



# **Singleton Horticulture Project**

**Annual report for 2022/23 for Licence to  
Take Water WDCP10358**

Fortune Agribusiness Funds Management Pty Ltd



# Contents

<b>Glossary of Acronyms</b>	<b>i</b>
<b>1. Introduction</b>	<b>2</b>
1.1 Purpose	2
1.2 Document control	2
<b>2. Conditions Precedent</b>	<b>3</b>
2.1 Requirements	3
2.2 Condition precedent activities	6
2.3 Other requirements	6
<b>3. Background information</b>	<b>8</b>
3.1 Status of project	8
3.2 Timeline of development	8
3.3 Hydrogeology	8
<b>4. Summary of the 2021/22 year activities</b>	<b>10</b>
4.1 Works undertaken	10
4.2 Improvement in technical understanding	10
4.3 Stakeholder engagement	10
4.4 Incident report	10
<b>5. Monitoring: Climate</b>	<b>12</b>
5.1 Rainfall and evaporation	12
<b>6. Monitoring: Soil health</b>	<b>13</b>
6.1 Existing farm development	13
6.2 Monitoring undertaken	13
6.2.1 Quantitative	13
6.2.2 Other	13
6.3 Comparison against previous monitoring	13
6.4 Summary of findings: soil condition	13
<b>7. Groundwater monitoring network</b>	<b>13</b>
7.1 Existing monitoring network	13
7.1.1 FAFM network	13
7.1.2 State network	14
7.2 Maintenance works	14
<b>8. Monitoring: Groundwater Production</b>	<b>16</b>
8.1 Existing farm development	16
8.2 Allowable volume	16
8.3 Monitoring undertaken	16
8.4 Pumping Bore performance	16
8.5 Pumping Bore maintenance works	16
8.6 Summary of findings: production	16
<b>9. Monitoring: Groundwater level</b>	<b>17</b>
9.1 Monitoring undertaken	17

9.2	Water level response	17
9.2.1	Production bores	17
9.2.2	Monitoring bores: FAFM network	17
9.2.3	Monitoring bores: State network / other	17
9.3	Potentiometric mapping	17
9.4	Comparison against model predictions	17
9.5	Summary of findings: levels	17
<b>10.</b>	<b>Monitoring: Groundwater quality</b>	<b>18</b>
10.1	Monitoring program	18
10.2	Water Quality response	18
10.2.1	Production bores	18
10.2.2	Monitoring bores	18
10.3	Water quality mapping	18
10.4	Summary of findings: quality	18
<b>11.</b>	<b>Monitoring: GDE Condition</b>	<b>19</b>
11.1	Monitoring undertaken	19
11.2	GDE condition	19
11.3	Comparison against background	19
11.4	Summary of findings: GDE condition	19
<b>12.</b>	<b>Monitoring: Other</b>	<b>20</b>
12.1	EPA monitoring	20
<b>13.</b>	<b>Compliance with licence conditions</b>	<b>21</b>
13.1	General conditions	21
13.2	Adaptive monitoring program requirements	22
<b>14.</b>	<b>Statement of data availability</b>	<b>23</b>
<b>15.</b>	<b>Conclusions</b>	<b>24</b>
<b>16.</b>	<b>Recommendations</b>	<b>25</b>
<b>17.</b>	<b>References</b>	<b>26</b>

## Table index

Table 1	General Condition GC6	2
Table 2	Proponent	2
Table 3	Document control	3
Table 4	WDPCC10358 Entitlement Staging Conditions	3
Table 5	Conditions Precedent	3
Table 6	Singleton Horticulture Project development timeline	8
Table 7	Climate statistics for Ali Curung weather station (Site 015502, BOM 2022)	12
Table 8	Climate Data – Monthly Rainfall (and Evaporation)	12
Table 9	Singleton Weather Data	14
Table 10	Licence Conditions	21
Table 11	Status of the Adaptive Management Program (AMP)	22

## Figure index

Figure 1	Timeline for CP approvals	7
Figure 2	Singleton project location	9
Figure 3	Sensitive receptors at the SHP	11
Figure 4	FAFM monitoring bore network	15

## Appendices

No table of contents entries found.

# Glossary of Acronyms

Acronym	Description
CP	Condition precedent
DBH	Diameter at breast height
DEPWS	Department of Environment, Parks and Water Security
EC	Electrical Conductivity
EFTF	Exploring for the Future (Geoscience Australia project)
FAFM	Fortune Agribusiness Funds Management
GDE	Groundwater dependent ecosystem
GMP	Groundwater monitoring plan
NGM	Numerical groundwater model
NT	Northern Territory
NTG	Northern Territory government
SHP	Singleton Horticulture Project
SOP	Standard Operating Procedure
SWL	Standing water level
TDS	Total Dissolved Solids
TO	Traditional owner
VWP	Vibrating Wire Piezometer
WAP	Water Allocation Plan
WEL	Water Extraction Licence

# 1. Introduction

## 1.1 Purpose

Under Section 60 of the Water Act (1992) FAFM was granted a licence to take water from the Western Davenport Water Control District (Licence No WDCP10358). The licence contains a number of conditions which are grouped into the following categories:

- Conditions Precedent (10 CPs)
- Staging Conditions (6 SCs)
- Water Extraction Conditions (6 WECs)
- Metering Conditions (7 MCs)
- Water Use Conditions (2 WUCs)
- General Conditions (9 GCs)

The ten Conditions Precedent must be fulfilled before any water can be extracted under this licence. The remaining conditions must be complied with throughout the thirty year term of the licence.

General Condition GC6 requires FAFM to submit an annual compliance report for the water accounting year ending on 30 June each year (see Table 1 below). This report describes the work undertaken in the year 2022/23. As the CPs have not yet been fulfilled, the work in the 2022/23 year relates primarily to the fulfillment of those CPs.

