# 

# Carlton Plain Stage 1 – Irrigated Agriculture

**COMPLIANCE ASSESSMENT REPORT** 

1 January 2023– 31 December 2023

Statement 1081

May 2024

### Prepared for and on behalf of

#### **Kimberley Agricultural Investment Pty Ltd**

ABN 60 154 270 194 PO Box 2531 KUNUNURRA WA 6743

by

# Dr Debra Pearce BSc MA PhD

Integrated Management Systems Lead Auditor AU-TL-QM-EM-OH 45001



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## **Disclaimer and Limitation**

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#### **Document Control**

Date	Version	Reviewed / endorsed by
6 May 2024	Rev A	For client review
7 May 2024	Rev O	For client endorsement and submission

# Acronyms and abbreviations in use in document

A.C.I.I.	Ab anisis all Cultural Havitana Ast 2021
ACH	Aboriginal Cultural Heritage Act 2021
AER	Annual Environment Report
AHA	Aboriginal Heritage Act 1972
ANZECC	Australian and New Zealand Environment and Conservation Council
BAM Act	Biosecurity and Agriculture Management Act 2007
САР	Compliance Assessment Plan
CAR	Compliance Assessment Report
DAFWA	(Former) Department of Agriculture and Food Western Australia
DBCA	Department of Biodiversity, Conservation and Attractions
DER	Department of Environmental Regulation
DoW	(Former) Department of Water
DPIRD	Department of Primary Industries and Regional Development
DWER	Department of Water and Environmental Regulation
ECD	Ecological Character Description
ECe	Electrical conductivity (of saturated soil extract)
EMP	Environmental Management Program/Plan
EPA	Environmental Protection Authority
EP Act	Environmental Protection Act (1986)
EPBC Act	Environment Protection and Biodiversity Conservation Act (1999) (Cwth)
ESP	Exchangeable Sodium Percentage
GL	Gigalitre(s)
ha	Hectare(s)
ILUA	Indigenous Land Use Agreement
KAI	Kimberley Agricultural Investment Pty Ltd
КВС	Kimberley Boab Consulting
km	Kilometre(s)
m3/sec	cubic metres per second (also known as cumec)
mbgl	metres below ground level
MNES	Matter(s) of National Environmental Significance
Ν	Nitrogen
NR	Nature Reserve
OFA	Ord Final Agreement
OHS	Occupational Health and Safety
ORFRS	Ord River Floodplain Ramsar Site
Р	Phosphorus
R&D	Research and development
RiWI Act	Rights in Water and Irrigation Act 1914
SoC	Statement of Compliance
TSS	Total Suspended Sediment
WA	Western Australia
WARMS	Western Australian Rangelands Monitoring System
-	

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# 1.0 Overview

This document reports on the compliance of Kimberley Agricultural Investment Pty Ltd (KAI) in the delivery of the requirements of Ministerial Statement 1081 relating to the development of Carlton Plain Stage 1 for irrigated agriculture. The reporting period is 1 January 2023 to 31 December 2023.

# 1.1 Project background

KAI received approval to clear and develop 3,055ha on a property known as 'Carlton Plain', northwest of Kununurra in the Shire of Wyndham East Kimberley (see Figure 1) in September 2018, following a Public Environmental Review (PER) process undertaken in 2017. Environmental Protection Authority (EPA) Assessment 2126 was completed, and Report 1614 prepared by the EPA Services branch of the Department of Water and Environmental Regulation (DWER) in 2018.

Statement 1081 originally allowed for the clearing and development of 3,055ha between House Roof Hill and the Ord River, for the purpose of surface and pressurised irrigated agricultural cropping, which may include grains, cotton, perennial horticulture, and other crops.

A section 45C application to vary Ministerial Statement 1081 was submitted to DWER on 3 October 2019. The s45C request was approved by DWER on 1st September 2021. Table 1 summarises the approved operational extent under Statement 1081.

The *Environmental Management Plan* (EMP) for Carlton Plain Stage 1 (Kimberley Boab Consulting, 2018) was approved for implementation under Statement 1081. A revised EMP was submitted to DWER with the s45C request. This 2023 Compliance Assessment Report (CAR) covers both the Statement and the EMP.

Figures 1 and 2 illustrate the location and the revised development area. The variation reduced the permitted area of clearing by 110ha, to 2,945ha.

Element	Originally approved extent	Revised extent approved 1/9/21
Surface and pressurized irrigation of annual and perennial crops, including infrastructure areas access, farm outbuildings, drainage and irrigation requirements.	Clearing of up to 3,055ha (refer to Table 3 for breakdown).	Clearing, development and agricultural activity on up to 2,945ha within the development envelope. Pressurised irrigation infrastructure to be constructed where soils do not allow for surface (flood) irrigation.
Annual irrigation water abstraction	27.6 gigalitres (GL) from the Ord River System.	27.6 gigalitres (GL) from the Ord River System.

Table 1. Original and approved varied development extent

(Source: Carlton Plain s45C application)



Figure 1. Carlton Plain Development Area Location

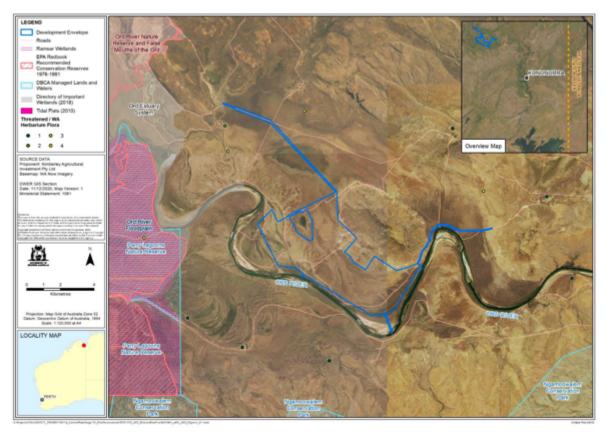


Figure 2. Carlton Plain Stage 1 Approved (revised) development envelope

(Source: Ministerial Statement 1081 Schedule 1 Figure 1, dated 1 September 2021).

# 2.0 Project approvals

# 2.1 Ministerial Statement 1081

Ministerial Statement 1081 permits the following activity:

#### Table 2. Summary of the Proposal

Proposal Title	Carlton Plain Stage 1 – Irrigated Agriculture
Short Description	Clearing and development of 2,945ha between House Roof Hill and the Ord River, for the purpose of surface and pressurized irrigated agricultural cropping which may include grains, cotton, perennial horticulture and other crops.

Table 3. Extent of physical and operational elements

Element	Operational extent
Surface irrigation of annual crops	Clearing of up to 1,749ha.
Pressurised irrigation of perennial crops	Clearing of up to 368ha. Pressurised irrigation infrastructure to be constructed where soils do not allow for surface (flood) irrigation.
Infrastructure	Clearing of up to 828ha within the Stage 1 Development Envelope.
Annual irrigation water abstraction	27.6 gigalitres (GL) from the Ord River System.

(Source: Table 2 of MS1081 Schedule 1)

(Source: Table 1 of MS1081 Schedule 1)

# 2.2 Water Licence Application – RiWI Act 1914

The Department of Water and Environmental Regulation has received from KAI the initial documentation for the water licence application for Carlton Plain. This documentation includes peak demand modelling and assessment of performance of Carlton Stage 1 as well as the expanded development across Carlton Plain and Mantinea. In addition, a draft *Operating Strategy* has been supplied to DWER for consideration. Discussions continue.

'Bed and Banks' permit applications for the Carlton project pump sites have been lodged with DWER, but are subject to securing easements through the Department of Planning, Lands and Heritage (DPLH). Recent (April 2024) progress with DPLH in relation to securing the easements paves the way for completing the Bed and Banks and water licence application requirements.

# 3.0 Proponent details

Registered Business Name: Kimberley Agricultural Investment Pty Ltd ACN: 154 270 194 ABN: 60 154 270 194 Address: 794 Weaber Plain Road (PO Box 2531) Kununurra, WA, 6743 Telephone No: (08) 9169 3113 Email Address: jengelke@kai-australia.com.au Email Address for notices: Copy to guhai@kai-australia.com.au Website: www.kai-australia.com.au

#### Proponent representatives:

Mr Gu Hai CHIEF EXECUTIVE OFFICER Phone No: (08) 9169 3113 E-mail address: guhai@kai-australia.com.au Mr Jim Engelke GENERAL MANAGER Phone No: (08) 9169 3113 Mobile Telephone: 0407 991 734 E-mail address: jengelke@kai-australia.com.au

# 4.0 Implementation status

# 4.1 Works program

Clearing for the development of Carlton Plain commenced in April 2019 following the renovation of the eastern entry track in November 2018. A total of 2,370.4ha has been cleared, including 1.05ha cleared in May 2023 for a pump site approved under Statement 1081 (refer to evidence item 2023.1081.M1.1 for images).

Other works undertaken in 2023 were very limited and confined to some maintenance of drainage and laser levelling works, and the clearing of approximately one hectare of land for a pumpsite. This totalled approximately three weeks of work.

# 4.2 Site water management

The reporting year (2023) saw a total of Parry Creek, twenty kilometres west of Carlton Hill, recorded 785.6mm of rainfall in 2023, as illustrated in Figure 3, consistent with the previous year's 786.3mm of rainfall recorded at the Carlton Hill Station weather monitoring station prior to Bureau of Meteorology (BoM) recording ceasing in May 2022.

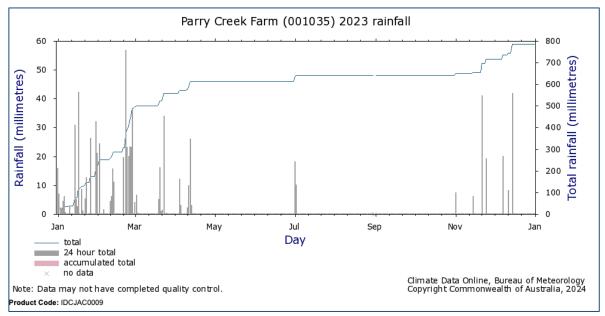


Figure 3. Parry Creek Rainfall - 2023

(Source: www.bom.gov.au accessed 24/4/2024)

The Carlton wetland 'plumbing' continues to operate effectively and recharges the wetland with hillside drainage from House roof Hill, per the project design. Consistent with the photographic evidence provided previously, the wetland was recharged successfully and remained functional for bird habitat. The removal of constant grazing has been a significant factor in the improvement of the wetland condition in recent years.

Plates 1-4 depict views from the western side of the Carlton Wetland in the late dry season (August 2023).



Plate 1. Carlton Wetland - 1 August 2023 (view to north-east)



Plate 2. Carlton Wetland - 1 August 2023 (view to east)



Plate 3. Carlton Wetland - 1 August 2023 (view to north-west)



Plate 4. Carlton Wetland - 1 August 2023 (view to west)



Figure 4. October 2023 Satellite Imagery indicating Carlton Wetland retaining water at end of dry season



Figure 5. Carlton Plain Stage 1 at end of reporting period (18 December 2023)

(Source: <u>www.satamap.com.au</u>)

# 4.3 Land clearing extent

No clearing outside of the approved development area has occurred. Figure 6 satellite vegetation index imagery, when compared to the December 2021 image presented in Figure 7, illustrates seasonal differences in vegetation coverage. These images highlight vegetation density across the development and surrounding areas, with equal resonance bias to low and high biomass vegetation. This allows for the distinction of pasture and other vegetation density. As can be seen in the images, heavily vegetated riparian areas are evident. Pastures appear in grey shades.

