

Knox Creek Plain EPBC Approval 2014/7143

Annual Report 2022

Prepared for submission to the Department of Climate Change, Environment, Energy and Water epbcmonitoring@environment.gov.au

Prepared for and on behalf of

Kimberley Agricultural Investment Pty Ltd

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by

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Document Control

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PROPONENT DETAILS

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Acronyms and Abbreviations Used

CAR Compliance Assessment Plan

DCCEEW Department of Climate Change, Environment, Energy and Water
DPIRD Department of Primary Industries and Regional Development
DSD (Former) Department of State Development, now JTSI
DWER Department of Water and Environmental Regulation

EMP Environmental Management Program
EPA Environmental Protection Authority

EPBC Environment Protection and Biodiversity Conservation (Act 1999)

FPDP Final Project Design Plan IRG Independent Review Group

JTSI Department of Jobs, Technology, Science and Innovation

KAI Kimberley Agricultural Investment Pty Ltd

WA Western Australia

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1.0 Overview

On June 16, 2015, the Australian Government Department of the Environment, under delegation of the Minister for the Environment, issued Kimberley Agricultural Investment Pty Ltd (KAI) conditional approval to develop the Knox Creek Plain for irrigated agriculture. Approval 2014/7143 contains fifteen conditions targeted at ensuring the protection of Matters of National Environmental Significance, listed under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999.*

This document reports on progress against implementation of the conditions of approval, for the period ending 31 December 2022, and has been prepared under the annual report requirement contained in Condition 3 of EPBC 2014/7143.

It is supplemented by the 2022 Annual Environmental Management Program (EMP) audit of compliance with the requirements of Statement 938. Statement 938 was issued under the WA Environmental Protection Act 1986 by the Western Australian Minister for the Environment, in relation to the development of the M2 agricultural area in the north-east Kimberley. The approval area includes the Knox Creek Plain. The 2022 EMP annual Compliance Assessment Report (CAR) prepared by the Western Australian Department of Primary Industries and Regional Development (DPIRD) is appended to this document as Attachment A.

A Final Project Design Plan (FPDP) for the Knox Plain, as required under Statement 938, was approved by the WA Department of Water and Environmental Regulation on 4 May 2020. KAI notified the (former) Department of Agriculture, Water and the Environment (DAWE) of the commencement of the development of the Knox Plain in May 2020. Approximately 410 hectares was cleared on the eastern boundary of the Knox development, in 2020.

Following a hiatus while the WA Government resolved issues surrounding the identification of *Typhonium sp. kununurra* on the Knox Plain, clearing and development re-commenced in 2022. A total of 3,098ha on the Knox Plain had been cleared for development by 31 December 2022, including the initial 410ha reported in the 2020 Annual Environment Report.

Figure 1 provides the approved Knox Plain layout.

Figure 2 indicates the extent of clearing to December 31, 2022, as determined by the WA Department of Primary Industries and Regional Development (DPIRD) in its 2022 Annual Compliance Assessment Report for Ministerial Statement 938, relating to the Goomig (Weaber) and Knox Plains.

Figure 3 supports the 'extent of clearing' mapping provided in Figure 2, indicating the difference in vegetation reflectance as determined by www.satamap.com.au. The 'SVI Low' interpretation represented in Figure 3 gives bias to low biomass crops. Its use in this reporting enables remote confirmation of the mapping extent.

Figure 4 illustrates the cadastral boundaries for the Knox and adjacent Weaber (Goomig) area, with clearing extent visible.