Table 1 General condition GC6

Condition	Requirement
GC6	The licence holder must submit to the department an annual compliance report on or before 30 September of each year of this licence. The annual report must:
	(a) demonstrate compliance with this licence for the water accounting year ending the 30 June immediately prior to the reporting date;
	(b) include a summary of the non-compliances reported since the commencement of the licence;
	(c) discuss monitoring data and trend analysis for all monitoring parameters collected since the commencement of the licence and how they compared with modelled predictions and any action taken where there are substantial differences;
	(d) demonstrate how the environmental objectives established in the adaptive management plan are being met; and
(e) where the licence holder has implemented actions under the approved adaptive management plan that reduces the taking of water, revised Total Projected Use volumes for the remainder of the licence term.	

## 1.2 Document control

Proposal proponent details are presented in Table 2 and document control is shown in Table 3.

Table 2 Proponent

Proponent	Fortune Agribusiness Funds Management Pty Ltd
Contact person	Peter Wood (Director)
Street & mailing Address	Suite 401, 434 St Kilda Rd, Melbourne, Victoria 3004
Telephone	0419 354 905 (preferred) or 03 9471 3556
Email	peter.wood@fortuneagri.com

Table 3 Document control

<b>Project name</b>	Fortune Agribusiness Annual Report				
<b>Document title</b>	Singleton Horticulture Project   Annual report for 2022/23 for Licence to Take Water WDCP10358				
<b>Project number</b>	12580936				
Revision	Author		Reviewer		
	Name	Signature	Name	Signature	Date
0	T. Anderson	On file	P. Wood		10/10/23

## 2. Conditions Precedent

### 2.1 Requirements

Water Extraction Licence WDCP10358, permits FAFM to extract up to 40 GL/year from the Central Plains groundwater management zone of the Western Davenport Water Control District from April 2021 to April 2051. The licence has staging conditions on the entitlement volume, which are summarised in Table 4

Table 4 WDPCC10358 Entitlement Staging conditions

Stage	Entitlement ML/yr	Period	Bore field (Block)
1	12,788	For a period of 3 years from the date the Controller approves, in accordance with CP 2, that the Conditions Precedent have been satisfied.	Block 1,2 and 3
2	22,845	For a period of 2 years from the date the Controller approves proceeding from Stage 1 to Stage 2.	Block 1,2,3,4 and 5
3	31,779	For a period of 2 years from the date the Controller approves proceeding from Stage 2 to Stage 3.	Block 1,2,3,4,5,6 and 7
4	40,000	For the remaining duration of the licence from the date the Controller approves proceeding from Stage 3 to Stage 4.	Block 1,2,3,4,5,6,7,8 and 9

The ten Conditions Precedent must be fulfilled in order for the Staging Conditions to be applied. The Conditions Precedent are listed in Table 5.

Table 5 Condition Precedent

No.	Condition Precedent
CP1	The right to take groundwater provided under this licence will not take effect (with the result that this licence will expire automatically), unless these Conditions Precedent are fulfilled before 31 December 2023. For the sake of clarity, the licence holder will have no entitlement to take and use water unless these Conditions Precedent are fulfilled before 31 December 2023.
CP2	The licence holder must seek and obtain approval in writing from the Controller that the Conditions Precedent have been fulfilled.
CP3	Where a Conditions Precedent requires a program, plan or other document to be approved by the Controller, the licence holder must:
	(a) seek approval of the document; and (b) the document:



No.	Condition Precedent			
	<ul style="list-style-type: none"> <li>(i) must be submitted not later than 1 June 2023, unless otherwise agreed in writing by the Controller; and</li> <li>(ii) may be returned by the Controller to the licence holder for amendment and the licence holder shall resubmit the document to the Controller within the timeframe specified in writing by the Controller.</li> </ul>			
CP4	<p>The licence holder must:</p> <ul style="list-style-type: none"> <li>(a) obtain the approvals as listed in Table 1 (which are necessary in order to undertake the activity that will involve the taking and use of groundwater on the Land); or</li> <li>(b) have a notice from the relevant authority that no approval is required; and</li> <li>(c) provide a copy of the approval or notice to the Controller or an Authorised Officer on request.</li> </ul> <p>Table 1 Approvals required</p> <table border="1" data-bbox="331 645 1091 864"> <tr> <td data-bbox="331 645 1091 719">Pastoral land clearing permit as required under the <i>Pastoral Land Act 1992</i></td> </tr> <tr> <td data-bbox="331 719 1091 792">Non-pastoral land use permit as required under the <i>Pastoral Land Act 1992</i></td> </tr> <tr> <td data-bbox="331 792 1091 864">Environment protection approval as required under the <i>Environment Protection Act 2019</i></td> </tr> </table>	Pastoral land clearing permit as required under the <i>Pastoral Land Act 1992</i>	Non-pastoral land use permit as required under the <i>Pastoral Land Act 1992</i>	Environment protection approval as required under the <i>Environment Protection Act 2019</i>
Pastoral land clearing permit as required under the <i>Pastoral Land Act 1992</i>				
Non-pastoral land use permit as required under the <i>Pastoral Land Act 1992</i>				
Environment protection approval as required under the <i>Environment Protection Act 2019</i>				
CP5	<p>The licence holder must prepare for approval by the Controller:</p> <ul style="list-style-type: none"> <li>(a) a map (and spatial data), verified through suitable on-ground surveys, of: <ul style="list-style-type: none"> <li>(i) Aboriginal cultural values identified in CP 10 (as appropriate); and</li> <li>(ii) groundwater dependent ecosystems in each landform on Singleton Station (NT Portion 653) in the Aeolian sandplain and alluvial plain areas shown in Figure 7.2 provided in Attachment A of this licence.</li> </ul> <p>The spatial data must be provided as a shapefile. The guideline: <i>Spatial data minimum requirements for clearing of native vegetation</i> should be used for guidance on the minimum requirements and attributes for the shapefile.</p> </li> <li>(b) maps (and shapefiles) demonstrating the modelled spatial extent of predicted impact on groundwater levels and to the Aboriginal cultural values identified at CP 10 and groundwater dependent ecosystems mapped in CP 5(a) at 5 yearly intervals for a minimum of 40 years.</li> <li>(c) should the extent of predicted impact mapped in CP 5(b) exceed the limits established under CP 10(d) or the limits outlined in the Guideline the licence holder must either submit: <ul style="list-style-type: none"> <li>(i) a revision of the bore field design (Figure 5.3 provided in Attachment B of this licence) and model pump file (pumping schedule) for the revised bore field design; and</li> <li>(ii) maps (and shapefiles) based on the revised bore field design in CP 5(c)(i), demonstrating the modelled spatial extent of predicted impact to the Aboriginal cultural values identified at CP 10 and the groundwater dependent ecosystems mapped in CP 5(a) at 5 yearly intervals for a minimum of 40 years meet the protection limits outlined in the Guideline. This map replaces the maps prepared under CP 5(b).</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>(iii) a revised pumping schedule and model pumping file for the existing bore field design (Figure 5.3 provided in Attachment B of this licence); and</li> <li>(iv) maps (and shapefiles) based on the revised pumping schedule in CP 5(c)(iii), demonstrating the modelled spatial extent of predicted impact to the Aboriginal cultural values identified at CP 10 and the groundwater dependent ecosystems mapped in CP 5(a) at 5 yearly intervals for a minimum of 40 years meet the protection limits outlined in the Guideline. This map replaces the maps prepared under CP 5(b).</li> </ul> </li> </ul>			
CP6	<p>The licence holder must undertake an assessment of the potential salinity impacts to the Land and Water Resource from water taken and used under this licence and submit a report to the Controller.</p> <p>The assessment and report must include:</p>			

