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## Ord River Irrigation Area Stage 2 (M2 Supply Channel)

### Compliance Assessment Report - Statement 938

Prepared for  
LandCorp  
by Strategen

April 2016



# **Ord River Irrigation Area Stage 2 (M2 Supply Channel)**

## **Compliance Assessment Report - Statement 938**

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April 2016

## ***Limitations***

### **Scope of services**

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### **Environmental conclusions**

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

## **Client: LandCorp**

Report Version	Revision No.	Purpose	Strategen author/reviewer	Submitted to Client	
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# 1. Introduction

## 1.1 Project background

The WA Minister for State Development (the proponent) has approval to develop land for irrigated agriculture across the Weaber, Keep River and Knox Creek Plains, located north-northeast of Kununurra in the eastern Kimberley region of WA and extends to the Keep River estuary in the Northern Territory. The area of development (M2 Area) is immediately northeast of the existing Ord River Irrigation Area (ORIA), with proposed development representing the second stage of the ORIA scheme. It comprises approximately 76 000 ha (including Buffer Areas) and a key part of the development is main irrigation channel (the 'M2 channel'), that extends from Lake Kununurra alongside the M1 channel.

## 1.2 Project approvals

The proposal to develop the M2 Area for irrigated agriculture was considered by the WA and NT governments in 2002 (the 'M2 proposal'). An Environmental Review and Management Programme/Draft Environmental Impact Statement (ERMP/Draft EIS; Kinhill 2000) was submitted for the M2 proposal in 2000 and assessed under the *Environmental Protection Act 1986* (EP Act). The M2 proposal was granted approval to be implemented by the WA Minister for the Environment in February 2002 by the issue of Ministerial Statement (MS) 585. In January 2007, this approval was extended to February 2012. Subsequent to the issue of MS 585 a number of elements within the statement were modified and a new statement, MS 830, was issued on 7 May 2010 to replace MS 585.

The Department of State Development (DSD) submitted an application to amend conditions of MS 830 in June 2012 pursuant to s. 46 of the EP Act. The proposed amendments to conditions were to bring ORIA Stage 2 in line with contemporary implementation conditions without reducing necessary environmental obligations under the original conditions and commitments. The s. 46 application was approved and an amended statement (MS 938) was issued on 12 June 2013.

## 1.3 Proponent details

The WA Minister for State Development is the current proponent for the proposal after transferral to the State from the original co-proponents; being Wesfarmers Sugar Company Pty Ltd, Marubeni Corporation and the Water Corporation of Western Australia.

LandCorp continued to provide local environmental management services to DSD, acting as the key contact for the 2015 compliance audit. Kimberley Agricultural Investment (KAI) is currently implementing and managing farming operations at Weaber Plain, future development of Knox Plain and implementation of the requirements of the environmental approvals on site.

Refer to Section 2 for further detail on management responsibility of assets.

## 2. Current status

### 2.1 Status of construction and operation

#### 2.1.1 Weaber Plain

During this audit period (1 January 2015–31 December 2015), clearing of all lots except Lot 13 was completed, including Lots 15 and 16, owned by the Yawooroong Miriuwung Gajerrong Yirrgeb Noong Dawang Aboriginal Corporation (MG Corporation). Cropping commenced on Lots 17 and 18 with a tailwater return system now in operation to service these lots. Construction also commenced on a tailwater return system for Lots 3 and 5 during this audit period. Shared infrastructure construction and repairs associated with the rectification of defective pipes have been completed.

As stated in Section 1.3, LandCorp will no longer be involved in the management of the Weaber Plain Development and ownership of some assets within the development has been transferred to other entities. Table 1 outlines the current ownership and management of assets within Weaber Plain.

Table 1 Weaber Plain asset ownership and management

Asset	Owner	Management arrangement
Lots 12, 1, 2, 6, 8 9, 3, 5 14, 17, 18, 20, 21, 19	Owned by the State. To be leased by KAI.	KAI to manage.
Lot 13	Owned by the State. To be leased by KAI.	KAI unable to develop until an agreement with Sorby Hills mine is in place.
Lots 15, 16	To be owned by MG Corporation.	KAI developing on behalf of MG Corporation.
M2, M2S channels and structures	Owned by Water Corporation (assets transferred to the Water Corporation in June 2015).	In the process of being finalised.
M2N, M2S1 channels, flood protection levees, drains, associated structures (e.g. M2S1W7; DW1GS)	Owned by Department of Regional Development (DRD) (assets handed over to DRD in 2014).	Agreement reached with KAI to manage these assets.
D8 pump, D8 basin	Owned by DRD (Assets handed over to DRD in 2014).	DRD sub-contracting Ord Irrigation Cooperative (OIC) to manage asset.
Moonamang Road, Minjiljirrga Lane, Jandami Lane, Wooljim Lane	Shire of Wyndham East Kimberley (SWEK) (road assets transferred to SWEK in 2014).	SWEK to manage.
Buffer Area	MG Corporation. Buffer Area to be transferred to freehold for MG Corporation (transfer remains pending).	KAI to manage.
Area 11 (borrow pit inside Buffer Area)	Refer to Buffer Area.	KAI has access. Buffer Area management arrangements apply.

#### 2.1.2 Knox Creek Plain

The Office of the Environmental Protection Authority (OEPA) approved the Knox Creek Plain Environmental Management Program (Knox EMP) (KBC 2015a) and the Knox Creek Plain Final Project Design Plan (Knox FPDP) (KBC 2015b) on 4 November 2015. Development (i.e. construction of channel and road infrastructure and clearing of native vegetation) of the Knox Creek Plain has not commenced; however, preliminary environmental studies including groundwater monitoring and Buffer Area vegetation and weed assessments have been undertaken during this audit period.



## 2.2 Approvals and environmental management arrangements

The following section has been included in this CAR to provide some context regarding key points of discussion that arose in undertaking the audit, and for associated audit conclusions and recommendations.

The M2 Area is currently subject to three separate environmental approvals with associated management plans under both the EP Act and *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Table 2). These approvals have a number of complex management and monitoring requirements and although some of these requirements are relevant to more than one approval there are minor differences between the approved management plans for different approvals. Given the complex nature of the requirements and the discrepancies across approvals, the proponent is at some risk of inconsistent application of management requirements and; therefore, at risk of achieving faultless compliance and conformance. In undertaking the 2015 assessment, it has become apparent to the auditors that this concern, which applies broadly to management across the project, has particular application to the management and monitoring regime for surface water and groundwater. The auditors also direct the reader's attention to the existence of an Independent Review Group (IRG) for each EPBC Act approval (i.e. two separate IRGs). The IRGs are a peer review body which has relevance to the consideration of discrepancies in management and monitoring requirements of the EP Act and EPBC Act (refer to Section 2.2.2 for further detail).

Environmental approval of the project was based on the potential for each farm lot being taken up and managed by separate entities, similar to the variety of growers occupying the ORIA Stage 1 area. The auditors understand this drove much of the complexity in management requirements, particularly water management requirements, as a larger number of parties involved in environmental management was perceived to increase the risk of adverse environmental impacts,.

Water management, and the IRG, are discussed in sections 2.2.1 and 2.2.2 respectively.

Table 2 Approvals associated with ORIA Stage 2

Approval	Subject area	Proponent	Environmental management plans required
<b>State</b>			
EP Act - Ministerial Statement 938	M2 Area	DSD	<ol style="list-style-type: none"> <li>1. Weaber Plain Environmental Management Program (EMP) approved in 2013.</li> <li>2. Knox Creek Environmental Management Program (Knox EMP) – considered an “Addendum” to the EMP; approved in November 2015.</li> </ol>
<b>Commonwealth</b>			
EPBC Act EPBC 2010/5491	Weaber Plain	DSD	<ol style="list-style-type: none"> <li>1. Gouldian Finch Conservation Plan</li> <li>2. Buffer Management Plan</li> <li>3. Weed, Plant pathogen and Pest Management Plan</li> <li>4. Aquatic Fauna Management Plan</li> <li>5. Stormwater and Groundwater Discharge Management Plan</li> <li>6. Groundwater Management Plan.</li> </ol>
EPBC Act EPBC 2014/7173	Knox Creek Plain	KAI	<ol style="list-style-type: none"> <li>1. Sections 6 – 11 of the Knox Creek Environmental Management Program (Knox EMP) – approved in May 2015: <ol style="list-style-type: none"> <li>a. Weed, Plant Pathogen and Pest Management Sub-plan.</li> <li>b. Surface Water Management Sub-plan.</li> <li>c. Groundwater Management Sub-plan.</li> <li>d. Discharge Management Sub-plan.</li> <li>e. Biodiversity and Habitat Management Sub-plan.</li> <li>f. Buffer Management Sub-plan.</li> </ol> </li> <li>2. Bare-rumped Sheathtail Bat Management Plan.</li> <li>3. Aquatic Fauna Management Plan.</li> </ol>

### 2.2.1 Groundwater and surface water management

The Environmental Protection Authority (EPA) identified groundwater and surface water as relevant environmental factors during the approval process (EPA 2001) due to potential impacts on:

- adjacent vegetation from rising groundwater levels
- the estuarine portion of Keep River from the discharge of groundwater
- farmland and adjacent vegetation from surface water alterations from farm operations
- Keep River, Border Creek and Sandy Creek from surface water discharges.

In addition, biodiversity was identified by the EPA as the environmental factor that required detailed evaluation (EPA 2000). The EPA assessment of biodiversity impacts included risks of species extinction and threats to viability of populations (including riverine species) and protection of riverine systems and riparian vegetation.

As such, objectives of groundwater and surface water management outlined in the EMP are to:

- ensure changes to the groundwater regime (quantity and quality) resulting from the Proposal do not significantly adversely affect:
  - \* vegetation (including crops) or fauna habitat within the Development area or adjacent Buffer Areas
  - \* downstream riverine environment and its flora and fauna
  - \* threatened aquatic fauna species in the Keep River
- minimise the potential for sedimentation of nearby waterways
- minimise the potential for chemical contaminants to enter nearby waterways
- minimise the potential for deterioration to the biological health of downstream riverine environments
- minimise the potential impacts of flooding and erosion on Point Springs Nature Reserve.

In contrast, the EPBC Act approvals were based solely on impacts on EPBC Act listed threatened species, including but not limited to, listed threatened species in the Keep River. Conditions were applied under the approvals to manage groundwater and surface water to avoid downstream impacts on the Keep River and subsequently those listed threatened species.

### 2.2.2 Independent Review Group

In accordance with condition 9 of EPBC 2010/5491 and condition 14 of EPBC 2014/7143, two IRGs were appointed by the approval holder to review hydrological aspects of the project and associated impacts on EPBC Act listed threatened species. The IRG consists of independent scientific and technical experts in northern Australian surface water and groundwater hydrology and aquatic fauna (specifically *Glyphis* and *Pristis* species – protected under the EPBC Act). Key tasks of the IRG include:

- provision of advice on any substantive changes to, or reviews of the Australian Government Department of the Environment (DotE) approved Aquatic Fauna Management Plan, Stormwater and Groundwater Discharge Management Plan and Groundwater Management Plan
- consultation and advice for all hydrological and aquatic fauna monitoring regimes
- assessment of any exceedance of trigger values and provision of advice in regards to exceedance
- provision of advice to the Minister for the Environment (Australian Government) when sought.

Due to there being separate proponents and EPBC Act approvals for the Weaber Plain and Knox Creek Plain developments, under both of which the IRG is mandated, there is currently no option but to have two separate IRGs. KAI has advised that this will likely be rectified if and when KAI becomes the proponent for Weaber Plain. Nonetheless, there is a 50% membership overlap between the two groups, and targets and monitoring requirements are applied and implemented consistently.

Although the establishment of the IRGs were a requirement of the EPBC Act approvals, the role of the IRG has also been incorporated into the MS 938 EMP with nine actions explicitly requiring IRG consultation and many other related actions implicitly requiring IRG input. However, the IRGs were established solely for the purpose of advice and consultation in regards to EPBC Act approval requirements and as such the auditors have been advised that actions requiring IRG involvement will be implemented in the context of impacts to EPBC Act listed threatened species in the Keep River only. It is recommended that the proponent ensure that OEPA is aware of this limitation in regards to the IRG role and that the applicable EMP actions are not related to additional EMP objectives of managing potential impacts on farmland, surrounding vegetation and nearby waterways.

## **2.3 Proposed changes to CAP**

No changes to the CAP have been proposed during this audit period.

### 3. Audit methodology

#### 3.1 Plan

##### 3.1.1 Purpose and scope

###### *Purpose*

This document is the Compliance Assessment Report (CAR) addressing Phase 2 of the ORIA Project Area development.

The CAR has been prepared to address condition 4-3 of Statement 938 which states:

*The proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by Condition 4-1.*

Condition 4-1 of Statement 938 referred to above states:

*The proponent shall prepare and maintain a Compliance Assessment Plan to the satisfaction of the CEO.*

A Compliance Assessment Plan (CAP) was prepared to address condition 4-1 as required (Strategen 2013). The CEO referred to in condition 4-1 is the Chief Executive Officer of the Office of the Environmental Protection Authority (OEPA). The CAP was approved by the CEO of the OEPA on 2 October 2013.

Condition 4-2 of Statement 938 describes what must be contained in the CAP, with point (e) of condition 4-2 requiring that the CAP shall indicate *the table of contents of compliance reports*. The approved CAP (Strategen 2013) provides this detail, replicated as Table 3 below, with an additional column indicating the corresponding section of this CAR. This CAR has been developed to align with the structure indicated in the CAP, which was guided by *Post Assessment Guideline No. 3 Preparing a Compliance Assessment Report* (OEPA 2012a).

Table 3 Table of contents for Compliance Assessment Report

Heading	Description	Section in this CAR
Introduction	Brief detail about the Project, including:	1.1
	• project background	1.2
	• project approvals	1.3
Current status	• proponent details.	
	Summary of the current implementation status of the Project, specifically milestones/achievements within the reporting period. Outline of any proposed changes to the Compliance Assessment Plan.	2
Audit methodology	Description of how the audit was undertaken including:	3.1
	• audit plan: purpose and scope, audit period, audit criteria, methodology. • audit terminology.	3.2

Heading	Description	Section in this CAR
Audit results	<p>Inclusion of a statement as to whether proponent has been, is being, has not or is not over the reporting period, complying with the:</p> <ul style="list-style-type: none"> <li>• conditions of Statement 938</li> <li>• requirements of the Environmental Management Programme (EMP), Final Project Design Plan (FPDP) and Final Decommissioning Plan (FDP).</li> </ul> <p>A breakdown of the key requirements and/or objectives of the EMP, FPDP and FDP will be provided with a declaration of compliance for each key requirement and/or objective.</p> <p>Reporting of all potential non-compliances and non-conformances, and a description of the corrective and preventative actions taken.</p> <p>Inclusion of the Ministerial Statement audit table in accordance with Table 1 of this CAP.</p> <p>Indication of any proposed changes to the Compliance Assessment Plan required by Condition 4-</p>	4
Appendices	<ol style="list-style-type: none"> <li>1. Statement of compliance prepared in accordance with the OEPA <i>Post Assessment Form for a Statement of Compliance</i> and endorsed by the proponent's Managing Director or a person delegated to sign on the Managing Director's behalf.</li> <li>2. Ministerial Statement 938 Schedule 1 audit table.</li> <li>3. Environmental Management Program audit tables (potentially non-conformant items only).</li> <li>4. Evidence (related to potential non-compliances/non-conformances only).</li> </ol> <p>Other appendices may be included where relevant from time to time.</p>	Appendices

### Scope

This CAR has been prepared to assess whether the proponent has been, is being, has not or is not over the reporting period (Section 3.1.2), complying with:

1. All seven conditions, including Schedule 1, of Statement 938. Note condition 1-1 of Statement 938 requires that:

*the proponent shall implement the proposal as documented and described in Schedule 1 of this Statement, subject to the conditions and procedures of this Statement.*
2. The requirements of the:
  - (a) Environmental Management Programme (EMP; comprising fifteen Management Plans or Sub-plans) in accordance with condition 5-1, which requires that:

*the proponent shall implement the proposal in accordance with the "Environmental Management Programme", dated July 2011, or subsequent revisions approved by the CEO.*

This includes the Knox EMP, considered an addendum to the above EMP, approved by OEPA on 4 November 2015.
  - (b) Final Project Design Plan (FPDP), in accordance with condition 6-1, which requires that:

*the proponent shall implement the proposal in accordance with the "Final Project Design Plan", dated July 2011, or subsequent revisions approved by the CEO.*

This includes the Knox FPDP, considered an addendum to the above FPDP, approved by OEPA on 4 November 2015.
  - (c) Final Decommissioning Plan (FDP), in accordance with condition 7-2, which requires that:

*the proponent shall implement the Final Decommissioning Plan required by Condition 7-1 until such time as the CEO determines that decommissioning is complete.*

An assessment of compliance with the conditions of Statement 938, including with respect to implementation of Schedule 1, EMP, FPDP and FDP, is provided in Table 8. Further detail with respect to compliance with Schedule 1 of Statement 938 and conformance with the actions of the EMP is provided Appendix 2 and Appendix 3 respectively.

### 3.1.2 Audit period

This CAR addresses the 12- month compliance period from 1 January 2015 to 31 December 2015.

As documented in the CAP (Section 3.1.1) the proponent will normally assess its compliance with Statement 938 annually, addressing a 12-month compliance period of 1 January to the 31 December with the report submitted to the Office of Environmental Protection Authority (OEPA) by June of the following year.

### 3.1.3 Audit criteria

Audit criteria were based on the conditions of approvals and Schedule 1 of Statement 938 and key actions of the *ORIA Stage 2-Weaber Plain Development Project Environmental Management Program* (EMP, DSD & LandCorp 2013) and the addendum *Ord River Irrigation Area Knox Creek Plain Environmental Management Program* (Knox EMP, KBC 2015).

Inherent in the audit is consideration of the:

- implementation and effectiveness of communication/reporting procedures
- controls and procedures in place to ensure implementation of management actions
- adequacy and effectiveness of the communication to personnel of matters including environmental procedures and changes to practices.

#### *MS 938*

An audit table has been prepared for condition 4-1 of Statement 938 in accordance with the approved CAP (Table 3). The audit table contains each condition separated into audit elements for auditing purposes (i.e. the audit criteria), and includes the following headings:

1. Audit code: Ministerial Statement reference number.
2. Subject: The environmental theme/issue.
3. Action: What the proponent must do.
4. How: The manner in which the requirements of an audit element should be achieved.
5. Evidence: Information or data collected to verify compliance, i.e. report/letter/site inspection requirements.
6. Phase: Project phase applicable to audit element.
7. Timeframe: Specific timing for achieving the requirements of an audit element.
8. Status: Notes about the fulfilment of compliance using compliance status terms.
9. Further information: Additional comments to support compliance findings, where required.

#### *Environmental Management Program*

Audit tables containing the management and monitoring actions from the EMP and its addendum the Knox EMP have been prepared (Appendix 3). The majority of actions from the Knox EMP were identical to actions contained within the Weaber EMP; however, conformance with these actions was assessed separately for each area. Where Knox EMP actions differed, additional audit items have been included in the EMP audit tables and labelled in the item column as *KEMP*. Where an audit item is not relevant to a particular area, the item has been assessed as Not Applicable (NA).

### 3.1.4 Methodology

The audit included a site visit conducted between 14 and 17 September 2015. The Audit Team Leader was Jeremy Mitchell (Strategen Environmental Consultants) with one other audit team member, Carolyn Ellis (Strategen Environmental Consultants). Interviews were conducted and a number of documents reviewed, during and after the site visit; to verify compliance or conformance. A list of persons consulted during the audit is provided in Table 4.

Table 4 Persons consulted during audit

Person and position	Organisation	Purpose
Deb Pearce – Consultant	LandCorp and KAI	To obtain verifiable evidence to assist in determining compliance with Ministerial Statement 938 and relevant Sub-Plans.
Wayne Paul – Logistics Manager	KAI	To obtain verifiable evidence to assist in determining compliance with Ministerial Statement 938 and relevant Sub-Plans.

### 3.2 Terminology

The 'Status' field of the audit table (refer to Section 4, Appendix 2 and Appendix 3) describes the implementation of the action and compliance with the condition, procedure or commitment. Although the CEO of the OEPA makes the final determination of compliance, it is necessary to update this field each reporting period, as the project progresses. The OEPA (2012a, 2012b, 2012c and 2012d) has prepared updated guidance related to the preparation of compliance audits, including generic expressions that are used to identify the status of each item (Table 5).

Table 5 Action implementation status

Status	Description
Compliant (Conformant)	Implementation of the proposal has been carried out in accordance with requirements of the audit. (Conformant – as above in relation to actions of management plans / programs).
Completed	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 (Potentially non-conformant)	Possible or likely failure to meet the requirements of the audit element. (Potentially non-conformant – as above in relation to actions of management plans / programs).
In process	Where an audit element requires a management or monitoring plan 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 by the OEPA or the other government agency and assessment by the OEPA or other government agency for approval is still pending.

Source: adapted from OEPA (2012b)

## 4. Audit results

### 4.1 Compliance with conditions

The results of the audit of Statement 938 are shown in Table 8. A total of 15 items were audited from Statement 938. No potential non-compliances with conditions of Statement 938 were identified during the audit (Table 8).

Condition 1-1 of Statement 938 requires implementation of the proposal as documented in Schedule 1 of the Statement, therefore the results of the audit of the implementation of the key characteristics contained in Schedule 1 are outlined in Appendix 2.

Additionally, condition 5-2 of Statement 938 requires the implementation of the EMP. Results of the audit of conformance with the management actions contained within the EMP and the Knox EMP are outlined in Appendix 3.

#### 4.1.1 Potential non-conformances in the Environmental Management Program

##### *Weaber Plain*

With respect to condition 5-2 (implementation of the EMP), 178 actions from the sub management and monitoring plans which comprise the EMP were audited. 20 actions from the EMP were found to be potentially non-conformant (Table 6) which represents approximately 11% of the total number of actions in the EMP. The majority of these actions relate to an aspect of formal monitoring that is currently not being undertaken, or is being partially undertaken, as prescribed in the EMP. There has been no reported or auditor-observed significant environmental impact resulting from the project to date. Based on feedback from KAI and LandCorp in the conduct of the audit, the auditors suggest many of the potential non-conformances highlight a reasonable need for revision of these actions due to the reported:

- impracticality of implementation
- increased knowledge of actual impacts based on baseline study results
- operational experience
- prescriptive requirements not necessarily achieving best environmental outcome
- frequency of monitoring being incongruent with industry practice.