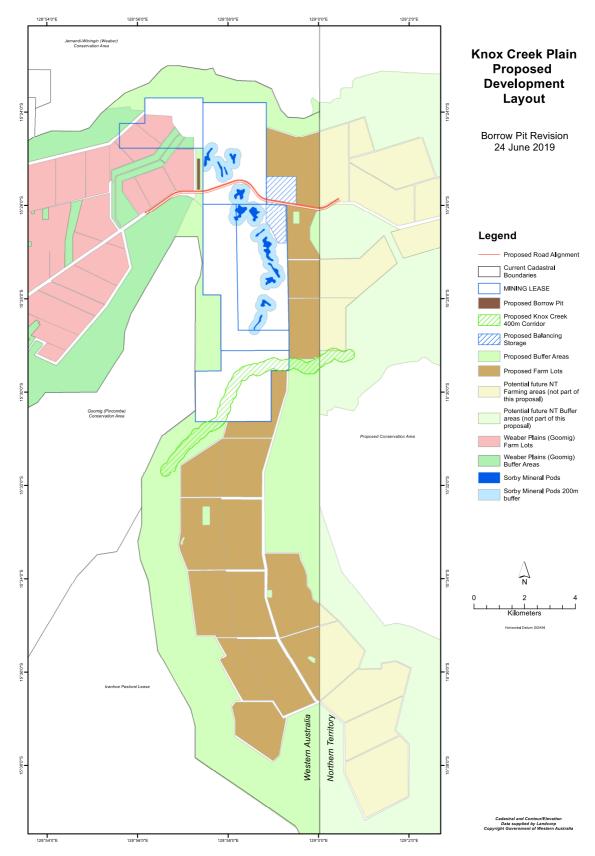


Figure 1. Knox Plain Layout (2019 Revision)



Figure 2. Knox Plain Clearing to 31 December 2022

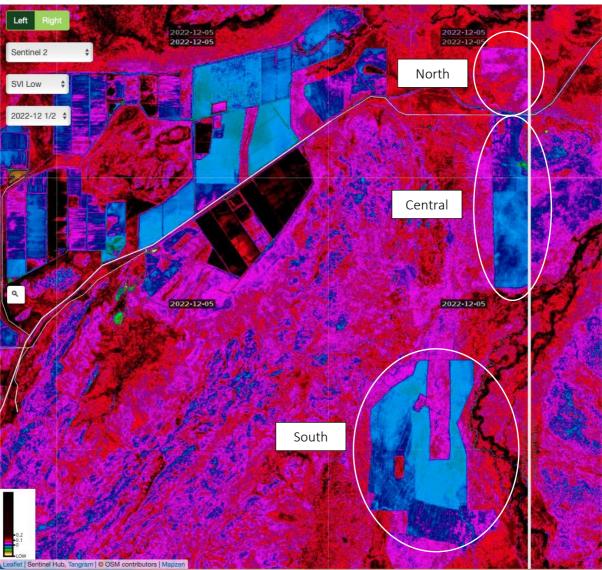


Figure 3. Knox Plain Satamap Low Biomass Vegetation Index: 5 December 2022

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

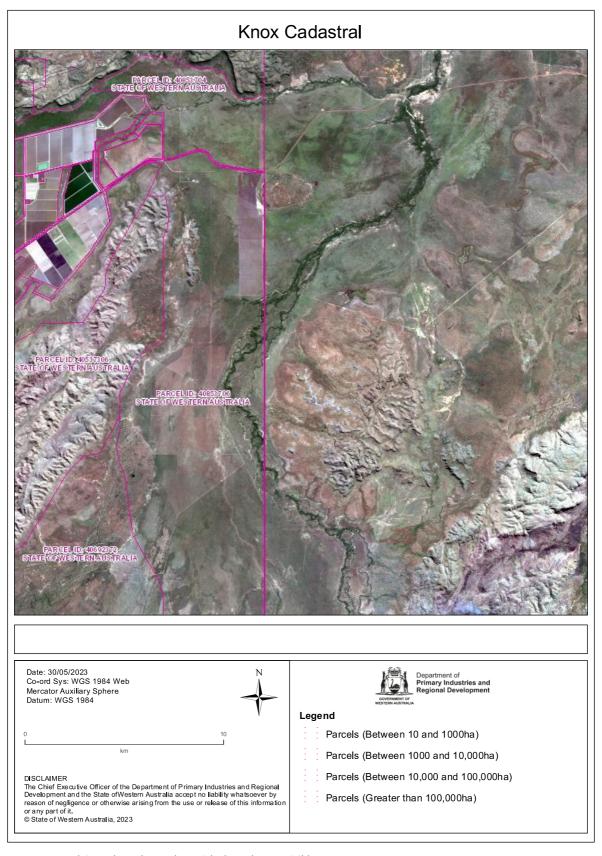


Figure 4. Knox Plain Cadastral Boundary with cleared areas visible

2.0 Key approval changes in 2022

Variation to conditions

No condition variations were issued in 2022.

Statement 938 changes and review of Environmental Management Plan

Ministerial Statement 938 covers both the Weaber Plain (Goomig) and Knox Creek Plain developments. On 12 December 2017, the proponency transferred from the WA Department of State Development (DSD) to DPIRD. The Department of Water and Environmental Regulation (DWER) requested, in mid-2017, that the proponent for Statement 938 conduct a full review of the EMP, in line with new DWER guidelines issued in March 2017. The revised EMP will amalgamate the existing Weaber and Knox EMPs, which have both been approved under Statement 938.