No.	Condition Precedent
	<ul style="list-style-type: none"> <li>(a) a detailed characterisation of the soil and unsaturated zone properties including permeability, hydraulic conductivity and vertical salt loads;</li> <li>(b) a detailed investigation of site specific environmental factors, such as evapotranspiration and rainfall, which includes salt transport in the unsaturated zone;</li> <li>(c) the development and application of a solute transport model that assesses and demonstrates the likelihood and extent of salinity impacts on the Land and Water Resource;</li> <li>(d) a description of the solute transport model with modelling data and attributes;</li> <li>(e) a discussion about the likelihood and extent of salinity impacts on the Land and Water Resource; and</li> <li>(f) how salinity impacts will be managed to maintain groundwater quality in accordance with the water quality objectives declared under section 73 of the Act and prevent or minimise adverse effects on the potential use of any other land.</li> </ul>
CP7	<p>The licence holder must develop and submit for approval by the Controller, an adaptive management plan. The adaptive management plan must:</p> <ul style="list-style-type: none"> <li>(a) Include clear and measurable objectives that: <ul style="list-style-type: none"> <li>(i) Achieve (or reduce) the predicted impact on groundwater levels as determined under CP5;</li> <li>(ii) Maintain groundwater quality in accordance with water quality objectives declared under section 73 of the Act;</li> <li>(iii) Protect 70% or more of the groundwater dependent ecosystems in each of the two major land form classes (Aeolian sandplain and alluvial plain) on the Land as determined under CP5; and</li> <li>(iv) Supports the Aboriginal cultural values identified under CP10;</li> </ul> </li> <li>(b) be prepared in consultation with the department</li> <li>(c) specify the monitoring parameters that will be used to demonstrate that the objectives under CP7(a) are being met</li> <li>(d) include the trigger values and limits identified under CP10(d) for initiating adaptive management actions</li> <li>(e) include quantitative triggers and limits which can be used to initiate adaptive management actions when: <ul style="list-style-type: none"> <li>(i) groundwater level response to water taken under this licence deviates from the prediction mapped in CP5</li> <li>(ii) groundwater quality objectives are likely to be impacted; or</li> <li>(iii) impact on the health of groundwater dependent ecosystems is measured or predicted to exceed 30% of the extent of the groundwater dependent ecosystems in each of the two major land form classes (Aeolian sandplain and alluvial plan) on the Land as determined under CP5;</li> </ul> </li> <li>(f) define management actions that are capable of being implemented in a timely way to meet environmental objectives</li> <li>(g) establish who in the licence holder's organisation makes the decision to implement management actions under the plan in response to triggers and the evidence on which such decisions must be made;</li> <li>(h) incorporate a feedback system to ensure appropriate actions are initiated when triggered and environmental objectives are always being met; and</li> <li>(i) Include a review process to ensure appropriate actions are updated as knowledge and technology improves.</li> </ul>
CP8	<p>The licence holder must develop and submit for approval by the Controller a monitoring program to assess the impact of water taken under this licence on groundwater levels in the Water Resource, the health of groundwater dependent ecosystems mapped in CP 5 and other users of the Water Resource. The monitoring program must:</p> <ul style="list-style-type: none"> <li>(a) Be prepared by a suitably qualified professional</li> <li>(b) Include the monitoring parameters, methodology and frequency for monitoring impact attributable to water taken under the licence on: <ul style="list-style-type: none"> <li>(i) Groundwater level</li> </ul> </li> </ul>

