old white goods), farm chemicals, oil and dead stock.

Domestic waste

Details of local domestic waste removal can be sought from your local council.

Recycling and reuse

Contact your local council for details of recycling services. You can usually recycle a large number of materials including:

- paper and cardboard
- plastic bottles (usually types one through to seven)
- steel cans (including aerosol cans and paint tins)
- aluminium cans
- glass jars and bottles
- juice and milk cartons
- aluminium foil.

Composting

Almost half of our domestic waste consists of kitchen and garden waste. Most of this material can be composted.

Composting is nature's own recycling program. In time, organisms will break down the waste into a rich, dark, crumbly compost that is a nutrient rich fertiliser.

Home composting generally takes two months or more. The more you turn and mix the contents, adding air in the process, the more rapidly the composting action will happen.

The compost can then be added to the garden to increase productivity.

What can be composted?

- 'greens' including grass cuttings, non woody garden prunings, weeds that have not gone to seed, leaves, flowers and vegetable remains, kitchen wastes (including egg shells and bread), herbivore animal manure – horse, chicken and cow (avoid other animal droppings)
- 'browns' including paper and cardboard, wood fire ash, sawdust, wood shavings, vacuum dust and hair.

You can make compost either in a heap or a bin, depending on quantity. Minimum dimensions for a heap are one metre by one metre.

You can enclose the heap using bricks, timber or metal, such as corrugated iron. Cover with a lid or piece of carpet to retain heat.

A compost bin is better for small gardens. Your compost heap or bin should be placed in contact with the soil to allow worms and decomposing insects and micro-organisms to enter the compost.

Collect all liquid waste in your kitchen as well as your food scraps. Your compost 'soup' will provide some of the water necessary for the composting process. Rain will provide further water, so take the cover off your compost bin while it's raining.



Composting returns nutrients to the soil that would otherwise be lost, improves soil structure and increases the water holding capacity of the soil.

You may need to cover your compost heap during heavy rain to prevent it from being flooded.

More information is available from your local council or from the NSW Office of Environment and Heritage.

Landfill

A landfill site should be the last resort for waste disposal on rural properties. Waste management facilities should be used wherever possible.

If you think a landfill site is appropriate contact your local council or the NSW Office of Environment and Heritage for advice.

Burning

Burning waste, such as household rubbish and garden clippings, has a negative impact on air quality.

Measures have been introduced over time to control backyard and other open air burning.

These have been successful in reducing average levels of particle pollution. The laws are different for burning for fire hazard reduction and burning for the disposal of waste.

Burning is prohibited in many areas (contact your local council for details).

The fire ban season generally runs from October to March but can vary according to conditions. You should carry out any burning in a way that prevents or minimises air pollution.

You need a permit from the Rural Fire Service for pile burning. You may also need a permit from your local council, so contact them before conducting any burn.

Regardless of the time of year, you must notify the Rural Fire Service and your adjoining or nearest neighbours prior to conducting burning activities.

Wood smoke and heating

Smoke from wood heaters adds to air pollution. The following measures will help to minimise pollution, improve local air quality, care for your health and save money.

- if you are buying a new heater check the compliance plate on the back to ensure that it meets the current Australian Standard AS/NZS 4013:1999

- check your wood heater complies with your relevant local council policy
- always burn small logs of aged (8–12 months) dry hardwood. Unseasoned wood (green wood) has more moisture making heaters smoke
- store wood under cover in a dry ventilated area and away from buildings
- never burn rubbish, driftwood or treated or painted wood - it can pollute the air and be poisonous
- when lighting a cold heater, use plenty of dry kindling to establish a good fire quickly
- stack wood loosely in your firebox so air can circulate - do not cram the firebox full
- keep the flame lively and bright. Your fire should only smoke for a few minutes when you light it and when you add extra fuel. Open the air controls fully for five minutes before and 15–20 minutes after reloading
- do not let your heater smoulder overnight. Keep enough air in the fire to maintain a flame
- clean the chimney every year. Check your chimney regularly. If there is smoke coming from the chimney, increase the air supply to your fire.

