

24 February 2021

Chief Executive Officer  
City of Greater Geraldton  
PO Box 101  
GERALDTON WA 6531

Dear Sir

## 1.0 Introduction

This report is in support of application for Intensive Agriculture (Greenhouses) on a portion of Lot 5 No 719 Edward Road in the locality of Narngulu.

The application report should be read in conjunction with Roly Brando Environmental Design Plan Set dated 16/02/2021\_and Blacktop Engineering Plan Set BCE2367.

The application demonstrates that potential impacts of the use can be contained on site and effectively managed and the use can be contemplated by the local authority in the Rural zone.

## 2.0 The Landholding

Lot 5 is located on Edward Road, approximately 1km south of the Edward Road and Narngulu-Moonyoonooka Road intersection. The lot is 19.8ha in area. The lot contains a dwelling and outbuilding (refer Figure 1). Mature trees surround the building envelope and along the existing driveway alignment. The balance of the lot is cleared except for a north-south running tree line in the middle of the lot.



Figure 1 Subject Land 719 Edward Road, Narngulu (NTS) (Source: Google Earth, 2020)

The lot is serviced with reticulated power, water and telecommunications. The lot is bisected by the DBNG Pipeline at the Edward Road frontage to the lot (approximately 400m from the area subject of the application). An easement registered on the title protects the extent of the infrastructure corridor.

The lot has historically been used for grazing activities.

The landholding is generally flat and sits at approximately 24m AHD as indicated at Figure 2.