No.	Condition Precedent
	(ii) Groundwater quality (including salinity)
	(iii) The health of groundwater dependent ecosystems, and
	(iv) Aboriginal cultural values
	(c) Include multi-level monitoring bores for defining stratification of groundwater quality parameters
	(d) Include a review process to ensure continuous improvement of the monitoring program and
	(e) Be implemented immediately following the Controllers approval.
CP9	The licence holder must develop and submit for approval by the Controller a program to assess the Water Resource on the Land. The program must:
	(a) be prepared by a suitably qualified person;
	(b) incorporate a drilling program including both production and monitoring bores;
	(c) verify the stratigraphy of the subsurface of the Land;
	(d) identify the aquifers;
	(e) verify the aquifer properties;
	(f) determine the interconnectivity between the aquifers;
	(g) quantify the aquifer yields by undertaking pumping tests of at least 48 hrs constant discharge with a recovery period of 24 hrs or 95% recovery to initial groundwater levels;
	(h) conclude with a report on the assessment submitted to the Controller; and
	(i) be implemented following the Controller's approval.
CP10	The licence holder must develop and submit to the Controller a groundwater dependent Aboriginal cultural values impact assessment. The assessment must:
	(a) be prepared by a suitably qualified professional;
	(b) identify, map and document (as appropriate) the cultural values of Aboriginal people that will be impacted by groundwater extraction under this licence;
	(c) identify reference points to be used in modelling the impacts of groundwater extraction under this licence on the identified Aboriginal cultural values; and
	(d) specify monitoring parameters, trigger values and limits for the reference points which can be used to initiate actions under an adaptive management framework.

## 2.2 Condition precedent activities

A timeline for addressing the Conditions Precedent activities, as determined on 30 June 2023, is provided in Figure 1.

An application was made by FAFM to extend the timeframes in CP1 and CP3 of the WEL which relate to the submission of reports related to the CPs and the overall completion of all CPs. The approved new timelines are shown in Figure 1.

A program to assess the water resource on the land, as required by CP 9, was prepared and approved by the Controller.

## 2.3 Other requirements

<<Not applicable >>

**Figure 1**      **Timeline for CP approvals**

### 3. Background information

#### 3.1 Status of project

The Singleton Horticulture Project (SHP) is located on Singleton Station in the Western Davenport Region, approximately 380 km north of Alice Springs, and 1,160 km south of Darwin, in the Northern Territory of Australia.

FAFM's growth plan is to stage the development of approximately 3,300 Ha of intensive irrigated horticulture. The development is to take place on nine blocks, each about 300 to 400 ha. The location and most recent aerial photography of the SHP is shown in Figure 2.

#### 3.2 Timeline of development

<<Not applicable for this annual reporting period >>

Table 6 Singleton Horticulture Project development timeline

Date	Activity
2022/23	Permitting and approvals. No water extraction or irrigation operations undertaken.