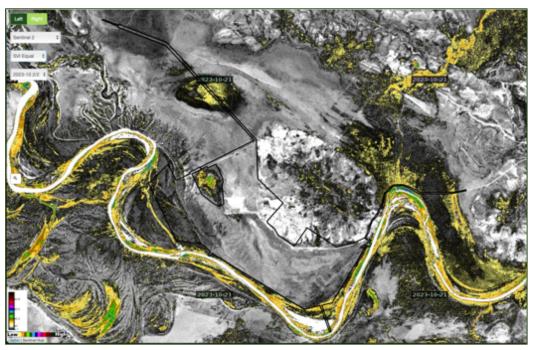


Figure 6. Carlton Plain Satamap Vegetation Index 21 October 2023

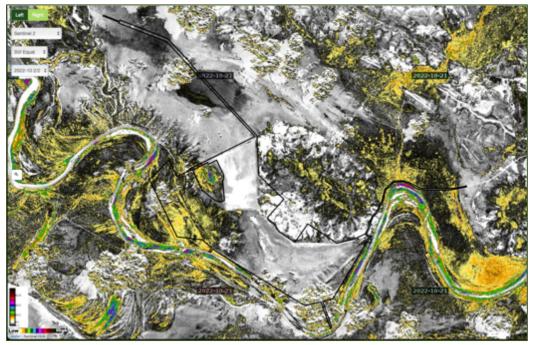


Figure 7. Carlton Plain Satamap Vegetation Index 21 October 2022

(Source: www.satamap.com.au)

# 5.0 Statement of Compliance

POST ASSESSMENT FORM 2

# Statement of Compliance

# 1. Proposal and Proponent Details

Proposal Title	Carlton Plain Stage 1 – Irrigated Agriculture
Statement Number	1081
Proponent Name	Kimberley Agricultural Investment Pty Ltd
Proponent's Australian Company Number (where relevant)	ACN 154 270 194

# 2. Statement of Compliance Details

Reporting Period	1/01/23 to 31/12/23
------------------	---------------------

Implementation phase(s) during reporting period (please tick relevant phase(s))</th							
Pre-construction	х	Construction	х	Operation		Decommissioning	

Audit Table for Statement addressed in this Statement of	2
Compliance is provided at Attachment:	2
An audit table for the Statement addressed in this Statement of	
provided as Attachment 2 to this Statement of Compliance. The	
prepared and maintained in accordance with the Department of W	ater and Environmental
Regulation (DWER) Post Assessment Guideline for Preparing an A	udit Table, as amended
from time to time. The 'Status Column' of the audit table must	accurately describe the
compliance status of each implementation condition and/or proc	edure for the reporting
period of this Statement of Compliance. The terms that may be us	sed by the proponent in
the 'Status Column' of the audit table are limited to the Compliance	Status Terms listed and
defined in Table 1 of Attachment 1.	

Were all implementation conditions and within the reporting period? (please tick		procedures of the Statement complied w appropriate box)	with
No (please proceed to Section 3)	х	Yes (please proceed to Section 4)	

POST ASSESSMENT FORM 2

#### 3. Details of Non-compliance(s) and/or Potential Non-compliance(s)

The information required Section 3 must be provided for each non-compliance or potential non-compliance identified during the reporting period covered by this Statement of Compliance.

#### Non-compliance/potential non-compliance 3-1

Which implementation condition or procedure was non-compliant or potentially non-compliant? M4:3 Compliance reporting

M4:6 Compliance reporting

Was the implementation condition or procedure non-compliant or potentially non-compliant?

Both M4:3 and M4:6 relate to the 2022 Compliance Assessment Report not being submitted by 31 March 2023.

On what date(s) did the non-compliance or potential non-compliance occur (if applicable)?

31 March 2023.

Was this non-compliance or potential non-compliance reported to the Chief Executive Officer, DWER?

T Yes	Reported to DWER verbally X Reported to DWER in writing	Date Date On submission of report (July 2023)	□ No
-------	--	--	------

What are the details of the non-compliance or potential non-compliance and where relevant, the extent of and impacts associated with the non-compliance or potential non-compliance? Report submitted late.

What is the precise location where the non-compliance or potential non-compliance occurred (if applicable)? (please provide this information as a map or GIS co-ordinates) N/A

What was the cause(s) of the non-compliance or potential non-compliance? Report completed late.

What remedial and/or corrective action(s), if any, were taken or are proposed to be taken in response to the non-compliance or potential non-compliance? Report completed earlier in 2024 but not prior to 31 March.

What measures, if any, were in place to prevent the non-compliance or potential non-compliance before it occurred? What, if any, amendments have been made to those measures to prevent reoccurrence?

It is proposed that the Compliance Assessment Report submission deadline be extended from 31 March to 30 June.

Please provide information/documentation collected and recorded in relation to this implementation condition or procedure:

- · in the reporting period addressed in this Statement of Compliance; and
- as outlined in the approved Compliance Assessment Plan for the Statement addressed in this Statement of Compliance.

(the above information may be provided as an attachment to this Statement of Compliance)

For additional non-compliance or potential non-compliance, please duplicate this page as required.

#### 4. Proponent Declaration

I, James Henry Engelke, Managing Director, (full name and position title) declare that I am authorised on behalf of Kimberley Agricultural Investment Pty Ltd (being the person responsible for the proposal) to submit this form and that the information contained in this form is true and not misleading.

Signature:....

Date:....

Please note that:

- it is an offence under section 112 of the Environmental Protection Act 1986 for a person to give or cause to be given information that to his knowledge is false or misleading in a material particular; and
- the Chief Executive Officer of the DWER has powers under section 47(2) of the Environmental Protection Act 1986 to require reports and information about implementation of the proposal to which the statement relates and compliance with the implementation conditions.

#### 5. Submission of Statement of Compliance

One hard copy and one electronic copy (preferably PDF on CD or thumb drive) of the Statement of Compliance are required to be submitted to the Chief Executive Officer, DWER, marked to the attention of Manager, Compliance (Ministerial Statements).

Please note, the DWER has adopted a procedure of providing written acknowledgment of receipt of all Statements of Compliance submitted by the proponent, however, the DWER does not approve Statements of Compliance.

#### 6. Contact Information

Queries regarding Statements of Compliance, or other issues of compliance relevant to a Statement may be directed to Compliance (Ministerial Statements), DWER:

#### Manager, Compliance (Ministerial Statements)

#### Department of Water and Environmental Regulation

Postal Address:	Locked Bag 10 Joondalup DC WA 6919
Phone:	(08) 6364 7000
Email:	compliance@dwer.wa.gov.au

# 6.0 Compliance assessment methodology

# 6.1 Purpose and scope of Compliance Assessment Report

This CAR has been prepared under the requirements of Condition 4-6 of Statement 1081, which states:

# 6.1.1 Condition 4-6 – Statement 1081

The proponent shall submit to the CEO the first Compliance Assessment Report fifteen (15) months from the date of issue of this Statement addressing the twelve (12) month period from the date of issue of this Statement and then annually from the date of submission of the first Compliance Assessment Report, or as otherwise agreed in writing by the CEO.

# The Compliance Assessment Report shall:

- (1) be endorsed by the proponent's Chief Executive Officer or a person delegated to sign on the Chief Executive Officer's behalf;
- (2) include a statement as to whether the proponent has complied with the conditions;
- (3) identify all potential non-compliances and describe corrective and preventative actions taken;
- (4) be made publicly available in accordance with the approved Compliance Assessment Plan; and indicate any proposed changes to the Compliance Assessment Plan required by condition 4-1.

# 6.1.2 Approved Compliance Assessment Plan

The Compliance Assessment Plan (CAP) required under Condition 4 of Statement 1081 was prepared under the requirements of condition 4-1 of Statement 1081, in accordance with the following EPA/DWER documents:

- PAG2 Post Assessment Guideline for preparing a Compliance Assessment Plan (OEPA 2012a)
- PAG1 Post Assessment Guideline for preparing an audit table (OEPA 2012b)
- PAG4 Post Assessment Guideline for making information publicly available (OEPA 2012c).
- PAG3 Post Assessment Guideline for preparing a Compliance Assessment Report (OEPA 2012d).
- Post Assessment Form 2 Statement of Compliance.

The CAP was approved by DWER on 21 February 2019. This report is submitted in accordance with the approved CAP.

## 6.1.3 Scope

The scope of this Compliance Assessment Report is the suite of conditions contained in MS1081, and in the associated Environmental Management Plan (EMP) for Carlton Plain Stage 1, dated August 2018 (Kimberley Boab Consulting, 2018). The requirements of MS1081 and the EMP are tabled in Attachment 2.

# 6.1.4 Audit period

The audit period for this CAR is 1 January 2023 to 31 December 2023.

# 6.1.5 Audit criteria

Audit criteria are specified for each requirement from Ministerial Statement 1081 and the Carlton Plain EMP, in Attachment 2, Tables 1 and 2 respectively.

# 6.1.6 Methodology

As required under the CAP, KAI engaged Kimberley Boab Consulting Pty Ltd as a suitably qualified auditor to assess and make recommendations on compliance with the requirements of Statement 1081, incorporating:

- Review of proponent-supplied documentation and satellite imagery.
- Consultation with the proponent's representative, employees, sub-contractors or other related persons to inform the audit process; and
- Compilation, review and assessment of documentary and photographic evidence. Documentary evidence may include monitoring results and/or analysis reports.

A site visit to Carlton Plain was undertaken on 1 August 2023. Records to verify the timing and extent of implementation were collected, collated, and retained for evidence of compliance with the approval. These records include:

- monitoring data and analyses;
- copies of publications relevant to the project;
- photographs
- relevant consultant or engineering reports;
- copies of written advice from agencies or stakeholders indicating or confirming that they
  have been consulted with and are satisfied with the action that has been or will be
  undertaken; and/or
- invoices from contractors for completion of the requirement.

Validation of the evidence was undertaken through cross-referencing with available data from other sources, including online remote sensing/satellite data. Photographic and/or video records made during compliance inspections are used to validate evidence supplied by the Proponent. Through the submission of this report, the Proponent warrants the accuracy of the evidence.

# 6.1.7 Terminology

Terminology used in the compliance assessment has been adopted in line with EPA definitions (modified from OEPA 2012b):

Phase	Description (modified to apply to farm development and operations)					
Pre-construction	No ground disturbance has commenced.					
Construction	Ground disturbance has commenced. Proposal has substantially commenced. Clearing and farm/infrastructure development are under way.					
Operation	Cropping has commenced, which may include the irrigation of crops.					
Decommissioning	Project decommissioning; returning of farmland and infrastructure to previous pastoral use.					
Overall	Phase used where an audit element applies across multiple phases.					

#### Table 4. Project phases

This differentiation allows for the compliance assessor to recommend (to the CEO of the EPA) that requirements be finalised due to the cessation of the phase of activity.

#### Table 5. Compliance assessment terminology

Status	Acronym	Description / definition
Compliant	С	Implementation of the proposal has been carried out in accordance with the requirements of the audit element.
Completed	CLD	A requirement with a finite period of application has been satisfactorily completed.
Not required at this stage	NR	The requirements of the audit element were not triggered during the reporting period.
Potentially non- compliant	PNC	Possible or likely failure to meet the requirements of the audit element.
Non-compliant	NC	Implementation of the proposal has not been carried out in accordance with the requirement of the audit element.
In process	IP	Where an audit element requires a management or monitoring plan to be submitted to the OEPA or another government agency for approval, that submission has been made and no further information or changes have been requested, and approval by that agency is still pending.

# 6.2 Retention of Compliance Assessment Report and evidence

KAI will retain this CAR for the life of the proposal and for a minimum 7 years following the end of life of the proposal (post-decommissioning). This includes the retention of -

- (a) Information/documentation/data to support and/or verify the compliance status of the implementation conditions and/or procedures of the Statement as determined during the compliance assessments; and
- (b) Records of any analysis undertaken to determine the compliance status of the implementation conditions and/or procedures as reported in the relevant CAR or Statement of Compliance.

These documents are listed in Attachment 3.

# 6.3 Reporting non-compliances and corrective measures

In relation to potential non-compliances of incidents, the Compliance Assessment Plan requires that the proponent addresses the following in each CAR or incident/compliance report to the CEO of the EPA:

- The date(s) and details (including precise location) of any non-compliance or potential noncompliance.
- When and how any non-compliance or PNC has been reported to the CEO.
- Assessment and recording of the extent of and impacts associated with any non-compliance or PNC, where applicable.
- Determination and recording of the cause(s) of any non-compliance or PNC.
- Remedial and/or corrective action(s), if any, taken or proposed to be taken in response to the non-compliance or PNC; and
- What measures, if any, were in place to prevent the non-compliance or PNC before it occurred and what, if any, amendments have been made to those measures to prevent re-occurrence.

# 6.4 Public availability of Compliance Assessment Reports

Monitoring data, evidence, this CAP, annual CARs and Statements of Compliance relating to Carlton Plain Stage 1 will be made publicly available in accordance with the *Post Assessment Guideline for Making Information Publicly Available* (OEPA 2012c), and in accordance with amendments to this guidance as may occur from time to time.

# 6.5 Next Compliance Assessment Report

The next CAR for Carlton Plain Stage 1, for the period 1 January 2024 to 31 December 2024 is required to be submitted to DWER by 31 March 2025.

# 7.0 KAI response to previous CAR findings

# 7.1 Review of previous audit findings

The previous assessment of KAI's compliance with the requirements of Statement 1081 for the period 1 January 2022 to 31 December 2022, submitted to DWER on 19 July 2023 indicated potential non-compliances shown in Table 6.

Evidence item **2023.CP1.1081.M4.3** provides the previous (2022) Compliance Assessment Report.

### Table 6. Progress in relation to unresolved potential non-compliances reported in previous CARs

Audit code	Subject	Requirement	Previous Audit finding	Previous audit commentary	Recommended mitigation	Status at 31 December 2023
1081:M5.1	Public Availability of Data	Subject to condition 5-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal the proponent shall make publicly available, in a manner approved by the CEO, all validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products (e.g. maps)) relevant to the assessment of this proposal and implementation of this Statement.	PNC (2019)	At the time of compliance assessment, KAI's website was undergoing reconstruction, and monitoring data was not publicly available.	Documents to be made publicly available when website is re- established.	Carlton Plain evidence and monitoring data from 2019 to 2023 is available on KAI's website as at 1 May 2024. <b>This PNC is now</b> <b>considered resolved</b> .
1081:M4.3	Compliance Reporting	After receiving notice in writing from the CEO that the Compliance Assessment Plan satisfies the requirements of condition 4-2 the proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by condition 4- 1.	PNC (2021) (2022)		Submit outstanding compliance report.	The 2021 CAR was submitted to DWER on 18 May 2022. The 2022 CAR was submitted in July 2023. The 2023 CAR will be submitted in May 2024. It is recommended that KAI seeks approval amend the annual Compliance Assessment Report submission date to 30 June of the following year.
1081:M4.6	Compliance Reporting	The proponent shall submit to the CEO the first Compliance Assessment Report fifteen (15) months from the date of issue of this Statement addressing the twelve (12) month period from the date of issue of this Statement and then annually from the date of submission of the first Compliance Assessment Report, or as otherwise agreed in writing by the	PNC (2021) (2022)		Submit outstanding compliance report.	The 2021 CAR was submitted to DWER on 18 May 2022. The 2022 CAR is submitted in July 2023. The 2023 CAR will be submitted in May 2024. It is recommended that KAI seeks approval amend the annual Compliance Assessment Report submission date to 30 June of the following year.

Audit code	Subject	Requirement	Previous Audit finding	Previous audit commentary	Recommended mitigation	Status at 31 December 2023
		CEO. (Additional condition text excluded for brevity).				
CP1.TE.8.1		Collect baseline soil samples prior to commencing irrigation. Sampling to include EC, pH, ESP, nutrients, across irrigation and vegetation zones	PNC (2021) (2022)	Baseline soil sampling data does not indicate pH or nutrients, as is required under the EMP. It is recommended that a soils data is reviewed and assessed, to inform management practices (2021).	Ensure nutrient and pH analysis is included in soil laboratory requests.	The omission of nutrients and pH analysis from soil laboratory requests also occurred in 2022. This was rectified in 2023, per this report. <b>This PNC is considered resolved.</b>
CP1.FV.3.3	Triennial weed mapping.	Triennial weed assessments in vegetation retention areas.	PNC (2022)	The first triennial weed inspection was due in 2022 (three years from clearing and destocking in 2019).	KAI will complete this assessment in 2023.	KAI completed the triennial weed assessment in 2023, per this report. <b>This PNC</b> <b>is considered resolved.</b>

# 8.0 Findings

# 8.1 Audit results

This Compliance Assessment Report identifies potential non-compliances in relation to report submission timelines. Minimal development activity occurred during the compliance year, with one hectare of clearing for a pumpsite, and maintenance activities occurring.

# 8.2 Recommended changes to the Compliance Assessment Plan

It is recommended that the due date for the Compliance Assessment Report be extended to 30 June in the following year.

# 8.3 Recommendations for improved environmental management

### CP1.FV.3.6 Weed management response

The 2020 CAR recommended improved weed management in vegetation management areas in relation to CP1.FV.3.2. This recommendation is retained. The triennial weed assessment indicated substantial weed growth in vegetation management areas.

The only pragmatic method to employ for weed control in vegetation management areas adjacent to the Ord River riparian zone is grazing. Grazing has continued to be employed as a control measure for the various weeds growing in the region. Of most concern for the broader region external to and upstream of Carlton Plain) is the explosion of Neem tree along the riparian areas. KAI further advised that cattle grazing has some impact but is not as effective on Neem as it is for *Parkinsonia* and *Calytropis*.

CP1.FV.3.6 relates to control of Declared Weeds listed under the BAM Act 2007. The extension of weed control requirements should be considered where weed growth is out-competing native species in vegetation management areas.

# 8.4 Recommended changes to the Environmental Management Plan

Following the Section 45C approval, no further changes have been recommended to the 2019 revision of the EMP. As the 2019 EMP revision was submitted with the s45C approval, the EMP amendments have been assumed to have been accepted by the EPA. KAI is anticipating submitting request for a significant variation to the Carlton Plain proposal and therefore Ministerial Statement 1081, later in 2024. This may trigger EMP changes. Any modifications to the EMP for Carlton Plain Stage 1 will be included at that time.

# 9.0 References

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Kimberley Boab Consulting, 2018, Carlton Plain Stage 1 Environmental Management Plan August 2018. Prepared for Kimberley Agricultural Investment Pty Ltd, Kununurra. Available from <u>www.kai-australia.com.au</u>

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Office of Environmental Protection Authority (OEPA) 2012a, *Post Assessment Guideline for Preparing a Compliance Assessment Plan*, OEPA, Perth. [PAG 2]. Available at: <u>http://epa.wa.gov.au/compliance-assessment-plan</u>

Office of Environmental Protection Authority (OEPA) 2012b, *Post Assessment Guideline for Preparing an Audit Table*, OEPA, Perth. [PAG 1]. Available at: <u>http://epa.wa.gov.au/preparing-compliance-assessment-report</u>

Office of Environmental Protection Authority (OEPA) 2012c, *Post Assessment Guideline for Making Information Publicly Available*, OEPA, Perth. [PAG 4]. Available at: <u>http://epa.wa.gov.au/making-information-publicly-available</u>

Office of Environmental Protection Authority (OEPA) 2012d, *Post Assessment Guideline for Preparing a Compliance Assessment Report*, OEPA, Perth. [PAG 3]. Available at: <u>http://epa.wa.gov.au/preparing-compliance-assessment-report</u>

Smith, N., Weeds of Northern Australia – A field guide. Environment Centre NT, Darwin, 2011.

# ATTACHMENT 1 – Compliance status terms

Compliance Status Terms	Abbrev	Definition	Notes
Compliant	С	Implementation of the proposal has been carried out in accordance with the requirements of the audit element.	<ul> <li>This term applies to audit elements with:</li> <li>ongoing requirements that have been met during the reporting period; and</li> <li>requirements with a finite period of application that have been met during the reporting period, but whose status has not yet been classified as 'completed'.</li> </ul>
Completed	CLD	A requirement with a finite period of application has been satisfactorily completed.	<ul> <li>This term may only be used where:</li> <li>audit elements have a finite period of application (e.g. construction activities, development of a document);</li> <li>the action has been satisfactorily completed; and</li> <li>the DWER has provided written acceptance of 'completed' status for the audit element.</li> </ul>
Not required at this stage	NR	The requirements of the audit element were not triggered during the reporting period.	This should be consistent with the 'Phase' column of the audit table.
Potentially Non- compliant	PNC	Possible or likely failure to meet the requirements of the audit element.	This term may apply where during the reporting period the proponent has identified a potential non- compliance and has not yet finalized its investigations to determine whether non-compliance has occurred.
Non- compliant	NC	Implementation of the proposal has not been carried out in accordance with the requirements of the audit element.	This term applies where the requirements of the audit element are not "complete" have not been met during the reporting period.
In Process	IP	Where an audit element requires a management or monitoring plan be submitted to the DWER or another government agency	The term 'In Process' may not be used for any purpose other than that stated in the Definition Column.
		for approval, that submission has been made and no further information or changes have been requested by the DWER or the other government agency and assessment by the DWER or other government agency for approval is still pending.	The term 'In Process' may not be used to describe the compliance status of an implementation condition and/or procedure that requires implementation throughout the life of the project (e.g. implementation of a management plan).

# Attachment 2 – Statement 1081 and Carlton Plain Stage 1 EMP Audit Tables

Audit tables for Statement 1081 and *Carlton Plain Stage 1 EMP* are presented in Attachment 2 Tables 1 and 2 respectively.

In the event of uncertainty or for clarification, refer to the Statement or EMP.

# Attachment 2 Table 1 - Statement 1081 Audit Table: January 1 2023 to December 31 2023

#### Notes:

- Phases that apply in this table = Pre-Construction, Construction, Operation, Decommissioning, Overall (several phases).
- This audit table is a summary and timetable of conditions and commitments applying to this project. Refer to the Minister's Statement for full detail/precise wording of individual elements.
- Code prefixes: M = Minister's condition, P = Proponent's commitment.
- Acronyms list: CEO = Chief Executive Officer of OEPA; DEC = Department of Environment Regulation; DPAW = Department of Parks and Wildlife; DIA = Department of Indigenous Affairs; DMP = Department of Mining and Petroleum; DWER = Department of Water and Environmental Regulation; EPA = Environmental Protection Authority; DoH = Department of Health; DoW = Department of Water, Minister for Env = Minister for the Environment; OEPA = Office of the Environmental Protection Authority.
- Compliance Status: C = Compliant, CLD = Completed, NA = Not Audited, NC = Non compliant, NR = Not Required at this stage. Please note the terms VR = Verification Required and IP = In Process are only for OEPA use.

Audit Code	Subject	Requirement		How	Evidence	Phase	Timeframe	Status	Further Information
1081:M1.1	Proposal Implementation	When implementing the proponent shall not exce extent of the proposal as Schedule 1, unless amer and the authorised exten been approved under the Summary of the Propos	eed the authorised s defined in Table 2 of idments to the proposal nt of the proposal have e EP Act.	Survey and mark clearing boundaries. <b>nent of 2,945ha betw</b> o	Boundary GPS track logs or survey data. Aerial imagery. Water licence annual reports. Metering data.	Overall and the Ord	When implementing the proposal. River, for the purp	C ose of surfac	1.05 hectares of pump site clearing was conducted in May 2023, within the approved boundary. Refer to <b>2023.1081.CP1.M1.1.</b> Previous evidence item <b>2021.1081.M1.1b</b> provides the revised Schedule 1 of Statement 1081, accommodating the s45C changes. <b>ce and pressurised irrigated</b>
		agricultural cropping wh	nich may include grains, c	otton, perennial hort	iculture and other cr	ops.			
		Key Characteristic	<b>Description</b>						
		Surface irrigation and crops	Clearing of up to 1,749h	a				С	The proposal has been implemented in accordance with
		Pressurised irrigation	Clearing of up to 368ha.	Pressurised irrigation	n to be constructed v	vhere soils d	o not allow for	С	all elements outlined in Table 2
		of perennial crops	surface (flood) irrigation	۱.					of the revised Schedule 1 of
		Infrastructure	Clearing of up to 828ha	within Stage 1 develo	pment envelope			С	Statement 1081, endorsed by the

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
		Annual irrigation water 27.6GL from the Ord Riv abstraction	er system				С	Chair of the EPA on 1 September 2021.
1081:M2.1	Contact Details	The proponent shall notify the CEO of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty-eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State	Written correspondence.	Correspondence to EPA.	Overall	Within twenty- eight (28) days of any change of proponent name, physical address or postal address.	С	There were no changes to KAI's contact details in 2023.
1081:M3.1	Time Limit for Proposal Implementation	The proponent shall not commence implementation of the proposal after five (5) years from the date of this Statement, and any commencement, prior to this date, must be substantial.	Commence prior to 11 September 2023.	Evidence of development commencement date.	Overall	By 11 September 2023.	CLD	Completed in previous reporting period. No change to this status.
1081:M3.2	Time Limit for Proposal Implementation	Any commencement of implementation of the proposal, on or before five (5) years from the date of this Statement, must be demonstrated as substantial by providing the CEO with written evidence, on or before the expiration of five (5) years from the date of this Statement.	Written correspondence.	Correspondence to EPA.	Overall	By 11 September 2023.	CLD	Completed in previous reporting period. <i>No change to this status.</i>
1081:M4.1	Compliance Reporting	The proponent shall prepare and maintain a Compliance Assessment Plan which is submitted to the CEO at least six (6) months prior to the first Compliance Assessment Report required by condition 4-6, or prior to implementation of the proposal, whichever is sooner.	Prepare and submit CAP to the CEO of the EPA.	Compliance Assessment Plan. Correspondence to EPA.	Overall	CAP submitted by 11 June 2019 or prior to implementation of the proposal, whichever is sooner and maintained thereafter.	CLD	Completed in previous reporting period. <i>No change to this status.</i>
1081:M4.2	Compliance Reporting	The Compliance Assessment Plan shall indicate: (1) the frequency of compliance reporting; (2) the approach and timing of compliance assessments; (3) the retention of compliance assessments; (4) the method of reporting of	CAP content inclusions.	Compliance Assessment Plan.	Overall	CAP submitted by 11 June 2019 or prior to implementation of the proposal,	CLD	Completed in previous reporting period. No change to this status.

INITIALS:\_\_\_\_\_

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
		potential non-compliances and corrective actions taken; (5) the table of contents of Compliance Assessment Reports; and (6) public availability of Compliance Assessment Reports.				whichever is sooner and maintained thereafter.		
1081:M4.3	Compliance Reporting	After receiving notice in writing from the CEO that the Compliance Assessment Plan satisfies the requirements of condition 4-2 the proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by condition 4-1.	Undertake and submit annual Compliance Assessment and report to the CEO in line with CAP requirements.	Notification (from CEO) of approval of Compliance Assessment Plan. Annual CARs. Confirmation of dates of submission of annual CARs.	Overall	After receiving notice in writing from the CEO that the CAP satisfies the requirements of condition 4-2.	PNC	The 2023 CAR was not submitted to DWER in the timeframe stipulated in the CAR. Evidence item <b>2023.1081.CP1.M4.3</b> 2022 Compliance Assessment Report was submitted to DWER on 19 July 2023. This PNC is therefore considered an administrative one.
1081:M4.4	Compliance Reporting	The proponent shall retain reports of all compliance assessments described in the Compliance Assessment Plan required by condition 4-1 and shall make those reports available when requested by the CEO.	Retain all CARs. Retain supporting documentation. Comply with CEO requests.	Compliance Assessment Reports. Supporting evidence. Requests from CEO. Confirmation of compliance with CAR requests from CEO of EPA.	Overall	Make reports available when requested by the CEO.	С	This document forms the sixth Statement 1081 Compliance Assessment Report. All supporting documentation from previous reports has been retained and CEO requests responded to. Previous reports are available at <u>https://kai- australia.com.au/land- development/carlton-plain- environmental/</u> (as at 30 April 2024).
1081:M4.5	Compliance Reporting	The proponent shall advise the CEO of any potential non-compliance within seven (7) days of that non-compliance being known.	Written advice to CEO of EPA Services.	Written notification to CEO.	Overall	Advise the CEO of a potential non-compliance within seven (7) days of that non-compliance being known.	С	PNCs identified in this report are administrative. Given that operations (irrigation) have not yet commenced, the non- reporting of this monitoring shortfall within 7 days may not be considered a material issue.

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
1081:M4.6	Compliance Reporting	The proponent shall submit to the CEO the first Compliance Assessment Report fifteen (15) months from the date of issue of this Statement addressing the twelve (12) month period from the date of issue of this Statement and then annually from the date of submission of the first Compliance Assessment Report, or as otherwise agreed in writing by the CEO. The Compliance Assessment Report shall: (1) be endorsed by the proponent's Chief Executive Officer or a person delegated to sign on the Chief Executive Officer's behalf; (2) include a statement as to whether the proponent has complied with the conditions; (3) identify all potential non-compliances and describe corrective and preventative actions taken; (4) be made publicly available in accordance with the approved Compliance Assessment Plan; and (5) indicate any proposed changes to the Compliance Assessment Plan required by condition 4-1.	Written advice to CEO of EPA Services. Proponent- endorsed compliance statement included in CAR. PNCs and corrective and preventative actions recorded. Evidence of public availability included. Proposed changes to CAP included.	Compliance Assessment Report. Evidence of submission date.	Overall	First CAR due 11 December 2019 and then annually thereafter or as otherwise agreed in writing by the CEO.	PNC	The 2022 CAR was submitted (late) on 19 July 2023. This PNC is therefore considered an administrative one.
1081:M5.1	Public Availability of Data	Subject to condition 5-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal the proponent shall make publicly available, in a manner approved by the CEO, all validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products (e.g. maps)) relevant to the assessment of this proposal and implementation of this Statement.	Upload data to website or other public access option.	Proponent website includes required data.	Overall	Within a reasonable time period approved by the CEO.	С	Historic and current monitoring evidence and data can be observed at KAI's website <u>www.kai-australia.com.au</u> as at 1 May 2024.
1081:M5.2	Public Availability of Data	If any data referred to in condition 5-1 contains particulars of: (1) a secret formula or process; or (2) confidential commercially sensitive information; the proponent may submit a request for approval from the CEO to not make these data publicly available. In making such a	Written request to CEO of EPA is to not be made publicly available.	Written advice to and from CEO of EPA.	Overall	For the life of the proposal.	NR	Not required at this stage.

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
		request the proponent shall provide the CEO with an explanation and reasons why the data should not be made publicly available.						
1081:M6.1	Operational Environmental Management Plan Implementation	The Proponent shall ensure implementation of the proposal achieves the following environmental outcomes: (1) no irreversible loss of, or serious damage to the riparian vegetation zone outside of the development envelope; (2) no long-term impacts on the environmental values of the Ord River, including: (a) vegetation community structure and composition; (b) water quality; (c) ecosystem processes; and (3) no long-term impacts to the Aboriginal heritage values linked to the physical and/or biological surroundings of the Ord River.	Implement Carlton Plain Stage 1 EMP.	Compliance assessment of EMP implementation.	Overall	For the life of the proposal.	С	Monitoring information presented by KAI and remote sensing imagery <b>does not</b> suggest (1) irreversible loss of, or serious damage to the riparian vegetation zone outside of the development envelope; (2) long- term impacts on the environmental values of the Ord River, including: (a) vegetation community structure and composition; (b) water quality; (c) ecosystem processes; and (3) long-term impacts to the Aboriginal heritage values linked to the physical and/or biological surroundings of the Ord River. EMP compliance evidence items are summarised in Attachment 3 (Evidence Registry).
1081:M6.2	Operational Environmental Management Plan Implementation	The proponent shall implement the <i>Carlton Plain</i> <i>Stage 1 Environmental Management Plan</i> (Rev 0.1, August 2018) (the Plan), until the CEO has confirmed by notice in writing that the Plan meets the environmental outcomes required by condition 6-1.	Implement Carlton Plain Stage 1 EMP.	Compliance assessment of EMP implementation.	Overall	Until the CEO has confirmed by notice in writing that the Plan meets the environmental outcomes required by condition 6-1.	С	Previous CAR evidence item <b>2021.1081.M6.2a</b> provides the 2019 EMP revision supplied to DWER with the Section 45C variation request. Table 2 reports on compliance with individual EMP requirements.
1081:M6.3	Operational Environmental Management Plan Implementation	The proponent shall implement the most recent version of the Plan which the CEO has confirmed by notice in writing, addresses the requirements of condition 6-1.	Implement Carlton Plain Stage 1 EMP.	Compliance assessment of EMP implementation.	Overall	Until the CEO has confirmed by notice in writing that the	С	The Proponent has implemented the Revised EMP dated 2019 per Table 2, during the reporting period.

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
	Operational	In the event that monitoring carried out under	Investigate	Reviewed data,	Overall	Plan meets the environmental outcomes required by condition 6-1. Report the non-	C	Monitoring data does not
1081:M6.4	Environmental Management Plan Implementation	the Plan, determines that any of the environmental outcomes set in condition 6-1 are not being achieved by implementing the proposal, the Proponent shall: (1) immediately implement the contingency management actions specified in the Plan, and continue implementation of those actions until the CEO has determined that the environmental outcomes set in condition 6-1 are being achieved and will continue to be achieved; (2) investigate to determine the likely cause of the environmental outcomes set in condition 6-1 not being achieved; (3) within seven (7) days of determining that any of the environmental outcomes set in condition 6-1 are not being achieved, report the non-achievement to the CEO; (4) within twenty-one (21) days of determining that any of the environmental outcomes set in condition 6-1 are not being achieved submit to the CEO a report detailing the following: (a) the results of the monitoring that led to the determination that any of the environmental outcomes set in condition 6-1 are not being achieved; (b) the investigation being undertaken as required by condition 6-4(2) into the cause of the environmental outcomes set in condition 6-1 not being achieved; and (c) any contingency management actions implemented by the proponent following determination that any of the environmental outcomes set in	reason(s) for outcomes not being met. Review monitoring data and procedures. Review level of compliance with procedures. Implement contingencies (where required). Report within required timeframes.	timestamped where possible. Evidence of contingency responses implemented. Written notices and report(s) to CEO of EPA.		achievement of the environmental outcomes set in condition 6-1 within seven (7) days. Submit to the CEO a report within twenty-one 21 days. Provide an investigation report CEO within sixty (60) days.		indicate that the environmental outcomes set in Condition 6-1 are not being achieved.

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
		condition 6-1 are not being achieved, (5) provide a report detailing the findings of the investigation required by condition 6-4(2) to the CEO within sixty (60) days of first determining that any of the environmental outcomes set in condition 6-1 are not being achieved.						
1081:M6.5	Operational Environmental Management Plan Implementation	The proponent shall submit to the CEO annual compliance assessment reports in accordance with condition 4-6 which includes: (1) all monitoring data and reportable incidents required by conditions 6-3 and 6-4; (2) an analysis and interpretation of monitoring data to demonstrate compliance with the requirements of condition 6-1; and (3) an assessment of the effectiveness of monitoring, management and contingency measures implemented to ensure compliance with the requirements of conditions 6-1.	Submit annual Compliance Assessment Report and monitoring data. Interpret and submit monitoring data. Assess effectiveness of management, monitoring and contingency measures.	Reports and correspondence submitted to EPA by 31 March of the year following the reporting period.	Overall	For the life of the proposal.	C	Attachment 2 Table 2 addresses compliance in implementing the Carlton Plain EMP. Commentary in Table 2, supported by site inspection documentation and photographic evidence, supports the conclusion that the monitoring and management had been effective to date during this initial construction period.
1081:M6.6	Operational Environmental Management Plan Implementation	Any changes to trigger criteria, threshold criteria, monitoring, trigger level actions, threshold contingency actions or reporting and/or any changes to management targets, management actions, monitoring and reporting in the Plan must be approved by the CEO in writing.	Submit recommended EMP changes to the CEO of the EPA.	Recommended changes and correspondence to EPA. Correspondence from EPA approving changes prior to any changes being adopted / implemented.	Overall	For the life of the proposal.	C	The Revised EMP dated 2019 is assumed to have been approved by DWER with the associated s45C variation on 1 September 2021.

# Attachment 2 Table 2 - Carlton Plain Stage 1 EMP Audit Table

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
CP1.FV.1.1	Establish a minimum 100m setback between the Ord River and the boundary of irrigated fields, for the purpose of maintaining riparian function and a biodiversity corridor.	Minimum riparian setback 100m.	Develop layout planning includes minimum 100m setback.	Project plans.	Pre- construc tion	2018	CLD	100m minimum setback from the Ord River was included in all project plans submitted for the original Statement 1081 approval, per the EMP. <i>No change to this status.</i>
CP1.FV.1.2	100m minimum riparian setback.	Clearing boundaries marked and adhered to.	Inspect initial clearing to ensure boundary lines along the Ord River meet requirements.	Site inspection. Aerial imagery.	Constru ction	2019	CLD	Site inspections and satellite imagery previously confirmed the retention of 100m minimum setbacks. No change to this status.
CP1.FV.1.3	100m minimum riparian setback.	Monitor riparian setbacks in vegetation retention areas. Report substantial changes to river trajectory to DWER (Kununurra) within 60 days of wet season rains or flood events or when access becomes available.	Annual inspections post- wet season to ensure no significant riverine scours or riverine trajectory changes affect irrigated fields on narrow (~100m) boundaries or restrict biodiversity corridors. Measurements to be undertaken using annual GPS field survey at narrowest points.	Site inspections. Aerial imagery. GPS track logs. Photographic records of scours. Correspondence to DWER (Kununurra) within 60 days of identification of significant river path change.	Overall.	Ongoing from commenceme nt.	С	Site inspections and satellite imagery previously confirmed the retention of 100m minimum setbacks, with the exception of the approved pump site clearing [in the riparian zone] reported under item M1.1. Riparian setbacks remain in situ. <b>2023.1081.CP1.FV.1.3a</b> and <b>2023.1081.CP1.FV.1.3b</b> provide satellite vegetation index imagery with bias to low biomass vegetation. These images indicate the differences between cleared and uncleared area vegetation on Carlton Plain in relation to the riparian setback.
CP1.FV.2.1	No decline in the long term vegetation condition rating in	Establish vegetation condition transects in vegetation retention area.	Establish a minimum of five (5) 10m x 10m monitoring sites per EMP Appendix B specifications.	Photographic records. GPS coordinates.	Pre- construc tion	Initial EMP date (2018) unable to be met due to	CLD	Per the September 2018-September 2019 CAR, the term 'transect' has been interpreted to mean 'quadrat' based on the description of 10m x 10m monitoring sites. Ten vegetation monitoring sites

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ном	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
	vegetation retention areas, compared to initial 2016 dry season baseline surveys and subsequent transect establishment surveys.		Select sites based on representative soil and vegetation types, practical accessibility, proximity to Ord River, wetland area and House Roof hill.	Site establishment notes. Aerial imagery.		late dry season approval of EMP. Undertaken dry season 2019.		were established in vegetation retention areas 2019. This item was completed in a previous reporting period. Monitoring sites remain in place and are simultaneously used for soil condition/erosion monitoring in the vegetation retention areas, and weed inspections per CP1.FV.3.1.
CP1.FV.2.2	Vegetation condition transect monitoring.	Annual dry season inspection of monitoring sites.	Inspect for vegetation type, condition, weed presence and erosion. Auditor note: The term 'transect' has been interpreted to mean 'quadrat' based on the description of 10m x 10m monitoring sites, per CP1.FV.2.1.	Photographic records. Aerial imagery. Field notes.	Overall	By August 31 of each year.	C	Vegetation condition monitoring was undertaken on 1 August 2023, per evidence items: 2023.1081.CP1.FV.2.2a Vegetation assessment sites; 2023.1081.CP1.FV.2.2b Vegetation Condition Report; and 2023.1081.CP1.FV.2.2c Example Field Data Sheet. Site photography records have been retained and catalogued by KAI to visually document changes, per 2023.1081.CP1.FV.2.2a and records provided with previous CARs. Evidence item 2023.1081.CP1.FV.2.2d provides time series satellite vegetation index imagery, indicating vegetation pre-, during and post- clearing of Carlton Plain Stage 1.
CP1.FV.2.3	Management response if vegetation condition monitoring indicates decline.	Where vegetation condition rating declines in 60% of vegetation retention zone monitoring sites, as assessed during annual dry season inspections.	In the event that condition declines in the vegetation retention areas in relation to the 2016 and subsequent transect establishment surveys, the proponent will:	Photographic records. Aerial imagery. Field notes. Monitoring records.	Overall	As required if monitoring indicates 60% of sites in decline.	С	Based on the comparison of 2023 site vegetation reports and photographic records with previous years, per items <b>2023.1081.CP1.FV.2.2b</b> sixty per cent of monitoring sites <u>do not</u> show vegetation decline.

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
		Seasonal conditions including rainfall and fire will be taken into account in condition assessments. The WARMS condition assessment rating method will be adopted. Vegetation condition in any given season can be directly affected by one-off incidents such as wildfire and/or poor (or extremely erosive) wet seasons.	<ol> <li>Remove cattle if overgrazing is considered a factor if condition has declined. Occasional use of cattle are considered essential as a mechanical weed management tool in lieu of chemical weed control, particularly in the vicinity of the Ord River and the Carlton Plain wetland area.</li> <li>Amend the fire regime if fire is considered a factor in vegetation condition decline.</li> <li>Address weed management, per CP1.FV.3.</li> <li>Establish [annual] targets for vegetation condition improvement based on the extent of variation from vegetation condition goal and current climatic seasonal conditions.</li> </ol>	Correspondence of vegetation condition decline forwarded to EPA services within 30 days of vegetation condition surveys being undertaken.				Overall ratings (vegetation x erosion)         Change since 2013           2019         2020         2021         2022         2023           Site         March         April         June         June         August           Site 1         Poor         Good         Good         Poor         Same           Site 2         Poor         Good         Good         Poor         Poor         Same           Site 3         Poor         Good         Good         Good         Good         Good         Boor         Poor         Same           Site 4         Fair         Good         Same           Site 5         Poor         Poor         Poor         Poor         Poor         Same           Site 6         Fair         Poor         Poor         Fair         Poor         Same           Site 9         Good         Good         Good         Good         Good         Good         Same           Site 9         Good         Good         Good         Good         Good         Same           Site 10         Poor </td
CP1.FV.2.4	Vegetation condition threshold indicator observed.	Where decline in vegetation condition ratings is registered across all monitoring sites in a given year.	As assessed using WARMS program described in EMP Appendix B Table B1.3.	Photographic records. Aerial imagery. Field notes.	Overall	If monitoring indicates all sites in vegetation decline.	С	Monitoring has not indicated that all sites are in decline, per the comparison below. Refer to <b>2023.1081.CP1.FV.2.2b</b> Vegetation Condition Report. The 2023 assessment indicated all vegetation monitoring sites are in the same or better condition than in 2019.

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
CP1.FV.3.1	No new Weeds of	Establish transects	Establish a minimum of five	Monitoring records. Correspondence re vegetation condition decline forwarded to EPA services within 30 days of vegetation condition surveys being undertaken. Photographic	Pre-	Completed	CLD	Overall ratings (vegetation x erosion)         Change since 2019           2019         2020         2021         2022         2023         Change since 2019           Site         March         April         June         June         August         Since 2019           Site 1         Poor         Good         Good         Poor         Poor         Same           Site 2         Poor         Good         Good         Poor         Poor         Same           Site 3         Poor         Good         Good         Good         Good         Good         Better           Site 4         Fair         Good         Good         Good         Good         Better           Site 5         Poor         Poor         Poor         Same         Same           Site 6         Fair         Poor         Poor         Poor         Same           Site 7         Good         Good         Good         Good         Good         Same           Site 8         Good         Good         Good         Good         Good         Same           Site 9         Good         Good         Good         Good         Good         Same <t< th=""></t<>
	National Significance, Declared Pest weed species or introduced crop species in vegetation retention areas compared to 2016 dry season baseline surveys and transect establishment surveys.	(per CP1.FV.2.1).	<ul> <li>(5) 10m x 10m monitoring sites per EMP Appendix B specifications.</li> <li>Select sites based on representative soil and vegetation types, practical accessibility, proximity to Ord River, wetland area and House Roof hill.</li> </ul>	records. GPS coordinates. Field notes. Aerial imagery.	construc	dry season 2019.		'quadrat' based on the description of 10m x 10m monitoring sites, per CP1.FV.2.1.
CP1.FV.3.2	Annual weed inspections.	Annual dry season inspection of monitoring sites.	Inspect for weed presence.	Photographic records. Aerial imagery. Field notes.	Overall	By August 31 of each year.	С	Weed presence is recorded in field records and vegetation condition site photographs per CP1.FV.2.1. Weed management needs to be considered in vegetation retention areas. Mechanical control options or controlled (mosaic) burns may assist in control of hyptis (wild mint).
CP1.FV.3.3	Triennial weed mapping.	Triennial weed assessments in	Weed inspections across vegetation retention areas.	Photographic records.	Overall	Commencing 3 years after	С	The first triennial weed inspection was due in 2022 (three years from clearing and destocking in 2019).

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
		vegetation retention areas.		GPS coordinates. Field notes. Aerial imagery. Triennial weed survey report.		construction begins.		<ul> <li>Following a PNC against this requirement in 2022, the triennial weed inspection was completed in August 2023, including an inspection and review of weed condition in adjacent riparian areas outside of the Vegetation Retention Area. The inspection was undertaken in conjunction with the vegetation condition assessment per CP1.FV.2.1.</li> <li>2023.1081.CP1.FV.3.3a illustrates the route taken during the weed inspection (tracklog).</li> <li>2023.1081.CP1.FV.3.3b provides weed inspection field notes, which are supplemented by catalogued images of weed coverage at nominated locations.</li> <li>2023.1081.CP1.FV.3.3c provides an interpretation of weed and other vegetation density, with time series from 1985-2023 (Google Earth) and 2017 baseline comparisons to 2023.</li> </ul>
CP1.FV.3.4	No new Weeds of National Significance or Declared Pest weed species established in vegetation retention areas.	Utilise monitoring data to ensure compliance with Threshold Indicator. Threshold exceedance occurs if new Weeds of National Significance or Declared Pest plant species establish or 100% of monitoring sites show increased weed coverage.	Weed inspections and analysis of monitoring data.	Photographic records. Site inspection field notes. Correspondence to DWER within 30 days of surveys.	Overall	Ongoing.	C	<ul> <li>No new Weeds of National Significance or Declared Pest and Weed species have been observed on the site.</li> <li>The expansion of Neem is of note within uncleared areas at this site and many others within the region. Noogoora burr (<i>Xanthium strumarium</i>) remains present near to the Ord River, within the Carlton Plain property boundary. This weed is not new to this area, with historical control measures on the lower Ord being unsuccessful.</li> <li>When weed data is assessed against baseline weed data from 2017, the following is noted:</li> <li>The original weed coverage assessment (2017) did not include riparian areas outside of the Carlton Plain cadastral boundary. It is noted that weed coverage in the river reserve is not within the management responsibilities of KAI, and remains consistently thick.</li> </ul>

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								<ul> <li>Areas classified as having 50-80% weed coverage in the 'Vegetation Retention Areas' surrounding Carlton Stage 1 remain largely within that range. Problematic weed density increases can be observed in the riparian reserve outside of the Carlton freehold boundary, as shown in Figures 14-17 of <b>2023.1081.CP1.FV.3.3c</b>.</li> <li>While the threshold has not been exceeded across all monitoring sites when compared to baseline data, it is recommended that weed control be considered in vegetation retention areas.</li> <li>Increased weed density across the cleared area of Carlton Plain Stage 1 (eg, the return of <i>Calotropis procera</i> following initial clearing in 2018-2019) will be rectified as farm development continues.</li> </ul>
CP1.FV.3.5	Introduced crop species identified.	Where introduced crop species are identified in the Carlton wetland vegetation retention areas adjacent to the Carlton Stage 1 area, notification to the Department of Biodiversity, Conservation and Attractions will occur within 30 days of identification.	Monitor vegetation areas for crop weed species.	Written evidence of advice to DBCA.	Overall	Report to Department of Biodiversity, Conservation and Attractions within 30 days of identification.	NR	Not yet required.
CP1.FV.3.6	Weed management response.	Weed control to be undertaken as required under statutory obligations	<ol> <li>Physical (including grazing if deemed appropriate) or chemical treatment of</li> </ol>	Site inspection records. Field notes. Photographic	Overall	From commenceme nt	С	The previous (2020, 2021 and 2022 CAR) findings are retained: It is recommended that control options be undertaken to thin or remove dense weed infestations in those parts of the vegetation

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		through the Biosecurity and Agriculture Management (BAM) Act 1987, and/or through the mechanisms listed under 'How'. Where investigations show that the spread of introduced crop species into adjacent or nearby environmentally sensitive areas is attributable to this proposal, the proponent shall liaise with landholders to remove introduced crop species plants.	<ul> <li>declared weeds or Weeds of National Significance if found in Carlton Plain Stage 1 area during annual CP1.FV.2 condition monitoring.</li> <li>Weed control/removal and/or rehabilitation of weed infested areas if weed coverage in vegetation retention areas is shown to increase.</li> <li>Specific weed control mechanism to be determined on case by case situation, dependent upon location of weed, type of weed, and other environmental risks caused by removal of weed (e.g. exacerbated erosion).</li> <li>In the case where introduced crop species are detected in the vegetation retention area:</li> <li>Remove the introduced crop species from the vegetation retention area;</li> <li>Investigate whether the species have</li> </ul>	evidence. Spray records. Triennial weed survey reports. Written evidence of advice to DBCA. Evidence of liaison with neighbouring properties to remove weeds attributable to Carlton Plain Stage 1.				retention areas which remain in poor condition due to weed presence. Control of Declared Weeds and Weeds of National Significance should be undertaken, noting that weeds were present prior to the development commencing, and are widespread on other lower Ord and regional pastoral properties.

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ном	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
			spread to adjacent environme ntally sensitive areas outside of the proponent's freehold area, or the Carlton wetland; c) If the proponent's investigations identify the spread of crop species to adjacent environmentally sensitive areas or the Carlton wetland, notify the Department of Biodiversity, Conservation and Attractions so that it can be determined whether further invest igations are warranted for nearby environmentally sensitive areas, including the Parry Nature Reserve.					
CP1.FV.4.1	In the event that decommissioning is to occur, rehabilitate cleared land to a fair-to-good rangeland condition rating within five years of cessation of irrigation.	Prepare and implement decommissioning plan.	Detailed decommissioning plan to include rehabilitation management and weed control.	Decommissioning plan. Rehabilitation work records. Photographs and aerial imagery. Field / site inspection and monitoring reports.	Decom mis- sioning	Within 5 years of cessation of irrigation.	NR	Not yet required.

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CP1.FV.4.2	Decommissioning and rehabilitation management.	Decommissioning and rehabilitation plan implemented.	<ol> <li>Remove and appropriately recycle or dispose of all infrastructure include pipes, culverts and other farm equipment.</li> <li>If not required for non-irrigation use of farmland, return land formation to original topography, per natural contours noted in EMP Appendix B, including the in-fill of drains and channels and removal of hillside and other levee banks.</li> <li>Post-irrigation land use to be congruent with surrounding land use.</li> <li>Monitor for natural revegetation / re- growth and erosion, per methodology contained in EMP Appendix B.</li> </ol>	Decommissioning plan. Rehabilitation work records. Photographs and aerial imagery. Field / site inspection and monitoring reports.	Decom mis- sioning	Within 5 years of cessation of irrigation.	NR	Not yet required.
CP1.FV.4.3	Post-rehabilitation monitoring.	Monitor six-monthly monitoring of rehabilitation. <u>Trigger indicator</u> : Five years post- rehabilitation WARMS combined	<ol> <li>Six-monthly rehabilitation inspections for species type, density, weed coverage, post- decommissioning.</li> <li>Inspections to occur each dry season for five years following</li> </ol>	Field / site inspection and monitoring reports. Photographs and aerial imagery.	Decom mis- sioning	Inspect six- monthly for five years after rehabilitation. Every two years after	NR	Not yet required.

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
		vegetation condition and soil erosion targets across 60% of all monitoring sites to have a minimum fair- to-good rating (based on Table B1.4 of EMP Appendix B) [or equivalent Keighery scale 'good to excellent' vegetation condition rating]. <u>Threshold indicator</u> : Minimum rating of 'fair' under WARMS method [or equivalent Keighery method] is achieved in only 40% (or less) of all rehabilitation monitoring sites five years after decommissioning.	<ul> <li>decommissioning, reducing to biennially (unless threshold indicator management responses are required), such that ten years' post- decommissioning rehabilitation assessment can occur.</li> <li>Monitoring to include comparison with adjacent landscape through use of WARMS data from nearby sites.</li> </ul>			the first five years, up to 10 years monitoring in total.		
CP1.FV.4.4	Five-year post- rehabilitation management contingency.	In the event that the trigger indicator (60%) of sites do not meet the target condition rating after 5 years, or the threshold (minimum) indicator of only 40% of sites meets the required 'fair to good' rangelands combined erosion/vegetation condition status after	<ol> <li>Undertake weed management to mitigate rehabilitation and revegetation efforts.</li> <li>Reform land through mechanical means to reduce erosion/scouring if present.</li> <li>Reduce or prevent grazing pressures through feral or</li> </ol>	Field / site inspection and monitoring reports. Photographs and aerial imagery. Monitoring reports. Correspondence to DWER within 30 days of surveys indicating inability	Decom mis- sioning	From Year 5 after decommission ing and continuing until performance indicators have been met, or Year 10, whichever is later.	NR	Not yet required.

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		five years, implement responses listed under 'How'.	<ul> <li>domestic animals (cattle).</li> <li>Amend fire regimes to reduce impact on natural regeneration.</li> <li>Consider revegetation, topsoil re-spread (if available) or seeding if considered practicable.</li> <li>Monitor effectiveness of mitigation efforts at beginning and end of each dry season until all monitoring sites meet target 'good' condition status under WARMS condition monitoring guide.</li> </ul>	to achieve a fair rating in 40% of sites post- rehabilitation.				
CP1.TE.5.1	Soil salinity levels do not exceed 400mS/m ECe in surface or 600mS/m ECe in subsurface soils (threshold indicators). Trigger indicators: 300mS/m ECe in topsoils or 500mS/m ECe in subsoils.	Monitor soil condition for evidence of soil salinity. Crop yield decline may be utilised as indicator. Soil testing to be undertaken in the event of crop yield decline.	Initial baseline samples, followed by annual soil testing at the end of each dry season following the commencement of irrigation, on a representative sampling regime to be established across soil types, and field locations and gradients. <i>EMP Appendix C contains</i> <i>initial risk and procedural</i> <i>information, to be refined</i> <i>following baseline soil</i> <i>testing and establishment</i>	Soil sample analysis report. Map of monitoring locations. In the event that trigger levels are observed, the Commissioner for Soil and Land Conservation will be informed within 60 days.	Pre- construc tion and Operati on.	Annually at end of each dry season.	C	Soil samples were taken at 10cm and 60cm depths in August 2023, and analysed by CSBP, per evidence item <b>2023.1081.CP1.TE.5.1</b> . The report indicates shallow (10cm) and deep (60cm) samples at 6 points across Carlton Plain. Shallow samples exhibited ECe ranging from 3mS/m to 10.1mS/m at 10cm depth, and 1.5mS/m to 64mS/m at 60cm, lower than the 2022 highest ECe levels at both depths. These samples are within acceptable ranges and do not meet trigger or threshold indicators.

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
			of soil test locations on farm and in vegetation zones in the 2019 dry season.					
CP1.TE.5.2	Soil salinity mitigation.	Where an exceedance of a trigger value is identified for salinity for surface and sub soil, the corrective actions outlined under 'How' will be implemented.	<ol> <li>Identify the distribution of soil with salinity exceeding trigger levels and increase the sampling density to define the areas above the trigger.</li> <li>Investigate the cause (which could include determining if salinity is due to a rise in the groundwater of whether the soil chemical status is deteriorating as a result of insufficient irrigation).</li> <li>Verify the adequacy of the estimated leaching rate (approximately 100 mm/a) in controlling salinity.</li> <li>Identify whether remedial action is required, such as installation of drainage or pumping systems or higher water use agriculture.</li> <li>Implement remedial</li> </ol>	Soil sample analysis reports. Revised soil mapping indicating distribution of salinity. Reports or other data confirming remedial activities.	Operati on	As required.	NR	Not yet required.
			actions on a trial basis in					

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
			areas identified from distribution mapping.					
CP1.TE.6.1	Soil sodicity levels five years after commencement of irrigation do not exceed an Exchangeable Sodium Percentage (ESP) of 10 in surface soils or 15 in subsurface soils (threshold indicators). Trigger indicators ESP 6 in surface/top soils (<100mm) and ESP 10 in subsoils (<600mm).	Monitor soil condition for evidence of soil sodicity. Crop yield decline may be utilised as indicator. Soil testing to be undertaken in the event of crop yield decline.	Soil samples to be taken at 100mm (topsoil / surface soil) and 600mm (subsurface soil). Per EMP Provision CP1.TE.6, revision of thresholds may occur following review of baseline data.	Soil sample analysis reports. In the event that trigger levels are observed, the Commissioner for Soil and Land Conservation will be informed within 60 days.	Pre- construc tion and Operati on	Baseline samples 2019. Annual sampling on each farm lot following commence- ment of irrigation.	C	The 2023 soils report ( <b>2023.1081.CP1.TE.5.1</b> ) includes exchangeable cations (Ca, K, Mg, Na). Conversion to ESP and review and analysis of the baseline soil sodicity in relation to triggers and thresholds should be undertaken prior to the commencement of irrigation. This action is not required until the commencement of irrigation. Exchangeable sodium percentages (ESP) of 12.3 and 13.8 were identified in separate 600mm soil samples, per <b>2023.1081.CP1.TE.5.1</b> . Given these exceed the post-irrigation commencement triggers, it is recommended that a review of the triggers be undertaken in consideration of the pre- irrigation baseline data.
CP1.TE.6.2	Soil sodicity mitigation.	Where an exceedance of a trigger value is identified for sodicity for surface and sub soil, the corrective actions outlined under 'How' will be implemented.	<ol> <li>Visually identify and/or map the distribution of soil with sodicity exceeding trigger levels. This may include initial identification through crop productivity decline.</li> <li>Investigate cause(s) (which may include determining if changes are consistent with</li> </ol>	Soil sample analysis reports. Revised soil mapping indicating distribution of sodicity. Reports or other data confirming remedial activities.	Operati on	As required.	NR	Not yet required. As noted above, ESP readings of 12.3 and 13.8 were identified in separate 600mm soil samples, per <b>2023.1081.CP1.TE.5.1</b> . Given these exceed the post-irrigation commencement triggers, a review of the suitability of the trigger values should be undertaken in consideration of the pre-irrigation baseline data.

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			<ul> <li>anticipated initial response to land use change, or whether soil chemical status is deteriorating as a result of insufficient irrigation).</li> <li>Verify the adequacy of the estimated leaching rate (approximately 100 mm/a) in controlling sodicity.</li> <li>Identify whether remedial action is required, such as application of recommended soil ameliorants.</li> <li>Implement remedial action (such as the application of lime or gypsum) on a trial basis in areas identified by distribution mapping.</li> </ul>					
CP1.TE.7.1	Soil erosion (scour) is minimised where possible on fields, flood protection levees, drainage and other significant infrastructure affecting project environmental outcomes.	Scour risk occurs following significant erosion (rainfall) events. The objective is to minimise any exacerbation of this risk due to the development of farms and the construction of irrigation infrastructure.	<ol> <li>Assess erosion damage at end of each wet season.</li> <li>Repair any damage to infrastructure and fields.</li> <li>Review and if necessary modify design implications to ensure future wet seasons do not result in same environmental</li> </ol>	Inspection reports. Photographic evidence of damage and repairs.	Overall	At beginning of each dry season.	С	<ul> <li>KAI reported no significant scours following the 2022-2023 wet season.</li> <li>Slight erosion activity was noted on vegetation monitoring site 10.</li> <li>Landgate's July 2023 Carlton Hill Station Vegetation, Ground Cover and Rainfall remote sensing report (2023.1081.CP1.TE.7.1) does not identify significant scours at broad scale. Local ground level assessment confirms this.</li> </ul>

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
			or infrastructure outcomes. 4. Record actions undertaken to repair erosion and prevent future damage.					
CP1.TE.7.2	Soil erosion target: No scours or severe erosion caused by design of irrigation infrastructure.	All wet season erosion is repaired prior to commencement of irrigation season in the local area in the dry season immediately following.	Repair scours (e.g. on drains) to functional condition.	Inspection reports. Photographic evidence of damage and repairs.	Overall	Nominal target completion dates May/June each year, subject to seasonal conditions.	NR	Irrigation infrastructure was not established during the reporting period. Recharge and drainage infrastructure has been constructed to maintain the ecological function of Carlton wetland, as reported in the 2021 CAR.
CP1.TE.8.1	Collect baseline soil samples across representative soil types in irrigation and non- development areas, prior to commencement of irrigation.	Collect baseline soil samples prior to commencing irrigation. Sampling to include EC, pH, ESP, nutrients, across irrigation and vegetation zones.	Soils sampling procedure is contained within EMP Appendix C (Section C.3). Sites and sampling regime recorded for future reference.	Soil sample analysis report. Map of monitoring locations.	Pre- construc tion Constru ction	Prior to commence- ment of irrigation.	CLD	Soil sampling data is provided in 2023.1081.CP1.TE.5.1. Nutrient and pH analysis was not included in the report. The 2020 and 2021 CARs noted that nutrient analysis should be included in future soil reports. The 2023 analysis report includes Nitrogen species, Phosphorus, EC, pH and ESP as required.
CP1.TF.9.1	Control pest or plague fauna as required to minimise negative environmental impacts.	Control pest or plague fauna to locally acceptable levels.	Regular visual monitoring as part of ongoing farm management. Vegetation monitoring (per EMP Appendix B) to indicate extent and impacts of pest fauna. Restrict access (where possible) including mustering or culling if	Monitoring / inspection and mitigation (outcome) reports. Photographic evidence. Licences if culling has occurred. Correspondence to DBCA reporting	Overall.	As required.	С	Vegetation condition monitoring (per <b>2021.CP1.FV.2.2</b> ) includes assessment of fauna damage, including cattle. Comparison to previous site records indicates significantly reduced cattle numbers, particularly in the Carlton wetland area. No pest fauna were reported by KAI.

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			necessary (with appropriate licences if required).	fauna pest management activities.				
CP1.HP.10.1	Undertake a groundwater monitoring program to observe changes in depth, and to better understand the water balance and connection between Carlton Plain Stage 1 groundwater and the Ord River.	Establish a groundwater monitoring program.	Groundwater monitoring for depth and water quality, utilising the regime recommended by Lillicrap et al, 2015 for the nearby Goomig farmlands (refer to EMP Appendix D). Install bores (with data loggers) on Carlton Plain. Locations: Initially as per EMP Figure 9 with modifications considered as farms are constructed. Management action review: Triennially.	Bore monitoring data. Bore locations plan. Site inspections. Drilling contractor receipts / proof of bores (re-) drilled. Triennial groundwater monitoring review.	Overall.	Bore drilling and initial sampling was undertaken in 2019.	C	<ul> <li>2023.1081.CP1.HP.10.1a provides data logger records for the period October 2022 to October 2023.</li> <li>2023.1081.CP1.HP.10.1b provides laboratory water quality analysis of groundwater samples from August 2023.</li> <li>Refer also to Figure 8, at the end of this table.</li> <li>2023.1081.CP1.HP.10.1c provides field bore monitoring data from October 2023.</li> </ul>
CP1.HP.10.2	Trigger indicator: Groundwater depth 3 metres below ground level (mbgl). Threshold indicator: Groundwater depth 2mbgl.	Threshold reporting will occur should groundwater depth rise to 2mbgl. DWER will be advised should groundwater levels near trigger or thresholds.	Undertake depth monitoring per CP1.HP.10.1.	Data logs. Monitoring records. Correspondence to DWER.	Overall	Review with each monitoring round.	C	It was previously reported that Initial bore monitoring records indicated depth to groundwater is less than 2mbgl in some existing bore locations (that is, prior to clearing/development), particularly on the low- lying western area outside of the Carlton Plain Stage 1 approved development area (eg Bore Y6). This action is interpreted as referring to the groundwater level directly below the irrigation area that forms Carlton Plain Stage 1. Data loggers indicate that the water level in bores Y3 and Y10 hit the trigger of 3mbgl in the wet season of 2022 and again in 2023 (refer to Figure 8, taken from <b>2023.1081.CP1.HP.10.1a</b> ). Groundwater levels at bores Y3 and Y10 remained higher than 3mbgl from mid-January 2023 to September (Bore Y3) and July (Bore Y10)

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
								respectively. Bore Y3 is located to the north west, and outside of, the Carlton Plain Stage 1 development area. Bore Y10 is located adjacent to Carlton Wetland. KAI does not consider the seasonal variation in these bores as being attributable to the development. The forthcoming review of groundwater as KAI progresses its Carlton Plain Stage 2 proposal will assess the suitability of the 3mbgl and other
CP1.HP.10.3	Groundwater risk mitigation.	Initiate management responses to mitigate groundwater accretion risk.	Manage water levels to remain below the root zone of crops – through irrigation techniques, use of trees in the farming system, pumping (ie, dewatering) or deep drainage. In the event that saline water accretion occurs and discharge is required, disposal downstream below the tidal zone, subject to water quality assessment and approval by DWER, would be considered.	Data logs. Monitoring records. Correspondence to DWER. DWER approval of groundwater discharge (if required).	Operati on	As required.	NR	groundwater triggers. Not yet required.
CP.HP.10.4	Groundwater management review.	Triennial review of groundwater monitoring and management regime.	Review data. Review monitoring regime.	Data logs. Monitoring records.	Operati on	Triennial	NR	The first triennial groundwater monitoring review is due three years after the commencement of operations, however a review of monitoring regimes and findings will be undertaken as part of

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			Initiate management and mitigation responses per CP1.HP.10.3 if required.	Correspondence to DWER.				the preparation for the referral of Carlton Plain Stage 2 in 2024.
CP1.HP.11.1	Protection of Carlton wetland from farm tailwater or (average wet season) stormwater flow.	Hillside drainage and internal stormwater drainage network maintained such that there is no tailwater flow through Carlton wetland in any dry season or stormwater flow through the wetland in an average rainfall wet season.	Install and maintain farm drainage around Carlton wetland. Visual monitoring and repairs (if required) after each wet season, per CP1.TE.7.1 and CP1.TE.7.2.	Inspection reports. Photographic evidence of damage and repairs.	Constru ct-ion Operati on	As required at the beginning of each dry season.	С	Hillside drainage has been constructed to protect Carlton wetland from farm runoff water, as reported in previous CARs. Carlton Plain is not yet being farmed for crops, therefore the remainder of this action is not yet required.
CP1.HP.11.2	Mitigate drainage risk to Carlton wetland.	Repair hillside drain or internal drainage network in the event of above average rainfall or intense storm event causing farm tailwater or stormwater flow through Carlton wetland.	Physical repairs to drains to prevent farm water flow into wetland.	Inspection and maintenance records. Photographic evidence of damage and repairs.	Operati on	As required at the beginning of each dry season.	NR	Not required during the 2023 CAR reporting period as operations have not commenced.
CP1.HP.11.3	Monitoring of Carlton wetland water quality following a dry season flow risk event.	In the event of dry season flow to Carlton wetland, water quality samples to be taken.	Water quality testing for farm chemicals (nominally Atrazine), total N and total P, EC and pH. Samples to be compared to routine testing taken under CP1.IW.14.	Monitoring records. Correspondence to DWER (if dry season risk flow event occurs).	Operati on	As required.	NR	Not yet required. This action commences with Operations.
CP1.IW.12.1	No tailwater discharge to Reedy Creek or	Prevent flow of farm tailwater to Reedy Creek or the Ord	Maintain drainage network to ensure no dry season tailwater is able to flow to Ord River.	Visual and system records to show no tailwater flows	Operati on	Ongoing observation of functionality,	NR	Not yet required. This action commences with Operations.

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
	Ord River during the dry season.	River during the dry season. Trigger indicator: Dry season flow of tailwater west of the point located at approximately 15.470324S 128.406378E (western end of Carlton Stage 1 drain). Threshold indicator: Dry season flow of tailwater downstream of the point located at approximately 15.474723S 128.407478 (500m downstream of the trigger indicator point).		to Reedy (Collins) Creek system.		and maintenance.		
CP1.IW.12.2	Ord River dry season tailwater risk event monitoring.	In the event of tailwater losses, take lower Ord River samples (below Reedy Creek confluence). Apply Ord Stage 1 water licence trigger levels and pollution reporting levels to incident reporting (Appendix E of EMP).	Daily samples for 7 days, then weekly for 4 weeks, testing for N, P, TSS and Atrazine (as an indicator farm chemical).	Monitoring records. Evidence of correspondence to DWER (within 30 days of risk event).	Operati on	If required	NR	Not yet required. This action commences with Operations.

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		Report incident to DWER within 30 days.						
CP1.IW.12.3	Ord River dry season tailwater risk event mitigation.	Threshold contingency action: In the event of an accidental flow of tailwater, release fresh water through to Reedy Creek to enable flushing to the Ord River.	Flush fresh water (non- tailwater) from irrigation channels/pipes through drainage network.	Monitoring records. Correspondence to DWER if flow to Ord River occurs in dry season.	Operati on	If required.	NR	Not yet required. This action commences with Operations.
CP1.IW.13.1	Water quality monitoring to confirm that no farm chemicals are entering Carlton wetland.	Establish a farm chemicals water quality testing program on the Carlton Stage 1 wetland to assure no farm water is entering the wetland.	Baseline water sampling of total N, total P, EC, pH and TSS prior to irrigation commencing. Testing per EMP Table E.1, Appendix E. Bi-monthly monitoring in dry season once irrigation commences, and in the season prior to irrigation. Inclusion of indicator farm chemical (atrazine – if used) once farming commences. If atrazine is not in use, alternative herbicide or pesticides to be analysed in samples and reported accordingly.	Monitoring records. Farm chemical application records.	Overall	Bi-monthly in dry season.	NR	Farm chemicals are not yet in use on Carlton Plain. Bi-monthly monitoring of Carlton Wetland water quality has not yet been initiated. Baseline water quality data was obtained in previous reporting years. It is recommended that the frequency of Carlton wetland water quality monitoring increases prior to the commencement of irrigation, to illustrate natural variability and pre-irrigation conditions and supplement the existing baseline data.
CP1.IW.13.2	Carlton wetland water quality monitoring indicators and threshold contingency actions	Trigger indicators: Per EMP Table E.1, Appendix E. Threshold indicators: Per EMP Table E.1, Appendix E.	Compare water sample analysis to trigger levels. In the event of a pesticide or herbicide being detected in Carlton wetland, follow- up monitoring to occur, with design repairs and/or consideration of freshwater	Monitoring records. Evidence to show mitigating actions – e.g. freshwater inflow.	Operati on	If required.	NR	Not yet required. This action commences with Operations.

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	ноw	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
			inflow to dilute remaining chemical residue.					
CP1.IW.14.1	Avoid substantial cattle damage to native vegetation while reducing weed infestations in the Carlton Stage 1 wetland by allowing limited, restricted cattle access for mechanical weed control.	Adopt an adaptive, integrated weed management approach using mechanical and/or chemical means.	<ul> <li>Weed control by cattle, with:</li> <li>reduced stock numbers (compared to historical grazing); and</li> <li>period of access limited in order to avoid excessive habitat damage.</li> <li>Cattle to not be present in the wetland on a full time grazing basis.</li> <li>Monitor vegetation condition during cattle presence to minimise physical damage.</li> </ul>	Annual wetland condition photographs. Pre- and post- cattle access weed and native vegetation wetland condition inspection reports.	Operati on	As required.	с	This action is not required until Operations commence, however it is noted that cattle numbers have been visibly reduced on parts of Carlton Plain, including within the wetland area.
CP1.IW.15.1	Implement a groundwater monitoring program to observe changes in water quality on Carlton Plain.	Monitor bores constructed per EMP Figure 9 and provision CP1.HP.10.	Determine indicators following baseline sampling. EC, pH to be tested in situ at beginning and end of each dry season. Farm chemical testing regime to be determined upon commencement of irrigation. Bore monitoring regime to be reviewed triennially.	Bore monitoring data. Triennial groundwater quality and bore monitoring regime review.	Overall	Twice-yearly bore monitoring.	С	<ul> <li>2023.1081.CP1.HP.10.1a provides data logger records for the period October 2022 to October 2023. Refer also to Figure 8 (below).</li> <li>2023.1081.CP1.HP.10.1b provides laboratory water quality analysis of groundwater samples from August 2023.</li> <li>2023.1081.CP1.HP.10.1c provides field bore monitoring data from October 2023.</li> <li>A full review of accumulated monitoring data will be completed as part of the Carlton Plain Stage 2 planning and referral processes in 2024.</li> </ul>

INITIALS:

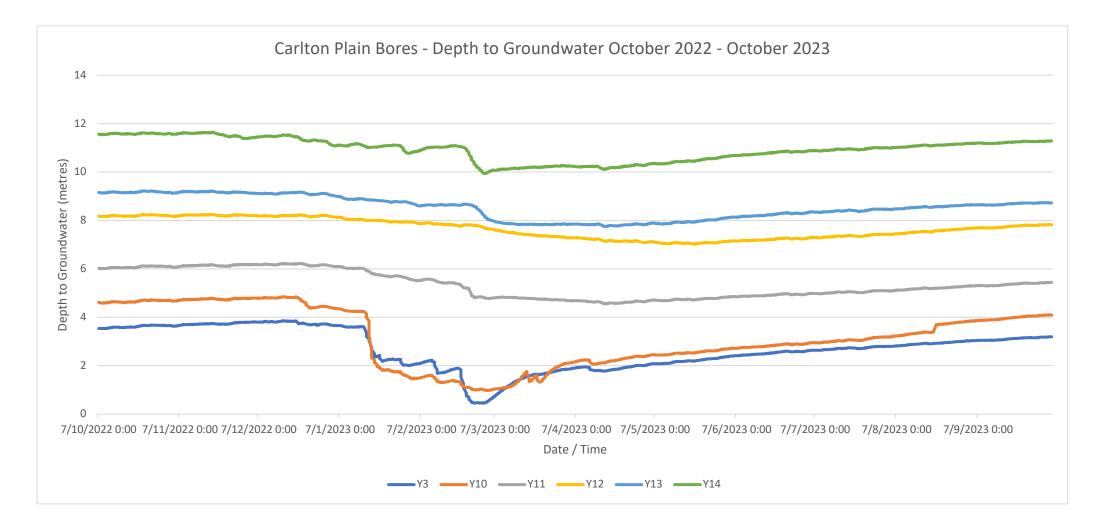


Figure 8. Carlton Plain Bores - Depth to Groundwater 2022-2023

## Attachment 3

## Attachment 3 - Evidence registry

- 2023.1081.CP1.FV.1.3a Riparian Setback SOUTH Min 100m
- 2023.1081.CP1.FV.1.3b Riparian Setback EAST Min 100m
- 2023.1081.CP1.FV.2.2a Vegetation Condition Assessment Sites.pdf
- 2023.1081.CP1.FV.2.2b Carlton Plain Stage 1 Vegetation Condition Report 2023.xlsx
- 2023.1081.CP1.FV.2.2c Carlton Vegetation Site 4 Example Field Data Sheet.pdf
- 2023.1081.CP1.FV.2.2d Vegetation Density Carlton Plain 2016-2019-2023.pdf
- A 2023.1081.CP1.FV.3.3a Carlton Plain Stage 1 Triennial Weed Assessment Tracklog 2023-08-01.pdf
- 💫 2023.1081.CP1.FV.3.3b Carlton Plain Triennial Weed Inspection and Vegetation Condition Field Notes 1 August 2023.pdf
- 2023.1081.CP1.FV.3.3c Carlton Plain Vegetation and Weed Coverage Time Series 1985-2023.pdf
- 📭 2023.1081.CP1.HP.10.1a Carlton Bores Data Logger Output 2022-2023.xlsm
- 2023.1081.CP1.HP.10.1b Laboratory Analysis Carlton Groundwater August 2023.pdf
- 2023.1081.CP1.HP.10.1c Carlton Bore Data 5 October 2023.xlsx
- 2023.1081.CP1.M1.1 Carlton Plain Pump Site Clearing May 2023.pdf
- 2023.1081.CP1.M4.3 Statement 1081 Carlton Plain Stage 1 Compliance Assessment Report 2022 REV O.pdf
- 2023.1081.CP1.TE.5.1 Carlton Plain Soil Test Report CSBP 2023-08-31.pdf
- 2023.1081.CP1.TE.7.1 Carlton Hill Station Landgate Report 2023.pdf