While a detailed review and resolution of these issues are outside the scope of the audit, based on their observation of the project to date the auditors are generally supportive of a revision process to reduce or streamline the environmental management and monitoring regime where possible and improve the alignment between approvals. Table 6 and Section 4.2 provide more detail on related recommendations identified by the auditors. The auditors suggest the proponent only initiate any process of review to address potential non-conformances and associated auditor recommendations in close consultation with the OEPA.

##### *Knox Creek Plain*

With respect to condition 5-2 (implementation of the EMP), 162 actions from the sub management and monitoring plans which comprise the Knox EMP were audited. One action from the Knox EMP was found to be potentially non-conformant (Table 6). Given that this represents less than 1% of the total number of actions and that this potential non-conformance was not viewed by the auditors as being of particular significance relative to other actions, the auditors consider on balance, the Knox EMP has been implemented satisfactorily.

The auditors consider that on balance the EMP (including its addendum, the Knox EMP) has been implemented satisfactorily and the proponent is; therefore, compliant with condition 5-2.



Table 6 Items assessed as potentially non-conformant

Item	Action	Comment
<b>Weaber Plain</b>		
EMP 19	<p><u>Monitoring:</u> Surface and subsoil electrical conductivity within the project area, with a specific focus on areas with Aquitaine clay soils, including:</p> <ul style="list-style-type: none"> <li>at least one sample from each lot</li> <li>a representative spread of sites throughout the Buffer Area.</li> </ul>	<p>Soil testing of salinity has not been undertaken in the audit period. KAI advised that soil sampling (for the parameters and those described in EMP 20) has not occurred in 2015 as there has been limited irrigation occurring (on Lots 17 and 18 only) and no indication of decline in soil structure or increases in salinity after this short period, based on its testing to date. KAI advised it received verbal advice from a reputable soil scientist that soil sampling should be undertaken when yield loss indicates potential soil quality decline. As such, KAI queries the utility of the frequency and scope of the mandated routine sampling. KAI advised that to bring itself back into conformance it commits to securing qualified scientific input regarding the Weaber Plain and Knox Creek Plain soil sampling regimes in 2016 to support its proposed modifications to the current regime and to implement the recommendations of the scientific input.</p> <p><u>Recommendation:</u> The auditors recommend revision of this item based on the qualified scientific input being sought.</p>
EMP 20	<p><u>Monitoring:</u> Surface and subsoil ESP and pH within the project area, with a specific focus on areas with Aquitaine clay soils, including:</p> <ul style="list-style-type: none"> <li>at least one sample from each lot</li> <li>a representative spread of sites throughout the Buffer Area.</li> </ul>	<p>Soil testing of sodicity has not been undertaken in the audit period. Refer to EMP 19 for KAI justification and proposed approach to bring itself back into conformance.</p> <p><u>Recommendation:</u> The auditors recommend revision of this item based on the qualified scientific input being sought.</p>
EMP 32	Commercial pesticide and herbicide spraying will be undertaken only by operators with the appropriate level of ChemCert accreditation.	<p>Pesticide and herbicide spraying is undertaken and/or supervised by operators with the appropriate level of ChemCert accreditation. KAI advised that some spraying is undertaken by personnel who are not accredited; however, these personnel are supervised by personnel who are accredited and have several (up to twenty years) experience. KAI advised that certification of these personnel is currently impractical due to the costs and logistics involved in organising a training program in Kununurra for a small number of personnel.</p> <p>Aerial spraying is undertaken by Lone Eagle (Lance Conley) who has appropriate certification from Department of Agriculture and Food WA (DAFWA).</p> <p><u>Recommendation:</u> The auditors recommend revision of this item to take into account the logistics of providing accreditation to all personnel, i.e. supervision by personnel with accreditation may be sufficient</p>
EMP 40	Develop emergency response procedures in accordance with Department of Water, Water Quality Protection Note <i>Contaminant spills – emergency response</i> (WQPN No. 10).	<p>KAI Induction Package includes a procedure for reporting incidents; however, Strategen has not sighted a prepared emergency response procedure that outlines “the appropriate level of response according to the degree (or classification) of the spill” in accordance with WQPN 10.</p> <p><u>Recommendation:</u> The auditors recommend an Emergency Response Procedure be prepared in accordance with this action (updated to align with contemporary guidelines, if appropriate).</p>
EMP 53	Establish permanent weed survey transects within 100 m into the Weaber Plain Buffer Area.	<p>This item was reported in a previous compliance assessment as not having occurred prior to ground disturbance as required by the action; therefore, it will remain as a potential non-conformance for as long as the EMP remains in effect or this action is amended.</p> <p>LandCorp has undertaken remedial action by since establishing weed transects, which were first established and surveyed commencing August 2013.</p> <p>No recommendation required.</p>

Item	Action	Comment
EMP 76	<p><u>Monitoring:</u> Density/ cover/ distribution of weed species in the permanent weed survey transects and common use infrastructure areas.</p>	<p>Density/cover/distribution of weed species in the permanent weed survey transects was not explicitly measured in the available reporting; as such, the auditors have assessed this item as potentially non-conformant.</p> <p>LandCorp advised that current weed control efforts are focused on controlling previously and newly identified weed growth.</p> <p>Common use infrastructure areas are also now owned and managed by others including the SWEK, Water Corporation and DRD (refer to Table 1).</p> <p><u>Recommendation:</u> Potential for revision of this action should revision of the EMP occur. The monitoring history of the project to date suggests the extent of significant weeds is relatively limited throughout the Proposal area – recording of weed infestations using less formal (i.e. simple observational) parameters may be an appropriate and practicable alternative to guide and assess the effectiveness of control measures.</p>
EMP 84	<p>Undertake monitoring of the parameters determined under Item 2 in bores established under EMP 83.</p> <p><i>Item 2 refers to this item (EMP 84)</i></p>	<p>The auditors have determined in consultation with the proponent that 'The parameters determined under Item 2' refers to the analytes listed in the Timing column.</p> <p>Groundwater monitoring results provided indicate that all required parameters are being tested in monitoring bores. The monitoring reports and database indicate that Atrazine (the only pesticide tested) does not appear to be monitored in all bores consistent with the requirement to do so seasonally (for both high and low intensity bores). Furthermore no evidence has been provided that groundwater levels and temperature are being monitored daily in high intensity bores. As such, the auditors have assessed this item as potentially non-conformant.</p> <p>DAFWA proposed changes to the current groundwater monitoring regime in the groundwater chemistry baseline monitoring report (Lillicrap <i>et al</i> 2015). Amendments are detailed in Table 4.2 in Lillicrap <i>et al.</i> (2015). The IRG endorsed the proposed changes at its January 2016 meeting and subsequently a variation to the approved Stormwater and Groundwater Discharge Management Plan and the Groundwater Management Plan required under EPBC 2010/5491 will be sought.</p> <p>In the auditors' view the overlap and relationship between the EP Act and EPBC Act groundwater management and monitoring requirements applicable to both Weaber and Knox Creek Plains is confusing and unclear.</p> <p><u>Recommendation:</u> The auditors recommend review of the groundwater monitoring regime required under the EP Act (i.e. this EMP) for both Weaber Plain and Knox Creek Plain to ensure alignment and consistency with the EPBC Act approval (and any variation to that approval) as informed and recommended by the IRG, to the satisfaction of the OEPA</p>

Item	Action	Comment
EMP 93	Adopt ANZECC guidelines trigger values for a 'high conservation/ecological value system' for three years then adopt appropriate site-specific trigger levels for chemicals and nutrients in accordance with ANZECC & ARMCANZ guidelines (2000).	<p>The initial three year timeframe, based on the July 2011 date of the original EMP was completed in July 2014.</p> <p>This action was based on the requirements of condition 12G of EPBC 2010/5491 which was subject to a variation in August 2015. Condition 12G no longer requires site specific trigger levels to be in accordance with ANZECC guidelines (2000). Varied condition 12G now states that site specific trigger values "may be determined in consultation with the IRG and within the context of Condition 11".</p> <p>KAI advised that site specific trigger values have since been adopted as determined in consultation with the IRG and in the context of condition 11 and condition 12G of EPBC 2010/5491. KAI advised that in the context of condition 11, site-specific triggers have been interpreted to now relate to water quality triggers for the Keep River as groundwater is no longer considered by KAI and the IRG to be a receiving environment.</p> <p>It is beyond the scope of this audit to assess whether this rationale is appropriate or if the site specific triggers developed in consultation with the IRG have been in accordance with ANZECC &amp; ARMCANZ guidelines. The IRG minutes provided make reference to the guidelines, inferring but not explicitly stating the guidelines have been used in line with requirements of this action. As the information provided is not clear on whether the requirements of the action have been met the auditors have assessed this item as a potential non-conformance.</p> <p>Notwithstanding this finding, although the IRG minutes refer only to the EPBC Act, the EMP Groundwater Management Sub-plan states that the methodology and design characteristics will be continuously refined on future monitoring and modelling results in consultation with the IRG, by which the auditors infer that the rationale for the new triggers aligns with the general groundwater monitoring requirements of this EMP.</p> <p><u>Note:</u> KAI has proposed a variation to the groundwater monitoring requirements of the EPBC Act approval, which the IRG supports. Refer to EMP 84 for detail.</p> <p><u>Recommendation:</u> The auditors recommend review of this action (and the groundwater monitoring requirements generally) to be consistent with the EPBC Act approval (and any variation to that approval) as informed and recommended by the IRG, to the satisfaction of the OEPA (also refer to EMP 84).</p>
EMP 94	<p><u>Trigger:</u> Groundwater levels, soil salinity and quality exceed or are likely to exceed trigger levels</p> <p><u>Corrective action:</u> As per EMP 94 (Appendix 3).</p>	<p>Refer to EMP 19 – soil salinity has not been undertaken in the audit period, so potential exceedances are unable to be determined.</p> <p>The information provided does not clearly indicate the relationship between monitoring results and trigger levels. Although there is no evidence any exceedances have occurred, as the data is unclear on this point the auditors conclude this item is a potential non-conformance.</p> <p><u>Recommendation:</u> The auditors recommend modification of the monitoring results spreadsheets to clearly show the trigger levels for each analyte, and highlight any result in which exceedances have occurred. If the monitoring regime is being amended as proposed, ensure the database is consistent with regime and adopted trigger values.</p>
EMP 95	<p><u>Trigger:</u> Levels of chemicals and nutrients exceed scenarios that show:</p> <ul style="list-style-type: none"> <li>• an increasing trend in the concentration of any chemical (at statistical confidence levels)</li> <li>• an exceedance of the site-specific triggers for a particular chemical over two consecutive years.</li> </ul> <p><u>Corrective action:</u> As per EMP 95 (Appendix 3).</p>	<p>Refer to EMP 93 – the information provided is inadequate to readily determine if this action has been conformed with, as such the auditors conclude this item is a potential non-conformance.</p> <p><u>Recommendation:</u> The auditors recommend modification of the monitoring results spreadsheets to clearly show the trigger levels for each analyte, and highlight any result in which exceedances have occurred and/or results that indicate increasing trends. If the monitoring regime is being amended as proposed, ensure the database is consistent with regime and adopted trigger values.</p>

Item	Action	Comment
EMP 108	Refine flow trigger values for the Keep River and Border Creek gauging station based on the refined discharge dilution model and Operational Surface Water Model.	<p>The auditors were advised that flow-trigger values have not been established, hence this has found to be a potential non-conformance. However, KAI advised that an alternative management approach has been determined which will result in the same outcome as the intent of action, that is to ensure adequate dilution of any discharges that may impact the water quality of the Keep River.</p> <p>The auditors were advised that in normal wet season conditions, should stormwater flow occur at the DW1 stormwater discharge point, other flow in the Keep River catchment will be occurring. 2015-2016 wet season monitoring indicated the Goomig development contributed less than 1.5% of total flow in the Keep River (KAI 2016). The broader, high volume, catchment flow into the Keep River will result in the required pool flushing.</p> <p>The 2014 Keep River bathymetry studies (Surrich Hydrographics 2014) measured the total Keep River Pool volumes at 1.26 GL. As such, KAI advised that in the event of a dry season flow which is not associated with widespread catchment rainfall, the management approach (reviewed by the IRG at its February 2016 meeting) is that if there is a risk to water quality, then a minimum release of 1.26 GL of water from the M2 channel would be required to fully flush the Keep River pools downstream of the Border Creek confluence. This is verified by the Keep River Baseline Study (RMTR 392; Bennett and George 2014) and informs the dilution calculations.</p> <p><b>Recommendation:</b> The auditors recommend revision of this action to clearly outline what is being undertaken to ensure adequate dilution of any discharges that may impact the water quality of the Keep River.</p>
EMP 119	<b>Monitoring:</b> Compliance of marked clearing boundary with development maps.	<p>Environmental inspection spreadsheet (R_045) indicates that marked clearing boundaries are checked regularly (four times in the month of August); however, they are not checked daily as required by the action. KAI advised that it was not practical to undertake these inspections daily.</p> <p><b>Recommendation:</b> The auditors recommend revision of the frequency of this action in the EMP, to the satisfaction of the OEPA.</p>
EMP 120	<b>Monitoring:</b> Extent of clearing and ground disturbance along pre-defined boundaries.	<p>Environmental inspection spreadsheet (R_045) does not explicitly state that the extent of clearing is monitored. Monitoring was also not undertaken daily during this audit period.</p> <p><b>Recommendation:</b> The auditors recommend revision of the environmental inspection spreadsheet to explicitly state this monitoring requirement and revision of the frequency of this action, to the satisfaction of the OEPA.</p>
EMP 125	Stabilise and revegetate areas identified as containing vegetation below a rating of 'Very Good' in accordance with species lists and planting procedures determined in consultation with DPW AND/OR DER.	<p>The initial vegetation condition assessment conducted in 2011 identified several small areas with a condition rating of less than Very Good (Figure 4 of R_054). On review, the 2014 vegetation condition assessment indicates that there were four monitoring sites that had a condition rating of 'Good' or 'Degraded'. LandCorp advised that revegetation of these areas has not been undertaken. Identification of noxious weeds and subsequent weed control is regularly being undertaken throughout the Buffer Area which LandCorp advised, along with the destocking of cattle from the Buffer Area, should result in the long-term improvement in condition through natural recruitment of these areas without revegetation being undertaken.</p> <p><b>Recommendation:</b> The auditors recommend revision of revegetation requirements in consultation with the OEPA and deletion of this action if revegetation is agreed as not being necessary due to natural regeneration and other management actions being undertaken.</p>

Item	Action	Comment
EMP 126	In consultation with the DPW AND/OR DER and DoW, revegetate areas within the buffer with species selected specifically for their ability to lower the groundwater table, given the local soil, water and solute settings. Species used in such revegetation will be agreed with the DPW AND/OR DER and DoW	LandCorp has previously advised that this action is not occurring as there is currently no indication of rising groundwater and the preferred local revegetation measure is by topsoil respread rather than revegetation. Strategen has assessed this item as potentially non-conformant as no consultation with DPW and/or DER and DoW has occurred to confirm this is satisfactory. <b>Recommendation:</b> The auditors recommend revision or deletion of this action in consultation with OEPA and the indicated agencies.
EMP 133	<b>Buffer monitoring:</b> Assess vegetation condition using the Keighery (1994) rating scale and update vegetation condition map.	LandCorp advised that a vegetation condition assessment was not undertaken in 2015; as such, this is a potential non-conformance. LandCorp advised that removal of cattle from the Buffer Area has, anecdotally, improved the vegetation condition throughout the Buffer. <b>Recommendation:</b> The auditors recommend that the proponent ensures a vegetation condition assessment is undertaken annually as required or revision of this item to ensure conformance.
EMP 135	Survey reference sites identified in EMP 134 to determine indicator species, density of native species, % cover of native species, native species richness and % weed cover as outlined in the monitoring procedures.	Auditors were advised that reference sites are surveyed six monthly consistent with the monitoring regime (EMP 162–164) rather than quarterly as required by this action. <b>Recommendation:</b> The auditors recommend that the timing of this action be amended, in consultation with the OEPA, to six monthly as per the monitoring regime (EMP 162–164) due to local conditions (e.g. wet season); also due to the potential impact on the buffer from frequent access.
EMP 162	<b>Rehabilitation monitoring:</b> Native species richness, density and % cover within rehabilitation sites as outlined in the monitoring procedures.	Rehabilitation assessments were undertaken in May and October and assessed native species richness, and % cover; however, plant density (number of plants/m <sup>2</sup> ) was not consistently measured in all rehabilitation areas. As such the Auditors have assessed this item as potentially non-conformant. <b>Recommendation:</b> The auditors recommend revision of this action to remove the requirement to measure plant density as there is no specific target for plant density outlined in this action.
EMP 171	Site heritage monitors from MG Corporation issued with a permit under Section 16 of the <i>Aboriginal Heritage Act 1972</i> (WA) will be on-site to monitor clearing and earthworks activities.	Clearing of farm lots occurred during this audit period; however, KAI advised that site heritage monitors from MG Corporation were not present during this clearing. KAI advised that this requirement is unfeasible due to the high costs involved. KAI also advised: <ul style="list-style-type: none"> <li>• it complies with the <i>Aboriginal Heritage Act 1972</i> (AH Act)</li> <li>• is in regular contact and maintains a strong relationship with MG Corporation management and Directors</li> <li>• MG Corporation is satisfied with the current arrangement.</li> </ul> To the auditors' knowledge a s 16 (of the AH Act) permit is only required if someone was intending to enter and excavate a known Aboriginal site; therefore, it appears unnecessary to require this permit for general clearing (the known sites have been excluded from clearing areas and retained in Buffer Areas). <b>Recommendation:</b> The auditors recommend revision of this action on the advice of the MG Corporation and in consultation with the Department of Aboriginal Affairs based on the reported unfeasibility of having a monitor present during all clearing events.
EMP 175	Meet with MG Corporation to discuss broader issues of Aboriginal cultural heritage and heritage protection in and around the buffer, and associated social impact.	KAI advised it meets with MG Corporation representatives on a regular basis; however, minutes of these meetings are not kept. As no verifiable evidence was provided regarding this action, this item has been assessed as a potential non-conformance. KAI advised that MG Corporation attended a meeting with DotE in January 2015 where the management of the Weaber and Knox buffers was discussed. <b>Recommendation:</b> The auditors recommend that adequate documentation and records of all meetings with MG Corporation are maintained.

Item	Action	Comment
<b>Knox Creek Plain</b>		
EMP 175	Meet with MG Corporation to discuss broader issues of Aboriginal cultural heritage and heritage protection in and around the buffer, and associated social impact.	<p>KAI advised it meets with MG Corporation representatives on a regular basis; however, minutes of these meetings are not kept. As no verifiable evidence was provided regarding this action, this item has been assessed as a potential non-conformance.</p> <p>KAI advised that MG Corporation Chairman Mr Des Hill and Director Mr Ted Hall attended the KAI briefing of DotE in Canberra in January 2015, in relation to the Knox Creek Plain proposal. The Knox Creek Plain Aboriginal Development Package has been subsequently endorsed by MG Corporation.</p> <p><u>Recommendation:</u> The auditors recommend that adequate documentation and records of all meetings with MG Corporation are maintained.</p>

## 4.2 Recommendations for revision

This CAR is the first report to assess compliance since operation of the project within Weaber Plain commenced and consequently it has provided an opportunity to evaluate the practicality, effectiveness and necessity of the management and monitoring actions contained within the EMP. It is clear from the results of the audit that ongoing monitoring requirements for Weaber Plain has proved complex.

Baseline studies for Weaber Plain have been completed and KAI now has operational experience of the project including ongoing monitoring requirements. Information gained from these aspects of the project has provided a greater knowledge of the surrounding environment, risks of impact, and practicality and effectiveness of implementation of actions.

Specific recommendations for the actions that were assessed as potentially non-conformant are detailed in Table 6; however, general recommendations for EMP revision, based on audit results and advice received from LandCorp and KAI during the preparation of the CAR, are also outlined below:

1. The farm lots are currently being managed by one operator (KAI) rather than the original plan for individual lot owners. This provides a basis for the need to review the entire EMP to remove reference to individual lot owners and any management actions that were included to effectively manage a number of individuals.
2. Deletion of actions that have been completed and do not need to be undertaken for future stages.
3. Amendment of actions that have proved impractical or unnecessary to implement on site given current experience operating the farm lots, while still ensuring removal of actions will not result in increased environmental impact.
4. Amendment of monitoring requirements based on increase in knowledge of the environmental impacts of the project and practicality to implement (refer to Table 6 for specific recommendations).  
Note: any revision of monitoring requirements in the EMP needs to be done concurrently with revision of EPBC Act approval requirements and approved management plans to ensure consistency.
5. Amalgamation of Weaber Plain and Knox Creek Plain EMPs to remove discrepancies in management between these two plans to ensure reduced risk in potential non-conformance and a more streamlined auditing process for future CARs.
6. Evaluation of EMP against EPBC Act required management plans to ensure consistency and removal (through EMP revision) of discrepancies, while still ensuring environmental objectives of all plans will be achieved (refer to Section 2.2 for differences in surface water and groundwater objectives across approvals).
7. Potential revision of Aboriginal heritage management requirements given MG Corporation involvement in the project. Note: Any revision should be undertaken in consultation with MG Corporation and Department of Aboriginal Affairs (DAA).

Additional specific recommendations have also been made for conformant items where auditors have identified the opportunity for revision. These are detailed in Table 7 and Appendix 3.