#### 3.3 Hydrogeology

<<Not applicable >>

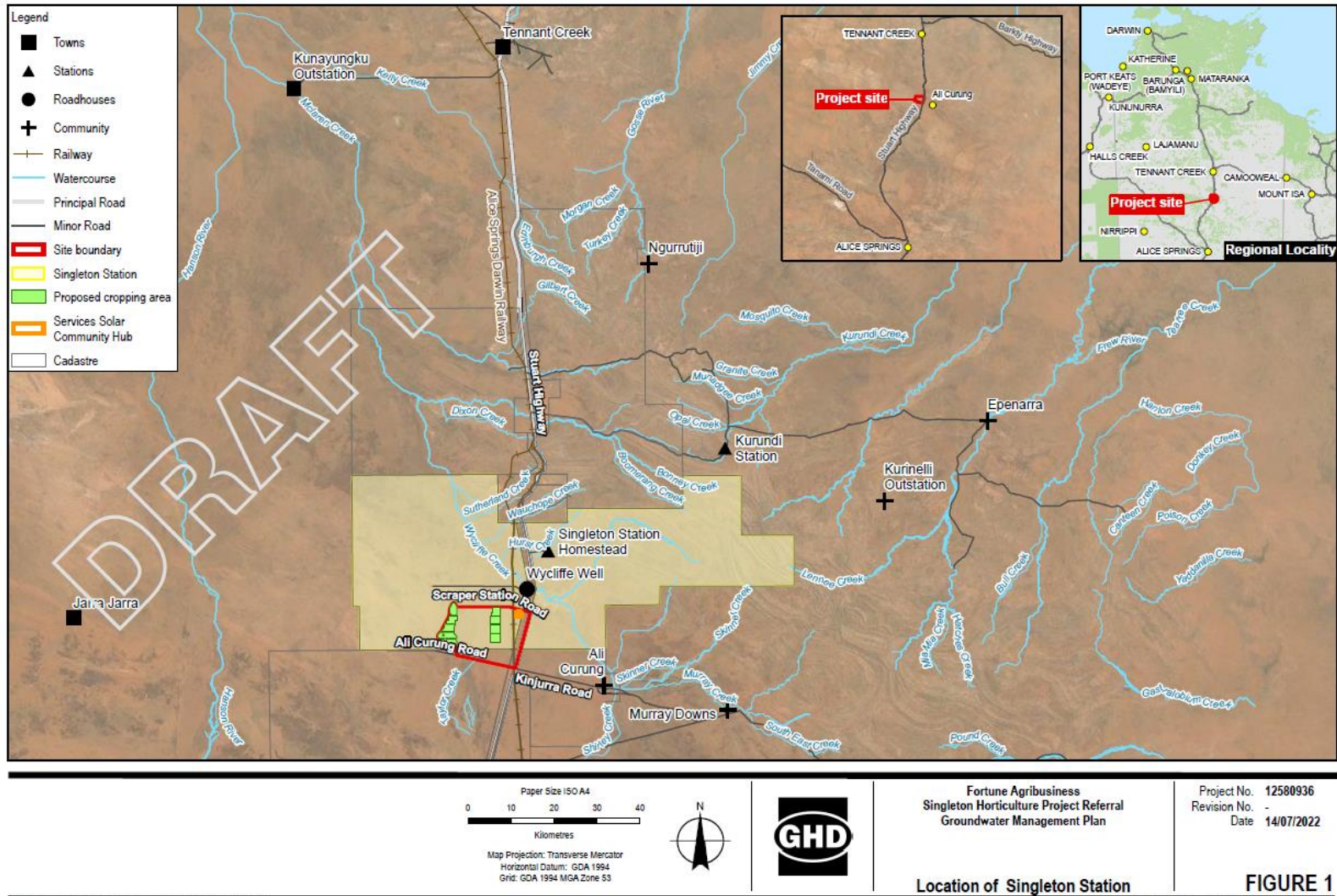


Figure 2 Singleton project location

## **4. Summary of the 2022/23 year activities**

### **4.1 Works undertaken**

FAFM spent much of 2022/23 completing technical studies or preparing documents to satisfy the CPs of licence WDCP10358. In particular, a detailed referral was submitted to the NT Environment Protection Authority (NTEPA). Following a period of public consultation, the NTEPA determined that a Tier 3 level of environmental assessment (Environmental Impact Statement or “EIS”) was required. As at the end of June 2023 the terms of reference for the EIS had not been finalised. Environmental approval of the project is a requirement of CP 4.

At the time of reporting no irrigation bores exist on the property, no cropping areas have been developed, and no irrigation activities are operational.

### **4.2 Improvement in technical understanding**

*<<Not applicable >>*

### **4.3 Stakeholder engagement**

As reported in the Annual Report for 2021/22, engagement by FAFM with Government and neighbouring landowners commenced in 2016, largely through participation in the Western Davenport Water Advisory Committee. This extended to wider members of the community in 2018 and has continued since then. FAFM has been engaging with local and regional stakeholders and communities throughout the proposal planning and approvals process.

Further targeted consultation to inform the referral to the EPA for environmental approval was undertaken between March 2022 and October 2022.

Consultation was planned for four key stakeholder groups to better understand their views, provide information about the proposal, and where possible, enable opportunities for collaboration on Proposal design including:

- Group One: Traditional Owners and Central Lands Council (engaged previously during 2018/19)
- Group Two: Pastoral lease holders, Ali Curung community and nearby businesses
- Group Three: Government organisations, agencies, local councils, interest groups, industry groups
- Group Four: General public

Consultation to inform the referral did not include Group One stakeholders (Traditional Owners and Central Lands Council). At the time of consultation, these stakeholders were unavailable due to concurrent legal action regarding the process of issuing the water licence for the project.

A series of community briefings was held in early 2023, facilitated by the NT Chamber of Commerce. Overall the participants in these briefings expressed strong support for the project and they recognised in particular the economic and social benefits for nearby communities and the Barkly region.

A Community and Stakeholder Engagement Strategy is being developed for the project, to manage ongoing communication with key stakeholders, and to guide consultation throughout design and delivery of the project.