The revised EMP for the Weaber and Knox areas had not been finalised by DPIRD for approval by DWER, at the end of this reporting period. It will be submitted to the DCCEEW as required under the (revised) condition 5 of the Knox Creek Plain EPBC approval when the WA government and DWER complete the revision process.

3.0 Statement of progress against EPBC 2014/7143 conditions

Table 1 provides a summary of progress during the period 1 January 2022 to 31 December 2022. This report is supplemented by the Statement 938 Annual Compliance Assessment Report (CAR) prepared by the Department of Primary Industries and Regional Development (DPIRD), appended as Attachment A.

Table 1 - EPBC 2014/7143 Progress Statement 2022

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
1	Within 30 days after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.	The action commenced on 26 May 2020. KAI provided written advice to DAWE on 12 June 2020 confirming the commencement of the action. DAWE acknowledged receipt of the letter and the commencement of the action in correspondence 15/016402 dated 17 June 2020. This condition is therefore considered to have been met.	Completed
2	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	KAI is maintaining records of environmental investigations and compliance with the requirements of EPBC 2014/7143.	KAI is maintaining records of environmental investigations and compliance with the requirements of EPBC 2014/7143.
3	By 31 March of each year after commencement of the action, the person taking the action must publish a report on their website addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any management plans as specified in the conditions. Non-compliance with any of the conditions of this approval must be reported to the Department within two days of the person taking the action becoming aware of the non-compliance and at the same time as the compliance report is published. The person taking the action must continue to publish	The 2021 report was provided to update the Minister for the Environment on progress against compliance with EPBC 2014/7143. The report was emailed to the Department on 3 May 2022.	This report presents the statement of progress on the development of the Knox Plain during the period 1 January 2022 to 31 December 2022.

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
	the report until such time as agreed in writing by the Minister or the approval has expired.		
4	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and submitted to the Minister. The person taking the action must not commence the audit until the independent auditor and audit criteria have been approved by the Minister. The audit report must address the criteria to the satisfaction of the Minister.	No audit requests received to date.	No audit requests received to date.
5	The person taking the action may choose to revise the Knox Creek Plain Environmental Management Program, August 2015; Bare-rumped Sheathtail Bat Management Plan; and Aquatic Fauna Management Plan, approved by the Minister without submitting it for approval (including under section 14A of the EPBC Act), if the taking of the action in accordance with the revised plan would not be likely to have a new or increased impact. If the person taking the action makes this choice they must:	No change to status. DPIRD is continuing with the EMP review, in conjunction with amendments to management plans under the associated Weaber Plain (Goomig) EPBC Approval 2010/5491.	No change to status.
	a) Notify the Department in writing that the approved plan has been revised and provide the Department, at least four weeks before implementing the revised plan, with:		
	i. An electronic copy of the revised plan; ii. An explanation of the differences between the revised plan and the approved plan; and iii. The reasons the person taking the action considers that the taking of the action in accordance with the		
	revised plan would not be likely to have a new or increased impact.		
5A	The person taking the action may revoke its choice under condition 5 at any time by giving written notice to the Department. If the person taking the action revokes its choice to implement the revised plan, without approval under Section 143A of the EPBC Act, the plan approved by the Minister must be implemented.	N/A	N/A
5B	If the Minister gives a notice to the person taking the action that the Minister is satisfied that the taking of the	N/A	N/A

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
	action in accordance with the revised plan would be likely to have a new or increased impact, then: i. Condition 5 does not apply, or ceases to apply, in relation to the revised plan; and ii. The person taking the action must implement the plan approved by the Minister. To avoid any doubt, this condition does not affect any operations of conditions 5 or 5A in the period before the day the notice is given. At the time of giving the notice, the Minister may also notify that for a specified period of time condition 5 does not apply to the plan required under the approval. Conditions 5, 5A and 5B are not intended to limit the operation of section 143A of the EPBC Act which allows the person taking the action to submit a revised plan to		
6	the Minister for approval. If the Minister believes that it is necessary or convenient for the better protection of the listed threatened or migratory species to do so, the Minister may request that the person taking the action make specified revisions to the management plans specified in the conditions and submit the revised management plan for the Minister's written approval. The person taking the action must comply with any such request. The revised approved management plan must be implemented. Unless the Minister has approved the revised management plan, then the person taking the action must continue to implement the management plan originally approved, as specified in the conditions.	No change.	No change.
7	If, at any time after five years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister.	410 hectares were cleared in May, June 2020. No further development occurred during 2021.	A total of 3,098 hectares were cleared to 31 December 2022, including the 410 cleared in 2020. Figures 2, 3 and 4 illustrate the extent of clearing.
8	Unless otherwise agreed in writing by the Minister, the person taking the action must publish all management plans referred to in these conditions of approval and any baseline information and monitoring results required by	The analysis of bore monitoring data for the period 2014 to 2018, including a comparison to baseline data and original groundwater	2022 monitoring reports were not yet uploaded to KAI's website at the time of preparation of this report. This will be rectified by 31 July 2023.