Table 7 Recommendations for revision of conformant EMP items

Item	Action	Recommendations
EMP 29	Notify the DPW AND/OR DER of hydrocarbon spills in accordance with the Environmental Protection (Unauthorised Discharges) Regulations 2004.	There are no notification requirements outlined in the Environmental Protection (Unauthorised Discharges) Regulations 2004; as such, the auditors recommend revision of this item to refer to the use of the DER s 72 (of the EP Act) waste discharge notification form and provide more explicit guidance on the type and scale of spills that would trigger a notification.
EMP 45	Burning of vegetation will occur only at times when prevailing winds will direct smoke and ash away from residential areas	The auditors recommend deletion of this action should revision of EMP occur as no residential areas in proximity to farmland – this action was more relevant to the Phase 1 construction of the M2 Channel, now completed.
EMP 47	Proponent shall notify the nearby residences of construction activities and the predicted nature and duration of proposed burning activities	Refer to EMP 45.
EMP 85	Undertake monitoring of the chemical and nutrient parameters determined by DoW licence conditions in bores established under Item 83.	The auditors recommend deletion of this action as Department of Water (DoW) licence conditions not applicable.
EMP 88	Undertake monitoring of the bores established under Item 86 for physical, chemical and nutrient parameters as determined by DoW licence conditions if regional bore ground water quality exceeds triggers.	The auditors recommend amending or deleting this action as reference to DoW licence conditions is not applicable.
EMP 90	Establish and maintain a database of groundwater chemical and nutrient parameters.	It is not clear to the auditors how the data contained within the database is analysed to ensure trigger levels are not exceeded. The auditors recommend revision of the database to: <ul style="list-style-type: none"> <li>include the determined trigger values for each parameter</li> <li>distinguish between high and low intensity bores (as in D_036)</li> <li>distinguish between Weaber Plain and Knox Creek Plain bores (as in D_036)</li> <li>denote frequency of monitoring (as in D_036).</li> </ul>
EMP 96	Construct a tailwater retention area on each farm lot sufficient to retain stormwater runoff during the periods most critical (low flow periods) to the Keep River system in consultation with DAFWA and the Office of the Environmental Protection Agency.	The auditors recommend revision of the wording of this action if the EMP is to be updated as the need for tailwater retention areas in each lot is no longer valid and retention areas are being constructed to receive water from more than one farm lot.
EMP 99	Determine AUSRIVAS trigger score levels for aquatic macro-invertebrates in consultation with the IRG.  Updated wording of C'wealth EPBC Approval (2010/5491) condition 11f: <i>“Use of best practice multivariate analyses on species level macro-invertebrates and fish assemblage data, within an adequate experimental design  (as defined in the AFMP required under condition 10), using multiple indices of ‘ecological condition’ and a ‘weight of evidence’ approach, to assess any change in ecological health of Keep River pools (K1, 2, and 3) relative to baseline and upstream reference sites”.</i>	The auditors recommend updating the wording of EMP 99, to the satisfaction of the OEPA, to reflect the intent of the varied condition 11f in the EPBC Act approval (EPBC 2010/5491) (variation dated 28 March 2014). AusRivAS trigger values are no longer required under EPBC 2010/5491 and as such should be removed from the Discharge Management Sub-plan.
EMP 102	Monitor water quality at the stormwater outlet from the Development Area, in consultation with DAFWA, DoW and DPW AND/OR DER.	The auditors recommend clarifying the timing of this action to state “When flowing in the dry season” (as wet season analysis not expected to be relevant due to dilution factor and lack of on-farm activity).

Item	Action	Recommendations
<i>KEMP 102</i>	<i>Monitor water quality at the stormwater outlet from the Development Area</i>	Refer to EMP 102.
EMP 104	Monitor water flow at the stormwater outlet from the Development Area, Border Creek and the Keep River, determined in consultation with IRG, DAFWA, DoW and DPW AND/OR DER.	The auditors recommend clarifying the timing of this action to state "When flowing in the dry season".
EMP 105	Develop and implement an adaptive groundwater and stormwater discharge program that addresses: <ul style="list-style-type: none"> <li>• design and location of dewatering infrastructure</li> <li>• design and location of discharge infrastructure</li> <li>• discharge rates, rules and contingency actions</li> <li>• monitoring locations and requirements including infrastructure and setup</li> <li>• written evidence of any Northern Territory Government permits that are required for discharge of groundwater</li> <li>• management measures that ensure discharge of water will not impact on water quality in Border Creek/Keep River; this includes erosion protection measures.</li> </ul>	The auditors recommend revision of this action in consultation with the IRG and to the satisfaction of the OEPA with respect to "stormwater discharge" as, based on the advice received, stormwater will not be deliberately discharged from the project area in the dry season as part of standard management (i.e. accidental discharge would only occur in the event of a breach of the tailwater retention system). In the wet season stormwater will overflow from all areas (inside and outside the project area) and any stormwater released above tailwater storage capacity will be subject to significant dilution.
EMP 106	Refine the discharge dilution model/relationship based on river flow monitoring data and water quality history from the Ord Stage 1 D4 drain and available water quality data from the Keep River system.	The auditors recommend revision of this action to remove reference to the D4 drain.
<i>KEMP 125</i>	<i>Stabilise and spread topsoil (if available) in areas identified as containing vegetation below a rating of 'Very Good' in accordance with species lists and planting procedures determined in consultation with DPW.</i>	The auditors recommend revision of this action to remove reference to species lists and planting procedures as the action does not include a revegetation requirement.
EMP 158	Where topsoil is not available, import topsoil in consultation with the Department of Parks and Wildlife (DPW) Kununurra office.	The auditors recommend deletion of this action in future revisions of the EMP if topsoil is never intended to be imported.



Table 8 Statement 938 Audit Table

Audit code	Subject	Action	How	Evidence	Phase	Timeframe	Status	Further information
938:M1.1	Implementation	The proponent shall implement the proposal as documented and described in Schedule 1 of this Statement, subject to the conditions and procedures of this Statement.	Implement Proposal as described in Schedule 1	Refer schedule 1 audit table (Appendix 2)	Overall	Ongoing	Compliant	Refer schedule 1 audit table (Appendix 2).
938: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 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.	Submit written notification to the CEO of OEPA	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Overall	Within 28 days of change of contact details.	Compliant	No changes to date
938:M3.1	Time limit for Proposal Implementation	The proponent shall not commence implementation of the proposal after the expiration of 5 years from the date of this Statement, and any commencement, within this 5 year period, must be substantial.	Commence substantial implementation of Proposal by 12 June 2018	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Overall	By 12 June 2018	Completed	Item assessed as completed in a previous audit period.
938:M3.2	Time limit for Proposal Implementation	Any commencement of implementation of the proposal, within 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 5 years from the date of this Statement.	Provide written evidence of substantial commencement of implementation on or before 12 June 2018	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Overall	By 12 June 2018	Completed	Item assessed as completed in a previous audit period.
938:M4.1	Compliance reporting	The proponent shall prepare and maintain a Compliance Assessment Plan to the satisfaction of the CEO.	Prepare a Compliance Assessment Plan and submit to the CEO of OEPA for approval	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Overall	Ongoing	Completed	Item assessed as completed in a previous audit period.
938: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. reporting of potential non-compliances and corrective actions taken; 5. the table of contents of compliance reports; and 6. public availability of compliance reports.	Prepare a Compliance Assessment Plan addressing all requirements	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Overall	Prior to implementation	Completed	Item assessed as completed in a previous audit period.
938:M4.3	Compliance reporting	The proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by Condition 4-1.	Undertake annual compliance assessments in accordance with the approved Compliance Assessment Plan	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Overall	Ongoing	Compliant	The 2014 CAR assessed compliance with conditions in accordance with the approved CAP.
938: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.	Prepare and retain Annual Compliance Assessment Reports in accordance with the approved Compliance Assessment Plan Make compliance assessment reports available to CEO of OEPA on request	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Overall	Ongoing	Compliant	Reports retained by Strategen, LandCorp and DSD.
938:M4.5	Compliance reporting	The proponent shall advise the CEO of any potential non-compliance within 7 days.	Written correspondence to CEO of OEPA within 7 days of any potential non-compliance	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 This report	Overall	Within 7 days of a potential non-compliance being known	Compliant	No non compliances with the statement have been recorded during the audit period.

Audit code	Subject	Action	How	Evidence	Phase	Timeframe	Status	Further information
938:M4.6	Compliance reporting	<p>The proponent shall submit a compliance assessment report annually from the date of issue of this Statement addressing the previous twelve month period or other period as accepted by the CEO. The compliance assessment report shall:</p> <ol style="list-style-type: none"> <li>1. be endorsed by the proponent's Managing Director or a person delegated to sign on the Managing Director's behalf;</li> <li>2. include a statement as to whether the proponent has complied with the conditions;</li> <li>3. identify all potential non-compliances and describe corrective and preventative actions taken;</li> <li>4. be made publicly available in accordance with the approved Compliance Assessment Plan; and</li> <li>5. indicate any proposed changes to the Compliance Assessment Plan required by Condition 4-1.</li> </ol>	Submit Annual Compliance Assessment Reports addressing all requirements annually to OEPA	<p>R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015</p> <p>C_003_OEPA_Ord River Irrigation Area Stage 2 (M2) Supply channel Shire of Wyndham-East Kimberley - Ministerial Statement 938 - Desktop Audit Report Results_17042015</p> <p>Report publicly available at:  <a href="http://www.dsd.wa.gov.au/docs/default-source/default-document-library/ord-river-irrigation-area-stage-2_march-2015?sfvrsn=2">http://www.dsd.wa.gov.au/docs/default-source/default-document-library/ord-river-irrigation-area-stage-2_march-2015?sfvrsn=2</a>This report</p>	Overall	By June 2014 and annually thereafter	Compliant	<p>The 2014 CAR was prepared and submitted by the proponent and addresses the five items outlined in this condition. Item 5 was not explicitly addressed in the CAR; however there were no apparent changes to the approved CAP; as such, auditors have assessed this item as compliant.</p> <p>The 2014 CAR is on the DSD website.</p>
938:M5.1	Environmental Management Program	<p>The proponent shall implement the proposal in accordance with the "Environmental Management Programme", dated July 2011, or subsequent revisions approved by the CEO.</p>	Implement approved Environmental Management Programme	<p>Environmental Management Plan, dated October 2013</p> <p>R_059_KBC_ORIA Knox Creek Plain Environmental Management Program_00082015</p> <p>C_058_OEPA_ORIA Stage 2 - Ministerial Statement 938 - Knox Creek Plain EMP and FPDP_04112015</p> <p>Refer to EMP audit tables (Appendix 3)</p>	Overall	Ongoing	Compliant	<p>The October 2013 EMP was approved in December 2013.</p> <p>The Knox EMP was approved in November 2015 as a Part B revision of the EMP and now requires implementation for works undertaken as part of the Knox Creek Plain stage of development.</p> <p>Refer to EMP audit tables (Appendix 3).</p> <p><u>Weaber Plain</u>  Of 178 audit items assessed for the Weaber EMP:</p> <ul style="list-style-type: none"> <li>• 84 were 'conformant'</li> <li>• 62 were 'completed'</li> <li>• 11 were 'not required at this stage'</li> <li>• 20 were 'potentially non-conformant (PNC)'</li> <li>• one was not able to be audited.</li> </ul> <p>Approximately 11% of management actions were potentially non-conformant. The majority of these actions relate to an aspect of formal monitoring that is currently not being undertaken, or is being partially undertaken, as prescribed in the EMP. There has been no reported or auditor-observed significant environmental impact resulting from the project to date.</p> <p>Refer to section 4.1.1 for further detail.</p> <p><u>Knox Creek Plain</u>  Of 162 management actions assessed for the Knox EMP:</p> <ul style="list-style-type: none"> <li>• 8 were 'conformant'</li> <li>• 5 were 'completed'</li> <li>• 148 were 'not required at this stage'</li> <li>• one was 'potentially non-conformant'.</li> </ul> <p>Less than 1% of management actions were potentially non-conformant.</p> <p>The auditors consider that on balance the EMP (including its addendum, the Knox EMP) has been implemented satisfactorily and the proponent is; therefore, compliant with condition 5-2.</p>

Audit code	Subject	Action	How	Evidence	Phase	Timeframe	Status	Further information
938:M6.1	Final Project Design	The proponent shall implement the proposal in accordance with the "Final Project Design Plan", dated July 2011, or subsequent revisions approved by the CEO.	Implement approved Final Project Design Plan	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 R_002_KBC_Knox Creek Plan Agricultural Development Final Project Design Plan_01082015 C_058_OEPA_ORIA Stage 2 - Ministerial Statement 938 - Knox Creek Plain EMP and FPDP_04112015	Overall	Ongoing	Completed for Weaber Plain Compliant for Knox Creek Plain	Condition previously assessed as Completed (for the Weaber Plain) A Final Project Design Plan (FPDP) has now been prepared and approved for the Knox Creek Plain stage of the Stage 2 development. The Knox FPDP has been classed as an addendum (Part B) to the 2011 (Weaber Plain) FPDP and as such requires implementation. No ground works were commenced in the audit period - assessment of compliance with the approved design will proceed once ground disturbance occurs.
938:M7.1	Final Decommissioning Plan	At least six months prior to the anticipated date of decommissioning, or at a time accepted by the CEO, the proponent shall prepare a Final Decommissioning Plan designed to ensure that the site is left in a suitable condition, with no liability to the State. The Final Decommissioning Plan shall be prepared in accordance with "Preliminary Decommissioning Plan", approved as part of the "Environmental Management Programme" dated July 2011 and required by Condition 5-1, or subsequent revisions approved by the CEO. The Final Decommissioning Plan shall address: 1. removal or, if appropriate, retention of plant and infrastructure; 2. rehabilitation of all disturbed areas to a standard suitable for the accepted new land use(s); and 3. identification of contaminated areas, including provision of evidence of notification to relevant statutory authorities.	Prepare a Final Decommissioning Plan addressing all requirements and submit to CEO of OEPA for approval in accordance with timeframe	Final Decommissioning Plan	Overall	At least six months prior to the anticipated date of decommissioning or at a time accepted by the CEO	NR	Decommissioning relates to a later phase
938:M7.2	Final Decommissioning Plan	The proponent shall implement the Final Decommissioning Plan required by Condition 7-1 until such time as the CEO determines that decommissioning is complete.	Implement Final Decommissioning Plan	Annual Compliance Assessment Report	Decommissioning	Until such time as the CEO determines that decommissioning is complete	NR	Decommissioning relates to a later phase
938:M7.3	Final Decommissioning Plan	The proponent shall make the Final Decommissioning Plan required by Condition 7-1 publicly available, to the requirements of the CEO.	Make Final Decommissioning Plan available to stakeholder or public upon request and within 7 days of the receipt of the request	Final Decommissioning Plan publicly available	Overall	To the requirements of the CEO	NR	Decommissioning relates to a later phase

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## 5. References

- Environmental Protection Authority (EPA) 2000 *Ord River Irrigation Area Stage 2 (M2 Supply Channel), Kununurra Part 1 – Biodiversity Implications. Report and Recommendations of the Environmental Protection Authority*, Bulletin 988, August 2000.
- Environmental Protection Authority (EPA) 2001, *Ord River Irrigation Area Stage 2 (M2 Supply Channel), Kununurra Part 2 – Management. Report and Recommendations of the Environmental Protection Authority*, Bulletin 1016, May 2001.
- Department of State Development and LandCorp (DSD & LandCorp) 2013, *Ord River Irrigation Area – Weaber Plain Development Project: Environmental Management Program*, October 2013.
- Kimberley Boab Consulting (KBC) 2015a, *Ord River Irrigation Area Knox Creek Plain Environmental Management Program*, Prepared for Kimberley Agricultural Investment Pty Ltd, August 2015.
- Kimberley Boab Consulting (KBC) 2015b, *Knox Creek Plain Agricultural Development Final Project Design Plan*, Prepared for Kimberley Agricultural Investment Pty Ltd, August 2015.
- Kinhill Pty Ltd (Kinhill) 2000, *Ord River Irrigation Area Stage 2 Proposed Development of the M2 Area Environmental Review and Management Program / Draft Environmental Impact Statement*, Prepared for Wesfamers Sugar Company Pty Ltd, Marubeni Corporation and The Water Corporation of Western Australia, January 2000.
- Office of Environmental Protection Authority (OEPA) 2012a, *Post Assessment Guideline for Preparing a Compliance Assessment Plan*, OEPA, Perth, August 2012.
- Office of Environmental Protection Authority (OEPA) 2012b, *Post Assessment Guideline for Preparing an Audit Table*, OEPA, Perth, August 2012.
- Office of Environmental Protection Authority (OEPA) 2012c, *Post Assessment Guideline for Making Information Publically Available*, OEPA, Perth, August 2012.
- Office of Environmental Protection Authority (OEPA) 2012d, *Post Assessment Guideline for Preparing a Compliance Assessment Report*, OEPA, Perth, August 2012.
- Strategen 2011, *ORIA Stage 2-Weaber Plain Development Project Environmental Management Program*, report prepared for LandCorp, Rev 2, June 2011.
- Strategen 2013, *Ord River Irrigation Area Stage 2 (M2 Supply Channel), Compliance Assessment Plan – Statement 938*, report prepared for LandCorp, September 2013.



**Appendix 1**  
**Statement of compliance**





## Statement of Compliance

### 1 Proposal and Proponent Details

Proposal Title	<i>Ord River Irrigation Area Stage 2 (M2 Supply Channel)</i>
Statement Number	938
Proponent Name	<i>Minister for State Development</i>
Proponent's Australian Company Number (where relevant)	

### 2 Statement of Compliance Details

Reporting Period	1/01/15 to 31/12/15
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Implementation phase(s) during reporting period (please tick ✓ relevant phase(s))							
Pre-construction	✓	Construction		Operation	✓	Decommissioning	

Audit Table for Statement addressed in this Statement of Compliance is provided at Attachment:	2
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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 Office of the Environmental Protection Authority's (OEPA) *Post Assessment Guideline for Preparing an Audit Table*, as amended from time to time. The 'Status Column' of the audit table must accurately describe the compliance status of each implementation condition and/or 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.

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)		Yes (please proceed to Section 4)	✓

Each page (including Attachment 2) must be initialed by the person who signs Section 4 of this Statement of Compliance. INITIALS:     *LD*

**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?	
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 General Manager, OEPA?	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to OEPA verbally      Date _____ <input type="checkbox"/> Reported to OEPA 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"> <li>• in the reporting period addressed in this Statement of Compliance; and</li> <li>• as outlined in the approved Compliance Assessment Plan for the Statement addressed in this Statement of Compliance.</li> </ul> (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.

Each page (including Attachment 2) must be initialed by the person who signs Section 4 of this Statement of Compliance. INITIALS:   *LD*

**4 Proponent Declaration**

I, .....STEPHEN WOOD, DIRECTOR GENERAL....., (full name and position title) declare that I am authorised on behalf of MINISTER STATE DEVELOPMENT. (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:.....SW..... Date:.....4/5/16.....

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 General Manager of the OEPA has powers under section 47(2) of the *Environmental Protection Act 1986* to require reports and information about implementation of the proposal to which the statement relates and compliance with the implementation conditions.

**5 Submission of Statement of Compliance**

One hard copy and one electronic copy (preferably PDF on CD or thumb drive) of the Statement of Compliance are required to be submitted to the General Manager, OEPA, marked to the attention of Manager, Compliance Branch.

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

**6 Contact Information**

Queries regarding Statements of Compliance, or other issues of compliance relevant to a Statement may be directed to Compliance Branch, OEPA:

**Manager, Compliance Branch  
Office of the Environmental Protection Authority**

Postal Address: Locked Bag 10  
EAST PERTH WA 6892

Phone: (08) 6145 0800

Email: [compliance@epa.wa.gov.au](mailto:compliance@epa.wa.gov.au)

**7 Post Assessment Guidelines and Forms**

Post assessment documents can be found at [www.epa.wa.gov.au](http://www.epa.wa.gov.au) in the following locations:

- Post Assessment Guidelines: Home>Policies and Guidelines>Post Assessment Guidelines;
- Post Assessment Forms: Home>Post Assessment Forms.

Each page (including Attachment 2) must be initialed by the person who signs Section 4 of this Statement of Compliance. INITIALS: SW

## ATTACHMENT 1

Table 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"> <li>ongoing requirements that have been met during the reporting period; and</li> <li>requirements with a finite period of application that have been met during the reporting period, but whose status has not yet been classified as 'completed'.</li> </ul>
Completed	CLD	A requirement with a finite period of application has been satisfactorily completed.	This term may only be used where: <ul style="list-style-type: none"> <li>audit elements have a finite period of application (e.g. construction activities, development of a document);</li> <li>the action has been satisfactorily completed; and</li> <li>the Office of the Environmental Protection Authority (OEPA) has provided written acceptance of 'completed' status for the audit element.</li> </ul>
Not required at this stage	NR	The requirements of the audit element were not triggered during the reporting period.	This should be consistent with the 'Phase' column of the audit table.
Potentially Non-compliant	PNC	Possible or likely failure to meet the requirements of the audit element.	This term may apply where during the reporting period the proponent has identified a potential non-compliance and has not yet finalized its investigations to determine whether non-compliance has occurred.
Non-compliant	NC	Implementation of the proposal has not been carried out in accordance with the requirements of the audit element.	This term applies where the requirements of the audit element are not "complete" have not been met during the reporting period.

