Guidelines for Keeping Stock

2017

Keeping horses, sheep and other livestock must comply with State and local requirements. In many cases the keeping of stock requires planning approval to ensure that natural features are protected and the land is appropriately managed. These Guidelines provide information about the approval process and how the Shire expects stock and land should be managed.

You can find more information on State Government requirements (including biosecurity) from the Department of Primary Industries and Regional Development online at www.dpird.wa.gov.au

You can contact the Shire's Planning & Environment Team on 9290 6740 for more information about planning approvals.

Shire of Mundaring Guidelines for Keeping Stock

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Introduction

These Guidelines serve to answer the following commonly asked questions and to provide general advice on the keeping of stock in the Shire of Mundaring.

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For the purpose of these Guidelines, "stock" includes a horse, cow, sheep, goat, deer, mule, alpaca, camel, donkey or any other similar animal or beast of burden.

These Guidelines represent a summary of the current rules and requirements under Council's Local Planning Scheme No.4 (LPS4 or 'the Scheme') for keeping stock in the Shire of Mundaring. Most of these rules and requirements have been in effect since gazettal of Town Planning Scheme No. 3 in March 1994, and continue under Local Planning Scheme No. 4.

These Guidelines are intended as a guide for landowners interpreting those rules and requirements for keeping stock in the Shire, and as those rules and requirements change, the Guidelines will also be updated.

The Guidelines are also used by the Shire's Planning and Environment Service to assess applications for the keeping of stock, and to calculate the number of stock that can be kept on properties within the Shire of Mundaring.

Preserving the Rural Lifestyle

The intention of the planning controls is to manage and promote the sustainable keeping of stock on land within the Shire, in a way that preserves and enhances the rural lifestyle and amenity of the area and protects environmental assets.

The keeping of stock can be a rewarding hobby or occupation for many landowners and occupiers within the Shire. However, stock also has the potential to cause environmental damage and can present a noise, dust or odour nuisance to adjoining neighbours. For this reason, the Shire has prepared these Guidelines to promote responsible management practices, which are environmentally sustainable and sympathetic to the needs and attitudes of the broader community and the keeping of all stock.

It is important to ensure the keeping of stock does not degrade the soil or natural environment, so that the hills lifestyle can be enjoyed by many future generations.

1 DO I NEED PLANNING APPROVAL TO KEEP STOCK?

If your property is zoned 'Residential' or 'Rural Residential' then yes, you do need planning approval before you can keep stock on your property. Under Local Planning Scheme No. 4 (LPS 4 or the Scheme), the keeping of stock is classed as a 'Rural Pursuit', which is an activity that requires planning approval and is only permitted in certain areas or 'zones' in the Shire.

If your property is zoned 'Rural Small Holdings' or 'General Agriculture' then you may not need planning approval, provided you comply with relevant Scheme requirements including protection of watercourses and native vegetation. You can contact the Shire's Planning or Environmental officers on 9290 6740 for advice or to find out the zoning of your property.

Some properties within the Shire have been previously approved for keeping stock, or stock has been historically kept on the property (non-conforming use). As a result, the current and future owners of these properties have a limited right to continue keeping the same amount and type of stock (or equivalent stocking rate) on the property as was previously approved, or was historically kept.

Where an approved Stock Management Plan exists on a property, then the keeping of stock must be kept in accordance with that approved plan. Stock Management Plans are discussed further in Section 6 of these Guidelines. Contact the Shire's Planning and Environmental Services to find out if your property has an existing planning approval and management plan for keeping stock. If the stock has been removed from the property for more than 6 months, then a new planning application seeking approval to keep stock may be required.

1.1 Building Permits

In addition to the planning approval required to keep stock on a property, a building permit approval will usually be required to construct any stable or animal shelter on the land. Any such structure must comply with the *Building Act 2011* and associated Regulations and must be situated on the property in accordance with any Local Laws.

Installation of boundary fencing will usually not require planning approval or a building permit if the fence complies with the Scheme and Fencing Local Laws. A Planning approval/building permit is only required for a boundary fence if it does not comply with these Local Laws. The Scheme and Fencing Local Laws are available from the Shire's website (www.mundaring.wa.gov.au).

1.2 Application Forms

Application forms for planning approval and building permits are available on request from the Shire, or from the 'Services' section of the Shire's website. It should be noted that a standard planning application fee is also payable when applying to keep stock.

Submitting a planning application for non-commercial keeping of stock is relatively easy and straightforward. Fill out a planning application form and prepare property plans and make sure you include the following documents:

- Form 1 – Application for Planning Approval and Certificate of Title.
- Stock management plan (refer to Appendix 3 or create your own management plan). Contact the Shire's Environmental Service Team on 9290 6651 if you need help filling out this form.
- A scaled site plan showing the property and the area you wish to keep the stock. Include the location of the fenced paddocks, shelters/stables and any environmental features. The Shire has online maps which could assist with drawing the site plan.
- More complex or intensive proposals may also require professionally prepared environmental, emergency evacuation or other management plans.

The standard planning application fee will be charged, which is set by the State Government.

2 WHY DO I NEED APPROVAL?

The Local Planning Scheme is a statutory (legal) document which controls the appropriate use and development of land within the Shire, and protects the natural environment. It is an offence to use or develop land within the Shire, including the keeping of stock, without the necessary approvals (refer to table 1). The keeping of stock without Shire approval may result in legal action for a breach of the Scheme under the *Planning and Development Act 2005*.

Applying for approval to keep stock on land within the Shire is both a legal obligation and an effective way for the Shire to guide and monitor the use of land and protect environmental assets. In assessing applications to keep stock on property, the Shire can recommend various management practices and impose conditions for the benefit of the applicant, animal welfare, the environment and the amenity of the area.

3 WHERE CAN STOCK BE KEPT?

If you are buying land with the intention of keeping stock, or if you intend to keep stock on land you already own or occupy, you should first check the 'zoning' of the property to ensure that the keeping of stock can be permitted. The land also needs to be capable of supporting stock and have existing cleared areas for pasture.

Table 1 summarises the zones where stock may be permitted based on defined land uses within the Scheme.

Table 1: Use Classes relevant to keeping stock.

ZONE:	USE CLASS:	PERMITTED / NOT PERMITTED:
General Agriculture	Rural Pursuit / Agriculture-Extensive	Permitted without Shire approval if no construction is involved and environmental features (such as bushland and watercourses) are protected.
	Animal Establishment / Agriculture - Intensive	May be allowed, subject to Shire approval based on detailed plans.
Rural Small Holdings	Rural Pursuit	Permitted without Shire approval if no construction is involved and environmental features (such as bushland and watercourses) are protected.
	Agriculture-Extensive / Agriculture-Intensive / Animal Establishment	May be allowed by the Shire if there is sufficient cleared area for pasture and environmental features are protected.
Rural Residential	Rural Pursuit / Agriculture-Intensive	May be allowed by the Shire if there is sufficient existing cleared area for pasture and environmental features are protected.
Residential	Rural Pursuit	May be allowed by the Shire if there is sufficient existing cleared area for pasture and environmental features are protected. Horses/ponies are not permitted on any lot less than 4,000m^2.