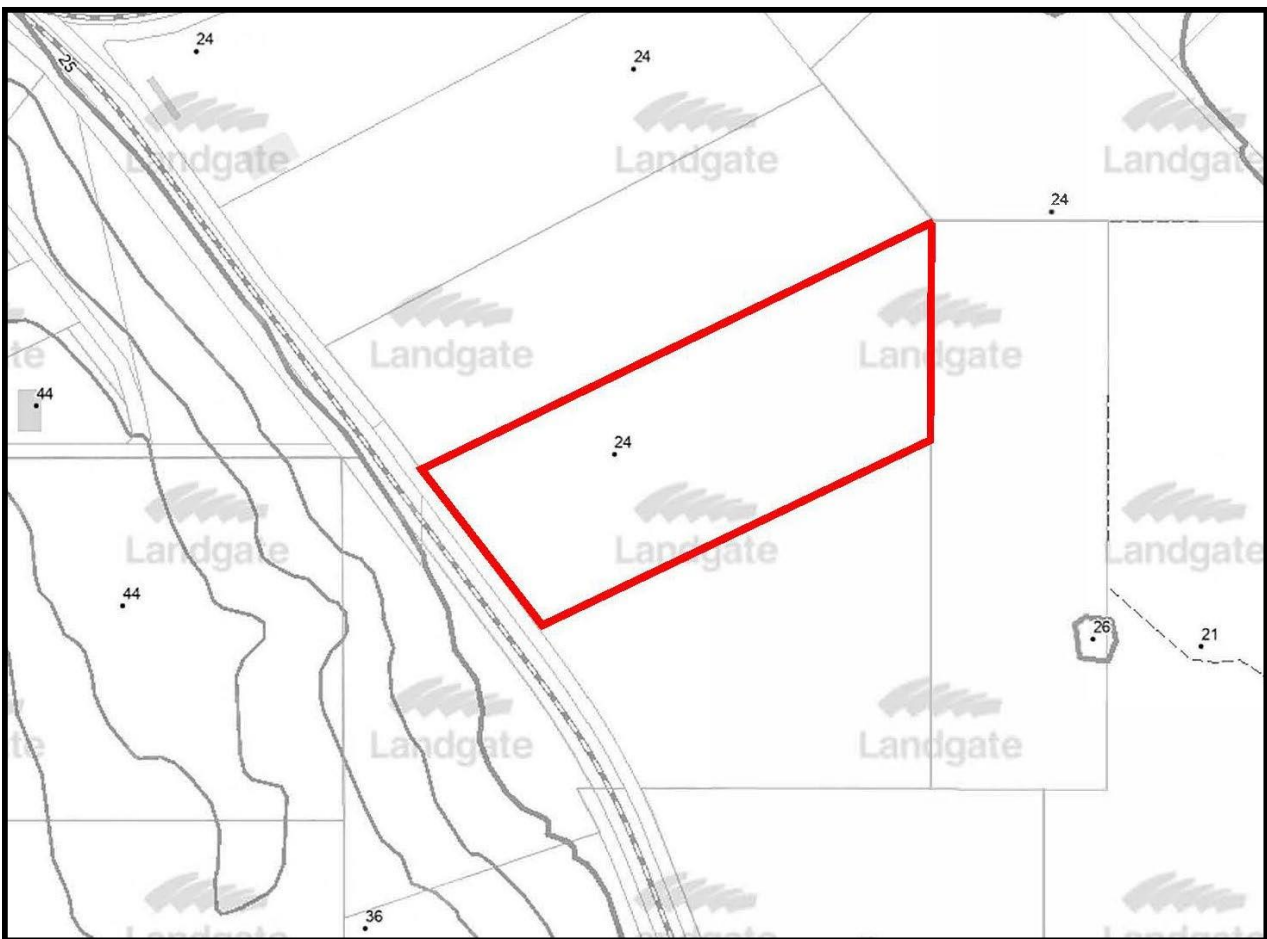


Figure 2 Approximate Contours Value Subject Land 719 Edward Road, Narngulu (NTS)  
(Source: Landgate, 2021)

The area subject of this application is approximately 9.5ha located at the eastern extent corner of the landholding (excluding the existing dwelling and some buildings). The development area has been chosen for existing access, proximity to existing infrastructure, development area screened from Edward Road by existing vegetation, and to maximise distance to dwelling on adjoining Lot 4.

### 3.0 Adjoining Landuse Context

Landholdings to the west of the subject land on Edward Road are zoned General Industry in the Local Planning Scheme. Narngulu is the established General Industry for the greater Urban Area of Geraldton. The Geraldton Regional maximum-security prison is located approximately 750m south west of the subject land.

The lot directly to the north of the subject land contains a dwelling and outbuildings and horse training facilities. Lot 2 contains intensive agriculture (shade house) development and associated dam infrastructure. Lot 12 contains cattle sale yards and transport facilities.

Lot 6 directly to the south contains a transport depot development. Lot 1152 to the east is vacant. Lot 7 contains a dwelling and outbuildings. These lots are all similar in size to the subject land. Lot 15, approximately 500metres to the south-east contains the CBH Narngulu Grain Receival Facility which has capacity for 180,000 tonnes and significant infrastructure to support its operations.