POST ASSESSMENT FORM 2

In Process	IP	Where an audit element requires a management or monitoring plan 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 by the OEPA or the other government agency and assessment by the OEPA or other government agency for approval is still pending.	<p><b>The term 'In Process' may not be used for any purpose other than that stated in the Definition Column.</b></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>
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Each page (including Attachment 2) must be initialed by the person who signs Section 4 of this Statement of Compliance. INITIALS:   *sh*



**Appendix 2**  
**Schedule 1 audit table**

Schedule 1 audit table

Audit Code	Element	Description	Evidence	Status	Comments
S1_2.1	Land within the Project Area	Project Area 76 000 ha	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 C_057_D Pearce_RE Ord Outstanding audit evidence_13112015	Compliant	A total of 7017.97 ha in Weaber Plain have been developed as land for irrigation since commencement with an additional 914.12 ha cleared for infrastructure, for a total of 7932.09 ha.
S1_2.2		Land managed as buffer 42 500 ha	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 R_002_KBC_Knox Creek Plan Agricultural Development Final Project Design Plan_01082015	Compliant	The previous compliance report indicated 11 562.41 ha has been set aside as buffer, relating to the Weaber Plain stage (now referred to as Goonig) of the proposal. The EMP and FPD for the Knox Creek Plain stage of development was approved this audit period with an additional 6417 ha to be managed as buffer, for a total of 17 979 ha.
S1_2.3		Land for irrigable development 30 500 ha	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 C_057_D Pearce_RE Ord Outstanding audit evidence_13112015	Compliant	A total of 7017.97 ha in Weaber Plain only have been developed as land for irrigation since commencement.
S1_2.4		Infrastructure area 3000 ha	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 LandCorp advice (14-17-Sept-2015)	Compliant	No change since previous audit period. As constructed shapefiles indicate 914.12 ha were cleared to 29 October 2013 (no more clearing for infrastructure has occurred since that date).
S1_2.5	Land outside the Project Area	M2 channel (lake Kununurra to project area) 690 ha	LandCorp advice (14-17-Sept-2015)	Not required at this stage	No clearing has occurred in relation to channel works outside the Project area.
S1_2.6		Wyndham Port Facilities 1 ha	LandCorp advice (14-17-Sept-2015)	Not required at this stage	No activity associated with the Wyndham Port Facilities has occurred or is required at this stage.
S1_2.7	Production	Raw sugar 400 000 tpa	LandCorp advice (14-17-Sept-2015)	Not required at this stage	No production of raw sugar has occurred.
S1_2.8		Molasses 160 000 tpa	LandCorp advice (14-17-Sept-2015)	Not required at this stage	No production of molasses has occurred.



Audit Code	Element	Description	Evidence	Status	Comments
S1_2.9	Infrastructure	Irrigation channels 160 km	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 LandCorp advice (14-17-Sept-2015)	Compliant	37 km channel of constructed to date. No change since previous audit period.
S1_2.10		Annual water requirements 740 GL	C_055_DoW_RE Issue of a licence under the Rights in Water and Irrigation Act 1914 Property: Goomig Farm Area_15052015	Compliant	Department of Water issued a licence with an annual Water Entitlement of 47 GL/annum.
S1_2.11		Drains 153 km*	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 LandCorp advice (14-17-Sept-2015)	Compliant	No change since previous audit period. 51 km of major drains constructed to date
S1_2.12		Flood protection levees 142 km	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 LandCorp advice (14-17-Sept-2015)	Compliant	No change since previous audit period. 48 km of flood protection levees constructed to date.
S1_2.13		Balancing storage dams (operating volume) 5.6 GL	L_056_GHD_Ord River Irrigation Expansion Project Stage 2 (Goomig Farmlands Overall Schematic_00042015)	Compliant	Storage Dams for Weaber Plain are contained within the M2 channel between M2C3 and M2C4. The reach of the M2 channel between the M2C3 and M2C4 structures holds up to 390ML, of which 100ML is considered 'Operational Storage', i.e. balancing storage.
S1_2.14		Roads 161 km	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Compliant	No change since previous audit period. 11.9 km of road has been constructed to date.
S1_2.15		Power lines 165 km	LandCorp advice (14-17-Sept-2015) Site inspection (15-Sept-2015)	Not required at this stage	No construction of power lines has occurred to date.
S1_2.16	Wyndham Port	Raw sugar store 180 000 t	LandCorp advice (14-17-Sept-2015)	Not required at this stage	Construction has not yet commenced.
S1_2.17		Molasses store 75 000 t	LandCorp advice (14-17-Sept-2015)	Not required at this stage	Construction has not yet commenced.



**Appendix 3**  
**Environmental Management Program**  
**audit tables**



## Audit tables relevant to sub-plans of the ORIA Stage 2 Environmental Management Plan – dated October 2013

Note: For audit purposes the numbering of Environmental Management Plan (EMP) items is sequential rather than the numbering used in the original document. Where the wording of an EMP item makes reference to other EMP items Strategen has referenced the sequential number.

### Legend:

Responsibility:

LANDCORP	LANDCORP (previously Leighton)	KAI and LANDCORP	KAI
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### Current status:

Items shown in red text require auditing during the 2015 audit period.

*Italicised* text requires review and/or updating during the 2015 audit period.

### Soil conservation management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Education</b>									
EMP 1.	Provide an Information Package to the owner/leaseholder, which outlines: <ul style="list-style-type: none"> <li>the susceptibility of soil from disturbed areas to erosion from high intensity rainfall during the wet season</li> <li>soil erosion prevention measures</li> <li>irrigation strategies to reduce potential impacts of sodicity and salinity</li> <li>procedures to monitor soil salinity and sodicity.</li> </ul>	To reduce the potential for agricultural practices to result in erosion by ensuring prospective landowners are aware of the appropriate risks and management measures.	At sub-lease/sale of lots	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	Completed	Item assessed as completed for Weaber Plain. As the same leaseholder (KAI) is responsible for Knox Creek Plain, this item has been assessed as completed.
<b>Induction</b>									
EMP 2.	Induct construction personnel on soil erosion control management measures.	To reduce the potential for construction activities to result in erosion by ensuring construction personnel are aware of appropriate management measures.	Within one week of personnel commencing work on-site	LANDCORP / KAI	LandCorp advice (14–17-Sept-2015) C_062_D Pearce_EMP2 - NDC induction records - Email 1 of 2_15122015 R_063_NDC_Site Induction Forms_17072014 R_064_LandCorp_Ord 2014 Environmental Induction_00002014	Conformant	Northern Development Company (NDC) was on site this audit period to conduct repairs on segments of channel infrastructure - all personnel have been previously inducted by LandCorp during the 2014 audit period.	NR	Construction not yet commenced.
<b>Construction</b>									
EMP 3.	Maintain records of ground disturbing activities that include the date that the boundary of clearing was delineated, the date of clearing and location of topsoil storage.	To provide data to inform management.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 4.	Restrict ground-disturbing activities to the dry season wherever practicable.	To prevent ground-disturbing activities when the risk of erosion is high.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 5.	Ensure a drainage management system that includes a sediment trap is in place around all borrow pits.	To reduce the potential for erosion of borrow pits to result in adverse environmental impacts.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 Site inspection 01/09 to 04/09/2014 (Area 11 Borrow pit rehabilitated, drainage system removed)	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 6.	Delineate the boundaries of the vegetation to be cleared for construction in the field with flagging tape, signage or fencing.	To minimise erosion by preventing unauthorised ground disturbance.	Prior to ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015)	Conformant	LandCorp completed clearing associated with project infrastructure during the 2013 audit period. KAI is not constructing shared infrastructure; however, clearing of farm lots is occurring. Clearing boundaries were observed to be delineated with flagging tape, levee banks and the use of 'Trimble GPS'.	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 7.	Stage clearing of vegetation so that areas are cleared only as required.	To reduce the potential for erosion by minimising the area of ground surface exposed at any one time, to allow native animals the chance to move on.	During construction of shared infrastructure	LANDCORP / KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period (as does not relate to clearing of farm lots).	NR	Construction not yet commenced.
EMP 8.	Restrict movement of construction machinery and equipment to designated tracks and roads.	To prevent unauthorised ground disturbance.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.

**Topsoil**

EMP 9.	Maintain records of topsoil stockpiles that include the location of stockpile and location of where topsoil was removed from.	To ensure topsoil is utilised in the most appropriate locations.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 10.	Remove topsoil from: <ul style="list-style-type: none"> <li>all areas to be excavated</li> <li>all areas where spoil from excavation is to be stored.</li> </ul>	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 11.	Stockpile cleared topsoil and subsoil separately, away from irrigation channels, for later use in rehabilitation in accordance with the Rehabilitation Management Sub-plan	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 12.	Install topsoil containment measures such as sediment fencing around stockpiles.	To reduce potential for erosion of topsoil stockpiles.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.

**Buffer**

EMP 13.	Install signage to prevent unauthorised access to the buffer in accordance with the Buffer Management Sub-plan.	To prevent damage to the buffer from unauthorised access.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not scheduled to commence until 2016.
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**Rehabilitation**

EMP 14.	Rehabilitate areas disturbed as a result of construction that are no longer required post-construction in accordance with the Rehabilitation Management Sub-plan.	To maximise the potential for successful rehabilitation.	As specified in the Rehabilitation Management Sub-plan	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period. Refer to Rehabilitation audit tables regarding rehabilitation monitoring for monitoring and assessment of rehabilitation success.	NR	Construction not scheduled to commence until 2016.
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**Soil monitoring regime**

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
<b>Construction</b>										
EMP 15.	Soil erosion within 50 m of construction activities.	Weekly during construction of shared infrastructure	No soil erosion occurring as a result of construction activities.	1. Investigate cause of erosion. 2. Investigate ways to minimise erosion and increase landform stability. 3. Implement remedy. 4. Monitor success of remedy.	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 16.	Management of top soil stockpiles.	Weekly during construction of shared infrastructure	Topsoil stockpiles are being managed appropriately, including no indication of erosion present.	1. Investigate cause of erosion. 2. Investigate ways to minimise erosion and increase landform stability. 3. Implement remedy. 4. Monitor success of remedy.	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 17.	Extent of clearing and ground disturbance along pre-defined boundaries.	Weekly during construction of shared infrastructure	No clearing or disturbance outside of pre-defined boundaries (Figure 2).	1. Report as Environmental Incident and initiate Incident Procedure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
<b>Operation</b>										
EMP 18.	Soil erosion within 50 m of infrastructure (including roads, channels, sediment basins and hillside drains).	As required after construction, e.g. after significant rainfall events.	Landform is safe and stable with no soil erosion occurring as a result of runoff from infrastructure.	1. Investigate cause. 2. Identify ways reduce erosion produced as a result of infrastructure such as reducing runoff velocity, diverting runoff and application of hydromulch to areas identified as susceptible to erosion from runoff. 3. Implement remedy. 4. Monitor success of remedy.	LANDCORP / KAI	Site inspection (15-Sept-2015) P_006 P_007 R_008_LandCorp_Goomig Asset Management post-LandCorp_00002015	Conformant	Evidence of repairs to channels and drain reinforcement observed during site inspection. No evidence of erosion was observed during site inspection. <u>Note:</u> Ownership of M2 and M2S channels has been transferred to Water Corporation with management arrangements of these assets still being finalised	NR	Construction not yet commenced.
EMP 19.	Surface and subsoil electrical conductivity within the project area, with a specific focus on areas with Aquitaine clay soils, including: • at least one sample from each lot • a representative spread of sites throughout the Buffer Area.	Twelve monthly, commencing prior to clearing and at the end of each dry season during operation of irrigation infrastructure.	Salinity levels do not exceed 400 mS/m in surface or subsurface soils.	1. Map the distribution of soil with salinity exceeding target levels. 2. Investigate cause (which could include determining if salinity is due to a rise in the groundwater or 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 sodicity in accordance with the Groundwater Management Sub-plan. 4. Identify whether remedial action is required, such as installation of field drains in accordance with the Groundwater Management Sub-plan. 5. Implement remedial action on a trial basis in areas identified from mapping. 6. Monitor success of remedy, increasing the frequency of soil monitoring if salinity exceeds target levels.	LANDCORP / KAI	KAI advice (14–17-Sept-2015)	Potentially non-conformant	Soil testing of salinity has not been undertaken in the audit period. KAI advised that soil sampling (for the parameters and those described in EMP 20) has not occurred in 2015 as there has been limited irrigation occurring (on Lots 17 and 18 only) and no indication of decline in soil structure or increases in salinity after this short period, based on its testing to date. KAI advised it received verbal advice from a reputable soil scientist that soil sampling should be undertaken when yield loss indicates potential soil quality decline. As such, KAI queries the utility of the frequency and scope of the mandated routine sampling. KAI advised that to bring itself back into conformance it commits to securing qualified scientific input regarding the Weaber Plain and Knox Creek Plain soil sampling regimes in 2016 to support its proposed modifications to the current regime and to implement the recommendations of the scientific input. <u>Recommendation:</u> The auditors recommend revision of this item based on the qualified scientific input being sought.	NR	Construction not yet commenced.
EMP 20.	Surface and subsoil ESP and pH within the project area, with a specific focus on areas with Aquitaine clay soils, including: • at least one sample from each lot • a representative spread of sites throughout the Buffer Area.	Twelve monthly, commencing prior to clearing and at the end of each dry season during operation of irrigation infrastructure.	Sodicity levels five years after commencement of irrigation do not exceed an ESP of 6 in surface soils or 15 in subsurface soils.	1. Map the distribution of soil with sodicity exceeding target levels. 2. Investigate cause (which could include determining if changes are consistent with the anticipated initial response to land use change, or 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 sodicity in accordance with the Groundwater Management Sub-plan. 4. Identify whether remedial action is required, such as application of gypsum or sulphur. 5. Implement remedial action on a trial basis in areas identified by mapping. 6. Monitor success of remedy, increasing the frequency of soil monitoring if salinity exceeds target levels.	LANDCORP / KAI	KAI advice (14–17-Sept-2015)	Potentially non-conformant	Soil testing of sodicity has not been undertaken in the audit period. Refer to EMP 19 for KAI justification and proposed approach to bring itself back into conformance. <u>Recommendation:</u> The auditors recommend revision of this item based on the qualified scientific input being sought.	NR	Construction not yet commenced.

## Chemicals management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Education</b>									
EMP 21.	Prospective land managers will be advised of the requirement to comply with procedures for chemical application, and chemical management legislation including: <ul style="list-style-type: none"> <li>Agricultural and Veterinary Chemicals Code Act 1994 (Cwth) and associated acts and regulations</li> <li>Health (Pesticides) Regulations 2011</li> <li>Aerial Spraying Control Act 1966 (WA)</li> <li>Agricultural Produce (Chemical Residues) Act 1983 (WA)</li> <li>Poisons Act 1964 (WA)</li> <li>Veterinary Preparations and Animal Feeding Stuffs Act 1976 (WA)</li> <li>Agriculture and Related Resources (Spraying Restriction) Regulations 1979.</li> </ul>	To reduce the potential for contamination of the environment by farm chemicals by ensuring that farm owners/managers are aware of the specified procedures for chemical application in the project area and informed of their rights and responsibilities under the relevant Acts and Regulations.	At sub-lease of lots.	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
<b>Induction</b>									
EMP 22.	Induct personnel on safe use of chemicals and hydrocarbon management measures, including hydrocarbon handling, disposal and spill response procedures.	To reduce the risk of contamination of the environment.	Within one week of personnel commencing work on site	KAI	R_004_KAI_Ord Irrigation Expansion Project Environment Induction_00002013 R_005_KAI_KAI Induction Register_00002015 C_062_D Pearce_EMP2 - NDC induction records - Email 1 of 2_15122015 R_063_NDC_Site Induction Forms_17072014 R_064_LandCorp_Ord 2014 Environmental Induction_00002014 KAI advice (14-17-Sept-2015)	Conformant	Formal inductions are undertaken by KAI for its farm workforce that includes management of hydrocarbons and chemicals. NDC was on site this audit period to conduct repairs on segments of channel infrastructure - all personnel have been previously inducted by LandCorp during the 2014 audit period. No other construction personnel were on site during this audit period.	NR	Construction not yet commenced.
<b>Storage and transport of chemicals</b>									
EMP 23.	Ensure storage of farm chemicals complies with relevant Australian and Western Australian Standards, including AS 2507-1998 "The storage and handling of agricultural and veterinary chemicals" and Department of Water Toxic and Hazardous Substances – Storage and Use WQPN No. 65.	To prevent potential contamination of the environment and harm to individuals by ensuring appropriate storage and handling of chemicals.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	No farm chemicals stored on site. <u>Note:</u> Chemical storage facilities are planned to be established on-site within Lot 3 in the next audit period.	NR	Construction not yet commenced.
EMP 24.	All hydrocarbons will be stored in accordance with the following: <ul style="list-style-type: none"> <li>Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 (WA)</li> <li>Australian Standard AS 1940-2004: The Storage and Handling of Flammable and Combustible Liquids.</li> </ul>	To minimise the potential for hydrocarbon contamination of the environment.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) P_009	Conformant	Small amounts of hydrocarbons observed appropriately stored on site to service pumps (i.e. diesel in tank on trailer in Lot 14). Most fuel on service trucks. <u>Note:</u> Permanent hydrocarbon storage facilities planned to be established on-site within Lot 3 in the next audit period.	NR	Construction not yet commenced.
EMP 25.	Generators will be located on bunded platforms to contain any fuel leaks.	To minimise the potential for spills and leaks to contaminate the environment.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) P_010	Conformant	Bunded generators observed in KAI development area (Lot 9).	NR	Construction not yet commenced.
EMP 26.	Maintain appropriate spill response equipment and Material Safety Data Sheet (MSDS) information in all hydrocarbon storage and re-fuelling areas and maintenance areas.	To minimise the potential for spills and leaks to contaminate the environment.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) P_011 P_012	Conformant	KAI advised that MSDS and spill response equipment maintained on the refuelling trucks. MSDS file sighted. Spill response equipment also observed adjacent to generator in Lot 9.	NR	Construction not yet commenced.
EMP 27.	Persons designated as responsible for the storage and handling of fertiliser on farms be provided with appropriate training and instruction.	To prevent potential contamination of the environment by ensuring appropriate storage and handling of fertilisers.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	No fertiliser stored or handled on farm lots during this audit period. Fertiliser collected from KAI compound as required. <u>Note:</u> Storage and handling of fertiliser planned to occur on-site within Lot 3 in the next audit period.	NR	Construction not yet commenced.



Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 28.	Transport dangerous goods in accordance with the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 (WA).	To ensure dangerous goods are stored appropriately during transport (e.g. on absorbent material, provision of spill kit, well-ventilated, appropriate documentation and provision of personnel protection equipment for safe handling).	Ongoing from commencement of ground disturbance	KAI	N/A	Unable to audit	Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 (WA) is beyond the scope of this audit.	NR	Construction not yet commenced.
EMP 29.	Notify the DPW AND/OR DER of hydrocarbon spills in accordance with the Environmental Protection (Unauthorised Discharges) Regulations 2004.	To ensure potential spills are appropriately assessed and remediated according to the Environmental Protection (Unauthorised Discharges) Regulations 2004 as hydrocarbons are a Schedule 1 Material in these Regulations.	In accordance with Incident Response Procedure	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	KAI advised that no significant spills have occurred and none were detected during site inspection. One very minor spill, which was considered most likely to be diesel (based on smell), was observed in Area 11. Strategen was advised the spill was most likely to have originated from a contractor to the Shire of Wyndham and East Kimberley (SWEK), as it was adjacent to a blue metal stockpile deposited by SWEK in Area 11. The spill appears to be of such marginal quantity that by itself it would not lead to environmental harm. KAI advised it would notify the DSD due to the potential for third party users such as this leading to compliance concerns for the proponent if the third parties do not have good environmental management practices in place.  <u>Note and recommendation:</u> There are no notification requirements outlined in the Environmental Protection (Unauthorised Discharges) Regulations 2004; as such, the auditors recommend revision of this item to refer to the use of the DER s 72 (of the EP Act) waste discharge notification form and provide more explicit guidance on the type and scale of spills that would trigger a notification.	NR	Construction not yet commenced.
<b>Application of chemicals</b>									
EMP 30.	Maintain registers of all chemicals applied on-site as required under applicable chemical usage legislation.	To provide data for review if monitoring indicates unacceptable impacts to the environment.	Ongoing from commencement of ground disturbance	KAI	KAI advice (14-17-Sept-2015) R_013_KAI_KAI Spraying Log_18052015 R_014_KAI_KAI Spraying Log_20052015 R_015_Lone Eagle_Aerial Request_22062015 R_016_Lone Eagle_Aerial Request_15072015	Conformant	KAI maintains a "Spraying Log" of all chemicals applied on site. KAI also maintains records of any aerial spraying undertaken. Example logs were sighted during the audit.	NR	Construction not yet commenced.
EMP 31.	Restrict chemical and fertiliser use when the tailwater retention capacity is unavailable	To prevent the transporting of nutrients and chemicals downstream	Ongoing from commencement of ground disturbance	KAI	KAI advice (14-17-Sept-2015)	Conformant	KAI advised there has been no tailwater overflow to date as the tailwater retention capacity has not been reached. In addition, a bund has been constructed in the DW4 drain to ensure any excess tailwater is not transported downstream, but is retained within the farm drain/channel network.	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 32.	Commercial pesticide and herbicide spraying will be undertaken only by operators with the appropriate level of ChemCert accreditation.	To minimise spray drift.	Ongoing from commencement of ground disturbance	KAI	P_017 R_018_AusChem_Statement of Reaccreditation Dick Pasfield_29022012 R_071_AusChem_Chemical Use Accreditation for WA Colt Dwyer_00000000 R_072_DAFWA_Pilot Chemical Rating Certificate_29062015	Potentially non-conformant	Pesticide and herbicide spraying is undertaken and/or supervised by operators with the appropriate level of ChemCert accreditation. KAI advised that some spraying is undertaken by personnel who are not accredited; however, these personnel are supervised by personnel who are accredited and have several (up to twenty years) experience. KAI advised that certification of these personnel is currently impractical due to the costs and logistics involved in organising a training program in Kununurra for a small number of personnel. Aerial spraying is undertaken by Lone Eagle (Lance Conley) who has appropriate certification from Department of Agriculture and Food WA (DAFWA). <u>Recommendation:</u> The auditors recommend revision of this item to take into account the logistics of providing accreditation to all personnel, i.e. supervision by personnel with accreditation may be sufficient.	NR	Construction not yet commenced.
EMP 33.	Ensure agricultural chemicals are not directly applied to dedicated on-farm access tracks.	To prevent off-site transportation of chemicals in dust lift-off from access tracks.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	KAI advised chemicals are not directly applied to farm tracks. No evidence observed of application of chemicals on dedicated on-farm tracks.	NR	Construction not yet commenced.
EMP 34.	Chemicals will be applied in accordance with the product label.	To prevent potential contamination of the environment by ensuring appropriate application of chemicals.	Ongoing from commencement of ground disturbance	KAI	R_013_KAI_KAI Spraying Log_18052015 R_019_Roundupag_Roundup Ultramax Herbicide_00000000 R_015_Lone Eagle_Aerial Request_22062015 R_020_Agbitech_Vivusmax_00000000 R_021_Agbitech_Optimol_00072012	Conformant	Example Spraying Logs provided indicated chemicals have been applied at rates within the application rate range outlined on the product labels.	NR	Construction not yet commenced.
<b>Aerial spraying</b>									
EMP 35.	Maintain a register of all aerial spraying operations.	To minimise potential for environmental impacts by ensuring aerial spraying is carried out in an acceptable manner.	Ongoing from commencement of ground disturbance	KAI	R_015_Lone Eagle_Aerial Request_22062015 R_016_Lone Eagle_Aerial Request_15072015	Conformant	KAI maintains records of any aerial spraying undertaken. Example logs were sighted during the audit.	NR	Construction not yet commenced.
EMP 36.	Use accredited operators (e.g. by operators and pilots accredited under the Aerial Agricultural Association of Australia (AAAA) "Spraysafe" program)	To minimise potential for environmental impacts by ensuring aerial spraying is carried out in an acceptable manner, to determine extent of required spray fall-out monitoring.	Ongoing from commencement of ground disturbance	KAI	R_072_DAFWA_Pilot Chemical Rating Certificate_29062015	Conformant	DAFWA Pilot Chemical Rating Certificate for aerial spraying contractor (Lance Conley of Lone Eagle) provided.	NR	Construction not yet commenced.
EMP 37.	Notify neighbours within: • 1500 m of an area to be sprayed with ultra-low volume • 750 m of an area to be sprayed with emulsifiable concentrate by air. Consideration should be given to provide a range of dates in case conditions are not conducive to safely apply the pesticide and to minimise spray drift.	To minimise the risk of adverse health effects caused by spray fall-out.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	No neighbours within 1500 m of areas that have been sprayed.	NR	Construction not yet commenced.
<b>Mixing and washdown facilities</b>									
EMP 38.	Design chemical washdown facilities in accordance with Department of Water, Water Quality Protection Notes on: • Mechanical Equipment Washdown (WQPN No. 68) • Chemical Blending (WQPN No. 7).	To minimise potential for environmental impacts by ensuring appropriate siting (location), design and construction of chemical wash down facilities.	Prior to commencement of planting of crops	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	No washdown facilities are currently located on farms within the Proposal area. Washdown currently undertaken at a compound outside of Proposal area. <u>Note:</u> Washdown is planned to occur on-site within Lot 3 in the next audit period.	NR	Planting of crops not expected to commence until 2018 at the earliest.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 39.	All chemical blending and decanting will be undertaken within a fully-contained area.	To minimise potential for environmental impacts by ensuring chemical spills are contained.	Ongoing from commencement of irrigation	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015)	Conformant	All chemical blending and decanting currently undertaken at a compound outside of Proposal area. <u>Note:</u> Blending and decanting is planned to occur on-site within Lot 3 in the next audit period.	NR	Irrigation not yet commenced.