Stock related land uses are defined in the Scheme. They are summarised below but you should check with the Shire's Planning and Environment Service whether your proposal will be considered a 'Rural Pursuit' or a different land use.

"Rural Pursuit" means any premises used for -

a) the rearing or agistment of animals;
b) the stabling, agistment, or training of horses.

"Agriculture - Extensive" means premises used for the raising of stock or crops (but does not include agriculture – intensive or animal husbandry – intensive);

"Agriculture - Intensive" means premises used for trade or commercial purposes, including outbuildings and earthworks, associated with … the development of land for irrigated fodder production or irrigated pasture.

"Animal Establishment" means premises used for the breeding, boarding, training or caring of animals for commercial purposes, including kennels, but does not include animal husbandry – intensive, cattery or veterinary centre.

"Animal Husbandry - Intensive" means premises used for keeping, rearing or fattening of pigs, poultry (for eggs or meat), rabbits (for meat or fur) and other livestock in feedlots. This land use is not permitted in any zone.

4 WHERE CAN'T STOCK BE KEPT?

To protect biodiversity and water quality within the Shire, stock will not be permitted to be kept within watercourse buffers, or with uncontrolled access to wetland or bushland areas.

Local Natural Areas (LNA) have been mapped and protected through the Local Planning Scheme and Strategy. The mapped LNA and watercourses can be viewed in the Shire's online maps, or you could apply for an Environmental Asset Inspection (phone 9290 6740 for more information about this Shire service). In areas where there are native trees but limited or no native understorey, stock may be permitted only if appropriate fencing and tree guards are installed.

No buildings or development (including the keeping of stock) are permitted within 30m of any creek or watercourse, unless otherwise approved by the Shire.

The Shire's *Health Local Laws 2003* require that paddocks, yards, arenas and any structure used for housing stock (such as a stable) must be located a minimum distance of 15m from any dwelling on the property or on neighboring properties.

The Shire may be required to refer an application for keeping stock to the state Department of Biodiversity Conservation and Attractions, or Department of Water and Environment Regulation, if the application is for land near the Helena River or within defined Public Drinking Water Source or Catchment Areas.

5 HOW MANY ANIMALS CAN I KEEP?

The 'stocking rate' calculation is used to estimate the number of stock/animals that can be sustainably kept on a property. The stocking rate is based on the following variables:

- soil type;
- animal type;
- area of existing cleared pasture (not the lot size); and
- land and stock management practices.

The Department of Agriculture, now part of the Department of Primary Industries and Regional Development (DPIRD), developed Stocking Rate Guidelines to determine the 'base stocking rates' for rural properties on the Swan Coastal Plain and Darling Scarp. Base stocking rates refer to the number of stock that can consistently be kept on a piece of pasture all year with minor additional feed and without causing environmental degradation.

Stocking rates are shown as 'Dry Sheep Equivalent' (DSE) and are largely based on the amount of pasture that each type of animal will consume, but are also influenced by feeding patterns, animal weight, hoof type and activity. The formula below is used by the Shire to calculate the stocking rate and estimate the number of stock/animals you can keep on your property.

$$\text{Number of animals on property (base stocking rate)} = \frac{\text{Dry or irrigated stocking rate (DSE) for soil type (Appendix 2)} \times \text{Area of existing cleared land or pasture}}{\text{DSE for the animal(s) you propose to keep (Appendix 1)}}$$

Figure 1. Formula for calculating the base stocking rate for your property.

Appendix 1 in these Guidelines lists each animal/stock type and its allocated DSE rating. The number of animals that can be kept on a property, based on the DSE values in Appendix 1, is dependent on the quality of the soils in paddock areas and the area of available pasture.

Appendix 2 in these Guidelines shows the DSE values per hectare for the different soil types in the Shire and shows the values for dry stocking rates and irrigated stocking rates. You will need to liaise with the Shire of Mundaring or use the Shire's online maps to determine the soil type(s) on your property. DSE values will vary between soil types depending on the slope, drainage, nutrient and water retention characteristics, and vegetation complexes associated with each soil type and the corresponding potential for erosion and capacity of the soils to support stock.

5.1 How to Calculate Your Base Stocking Rate

The number of animals that may be kept on your property is calculated as follows:

Step 1. Refer to Appendix 1 to determine the Dry Sheep Equivalent (DSE) for the type of animal you wish to keep.

Step 2. Contact the Shire of Mundaring or use the Shire's online maps to determine the soil type(s) on your property then refer to Appendix 2 in these Guidelines to determine the DSE/ha rating for dry or irrigated paddocks.

Step 3. Calculate the area (in hectares) of cleared land/pastured on your property to determine the area of land available for keeping stock.

Step 4. Insert the values from steps 1-3 into the formula above to determine the base stocking rate, i.e. multiply the area of cleared land/pasture (in hectares) by the soil stocking rate per hectare. Then divide the result by the DSE for the animal you wish to keep.

If you have more than one soil type on your property, you will need to work out how many hectares of each soil type you have. You can then calculate a stocking rate for each soil area and add them together for the total stocking rate.

1.	Dry Sheep Equivalent:	
2.	Soil type 1:	
	Soil type 2:	
3.	Hectares of soil type 1:	
	Hectares of soil type 2:	

5.2 Example Using Stocking Rate Formula

Using the steps in section 5.1 we can determine how many Light Horses (450kg) can be kept on a property as follows:

Area of property:	2.65ha
Area of cleared land/pasture:	1.8ha
Soil Type:	Ya1

Step 1: Using Appendix 1, the Dry Sheep Equivalent (DSE) for a Light Horse (450kg) is 10.

Step 2: The soil type for the given property is Ya1, which has an equivalent stocking rate under Appendix 2 of 6 DSE/ha for dry pasture and 20 DSE/ha for irrigated pasture. We are proposing dry paddocks.

Step 3: Put these figures into the equation:

$$\text{Number of animals on property (basic stocking rate)} = \frac{6\ \text{DSE/ha} \times 1.8\text{ha}}{10\text{DSE}}$$

$$= \textbf{1 Light Horse on dry pasture}$$

(rounded down from 1.09)

This stocking rate is for Basic Stock Management practices. This might be increased to 2 horses by using Intermediate Stock Management practices, or up to 4 horses if all the paddocks are irrigated. Stock Management Plans are explained in the next section of these Guidelines.