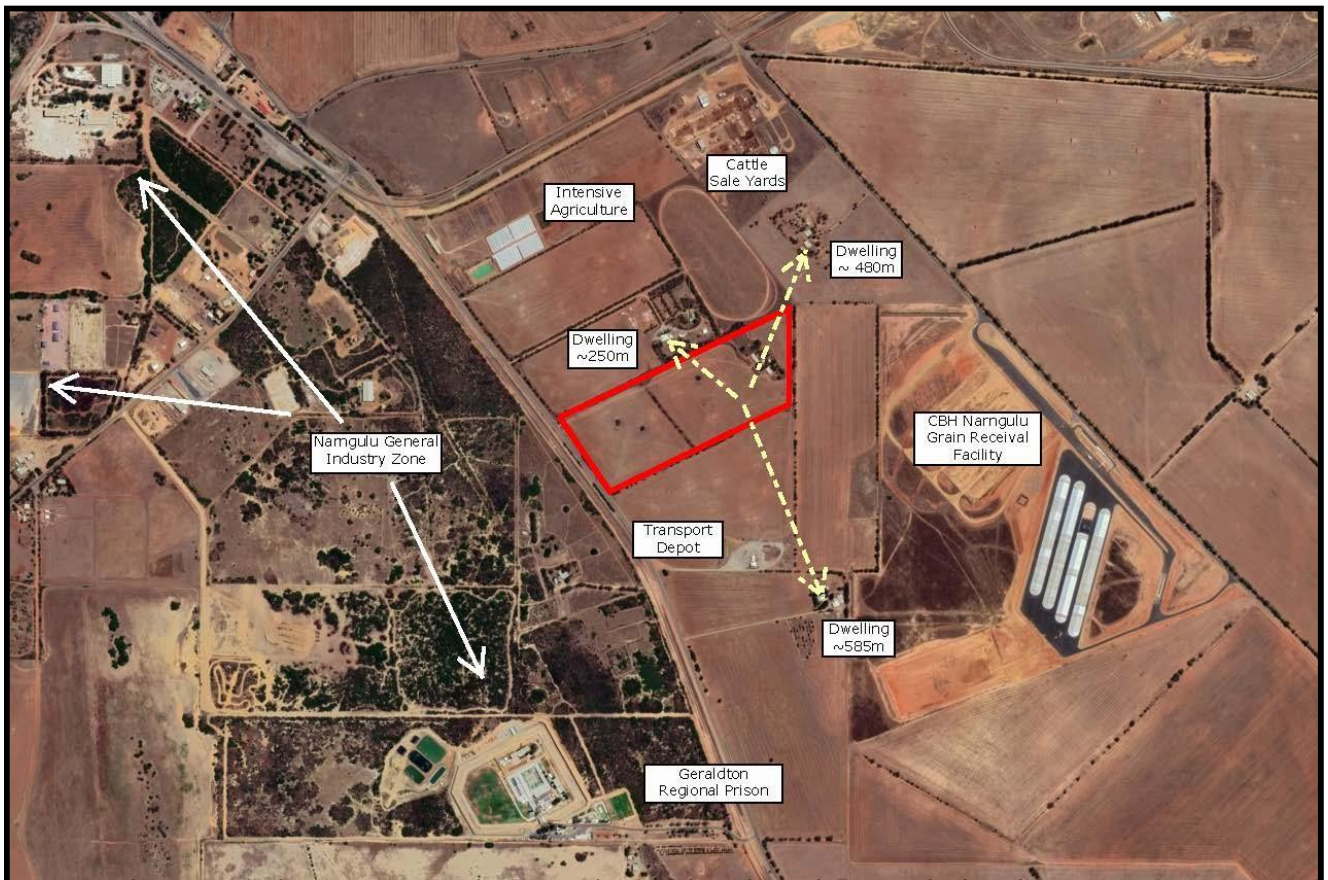


Figure 3 Adjoining Land Use context Subject Land 719 Edward Road, Narngulu (N15)





In addition, the subject land is in the Geraldton Airport SCA and aircraft flight paths. The lot, and lots adjoining will be impacted by significant aircraft noise.

A consideration of land use in the locality indicates the area is one in transition, between rural and industrial uses which ensure more sensitive land use uses cannot be contemplated. Sensitive land use will not result from the development. The proposed use does not the compromise existing agricultural uses and is a transitional use between industrial and broadacre agricultural land use.

#### 4.0 Planning Considerations

Lot 5 is zoned Rural in City of Greater Geraldton Town Planning Scheme No 1 (TPS No 1). In considering an application in the Rural zone, the local authority should consider the objectives of the Rural zone as prescribed in the Local Planning Scheme:

- (a) provide for the maintenance or enhancement of specific local character.
- (b) protect broadacre agricultural activities, such as cropping and grazing, and intensive uses, such as horticulture, from incompatible uses and minimise land use conflicts.
- (c) provide for a range of non-rural land uses where they have demonstrated benefit and are compatible with the surrounding rural uses.
- (d) protect and provide for existing or planned key infrastructure, public utilities and renewable energy facilities.

Intensive Agriculture is listed in the zoning table as an "D" use in the Rural zone: the local authority may consider the proposal after exercising its discretion.

Intensive Agriculture is defined as follows in the LPS:

*means premises used for commercial production purposes, including outbuildings and earthworks, associated with any of the following:*

- (a) the production of grapes, vegetables, flowers, exotic or native plants, or fruit or nuts;*
- (b) the establishment and operation of plant or fruit nurseries;*
- (c) the development of land for irrigated fodder production or irrigated pasture (including turf farms);*
- (d) aquaculture*

The lot is included in Special Control Area 3 Geraldton Airport (SCA3). Provisions in the SCA require development not to impact on the operations or capacity of the Geraldton airport. Development should not impact on the stated Obstacle Height Limitation levels and precludes additional dwellings inside the higher ANEF noise contour extents. A Local Planning Policy (LPP) provides detailed guidance on development standards within the SCA. For the purposes of this application, the proposed used is considered building type Other Industrial as defined in the LPP. Such development is prescribed as acceptable in all ANEF zones (noting the subject land is contained wholly within the lowest ANEF zone (20 and under).

