FARM MANAGEMENT PLAN

PULLINGTON INVESTMENTS PTY LTD

LOT 8019
992 COWALLA ROAD
WANERIE
WESTERN AUSTRALIA

1. SUMMARY

PULLINGTON INVESTMENTS PTY LTD has purchased Lot 8019, 992 Cowalla Road, Wanerie for the purposes of growing irrigated loose leaf salads. Thus far 140 hectares (ha) have been established for this purpose. This land is used in conjunction with other properties owned by the associated family companies.

As part of the Gingin shire's requirements for planning consent a comprehensive Farm Management Plan is proposed to provide guidelines for efficient and sustainable management of the resources on the property and the natural surroundings.

2. INTRODUCTION

Environmental Context and Commitment to Sustainable Management

Western Australian population is estimated to increase by 500,000 over the next 10 years. Food production is required to increase as land resources decline.

Horticultural activities, by their nature, do impact the surrounding environment. Horticultural producers face the ongoing challenge of improving sustainability and reducing environmental impacts while increasing productivity.

Pullington recognises the importance of adopting best practice management techniques that support the production of safe, high-quality food for a growing population.

Local governments such as Gingin Shire play a key role in safeguarding the future productivity of their regions for economic, social, and environmental purposes. The interaction between land capability and land management is a major factor in the ongoing viability of rural land uses. Implementing sustainable management practices reduces potential conflicts between different land uses and enables "high potential" land to be productive.

This Farm Management Plan is based on the understanding that Lot 8019 is part of a broader landscape. It outlines the owners' commitment to sustainable horticultural practices that support the coexistence of their enterprise with surrounding land uses.

3. PROPERTY DESCRIPTION

Lot 8019 on Deposited Plan 210463 is the land in Certificate of Title Volume 1505 Folio 25 and is located on the eastern side of Cowalla Road, on the southern side of Beermullah Road (see Figure 1).

Figure 1: Regional Location – Farm Management Plan, Pullington Investments PTY LTD. Lot 8019. 992 Cowalla Rd, Wanerie. Red line outlines the property boundary.

3.1 Site Description

Development of this farm for vegetable production commenced in 1980 under the stewardship of Tony Cosentino reaching full production in or about 2003. Tony's wife died around that time and farm operations declined thereafter.

The site consists of 285 Ha and is undulating with a varied soil type, the majority being sandy loam over limestone. It has been identified as being highly capable for horticulture. The area in the immediate vicinity of the property can best be described as pastoral and horticultural farming activities with some remnant bushland. Various horticultural farming activities along Cowalla Rd have been encouraged by the Gingin Shire.

3.2 Crops in Rotation

The area under fixed irrigation (Fig. 4) is used for production of loose leaf salads such as lettuce, spinach, rocket and beet.

The southern pivot area (Fig. 4, Pivot 2) was previously used for lettuce, onions and carrots. During the 2024 winter season it was used to grow potatoes for a seed crop. The area is currently growing lucerne. This will be a five year duration crop.

The northern pivot area (Fig. 4, Pivot 1) was previously used for growing lettuce onions and carrots. During the 2024 season, the eastern hemisphere was used for onions and some potato

for a seed crop. It is anticipated that the next crop under that pivot will be spinach, followed by a rotation of other loose leaf salads as and when the market demands.

The property is not impacted by any of the following:

- ☐ State forests or timber reserves (managed to conserve biodiversity)
- ☐ Water corporation infrastructure buffer zone
- ☐ Waterways conservation act management area

4. SOILS

Pullington Investments Pty Ltd recognises that maintaining soil health is essential for agricultural food production, plant growth and overall ecosystem functioning.

4.1 Soil Type

The soil type on can best be characterised as;

- Pale brown to light grey sand to 90cm over brownish yellow weak clayey sand to 200cm, pH - weak acid to neutral or,
- Light grey sand 90-150cm over pale yellow to yellow sand, pH - weak acid to neutral.

The soils are relatively deep and limestone is rare in the top 2m. The sands are described as quartzose and contain <10% but more commonly <5% clay.

Wind erosion can cause soil degradation if the surface is exposed. Wind erosion may occur with wind speeds >18 km/hr depending on surface conditions. The soils have a low susceptibility to wind erosion. However, to prevent any excess soil loss the harvested crop stubble remains in the soil or is replaced with short rotation cereals to maximise soil structure during fallow periods (see section 4.2).