### **4.4 Incident report**

*<<Not applicable >>*

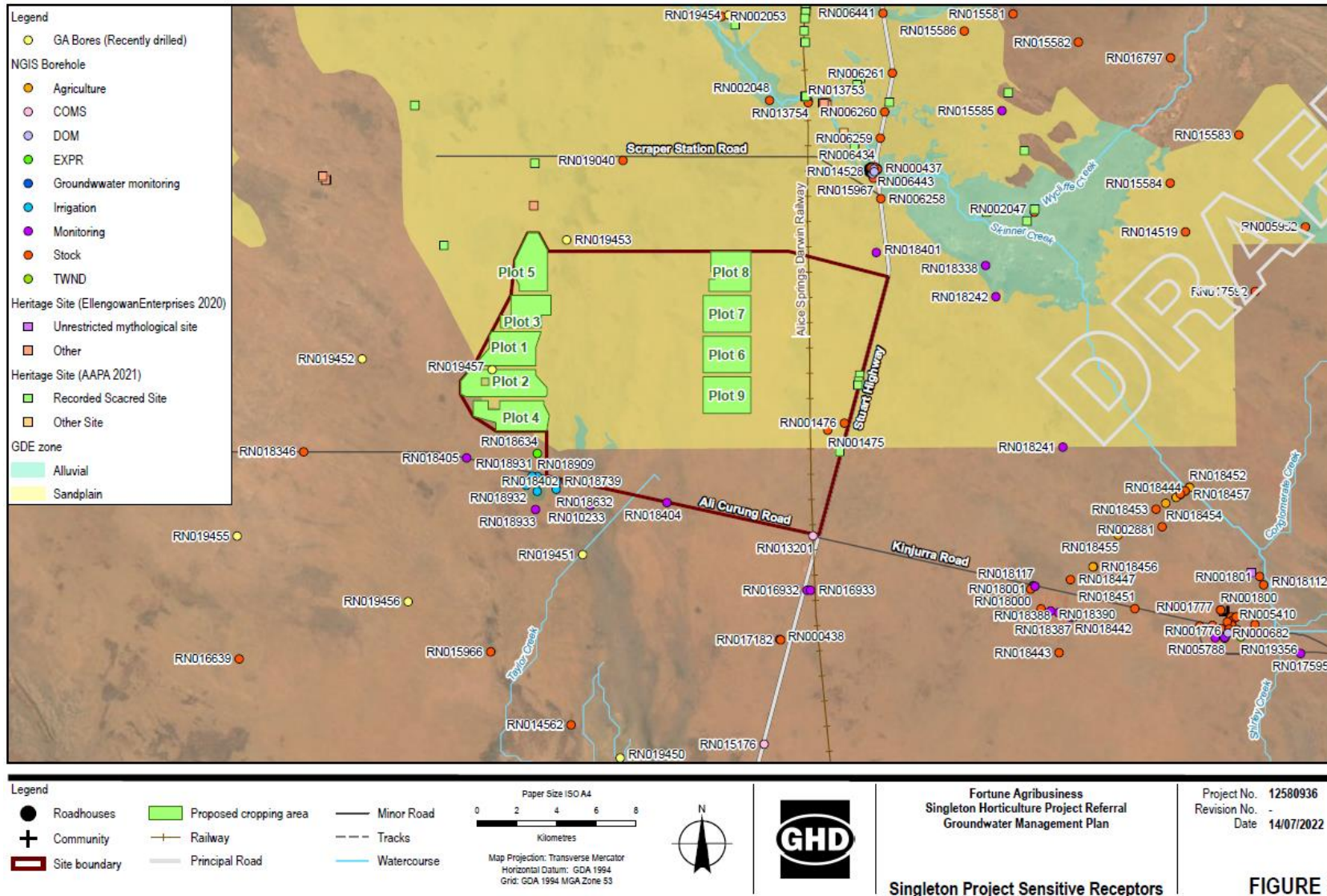


Figure 3 Sensitive receptors at the SHP



## 5. Monitoring: Climate

Climate statistics for Ali Curung weather station are listed in Table 7. Average monthly minimum and maximum temperature and average rainfall data are presented in Table 8.

Table 7 Climate statistics for Ali Curung weather station (Site 015502, BOM 2022)

Aspect	Ali Curung weather station
Mean maximum temperature (1988 – 2014)	32.3°C
Mean minimum temperature (1988 – 2014)	16.6°C
Mean annual rainfall (1967 – 2015)	386.6 mm
Highest mean monthly rainfall (1967 – 2015)	98.3 mm (February)
Lowest mean monthly rainfall (1967 – 2015)	4.1 mm (August)

### 5.1 Rainfall and evaporation

Climate data was obtained from the Ali Curung climate station (BOM ID: 15502). The long term average evaporation and rainfall data are based upon data collected between 1990 and 2022 to reflect the more recent climate data, and have been summarised in Table 8.

Table 8 Climate Data – Monthly Rainfall (and Evaporation)

Month	Evaporation (mm)	Rainfall (mm)						
	LTA	LTA	2017	2018	2019	2020	2021	2022*
January	326.7	85.9	120.2	44.1	16.3	64.6	33	212.9
February	274.2	78.6	77.1	4.4	0.5	86.7	8.7	32.7
March	286.2	36.5	0	118.9	46.7	42	37.5	3.1
April	238.7	14.3	0	0.4	0	0.2	0	0
May	181.5	14.5	0	0	5.8	3.5	0	0.1
June	144.1	6.3	0.7	0	0.1	0	0.7	22.1
July	160.3	7	56	0	0	0	0	0
August	210.2	1.5	0	0	0	0	0	0.3
September	265.9	10.6	0	0	0.1	0.1	17.6	15.6
October	319.4	19.7	13.5	14.9	0.3	34.4	53.5	45.9
November	326.6	32.1	79.9	30	0.6	0.1	54.1	19.5
December	325.4	70.3	23.3	0	0.9	124.7	26.7	0.1
Total	3059.4	377.3	370.7	212.7	71.3	356.3	232	352.3

Notes:

1. All rainfall records in mm.
2. LTA – Long term average (based on 1990 to 2020)
3. Long term mean rainfall based on records: 1990 – Present.
4. 2022 total to 15/12/2022
5. Climate station location: -21.0025°S, 134.4029 E.
6. Elevation: 375 m.

FAFM has installed a MAIT weather monitoring system at the site of the trial farm adjacent to the Singleton Station homestead. The system comprises a Davis Weather Station with a Vaisala weather transmitter. The following table (Table 9) summarises the data obtained from March 2022 to August 2023.