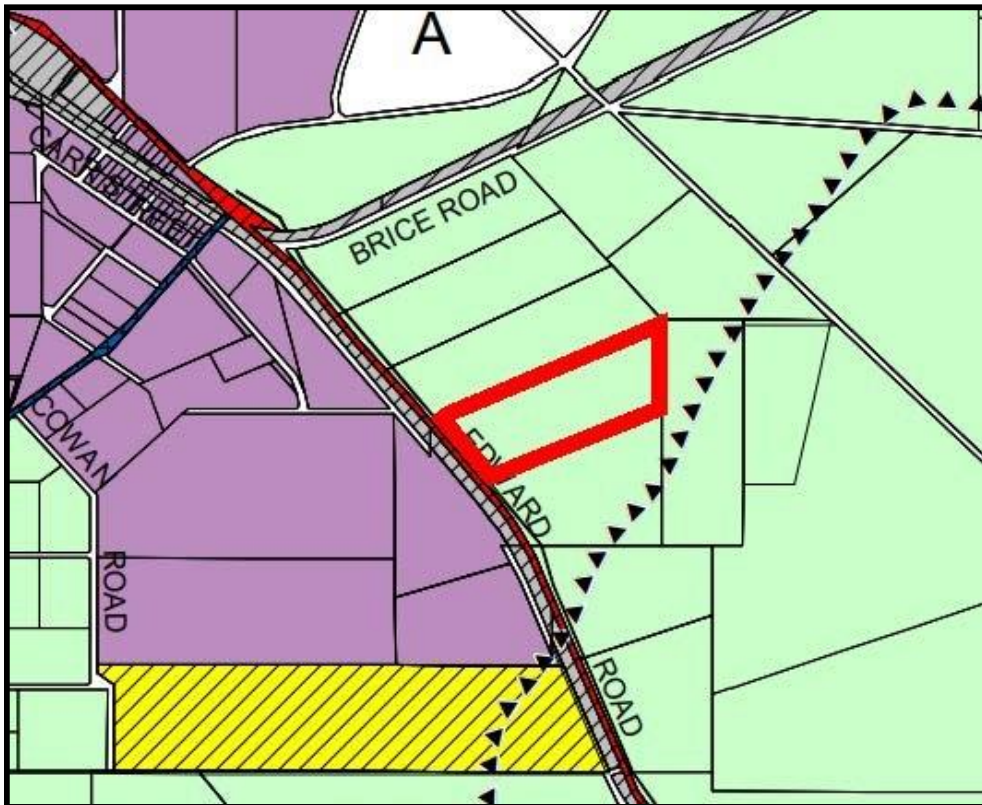


Figure 3 City of Greater Geraldton Local Planning Scheme Extract Zoning: Rural & SCA3

The City of Greater Geraldton's Local Planning Strategy pays strong regard to the Department of Agriculture's *Identification of High Quality Agricultural land in the Geraldton Planning Region*. The subject land is included in the Greenough Flats Agricultural Land Area (ALA). The report notes the increased development of irrigated agriculture in the ALA due to:

- productive soils;
- proximity to labour and supporting infrastructure in Geraldton;
- located on or in proximity to transport routes;
- access to scheme water; and
- average lot size commensurate with intensive agriculture requirements.

The ALA is identified as having the highest versatility for agricultural uses, based on largest water source (scheme) and high rainfall and yields. The proposal for irrigated agriculture secures the landholding for agricultural use on a lot size of suitable size, but that is not sufficient size for broadacre farming enterprises.



## The Proposal

The proposal is for Intensive Agriculture (Greenhouses) development comprising new shade houses, dam, car parking, and ablutions. The existing crossover, access driveway and outbuilding will also form part of the development.

The site plan indicates the area on the lot which is subject of this application.