The soils are highly suitable for horticultural development (capability class II). The siliceous sands are well drained and possess a high to moderate phosphate retention ability.

4.2 Cover Crops and Minimising Soil Erosion

Cover crops are planted in between productive crops to minimise the time in which soil will be left bare which reduces dust production and the loss of top soil.

In the production of loose leaf salads, the irrigation is turned off after the crop has been mowed. This leaves a very short stubble that dries out quickly and retains the soil structure, preventing blowing of the soil pending preparation for the next crop. Irrigation will recommence before planting a new crop to prepare the soil. If there is going to be an extended period without a crop, a cover crop will be planted within the week.

Lucerne is planted from time to time as a crop break and is useful for its nitrogen fixing properties which can help restore soil nutrient levels. Lucerne stubbles, after mowing and baling of the crop, are returned to irrigation as rapidly as possible. Every day without water is a cause of reduced production.

There is no immediate plan to grow crops of potatoes, carrots or other root vegetables. We may grow a small area of broccoli during the 2026 winter season. The normal practice with broccoli is to chop the plant after cropping, rotavate into the soil, and to sow immediately a cereal crop such as oats or wheat. Oat roots reinforce soil structure reducing wind and water erosion. Oat stubbles are ploughed back into the soil to maintain nutrients and carbon.

Prior to planting, cultivated soil is irrigated to prevent loss of topsoil in windy conditions, and if the wind is too strong and topsoil is being blown by the wind, cultivation will cease.

4.3 Fertiliser and Nutrient Monitoring

The nutrient requirements of soil are undertaken regularly and the nutrient burden of water in the bores is monitored by the water licensing authority.

If it becomes necessary to use Metham Sodium, it will be injected into the soil and not sprayed.

Figure 2: Example of productive crop on Lot 8019

5. WATER MANAGEMENT

5.1 Surface Water Resources

There are four licensed production bores in the superficial aquifer. Solar powered pumps lift and transfer water to a reservoir on site. Mains power pressurises the water from the reservoir to the irrigation infrastructure.

5.2 Groundwater Aquifers

In this area ground water levels have been rising in recent decades according to the Department of Water and Environmental Regulation (DWER)

Groundwater Management Area:	Seabird
Groundwater Subarea:	Seabird
Groundwater Source:	Gingin, Perth - Superficial Swan

Groundwater resources are granted by the Minister under section 5C of the Rights in Water and Irrigation Act 1914 (amended 2001) by DWER.

5.3 License Details

Licensee	Pullington Investments Pty Ltd
Licence to take water	Instrument No. GWL207138(1)
Annual Water entitlement	720,000kL
Authorised Activities	Taking water for Horticultural Purposes
Duration of Licence	From 21 March 2022 to 20 March 2032

5.4 Water use

The water is used in compliance with the licensed allocation of 720,000 kL.

5.5 Water Abstraction Method

Four of the six licensed production bores will continue to be used. The two production bores formerly supplying the area covered by pivot 2 (Figures 3 and 4) have now been abandoned and the pumps removed. If additional bores are required then a new license will be sought

through DWER. The 'Licence to Construct or Alter Well' is granted by the Minister under section 26D of the Rights in Water and Irrigation Act 1914.

5.6 Monitoring Water Use, Groundwater levels and Quality

The quantity of water abstracted each month is monitored by calibrated water meters fitted to all production bores and reported to DWER annually.

5.7 Irrigation system design

The current irrigation infrastructure is shown in the attached development plan (Figure 6) and in the below figures 3 and 4. There are two 30 ha pivots and 80ha of fixed irrigation. The irrigation systems were installed to ensure a setback of >20m from the boundary line of the property which is the rural industry minimum highlighted in local planning scheme No.9 (4.7.1).