**Emergency response**

EMP 40.	Develop emergency response procedures in accordance with Department of Water, Water Quality Protection Note <i>Contaminant spills – emergency response</i> (WQPN No. 10).	For determining the appropriate level of response according to the degree (or classification) of the spill.	Prior to commencement of planting of crops	KAI	R_004_KAI_Ord Irrigation Expansion Project Environment Induction_00002013	Potentially non-conformant	KAI Induction Package includes a procedure for reporting incidents; however, Strategen has not sighted a prepared emergency response procedure that outlines “the appropriate level of response according to the degree (or classification) of the spill” in accordance with WQPN 10. <u>Recommendation:</u> The auditors recommend an Emergency Response Procedure be prepared in accordance with this action (updated to align with contemporary guidelines, if appropriate).	NR	Planting of crops not expected to commence until 2018 at the earliest.
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**Disposal**

EMP 41.	Dispose empty chemical containers in accordance with the AgSafe guidelines for disposal of containers.	To minimise potential for environmental impacts by minimising chemical residue in disposed chemical containers.	Ongoing from commencement of irrigation	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015)	Conformant	Empty chemical containers are stored off site at the KAI compound and then routinely collected through a “drum muster”. An assessment specifically against the AgSafe guidelines was not conducted as part of this audit – the auditors have assumed that participation in the drum muster meets the AgSafe guidance. No empty containers were observed within the Project area.	NR	Irrigation not yet commenced.
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**Chemical use monitoring regime**

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 42.	Inspection of permanent hydrocarbon storage facilities.	Three monthly	All hydrocarbon storage devices comply with appropriate standards and/or regulations	1. Non-compliant hydrocarbon storage devices to be replaced/repared as appropriate.	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015)	Conformant	No permanent hydrocarbon storage facilities currently within the Project area. <u>Note:</u> Hydrocarbon storage planned to occur on-site within Lot 3 in the next audit period.	NR	Construction not yet commenced.
EMP 43.	Survey vegetation in the Buffer Area for symptoms of damage typical of chemicals being used in the ORIA.	Annually	No detectable impact on the buffer	1. Investigate the cause. 2. Investigation opportunities to prevent re-occurrences. 3. Inform farm owners of outcomes of the survey. 4. In the event of chemical discharge contrary to Environmental Protection (Unauthorised Discharges) Regulations 2004, report to DPW AND/OR DER.	LANDCORP / KAI	R_066_OLW_Spray Drift Report Goomig Buffer Area_00022015 KAI advice (15-Dec-2015).	Conformant	A visual inspection of the Buffer Area was undertaken by Ord Land and Water (OLW) in February 2015 to inspect for symptoms of damage typical of chemicals being used. The inspection identified some areas where spray drift damage was evident. KAI advised that following the receipt of the inspection report the spray operator was counselled by KAI on the importance of drift minimisation and appropriate spraying practices. A repeat survey will be undertaken following wet season spraying in 2016, to determine the longer term implications of the spray drift and any impacts from 2015/16 wet season spraying.	NR	Construction not yet commenced.

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 44.	Inspect storage facilities and mixing and washdown areas, and surrounds for chemical spills.	Daily during spray operations Monthly at other times	No chemical spills	<ol style="list-style-type: none"> <li>1. Implement emergency response.</li> <li>2. Classify appropriate response.</li> <li>3. Notify authorities if High or Moderate incident impact classifications.</li> <li>4. Review Emergency Response Plan (for High and Moderate incident impact classes).</li> <li>5. Prepare and implement follow-up environmental monitoring (in consultation with DPW AND/OR DER and DoW as required).</li> </ol>	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015)	Conformant	Chemicals not mixed or stored on site <u>Note:</u> Chemical storage, mixing and washdown facilities planned to be established within Lot 3 in the next audit period.	NR	Construction not yet commenced.

## Dust and particulate management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 45.	Burning of vegetation will occur only at times when prevailing winds will direct smoke and ash away from residential areas	To minimise the potential for smoke and ash to affect nearby residents	Ongoing from commencement of ground disturbance	KAI	R_073_DFES_Permit to set fire to the bush_various dates	Conformant	No nearby residential areas. KAI burn in accordance with FESA permits. Example permits provided. <u>Recommendation:</u> The auditors recommend deletion of this action should revision of EMP occur as no residential areas in proximity to farmland – this action was more relevant to the Phase 1 construction of the M2 Channel, now completed.	NR	Construction not yet commenced.
EMP 46.	Provide prospective farm owners/leasees documentation on practices to prevent dust emissions	To reduce the potential for dust generation by minimising ground disturbance	At time of sub-lease	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Sub-lease yet to occur.
EMP 47.	Proponent shall notify the nearby residences of construction activities and the predicted nature and duration of proposed burning activities	To reduce the potential for community impact by ensuring effective communication	As required	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015)	Conformant	No nearby residences. <u>Recommendation:</u> Refer to EMP 45 - potential to delete this action should revision of EMP occur.	NR	Construction not yet commenced.
EMP 48.	Cleared construction surfaces and stockpiles will be watered and/or stabilised where practicable to reduce dust lift-off	To reduce the potential for environmental and community impacts by reducing the potential for dust generation	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 49.	Speed limits will be sign-posted and implemented in the project area and will reflect local conditions	To reduce the potential for environmental impacts by reducing the potential for dust generation	Ongoing from commencement of ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.

## Dust and particulate monitoring regime

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 50.	Visual monitoring	Daily during construction of shared infrastructure	No off site impact on amenity	1. Investigate cause. 2. Implement additional dust control measures, as appropriate.	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 51.	Monitor community issues associated with dust/burning	During construction of shared infrastructure	No public complaints relating to dust generated by the project	Public complaints will be recorded and responded to in accordance with the Community Issues Management Sub-plan.	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.

## Weed, plant pathogen and pest animal management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Baseline information</b>									
EMP 52.	Conduct a weed survey in the common user infrastructure areas and adjoining areas (up to 100 m) within the Weaber Plain Buffer Area to establish baseline information (i.e. weed species and density/cover/distribution of weeds) and identify Priority Areas for management and control. Priority Areas will be defined by: <ul style="list-style-type: none"> <li>weed infested areas (e.g. monocultures of neem trees, weed density/cover greater than 50%)</li> <li>areas that have declared noxious weed species and Weeds of National Significance (WONS)</li> <li>areas declared as local priority in consultation with DPW AND/OR DER and DAFWA</li> </ul>	To provide data to inform management.	Prior to ground disturbance	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item amended in Knox EMP (refer to KEMP 52).
KEMP 52	Conduct a weed survey to establish baseline information (i.e. weed species and density/cover/distribution of weeds) and identify Priority Areas for management and control. Priority Areas will be defined by: <ul style="list-style-type: none"> <li>weed infested areas (e.g. monocultures of neem trees, weed density/cover greater than 50%)</li> <li>areas that have declared noxious weed species and Weeds of National Significance (WONS)</li> <li>areas declared as local priority in consultation with DPaW, DAFWA and Ord Land and Water Inc.</li> </ul>	To provide data to inform management.	Prior to ground disturbance	KAI	R_061_OLW_Vegetation Condition Assessment and Weed Survey for the Knox Creek Farmland Buffer Area 2015_00002015	NA	NA	Completed	Weed survey conducted in Knox Creek Plain Buffer Area. Two weed species were identified, of which one species ( <i>Parkinsonia aculeata</i> ) is of concern as a significant environmental weed.
EMP 53.	Establish permanent weed survey transects within 100 m into the <b>Weaber Plain/Knox Creek Plain</b> Buffer Area.	To ensure repeatability of ongoing weed monitoring.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 R_061_OLW_Vegetation Condition Assessment and Weed Survey for the Knox Creek Farmland Buffer Area 2015_00002015 C_065_D Pearce_EMP54 Knox Weed and Vege Condition Assessment 2015_15122015	Potentially non-conformant	This item was reported in a previous compliance assessment as not having occurred prior to ground disturbance as required by the action; therefore, it will remain as a potential non-conformance for as long as the EMP remains in effect or this action is amended.  LandCorp has undertaken remedial action by since establishing weed transects, which were first established and surveyed commencing August 2013. No recommendation required.	Completed	Ten weed transects were established during the 2015 Weed Survey of the Knox Creek Plain Buffer Area. Ord Land and Water confirmed these transects are within 100 m into the Buffer Area.
EMP 54.	Conduct weed surveys along permanent weed survey transects (and opportunistically between permanent weed survey transects) to establish baseline information (i.e. weed species and density/cover/distribution of weeds) and identify and update Priority Areas for management and control. Priority Areas will be defined by: <ul style="list-style-type: none"> <li>weed infested areas (e.g. monocultures of neem trees, weed density/cover greater than 50%)</li> <li>areas that have declared noxious weed species and Weeds of National Significance (WONS)</li> <li>areas declared as local priority in consultation with DPW AND/OR DER, DAFWA and Ord Land and Water Inc.</li> </ul>	To provide data to inform management.	Annually, from commencement of ground disturbance	LANDCORP / KAI	R_022_OLW_Weed Control and Survey Goomig Farmland Buffer Area_00002015 R_052_unknown_Ord River Irrigation Area Expansion - Stage Two Weed Monitoring Program September 2012_00092012 Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	The Weed Control and Survey report indicates that weed surveys are being undertaken simultaneously with the weed control program. The report does not explicitly state that weed surveys are being undertaken along the established permanent weed survey transects; however the areas surveyed and controlled appear to cover the locations of permanent transects (shown in R_052) as well as additional areas. As such, auditors have assessed this item as conformant.  No expansion in priority areas has occurred due to regular and ongoing weed control via Ord Land and Water. LandCorp advised that the extent of areas being actively managed have reduced in response to the program. The Weed Control report states that the total number of Parkinsonia controlled was down over 50% from the previous year and only three Sicklepod Senna plants required spraying.	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 55.	Update the extent of Priority Areas which will be defined by: <ul style="list-style-type: none"> <li>weed infested areas (e.g. monocultures of neem trees, weed density/cover greater than 50%)</li> <li>areas that have declared noxious weed species and Weeds of National Significance (WONS)</li> <li>areas declared as local priority in consultation with DPW AND/OR DER, DAFWA and Ord Land and Water Inc.</li> </ul>	To provide data to inform management.	Annually, from commencement of ground disturbance	LANDCORP / KAI	R_022_OLW_Weed Control and Survey Goomig Farmland Buffer Area_00002015 LandCorp advice (14-17-Sept-2015)	Conformant	Refer to EMP 54.	NR	Construction not yet commenced.
EMP 56.	Develop and undertake a weed control program in Priority Areas with the exception of roads.	To ensure effective control of weeds by the appropriate parties.	Prior to ground disturbance	LANDCORP / KAI	R_022_OLW_Weed Control and Survey Goomig Farm land Buffer Area_00002015	Conformant	A weed control program is being implemented by Ord Land and Water. The Weed Control and Survey report does not explicitly show Priority Areas; however, OLV has undertaken weed control on all locations where Parkinsonia (Declared Weed) and Sicklepod Senna (WONS) have been identified. As such this item has been assessed as conformant.	NR	Construction not scheduled to commence until 2016.

**Induction**

EMP 57.	Implement an induction program for personnel which contains information on: <ul style="list-style-type: none"> <li>hygiene procedures for all vehicles, machinery and equipment upon entering and leaving the Weaber Plain Development Area and/or Priority Areas</li> <li>specific soil management requirements in Priority Areas</li> <li>requirement to remain within designated clearing areas.</li> </ul>	To reduce the risk of construction activities introducing and/or spreading weeds and plant pathogens by ensuring construction personnel are aware of appropriate management measures and requirements.	Within one week of personnel commencing work on-site	KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	This action has been interpreted to relate to construction of shared infrastructure only (based on the purpose) and as such has been assessed as completed for the Weaber Plain phase of the Project.	NR	Construction not yet commenced.
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**Education**

EMP 58.	Prepare guidelines for prospective farmers/lessees that contains information on: <ul style="list-style-type: none"> <li>vehicle hygiene measures (e.g. issues of using machinery from southern WA or interstate)</li> <li>identification, control and reporting of weeds (e.g. weed control in tail water ditches, use of fire)</li> <li>identification and reporting of pest animals, declared noxious weed species and signs of plant pathogens</li> <li>obligations under the Agricultural and Related Resources Protection Act 1976 (WA) (including the requirement for the occupier of any private land to control declared plants and declared animals on and in relation to that land)</li> <li>selection of pet animals (e.g. discourage cat ownership)</li> <li>selection of crops (e.g. no declared noxious weed species)</li> <li>irrigation and drainage of land (i.e. no water from farming allotments directed into the Weaber Plain Buffer Area).</li> </ul>	To reduce the risk of agricultural activities introducing and/or spreading weeds, plant pathogens and pest animals by ensuring farm owners/managers are aware of appropriate management measures and requirements.	At time of sub-lease	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
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Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 59.	Develop and supply an information package to prospective farm owners/lessees/managers within the project area that contains: <ul style="list-style-type: none"> <li>a weed identification key for all species known to occur in the area (key to be developed in consultation with DPW AND/OR DER, DAFWA and Ord Land and Water)</li> <li>possible control techniques (information on controlling declared noxious weed species can be obtained from DAFWA [2003])</li> <li>general soil management and hygiene requirements for farms</li> <li>reporting requirements.</li> </ul>	To reduce the risk of agricultural activities introducing and/or spreading weeds, plant pathogens and pest animals by ensuring farm owners/managers are aware of appropriate management measures and requirements.	At time of sub-lease	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.
<b>Clearing/stockpiling</b>									
EMP 60.	Topsoil from areas with known declared weed species will managed accordance with DAFWA requirements.	To reduce the risk of declared weed species being introduced into/ spread throughout the Buffer Area.	During clearing of farm lots	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	KAI advised that topsoil is not being used and remains in situ. Any weeds present are burnt or controlled using Round-up during clearing.	NA	Item not included in Knox EMP.
<b>Irrigation channel</b>									
EMP 61.	Aquatic weed control shall be undertaken consistent with industry standards	To reduce the risk of aquatic weeds being introduced into/ spread throughout natural watercourses and wetlands near the project area.	Ongoing from commencement of irrigation	KAI	F_023_Ord Irrigation Coop_Tax Invoice 961049_15052015 R_024_Ord Irrigation Coop_Acrolein Users Manual_00022015	Conformant	Aquatic weed control using acrolein injections is undertaken by Ord Irrigation Co-operative (OIC) on behalf of LandCorp. A revised Acrolein Users Manual prepared by OIC was also provided to demonstrate control undertaken appropriately.	NR	Irrigation not yet commenced.
<b>Hygiene</b>									
EMP 62.	Restrict movement of vehicles and machinery to the limits of the areas to be cleared (thus not affecting the <b>Weaber Plain/Knox Creek Plain</b> Buffer Area) by delineating the <b>Weaber Plain/Knox Creek Plain</b> Buffer Area (e.g. fence, flags and signs) prior to clearing.	To reduce the risk of weeds being introduced into/ spread throughout the Buffer Area by limiting access.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) P_025	Conformant	Following completion of construction, all roads within the project area have become public roads, subject to WA road laws. Vehicles and machinery are restricted to limits of clearing in KAI farm lots through signage delineating the Buffer Area and bunding surrounding farm lots. Signage and bunding was sighted during site inspection and no evidence of unauthorised access was observed.	NR	Construction not yet commenced.
EMP 63.	Access into the <b>Weaber Plain/Knox Creek Plain</b> Buffer Area will be via designated access tracks only.	To reduce the risk of weeds being introduced into/ spread throughout the Buffer Area by limiting access.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) P_026 P_027	Conformant	The 'Northovers' mining track has been upgraded to provide and control access through the Buffer Area. Signage also observed during site inspection to control access to Buffer Area.	NR	Construction not yet commenced.
EMP 64.	Establish clean down site/s at access points to the Weaber Plain Buffer Area, rehabilitation areas (outside of the Buffer Area) and Priority Areas. The clean down site/s will be designed to ensure soil is collected and disposed of in a manner that does not allow the introduction or spread of weeds or plant pathogens. At each permanent clean down site there will be a sign describing the hygiene procedure/s required to be implemented.	To prevent the introduction/ spread of weeds and plant pathogens in the Weaber Plain Buffer Area, rehabilitation areas and Priority Areas.	During construction of shared infrastructure	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP
EMP 65.	Clean down all machinery entering the Weaber Plain Development Area to remove vegetative matter, seeds and soil.	To prevent the introduction/ spread of weeds and plant pathogens in the project area.	During construction of shared infrastructure	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item amended in Knox EMP (refer to KEMP 65).
KEMP 65	<i>Clean down all large machinery entering the Knox Creek Plain Development Area for the first time, to remove vegetative matter, seeds and soil. Each vehicle will be given a 'hygiene sticker' indicating that they have been checked and assessed for hygiene performance.</i>	<i>To prevent the introduction/ spread of weeds and plant pathogens in the project area.</i>	<i>Ongoing from commencement of ground disturbance</i>	KAI	NA	NA	NA	NR	Construction not yet commenced.
EMP 66.	Undertake a vehicle hygiene check for all vehicles/machinery entering the construction site for the first time. Each vehicle will be given a 'hygiene sticker' indicating that they have been checked and assessed for hygiene performance.	To prevent the introduction/ spread of weeds and plant pathogens in the project area.	During construction of shared infrastructure	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.



Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 67.	Record in a hygiene log book (located at all clean-down sites) the: <ul style="list-style-type: none"> <li>time and date of clean down of machinery/vehicle/equipment</li> <li>method of cleaning machinery and vehicles</li> <li>signature of the driver (and vehicle hygiene inspector if first inspection).</li> </ul>	To provide hygiene data to inform management.	During construction of shared infrastructure	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.
<b>Imported material</b>									
EMP 68.	Certify all soil and fill material sourced from outside the project area as disease and weed free in accordance with DAFWA and DPW AND/OR DER requirements. If certificates cannot be obtained a risk assessment will be carried out on the soil material and only material that is evaluated as a very low risk of having environmental or declared noxious weeds or plant pathogens will be permitted for use.	To prevent the introduction/spread of weeds and plant pathogens in the project area.	Ongoing from commencement of ground disturbance	LANDCORP / KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	No external fill used by KAI and LandCorp during this audit period.	NR	Construction not yet commenced.
EMP 69.	Inspect borrow pits and borrow pit access tracks prior to disturbance to ensure weed species are not present. If any weeds are present, they will be cleared and controlled (e.g. physical removal, spray, disposal off-site, burning) from the affected areas prior to commencement of borrow extraction.	To prevent the introduction/spread of weeds and plant pathogens in the project area.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not scheduled to commence until 2016.
<b>Rehabilitation</b>									
EMP 70.	Rehabilitate disturbed areas that are not to be utilised post-construction in accordance with the Rehabilitation Management Sub-plan.	To re-establish native vegetation and reduce and control weed cover.	During construction of shared infrastructure / <i>During construction</i>	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
<b>Pest animals</b>									
EMP 71.	Ensure that waste that may attract pest animals is properly disposed of as far as is practicable.	To prevent the encouragement of pest animals by ensuring effective waste disposal.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) P_028 P_029	Conformant	Waste observed appropriately disposed of in bins in one lot. One bin observed without a lid. The auditors recommend this is rectified. No other waste observed on site.	NR	Construction not yet commenced.
EMP 72.	Undertake pest eradication program within Buffer Area.	To reduce the risk of pest animals becoming established within the Buffer Area.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	KAI advised a cattle muster was undertaken in this audit period by Carlton Hill Station; however, no correspondence was provided regarding this event. No cattle or other pests were observed in the Buffer Area during the site inspection.	NR	Construction not yet commenced.
EMP 73.	Install signs at the entry point to any access tracks in the <b>Weaber Plain/Knox Creek Plain</b> Buffer Area to discourage people from entering the area.	To reduce the risk of feral cats and dogs becoming established in the Buffer Area.	Prior to commencement of planting of crops	LANDCORP / KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) P_026	Conformant	Access tracks and signage observed during site inspection to control access to Buffer Area.	NR	Planting of crops not expected to commence until 2018 at the earliest.
EMP 74.	Ensure stock are removed from the Buffer Area.	To remove stock as an ongoing source of land degradation and a vector for introducing and spreading weeds throughout the Buffer Area.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	Refer to EMP 72.	NR	Construction not yet commenced.