### Development Summary:

Development Provision Rural	Minimum Requirement	Actual Provision
Minimum Lot Size	NA	9.5ha (development area only)
Minimum Front Setback	20m	410m
Minimum Secondary Street/ Side Setback	10m	20m
Minimum Rear Setback	10m	110m
Floor Area (packing shed & ablutions) *Excludes greenhouses	NA	225m <sup>2</sup>
Maximum Plot Ratio (225m <sup>2</sup> /9.5ha)	NA	0.23%
Maximum Building Height	NA	3.4m (greenhouses) 3.0m (existing shed)
Parking 1/staff member	5 car	5 plus 1 accessibility bay
Stormwater Requirements Total Impervious Area 320m <sup>2</sup>	4.8m <sup>2</sup>	Locations as required. Soakwells and/or rainwater tanks. All runoff from shade houses directed to dam.

### 5.1 Packing/Storage Shed

Floor area: 216m<sup>2</sup>

Wall height: 3m

Construction materials: metal cladding.

Previously approved by local authority (Shire of Greenough 93/562).

No changes to structural elements of shed required.

Construction materials: steel chassis, walls and roof metal cladding.

All packing and storage functions associated with the business will be based in

the existing building.



## 5.2 Greenhouses

Floor area: 216m<sup>2</sup>

Wall height: 2.4m

Finished height: 3.4.

Construction materials: pine posts, SHS truss and plastic film walls and roof.

The orientation of the greenhouses is to ensure maximum solar access and radiation is achieved, and to protect plants from prevailing winds.

## 5.3 Water

The horticulture operations will utilise scheme water and onsite rainfall capture. Water will be stored in tanks and on-site water dam.

## 5.4 Ablutions

As per table F2.3 of BCA 2016: under 10 employees and predominantly single sex.

## 5.5 Site Works

Minimal site works will be required to accommodate development. Finished ground levels determined at detailed building design stage. The area for new development is cleared, no vegetation removal is required.

## 5.6 Building

Prior to commencement of any works, building design certification will be required. This will include requirements for structural engineering certification.

## 5.7 Stormwater Drainage

The detailed site plan indicates the calculations for stormwater drainage based on sandy soil type and total impervious area. All storm water will be retained on site. Soak wells and/or rainwater tanks will be employed for stormwater capture from packing shed, ablutions and sealed parking areas. All runoff from greenhouses will be captured and directed to the proposed dam.

## 5.8 Landscaping

Given the rural zoning, formal landscaping is not proposed. The proponent intends to undertake a tree planting program on the southern boundary of the development area as indicated on plan AD01.

## 5.9 Vehicle Access

Access/egress will continue via existing crossover to Edward Road and existing driveway. Driveway and access to remain as compacted gravel.

## 5.10 Parking

Parking requirement for intensive agriculture is calculated per number of employees. Maximum FT employees will be 5. Five (5) bays are indicated together with an additional accessibility parking bay. The accessible bay will be hard stand as required to permit accessibility



Parking for loading/unloading of maximum size single axle 5tonne truck is indicated on site plan.

**5.11** Hours of Operation

6am (or sunrise) to 7pm (or sunset), 7 days a week.

Packing occurs 3-4 per week at night, no later than 10pm (for collection early the next morning for transport to market).

**5.12** Number of Employees

5 FTE

**5.13** Rural Zone

The character of the area will not be altered by the proposal which maintains the agricultural use of the lot, in keeping with the rural zoning. The area of the proposed lot subject to development represents only a small portion of the landholding. It is located at the rear of the property and will be screened by an existing vegetation line and substantial tree line on northern boundary. In addition, additional planting of vegetation on southern boundary is proposed. Additional vegetation will also improve the rural characteristic of the precinct when viewed from external locations.

**5.14** EPA Guidelines for the Assessment of Environmental Factors

*(Separation Distance between Industrial Uses and Sensitive Land Uses (2005))*

The document provides guidance on the use of buffers between impact generating land uses and sensitive land uses to avoid conflicts between incompatible land uses. They are intended to inform the need for detailed assessment and in the absence of detailed studies, provide guidance on separation distances.

Broad scale market garden operations are considered to potentially generate the following impacts:

Gas, noise, dust, odour.

As a result of the potential impacts, the recommended buffer between the use and sensitive land use (in this case, dwelling) is between 300 and 500m (dependent on scale of development).

The closest dwelling to the proposed land use is approximately 210m as indicated in Figure 4. As a result, the application includes a management plan to address management of potential impacts.

**5.15** Other

- Client will use separate application for produce stall at frontage of property for sale of seconds or direct to produce.