Table 9 Singleton Weather Data

## **6. Monitoring: Soil health**

### **6.1 Existing farm development**

*<<Not applicable >>*

### **6.2 Monitoring undertaken**

#### **6.2.1 Quantitative**

*<<Not applicable >>*

#### **6.2.2 Other**

*<<Not applicable >>*

### **6.3 Comparison against previous monitoring**

*<<Not applicable >>*

### **6.4 Summary of findings: soil condition**

*<<Not applicable >>*

## **7. Groundwater monitoring network**

### **7.1 Existing monitoring network**

#### **7.1.1 FAFM network**

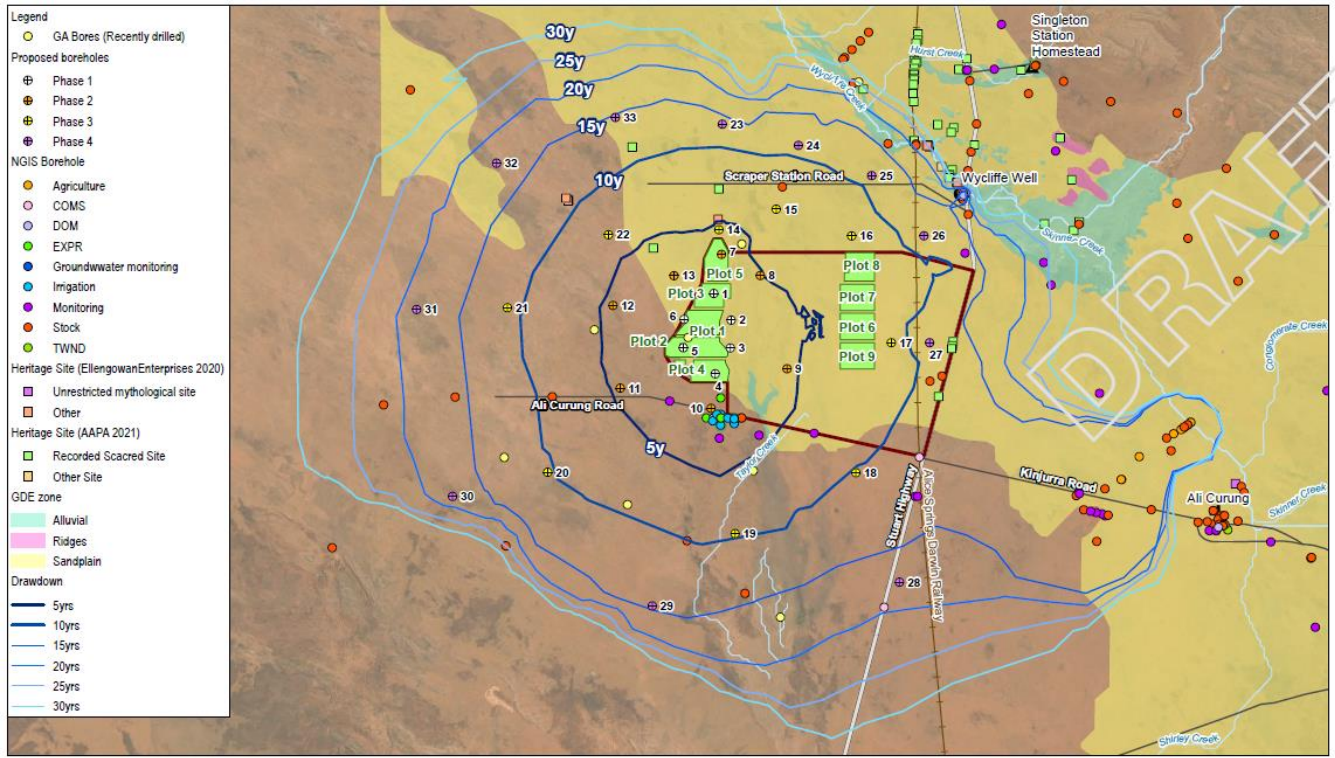
*<<Not applicable >>*

## 7.1.2 State network

*<<Not applicable >>*

## 7.2 Maintenance works

*<<Not applicable >>*



<p><b>Legend</b></p> <ul style="list-style-type: none"> <li>GA Bore (Recently drilled)</li> <li>Proposed boreholes <ul style="list-style-type: none"> <li>Phase 1</li> <li>Phase 2</li> <li>Phase 3</li> <li>Phase 4</li> </ul> </li> <li>NGIS Borehole <ul style="list-style-type: none"> <li>Agriculture</li> <li>COMS</li> <li>DOM</li> <li>EXPR</li> <li>Groundwater monitoring</li> <li>Irrigation</li> <li>Monitoring</li> <li>Stock</li> <li>TWND</li> </ul> </li> <li>Heritage Site (EllengowanEnterprises 2020) <ul style="list-style-type: none"> <li>Unrestricted mythological site</li> <li>Other</li> </ul> </li> <li>Heritage Site (AAPA 2021) <ul style="list-style-type: none"> <li>Recorded Sacred Site</li> <li>Other Site</li> </ul> </li> <li>GDE zone <ul style="list-style-type: none"> <li>Alluvial</li> <li>Ridges</li> <li>Sandplain</li> </ul> </li> <li>Drawdown <ul style="list-style-type: none"> <li>5yrs</li> <li>10yrs</li> <li>15yrs</li> <li>20yrs</li> <li>25yrs</li> <li>30yrs</li> </ul> </li> </ul>	<p><b>Legend</b></p> <ul style="list-style-type: none"> <li>Towns</li> <li>Site boundary</li> <li>Minor Road</li> <li>Proposed cropping area</li> <li>Tracks</li> <li>Roadhouses</li> <li>Railway</li> <li>Watercourse</li> <li>Community</li> <li>Principal Road</li> </ul>	<p>Paper Size ISO A4</p> <p>0 2 4 6 8 Kilometres</p> <p>Map Projection: Transverse Mercator Horizontal Datum: GDA 1994 Grit: GDA 1994 MGA Zone 53</p>	<p><b>GHD</b></p>	<p>Fortune Agribus Singleton Horticulture Project Referral Groundwater Management Plan</p> <p><b>Singleton Project Sensitive Receptors and Drawdowns 5 - 30 years</b></p>	<p>Project No. 12580936 Revision No. Date 29/08/2022</p> <p><b>FIGURE 6.8</b></p>
---	--	---	-------------------	---	---

Figure 4 FAFM monitoring bore network

To be updated when bores are installed. Indicative layout of the proposed monitoring installations.