6 WHAT IS A STOCK MANAGEMENT PLAN?

All applications for keeping stock must be accompanied by a Stock Management Plan and site plan. The Shire may monitor compliance with an approved Stock Management Plan to ensure that fencing, tree guards or irrigation have been installed and stock are being kept in accordance with the planning approval. Refer to Appendices 3 and 4 in these Guidelines for Stock Management Plan templates.

The purpose of a Stock Management Plan is to ensure that stock are being managed in such a way as to maintain their general wellbeing and provide for their nutritional needs without causing a nuisance or degradation of the land.

Anyone can prepare a Stock Management Plan; however, the management practices in the plan will need to ensure that pasture cover is maintained, ideally to 70% cover all year-round, and not allowed to drop below 50%. The Stock Management Plan will also need to ensure that the following issues are addressed and managed while keeping stock on a property: land degradation, overgrazing,

salinity, erosion (wind and water), waterlogging, the spread of weeds, nuisances (such as flies, dust and odour) and degradation of water quality in streams from nutrient exports (such as manure and waste products).

The level of detail required in a Stock Management Plan will depend on the proposed number of stock compared with the base stocking rate calculation, and the proposed land management practices and site conditions. This in turn will determine whether the required land and stock management is 'Basic', 'Intermediate', or 'Advanced/Intensive'. The land and stock management levels are explained below. Applications will be assessed on a case-by-case basis.

The Stock Management Plan will need to be accompanied by an accurate site plan of the property, at an appropriate scale. The site plan can be based on previously approved plans, or an aerial map of your property downloaded from the Shire's website via Online Maps. The site plan will need to show the following features: cleared areas, areas of native vegetation or mapped LNA, old growth habitat trees, watercourses or wetland areas, dams/soaks, firebreaks, fenced areas (paddocks) where stock will be kept, arenas, round yards and any existing and proposed structures for the stock (such as stables or animal shelters).

6.1 Basic Stock Management

Basic stock management is defined as land where:

- number of proposed stock is similar to the base stocking rate calculation;
- stock freely graze on available pasture without irrigation;
- some paddock rotation occurs to manage pasture cover (70% cover and minimum height of 3cm);
- there is little to no additional feed;
- no stabling or yards are required; and
- manure is collected on a weekly basis.

This type of stock management is a low input system (extensive grazing). Refer to Appendix 3 in these Guidelines for the Basic / Intermediate Stock Management Plan template.

6.2 Intermediate Stock Management

Intermediate stock management is defined as land where:

- the number of proposed stock is the base stocking rate calculation with some variations and additional animals;
- the stock graze freely on available pasture;
- some paddocks may have irrigated pasture;
- stock are rotated between paddocks to manage pasture cover (70% cover and minimum height of 3cm);
- additional feed is brought onto the property (such as hay, hard feed, etc.);

- there may be some temporary/overnight shelter for animals (such as stables);
- manure is collected regularly (e.g. daily or twice weekly) and composted or taken offsite;
- the property may require stables or yards for routine management; and
- the animals are stabled or agisted when paddocks cannot withstand hoof activity (for example when paddocks are waterlogged) or paddock cover is too low (less than 50% cover).

This type of stock management is a medium input system (grazing as well as stabled at times) and requires an Intermediate Stock Management Plan. Refer to Appendix 3 in these Guidelines for the Basic/Intermediate Stock Management Plan template.

6.3 Advanced/Intensive Stock Management

Advanced/Intensive stock management is defined as land where:

- the number of stock greatly exceeds the base stocking rate calculation and stock requires maximum stabling;
- all paddocks have irrigated pasture and grazing is limited or restricted to ensure pasture is maintained to no less than 50% cover and minimum height of 3cm;
- stock are rotated between paddocks;
- stock rely on a comprehensive program for additional and supplementary feed;
- manure is collected daily and stored in a formalised composting area or disposed of offsite;
- the animals will spend the majority of their time in stables or yards and will only spend a few hours of their day in the paddocks;
- the animals will require regular exercise programs onsite and/or offsite; and
- annual reporting to the Shire is likely to be required.

This type of stock management is a high input system (stabled and hand fed) and requires an Advanced/Intensive Stock Management Plan. Additional information will need to be provided about irrigation and fertiliser regimes for pasture, dust suppression, storage of feed and products, waste management, stormwater management, pest and rodent control, disease management, topdressing of yard and arena floor material. Refer to Appendix 4 in these Guidelines for the Advanced/Intensive Stock Management Plan template.

6.4 Best Practices

There are many ‘best practice’ management approaches that can be adopted by landowners when keeping stock, to balance managing the stock and caring for the land. Many stock owners already undertake these practices voluntarily, or may be required to do so in accordance with management plans approved by the Shire.

Some of these practices include:

- Talking to your neighbours to minimise any potential nuisance or conflict associated with your stock, or to discuss their experiences if they already keep the same stock as you wish to keep.
- Planting trees for windbreaks and as shade and shelter for stock.
- Revegetating degraded natural areas, such as bushland and watercourses, to provide habitat for native fauna.
- Contacting Department of Primary Industries and Regional Development (DPIRD) on 9368 3333 or visit their website to find out their requirements for livestock registration, waybills and biosecurity management.

Please contact the Shire's Planning and Environment Service on 9290 6740 if you need any assistance with determining the type of Stock Management Plan you require.

7 CHECKLIST FOR LODGING YOUR APPLICATION

Below is a checklist for lodging your application to keep stock on a property:

☐ Complete Form 1 Application for Planning Approval, available from the 'Services' section of the Shire's website. Some of the information listed as required by Form 1 will not be relevant if you are not building anything.

☐ Identify all environmental features that need to be protected from stock (such as streams, wetland areas, habitat trees, native vegetation etc.) and explain how you will protect them.

☐ Complete and attach a Stock Management Plan (Appendix 3 or 4).

☐ Prepare and attach a site plan (at an appropriate scale) to accompany the Stock Management Plan.

☐ Pay the relevant Planning Application Fee.

A flow chart mapping the planning application process is included as Appendix 5 of these Guidelines.

8 USEFUL REFERENCES

References and other useful keeping of stock reading material:

1. Department of Agriculture and Food, WA (May 2000). Stocking Rate Guidelines for Rural Small Holdings.
2. Horse SA (2013). Horse, Land and Water Management Guidelines.
3. Department of Agriculture and Food, WA (February 2015). “The Land Is In Your Hands”, 3rd Edition.
   Rural Industries Research (December 1998). “Healthy Land, Healthy Horses – A Guidebook for Small Properties”.
   Department of Agriculture and Food, WA. Small Landholder Noteworthy Series.
4. Additional reference material is available from the Department of Primary Industries and Regional Development (DPIRD).
5. Department of Primary Industries, NSW. Guidelines for minimum standards for keeping horses in urban areas (Factsheet 16).
6. Department of Water and Environment Regulation, WA. Water Quality Protection Note No.80. Stockyards
7. Landcare Online (2010) Case study Achievable Intensive Horse Keeping.