- No signage required at frontage of the property.



Figure 4 Distance sensitive land uses from development area (greenhouses)



## 6.0 Operations Summary

- Product: Cucumbers (90%) Capsicums, tomatoes, other (10%)
- Ground preparation and baiting for pests – 2 weeks
- Planting seedlings – 2 weeks
- Growing period – 6-8 weeks.
- Harvest – crops fruit for 6 to 8 period.
- Fertilizer and pesticides dispensed through reticulation system and hand delivery as required.
- Average – 1000kg/pick. 3 picks per week.
- Packed into 10kg boxes.
- Transport to Perth wholesale markets. No local wholesaler markets.
- No on-site washing or wrapping of product.
- Transport – maximum 5t single axle to attend site for transport.
- Crates are returned to seller when coming for next produce collection.
- Harvest, packing and transport to market timeframe: 1 – 2 days.
- Visitors entering production areas required to wash shoes/cover shoes before entering.
- Equipment used in production: tractor, hand tools, electric pumps, light vehicle, truck for deliveries and pickup.



## 7.0 Management Plan

Management Plan Objective:

Minimise all impacts associated with operations associated with the operation of proposed Intensive Agriculture, on staff, people attending site, and occupiers of adjoining

Potential Impact	Performance Criteria	Management requirements
<p><u>Pesticides and Chemicals</u></p> <p>Use and storage of chemicals risk to users, consumers, community and environment.</p>	<ul style="list-style-type: none"> <li>▪ Minimise risk to public health, property and environment from chemical use and prevent movement of chemicals into non-agricultural areas.</li> <li>▪ Greenhouses as a form of intensive agriculture substantially reduce the use of pesticides</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pesticide use is minimised based on best industry practice.</li> <li>▪ Storage and transport of chemicals meet the requirements of health and safety for workers and visitor to farm.</li> <li>▪ Staff using fertilizers has completed chemical use training as required by applicable legislation.</li> <li>▪ mixed, applied and disposed of in accordance with</li> <li>▪ chemicals stored, mixed, applied and disposed of in accordance with manufacturer instructions and WorkSafe requirements.</li> <li>▪ Chemical type and application recorded and records maintained for 2 year period.</li> <li>▪ Chemicals including fertilizer and pesticide applied directly through irrigation system to ensure applied only where required and direct to plants to avoid over-use.</li> <li>▪ Chemicals to be applied evenly across the crop area.</li> <li>▪ All chemical use contained inside greenhouse area which limits spray drift to external area.</li> <li>▪ Organic material/animal manure not stored on site, only used as required.</li> </ul>



Potential Impact	Performance Criteria	Management requirements
<p><u>Dust</u></p> <p>Dust generated by vehicle movements, bare soil displacement during strong winds; construction phase.</p>	<ul style="list-style-type: none"> <li>▪ Minimise dust impacts being experienced by adjoining properties</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sufficient setback from sensitive land uses.</li> <li>▪ Maintain existing mature vegetation on northern boundary.</li> <li>▪ Implement vegetation planting on southern boundary.</li> <li>▪ Maintain access ways with compacted gravel to reduce dust.</li> <li>▪ Low vehicle speed required for all farm vehicles.</li> <li>▪ No cultivation of soil, manure spreading during strong winds.</li> </ul>
<p><u>Waste</u></p> <p>Waste materials may include crop residues, growing media, plastic, packaging.</p>	<ul style="list-style-type: none"> <li>▪ Maintain tidy property.</li> <li>▪ Dispose of waste appropriately to avoid contamination.</li> </ul>	<p>Crop residue:</p> <ul style="list-style-type: none"> <li>▪ Plant residue not incorporated back into soil.</li> <li>▪ Waste raked from source. Waste includes pruning's, damaged produce, and spent plants.</li> <li>▪ All collected and disposed of off-site to prevent spread of pests and diseases into soil and crops.</li> </ul> <p>Plastics:/Packaging:</p> <ul style="list-style-type: none"> <li>▪ Plastic from polythene coverings, crop support, bags, weed matting, redundant irrigation treatment.</li> <li>▪ Waste separated.</li> <li>▪ No waste burning or burying on site.</li> <li>▪ Disposed of off-site to recycling and/or landfill.</li> <li>▪ Secure rubbish to prevent blowing away.</li> <li>▪ Chemical containers disposed of in accordance with manufacturer's instructions.</li> </ul>