## Weed, plant pathogen and pest animal monitoring regime

Item	Activity and location	Frequency*	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 75.	Weed species found along permanent weed survey transects in the buffer	Annually	No new plant pathogens or weed species observed or recorded in the mapped area during construction. No new Priority Areas during construction.	<ol style="list-style-type: none"> <li>1. Map the extent of any new Priority Areas.</li> <li>2. Map the distribution of the newly introduced species.</li> <li>3. Identify activities that may have potentially introduced the species.</li> <li>4. Plan and implement a monitoring or control treatment program.</li> <li>5. Re-educate contractors/farm owners/managers of the importance of hygiene control measures.</li> </ol>	LANDCORP / KAI	Refer EMP to 54	Conformant	Refer to EMP 54.	NR	Construction not yet commenced.
EMP 76.	Density/ cover/ distribution of weed species in the permanent weed survey transects and common use infrastructure areas.	Annually	No more than a 10% statistical increase in weed species density/ cover/distribution compared to the results of initial weed survey. No new Priority Areas	<ol style="list-style-type: none"> <li>1. Map the extent of any new Priority Areas.</li> <li>2. Map the revised extent of the specific weed species within the site.</li> <li>3. Identify activities that may have potentially spread the weed species.</li> <li>4. Plan and implement a weed control treatment program.</li> <li>5. Apply hygiene control and education measures.</li> </ol>	LANDCORP / KAI	Refer EMP to 54 LandCorp advice (15-Dec-2015)	Potentially non-conformant	<p>Density/cover/distribution of weed species in the permanent weed survey transects was not explicitly measured in the available reporting; as such, the auditors have assessed this item as potentially non-conformant.</p> <p>LandCorp advised that current weed control efforts are focused on controlling previously and newly identified weed growth.</p> <p>Common use infrastructure areas are also now owned and managed by others including the SWEK, Water Corporation and DRD (refer to Table 1).</p> <p><u>Recommendation:</u> Potential for revision of this action should revision of the EMP occur. The monitoring history of the project to date suggests the extent of significant weeds is relatively limited throughout the Proposal area – recording of weed infestations using less formal (i.e. simple observational) parameters may be an appropriate and practicable alternative to guide and assess the effectiveness of control measures.</p>	NR	Construction not yet commenced.
EMP 77.	Presence of declared weeds in farm lots.	As required	No declared weed species present.	<ol style="list-style-type: none"> <li>1. Notify DAFWA if required.</li> <li>2. Investigate cause.</li> <li>3. Undertake weed control in accordance with DAFWA requirements.</li> <li>4. Monitor success of weed control.</li> </ol>	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015)	Conformant	No Declared weeds identified in farm lots.	NR	Construction not yet commenced.
EMP 78.	Feral animals (including stock) in the <b>Weaber Plain / Knox Creek Plain</b> Buffer Area	As required	No new pest animals or sightings of feral animals	<ol style="list-style-type: none"> <li>1. Investigate cause.</li> <li>2. Undertake eradication program as required.</li> <li>3. Undertake intervention or remediation works (e.g. reduce bins, trapping, re-education).</li> </ol>	KAI	Refer EMP to 72	Conformant	Refer EMP to 72.	NR	Construction not yet commenced and Buffer Area yet to be fenced.

## Surface water management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Induction</b>									
EMP 79.	Induct personnel on surface water management measures, including: <ul style="list-style-type: none"> <li>M2 channel may receive effluent from the Kununurra Wastewater Treatment Plant</li> <li>the potential risks from <i>Burkholderia pseudomallei</i>, which is found dormant in soils and the potential for its dispersion through irrigation processes.</li> </ul>	To reduce the potential for activities to adversely affect surface water values by ensuring construction personnel are aware of appropriate management measures.	Within one week of personnel commencing work on-site	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item amended in Knox EMP (refer to KEMP 79).
KEMP 79	Induct personnel on surface water management measures.	To reduce the potential for activities to adversely affect surface water values by ensuring construction personnel are aware of appropriate management measures.	Within one week of personnel commencing work on-site	KAI	NA	NA	NA	NR	Construction not yet commenced.
<b>Flood protection</b>									
EMP 80.	Construct levees at the perimeter of farmland adjacent to <b>Border Creek/Knox Creek</b> to protect them from 1 in 20 year ARI flooding.	To protect farmland, prevent sedimentation of farm soil in Border Creek or the Keep River system.	Prior to commencement of planting of crops	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Planting of crops not expected to commence until 2018 at the earliest.
EMP 81.	Locate all drains on less permeable soils to minimise seepage to groundwater where possible. Where deeper drains are required, the excavated surface of the drain will be compacted to reduce seepage.	To reduce accessions to groundwater.	Prior to commencement of planting of crops	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Planting of crops not expected to commence until 2018 at the earliest.

## Surface water monitoring regime

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 82.	Inspect areas along the banks of channels, watercourses and drainage devices downstream and adjacent to the project area for evidence of erosion.	Ongoing from commencement of ground disturbance	No exposed surfaces outside the channel from which erosion could occur	<ol style="list-style-type: none"> <li>Investigate cause.</li> <li>Implement erosion protection measures, such rock armouring or application of hydromulch to areas identified.</li> <li>Monitor the effectiveness of remedy.</li> </ol>	LANDCORP / KAI	Refer to EMP 18 LandCorp/KAI advice (14-17-Sept-2015)	Conformant	Refer to EMP 18. KAI suggested erosion usually occurs in the early stages of drains opening up, resulting in high levels of erosion (i.e. bank blow-outs). KAI advised these areas are inspected at this stage and any damage caused by erosion is repaired and restored.	NR	Construction not yet commenced.

Groundwater management and monitoring actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Groundwater levels and quality (as it relates to salinity management)</b>									
EMP 83.	Expand the groundwater monitoring bore network to include: <ul style="list-style-type: none"> <li>at least 20 'high intensity'† regional bores</li> <li>at least 30 'low intensity'† regional bores.</li> </ul> Regional bore locations shown in Appendix 3	To allow the collection of baseline and ongoing groundwater data to guide management.	Install prior to commencement of clearing of farm lots and at least 18 months before the commencement of irrigation.	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item amended in Knox EMP (refer to KEMP 83).
KEMP 83	Expand the groundwater monitoring bore network to include: <ul style="list-style-type: none"> <li>'high intensity' regional bores (i.e. auto loggers installed)</li> <li>'low intensity' regional bores (i.e. no auto loggers installed but monitored manually).</li> </ul>	To allow the collection of baseline and ongoing groundwater data to guide management.	Install prior to commencement of clearing of farm lots, a minimum of 18 months prior to irrigation.	LANDCOP / KAI	R_002_KBC_Knox Creek Plan Agricultural Development Final Project Design Plan_01082015 D_036_KAI_Groundwater Monitoring Weaber Plain and Knox Creek Plain_29072015 LandCorp advice (6-Dec-2015)	NA	NA	Conformant	Figure 9 of the Knox Creek Plain FPDP shows the existing locations of monitoring bores. The FPDP states that "Additional reference bores will be identified and monitored on an ongoing basis when the development of the Knox Creek Plain commences". LandCorp advised these additional bores will be identified by the IRG. The FPDP is unclear as to which of the existing bores are 'high intensity' or 'low intensity'; however the monitoring data provided indicates there are three high intensity bores, one 'sentinel' bore and the remainder either low intensity or of indeterminate type.
EMP 84.	Undertake monitoring of the parameters determined under Item 2 in bores established under EMP 83. <i>Item 2 refers to this item (EMP 84)</i>	To collect baseline and ongoing groundwater data to determine any adverse effects to the receiving environment as a result of the Proposal.	Commencing 18 months prior to commencement of irrigation. High intensity bores: <ul style="list-style-type: none"> <li>groundwater levels and temperature (automatic, daily)</li> <li>EC, pH, TDS, major cations and anions, nutrients and pesticides seasonally<sup>s</sup>.</li> </ul> Low intensity bores: <ul style="list-style-type: none"> <li>groundwater levels, EC, pH, TDS, nutrients and pesticides seasonally.</li> </ul>	KAI	D_030_ChemCentre_Report of Examination_17082015 D_031_ChemCentre_Report of Examination_12082015 M_034_IRG_Agenda Weaber Plain Development Project Independent Review Group_29062015 D_036_KAI_Groundwater Monitoring Weaber Plain and Knox Creek Plain_29072015 D_077_KAI_Groundwater Database_17112015 M_078_IRG_Weaber Plain Development Project - Independent Review Group Meeting - 9 January 2016_09012016 R_079_Lillicrap et al_Groundwater chemistry of the Weaber Plain (Goomig Farmlands): baseline results 2010-13_00092015	Potentially non-conformant	The auditors have determined in consultation with the proponent that 'The parameters determined under Item 2' refers to the analytes listed in the Timing column. Groundwater monitoring results provided indicate that all required parameters are being tested in monitoring bores. The monitoring reports and database indicate that Atrazine (the only pesticide tested) does not appear to be monitored in all bores consistent with the requirement to do so seasonally (for both high and low intensity bores). Furthermore no evidence has been provided that groundwater levels and temperature are being monitored daily in high intensity bores. As such, the auditors have assessed this item as potentially non-conformant. DAFWA proposed changes to the current groundwater monitoring regime in the groundwater chemistry baseline monitoring report (Lillicrap <i>et al</i> 2015). Amendments are detailed in Table 4.2 in Lillicrap <i>et al.</i> (2015). The IRG endorsed the proposed changes at its January 2016 meeting and subsequently a variation to the approved Stormwater and Groundwater Discharge Management Plan and the Groundwater Management Plan required under EPBC 2010/5491 will be sought. In the auditors' view the overlap and relationship between the EP Act and EPBC Act groundwater management and monitoring requirements applicable to both Weaber and Knox Creek Plains is confusing and unclear. <b>Recommendation:</b> The auditors recommend review of the groundwater monitoring regime required under the EP Act (i.e. this EMP) for both Weaber Plain and Knox Creek Plain to ensure alignment and consistency with the EPBC Act approval (and any variation to that approval) as informed and recommended by the IRG to the satisfaction of the OEPA.	NA	Item amended in Knox EMP (refer to KEMP 84).  Also refer to the comments for the Weaber Plain part of this item.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
KEMP 84	Undertake monitoring of the parameters below for bores established under Item 1 (KEMP 83) <i>High intensity bores:</i> <ul style="list-style-type: none"> <li>groundwater levels and temperature (automatic, daily)</li> <li>EC, pH, TDS, nutrients and pesticides seasonally</li> </ul> <i>Low intensity bores:</i> <ul style="list-style-type: none"> <li>groundwater levels, EC, pH, TDS, nutrients and pesticides seasonally.</li> </ul>	To collect baseline and ongoing groundwater data to determine any adverse effects to the receiving environment as a result of the Proposal.	Commencing 18 months prior to commencement of irrigation.	KAI	D_036_KAI_Groundwater Monitoring Weaber Plain and Knox Creek Plain_29072015 D_030_ChemCentre_Report of Examination_17082015	NA	NA	NR	Baseline groundwater monitoring has commenced. Refer to EMP 84 (for Weaber Plain) regarding monitoring of atrazine (pesticides). As irrigation is not scheduled to commence until 2018 at the earliest, this item has not been assessed as NR.
EMP 85.	Undertake monitoring of the chemical and nutrient parameters determined by DoW licence conditions in bores established under Item 83.	To collect baseline and ongoing groundwater data.	Annually at commencement of dry season commencing 12 months prior to operation of irrigation infrastructure.	LANDCORP	N/A	Conformant	Bores are for monitoring purposes only, i.e. no extraction; therefore do not require a licence. <u>Recommendation:</u> The auditors recommend deletion of this action as Department of Water (DoW) licence conditions not applicable.	NA	Item not included in Knox EMP.
EMP 86.	Expand the groundwater monitoring bore network with the establishment of at least one 'on-farm' bore per farm.	To allow the collection of baseline and ongoing groundwater data to inform management.	Install after clearing of farm lots but prior to commencement of irrigation.	KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	Bores installed previously by DAFWA New bore installed on Lot 17 during this audit period.	NR	Clearing of farm lots not yet commenced.
EMP 87.	Determine sampling parameters for 'on farm' bores in consultation with the IRG including: <ul style="list-style-type: none"> <li>groundwater levels</li> <li>EC</li> <li>pH.</li> </ul>	To inform management.	Prior to commencement of irrigation and annually after the commencement of irrigation.	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 M_034_IRG_Agenda Weaber Plain Development Project Independent Review Group_29062015 KAI advice (14-17-Sept-2015)	Conformant	Sampling parameters have not changed. <u>Note</u> the IRG recommends: "that KAI tests for groundwater depth, pH and salinity in its regular (6-monthly) bore monitoring rounds, across all bores" (i.e. not just 'on farm bores).	NA	Item amended in Knox EMP (refer to KEMP 87).
KEMP 87	Determine sampling parameters for 'on farm' bores including: <ul style="list-style-type: none"> <li>groundwater levels</li> <li>EC</li> <li>pH.</li> </ul>	To inform management.	Prior to commencement of irrigation and annually after the commencement of irrigation.	KAI	NA	NA	NA	NR	Irrigation not yet commenced.
EMP 88.	Undertake monitoring of the bores established under Item 86 for physical, chemical and nutrient parameters as determined by DoW licence conditions if regional bore ground water quality exceeds triggers.	To increase the monitoring spatial intensity to help determine location and reasons for exceedance. To assist with development of appropriate contingency action.	Annually at commencement of dry season once trigger has been exceeded.	LANDCORP / KAI	N/A	NR / Redundant	No DoW licence and therefore no conditions. <u>Recommendation:</u> The auditors recommend amending or deleting this action as reference to DoW licence conditions is not applicable.	NR	Construction not yet commenced. <u>Recommendation:</u> The auditors recommend amending or deleting this action as reference to DoW licence conditions is not applicable.
EMP 89.	Maintain a database of groundwater levels and groundwater quality data based on monitoring results.	To provide data to inform management. To be used in combination with high and low intensity bores where exceedances of triggers are defined.	Ongoing – database to be updated at least every six months with the database to be established prior to June 2013.	KAI	D_032_KAI_Groundwater Database_07112014 D_036_KAI_Groundwater Monitoring Weaber Plain and Knox Creek Plain_29072015	Conformant	A database is being maintained by KAI that includes groundwater levels and groundwater quality data. Latest monitoring results (May-July 2015) have been put in a new (updated) database.	Conformant	Monitoring data from Knox Creek Plain bores included in latest database (D_036).
EMP 90.	Establish and maintain a database of groundwater chemical and nutrient parameters.	To provide data to inform management.	Ongoing – database to be updated annually.	KAI	D_032_KAI_Groundwater Database_07112014 D_077_KAI_Groundwater Database_17112015 D_036_KAI_Groundwater Monitoring Weaber Plain and Knox Creek Plain_29072015	Conformant	A database is being maintained by KAI that includes groundwater levels and groundwater quality data. <u>Recommendation:</u> It is not clear to the auditors how the data contained within the database is analysed to ensure trigger levels are not exceeded. The auditors recommend revision of the database to: <ul style="list-style-type: none"> <li>include the determined trigger values for each parameter</li> <li>distinguish between high and low intensity bores (as in D_036)</li> <li>distinguish between Weaber Plain and Knox Creek Plain bores (as in D_036)</li> <li>denote frequency of monitoring (as in D_036).</li> </ul>	Conformant	The database for Weaber Plain also contains data for Knox Creek Plain bores. A separate spreadsheet provided (D_036) outlines the bores that belong to each area.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 91.	Update groundwater model and operation of groundwater management system with monitoring data derived from EMP 84, 89 and 90, in consultation with the IRG.	To assist in determining an optimal dewatering strategy and to forecast potential breaches of trigger values within a ten year period.	Prior to commencement of irrigation and subsequently every 2–4 years depending on monitoring trends. If worst case scenario indicated a breach in trigger levels, modelling must be updated every two years.	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	The 'Weaber-Knox' groundwater model was reviewed and updated in 2014. Updates are required every 2–4 years; therefore, not required during this audit period.	NA	Item amended in Knox EMP (refer to KEMP 91).
KEMP 91	<i>Update groundwater model and operation of groundwater management system with monitoring data.</i>	<i>To assist in determining an optimal dewatering strategy and to forecast potential breaches of trigger values within a ten year period.</i>	<i>Prior to commencement of irrigation and subsequently every 2–4 years depending on monitoring trends. If worst case scenario indicated a breach in trigger levels, modelling must be updated every two years.</i>	KAI	NA	NA	NA	NR	Irrigation not yet commenced.
EMP 92.	Define the conditions at which various irrigation methods can be utilised for the leased farms on the Weaber Plain development based on the outcomes of future modelling undertaken.	To maximise water use efficiency and minimise potential environmental impacts of shallow groundwater levels by managing irrigated agriculture and/or cropping systems where required, e.g. on leased farms.	Review every five years in association with modelling from the commencement of irrigation.	LANDCORP / KAI	N/A	NR	Irrigation commenced in 2015. Review of irrigation conditions not required until 2019.	NA	Item amended in Knox EMP (refer to KEMP 92).
KEMP 92	<i>Define the conditions at which various irrigation methods can be utilised for the Knox Creek Plain farms, based on the outcomes of modelling undertaken.</i>	<i>Refer to EMP 92.</i>	<i>Refer to EMP 92.</i>	KAI	NA	NA	NA	NR	Irrigation not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 93.	Adopt ANZECC guidelines trigger values for a 'high conservation/ecological value system' for three years then adopt appropriate site-specific trigger levels for chemicals and nutrients in accordance with ANZECC & ARMCANZ guidelines (2000).	To ensure monitoring and management responses relate to appropriate trigger levels.	For the initial three years, after which site-specific triggers will be adopted.	LANDCORP / KAI	D_033_KAI_Trigger Values_00000000 M_034_IRG_Agenda Weaber Plain Development Project Independent Review Group_29062015 R_035_DotE_Variation to conditions attached to Approval_07082015 KAI advice (14-17-Sept-2015) M_078_IRG_Weaber Plain Development Project - Independent Review Group Meeting - 9 January 2016_09012016	Potentially non-conformant	The initial three year timeframe, based on the July 2011 date of the original EMP was completed in July 2014.  This action was based on the requirements of condition 12G of EPBC 2010/5491 which was subject to a variation in August 2015. Condition 12G no longer requires site specific trigger levels to be in accordance with ANZECC guidelines (2000). Varied condition 12G now states that site specific trigger values "may be determined in consultation with the IRG and within the context of Condition 11".  KAI advised that site specific trigger values have since been adopted as determined in consultation with the IRG and in the context of condition 11 and condition 12G of EPBC 2010/5491. KAI advised that in the context of condition 11, site-specific triggers have been interpreted to now relate to water quality triggers for the Keep River as groundwater is no longer considered by KAI and the IRG to be a receiving environment.  It is beyond the scope of this audit to assess whether this rationale is appropriate or if the site specific triggers developed in consultation with the IRG have been in accordance with ANZECC & ARMCANZ guidelines. The IRG minutes provided make reference to the guidelines, inferring but not explicitly stating the guidelines have been used in line with requirements of this action. As the information provided is not clear on whether the requirements of the action have been met the auditors have assessed this item as a potential non-conformance.  Notwithstanding this finding, although the IRG minutes refer only to the EPBC Act, the EMP Groundwater Management Sub-plan states that the methodology and design characteristics will be continuously refined on future monitoring and modelling results in consultation with the IRG, by which the auditors infer that the rationale for the new triggers aligns with the general groundwater monitoring requirements of this EMP.  <u>Note:</u> KAI has proposed a variation to the groundwater monitoring requirements of the EPBC Act approval, which the IRG supports. Refer to EMP 84 for detail.  <u>Recommendation:</u> The auditors recommend review of this action (and the groundwater monitoring requirements generally) to be consistent with the EPBC Act approval (and any variation to that approval) as informed and recommended by the IRG, to the satisfaction of the OEPA (also refer to EMP 84).	NA	Item amended in Knox EMP (refer to KEMP 93).
KEMP 93	Adopt water quality trigger values established under the requirements of EPBC Approval 2010/5491.	To ensure monitoring and management responses relate to appropriate trigger levels.	Ongoing	KAI		NA	NA	Conformant	Refer to EMP 93 (Weaber Plain). This is being managed under the guidance of the IRG, which references the EPBC Act approval.  Trigger values are expected to be consistent with those developed for Weaber Plain (refer to EMP 93).