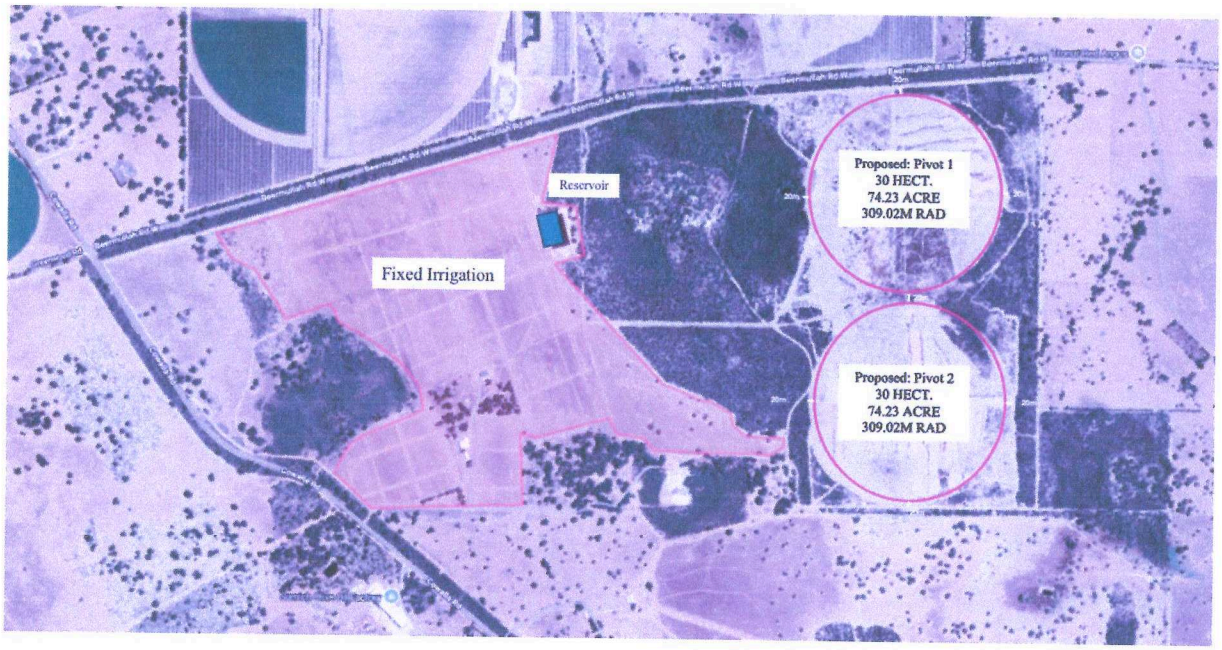

Figure 3: Irrigation infrastructure (Satellite) – Farm Management Plan, Pullington Investments PTY LTD. Lot 8019. 992 Cowalla Rd, Wanerie.