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
	these plans on their website. Each management plan must be published on the website within one month of being approved and all baseline information and monitoring results must be published on the website annually, beginning twelve months after the commencement of the action. The person taking the action must continue to publish the approved management plans and baseline information until such	modelling, was completed by DPIRD in July 2019. This review was considered by the Independent Review Group established for the Weaber Plain (Goomig) project at its February 2020 meeting.	Revision of the aquatic management plans through the IRG process continues. At its 14 September 2022 meeting, the Weaber-Knox IRG requested an interim management approach be developed for Goomig stormwater, informed by monitoring completed to date. This will have implications for the management of Knox. The interim management approach to Stormwater Discharge Monitoring and Management was subsequently prepared and presented to the IRG at its 28 March 2023 meeting (outside of this reporting period).
	time as agreed in writing by the Minister or the approval has expired.	Arising from this and an associated review of stormwater management arrangements, it is expected that the Stormwater and Groundwater Discharge Management Plan, Groundwater Management Plan and Aquatic Fauna Management Plan approved under the Weaber Plain conditions will be amended in coming months. This will have implications for the associated Knox management plans, and will be addressed as and when required.	The interim management approach noted above will inform the completion of the management plans under the Weaber Plain EPBC approval, which will relate directly to the management of the Knox Plain.
9	Any amendments to Sections of the <i>Knox Creek Plain Environmental Management Program May 2015</i> referred to in the conditions below must be submitted to the Department and approved by the Minister prior to any amendments being implemented.	Condition revoked.	N/A
10	To avoid and/or minimise impacts on listed threatened and migratory species from impacts resulting from the action, the person taking the action must not clear more than 6,280ha of vegetation, as specified by 'Proposed Development Area" in Annexure 1.	No further clearing was undertaken during 2021.	A total of 3,098 hectares were cleared to 31 December 2022, including the 410 cleared in 2020. Figures 2, 3 and 4 illustrate the extent of clearing.
11	To protect the critically endangered Bare-rumped Sheathtail Bat (Saccolaimus saccolaimus nudicluniatus) from impacts resulting from the action, the person taking the action must:		Dr Kyle Armstrong from Specialised Zoological provided advice to KAI in 2022 on risk associated with the BRSB. Dr Armstrong's report assessed the likelihood of roost habitat of the BRSB occurring within the Knox Creek Plain development area. The assessment required a field survey of 26 trees that
11A	Ensure the clearance of the Development Area does not result in the death of any Bare-rumped Sheathtail Bats		contained hollows considered large enough in a previous survey by biological consultants for potential use by the BRSB. Consideration was given mainly to

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
11B	Conduct Bare-rumped Sheathtail Bat roosting tree surveys of potential Bare-rumped Sheathtail Bat habitat areas in accordance with the advice of a Bare-rumped Sheathtail Bat expert. Bare-rumped Sheathtail Bat roosting tree surveys must identify, tag and map all potential or confirmed Bare-rumped Sheathtail Bat roost trees in the potential Bare-rumped Sheathtail Bat habitat areas and be completed within six months prior to clearance of potential Bare-rumped Sheathtail Bat habitat areas; and	Secondary checks to be completed in early 2022.	whether a tree hollow could support a colony of individuals for a relatively long period of time, rather than one or two individuals over a few nights. Specialised Zoological provided advice on appropriate survey design, provided the equipment to implement that design, and reviewed the data collected to make a determination of whether any of the hollows were likely to be used by the BRSB. Based on all the observations and data provided, Specialised Zoological found there was no evidence of the use of the hollows by the BRSB. The report
11C	If the Bare-rumped Sheathtail Bat roosting tree surveys identify potential or confirmed Bare-rumped Sheathtail Bat roost trees in the potential Bare-rumped Sheathtail Bat habitat areas, then submit to the Department a Bare-rumped Sheathtail Bat Management Plan (BRSBMP). The BRSBMP must detail how all potential and confirmed Bare rumped Sheathtail Bat roost trees in the potential Bare-rumped Sheathtail Bat habitat areas will be avoided, mitigated or offset. The BRSBMP must be submitted for approval by the Minister. The person taking the action must not commence clearance of potential Bare-rumped Sheathtail Bat habitat areas until the BRSBMP is approved by the Minister. The BRSBMP must be approved by the Minister prior to implementation	No change.	provided notes that "given the size of both the trees and hollows and the height of the hollows from the ground, it is unlikely that any of the structures would be used by a colony of the BRSB". Refer to Attachment B for the report provided by Specialised Zoological.
	The approved BRSBMP must be implemented and include commitments to:		
11C(i)	Consider the implementation of more focused survey methods, such as mist netting, to obtain more refined results. This may be particularly beneficial in the event that the number of potential or confirmed Bare-rumped Sheathtail Bat roost trees identified during Bare-rumped Sheathtail Bat roosting tree surveys is high:	No change.	Methods adopted in the BRSB surveys noted above included acoustic detection using Anabat Swift bat detectors, infra-red video recording, day-time video recording of hollows, and the use of clean sheeting for scat collection, noting that no scats were detected.
11C(ii)	Conduct all clearance of potential Bare-rumped Sheathtail Bat habitat areas outside of the Bare-rumped Sheathtail Bat breeding season	No change.	Surveys were completed in May 2022.