Appendix 1 - Animal equivalents for calculating stocking rates

Type of livestock Weight (kg) and animal type	Dry Sheep Equivalent (DSE)
Sheep	
50kg Wether, ewe	1.0
40 – 45 kg Lambing ewe (ewe and lamb)	1.5
75 kg Rams	1.5
Cattle	
425 kg Milking cow	10.0
425 kg Dry cows, yearling, steer or heifer	8.0
300 kg Yearling, heifer	6.0
200 kg Smaller cattle (Dexter, Lowline)	4.0
750 kg Bull, cow with calf	15.0
Cow with young calf	10.0
Horses	
450 kg Light	10.0
1000 kg Draught	20.0
250 kg Pony	5.0
Goats	
30 – 35 kg Dry Angora	0.7
35 – 40 kg Cashmere goat	1.0
50 – 60 kg Dry milk goat	1.5
Milking goat	2.0
Deer	
120 kg Red Deer	2.2
50 kg Fallow Deer	1.0
Other	
55 – 120 kg Ostrich average (assumes half introduced feed)	1.4
55 kg Emu average (assumes half introduced feed)	0.7
150 – 210 kg Llama	3.0
60 – 70 kg Alpaca	0.8

(Source: Department of Agriculture and Food WA 'Stocking Rate Guidelines for Rural Small Holdings', May 2000)

Appendix 2 - Basic Stocking Rate for Soil Types within Shire of Mundaring for Dry and Irrigated Paddocks

(Derived from: Department of Agriculture and Food WA 'Stocking Rate Guidelines for Rural Small Holdings', May 2000

** Proximity to water likely to make portion of map unit unsuitable for stock.*

Soil Type	Soil Description	Dry Stocking Rate (DSE/ha)	Irrigated Stocking Rate (DSE/ha)	Land quality considerations (Bold text indicates significant limitations)
Bg1	Valleys within Darling Scarp.	**6**	**10**	**Water erosion**, Phosphorus export
Bg2	Valleys within side slopes of major river valley systems	**6**	**10**	**Water erosion**, Phosphorus export
C	Crests and upper slopes dominated by granite outcrop and very shallow yellow duplex soils, and yellow and brown massive earths.	**2**	**Usually not suitable**	**Water erosion**, Phosphorus export, Soil eater storage
D1	Crests and very gently inclined terrain dominated by lateritic duricrust and very shallow gravelly brownish sands, pale brown sands and earthy sands.	**2**	**Usually not suitable**	**Unrestricted rooting depth, soil water storage**
D2	Gently undulating terrain with well drained, shallow to moderately deep gravelly brownish sands, pale brown sands and earthy sands overlying lateritic duricrust.	**10**	**25**	Soil water storage
D3	Moderately inclined slopes with well drained shallow to moderately deep gravelly brownish sands, pale brown sands and earthy sands overlying lateritic duricrust.	**10**	**25**	Soil water storage
DS1	Moderately steep to steep upper slopes.	**6**	**10**	**Water erosion**, Phosphorus export
DS2	Moderately inclined lower slopes.	**6**	**10**	**Water erosion**, Phosphorus export
F1	Very gently to gently inclined foot slopes with deep rapidly drained siliceous yellow brown sands, and pale or bleached sands with yellow-brown subsoil.	**6**	**20**	**Soil water storage**
F2	Very gently to gently inclined foot slopes with well drained gravelly yellow or brown duplex soils with sandy topsoil.	**10**	**25**	
F3	Very gently to gently inclined foot slopes with well drained gravelly yellow or red duplex soils with sandy loam to loam topsoil	**10**	**25**	
F4	Gently to moderately inclined breakaway slopes separating Forrestfield from the Swan alluvial terraces. Soils are imperfectly drained yellow or grey gradational earths.	**10**	**25**	
F5	Very gently to gently inclined incised drainage channels with poorly drained gravelly yellow or brown duplex soils.	**6***	**20***	Water erosion, Phosphorus export, Waterlogging risk. Proximity to water likely to make portion of map unit unsuitable for stock.
F6	Very gently to gently inclined crests and knolls with common lateritic outcrop. Soils are shallow moderately well drained gravelly brownish or earthy sands.	**2**	**Usually not suitable**	**Soil water storage, Unrestricted rooting depth**
F7	Level to very gently inclined alluvial fans with variable imperfectly drained soils comprising layers of sand, sandy loam, clay, grit and weathered granitic detritus.	**6***	**20***	Phosphorus export, Waterlogging risk. Proximity to water likely to make portion of map unit unsuitable for stock.

Soil Type	Soil Description	Dry Stocking Rate (DSE/ha)	Irrigated Stocking Rate (DSE/ha)	Land quality considerations (Bold text indicates significant limitations)
F8	Moderately inclined foot slope areas with moderately well drained gravelly duplex soils similar to those of unit F3.	**10**	**25**	
F9	Very gently inclined seepage areas and non-incised drainage channels with poorly drained bleached grey sands over an iron-organic hardpan	**6***	**20***	Soil water storage, Waterlogging risk, Phosphorus export. Proximity to water likely to make portion of map unit unsuitable for stock.
F10	Level to very gently inclined alluvial fans with variable poorly drained soils.	**6***	**20***	PH, Waterlogging risk. Proximity to water likely to make portion of map unit unsuitable for stock.
G (GO)	Level, imperfectly drained swampy margins with deep grey, yellowish brown or brown siliceous or bleached sands.	**6***	**20***	Phosphorus export, Soil water storage. Proximity to water likely to make portion of map unit unsuitable for stock.
Gf1	Plain with moderately well drained yellow duplex or gradational soils with sand to sandy loam topsoil.	**10**	**25**	
Gf2	Plain with imperfectly drained yellow duplex soils with sand to sandy loam topsoil.	**6**	**20**	
Gf3	Plain with poorly drained mottled yellow earths with loamy topsoil	**6**	**20**	Waterlogging risk
Gf4	Alluvial fans with variable imperfectly drained soils similar to unit F7	**10**	**25**	
Gf5	Incised drainage channels with poorly drained gradational mottled yellow earths	**6***	**20***	Waterlogging risk. Proximity to water likely to make portion of map unit unsuitable for stock.
Gf6	Seasonally inundated swamps with very poorly drained uniform non-cracking clays	**Not suitable**	**Not suitable**	**Waterlogging risk**, Phosphorus export
Gf7	Minor rises with deep rapidly drained brownish, siliceous or bleached	**2**	**10**	**Soil water storage**
Gf8	Plain and broad depressions with poorly drained uniform non-cracking clays	**Not suitable**	**Not suitable**	**Waterlogging risk**, Phosphorus export, Soil water storage
Gf9	Minor sandy rises (aeolian deposits) with moderately deep well drained sands overlying gravelly mottled clay.	**6**	**20**	Soil water storage
H1	Moderately steep to steep side slopes and very narrow drainage floors with areas of many rock outcrop	**2**	**Usually not suitable**	Water erosion, Unrestricted rooting depth, Phosphorus export
H2	Moderately inclined side slopes and lower slopes with few areas of rock outcrop.	**6**	**10**	
H3	Very gentle to gently inclined valley floors with common rock outcrop	**10***	**25***	Proximity to water likely to make portion of map unit unsuitable for stock