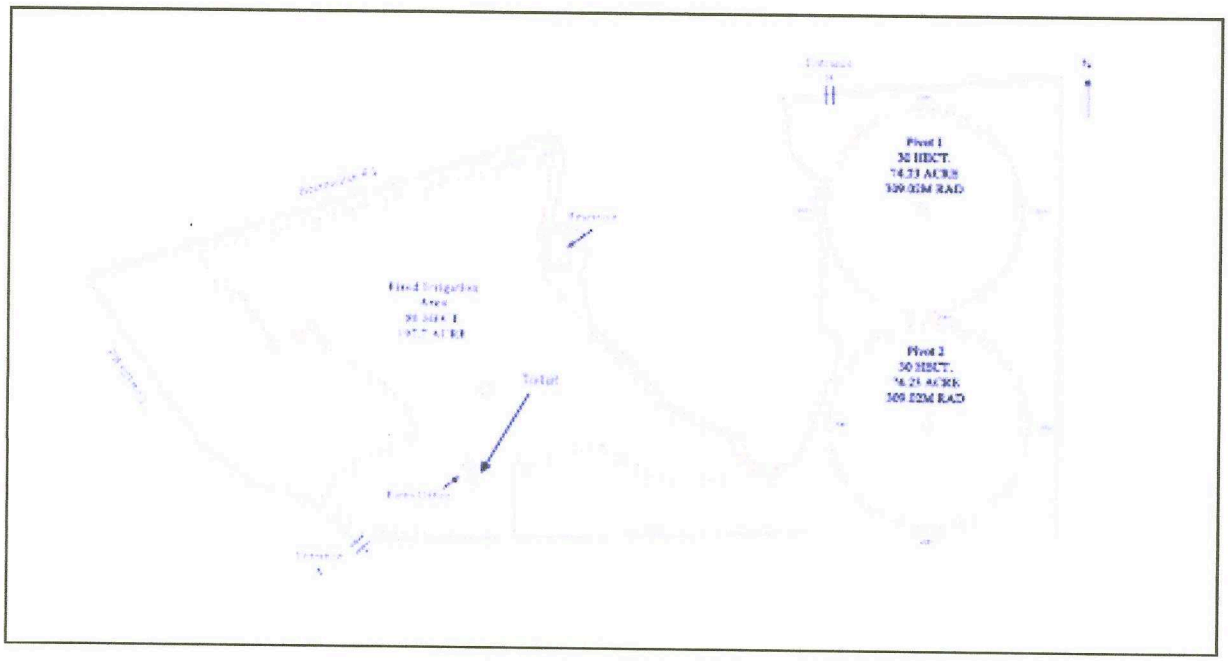

Figure 4: Irrigation infrastructure – Farm Management Plan, Pullington Investments PTY LTD. Lot 8019. 992 Cowalla Rd, Wanerie.

7. MANAGING EFFECT ON NEIGHBOURING PROPERTIES

7.1 Noise

Agricultural activities can produce several noise types: noise from intensive livestock operations, continuous or long-term noise sources (such as pumps or refrigeration units), and intermittent noise from machinery like tractors.

On Lot 8019, noise is expected to come primarily from general farming operations, specifically intermittent use of tractors and attached implements. These activities typically occur during daylight hours, with minimal operations at night. This helps to reduce conflict with neighbouring properties and reduce noise pollution.

7.2 Dust

Agricultural practices can generate dust throughout the entire production process, including land cultivation during planting and harvesting, as well as the transport of products on unsealed farm tracks. To prevent excess dust leaving the property, lot 8019 has integrated buffer zones or 'setbacks' according to the rural industry minimum highlighted in local planning scheme No.9 (4.7.1).

Soil loss which could lead to the production of dust will also be minimised according to section 4.2. (e.g cover crops, irrigated soils). The cropping plans for this farm are unlikely to give rise to dust issues.

Soil loss through wind erosion represents a significant economic risk for farmers, and preventative measures are a high priority. However, severe events can still cause damage. For example, on a former dairy property we owned in New Zealand, one 100-acre paddock consistently underperformed compared to surrounding land. Local knowledge revealed that, prior to our ownership, a severe north-west storm had struck shortly after the paddock was drilled with barley, blowing away both the seed and a substantial portion of the topsoil.

It is clear that if unexpected weather hits the farm just at the wrong moment during soil prep, there is a difficult problem to solve. With fixed irrigation you can move through an irrigation cycle quite rapidly. With a centre pivot, more time is required but our pivots have been fitted with faster gear boxes to reduce the irrigation cycle time.

We are open to suggestions from the Shire as to what other potential remedies are available.

8. ENVIRONMENTAL CONSIDERATIONS

8.1 Tree Planting

Lot 8019 has extensive tree-lined boundaries, with additional plantings planned for non-horticultural areas. While no formal planting plan is currently in place, Pullington Investments and the Holman family have a strong history of revegetation, having planted over 150,000 trees on their neighbouring property on the other side of Cowalla Road.

On the lot 8019, recent plantings around the entrance drive (Figure 4, Entrance A) and farm buildings (Fig 4.) include *Eucalyptus eximia* and *Eucalyptus meliodora* for their proven growth performance and seasonal flowering, as well as *Casuarina cunninghamiana* for windbreak purposes. Proposed species for future planting include *Eucalyptus marri* for broad revegetation and *Eucalyptus todtiana* for shade and habitat as there are good examples of it doing well in recent plantings along Nabaroo road.

We had hoped to plant large areas of Tuart. *Eucalyptus gomphocephala.* This is one of the predominant large tree species of the area, but unfortunately it succumbs to insect damage after year 20. In contrast with older tuart trees in the vicinity which appear to have lasted for a century or so before succumbing to old age

Existing plantings established by the previous owner remain in good condition. Where new plantings are located near production areas, fencing may be required to exclude kangaroos and feral pigs, in compliance with supermarket food safety audit requirements.