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
11C(iii)	Conduct a pre-clearance disturbance regime in accordance with the advice of a Bare-rumped Sheathtail Bat expert	No change.	Completed. Specialised Zoological provided advice on an appropriate set of survey methods for BRSB in the project area. Refer to notes above and Attachment B. The surveys were undertaken by staff from DPIRD using the advice and equipment provided by Specialised Zoological. The survey report concluded: 1. No direct evidence of the BRSB was observed in any of the data collected and submitted for analysis. 2. There were no observations that suggested a high likelihood of the BRSB using any of the tree hollows documented, and certainly not a large colony of this species. 3. Some determinations were limited by the lack of available data or observations.
11C(iv)	Fell any potential or confirmed Bare-rumped Sheathtail Bat roost trees that cannot be avoided, with care, in the presence of a Bare-rumped Sheathtail Bat expert, and in accordance with the advice of a Bare-rumped Sheathtail Bat expert, so as to avoid mortality of Bare-rumped Sheathtail Bat individuals	No change.	No BRSB habitat trees were identified in the surveys conducted.
11C(v)	Translocate, with the service of a Bare-rumped Sheathtail Bat expert, any Bare rumped Sheathtail Bat that is captured following the felling of a potential or confirmed Bare-rumped Sheathtail Bat roost tree	No change.	Not required. Refer to survey report findings.
11C(vi)	Report site locations (both original location site and, if a Bare-rumped Sheathtail Bat is captured, the translocated site) to the Department if any confirmed Bare rumped Sheathtail Bat roost trees are found	No change.	Not required. Refer to survey report findings.
11C(vii)	Provide offsets of no less than \$100,000 to a trust fund for Bare-rumped Sheathtail Bat research for each confirmed Bare-rumped Sheathtail Bat roost tree cleared for the proposal, to a maximum contribution of \$500,000. The offset trust fund and research activities must be approved by the Minister prior to implementation; or	No change.	Not required. Refer to survey report findings.
11C(viii)	Not clear selected potential or confirmed Bare-rumped Sheathtail Bat roost trees or any vegetation within a 30m zone around these trees	No change.	Not required. Refer to survey report findings.