You could also use solar power, green power (electricity produced from renewable energy sources) and gas, as they are cleaner alternatives to wood heating.

Dead stock disposal

If the cause of death of an agricultural livestock animal is unknown, local vets, or in the case of large numbers of losses, your Local Land Services district veterinarian may offer services to diagnose the carcass if you make contact in a reasonable timeframe.

Whether one or more animals are to be disposed of, disposing of dead stock carries the risk of polluting watercourses, producing odours, spreading disease and interfering with community amenity.

If possible, carcasses should be used or rendered. If the animals are to be slaughtered, local abattoirs and knackeries should be contacted to find out the cost of getting them to do the work.

If you have to dispose of carcasses on the farm it is important to do the job quickly and thoroughly. Burning is rarely satisfactory - burying is better.

However, with certain exotic diseases burning may be mandatory. Contact Greater Sydney Local Land Services if you are unsure of what to do.

More information

The recommended method to dispose of dead stock can be found at the NSW Environment Protection Authority website at www.epa.nsw.gov.au/mao/deadstockdisposal.htm

Details of the Protection of the Environment Operations (Clean air) Regulation 2002 and the Rural Fires Act 1997, are available at the NSW Office of Environment and Heritage website at www.environment.nsw.gov.au.

Effluent management

Failing on site effluent management systems release dangerous levels of sewage pollution to the environment.

Sewage pollution can contaminate water, spread disease and lead to environmental degradation.

There are over 13,000 on site effluent management systems across NSW and the cumulative impact of effluent, sometimes from thousands of systems is a critical problem. Sewage pollution is evident in different areas across the state often near waterways and in drinking water catchments.

Small domestic sewage management facilities or on site effluent management systems include all types of human waste storage facilities.

There are a number of different types. With advances in the performance of on site effluent management systems, there is no

reason for the community to accept failing systems.

Research shows many people do not know how to manage their systems and around 70 per cent of systems fail to meet environmental and health protection standards.

Septic Safe

The NSW Government has introduced local government reforms and guidelines for efficient management of small domestic sewage facilities.

Septic Safe is a state-wide partnership between the NSW Government and councils to address the issue. Councils regulate the installation and operation of on-site effluent management systems under the Local Government Act 1993.

Regulations under the Act specify performance standards and require councils to supervise the operation of on site effluent management systems.

If you have an on site effluent management system you must obtain an approval to operate from council. As the owner you are responsible for the system's operation.

Therefore you must maintain and manage the system in accordance with health and environmental performance standards.

The performance standards are necessary to:

- prevent the spread of disease by micro-organisms
- discourage insects and vermin
- prevent sewage contamination of waterways and ground water
- prevent degradation of soil and vegetation
- prevent the spread of odours
- minimise adverse impacts on neighbours and the amenity of the land
- ensure good water conservation practice and appropriate re-use of natural resources (including nutrients, organic matter and water).

To support these performance standards landholders must ensure:

- people do not come into contact with sewage or effluent (whether treated or not) in their ordinary activities on the premises concerned
- effluent is not discharged into any watercourse or onto any land other than a designated effluent application area
- whatever system of effluent management is used, it is well maintained and operated in a sanitary condition
- relevant information is provided to council when requested
- you have lodged an application for approval to operate, and paid the scheduled fee for registration and assessment costs.

Depending upon where you live in the region there are different requirements in regards to placement of effluent management areas.

The general recommendation is for a buffer distance to be at least 100 m from permanent water (rivers creeks, lakes etc), 250 m to a domestic groundwater well and 40 m to other waters such as dams, seasonal water courses and drainage depressions.

There are other influences such as property size, soil type and slope that can change how your system is installed or managed. To ensure your system meets approval and minimise the risk of pollution, talk to you local council environmental health officer.