The property adjoins a Shire-managed crown land parcel on the Beermullah side, historically used as a clay quarry and now undergoing natural regeneration. This area is unsuitable for farming or grazing and currently harbours feral pigs and wild cats. We are open to working collaboratively with the Shire to enhance revegetation and biodiversity outcomes in this adjoining land.

In summary, we are committed to planting in all non-croppable areas of the property and welcome Shire input on preferred planting locations and species selection.

8.2 Native vegetation removal

The Department of Water and Environmental Regulation (DWER) has identified approximately 2.6 ha on the eastern side of the property as not previously irrigated. Historical records show this area was fully cleared for grazing in the 1960s. During the early 2000s, following a decline in carrot profitability and changes in farm management, some regrowth occurred which was primarily monodominant, low-grade prickly scrub. This regrowth has since been selectively removed to restore horticultural capacity. An application to DWER is currently in progress to formally approve irrigation in this 2.6 ha area; the outcome remains pending.

8.3 Waste Management

In terms of organic waste, little organic matter remains on-site due to effective crop residue and waste management (refer to section 9). The crop is also sorted and packaged off site, which again reduces the amount of organic waste that needs to be managed on site.
In terms of inorganic waste, burning or burying it was historically considered proper waste management. In recent years it has become apparent that this is not effective and recycling these resources is more valuable. Therefore inorganic waste will be collected in bins and taken to landfill or recycling centres as appropriate.

9. STABLE FLY BREEDING

The production of vegetable crops can lead to the build up of rotting organic matter which in combination with porous sandy soils and moisture is the ideal breeding ground for stable fly. Stable fly bites can negatively impact both livestock and domestic pets, and is classified as a pest on the swan coastal plain. Gingin shire actively works with the Western Australian Department of Agriculture and Food (DAFWA) to control these pest populations.

The loose leaf salad production on the farm follows these measures to ensure compliance with the *Biosecurity and Agriculture Management (Stable Fly) Management Plan 2019*:

- **Post-harvest stubble management** - After mowing salad leaf crops, irrigation ceases, and stubble is allowed to dry to retain soil structure and nutrients.
- **Pre-planting preparation** – Prior to establishing the next crop, stubble is rotavated, and irrigation resumes to minimise dust generation.
- **Breeding site control** – Regular monitoring is undertaken but if stable fly breeding is suspected then traps will be deployed and approved insecticides will be applied if necessary.

- **Organic waste control** – All produce is transported to a processing facility in the Perth metropolitan area, and any unsaleable waste is disposed of off-site. On-site waste is rare and is transferred to a neighbouring farm and fed to cattle in troughs.
- **Low-risk production system** – Due to effective crop residue and waste management, little organic matter remains on-site to support stable fly breeding.

These practices are reviewed regularly to ensure full alignment with legislative requirements and to minimise biosecurity risks to the surrounding agricultural environment.

10. HEAVY VEHICLE MOVEMENT

The farm has two existing entry points, shown on Figure 4 labelled as entrance A and B. The primary entry (A) is used regularly for employee access and twice weekly for outgoing production on a light weight covered truck, with a maximum length of 19m.

Loose leaf salads are harvested into plastic trays on a covered waggon hauled behind the tractor conducting the mowing. The trays are hauled to the yard in a covered waggon and placed in the cool room. When a sufficient quantity is assembled for delivery to the Perth based processor, the trays are loaded onto a covered truck for transport.

Machinery is kept in three tractor sheds on the property (Fig. 5). The second entry (B) is used infrequently and is designated for occasional access by heavy machinery or equipment required for agricultural purposes. This arrangement ensures safe and efficient vehicle movement while minimising disruption to regular farming activities and maintaining operational safety on the property.

11. BUILDINGS ON SITE

Other existing buildings on the property include a pump room that supports irrigation infrastructure and a farm office (Figure 4.) which is attached to two cool rooms used for produce storage, lunchroom and an employee toilet facility. The effluent disposal system has been in place for many years and is consistently maintained. These structures support the day-to-day operations of the agricultural business and are essential to maintaining productivity and staff welfare. There are three full time staff (a manager, tractor driver and foreman) and around three part time workers during the harvest who use these facilities.

12. COMPLAINTS

Signage has been installed at the farm entrance identifying the farm name, hours of operation and company contact details for the submission of any public concerns or complaints that may arise.

The hours of operation will be from 7am to 3pm.