Potential Impact	Performance Criteria	Management requirements
<p><u>Visual Impact</u></p> <p>Greenhouses can cause sudden visual intrusion on the landscape.</p>	<ul style="list-style-type: none"> <li>▪ Maintain neat and tidy environs.</li> <li>▪ Collect stray rubbish.</li> <li>▪ control weeds.</li> <li>▪ Use vegetation/tree planting to screen development and enhance the rural characteristics of the area.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Tree and vegetation planting as per development application, to be completed within 6 months of construction of greenhouses.</li> <li>▪ Maintain existing vegetation wherever possible.</li> <li>▪ Prevent direct line of sight between development and neighbouring dwelling.</li> </ul>
<p><u>Water Management &amp; Irrigation</u></p> <p>Crops grown directly into soil. Intensive use of water and water erosion from run-off.</p>	<ul style="list-style-type: none"> <li>▪ Efficient use of water.</li> <li>▪ Protect surface water, ground water and soil from contamination.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Collect all rainwater runoff for irrigation.</li> <li>▪ Ensure rate of water application does not exceed infiltration rate of soil.</li> <li>▪ Irrigation system covers production area evenly.</li> <li>▪ Run-off water retained on farm for treatment and re-use water. wherever possible;</li> <li>▪ Licencing for water as required.</li> </ul>
<p><u>Noise:</u></p> <p>Noise level generated by farm and associated activities can cause unacceptable impacts on nearby sensitive land uses. Noise impacts more pronounced during non- business working hours.</p>	<ul style="list-style-type: none"> <li>▪ Minimise continuous or intermittent noise generated by activities including machinery and pumps used on site and vehicle movements.</li> <li>▪ Impact will be affected by prevailing winds, topography and consistency of noise source.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Address noise during construction and operational phases.</li> <li>▪ Implementation sufficient setback to minimise noise transmission to sensitive land uses.</li> <li>▪ Vegetation maintained and enhanced to absorb and deflect noise.</li> <li>▪ All farming activities during day time hours;</li> <li>▪ Deliveries and transport of produce and majority of vehicle movements scheduled for reasonable areas of the day.</li> </ul>



Potential Impact	Performance Criteria	Management requirements
<p><u>Odours</u></p> <p>Odour may be caused by use of organic fertilisers e.g. manure and potentially from wet and poorly drained areas.</p>	<ul style="list-style-type: none"> <li>Minimise odours from development impacting on sensitive land uses.</li> </ul>	<ul style="list-style-type: none"> <li>Visual vegetation barriers can also assist in minimise the impact of odour.</li> <li>Sufficient setback to sensitive land use.</li> <li>No manure storage on site and no application during strong winds.</li> <li>Dam water managed to ensure odour not generated from stagnant water.</li> <li>Manage all waste promptly and appropriately.</li> </ul>
<p><u>Light</u></p> <p>Light spill or reflected glare to sensitive land uses.</p>	<ul style="list-style-type: none"> <li>Minimise light pollution to adjoining properties.</li> </ul>	<ul style="list-style-type: none"> <li>Packing shed only source of night time light – screened from sensitive land uses by vegetation corridor and existing development.</li> <li>Security lighting to be angled so doesn't directly illuminate adjoin property.</li> </ul>
<p><u>General</u></p>	<ul style="list-style-type: none"> <li>Address complaints or concerns.</li> </ul>	<ul style="list-style-type: none"> <li>Inform sensitive land users of unusual events or problems that may impact them.</li> <li>Advise timeframe and measures to be undertaken to manage.</li> <li>If a complaint is received, gather evidence and identify and implement strategies to rectify the problem.</li> </ul> <p>Contact details: Lin Nguyen: 0417094565</p>



## 8.0 Conclusion

Lot 5 offers a suitable location with appropriate zoning and permissibility in the local planning scheme and is identified as an appropriate form of agricultural development in the rural zone in this locality. A suitable sized area is available for the proposed use where potential impacts can be managed effectively. The management plan for the proposed uses provides the basis for compliance with approval to establish and operate an intensive agricultural enterprise.

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