Soil Type	Soil Description	Dry Stocking Rate (DSE/ha)	Irrigated Stocking Rate (DSE/ha)	Land quality considerations (Bold text indicates significant limitations)
Ma1	Moderately steep to steep valley side slopes and narrow incised valley floors.	**6***	**20***	**Water erosion**, Phosphorus export. Proximity to water likely to make portion of map unit unsuitable for stock.
Ma2	Gentle to moderately inclined lower side slopes	**10***	**25***	Proximity to water likely to make portion of map unit unsuitable for stock.
Mm1	Gently undulating ridge crests and benches	**10**	**25**	
Mm2	Moderately inclined flanks of ridges and spurs	**6**	**10**	**Water erosion**, Phosphorus export
My1	Moderately steep to steep side slopes and very narrow valley floors, with few to commonly occurring areas of rock outcrop.	**6**	**10**	**Water erosion**, Phosphorus export
My2	Moderately inclined to moderately steep sideslopes and narrow valley floors with few areas of rock outcrop.	**6***	**10***	**Water erosion**, Phosphorus export. Proximity to water likely to make portion of map unit unsuitable for stock.
My3	Gently to moderately inclined side slopes and lower slopes with very few areas of rock outcrop.	**10**	**25**	
My4	Very gently inclined valley floors, with very few areas of rock outcrop and poorly drained and commonly saline soils.	**6***	**10***	Surface salinity, Waterlogging risk, Salinity risk. Proximity to water likely to make portion of map unit unsuitable for stock.
Pn1	Gently inclined side slopes with well drained gravelly brownish sands, pale brown sands and earthy sands	**10**	**25**	
Pn2	Gently inclined valley headwaters with deep rapidly drained grey, yellowish brown or brown siliceous or bleached sands.	**2**	**10**	**Soil water storage,** Phosphorus export
Pn3	Gently inclined valley headwaters with moderately well drained shallow to moderately deep sands underlain by mottled clay.	**6***	**20***	Soil water storage. Proximity to water likely to make portion of map unit unsuitable for stock.
Pn4	Valley floors with imperfectly drained yellow duplex soils and yellow and brown massive earths	**6***	**20***	Waterlogging risk. Proximity to water likely to make portion of map unit unsuitable for stock.
Pn5	Broad, level to very gently inclined valley floors with very poorly drained uniform grey or brown clays or clay loams	**Not suitable**	**Not suitable**	**Waterlogging risk,** Phosphorus export
Pn6	Level to very gently inclined valley floors with poorly drained saline duplex or gradational soils.	**Not suitable**	**Not suitable**	**Surface salinity, Waterlogging risk, Salinity risk**
Sw1	River margins and low flats with poorly drained variable alluvial soils, subject to frequent flooding	**6***	**20***	Flood risk, Waterlogging risk. Proximity to water likely to make portion of map unit unsuitable for stock.

Soil Type	Soil Description	Dry Stocking Rate (DSE/ha)	Irrigated Stocking Rate (DSE/ha)	Land quality considerations (Bold text indicates significant limitations)
Sw2	Low level, occasionally flooded, alluvial terraces with imperfectly drained variable alluvial soils with loamy surfaces	**10***	**25***	Proximity to water likely to make portion of map unit unsuitable for stock.
Sw3	Low level, occasionally flooded, alluvial terraces with imperfectly drained variable alluvial soils with sand to sandy loam surfaces	**10***	**25***	Proximity to water likely to make portion of map unit unsuitable for stock.
Sw4	Low level, occasionally flooded alluvial terraces with poorly drained variable alluvial soils with dark greyish brown clay loam to clay surfaces	**6***	**20***	**Waterlogging risk.** Proximity to water likely to make portion of map unit unsuitable for stock.
Sw5	Swamps within river terraces	**Not suitable**	**Not suitable**	Waterlogging risk, Phosphorus export
Sw6	Incised drainage channels within river terraces	**6***	**20***	Waterlogging risk.
Sw7	Mid to higher level terrace with moderately well drained red or brown duplex soils	**10***	**25***	Proximity to water likely to make portion of map unit unsuitable for stock.
Sw8	Higher level terrace with well drained red earthy sands or brownish sands	**10***	**25***	Proximity to water likely to make portion of map unit unsuitable for stock.
Sw9	Higher level terrace with well drained sandy gradational red earths	**10***	**25***	Proximity to water likely to make portion of map unit unsuitable for stock.
Y1	Gently undulating terrain with well drained moderately deep to deep fine gravelly brownish sands, pale brown sands and earthy sands	**6**	**20**	Soil water storage
Y2	Gently undulating terrain with moderately well drained yellow duplex soils, and yellow and brown massive earths	**10**	**25**	
Ya1	Plain with moderately deep poorly drained pale yellow brown sands underlain by mottled clay	**6**	**20**	Waterlogging risk
Ya2	Plain and swamp margins with deep poorly drained grey siliceous sand overlaying clay	**6**	**20**	Waterlogging risk, Soil water storage
Ya3	Seasonally inundated swamps with shallow very poorly drained grey siliceous sand over clay	**Not suitable**	**Not suitable**	**Surface salinity, Waterlogging risk, Salinity risk**,
Ya4	Seasonally inundated swamps with very poorly drained alkaline uniform grey clays overlain in places by a thin sand veneer	**Not suitable**	**Not suitable**	**Surface salinity, Waterlogging risk, Salinity risk**,
Yg1	Gently to moderately inclined side slopes with moderately well drained yellow duplex soils, and yellow and brown massive earths	**10**	**25**	
Yg2	Very gentle to gently inclined valley headwaters with deep rapidly drained grey, yellowish brown or brown siliceous or bleached sands	**6**	**20**	Soil water storage, Phosphorus export
Yg3	Very gentle to gently inclined valley headwaters with moderately well drained shallow to moderately deep sands underlain by mottled	**6***	**20***	Soil water storage.
Yg4	Valley floors with poorly drained mottled yellow duplex soils	**6***	**20***	Waterlogging risk, Phosphorus export.
Yg5	Level to very gently inclined broad valley floors with very poorly drained uniform grey or brown clays or clay loams.	**2***	**Usually not suitable**	**Waterlogging risk,** Phosphorus export