## **8. Monitoring: Groundwater Production**

### **8.1 Existing farm development**

*<<Not applicable >>*

### **8.2 Allowable volume**

*<<Not applicable >>*

### **8.3 Monitoring undertaken**

*<<Not applicable >>*

### **8.4 Pumping Bore performance**

*<<Not applicable >>*

### **8.5 Pumping Bore maintenance works**

*<<Not applicable >>*

### **8.6 Summary of findings: production**

*<<Not applicable >>*

## **9. Monitoring: Groundwater level**

### **9.1 Monitoring undertaken**

*<<Not applicable >>*

### **9.2 Water level response**

#### **9.2.1 Production bores**

*<<Not applicable >>*

#### **9.2.2 Monitoring bores: FAFM network**

*<<Not applicable >>*

#### **9.2.3 Monitoring bores: State network / other**

*<<Not applicable >>*

### **9.3 Potentiometric mapping**

*<<Not applicable >>*

### **9.4 Comparison against model predictions**

*<<Not applicable >>*

### **9.5 Summary of findings: levels**

*<<Not applicable >>*

## **10. Monitoring: Groundwater quality**

### **10.1 Monitoring program**

*<<Not applicable >>*

### **10.2 Water Quality response**

#### 10.2.1 Production bores

*<<Not applicable >>*

#### 10.2.2 Monitoring bores

*<<Not applicable >>*

### **10.3 Water quality mapping**

*<<Not applicable >>*

### **10.4 Summary of findings: quality**

*<<Not applicable >>*

# **11. Monitoring: GDE Condition**

## **11.1 Monitoring undertaken**

*<<Not applicable >>*

## **11.2 GDE condition**

*<<Not applicable >>*

## **11.3 Comparison against background**

*<<Not applicable >>*

## **11.4 Summary of findings: GDE condition**

*<<Not applicable >>*



## **12. Monitoring: Other**

### **12.1 EPA monitoring**

*<<Not applicable >>*

# 13. Compliance with licence conditions

## 13.1 Licence Conditions

<<Note- Compliance and FAFM Response not applicable for this annual reporting period>>

Table 10 Licence conditions

Item	Requirement	Compliance	FAFM Response
SC2	Approval must be provided in writing to proceed from one entitlement stage to the next.	Yes	During the 2022/2023 water year there was no change in the entitlement stage. No change in the entitlement staging is required for the 2023/24 year.
SC5	The licence holder must complete each stage within the period specified in Table 2.	Yes	The FAFM program of development is currently on track with that provided to the regulator.
WEC1	Compliance with the licence entitlement	Yes	As of 1 July 2023 FAFM are permitted to extract 12,788 ML per annum once CPs fulfilled. Total volume pumped in 2022/23 was 0 ML.
WEC3	Production bores used to take water under licence	Yes	There were no production bores commissioned and pumped in the 2022/23 year.
WEC4, WEC6	The licence holder must maintain bores in accordance with the NUDLC (2020) guidelines.	Yes	Bore maintenance works were not required in 2022/23.
WEC5	Use of chemical or fertiliser injection.	N/A	No chemicals or fertilisers have been used in 2022/23 and no backflow prevention devices were required to be installed or maintained.
MC1	Metering equipage and monitoring.	Yes	As of the close of the 2022/23 year, no production bores have been commissioned. No meters are yet installed.
MC2	Metering replacement	Yes	As of the close of the 2022/23 year, no production bores have been commissioned. No meters have needed to be replaced.
MC3	Maintain a record of the duration of any maintenance activities undertaken on meters.	Yes	As of the close of the 2022/23 year, no production bores have been commissioned. No meters have needed maintenance works.
MC4	The licence holder must not tamper with any installed meter.	Yes	As of the close of the 2022/23 year, no production bores have been commissioned. Metering sites would be made available for Controller inspection.
MC5	The licence holder must not install an offtake point before a meter.	Yes	As of the close of the 2022/23 year, no production bores have been commissioned. Metering sites would be made available for Controller inspection.
MC6	Submission of meter readings to the Controller on a monthly basis.	Yes	As of the close of the 2022/23 year, no production bores have been commissioned.
MC7	Reporting of flow data	Yes	As of the close of the 2022/23 year, no production bores have been commissioned and therefore no flow data has been recorded.

Item	Requirement	Compliance	FAFM Response
GC2	Implementation of the most recent adaptive management plan.	Yes	The Adaptive Management Plan will be updated following completion of the approved drilling and testing program which will satisfy CP 9. Refer Table 11 below for discussion of compliance with the current Adaptive Management Plan
GC3	The licence holder must seek approval from the Controller prior to implementing revisions to the Adaptive Management and Monitoring program.	Yes	The draft Adaptive Management Plan was updated for inclusion in the referral to the NTEPA in October 2022. As noted above this Plan will be further updated after the drilling program.
GC4	Timely reporting to the NT government of Adaptive Management Plan trigger	Yes	No monitoring triggers were activated.
GC5	Notification of non-compliances	N/A	No non-compliance has been reported in the 2022/23 monitoring year.
GS6	Annual reporting	Yes	This document includes annual reporting requirements.
GC7	Maintaining a website	Yes	Annual report will be publicly available on FAFM website- <a href="https://www.fortuneagri.com/">https://www.fortuneagri.com/</a>
GC8	Current contact details	Yes	Contact details for FAFM up to date

## 13.2 Adaptive Management Plan requirements

Table 11 Status of the Adaptive Management Plan (AMP)

No.	Requirement	Compliance	FAFM response
1	Stakeholder consultation	N/A	No stakeholder consultation undertaken relevant to the implementation of the AMP.
2a	Investigation reports	N/A	None prepared in 2022/23
2b	Production reports	N/A	None prepared in 2022/23
2c	Notification of AMP triggers	N/A	
2d	Compliance reporting	Yes	Annual report 2022/23 (this report) has been issued to the NTG
2e	Requests for information from the NTG	N/A	No requests for information were made by the NTG in 2022/23 in respect to site operation and the AMP
3	Numerical groundwater model revision / verification	N/A	As of 2022/23 no production bores have been installed. There is no further site investigation (or operation data) to support update of the numerical model.
4	Continuous Improvement	N/A	The AMP is yet to be implemented.
5	Audit of the AMP	N/A	The AMP is yet to be implemented. No audit of the AMP has been completed.
6	Complaints	N/A	No complaints have been registered by FAFM during 2022/23.
7	Non-conformances with plan	N/A	No non-conformances have been registered by FAFM during 2022/23.

## 14. Statement of data availability

*<<Not applicable >>*

# 15. Conclusions

*<<Not applicable >>*

## 16. Recommendations

*<<Not applicable >>*

## 17. References