How to maintain a healthy effluent management system - some easy tips

Many of these suggestions help reduce the volume of wastewater going into the effluent management system and help avoid the use of chemicals that interfere with how well the effluent management system works:

- in the laundry, if you have a number of loads of washing spread them over a couple of days. This will avoid flooding the system with large amounts of water at one time
- use low phosphorous or phosphorous free detergent. Phosphorous is a major pollutant of waterways and contributes to the growth of algal blooms
- repair leaking taps and cisterns and install a lint filter on the washing machine – a stocking over the outlet hose will do. Make sure to clean it regularly
- if you have a blocked drain, use boiling water or a drain eel to clear the line. Don't use caustic soda or drain cleaners in a septic tank as they kill "good" bacteria
- use front loading washing machines as they use less water and detergent
- in the kitchen, use a sink strainer. Food scraps slow down the digestion process and make solids build up more quickly. Don't pour oils and fats down the sink as they can block the system
- in the bathroom, install a low-flow shower head to save water
- repair leaking taps and minimise the use of commercial cleaners and bleaches – these interfere with the bacterial breakdown in the tank. Try using baking soda, vinegar or a mild soap
- do not flush anything down the toilet that could block the system. Install a efficient toilet cistern – aim for four stars or higher
- around the tank and trench area, keep water from the roof downpipes and paved areas away from the absorption field
- have a plumber fit an effluent filter to the septic tank outlet to keep solids in the tank and extend the life of your trenches
- planting lawn, trees and shrubs around an effluent disposal area will greatly increase the system's efficiency
- only plant grass near the absorption field – roots from larger plants such as trees and shrubs are likely to damage the trench. Mow regularly
- do not use scoria, pebbles, pine bark mulch or plastic underlay as they inhibit evaporation and air movement in the soil
- do not drive or park on any part of the absorption area and keep livestock away. These will compact the soil and may crush the pipes and trench domes
- grow plants with high nutrient requirements near the drain fields and irrigation areas.

More information

Contact your council for advice on installing and maintaining an effluent management system.

Research shows many people do not know how to manage their on site effluent management systems and around 70 per cent of systems fail to meet environmental and health protection standards.

Biosecurity

Biosecurity means protecting the economy, environment and community from the negative impacts of pests, diseases and weeds. Biosecurity is essential to ensuring the safety, wellbeing and prosperity of all people.

Biosecurity is considered a shared responsibility, that is, everyone is responsible for good biosecurity.

General Biosecurity Duty

The General Biosecurity Duty refers to the fact that we all have a duty to take biosecurity matters seriously and as far as is practical work to prevent, eliminate or minimise possible biosecurity risks. Full details of the General Biosecurity Duty can be found in Part 3 section 22 of the NSW Biosecurity Act.

Australia is in a unique position because of its isolation and strong quarantine regulations. We have managed to remain safe from many threats as a result of this.

NSW by extension has been able to maintain good biosecurity measures.

Changes in a number of external factors have meant that we must be more vigilant about strengthening our measures and upholding biosecurity.

Local Land Services works with landholders, industry and the community to uphold biosecurity.

Disease control

In addition to international borders we must also make a concerted effort to protect NSW from risks that are in other states and territories.

Controlling the spread of diseases in our plants and animals protects productivity, profitability as well as protecting the safety of all plants, animals and humans in NSW.

Pest control

Local Land Services also works with private and government stakeholders to develop vertebrate pest management

plans and cooperative management programs.

Species currently declared pests in NSW are:

- wild rabbits
- wild dogs
- feral pigs
- european foxes
- a number of locust species (the Australian Plague, Spur-Throated and Migratory).

Under the Local Land Services Act 2013, all land managers in NSW, whether on public or private land, have an obligation to control declared pest species on their land.

Mice are classed as nuisance animals in NSW and while there is no obligation for a landholder to control these species, Local Land Services can provide advice and assistance in their control.

How Biosecurity Officers can help?

At a local level, Local Land Services Biosecurity Officers:

- provide advice with regard to eradicating declared pest species
- coordinate management plans to control vertebrate pests
- inspect properties for declared pests and help you to develop a plan to control pest populations
- provide advice on controlling nuisance animals – either through group baiting programs (organised with your neighbours) or individual control methods
- help you obtain suitable control options.

Many Biosecurity Officers also play a livestock health role, particularly through their role as stock inspectors.

They also handle stock movement permits and stock identification.

Biosecurity officers also form part of our rapid response effort

in disease outbreaks such as Equine Influenza.