Appendix 3 – Basic / Intermediate Stock Management Plan Template

<table>
<tr><td>1.</td><td>Address of property</td><td></td></tr>
<tr><td>2.</td><td>Area of property (ha)</td><td></td></tr>
<tr><td>3.</td><td>What is the zone of the property under the Scheme (LPS4)?</td><td></td></tr>
<tr><td>4.</td><td colspan="2">What type of animal(s) and how many are proposed to be kept on the property?
<table>
<tr><th></th><th>Animal type</th><th colspan="2">Height (cm) OR Weight (kg)</th></tr>
<tr><td>Animal 1:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 2:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 3:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 4:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 5:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 6:</td><td></td><td></td><td></td></tr>
</table>
If keeping horses/ponies refer to DPIRD ‘Noteworthy 31 - Keeping horses on small properties’</td></tr>
<tr><td>5.</td><td>What is the DSE for the animal(s) proposed to be kept (refer to Appendix 1)?</td><td></td></tr>
<tr><td>6.</td><td colspan="2">Paddock details (as shown on site plan):
<table>
<tr><th>Paddock number</th><th>Area (ha)</th><th>Irrigated (yes/no)</th></tr>
<tr><td>Paddock 1</td><td></td><td></td></tr>
<tr><td>Paddock 2</td><td></td><td></td></tr>
<tr><td>Paddock 3</td><td></td><td></td></tr>
<tr><td>Paddock 4</td><td></td><td></td></tr>
<tr><td>Paddock 5</td><td></td><td></td></tr>
<tr><td>Paddock 6</td><td></td><td></td></tr>
</table>
(a) Total DRY paddock area (ha) =
(b) Total IRRIGATED paddock area (ha) =</td></tr>
<tr><td>7.</td><td colspan="2">If no irrigated paddocks, then go to question 8. If there are irrigated paddocks, then provide more details about the water source, irrigation system and watering regime you plan to implement: (See DPIRD’s Noteworthy 34 - Productive pasture management)

Water source for irrigation: _____
Groundwater bores, large dams or work affecting a watercourse may need permits from the Department of Water and Environment Regulation – check www.dwer.wa.gov.au or attach copy of water licence</td></tr>
<tr><td>8.</td><td>What are the soil types where the stock will be kept?</td><td>(for more info about soil types refer to section 5 in these Guidelines)</td></tr>
<tr><td>9.</td><td>What is the stocking rate for the relevant soil type/s (appendix 2)?</td><td>(use the dry or irrigated stocking rate (DSE/ha) depending on your answer in question 6)</td></tr>
</table>

10.	Are there any of the following features on your property? □ Watercourses, permanent or seasonal □ Constructed dams, natural wetlands or waterlogged areas □ Granite outcrop □ Old growth habitat trees (has hollows or diameter more than 80cm) □ Areas of native vegetation / Local Natural Area (LNA)	
11.	If you answered yes to any part of question 10, please explain how those features will be protected from stock.	
12.	Will you be constructing/providing any animal shelters, stables, yards, arenas or exercise areas?	If no, go to question 13. If yes please provide details and make sure these structures are shown on the site plan.
13.	Manure collection details	Include frequency, disposal, storage location & show on site plan.
14.	How will the animals be fed/grazed?	
15.	Describe the condition of the existing pasture cover and composition.	Should maintain 70% ground cover at all times, grass height at least 3cm.
16.	Describe the pasture management practices you plan to implement for the proposed animals. (Include details such as sowing of pastures, paddock rotation, weed management, dust and erosion management, use of fertilisers or herbicides, etc. Refer to DPIRD's 'Noteworthy 12 - Establishing pasture', 'Noteworthy 34 - Productive pasture management', and 'Noteworthy 61 - Rotational grazing'):	
17.	Attach a site plan of your property at an appropriate scale showing cleared areas, areas of native vegetation or mapped LNA, environmental features (e.g. watercourse, granite outcrop, habitat trees), dams/soaks, firebreaks, fenced paddocks where stock will be kept, arenas, round yards and any existing and proposed structures for the stock (such as stables or animal shelters). See example on page 20. □ **Site plan attached**	

Using the above information, the number of animals that may be kept on the property is calculated as follows. Pick the formula(s) that best fits your proposal.

DRY PADDOCKS:

No. of animals that may be kept on the property = $\frac{\text{Q..9..……..} \times \text{Q.6(a) ...……}}{\text{Q.5.....…..…....}}$

Total (base stocking rate): = **…….**

IRRIGATED PADDOCKS:

No. of animals that may be kept on the property = $\frac{\text{Q..9..……..} \times \text{Q.6(b) ...……}}{\text{Q.5.....…..…....}}$

Total (base stocking rate): = **…….**

Proposed stock number = **…….**

Additional information regarding proposed stock number (e.g. paddock rotation system, frequency and type of additional feed, temporary/ overnight shelter or stabling of animals, pasture management, etc.):

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Example of a Site Plan to accompany Basic Stock Management Plan