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
12	Buffer Management		
12A	The person taking the action must establish a buffer area of at least 6,415ha, as specified by "Proposed Buffer Areas" in Annexure 1.	No change.	No change to the buffer status.
12B	The person taking the action must implement the action in accordance with Sections 10 and 11 of the Knox Creek Plain Environmental Management Program, August 2015.	An audit of the Knox Creek Plain Environmental Management Program has been undertaken as part of the 2021 Statement 938 compliance assessment required by the WA EPA. The associated compliance assessment report will be forwarded when received from the DPIRD.	Section 10 of the Knox Creek Plain EMP is the Biodiversity and Habitat Management Sub-plan. Section 11 is the Buffer Management Sub-plan. The 2022 annual Statement 938 Compliance Assessment Report prepared by DPIRD for the Weaber (Goomig) and Knox Plains, appended as Attachment A, did not identify potential non-compliance with actions related to these sub-plans on the Knox Plain.
12C	The person taking the action must ensure that none of the following habitat trees or any vegetation within a 30m zone around these trees are cleared within the Buffer Area:	No change.	KAI is not clearing within the buffer area.
12C(i)	Confirmed or potential Bare-rumped Sheathtail Bat (Saccolaimus Saccolaimus nudicluniatus) roosting trees;	No change.	KAI is not clearing within the buffer area.
12C(ii)	Gouldian Finch (Erythrura gouldiae) breeding trees;	No change.	KAI is not clearing within the buffer area.
12C(iii)	Red Goshawk (<i>Erythrotiorchis radiatus</i>) nesting trees; and	No change.	KAI is not clearing within the buffer area.
12C(iv)	Masked Owl (Northern) (<i>Tyto novaehollandiae kimberli</i>) nesting trees.	No change.	KAI is not clearing within the buffer area.
12C(v)	The location and date of any incidental sightings of the species listed in Condition 12.C above must be reported to the Department within 30 days of occurrence.	No change.	No incidental sightings of the species listed above have been made by employees or contractors of KAI in the Knox project area.
13 13A	Weed and Pest Animal Management	An audit of the <i>Knox Creek Plain</i>	The 2022 annual Statement 029 Compliance Assessment Depart program by
ISA	The person taking the action must implement the action in accordance with Section 6 of the Knox Creek Plain Environmental Management Program August 2015.	Environmental Management Program has been undertaken as part of the 2021 Statement 938 compliance assessment required by the WA EPA. The associated compliance assessment report will be forwarded when received from the DPIRD.	The 2022 annual Statement 938 Compliance Assessment Report prepared by DPIRD for the Weaber (Goomig) and Knox Plains is appended as Attachment A. The report notes (EMP53) that the Knox Creek Plain weed transects established by Ord Land and Water in 2015) will be revisited and reestablished in parallel with the establishment of the Knox Creek Plain buffer area (destocking and fencing), farm and infrastructure development. This will occur at an appropriate time in the development of the Knox area, prior to farming commencing.

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
14	Independent Review Group		
14A	The person taking the action must appoint an Independent Review Group (IRG) to review the impacts of the action on aquatic listed threatened and migratory species. The IRG must be established prior to the submission of the Aquatic Fauna Management Plan to the Minister for approval. If a condition of another approval held by the proponent requires an IRG identical in nature, the proponent may meet the relevant requirements of both conditions by appointing a single IRG. The IRG must be established by the person taking the action in accordance with the following requirements:	The Weaber Plain (Goomig) IRG met in March 2020. Membership is now merged with the Knox IRG. Although two different proponents (DPIRD and KAI) are responsible for the Weaber and Knox approvals respectively, the single IRG membership, reviews, monitoring and management recommendations relate to both approval areas.	The IRG met on 14 September 2022. The combined IRG advises on appropriate management and monitoring for both the Weaber (Goomig) and Knox areas as they are congruent and both fall within the Keep River catchment, the location of the MNES of interest to the IRG through EPBC 2014-7143 and EPBC 2010-5491.
14A(i)	The IRG must be funded, resourced and managed by the person taking the action.	As above.	Resourcing and executive support to the IRG is provided by DPIRD.
14A(ii)	The IRG must consist of independent scientific and technical experts, of whom at least one must be a <i>Glyphis</i> and <i>Pristis</i> expert and two must be technical experts with at least five years experience in northern Australian surface water and groundwater hydrology, approved by the Minister.	The Weaber Plain (Goomig) IRG membership consists of David Menzel (Chair) – also approved Knox IRG Chair. Dr Ray Evans – also approved Knox IRG member. Dr Mark Silburn (Queensland Government) Dr David Morgan (Murdoch University).	No changes to membership.
14A(iii)	Terms of Reference for the IRG must be prepared by the person taking the action and submitted for approval by the Minister. The Terms of Reference must include the frequency of proposed meetings, tenure of membership, and chairing and quorum arrangements. The Terms of Reference must be approved by the Minister in writing prior to the submission of the Aquatic Fauna Management Plan to the Minister for approval.	There has been no change to the Knox Terms of Reference, noting that formal changes and a request to merge with the Weaber Plain IRG (despite different approval holders) will be made when the Knox action commences.	No changes have been made to the Terms of Reference. KAI will seek advice and guidance from DPIRD and the IRG in relation to formally reviewing and seeking approval on any recommended revisions to the Terms of Reference.
14A(iv)	The IRG must provide advice to the person taking the action on any revisions to the Aquatic Fauna Management Plan. The advice of the IRG must also be provided to the Minister.	No change.	At its September 2022 meeting, the IRG reviewed the <i>Keep River Aquatic Fauna and Targeted Sawfish Survey 2021</i> .