More information on pest control can be found on the Local Land Services website <http://www.lls.nsw.gov.au/biosecurity/pest-control>

Purchasing baits

Local Land Services staff will be able to advise you on purchasing baits such as meat, carrots, grain and pellets, depending on your needs.

Joining a group control program

It is recognised that coordinated group control programs are the most effective method of controlling pest animals across the landscape.

Each year, Local Land Services Biosecurity Officers coordinate hundreds of group programs using a variety of control methods.

Landholders are encouraged to participate through newsletters, field days and other promotions.

To find out more about group control programs in your area contact your local office.

1080 and Pindone course

Greater Sydney Local Land Services runs short training courses which enables landholders to use 1080 and Pindone baits on their properties.

The three hour course gives landholders a clear understanding of 1080 and Pindone use and their legal obligations.

The AQF chemical application courses remain a requirement for use of any other pesticide.

The training courses are delivered by our Biosecurity Officers and cover topics such as baiting techniques, toxicity, storage, transport, legislation and Work Health and Safety obligations.

Those completing the courses are issued a certification card and remain accredited to use 1080 and Pindone for five years.

A small fee is charged for the courses.

Any landholder interested in attending a 1080 and Pindone training course should contact their Local Land Services office for more details.

Plant diseases

Protecting NSW from the threat of plant diseases requires on-going vigilance on behalf of all farmers and landholders.

There are clear regulations that have been put in place to restrict the spread of diseases that already exist in other parts of Australia such as potato cyst nematode or lupin anthracnose.

Early detection and constant caution when dealing with plant diseases is important. Regularly check your plants for anything unusual and keep up to date with current risks.

Adhere to the recommended notion of 'come clean go clean' as set out by the NSW DPI, when visiting other properties or receiving visitors.

If you notice anything unusual or are aware of a plant threat, call the Exotic Plant Pest hotline on 1800 084 881.

Quarantine conditions apply to the movement of fruit, vegetables, nursery stock, flowers, plants, soil, seeds and timber.

Find out what quarantine regulations apply to you by viewing the travellers' guide to interstate quarantine at the Quarantine Domestic website, domesticquarantine.org.au or calling the Quarantine Domestic hotline on telephone 1800 084 881.

Animal diseases

One of the biggest risks of animal diseases is zoonosis.

These are infectious diseases that can be spread from animals to humans. As many as 75 per cent of new human diseases found are zoonotic, such as anthrax, avian influenza, hendra virus and many more.



People should take active steps to reduce the risk of these diseases potentially spreading.

NSW DPI has more information about some of the greater risk zoonotic diseases.

Other animal diseases can be an on-going threat to the livestock, productivity and profitability.

Farmers and landholders are advised to always act with caution when it comes to any potential risks, and to notify authorities immediately if a possible threat is identified.

More information

Local Land Services works with organisations such as NSW DPI to ensure the safety and security of our land is upheld. We aim to be able to provide up to date relevant information about potential threats and on-going risks to our plants and animals.

Priority areas for on-farm biosecurity

1. livestock sales, purchases and movements
2. people, vehicles and equipment
3. feed and water
4. feral animals, pests and weeds
5. animal health management
6. carcass, effluent and waste management
7. staff training
8. planning, recording and monitoring.

Seen anything unusual?

If you notice any unusual disease symptoms, abnormal behaviour or unexpected deaths in your stock immediately call your veterinarian, stock inspector or the Emergency Disease Watch Hotline 1800 675 888. Any unusual plant pest should be reported immediately to the relevant state or territory agriculture agency through the Exotic Plant Pest Hotline 1800 084 881. Early reporting increases the chance of effective control and eradication.



The Rural Living Handbook

Even the smallest rural blocks will provide a challenge if you have never before encountered noxious weeds, prepared for a bushfire or managed biosecurity issues.

Through this handbook Greater Sydney Local Land Services aims to inform you know about the many resources available to you living in the Greater Sydney region, as well as your responsibilities as a land owner.

Keep this handbook as a helpful reference that you can refer to when needed.

This handbook provides useful information on:

- Buying your property
- Natural resources
- Property management
- Biosecurity requirements



Local Land
Services