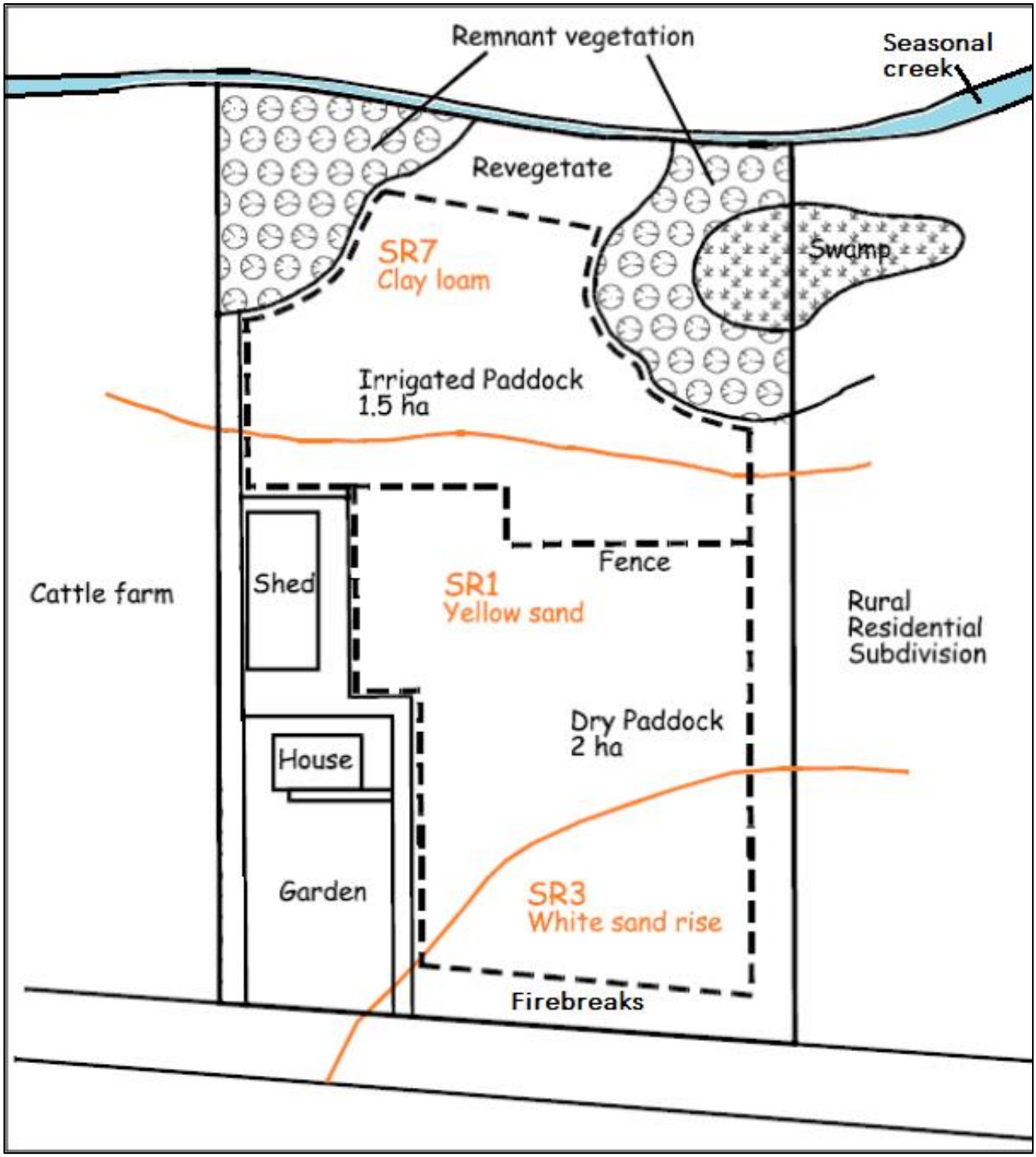

Figure 2. Example site plan from 'Stocking Rate Guidelines for Rural Small Holdings' by Department of Agriculture and Food WA (DAFWA, now DPIRD) and Landform Research.

Appendix 4 – Advanced / Intensive Stock Management Plan Template

<table>
<tr><td>1.</td><td>Address of property</td><td></td></tr>
<tr><td>2.</td><td>Area of property (ha)</td><td></td></tr>
<tr><td>3.</td><td>What is the zone of the property under the Scheme (LPS4)?</td><td></td></tr>
<tr><td>4.</td><td colspan="2">Tick the option that best describes how you wish to keep/use stock on your property.
□ Rural Pursuit: any premises used for – (a) the rearing or agistment of animals; or (b) the stabling, agistment, or training of horses.
□ Agriculture – extensive: means premises used for the raising of stock or crops but does not include agriculture – intensive or animal husbandry – intensive.
□ Other: ……..</td></tr>
<tr><td>5.</td><td colspan="2">What type of animal(s) and how many are proposed to be kept on the property?
<table>
<tr><th></th><th>Animal type</th><th>Height (cm) OR Weight (kg)</th><th></th></tr>
<tr><td>Animal 1:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 2:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 3:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 4:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 5:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 6:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 7:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 8:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 9:</td><td></td><td></td><td></td></tr>
<tr><td>Animal 10:</td><td></td><td></td><td></td></tr>
</table>
If keeping horses/ponies refer to DAFWA / DPIRD Noteworthy 31 - Keeping horses on small properties’</td></tr>
<tr><td>6.</td><td>What is the DSE for the animal(s) proposed to be kept (refer to Appendix 1)?</td><td></td></tr>
<tr><td>7.</td><td colspan="2">Paddock details (as shown on site plan):
<table>
<tr><th>Paddock number</th><th>Area (ha)</th><th>Irrigated (yes/no)</th></tr>
<tr><td>Paddock 1</td><td></td><td></td></tr>
<tr><td>Paddock 2</td><td></td><td></td></tr>
<tr><td>Paddock 3</td><td></td><td></td></tr>
<tr><td>Paddock 4</td><td></td><td></td></tr>
<tr><td>Paddock 5</td><td></td><td></td></tr>
<tr><td>Paddock 6</td><td></td><td></td></tr>
</table>
(a) Total DRY paddock area (ha) =
(b) Total IRRIGATED paddock area (ha) =</td></tr>
<tr><td>8.</td><td colspan="2">If no irrigated paddocks, then go to question 9. If there are irrigated paddocks then you must include details in an irrigation plan (including site plan showing irrigation layout). Please provide details about the water source, relevant water licences, irrigation system and watering regime. (Refer to the DAFWA / DPIRD Noteworthy 34 - Productive pasture management):
□ Attached Irrigation Plan, or combined Irrigation & Pasture Plan</td></tr>
</table>

<table>
<tr><td>9.</td><td>What are the soil types where the stock will be kept?</td><td>(for more info about soil types refer to section 5 in these Guidelines)</td></tr>
<tr><td>10.</td><td>What is the stocking rate for the relevant soil type/s (appendix 2)?</td><td>(use the dry or irrigated stocking rate (DSE/ha) depending on your answer in question 6)</td></tr>
<tr><td>11.</td><td colspan="2">Are there any of the following features on your property?
□ Watercourses, permanent or seasonal
□ Constructed dams, natural wetlands or waterlogged areas
□ Granite outcrop
□ Old growth habitat trees (has hollows or diameter more than 80cm)
□ Areas of native vegetation / Local Natural Area (LNA)</td></tr>
<tr><td>12.</td><td>If you answered “Yes” to any part of question 11, please explain how those features will be protected from stock.</td><td>Note: watercourses shall be protected from stock by fencing, at a minimum of 20m for residential and 30m for all other zones, either side of the watercourse.</td></tr>
<tr><td>13.</td><td>Will you be constructing/providing any animal shelters?</td><td>If No go to question 14. If Yes please provide details and make sure these structures are shown on the site plan.</td></tr>
<tr><td>14.</td><td>Will you be constructing or using any stables, yards/ pens, arenas or exercise areas?</td><td>□ No (please go to question 16)
□ Yes, you are required to submit a Stable & Yard Plan relating to the use of the proposed or existing structure(s). Include details about: management of dust, stormwater drainage, sediment, waste disposal (manure and urine), floor materials, wash-down area, chemical and products, frequency of using structure, food storage, dimensions of structure, etc. Show all structures on site plan. Refer to the ‘Horse, Land and Water Management Guidelines’ – management for intensive horse keeping for more information.
□ Stable & Yard Plan attached.</td></tr>
<tr><td>15.</td><td colspan="2">If you are constructing or using stables, yards or pens then please provide details below:
<table>
<tr><th>Animal number from Q.5</th><th>Structure type (from Q.15)</th><th>Frequency (e.g. daily, nights only)</th><th>Timeframe (e.g. 6hrs, 12hrs)</th></tr>
<tr><td>e.g. animal 1</td><td>Stables</td><td>Nights and part of day</td><td>12hrs</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
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</table></td></tr>
<tr><td>16.</td><td>Manure collection details (include frequency, disposal, composting, storage location)</td><td>Must be no less than twice weekly for paddocks and daily for stables or yards. Show storage location (away from watercourses) on site plan.</td></tr>
</table>