Any complaints will be registered, and every attempt made to resolve if and as required.

Figure 5. Tractor sheds and office aerial view

Figure 6. Tractor sheds on the Lot 8019 to safely store machinery.

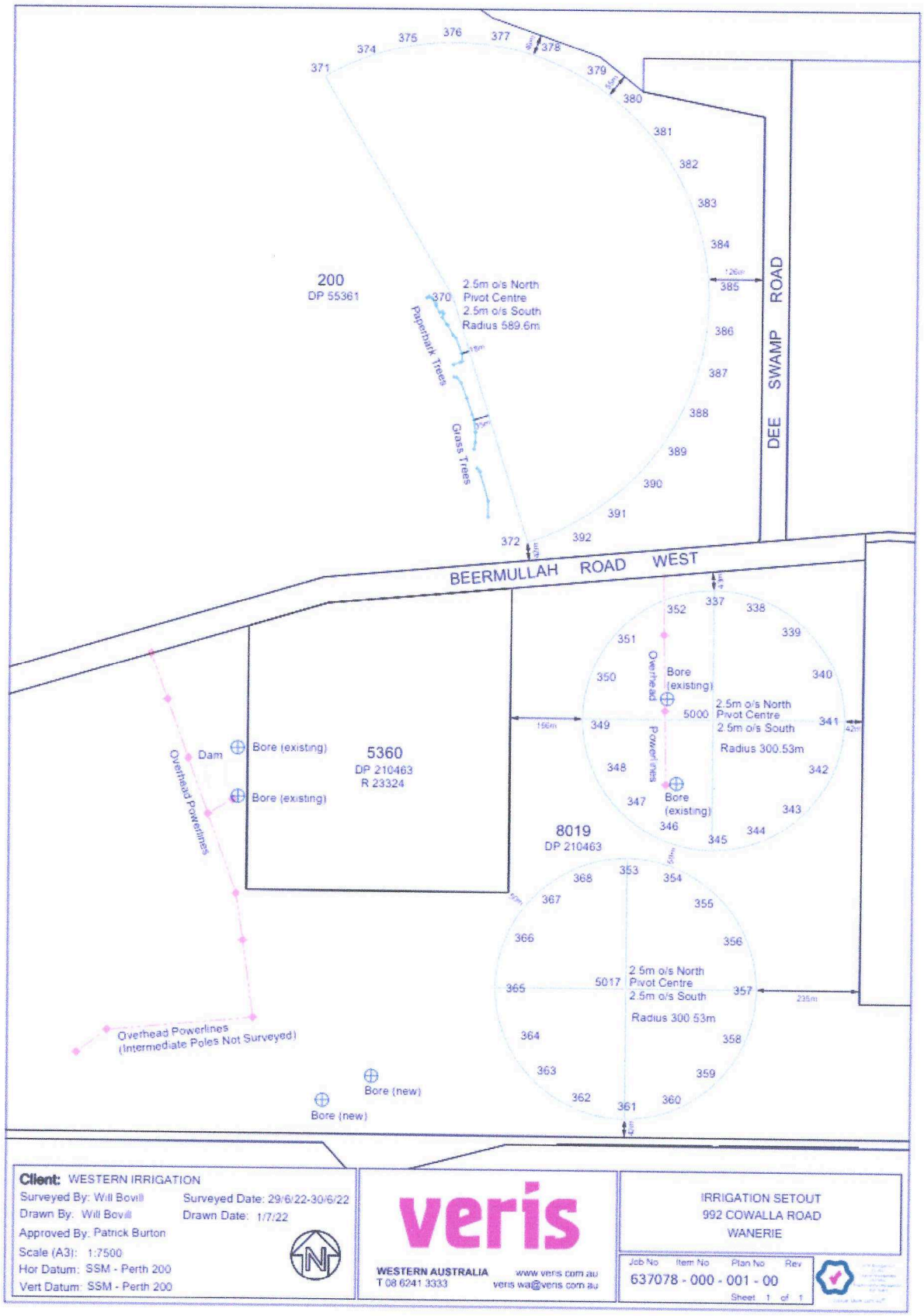

Figure 7: Development Plan of Irrigation infrastructure - Farm Management Plan, Pullington Investments PTY LTD. Lot 8019. 992 Cowalla Rd, Wanerie