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
14A(v)	The IRG must assess any exceedances of trigger values and advise changes to the person taking the action as required; and	N/A in 2019 as Knox has not commenced.	Farming on the Knox Plain has not commenced. Monitoring and
14A(vi)	The Minister may seek advice from the IRG at any time.	No requests from the Minister were received in 2021.	No requests from the Minister were received in 2021 in relation to the impacts of the Knox development on aquatic MNES.
15	Aquatic Fauna Management.		
15A	The person taking the action must implement the action in accordance with Sections 7, 8 and 9 of the Knox Creek Plain Environmental Management Program August 2015, to minimise impacts on listed threatened and migratory species in the Keep River.	An audit of the Knox Creek Plain Environmental Management Program has been undertaken as part of the 2021 Statement 938 compliance assessment required by the WA EPA. A copy will be made available when received from the DPIRD.	Section 7 of the Knox EMP is the Surface Water Management Sub-plan, Section 8 is the Groundwater Management Sub-Plan, and Section 9 is the Discharge Management Sub-plan. In relation to these sections of the EMP, the 2022 CAR prepared by DPIRD noted a potential non-compliance in relation to the compilation of groundwater data and the inclusion of this data into a database. In accordance with the IRG's decision of 28 March 2023, a review and analysis of groundwater monitoring data collected since 2019 will be completed as soon as practicable following the collection of 2023 comprehensive data. The review will be guided by the scope and content of the previous review completed by DPIRD in 2019 (Bennett et al 2019). The comprehensive review will review and analyse groundwater levels and quality and consider whether any corrective actions should be undertaken. The question of whether the groundwater model should be updated will also be revisited after the groundwater review and analysis.
15B	In order to mitigate impacts to listed threatened and migratory species in the Keep River from impacts resulting from the action, the person taking the action must prepare an Aquatic Fauna Management Plan (AFMP), in consultation with the IRG. The AFMP must be submitted for approval by the Minister. The person taking the action must not commence clearance of the Development Area until the AFMP is approved by the Minister. The approved AFMP must be implemented. If a condition of another approval held by the proponent requires an AFMP, the proponent may meet the relevant requirements of both conditions by submitting a single plan. If a single plan is submitted, the plan must identify	No change.	The Knox AFMP was approved by the Department on 23 December 2016, as previously reported. See notes above re joint operation of the Weaber and Knox IRGs.

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
15B(i)	to which approval the sections of the plan relate. The AFMP must include: A targeted, non-lethal baseline surveying program for listed threatened species that are likely to occur in the Keep River. This must include the critically endangered Speartooth Shark (Glyphis glyphis), the endangered Northern River Shark (Glyphis garricki), the vulnerable Dwarf Sawfish (Pristis clavata) and the vulnerable Freshwater Sawfish (Pristis Microdon), now known as Largetooth Sawfish (Pristis pristis). The methodology of the baseline surveying program must be developed in consultation with the IRG. Surveys must be conducted over a period of 3 years and must be undertaken in the four Keep River pools (K1, K2, K3 and K4) and at least three sites in the Keep River estuary.	N/A	Baseline aquatic fauna surveys of the Keep River were completed prior to the commencement of farming on the Weaber Plain, under EPBC 2010/5491. Post-development aquatic fauna surveys of the Keep River are being undertaken by Indo-Pacific Environmental Pty Ltd under the oversight of the IRG, in relation to the Weaber Plain development impacts. While not reflecting the impact of farming on the Knox, which has not yet commenced, the 2021 surveys (reported in 2022) found that: Current results suggest that the Goomig Development has not had an adverse impact on the water or sediment quality within the lower Keep River and that there has been limited input or accumulation of pollutants originating from the irrigation development. The herbicide atrazine, which was of specific concern to the IRG was not detected in water or sediment sampled. Although there were several exceedances of site-specific guideline values in 2021, the majority were considered to be the result of natural processes, such as increased tidal influence, evapo-concentration and/or the first-flush run-off that occurs after the onset of the wet season. In 2020 increased concentrations and exceedances for a number of parameters, particularly metals in sediment, were attributed to either water released down Border Creek from the Goomig Development or major earthworks including the
			Creek from the Goomig Development or major earthworks including the construction of a bridge and the bituminising of the Legune Road. In 2021 it remains unclear which factor was responsible for increased concentrations in 2020, as neither occurred between 2020 and 2021, however, concentrations in 2021 were generally lower and the number of exceedances was far lower, suggesting that elevated analyte concentrations or their potential effects had been reduced.
			Consistent with the baseline surveys and historic survey records, no Glyphis (River Shark) species were captured during the 2021 survey. However, two Pristis pristis (Largetooth Sawfish) were recorded from the freshwater reaches of the Keep River and four Pristis clavata (Dwarf Sawfish) from the estuary. The numbers of individuals of these species recorded in 2021 were within the ranges encountered during the baseline surveys, and distributions were also broadly comparable. Additional analysis undertaken during the current study indicated that the number of P. pristis recorded in 2020 and 2021 was within the expected range based on the magnitude of the previous wet seasons. Therefore, the numbers of P. pristis and P. clavata recorded in 2021 suggested