17.	Will the animals be on the property all year round or will they be spelled/agisted?	□ **No** (please go to question 18) □ **Yes,** please provide details: i) How frequently (e.g. annually, bi-annually) and for what length of time (e.g. 1 month, 6 weeks) will the animal(s) be spelled? ii) At what property will they be spelled (indicate property address)?
18.	You are required to submit a **Pasture Plan** (which can be combined with the Irrigation Plan if you are irrigating). The plan needs to include details about: pasture management practices, additional and supplementary feed program, description of existing pasture cover and composition, sowing of pastures, paddock rotation, weed management, use of fertilisers or herbicides, and dust and erosion management. Refer to DPIRD / DAFWA's 'Noteworthy 10 - Supplementary feeding', 'Noteworthy 12 - Establishing pasture', 'Noteworthy 34 - Productive pasture management', and 'Noteworthy 61 - Rotational grazing'. □ **Attached Pasture Plan, or combined Pasture & Irrigation Plan**	
19.	You are required to submit a site plan of your property (at an appropriate scale) showing cleared areas, areas of native vegetation, environmental features (e.g. watercourse, granite outcrop), dams/soaks, firebreaks, fenced areas (paddocks) where stock will be kept, arenas, round yards and any existing and proposed structures for the stock (such as stables or animal shelters). See example on page 25. □ **Site plan attached**	

Using the above information, the number of animals that may be kept on the property is calculated as follows. Pick the formula(s) that best fits your proposal.

DRY PADDOCKS:

No. of animals that may be kept on the property = $\frac{\text{Q..10.....} \times \text{Q.7(a) .....}}{\text{Q.6.....}}$

Total (base stocking rate): = **…….**

IRRIGATED PADDOCKS:

No. of animals that may be kept on the property = $\frac{\text{Q..10.....} \times \text{Q.7(b) .....}}{\text{Q.6.....}}$

Total (base stocking rate): = **…….**

Proposed stock number = **…….**

Percentage (%) adjustment to stocking rate based on additional land management practices:

- □ Stabling of animal(s) (frequency and timeframe)
- □ Spelling of animal(s) (frequency and timeframe)
- □ Pasture management and supplementary feed.

Additional information regarding proposed stock number and practices:

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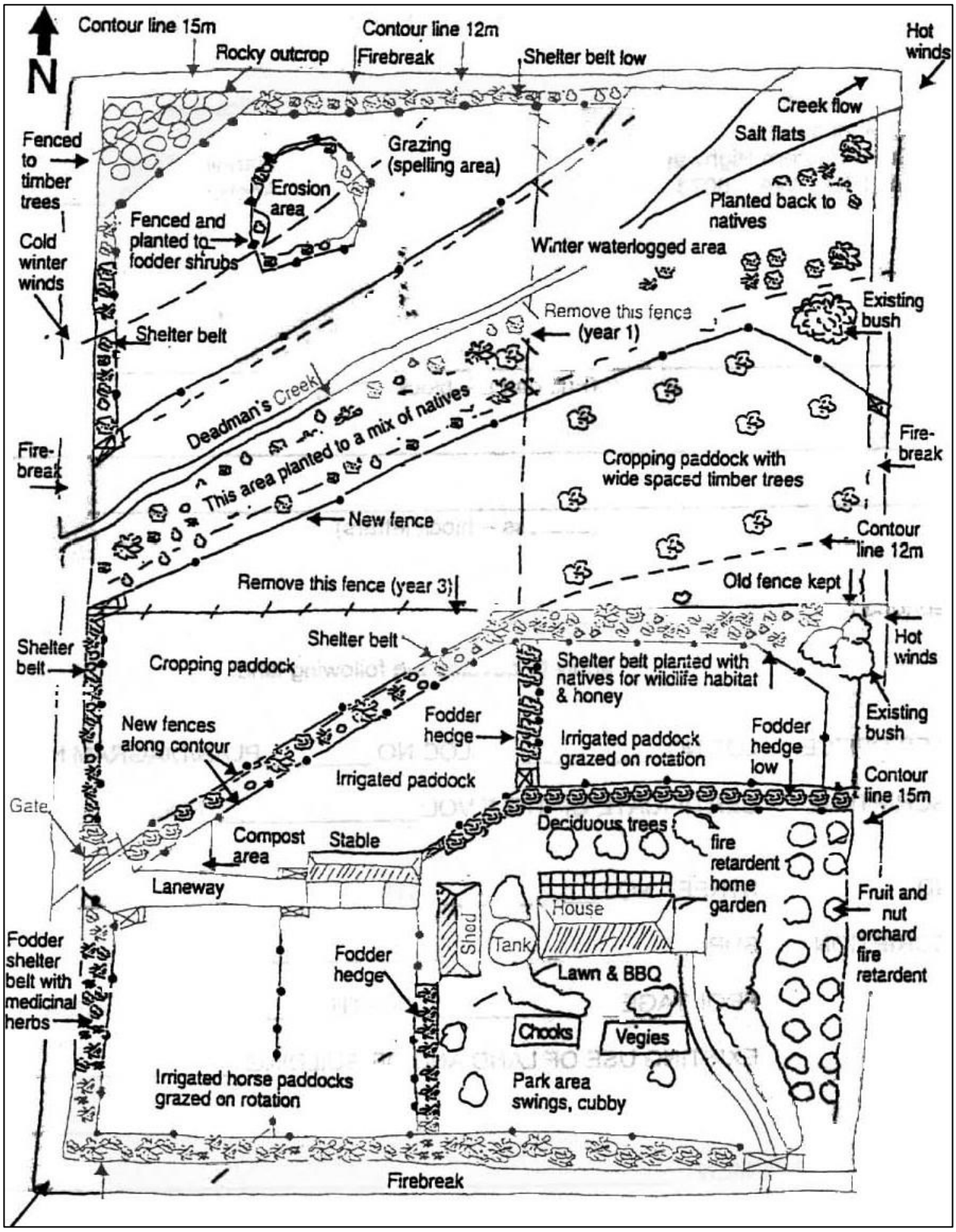
Example of a Site Plan to accompany Stock Management Plan



Appendix 5 – Planning Application Process: