



Carlton Plain Stage 1 – Irrigated Agriculture

COMPLIANCE ASSESSMENT REPORT

11 September 2019 – 31 December 2019

Statement 1081

March 2020

Prepared for and on behalf of

Kimberley Agricultural Investment Pty Ltd

CAN 154 270 194

794 Weaber Plain Road, Kununurra WA 6743

by

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Document Control

Date	Version	Reviewed / endorsed by
31 March 2020	Rev A	For client review and submission

Acronyms and abbreviations in use in document

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
CAP	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
KBC	Kimberley Boab Consulting
km	Kilometre(s)
m ³ /sec	cubic metres per second (also known as cumec)
mbgl	metres below ground level
MNES	Matter(s) of National Environmental Significance
MG	Miriuwung and Gajerrong (peoples)
MG Corporation	Yawoorroong Miriuwung Gajerrong Yirrgeb Noong Dawang Aboriginal Corporation
N	Nitrogen
NR	Nature Reserve
OFA	Ord Final Agreement
OHS	Occupational Health and Safety
ORFRS	Ord River Floodplain Ramsar Site
P	Phosphorus
PEC	Priority Ecological Community
PER	Public Environmental Review
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 compliance period is September 11, 2019 to December 31, 2019.

This short reporting period aligns with the Statement 1081 Compliance Assessment Plan (CAP) approval received from the Department of Water and Environmental Regulation (DWER), dated 21 February 2019. Subsequent Compliance Assessment Reports (CARs) will align to calendar years, with the next CAR for the 2020 year due for submission by 31 March 2021.

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 allows 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.

The *Environmental Management Plan* (EMP) for Carlton Plain Stage 1 (Kimberley Boab Consulting, 2018) was approved for implementation under Statement 1081.

This Compliance Assessment Report (CAR) covers both the Statement and the EMP, and continues from the first CAR submitted to DWER in December 2019.

A section 45C application to vary Ministerial Statement 1081 was submitted to DWER on 3 October 2019. The s45C request is currently under consideration by DWER. Table 1 summarises the approved operational extent under Statement 1081. Tables 3 outlines the changes under consideration.

Figures 1 and 2 illustrate location and the proposed varied development area. The net impact of the proposed variation is a reduction in the area of clearing by 110ha, to 2,945ha.

Table 1 - Approved and proposed varied development extent

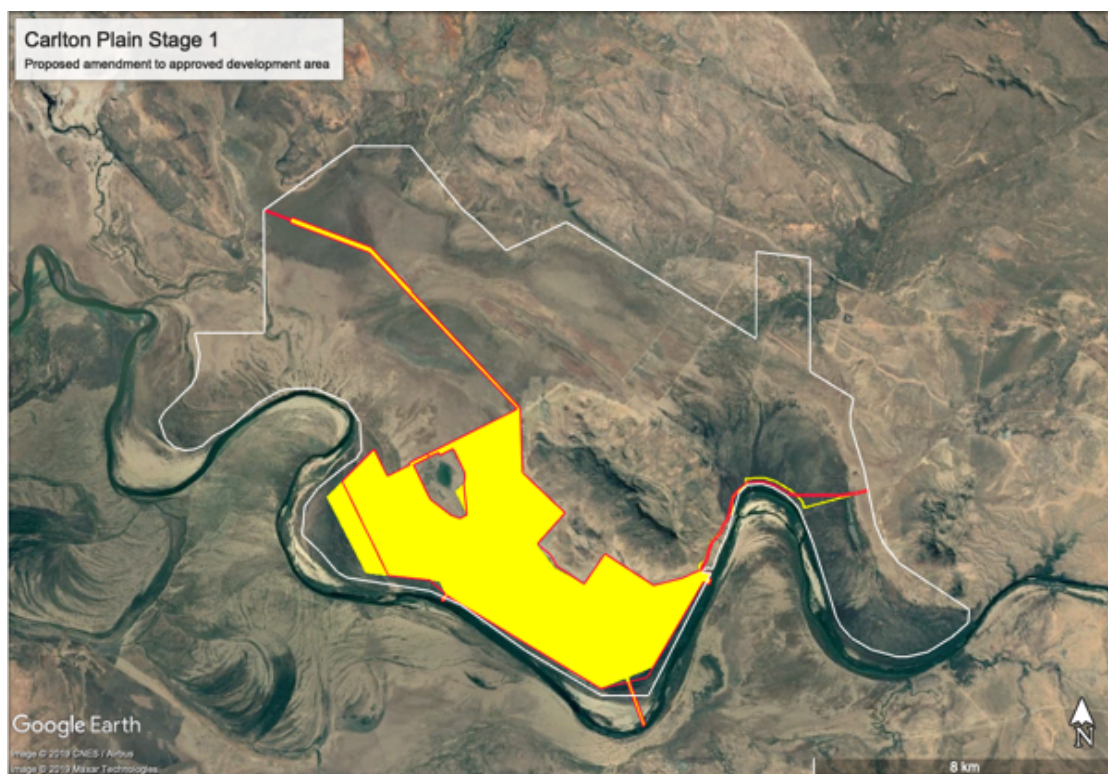
Element	Approved extent	Proposed extent
Surface and pressurized irrigation of annual and perennial crops, including infrastructure areas access, farm outbuildings, drainage and irrigation requirements.	Clearing of up to 3,055ha (refer to Table 3 for breakdown).	Clearing, development and agricultural 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.

(Source: Carlton Plain s45C application)

Table 2 – Detailed inclusions in proposed Carlton Plain Stage 1 development area changes

Item	Approximate location Zone: 52	Area affected (ha)	Reason	Net impact on development area
Modification to entrance track	E: 450110 N: 8282195	32.3 ha total	Detailed survey determined a more preferred road alignment to manage surface water run-off. Relocation of track further away from the existing station track location adjacent to the riverbank to reduce erosion/scour risk, but not as far 'north' as included in the original footprint/proposal. This alignment is more efficient and reduces the physical pressure on the existing property firebreak track along the Ord River near a location known as 'Maccas Barra Camp'.	Increase of 3.4ha in track area envelope, taking into the layout the existing station track adjacent to the boundary.
Modification to total development footprint - extension outside of approved area.	E: 446391 N: 8277371	14.9ha	Allows for full pivot circle with consistent irrigation area. Allows for better weed and drainage management.	Alteration to approved development boundary
	E: 440902 N: 8279721	4.1ha	Inclusion of this area allows for better access and water supply infrastructure.	Additional clearing. Within freehold. 165m offset from top of banks.
	E: 444025 N: 8280291	10.1ha	Allows hillside drain to follow higher contour and ensures a natural flow of water to wetland	Alteration to approved development boundary.
Modification to total development footprint – reduction of approved area.	E: 441603 N: 8282042	9.9ha	Area better utilised within wetland area than as developed area	Reduction of development footprint
	E: 438488 N: 8281059	132ha	Area better utilised within buffer zone, Undulating ground subject to inundation.	Reduction in development footprint
Groundwater monitoring bores	N/A	N/A	Bore plan modified to accommodate revised irrigation layout. Additional bore added. Twelve monitoring bores will now be located on the site (compared to 11 in the originally approved EMP).	No impact on development. Additional monitoring information will be resourced.

(Source: Carlton Plain s45C application)



2.0 Project approvals

Ministerial Statement 1081 permits the following activity:

Table 3 - Summary of the Proposal

Proposal Title	Carlton Plain Stage 1 – Irrigated Agriculture
Short Description	Clearing and development of 3,055ha 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.

(Source: Table 1 of MS1081 Schedule 1)

Table 4 - Extent of physical and operational elements

Element	Operational extent
Surface irrigation of annual crops	Clearing of up to 1,735ha.
Pressurised irrigation of perennial crops	Clearing of up to 510ha. Pressurised irrigation infrastructure to be constructed where soils do not allow for surface (flood) irrigation.
Infrastructure	Clearing of up to 810ha 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)

Applications for easements for pumpsites 1 and 2 have been submitted to the Department of Planning, Lands and Heritage (DPLH). The Department of Water and Environmental Regulation has received initial documentation for the water licence application for Carlton Plain, and has requested Bed and Banks Permits for the pumpsites and hillside drainage lines intersected by the Carlton Plain access track. Permit processes are under way.

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

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Website: www.kai-australia.com.au

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CHIEF EXECUTIVE OFFICER

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GENERAL MANAGER

Phone Number: (08) 9169 3113

Mobile Telephone: 0407 991 734

E-mail address: jengelke@kai-australia.com.au

4.0 Implementation status

Clearing for the development of Carlton Plain commenced in April 2019. Entry track renovation commenced in November 2018. At 10 September 2019, 1,102ha of the western portion of the Carlton Stage 1 area had been cleared, per the CAR submitted to DWER in December 2019.

As illustrated in Figures 3 and 4, clearing and earthworks in the eastern portion of Carlton Stage 1 (indicated with red ring) extended the western side clearing which was reported in the September 2019 CAR.

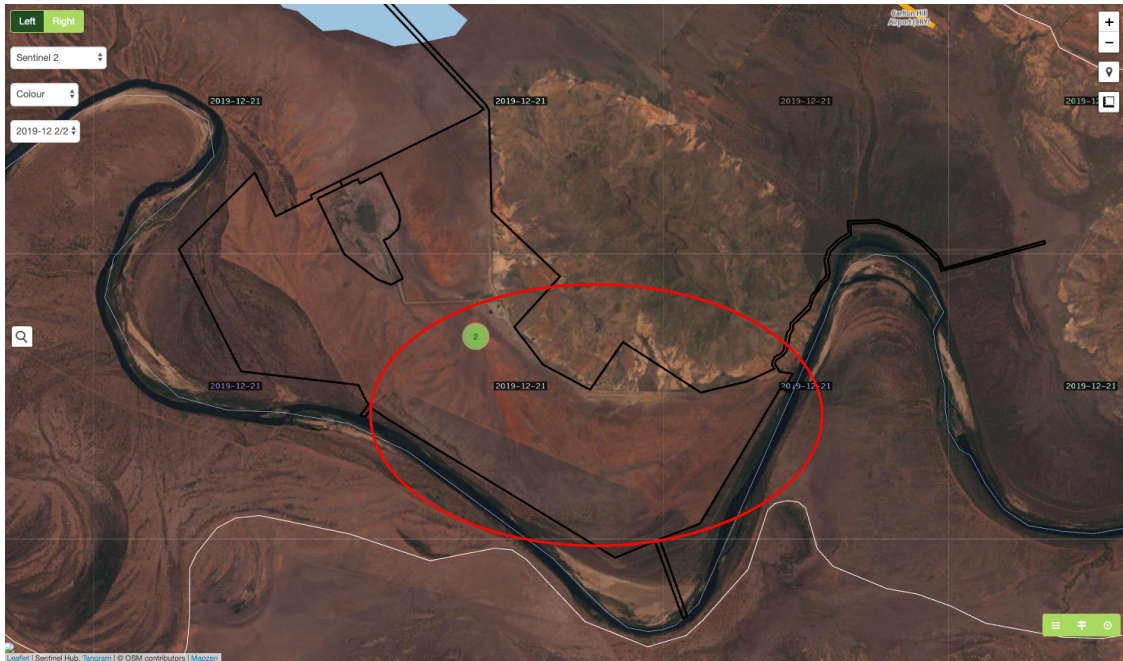


Figure 3 – Satellite imagery - extent of clearing at 31 December 2019: original (approved) clearing envelope marked

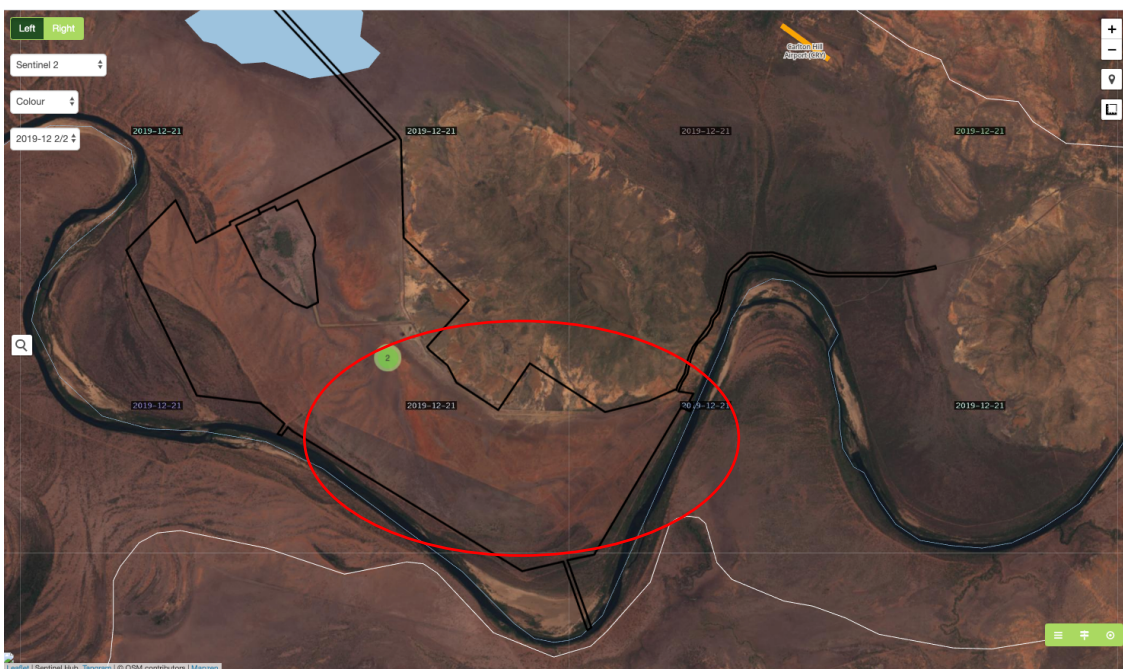


Figure 4 – Satellite imagery – extent of clearing at 31 December 2019: proposed [varied] clearing envelope marked

Total area cleared to 31 December 2019, including the area reported in the September 2019 CAR, has been calculated by cross-referencing satellite imagery with on-farm records.

Table 5 - Summary of clearing to 31 December 2019

Sub-area	Area cleared at 11 September 2019 (ha)	Area cleared September - December 2019 (ha)	Total area cleared (ha)
Western side – Carlton Stage 1 main area	1,102	0	1,102
Eastern side – Carlton Stage 1 main area	0	882.4	882.4
Entrance track	21.3	0	21.3
TOTAL AREA CLEARED	1,123.3	882.4	2,005.7

Mapping error estimate \pm 2%

5.0 Statement of Compliance

Statement of Compliance

1. Proposal and Proponent Details

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

2. Statement of Compliance Details

Reporting Period	<i>11/09/19 to 31/12/20</i>
------------------	-----------------------------

Implementation phase(s) during reporting period (please tick ✓ relevant phase(s))							
Pre-construction	<input checked="" type="checkbox"/>	Construction	<input checked="" type="checkbox"/>	Operation	<input type="checkbox"/>	Decommissioning	<input type="checkbox"/>

Audit Table for Statement addressed in this Statement of Compliance is provided at Attachment:	2
<p>An audit table for the Statement addressed in this Statement of Compliance must be provided as Attachment 2 to this Statement of Compliance. The audit table must be prepared and maintained in accordance with the Department of Water and Environmental Regulation (DWER) <i>Post Assessment Guideline for Preparing an Audit Table</i>, 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 procedure for the reporting period of this Statement of Compliance. The terms that may be used 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.</p>	

Were all implementation conditions and/or procedures of the Statement complied with within the reporting period? (please tick ✓ the appropriate box)			
No (please proceed to Section 3)	<input type="checkbox"/>	Yes (please proceed to Section 4)	<input checked="" type="checkbox"/>

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?
<i>No further potential or actual non-compliances were observed. A PNC for Condition M1.1 has been retained. KAI is currently in discussion with DWER regarding the resolution of this issue.</i>
Was the implementation condition or procedure non-compliant or potentially non-compliant?
On what date(s) did the non-compliance or potential non-compliance occur (if applicable)?

Was this non-compliance or potential non-compliance reported to the Chief Executive Officer, DWER?	
<input type="checkbox"/> Reported to DWER verbally Date _____ <input type="checkbox"/> Reported to DWER in writing Date _____	<input type="checkbox"/> 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?
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)
What was the cause(s) of the non-compliance or potential non-compliance?
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?
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 re-occurrence?
Please provide information/documentation collected and recorded in relation to this implementation condition or procedure: <ul style="list-style-type: none"> • 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,, (*full name and position title*)

declare that I am authorised on behalf of

(*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.

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

4-6 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 tabulated in Attachment 2.

6.1.4 Audit period

The audit period for this CAR is 11 September 2019 to 31 December 2019.

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 undertake an annual compliance assessment involving:

- Site inspection undertaken on 8 October 2019;
- Utilisation of satellite imagery (www.satamap.com.au)
- 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.

Records to verify the timing and extent of implementation were collected and collated, and will be and retained to prove compliance with the approval. These records include:

- monitoring data and analyses;
- copies of publications relevant to the project;
- records of contractor contracts;
- 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):

Table 6 - Project phases

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.

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 7 - Compliance assessment terminology

Status	Acronym	Description / definition
Compliant	C	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 non-compliance.
- 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 2020 to 31 December 2020 is required to be submitted to DWER by 31 March 2021.

7.0 KAI response to previous CAR findings

7.1 Review of 2018-2019 audit findings

The previous assessment of KAI's compliance with the requirements of Statement 1081 for the period 11 September 2019 to 31 December 2019 indicated potential non-compliances per Table 8.

Table 8 – Progress in relation to potential non-compliances reported in 2018-2019 CAR

Audit code	Subject	Requirement	Previous Audit finding	Audit commentary (see Attachment 1, Table 1)	Recommended mitigation	Status (at 16 March 2020)
1081:M1.1	Proposal Implementation	When implementing the proposal, the proponent shall not exceed the authorised extent of the proposal as defined in Table 2 of Schedule 1, unless amendments to the proposal and the authorised extent of the proposal have been approved under the EP Act.	PNC	A Section 45c application to vary MS1081 has been submitted to DWER. This application requests minor boundary amendments and an overall decrease in the area to be cleared by 110ha. This variation application was submitted retrospectively in some locations (eg near pumphouse 2 and the eastern entrance track). See evidence item 2019.1081.M1.1a	Advice be obtained from the EPA in relation to the s45C application and response implemented accordingly.	<p>KAI provided a written response to DWER queries on 10 March 2020, advising that:</p> <ol style="list-style-type: none"> 1) The detailed, on-ground survey (of the Carlton Plain entrance track) determined a more preferred road alignment to manage surface water run-off. Relocation of the track further away from the existing (historical) station track location adjacent to the riverbank to reduce erosion/scour risk, but not as far north as was included in the original proposal. This alignment is more efficient, utilises the existing track and reduces the physical pressure on the existing property firebreak track along the Ord River, near a location known as ‘Macca’s Barra Camp’. 2) Survey marker error is believed to have occurred in the location around the river bend. There is a discrepancy between a localised set of coordinates, KUN94 and the standard MGA52. It is believed an error in the basic georeferencing in the original mapping may have resulted in the track misalignment in some places. <p>Allowing for mapping error calculations, there is approximately 12.64ha cleared outside of the approved alignment. When considering the impact on the Vegetation Types (VT) within the immediate, local area of the track, and offsetting the original track alignment not cleared against the area cleared, the net impact is 3.64ha of additional clearing. Of this, the full area is within VT’s classified as very poor to degraded in the baseline surveys. Per the annual compliance report, the total amount of clearing has not been exceeded, and it is KAI’s intent to reduce the overall footprint by 110ha, as proposed in the s45C application.</p> <p>To ensure no further non-compliances of this nature, KAI has submitted the s45C request for variation to EPA Services at DWER to accommodate the improved site knowledge and the</p>

Audit code	Subject	Requirement	Previous Audit finding	Audit commentary (see Attachment 1, Table 1)	Recommended mitigation	Status (at 16 March 2020)
						<p>survey issues noted above. KAI will complete its boundary clearing in the current year (2020) and will ensure boundary sanctity is maintained. Additional management inspections have been implemented to ensure boundary compliance occurs and operators have been briefed on the requirements of the approval.</p> <p><i>A copy of the response and associated detailed clearing report is included in the evidence folder for this report.</i></p>
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.	PNC	The Section 45C variation application was submitted retrospectively, with boundary adjustments (particularly in relation to the entrance track) already initiated. See evidence item 2019.1081.M1.1a	As above.	<i>This is a report timing matter which KAI has noted.</i>
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	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.	KAI will make available on its website its environmental monitoring data relating to Carlton Plain by 30 April 2020, in order to rectify this non-compliance.

Table 9 – Progress in relation to previous recommended changes to EMP

EMP audit code	EMP requirement	Recommended change / clarification	Status (at 31 March 2020)
CP1.FV.2.1 CP1.FV.2.2 CP1.FV.2.3 CP1.FV.3.1	Establish and monitoring vegetation condition transects in vegetation retention area (including weed monitoring).	Replacement of the word ‘transect’ with ‘quadrat’ within these actions.	This change is yet to be made to the EMP. This amendment is to be included when advice from DWER accepting recommendation is received.
CP1.HP.10.1	Groundwater monitoring program.	Proponent to advise CEO of EPA with final bore location coordinates upon completion of installation, and EMP to be updated accordingly.	Bore installation has occurred, including data loggers. Bore location advice included in evidence item 2019a.1081.HP.10.1a. Updating of the Carlton Plain EMP is required to reflect actual bore locations.
CP1.HP.10.2	Groundwater monitoring rigger indicator: Groundwater depth 3 metres below ground level (mbgl). Threshold indicator: Groundwater depth 2mbgl.	Clarification that the 3mbgl trigger and 2mbgl threshold groundwater levels <i>are applicable to measurements taken from bores located on or immediately adjacent (within 100m) of irrigated areas on Carlton Plain, and not to bores located outside of the irrigated fields within the development area.</i> This clarification accommodates bores located in or near areas of existing groundwater expression/discharge to the west of House Roof Hill, where historical records indicate groundwater levels naturally at, near or above ground surface.	Recommendation unchanged.
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.	It is recommended that the triggers for total N, total P, EC, pH and TSS be reviewed after three years of water quality analysis, following review of pre-irrigation and post-development actual water quality data. Testing in 2019 indicated natural levels higher than the triggers noted in the EMP, which were adopted from the triggers used for Ord Stage 1 in free-flowing freshwater. Carlton wetland is not free flowing, so <i>locally specific</i> triggers should be determined after three years of baseline data collation. Season 2019 sampling indicates that in the pre-development, dry season state, following two	Recommendation unchanged.

		<p>successive lower-than-average rainfall seasons, that Carlton wetland exceeded initial triggers for Total N, Total P and TSS. There is insufficient data to draw baseline conclusions, however ongoing monitoring will inform the understanding of the natural wetland water quality. It is also noted that the triggers contained in EMP Table E.1 are adopted from Ord Stage 1 flowing water triggers (as opposed to stagnant water per the wetland state). It is expected that a review of the triggers will be required once sufficient baseline data is obtained.</p>	
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8.0 Findings

8.1 Audit results

This Compliance Assessment Report did not identify additional non-compliances, potential non-compliances or negative environmental outcomes on Carlton Plain and surrounding areas, during the period September 11 2019 to December 31 2019.

KAI is continuing to attend to potential non-compliances identified in the previous CAR and addressed through the section 45C variation request submitted to DWER in October 2019.

8.2 Recommended changes to the Compliance Assessment Plan

Following the submission and acceptance of this report, the compliance reporting period for Carlton Plain Stage 1 will revert to calendar years (1 January to 31 December), with annual compliance reports due by 31 March in the following year. This change has been previously flagged.

8.3 Recommended changes to the Environmental Management Plan

Recommended changes to the Carlton Plain EMP are as follows:

1. Replacement of the word 'transect' with 'quadrat' in CP1.FV.2.1, CP1.FV.2.2, CP1.FV.2.3 and CP1.FV.3.1.
2. Clarification that the 3mgbl trigger and 2mgbl threshold groundwater levels indicated in CP1.HP.10.1 *are applicable to measurements taken from bores located on or immediately adjacent (within 100m) of irrigated areas on Carlton Plain, and not to bores located outside of the irrigated fields within the development area.* This clarification accounts for bores located in or near areas of existing groundwater expression/discharge to the west of House Roof Hill, where groundwater levels are naturally at, near or above ground surface.
3. Updating of bore locations in relevant plans and references contained in the EMP.
4. In relation to Carlton wetland water quality (CP1.IW.13.2), the triggers for total N, total P, EC, pH and TSS be reviewed after three years of testing, following review of pre-irrigation and post-development actual water quality data. Testing in 2019 indicated natural levels higher than the triggers noted in the EMP, which were adopted from the triggers used for Ord Stage 1 in free-flowing freshwater. Carlton wetland is not free flowing, so locally specific triggers should be determined after three years of baseline data collation.
5. The 2019 comparison indicates that in the pre-development, dry season state, following two successive lower-than-average rainfall seasons, that Carlton wetland exceeded initial triggers for Total N, Total P and TSS. There is insufficient data to draw baseline conclusions, however ongoing monitoring will inform the understanding of the natural wetland water quality. It is also noted that the triggers contained in EMP Table E.1 are adopted from Ord Stage 1 flowing water triggers (as opposed to stagnant water per the wetland state). It is expected that a review of the triggers will be required once sufficient baseline data is obtained.

9.0 References

Department of Water and Environmental Regulation, undated, Form 2 Statement of Compliance. Available at: <http://epa.wa.gov.au/post-assessment-forms>

Environmental Protection Authority, 2018, Report and recommendations of the Environmental Protection Authority: Carlton Plain Stage 1 Irrigated Agriculture. Report 1614. Government of Western Australia, Perth. Available at: http://www.epa.wa.gov.au/sites/default/files/EPA_Report/Carlton%20Plain%20Stage%201-EPA%20Final%20Report%20and%20Recommendations.pdf

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

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

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

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

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

ATTACHMENT 1 – Compliance status terms

Compliance Status Terms	Abbrev	Definition	Notes
Compliant	C	Implementation of the proposal has been carried out in accordance with the requirements of the audit element.	This term applies to audit elements with: <ul style="list-style-type: none"> ongoing requirements that have been met during the reporting period; and 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’.
Completed	CLD	A requirement with a finite period of application has been satisfactorily completed.	This term may only be used where: <ul style="list-style-type: none"> audit elements have a finite period of application (e.g. construction activities, development of a document); the action has been satisfactorily completed; and the DWER has provided written acceptance of ‘completed’ status for the audit element.
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 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.	<p>The term ‘In Process’ may not be used for any purpose other than that stated in the Definition Column.</p> <p>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).</p>

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 September – December 2019

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 proposal, the proponent shall not exceed the authorised extent of the proposal as defined in Table 2 of Schedule 1, unless amendments to the proposal and the authorised extent of the proposal have been approved under the EP Act.	Survey and mark clearing boundaries.	Boundary GPS track logs or survey data. Aerial imagery. Water licence annual reports. Metering data.	Overall	When implementing the proposal.	PNC <i>(carried over from previous CAR)</i>	No further exceedance of clearing outside of the approved development envelope was evident in the September-December 2019 period. However, this PNC remains outstanding from the previous CAR. Evidence items 2019a.1081.M1.1a 2019a.1081.M1.1b 2019a.1081.M1.1c 2019a.1081.M1.1d 2019a.1081.M1.1e
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.	C	Proponent contact details remain unchanged. <i>No change to this status.</i>

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

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
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. <i>No change to this status.</i>
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 potential non-compliances and corrective actions taken; (5) the table of contents of Compliance Assessment Reports; and (6) public availability of Compliance Assessment Reports.	CAP content inclusions.	Compliance Assessment Plan.	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:M4.3	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	Undertake and submit annual Compliance Assessment and report to the CEO	Notification (from CEO) of approval of Compliance Assessment Plan. Annual CARs.	Overall	After receiving notice in writing from the CEO that the CAP satisfies the	C	The 2018-2019 CAR was submitted to DWER on 10 December 2019. A subsequent notice of non-compliance (in relation to the audit findings)

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

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
		Compliance Assessment Plan required by condition 4-1.	in line with CAP requirements.	Confirmation of dates of submission of annual CARs.		requirements of condition 4-2.		was received from DWER on 10 February 2020. Evidence items 2019a.1081.M4.3a 2019a.1081.M4.3b
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.	C	This document forms the second Statement 1081 Compliance Assessment Report. Evidence items 2019a.1081.M4.4 2019a.1081.M4.3a 2019a.1081.M4.3b
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.	C	No non-compliances identified (further to those currently being rectified following previous CAR submission).
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	Written advice to CEO of EPA Services. Proponent-endorsed compliance statement included in CAR. PNCs and corrective and preventative actions recorded.	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.	C	The first CAR for the period 11 September 2018 to 10 September 2019 was submitted to DWER on 10 December 2019. Evidence items 2019a.1081.M4.3a 2019a.1081.M4.3b

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

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
		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.	Evidence of public availability included. Proposed changes to CAP included.					
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.	PNC <i>(carried over from previous CAR)</i>	KAI advised DWER in its response dated 10 March 2020 that data will be uploaded to its website by 30 April 2020. Evidence item 2019a.1081.M1.1a
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 request the proponent shall provide the CEO with an explanation and reasons why the data should not be made publicly available.	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.
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	Implement Carlton Plain Stage 1 EMP.	Compliance assessment of EMP implementation.	Overall	For the life of the proposal.	C	Site inspection and monitoring reports indicate there is no evidence to suggest -

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

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
		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.						<p>(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.</p> <p>A revised EMP was submitted to DWER with the request for s45C variation in October 2019. Recommendations from the previous CAR will be incorporated when agreed by DWER.</p> <p>Evidence item 2019a.1081.M6.1</p>
1081:M6.2	Operational Environmental Management Plan Implementation	The proponent shall implement the <i>Carlton Plain 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.	C	Refer to Table 2.

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

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
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 Plan meets the environmental outcomes required by condition 6-1.	C	The Proponent has implemented EMP dated August 2018 per Table 2, during the reporting period.
1081:M6.4	Operational Environmental Management Plan Implementation	In the event that monitoring carried out under 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-	Investigate 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.	Reviewed data, timestamped where possible. Evidence of contingency responses implemented. Written notices and report(s) to CEO of EPA.	Overall	Report the non-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.	C	Monitoring data does not indicate that the environmental outcomes set in Condition 6-1 are not being achieved.

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

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
		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 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	Overall	For the life of the proposal.	C	Recommended changes to the EMP are included as an addendum to this table (for brevity and formatting purposes).

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

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
				changes prior to any changes being adopted / implemented.				

Addendum to Attachment 2 Table 1: Recommended changes to the Carlton Plain EMP

1. Replacement of the word ‘transect’ with ‘quadrat’ in CP1.FV.2.1, CP1.FV.2.2, CP1.FV.2.3 and CP1.FV.3.1.
2. Clarification that the 3mgbl trigger and 2mgbl threshold groundwater levels indicated in CP1.HP.10.1 *are applicable to measurements taken from bores located on or immediately adjacent (within 100m) of irrigated areas on Carlton Plain, and not to bores located outside of the irrigated fields within the development area.* This clarification accounts for bores located in or near areas of existing groundwater expression/discharge to the west of House Roof Hill, where groundwater levels are naturally at, near or above ground surface.
3. Updating of bore locations in relevant plans and references contained in the EMP.
4. In relation to Carlton wetland water quality (CP1.IW.13.2), the triggers for total N, total P, EC, pH and TSS be reviewed after three years of testing, following review of pre-irrigation and post-development actual water quality data. Testing in 2019 indicated natural levels higher than the triggers noted in the EMP, which were adopted from the triggers used for Ord Stage 1 in free-flowing freshwater. Carlton wetland is not free flowing, so locally specific triggers should be determined after three years of baseline data collation.
5. The 2019 comparison indicates that in the pre-development, dry season state, following two successive lower-than-average rainfall seasons, that Carlton wetland exceeded initial triggers for Total N, Total P and TSS. There is insufficient data to draw baseline conclusions, however ongoing monitoring will inform the understanding of the natural wetland water quality. It is also noted that the triggers contained in EMP Table E.1 are adopted from Ord Stage 1 flowing water triggers (as opposed to stagnant water per the wetland state). It is expected that a review of the triggers will be required once sufficient baseline data is obtained.

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

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	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-construction	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.	Construction	2019	CLD	Site inspections and satellite imagery previously confirmed the retention of 100m minimum setbacks. <i>No change to this status.</i>
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 commencement.	C	Site inspections and satellite imagery confirm the retention of 100m minimum setbacks. <i>No change to this status.</i>
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-construction	<i>Initial EMP date (2018) unable to be met due to late</i>	CLD	Per the September 2018-September 2019 CAR, the term 'transect' has been interpreted to mean 'quadrat' based on the

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

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	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.		<i>dry season approval of EMP.</i> To be undertaken dry season 2019.		description of 10m x 10m monitoring sites. Ten vegetation monitoring sites were established in vegetation retention areas 2019. Evidence item 2019a.1081.FV.2.1 These sites 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.	Photographic records. Aerial imagery. Field notes.	Overall	By August 31 of each year.	NR	Not required during the September-December 2019 period. The term 'transect' has been interpreted to mean 'quadrat' based on the description of 10m x 10m monitoring sites, per CP1.FV.2.1.
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. Seasonal conditions including rainfall and fire will be taken into	In the event that condition declines in the vegetation retention areas in relation to the 2016 and subsequent transect establishment surveys, the proponent will: 1. 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	Photographic records. Aerial imagery. Field notes. Monitoring records. Correspondence of vegetation condition decline forwarded to EPA	Overall	As required if monitoring indicates 60% of sites in decline.	NR	Not required during the September-December 2019 period.

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

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
		<p>account in condition assessments. The WARMS condition assessment rating method will be adopted.</p> <p>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.</p>	<p>chemical weed control, particularly in the vicinity of the Ord River and the Carlton Plain wetland area.</p> <ol style="list-style-type: none"> 2. Amend the fire regime if fire is considered a factor in vegetation condition decline. 3. Address weed management, per CP1.FV.3. 4. Establish [annual] targets for vegetation condition improvement based on the extent of variation from vegetation condition goal and current climatic seasonal conditions. 	<p>services within 30 days of vegetation condition surveys being undertaken.</p>				
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.	<p>Photographic records. Aerial imagery. Field notes. Monitoring records.</p> <p>Correspondence of vegetation condition decline forwarded to EPA services within 30 days of vegetation condition surveys being undertaken.</p>	Overall	If monitoring indicates all sites in vegetation decline.	NR	Not yet required.
CP1.FV.3.1	No new Weeds of National Significance, Declared Pest weed species or	Establish transects (per CP1.FV.2.1).	Establish a minimum of five (5) 10m x 10m monitoring sites per EMP Appendix B specifications.	<p>Photographic records. GPS coordinates. Field notes. Aerial imagery.</p>	Pre-construction	To be undertaken dry season 2019.	CLD	<p>Transects established.</p> <p>Evidence item 2019a.1081.FV.2.1</p>

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
	introduced crop species in vegetation retention areas compared to 2016 dry season baseline surveys and transect establishment surveys.		Select sites based on representative soil and vegetation types, practical accessibility, proximity to Ord River, wetland area and House Roof hill.					The term 'transect' has been interpreted to mean '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.	NR	Not required during the September-December 2019 period.
CP1.FV.3.3	Triennial weed mapping.	Triennial weed assessments in vegetation retention areas.	Weed inspections across vegetation retention areas.	Photographic records. GPS coordinates. Field notes. Aerial imagery. Triennial weed survey report.	Overall	Commencing 3 years after construction begins.	NR	Not yet required.
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	New Weeds of National Significance or Declared Pest and Weed species were not observed during the compliance period.

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
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 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	<ol style="list-style-type: none"> 1. Physical (including grazing if deemed appropriate) or chemical treatment of declared weeds or Weeds of National Significance if found in Carlton Plain Stage 1 area during annual CP1.FV.2 condition monitoring. 2. Weed control/removal and/or rehabilitation of weed infested areas if weed coverage in vegetation retention areas is shown to increase. 3. 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). 4. In the case where introduced crop species are detected in the vegetation retention area: 	Site inspection records. Field notes. Photographic 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.	Overall	From commencement	C	<p>Previous finding is retained: Rubber bush (<i>Calotropis procera</i>), a Declared Weed in Western Australia, was widely present on Carlton Plain and across the East Kimberley prior to the commencement of development. There is no evidence that the commencement of clearing on Carlton Plain has increased this spread within the vegetation retention areas.</p> <p>Clearing has removed large quantities of <i>Calotropis procera</i>, restricting the available local seed source which could further infest vegetation retention areas.</p>

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

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
		remove introduced crop species plants.	<ul style="list-style-type: none"> a) Remove the introduced crop species from the vegetation retention area; b) Investigate whether the species have spread to adjacent environmentally 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 investigations 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.	Decommissioning	Within 5 years of cessation of irrigation.	NR	Not yet required.

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

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
CP1.FV.4.2	Decommissioning and rehabilitation management.	Decommissioning and rehabilitation plan implemented.	<ol style="list-style-type: none"> 1. Remove and appropriately recycle or dispose of all infrastructure include pipes, culverts and other farm equipment. 2. 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. 3. Post-irrigation land use to be congruent with surrounding land use. 4. Monitor for natural revegetation / re-growth and erosion, per methodology contained in EMP Appendix B. 	Decommissioning plan. Rehabilitation work records. Photographs and aerial imagery. Field / site inspection and monitoring reports.	Decommissioning	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 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	<ol style="list-style-type: none"> 1. Six-monthly rehabilitation inspections for species type, density, weed coverage, post-decommissioning. 2. Inspections to occur each dry season for five years following decommissioning, reducing to biennially (unless threshold indicator management responses are required), such that ten years' post-decommissioning rehabilitation assessment can occur. 3. Monitoring to include comparison with adjacent 	Field / site inspection and monitoring reports. Photographs and aerial imagery.	Decommissioning	Inspect six-monthly for five years after rehabilitation. Every two years after the first five years, up to 10 years monitoring in total.	NR	Not yet required.

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
		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.	landscape through use of WARMS data from nearby sites.					
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 five years, implement responses listed under 'How'.	<ol style="list-style-type: none"> 1. Undertake weed management to mitigate rehabilitation and revegetation efforts. 2. Reform land through mechanical means to reduce erosion/scouring if present. 3. Reduce or prevent grazing pressures through feral or domestic animals (cattle). 4. Amend fire regimes to reduce impact on natural regeneration. 5. Consider revegetation, topsoil re-spread (if available) or seeding if considered practicable. 6. 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. 	<p>Field / site inspection and monitoring reports. Photographs and aerial imagery. Monitoring reports.</p> <p>Correspondence to DWER within 30 days of surveys indicating inability to achieve a fair rating in 40% of sites post-rehabilitation.</p>	Decommissioning	From Year 5 after decommissioning and continuing until performance indicators have been met, or Year 10, whichever is later.	NR	Not yet required.

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
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. <i>Crop yield decline may be utilised as indicator. Soil testing to be undertaken in the event of crop yield decline.</i>	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 initial risk and procedural information, to be refined following baseline soil testing and establishment of soil test locations on farm and in vegetation zones in the 2019 dry season.</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-construction and Operation.	Annually at end of each dry season. <i>Initial EMP date of 2018 unable to be met due to late season receipt of Statement 1081. Baseline sampling to be undertaken in 2019.</i>	NR	Carlton Plain Stage 1 EMP Appendix C states that monitoring of both soil and subsoil salinity and sodicity will commence 12 months prior to operation of irrigation infrastructure. As such, this activity is not yet required.
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 style="list-style-type: none"> 1. Identify the distribution of soil with salinity exceeding trigger levels and increase the sampling density to define the areas above the trigger. 2. 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). 3. Verify the adequacy of the estimated leaching rate (approximately 100 mm/a) in controlling salinity. 4. Identify whether remedial action is required, such as installation of drainage or 	Soil sample analysis reports. Revised soil mapping indicating distribution of salinity. Reports or other data confirming remedial activities.	Operation	As required.	NR	Not yet required.

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

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
			<p>pumping systems or higher water use agriculture.</p> <p>5. Implement remedial actions on a trial basis in areas identified from distribution mapping.</p>					
CP1.TE.6.1	<p>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).</p> <p>Trigger indicators ESP 6 in surface/top soils (<100mm) and ESP 10 in subsoils (<600mm).</p>	<p>Monitor soil condition for evidence of soil sodicity.</p> <p><i>Crop yield decline may be utilised as indicator. Soil testing to be undertaken in the event of crop yield decline.</i></p>	<p>Soil samples to be taken at 100mm (topsoil / surface soil) and 600mm (subsurface soil).</p> <p><i>Per EMP Provision CP1.TE.6, revision of thresholds may occur following review of baseline data.</i></p>	<p>Soil sample analysis reports.</p> <p>In the event that trigger levels are observed, the Commissioner for Soil and Land Conservation will be informed within 60 days.</p>	Pre-construction and Operation	<p>Baseline samples 2019.</p> <p>Annual sampling on each farm lot following commencement of irrigation.</p>	NR	Carlton Plain Stage 1 EMP Appendix C states that monitoring of both soil and subsoil salinity and sodicity will commence 12 months prior to operation of irrigation infrastructure. As such, this activity is not yet required.
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 style="list-style-type: none"> 1. Visually identify and/or map the distribution of soil with sodicity exceeding trigger levels. This may include initial identification through crop productivity decline. 2. Investigate cause(s) (which may include determining if changes are consistent with anticipated initial response to land use 	<p>Soil sample analysis reports.</p> <p>Revised soil mapping indicating distribution of sodicity.</p> <p>Reports or other data confirming remedial activities.</p>	Operation	As required.	NR	Not yet required.

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
			<p>change, or whether soil chemical status is deteriorating as a result of insufficient irrigation).</p> <p>3. Verify the adequacy of the estimated leaching rate (approximately 100 mm/a) in controlling sodicity.</p> <p>4. Identify whether remedial action is required, such as application of recommended soil ameliorants.</p> <p>5. Implement remedial action (such as the application of lime or gypsum) on a trial basis in areas identified by distribution mapping.</p>					
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 style="list-style-type: none"> 1. Assess erosion damage at end of each wet season. 2. Repair any damage to infrastructure and fields. 3. Review and if necessary modify design implications to ensure future wet seasons do not result in same environmental or infrastructure outcomes. 4. Record actions undertaken to repair erosion and prevent future damage. 	Inspection reports. Photographic evidence of damage and repairs.	Overall	At beginning of each dry season.	C	<p>No significant scours identified during the September-December 2019 early wet season period.</p> <p>Soil erosion was not evident in site inspection (October 2019) or reported by KAI.</p>
CP1.TE.7.2	Soil erosion target: No scours or severe erosion caused by design	All wet season erosion is repaired prior to commencement of irrigation season in	Repair scours (e.g. on drains) to functional condition.	Inspection reports. Photographic evidence of	Overall	Nominal target completion dates May/June each year, subject to	NR	Irrigation infrastructure was not established during the reporting period.

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
	of irrigation infrastructure.	the local area in the dry season immediately following.		damage and repairs.		seasonal conditions.		
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-construction Construction	Prior to commencement of irrigation.	NR	Carlton Plain Stage 1 EMP Appendix C states that monitoring of both soil and subsoil salinity and sodicity will commence 12 months prior to operation of irrigation infrastructure. As such, this activity is not yet 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 necessary (with appropriate licences if required).	Monitoring / inspection and mitigation (outcome) reports. Photographic evidence. Licences if culling has occurred. Correspondence to DBCA reporting fauna pest management activities.	Overall.	As required.	C	Initial vegetation monitoring undertaken in previous reporting period. Pest fauna not evident in site inspection (October 2019) or reported by KAI.
CP1.HP.10.1	Undertake a groundwater monitoring program to observe changes in depth, and to better understand the water balance and connection	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.	Bore monitoring data. Bore locations plan. Site inspections. Drilling contractor receipts / proof of bores (re-)drilled.	Overall.	<i>Initial EMP date of 2018 unable to be met due to late season receipt of Statement 1081.</i> Bore drilling and initial sampling to	C	Additional bores established in December 2019, per The installation of bores has been amended to accommodate farm design. Refer to evidence item 2019.CP1.HP.10.1a for bore locations. Refer to

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

EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
	between Carlton Plain Stage 1 groundwater and the Ord River.		Management action review: Triennially.	Triennial groundwater monitoring review.		be undertaken in 2019.		2019.CP1.HP.10.1b and 2019.CP1.HP.10.1c for records from Carlton Plain bore monitoring.
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	Initial bore monitoring records contained in 2019a.CP1.HP.10.1b indicate 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. This action is interpreted as referring to the groundwater level directly below the irrigation area that forms Carlton Plain Stage 1.
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).	Operation	As required.	NR	Not yet required.

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
CP.HP.10.4	Groundwater management review.	Triennial review of groundwater monitoring and management regime.	Review data. Review monitoring regime. Initiate management and mitigation responses per CP1.HP.10.3 if required.	Data logs. Monitoring records. Correspondence to DWER.	Operation	Triennial	NR	Not yet required.
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.	Construction Operation	As required at the beginning of each dry season.	C	No change since previous reporting period.
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.	Operation	As required at the beginning of each dry season.	NR	Not required during the September-December 2019 reporting period.
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).	Operation	As required.	NR	Not yet required.

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
CP1.IW.12.1	No tailwater discharge to Reedy Creek or Ord River during the dry season.	Prevent flow of farm tailwater to Reedy Creek or the Ord 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).	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 to Reedy (Collins) Creek system.	Operation	Ongoing observation of functionality, and maintenance.	NR	Not yet required.
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	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).	Operation	If required	NR	Not yet required.

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
		incident reporting (Appendix E of EMP). 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.	Operation	If required.	NR	Not yet required.
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	Regular Bi-monthly monitoring of water quality in the Carlton Wetland will commence in 2020. Farm chemicals are not yet in use on Carlton Plain.
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 inflow to dilute remaining chemical residue.	Monitoring records. Evidence to show mitigating actions – e.g. freshwater inflow.	Operation	If required.	C	No change from the previous finding. Baseline water quality assessments are continuing.

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EMP AUDIT CODE	SUBJECT / KEY PROVISION	REQUIREMENT	HOW	EVIDENCE	PHASE	TIMEFRAME	STATUS	FURTHER INFORMATION
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.	<p>Weed control by cattle, with:</p> <ul style="list-style-type: none"> reduced stock numbers (compared to historical grazing); and period of access limited in order to avoid excessive habitat damage. <p>Cattle to not be present in the wetland on a full time grazing basis. Monitor vegetation condition during cattle presence to minimise physical damage.</p>	<p>Annual wetland condition photographs.</p> <p>Pre- and post-cattle access weed and native vegetation wetland condition inspection reports.</p>	Operation	As required.	NR	<p>No change from previous CAR.</p> <p>It is noted that cattle numbers have been visibly reduced on parts of Carlton Plain, including within the wetland area.</p>
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.	<p>Determine indicators following baseline sampling. EC, pH to be tested in situ at beginning and end of each dry season.</p> <p>Farm chemical testing regime to be determined upon commencement of irrigation.</p> <p>Bore monitoring regime to be reviewed triennially.</p>	<p>Bore monitoring data.</p> <p>Triennial groundwater quality and bore monitoring regime review.</p>	Overall	<p><i>Initial EMP date of 2018 unable to be met due to late season receipt of Statement 1081. Carlton Plain bores to be installed 2019. Twice-yearly bore monitoring.</i></p>	C	<p>Additional bores were established and sampled in December 2019. The installation of bores has been amended to accommodate farm design. Refer to evidence item 2019.CP1.HP.10.1a for bore locations. Evidence items 2019.CP1.HP.10.1b and 2019.CP1.HP.10.1c provide in-field and chemistry analysis records from Carlton Plain bores.</p>

Attachment 3 - Appendices

Attachment 3 Table 1 – Evidence registry

Evidence item	Title	Date	Associated conditions and actions
2019a.1081.M6.1	Carlton Plain Stage 1 EMP September 2019 as submitted with s45C variation	Sep-19	1081:M6.1
2019a.1081.M4.4	Statement 1081 Carlton Plain Stage 1 Compliance Assessment Report 2018-2019 - Signed	Dec-19	
2019a.1081.M4.3b	Statement 1081 Condition 1-1 and 5-1 Notice of Non-Compliance letter	Feb-20	1081:M4.3 1081:M4.4
2019a.1081.M4.3a	Statement 1081 CAR 2018-2019 Submission email	Dec-19	1081:M4.3 1081:M4.4
2019a.1081.M1.1a	Carlton Plain Compliance Response - KAI	Mar-20	1081:M1.1 1081:M4.5 1081:M5.1
2019a.1081.M1.1b	Carlton Plain clearing at 31 Dec 2019 - approved envelope	Dec-20	1081:M1.1
2019a.1081.M1.1c	Carlton Plain clearing at 31 Dec 2019 - proposed envelope	Dec-20	1081:M1.1
2019a.1081.M1.1d	Carlton Plain cleared area at 31 Dec 2019	Dec-20	1081:M1.1
2019a.1081.M1.1e	Carlton Plain wetland - clearing exclusions at 31 Dec 2019	Dec-20	1081:M1.1
2019a.1081.HP.10.1a	Carlton Plain bore coordinates and Dec 2019 results	Mar-20	1081:HP.10.1 1081:IW.15.1
2019a.1081.HP.10.1b	Carlton Plain bores field data 2017-2019	Mar-20	1081:HP.10.1 1081:HP.10.2 1081:IW.15.1
2019a.1081.HP.10.1c	Carlton Plain bores Chem Centre Analysis Database	Mar-20	1081:HP.10.1 1081:IW.15.1
2019a.1081.FV.2.1	Carlton Plain Vegetation Condition Monitoring Sites	Sep-19	1081.FV.2.1 1081.FV.3.1