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
			that the Goomig Development had not had a detectable negative population-wide effect on these two Pristis species. With respect to fish and macroinvertebrates, lower Keep River pools continue to support high diversity and assemblages continue to be primarily driven by the longitudinal gradient in salinity decreasing with increasing distance from the estuary. Results indicated that there has been no decline in species richness and composition throughout the lower reaches of the Keep River outside of that which could be considered natural variation in response to the ingress of tidal waters upstream, evapo-concentration and climatic events. These findings contribute to pre-farming baselines on which any MNES impacts of the Knox will be assessed in the future.
15B(ii)	An outcome based risk assessment which is based on data collected during the baseline monitoring program and other relevant data to determine the potential risks to the listed threatened species named in Condition 15.B.i above as well as for the listed vulnerable Green Sawfish (<i>Pristis zijsron</i>) and the listed migratory Australian Snubfin Dolphin (<i>Orcaella heinsohm</i>) and Indo Pacific Humpback Dolphin (<i>Sousa chinensis</i>), at an individual and local population level.	N/A	The outcome-based risk assessment (WRM, 2015) completed under the requirements of the Weaber Plain (Goomig) EPBC approval 2010/5491 is considered to have met this requirement.
15B(iii)	Seasonal, site-specific baseline water quality and flow trigger values for the Keep River listed threatened and migratory species determined with reference to the ANZECC guidelines and the advice of the IRG. Until trigger values are established with the advice of the IRG, ANZECC guidelines trigger values for systems with high conservation/ecological value (as defined in the ANZECC guidelines) must be used. Sample analytes must also be determined with the advice of the IRG.	Amendments to the Weaber (and therefore Knox) Stormwater and Groundwater Discharge Management Plan, including triggers, are anticipated in 2021 on the advice of the IRG.	The IRG-informed water quality triggers will be adopted for the Knox when irrigation commences.
15B(iv)	A monitoring program for the Keep River, Keep River pools, on the Development Area, and of relevant groundwater sites and parameters to be undertaken to monitor water quality and flow with the purpose of enabling early detection of changes so that corrective action can be taken to ensure that trigger values are not exceeded during construction and operation.	Keep River monitoring is undertaken as reported by DPIRD through the Weaber Plain approvals.	No change.

Condition	Requirement	Statement of Progress - 2021	Statement of Progress - 2022
15B(v)	A method or mechanism for predicting, modelling and/or monitoring the water quality of the seasonal first flush of water capable of detecting water quality trigger levels for listed threatened and migratory species, developed in consultation with the IRG. This may include onsite monitoring.	Not yet required.	The Keep River water quality prediction modelling developed under the oversight of the IRG will be adopted for the Knox when irrigation commences.
15B(vi)	A targeted aquatic fauna monitoring program to be undertaken during construction and operation to measure the success of management measures to inform an adaptive management approach.	Not yet required.	Refer to 15B(i). Post-Weaber Plain development aquatic fauna surveys of the Keep River are being undertaken by Indo-Pacific Environmental Pty Ltd under the oversight of the IRG. These surveys are deemed to meet the requirements of this condition in relation to the Knox development.
15B(vii)	Details of management objectives, management actions, performance standards, corrective actions should trigger values be reached, adaptive management and contingency measures to mitigate impacts on listed threatened and migratory species in the Keep River from changes to flow, water quality from surface water, stormwater and groundwater during construction and operation.	Not yet required.	The advice of the IRG in relation to this sub-condition applies to the Knox development. The performance objectives, management responses, standards and actions developed and adopted in relation to EPBC 2010/5491 will be those applied to the Knox operations under EPBC 2014/7143.

4.0 References

Department of Primary Industries and Regional Development, 2023, *Statement 938 Compliance Assessment Report 2022*. DPIRD, Kununurra.

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Attachment A – Statement 938 Compliance Assessment Report 2022 Attachment B – Specialised Zoological BRSB Report 2022