## Groundwater contingency actions

Item	Trigger	Corrective action	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 94.	Groundwater levels, soil salinity and quality exceed or are likely to exceed trigger levels	<ol style="list-style-type: none"> <li>1. Investigate cause.</li> <li>2. Implement actions consistent with Groundwater Management Plan (Appendix 3) (e.g. modify land use/irrigation strategies, groundwater extraction).</li> <li>3. Document changes in Annual Environmental Report (AER).</li> </ol>	Refer Groundwater Management Plan (Appendix 3)	LANDCORP / KAI	Refer EMP 19, EMP 84. EMP 88 and EMP 93	Potentially non-conformant	<p>Refer to EMP 19 – soil salinity has not been undertaken in the audit period, so potential exceedances are unable to be determined.</p> <p>The information provided does not clearly indicate the relationship between monitoring results and trigger levels. Although there is no evidence any exceedances have occurred, as the data is unclear on this point the auditors conclude this item is a potential non-conformance.</p> <p><b>Recommendation:</b> The auditors recommend modification of the monitoring results spreadsheets to clearly show the trigger levels for each analyte, and highlight any result in which exceedances have occurred. If the monitoring regime is being amended as proposed, ensure the database is consistent with regime and adopted trigger values.</p>	NR	Irrigation not yet commenced.
EMP 95.	<p>Levels of chemicals and nutrients exceed scenarios that show:</p> <ul style="list-style-type: none"> <li>• an increasing trend in the concentration of any chemical (at statistical confidence levels)</li> <li>• an exceedance of the site-specific triggers for a particular chemical over two consecutive years.</li> </ul>	<ol style="list-style-type: none"> <li>1. Implement EMP 8 and 9 (Table 14) [KEMP: item 6 (Table 14)] to better map the distribution of groundwater exceeding target levels.</li> <li>2. Investigate cause.</li> <li>3. In consultation with the IRG, identify remedial action required, which could include the modification of irrigation and agricultural practices, reducing or ceasing the use of fertiliser and/or chemicals, groundwater abstraction or a combination of these measures.</li> <li>4. Implement remedial action immediately after trigger levels are exceeded or, in consultation with the IRG, at an appropriate time.</li> <li>5. Monitor success of remedy quarterly for 12 months or, following consultation with the IRG and in accordance with the advice from the IRG, (the following text from KEMP only) in relation to the impacts of MNES in the Keep River.</li> <li>6. Document changes in Annual Environmental Report (AER).</li> </ol>	Refer Groundwater Management Plan Appendix 3	LANDCORP / KAI	Refer EMP 93	Potentially non-conformant	<p>Refer to EMP 93 – the information provided is inadequate to readily determine if this action has been conformed with, as such the auditors conclude this item is a potential non-conformance.</p> <p><b>Recommendation:</b> The auditors recommend modification of the monitoring results spreadsheets to clearly show the trigger levels for each analyte, and highlight any result in which exceedances have occurred and/or results that indicate increasing trends. If the monitoring regime is being amended as proposed, ensure the database is consistent with regime and adopted trigger values.</p>	NR	Irrigation not yet commenced.



Discharge management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Farm tailwater management</b>									
EMP 96.	Construct a tailwater retention area on each farm lot sufficient to retain stormwater runoff during the periods most critical (low flow periods) to the Keep River system in consultation with DAFWA and the Office of the Environmental Protection Agency.	Capacity to manage runoff to avoid transporting chemicals downstream.	Prior to commencement of irrigation	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) P_041	Conformant	Tailwater retention areas observed. A retention area may service more than one individual lot as there is no longer an intention for individual lot owners. For example, the tailwater retention area in Lot 3 takes tailwater from lots 3 and 5.  Strategen was advised that DAFWA personnel (i.e. Richard George and Don Bennett, as advisors to the IRG on behalf of the proponent) have been briefed on the tailwater management arrangements via the IRG, including a presentation with aerial photographs at the June 2015 IRG meeting. In addition, the OEPA has approved the Weaber (December 2013) and Knox (November 2015) Environmental Management Programs which both include the farm tailwater management requirements. As such, Strategen has assessed this item as conformant.  <u>Recommendation:</u> The auditors recommend revision of the wording of this action if the EMP is to be updated as the need for tailwater retention areas in each lot is no longer valid and retention areas are being constructed to receive water from more than one farm lot.	NA	Item amended in Knox EMP (refer to KEMP 96).
KEMP 96	Construct a tailwater retention area on each farm lot sufficient to retain stormwater runoff during the periods most critical (low flow periods) to the Keep River system.	Capacity to manage runoff to avoid transporting chemicals downstream.	Prior to commencement of irrigation	KAI	NA	NA	NA	NR	Construction not yet commenced.
EMP 97.	No usage of chemicals and fertilisers when the tailwater retention capacity is unavailable.	To prevent the transporting of nutrients and chemicals downstream.	Ongoing from commencement of farming	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) R_037_WRM_ORIA Stage II M2 Expansion Risk Assessment of Weaber Plain Development on Keep River Listed Species_20082015	Conformant	Tailwater retention capacity has not been reached nor is it ever expected to in the dry season as the capacity of retention areas includes a 25 mm threshold for rainfall runoff. Dry season flows that exceed the equivalent of 25 mm of runoff have never been recorded at the Border Creek gauging station (WRM 2015). Wet season flows above this threshold cannot be stored and are discharged to the environment. Discharge in the wet season is not expected to be an issue due to the natural dilution from rainfall.	NR	Construction not yet commenced.

Education and erosion protection measures (as per Surface Water Management Sub-plan and Soil Management Sub-plan)

EMP 98.	Provide an Information Package to prospective landowners/lessees, which: <ul style="list-style-type: none"> <li>outlines the susceptibility of soil to erosion from high intensity rainfall during the wet season</li> <li>encourages maintenance of crop cover during the wet season to reduce soil erosion</li> <li>outlines optimal irrigation strategies to reduce potential impacts of sodicity and salinity</li> <li>includes information regarding identification of salinity and sodicity and mechanisms to report this to the Proponent.</li> </ul>	To minimise the potential for agricultural practices to result in erosion by ensuring prospective landowners are aware of the risks and appropriate management measures.	At sublease of farm lots	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
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Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Water quality and hydrodynamics</b>									
EMP 99.	Determine AUSRIVAS trigger score levels for aquatic macro-invertebrates in consultation with the IRG.  Updated wording of C'wealth EPBC Approval (2010/5491) condition 11f: <i>"Use of best practice multivariate analyses on species level macro-invertebrates and fish assemblage data, within an adequate experimental design (as defined in the AFMP required under condition 10), using multiple indices of 'ecological condition' and a 'weight of evidence' approach, to assess any change in ecological health of Keep River pools (K1, 2, and 3) relative to baseline and upstream reference sites'.</i>	To manage the discharge of stormwater and surplus groundwater to protect the downstream environment and EPBC listed species.	Prior to commencement of irrigation	LANDCORP	R_053_WRM_ORIA Stage II expansion Keep River Baseline Aquatic Fauna and Targeted Sawfish surveys 2013_08022014 M_075_IRG_Record of Meeting Weaber Plain Development Project_03122014	Completed	AusRivAS trigger values for macroinvertebrates are outlined in Table 7 of the Baseline Aquatic Fauna Survey (WRM 2014). The Baseline Study was endorsed by the IRG in December 2014.  Note with respect to this sub-plan, the EMP states: 'This Sub-plan also addresses aspects of Condition 11 of the EPBC Act Approval 2010/5491 where the requirements are similar...This Sub-plan describes the processes for monitoring and management of discharge into the Keep River. This plan... will be continuously refined...in consultation with an Independent Review Group (IRG)'. <b>Recommendation:</b> The auditors recommend updating the wording of EMP 99, to the satisfaction of the OEPA, to reflect the intent of the varied condition 11f in the EPBC Act approval (EPBC 2010/5491) (variation dated 28 March 2014). AusRivAS trigger values are no longer required under EPBC 2010/5491 and as such should be removed from the Discharge Management Sub-plan.	NA	Item amended in Knox EMP (refer to KEMP 99).
KEMP 99	Adopt water quality trigger levels, as developed in consultation with the IRG under EPBC Approval 2010/5491 and EPBC 2014/7143.	To manage the discharge of stormwater and surplus groundwater to protect the downstream environment and EPBC listed species.	Prior to commencement of irrigation	KAI		NA	NA	NR	Irrigation not expected to commence until 2018 at the earliest.
EMP 100.	Establish and update annually, a list of key analytes (chemicals and nutrients) to be sampled, based on-farm practices as part of ongoing water quality monitoring in consultation with DAFWA, DoW and the IRG.	To ensure key chemicals and nutrients are included in water quality monitoring.	Prior to commencement of planting of crops, then ongoing annually	LANDCORP	R_039_IRG_Table of Recommendations Weaber Plain Development Project (EPBC 2010/5491) IRG 29 June 2015_29062015 C_055_DoW_RE Issue of a licence under the Rights in Water and Irrigation Act 1914 Property: Goomig Farm Area_15052015 R_067_KAI_Goomig-Knox Farm Areas Operating Strategy SWL179228_00112014	Conformant	The IRG endorsed the following analytes for surface water monitoring: Nitrogen, Phosphorus, Atrazine and Total Suspended Solids. This was detailed in their Recommendations from the IRG meeting dated 29 June 2015.  Auditors were advised that DAFWA personnel (i.e. Richard George and Don Bennett) were involved in IRG discussions regarding analytes to be monitored. The DoW water licence supports use of EMP monitoring requirements, with no additional requirements.	NA	Item amended in Knox EMP (refer to KEMP 100).
KEMP 100	Establish and update annually, a list of key analytes (chemicals and nutrients) to be sampled, based on-farm practices as part of ongoing water quality monitoring	To ensure key chemicals and nutrients are included in water quality monitoring.	Prior to commencement of planting of crops, then ongoing annually	KAI	R_039_IRG_Table of Recommendations Weaber Plain Development Project (EPBC 2010/5491) IRG 29 June 2015_29062015	NA	NA	NR	Planting of crops not expected to occur until 2018 at the earliest.
EMP 101.	Install a water quality and flow gauging station capable of sampling, on a flow proportional basis (at least sub-daily when required) at the stormwater outlet from the Development Area.	To determine flow rate from the Project Area to inform management.	Prior to commencement of planting of crops	LANDCORP	Site inspection (15-Sept-2015) P_038 R_040_SCADA_SCADAConnect Network Visualisation DW1 GS_16092015	Completed	DW1 Gauging Station installed on Border Creek sighted during site inspection. Automatic sampling and monitoring program (SCADA) also sighted. The SCADA program has the ability to undertake automatic and manual samples.	NA	Item amended in Knox EMP (refer to KEMP 101).
KEMP 101	Install a water quality and flow gauging station at the stormwater outlet from the Development Area.	To determine flow rate from the Project Area to inform management.	Prior to commencement of planting of crops	KAI	NA	NA	NA	NR	Planting of crops not expected to occur until 2018 at the earliest.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 102.	Monitor water quality at the stormwater outlet from the Development Area, in consultation with DAFWA, DoW and DPW AND/OR DER.	To determine salinity and nutrient contribution from the Project Area to inform management.	On a flow proportional basis (with the ability to sample sub-daily as required)	LANDCORP	R_040_SCADA_SCADACoconnect Network Visualisation DW1 GS_16092015 R_039_IRG_Table of Recommendations Weaber Plain Development Project (EPBC 2010/5491) IRG 29 June 2015_29062015 D_068_National Measurement Institute_Report of Analysis_15102015 D_069_National Measurement Institute_Report of Analysis_05102015	Conformant	Telemetered flow monitoring and sampling is being undertaken through the SCADA program at the stormwater outlet (DW1 Gauging Station). Measurements of electrical conductivity and temperature are automated, while samples of water are tested for Nitrogen, Phosphorus, Atrazine, Total Suspended Solids and other analytes. Results of two flow events provided.  <u>Recommendation:</u> The auditors recommend clarifying the timing of this action to state "When flowing in the dry season" (as wet season analysis not expected to be relevant due to dilution factor and lack of on-farm activity).	NA	Item amended in Knox EMP (refer to KEMP 102).
KEMP 102	Monitor water quality at the stormwater outlet from the Development Area	To determine salinity and nutrient contribution from the Project Area to inform management.	On a flow proportional basis (with the ability to sample sub-daily as required)	KAI	NA	NA	NA	NR	Construction not yet commenced. <u>Note:</u> timing recommendation in EMP 102 (Weaber Plain).
EMP 103.	Ensure the flow gauging stations at Border Creek and the Keep River have the required accuracy to measure low flow rates in consultation with the Northern Territory NRETAS and IRG.	To provide flow data to manage the discharge of stormwater and surplus groundwater.	Prior to commencement of planting of crops	LANDCORP	C_060_D Pearce_EMP103 Keep River Gauging Station - advice from NT Government_16112015 R_070_KAI_EMP 103 Evidence of Border Creek (Weaber Range) flow gauge in operation_00002015	Conformant	Both gauging stations are owned by Northern Territory government. The Keep River flow gauging station has been recently upgraded by the Department of Natural Resources, Environment, the Arts and Sport (NRETAS) (C_060). Correspondence verified flow data is being measured. Screen captures of the Border Creek gauging station measurement databases (R_070) verifies flow is able to be measured at this gauging station.	NA	Item not included in Knox EMP.
EMP 104.	Monitor water flow at the stormwater outlet from the Development Area, Border Creek and the Keep River, determined in consultation with IRG, DAFWA, DoW and DPW AND/OR DER.	To preserve and protect the water quality of the Keep river and EPBC listed species, prevent erosion of the banks of the Keep River and provide maximum mixing potential.	Ongoing from commencement of irrigation	LANDCORP	R_040_SCADA_SCADACoconnect Network Visualisation DW1 GS_16092015 R_044_LandCorp_OSWM Progress Report_00002015	Conformant	Telemetered flow monitoring is being undertaken through the SCADA program at the stormwater outlet (DW1 Gauging Station), Border Creek Gauging Station, Keep river Gauging Station and the D8 outflow and pump. <u>Recommendation:</u> The auditors recommend clarifying the timing of this action to state "When flowing in the dry season".	NA	Item amended in Knox EMP (refer to KEMP 104).
KEMP 104	Monitor water flow at the stormwater outlet from the Development Area and the Keep River.	To preserve and protect the water quality of the Keep river and EPBC listed species, prevent erosion of the banks of the Keep River and provide maximum mixing potential.	Ongoing from commencement of irrigation	KAI	NA	NA	NA	NR	Irrigation not yet commenced.

**Discharge infrastructure and program**

EMP 105.	Develop and implement an adaptive groundwater and stormwater discharge program that addresses: <ul style="list-style-type: none"> <li>design and location of dewatering infrastructure</li> <li>design and location of discharge infrastructure</li> <li>discharge rates, rules and contingency actions</li> <li>monitoring locations and requirements including infrastructure and setup</li> <li>written evidence of any Northern Territory Government permits that are required for discharge of groundwater</li> <li>management measures that ensure discharge of water will not impact on water quality in Border Creek/Keep River; this includes erosion protection measures.</li> </ul>	To provide information for adaptive management of the discharge of stormwater and surplus groundwater.	Ongoing after sale/lease of farmland and prior to the commencement of stormwater and groundwater discharge from operational farms	LANDCORP / KAI	Site inspection (15-Sept-2015) LandCorp advice (14-17-Sept-2015)	NR	LandCorp advise that groundwater and stormwater are not yet being discharged from the project area. <u>Recommendation:</u> The auditors recommend revision of this action in consultation with the IRG and to the satisfaction of the OEPA with respect to "stormwater discharge" as, based on the advice received, stormwater will not be deliberately discharged from the project area in the dry season as part of standard management (i.e. accidental discharge would only occur in the event of a breach of the tailwater retention system). In the wet season stormwater will overflow from all areas (inside and outside the project area) and any stormwater released above tailwater storage capacity will be subject to significant dilution.	NR	Construction not yet commenced.
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Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 106.	Refine the discharge dilution model/relationship based on river flow monitoring data and water quality history from the Ord Stage 1 D4 drain and available water quality data from the Keep River system.	To determine when flow rates at Border Creek and the Keep River fall below a minimum flow rate to enable flushing.	Prior to commencement of irrigation	LANDCORP	R_042_LandCorp_Memorandum Update on OSWM Development_25062015 R_043_Bennett & George_Surface Water Characteristics of the Weaber Plain and lower Keep River Catchments: data review and preliminary results_00122011 LandCorp advice (14-17-Sept-2015)	Conformant	The requirement of this action is incorporated into the Operational Surface Water Model (OSWM). The OSWM combines remote sensed water flow and basic water quality parameters (EC, temperature) with historical and recent water quality analysis records, rainfall, tidal and pool volumes in the Keep River, to estimate risk and recommend dilution (flushing) requirements should a breach of a water quality trigger be identified (LandCorp 2015). Water quality results are uploaded into the OSWM which predicts the concentration and then calculates dilution required to improve water quality affected by the breach.  Specific sites used for data input are DW1GS, D8 (x 2 locations), Border Creek (notional), K1, K2, K3, and K4 pools, the Keep River and Border Creek gauging stations, and Keep estuary sites E1, E2, E3.  Data from the D4 drain is now considered by project hydrologists to be an irrelevant input into the OSWM. The D4 water comes from Ord Stage 1 which does not have an operational tailwater management system and has a higher proportion of irrigation land in the D4 catchment, as such, the characteristics of the D4 discharge are considered beyond the worst case scenario for the Weaber Plains development (George and Bennett 2011). KAI is monitoring tailwater during the irrigation season, for accurate information on the content of the tailwater, and using this to inform discharge dilution calculations.  Although data from the D4 drain has not been used for the model the auditors consider this does not constitute a potential non-conformance as the data inputs used are an improvement on the original requirement.  <u>Recommendation:</u> The auditors recommend revision of this action to remove reference to the D4 drain.	NA	Item amended in Knox EMP (refer to KEMP 106).
KEMP 106	Refine the discharge dilution model/relationship based on river flow monitoring data	To determine when flow rates at the Keep River fall below a minimum flow rate to enable flushing.	Prior to commencement of irrigation	KAI	NA	NA	NA	NR	Irrigation not expected to commence until 2018 at the earliest.
EMP 107.	Refine the discharge dilution model/relationship based on flow monitoring data from the Development Area and the Keep River system and water quality characteristics of stormwater from the Development Area.	To determine when flow rates at the Keep River fall below a minimum flow rate to enable flushing.	On a seasonal basis, commencing 12 months after commencement of irrigation	LANDCORP / KAI	R_042_LandCorp_Memorandum Update on OSWM Development_25062015 R_044_LandCorp_OSWM Progress Report_00002015	Conformant	The requirement of this action is incorporated into the Operational Surface Water Model (OSWM). Refer to in EMP 106 for details on process and inputs of the OSWM.	NR	Irrigation not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 108.	Refine flow trigger values for the Keep River and Border Creek gauging station based on the refined discharge dilution model and Operational Surface Water Model.	To determine when flow rates at Border Creek and the Keep River fall below a minimum flow rate to enable flushing.	Ongoing after sale/lease of farm lots or commencement of farming activity	LANDCORP	LandCorp advice (14-17-Sept-2015) KAI advice (29-Feb-2016) R_081_Surrich Hydrographics_Keep River Pools Bathymetric Survey Report_11022014 R_082_Bennett and George_Goomig Farmlands development Baseline water quality in the lower Keep River RMTR 393_00112014 R_083_KAI_2015 Goomig Surface Water Monitoring Results_00022016	Potentially non-conformant	The auditors were advised that flow-trigger values have not been established, hence this has found to be a potential non-conformance. However, KAI advised that an alternative management approach has been determined which will result in the same outcome as the intent of action, that is to ensure adequate dilution of any discharges that may impact the water quality of the Keep River.  The auditors were advised that in normal wet season conditions, should stormwater flow occur at the DW1 stormwater discharge point, other flow in the Keep River catchment will be occurring. 2015-2016 wet season monitoring indicated the Goomig development contributed less than 1.5% of total flow in the Keep River (KAI 2016). The broader, high volume, catchment flow into the Keep River will result in the required pool flushing.  The 2014 Keep River bathymetry studies (Surrich Hydrographics 2014) measured the total Keep River Pool volumes at 1.26 GL. As such, KAI advised that in the event of a dry season flow which is not associated with widespread catchment rainfall, the management approach (reviewed by the IRG at its February 2016 meeting) is that if there is a risk to water quality, then a minimum release of 1.26 GL of water from the M2 channel would be required to fully flush the Keep River pools downstream of the Border Creek confluence. This is verified by the Keep River Baseline Study (RMTR 392; Bennett and George 2014) and informs the dilution calculations.  <u>Recommendation:</u> The auditors recommend revision of this action to clearly outline what is being undertaken to ensure adequate dilution of any discharges that may impact the water quality of the Keep River.	NA	Item amended in Knox EMP (refer to KEMP 108).
KEMP 108	Review/refine trigger values for the Keep River pools.	To update discharge model.	Annually	KAI		NA	NA	NR	Irrigation not yet commenced.

Discharge monitoring regime and corrective actions

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 109.	Telemetered flow monitoring at development gauge, existing gauging stations along Border Creek and the Keep River and in groundwater discharge pipe.	Continuous (hourly) flow monitoring when stormwater or groundwater discharge occurs.	No discharge of surplus groundwater to the Keep River unless there is sufficient threshold natural flow. No significant impact on the health of aquatic ecosystems from stormwater and surplus groundwater.	<ol style="list-style-type: none"> <li>Investigate cause. This could include examining management practices and identifying instances where water may have been unnecessarily discharged during low flow periods.</li> <li>Conduct an intensive water quality sampling program upstream and downstream of the discharge point.</li> <li>Immediately initiate processes to identify whether remedial action is required, in consultation with the IRG. Remedial actions could include:                             <ul style="list-style-type: none"> <li>releasing irrigation water from the M2 channel into Border Creek</li> <li>increasing groundwater pumping into the Ord Stage 1 or 2 supply channel during periods of low river flow</li> <li>installing additional erosion protection</li> <li>educating farm owners/managers</li> <li>revision of management practices (including groundwater discharge rules).</li> </ul> </li> <li>Implement remedial action/s.</li> <li>Monitor success of remedial action/s quarterly for a period of 12 months</li> <li>Report on any findings as a result of monitoring.</li> </ol>	LANDCORP	Refer to EMP 104	Conformant	Refer to EMP 104.	NA	Item amended in Knox EMP (refer to KEMP 109).
KEMP 109	Telemetered flow monitoring at the development gauge, and the existing gauging station on the Keep River and in groundwater discharge pipe.	Refer to EMP 109	Refer to EMP 109.	Refer to EMP 109.	KAI	NA	NA	NA	NR	Construction not yet commenced.
EMP 110.	Aquatic ecology monitoring (including aquatic invertebrates and fish) in the Keep River pools (K1, K2, K3 and K4) and threatened aquatic ecology monitoring (this includes the Speartooth shark [Glyphis glyphis], Northern river shark [Glyphis garricki], Dwarf Sawfish <i>Pristis clavata</i> and <i>Pristis Microdon</i> ) at three sites in the Keep River estuary (EST1, EST2, EST3). Monitoring to be supported by concurrent sampling at five control / reference locations to differentiate natural changes from those potentially resulting from the action (as listed in the Aquatic Fauna Management Plan).	Annually in the late dry season from the commencement of the action. Initially for three years to establish a baseline, and then for a further three years post-development. If there is no detectable effect on any of the species included in the aquatic monitoring program, then frequency is reduced to three-yearly, or in response to known events that may result in exceedances of site-specific trigger values for water quality Keep River.	No detrimental change in the AUSRIVAS macroinvertebrate category and in fish assemblage composition that is caused by the action. This can be resulting from stormwater, surplus groundwater and groundwater seepage increases, as compared against reference sites that reflect natural variability in ecosystem health.	<ol style="list-style-type: none"> <li>Immediately investigate cause over a period of at least 12 months through reviewing management practices and determining whether ecological health of aquatic fauna has deteriorated.</li> <li>Identify remedial action required. Remedial actions could include:                             <ul style="list-style-type: none"> <li>releasing irrigation water from the M2 channel in Border Creek</li> <li>increasing the pumping rates of the eastern bores to reduce groundwater seepage</li> <li>increasing groundwater pumping into the Ord Stage 1 or 2 supply channel during periods of low river flow</li> <li>potentially, pending analysis, discharging groundwater into the lower Keep River estuary</li> <li>installing additional erosion protection</li> <li>educating farm owners/managers</li> <li>revision of management practices (including groundwater discharge rules)</li> <li>review flow monitoring data.</li> </ul> </li> <li>Implement remedial action/s, as required, immediately or at a time determined with the IRG to be appropriate.</li> <li>Monitor success of remedial action/s at least quarterly for 12 months.</li> <li>Report on any findings in Annual Environmental Report (AER) as a result of monitoring.</li> </ol>	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 M_034_IRG_Agenda Weaber Plain Development Project Independent Review Group_29062015	3-year baseline study -Completed.  3-years post-development - NR	Baseline study assessed as completed in the 2014 compliance report (Strategen 2015).  The IRG supports the commencement of the "three years' post-development" aquatic fauna monitoring as being the year that 90% of Goomig farms are irrigated.	NA	Item amended in Knox EMP (refer to KEMP 110).

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
KEMP 110	Utilise the aquatic ecology monitoring conducted under EPBC Approval 2010/5491 as an indicator of the outcomes of the combined Weaber and Knox management.	Ongoing	Refer to EMP 110.	Refer to EMP110.	KAI	NA	NA	NA	NR	Construction not yet commenced in the Knox Plain area. Post-development aquatic ecology monitoring conducted under EPBC Approval 2010/5491 not yet commenced.

### Biodiversity and habitat management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain		
						Status	Comment	Status	Comment	
<b>Induction</b>										
EMP 111.	Induct personnel on biodiversity and habitat management measures	To minimise potential for adverse environmental impacts by ensuring personnel are informed of appropriate environmental management procedures.	Within one week of personnel commencing work on-site	KAI	R_004_KAI_Ord Irrigation Expansion Project Environment Induction_00002013 R_005_KAI_KAI Induction Register_00002015 C_062_D Pearce_EMP2 - NDC induction records - Email 1 of 2_15122015 R_063_NDC_Site Induction Forms_17072014 R_064_LandCorp_Ord 2014 Environmental Induction_00002014	Conformant	Formal inductions are undertaken by KAI that include biodiversity and habitat management measures. No construction personnel were onsite during this audit period. NDC was on site this audit period to conduct repairs on segments of channel infrastructure - all personnel have been previously inducted by LandCorp during the 2014 audit period.	NR	Construction not yet commenced.	
<b>Construction</b>										
EMP 112.	Ensure development maps clearly delineate the Buffer Area and Development Area.	To prevent unauthorised clearing by ensuring clearing boundaries are appropriately documented.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not scheduled to commence until late in the dry season 2016.	
EMP 113.	Delineate the boundaries of the vegetation to be cleared for construction in the field with flagging tape, signage or fencing.	To prevent unauthorised clearing by ensuring clearing boundaries are appropriately marked in the field.	Prior to ground disturbance	KAI	Refer EMP 6	Conformant	Refer to EMP 6.	NR	Construction not scheduled to commence until late in the dry season 2016.	
EMP 114.	Restrict movement of construction machinery and equipment to designated tracks and roads.	To minimise disturbance by consolidating vehicle access to designated areas.	Ongoing from commencement of ground disturbance	LANDCORP / KAI	Refer to EMP 7	Completed	Refer to EMP 7. Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.	
EMP 115.	Stage clearing of vegetation so that areas are cleared only as required.	To minimise the area of exposed surfaces at any one time and to allow native animals the chance to move on.	During construction of shared infrastructure	LANDCORP / KAI	Refer to EMP 7	Completed	Refer to EMP 7. Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.	
EMP 116.	Manage topsoil in accordance with the Soil Management Sub-plan	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During construction of infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.	
<b>Native fauna encounter</b>										
EMP 117.	Give native animals encountered on-site the opportunity to move on if there is no threat to personnel safety in doing so.	To prevent injury or death to native animals.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	No native animal encounters/incidents recorded. Occasional road-kill incidents of wallabies only.	NR	Construction not yet commenced.	
EMP 118.	Call the nominated carer or Wildlife Hotline to rescue sick or injured native animals if they are encountered.	To prevent loss of native animals.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015)	Conformant	Refer EMP 117. No calls required.	NR	Construction not yet commenced.	

## Biodiversity and habitat monitoring regime

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 119.	Compliance of marked clearing boundary with development maps.	Daily	No clearing adjacent to areas where clearing boundaries are not defined.	Report as Environmental Incident and initiate Incident Procedure which shall include: <ul style="list-style-type: none"> <li>investigating the cause of the incident</li> <li>redefining boundaries.</li> </ul>	KAI	R_045_KAI_KAI Environmental audits (Non Construction) 2015 Month - August_00082015 R_046_KAI_KAI Ground disturbance log_00002015	Potentially non-conformant	Environmental inspection spreadsheet (R_045) indicates that marked clearing boundaries are checked regularly (four times in the month of August); however, they are not checked daily as required by the action. KAI advised that it was not practical to undertake these inspections daily. <u>Recommendation:</u> The auditors recommend revision of the frequency of this action in the EMP, to the satisfaction of the OEPA.	NR	Construction not yet commenced.
EMP 120.	Extent of clearing and ground disturbance along pre-defined boundaries.	Daily	No clearing or disturbance outside of pre-defined boundaries (Figure 1).	Report as Environmental Incident and initiate Incident Procedure which shall include: <ul style="list-style-type: none"> <li>investigating the cause of the incident</li> <li>redefining boundaries if due to inadequate boundary marking</li> <li>rehabilitating affected area as required in accordance with the Rehabilitation Management Sub-plan.</li> <li>monitoring the success of remedial action.</li> </ul>	KAI	R_045_KAI_KAI Environmental audits (Non Construction) 2015 Month - August_00082015 R_046_KAI_KAI Ground disturbance log_00002015	Potentially non-conformant	Environmental inspection spreadsheet (R_045) does not explicitly state that the extent of clearing is monitored. Monitoring was also not undertaken daily during this audit period. <u>Recommendation:</u> The auditors recommend revision of the environmental inspection spreadsheet to explicitly state this monitoring requirement and revision of the frequency of this action, to the satisfaction of the OEPA.	NR	Construction not yet commenced.



## Buffer management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Access</b>									
EMP 121.	Control vehicle access to the buffer through designated tracks, and provision of signage to inform of restrictions to areas, including speed restrictions, hygiene protocols, and to advise that no off-track driving is permitted.	To minimise impacts to the buffer by consolidating and restricting access	At all times	LANDCORP	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) P_027	Conformant	The Northovers mining track has been upgraded to provide and control access through the Buffer Area. Signage also observed during site inspection to control access to Buffer Area.	NA	Item amended in Knox EMP (refer to KEMP 121).
KEMP 121	Control vehicle access to the buffer through designated tracks, and provision of signage to inform of restrictions to areas	To minimise impacts to the buffer by consolidating and restricting access	At all times	KAI	NA	NA	NA	NR	Construction not yet commenced.
EMP 122.	Control human access to the buffer through provision of signage at entry points to Buffer Area advising of restrictions and no unauthorised access.	To minimise impacts to the buffer by restricting access	At all times	LANDCORP	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) P_025 P_026	Conformant	Signage advising of restricted access observed during site inspection.	NA	Item not included in Knox EMP.
<b>Infrastructure</b>									
EMP 123.	Induct all personnel constructing or utilising infrastructure within the Buffer Area, including roads, channels, groundwater bores and the phone tower, to advise on protocols for hygiene, wildlife encounters, prohibited activities etc.	To minimise potential for adverse environmental impacts by ensuring personnel are informed of environmental management procedures	Within one week of commencing work on-site	LANDCORP	LandCorp/KAI advice (14-17-Sept-2015) R_005_KAI_KAI Induction Register_00002015 R_080_KAI_KAI Induction Questionnaire_13042015	Conformant	Buffer access only permitted for Wayne Paul (KAI), Debra Pearce (LandCorp), Dick Pasfield (Ord Land and Water), who have been previously inducted, and KAI grader drivers. KAI grader drivers were inducted during this audit period.	NA	Item amended in Knox EMP (refer to KEMP 123).
KEMP 123	Induct all personnel constructing or utilising infrastructure within the Buffer Area, including roads and groundwater bores.	To minimise potential for adverse environmental impacts by ensuring personnel are informed of environmental management procedures	Within one week of commencing work on-site	KAI	NA	NA	NA	NR	Construction not yet commenced.
<b>Vegetation improvement</b>									
EMP 124.	Assess and map vegetation condition within the buffer according to the Keighery (1994) Vegetation Condition rating scale.	To provide data to inform management.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 R_054_Botanical North_Assessment and mapping of vegetation condition within the Weaber Plain Development Project Buffer Area 2011_00102011 R_061_OLW_Vegetation Condition Assessment and Weed Survey for the Knox Creek Farmland Buffer Area 2015_00002015	Completed	Item assessed as completed in previous compliance report.	Conformant	Ord Land and Water conducted a vegetation condition assessment of the Knox Creek Plain Buffer Area in September 2015.
EMP 125.	Stabilise and revegetate areas identified as containing vegetation below a rating of 'Very Good' in accordance with species lists and planting procedures determined in consultation with DPW AND/OR DER.	To better enable the Buffer Area to fulfil its intended role and purpose by restoring ecological integrity and function to degraded areas.	Within 12 months of completion of construction of infrastructure	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 R_054_Botanical North_Assessment and mapping of vegetation condition within the Weaber Plain Development Project Buffer Area 2011_00102011 R_047_OLW_Vegetation Condition Assessment Goomig Farmland Buffer Area 2014_00002014	Potentially non-conformant	The initial vegetation condition assessment conducted in 2011 identified several small areas with a condition rating of less than Very Good (Figure 4 of R_054). On review, the 2014 vegetation condition assessment indicates that there were four monitoring sites that had a condition rating of 'Good' or 'Degraded'. LandCorp advised that revegetation of these areas has not been undertaken. Identification of noxious weeds and subsequent weed control is regularly being undertaken throughout the Buffer Area which LandCorp advised, along with the destocking of cattle from the Buffer Area, should result in the long-term improvement in condition through natural recruitment of these areas without revegetation being undertaken. <u>Recommendation:</u> The auditors recommend revision of revegetation requirements in consultation with the OEPA and deletion of this action if revegetation is agreed as not being necessary due to natural regeneration and other management actions being undertaken.	NA	Item amended in Knox EMP (refer to KEMP 125).

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain		
						Status	Comment	Status	Comment	
KEMP 125	Stabilise and spread topsoil (if available) in areas identified as containing vegetation below a rating of 'Very Good' in accordance with species lists and planting procedures determined in consultation with DPW.	To better enable the Buffer Area to fulfil its intended role and purpose by restoring ecological integrity and function to degraded areas.	Within 12 months of completion of construction of infrastructure	KAI	NA	NA	NA	NR	Construction not yet commenced. <u>Recommendation:</u> The auditors recommend revision of this action to remove reference to species lists and planting procedures as the action does not include a revegetation requirement.	
EMP 126.	In consultation with the DPW AND/OR DER and DoW, revegetate areas within the buffer with species selected specifically for their ability to lower the groundwater table, given the local soil, water and solute settings. Species used in such revegetation will be agreed with the DPW AND/OR DER and DoW.	To improve the ability of the buffer to reduce the potential impacts of elevated groundwater levels and minimise diffuse groundwater discharge (including salts) to downstream watercourses.	Within 12 months of completion of construction of infrastructure and as determined to be required in consultation with DPW AND/OR DER and DoW	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 D_077_KAI_Groundwater Database_17112015	Potentially non-conformant	LandCorp has previously advised that this action is not occurring as there is currently no indication of rising groundwater and the preferred local revegetation measure is by topsoil respread rather than revegetation. Strategen has assessed this item as potentially non-conformant as no consultation with DPW and/or DER and DoW has occurred to confirm this is satisfactory. <u>Recommendation:</u> The auditors recommend revision or deletion of this action in consultation with OEPA and the indicated agencies.	NA	Item amended in Knox EMP (refer to KEMP 126).	
KEMP 126	If required for degraded areas, revegetate areas within the buffer with species selected specifically for their ability to lower the groundwater table, given the local soil, water and solute settings.	To improve the ability of the buffer to reduce the potential impacts of elevated groundwater levels and minimise diffuse groundwater discharge (including salts) to downstream watercourses.	Within 12 months of completion of construction of infrastructure and as determined to be required in consultation with DPW.	KAI	NA	NA	NA	NR	Construction not yet commenced.	
EMP 127.	Undertake weed control in areas identified as containing vegetation below a rating of 'Very Good', focusing on the most degraded areas first and in accordance with procedures detailed in the Weed, Plant Pathogen and Pest Animal Management Sub-plan.	To better enable the Buffer Area to fulfil its intended role and purpose by restoring ecological integrity and function to degraded areas.	Within 12 months of completion of construction of infrastructure and ongoing	LANDCORP / KAI	R_022_OLW_Weed Control and Survey Goomig Farmland Buffer Area_00002015 R_047_OLW_Vegetation Condition Assessment Goomig Farmland Buffer Area 2014_00002014	Conformant	The weed control and survey report 2014-15 (R_022) indicates that weed control was focussed on locations of weed infestations with targeted weeds being <i>Parkinsonia</i> and Sicklepod <i>Senna</i> . There is no reference to weed control being undertaken in areas with vegetation condition of less than 'Very Good'; however, the weed survey and control program covered all the areas surveyed in the 2014 condition assessment; as such this item has been assessed as conformant.	NR	Construction not yet commenced.	
<b>Cane toads</b>										
EMP 128.	Liaise with DPW with regard to their plans for implementation of the State Cane Toad Strategy (DEC 2009) in the Development Area.	To reduce the potential effect of cane toads on the Buffer Area.	As required	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.	
EMP 129.	Provide information to land owners and Traditional Owners, on the Cane Toad Strategy for Western Australia (DEC 2009).	To reduce the potential effect of cane toads on the Buffer Area	At sublease of farm lots	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.	
<b>Ongoing buffer maintenance and monitoring</b>										
EMP 130.	Investigate the possibility of extending the DPW AND/OR DER Traditional Owner Ranger Program (Kununurra based) into the Buffer Area, or incorporating other Indigenous management initiatives – consult with MG Corporation regarding shared responsibilities for maintenance of the Buffer Area.	To maximise opportunities for involvement of Traditional Owners in ongoing management of the Buffer Area	Ongoing	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	Completed	Item assessed as completed as the investigation completed for Weaber Plain is assumed by the auditors to also be relevant to the Knox Creek Plain.	
EMP 131.	Maintain the Buffer Area perimeter fencing, where required, to minimise stock invasion, remove introduced livestock, and continue to remove any subsequent invading livestock, as required, to protect native vegetation condition	To ensure species and habitats within the Buffer Area are not adversely affected by stock grazing	Ongoing	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) P_048 P_049	Conformant	Buffer Area perimeter fencing observed during site inspection. Cattle muster undertaken in this audit period by Carlton Hill Station; however, no correspondence could be found regarding this event. No cattle or other pests were observed in the Buffer Area during the site inspection.	NR	Construction not yet commenced.	

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Fire management</b>									
EMP 132.	Implement the Fire Management Sub-plan	To reduce the potential for impacts of fire on the buffer, infrastructure, MNES populations and habitats	Ongoing	KAI	Refer to EMP 45	Conformant	No key actions have been identified from the Fire Management sub-plan (FMP); therefore, the plan has not been audited. The FMP is due for revision in 2016 and the audit table will be updated accordingly to assess the FMP. Refer also to EMP 45.	NR	Construction not yet commenced.

**Buffer monitoring regime**

Item	Activity and location	Frequency	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 133.	Assess vegetation condition using the Keighery (1994) rating scale and update vegetation condition map.	Annually commencing within 12 months of the commencement of the action.	All areas within buffer to be in 'Very Good' or better condition.	Investigate cause, e.g. cattle intrusion, loss of seed through heavy rains. Take appropriate remedial actions, e.g. feral animal eradication programs, stabilise and revegetate area. Monitor success of remedy (annually at time of regular monitoring).	LANDCORP / KAI	LandCorp advice (9-Feb-2016)	Potentially non-conformant	LandCorp advised that a vegetation condition assessment was not undertaken in 2015; as such, this is a potential non-conformance. LandCorp advised that removal of cattle from the Buffer Area has, anecdotally, improved the vegetation condition throughout the Buffer. <u>Recommendation:</u> The auditors recommend that the proponent ensures a vegetation condition assessment is undertaken annually as required or revision of this item to ensure conformance.	NR	Construction not yet commenced.

## Rehabilitation management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Baseline information</b>									
EMP 134.	Select reference sites in buffer and conservation areas containing landforms and vegetation comparable (or likely to have been comparable) to those of planned disturbance areas not required post-construction.	To locate suitable sites against which to compare rehabilitation success.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in previous compliance report. <u>Note:</u> Area 11 will require rehabilitation and reference sites to compare revegetation to; however, as the area is still being used as a quarry, reference sites have not yet been selected for this area.	NR	Construction not yet commenced.
EMP 135.	Survey reference sites identified in EMP 134 to determine indicator species, density of native species, % cover of native species, native species richness and % weed cover as outlined in the monitoring procedures.	To provide data against which rehabilitation success can be measured.	Prior to ground disturbance and quarterly throughout the rehabilitation process	LANDCORP / KAI	R_050_Botanical North_Ord Stage 2 rehabilitation assessment May 2015_14072015 R_076_Botanical North_Ord Stage 2 rehabilitation assessment - Oct 2015_29112015	Potentially non-conformant	Auditors were advised that reference sites are surveyed six monthly consistent with the monitoring regime (EMP 162–164) rather than quarterly as required by this action. <u>Recommendation:</u> The auditors recommend that the timing of this action be amended, in consultation with the OEPA, to six monthly as per the monitoring regime (EMP 162–164) due to local conditions (e.g. wet season); also due to the potential impact on the buffer from frequent access.	NR	Construction not yet commenced.
EMP 136.	Determine parameters and targets for each indicator species as appropriate. e.g. density of indicator species, % cover of indicator species, etc.	To enable specific aspects of rehabilitation success to be measured.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 137.	Undertake a weed survey of the project area to establish baseline information in accordance with the Weed, Plant Pathogen and Pest Animal Management Sub-plan.	To provide data to inform management.	As specified in the Weed, Plant Pathogen and Pest Animal Management Sub-plan	LANDCORP	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 R_061_OLW_Vegetation Condition Assessment and Weed Survey for the Knox Creek Farmland Buffer Area 2015_00002015	Completed	Item assessed as completed in a previous audit period.	Completed	A baseline weed survey has been conducted in Knox Creek Plain Buffer Area. Only two weed species were identified, of which only one species ( <i>Parkinsonia aculeata</i> ) is of concern, along Border Creek in the northern most Buffer Area of the Knox Creek Plain development area.
<b>Seed collection</b>									
EMP 138.	Develop a species list for seed collection based on species known to germinate from seed and/or that can be propagated by nurseries (may require consultation with nurseries and rehabilitation specialists in the area).	To maximise potential for rehabilitation success by ensuring appropriate species are used in seeding/planting.	As required for rehabilitation	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Seed collection not yet required.
EMP 139.	Contract experienced seed collector licensed by the DPW AND/OR DER to undertake a seed collection program of plant species endemic to the project area following <i>Florabank Guidelines</i> (Greening Australia 2009) including: <ul style="list-style-type: none"> <li>gathering information and targeting certain species</li> <li>undertaking seed collection in the optimum season for the species</li> <li>collecting only mature seed</li> <li>determining seed collection method (e.g. natural seed fall, collection by hand, mechanical harvesting, etc.</li> <li>maintaining detailed record sheets to provide evidence that the seed is local provenance, e.g. date of collection, time of collection, person undertaking collection etc.</li> <li>preparing material for transportation.</li> </ul>	To maximise potential for rehabilitation success by ensuring seed collection is undertaken in accordance with appropriate guidelines and procedures.	As required for rehabilitation	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 LandCorp advice (14–17-Sept-2015)	NR	Not required in this audit period – probably not required until Area 11 closed in several years.	NR	Seed collection not yet required.
EMP 140.	Ensure all seed to be used in rehabilitation is sourced from species that are endemic to the area/local provenance (unless otherwise authorised by the DPW AND/OR DER).	To ensure species used in rehabilitation have adaptations to suit local conditions.	As required for rehabilitation	LANDCORP / KAI	Refer to EMP 139	NR	Refer to EMP 139	NR	Seed collection not yet required.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 141.	Monitor the progress of seed collection and store and process seed in accordance with the seed collection and direct seeding procedure.	To maximise potential for rehabilitation success by ensuring seed collection is undertaken appropriately.	As required for rehabilitation	LANDCORP / KAI	Refer to EMP 139	NR	Refer to EMP 139	NR	Seed collection not yet required.
<b>Hygiene</b>									
EMP 142.	Implement hygiene management actions as outlined in the Weed, Plant Pathogen and Pest Animal Management Sub-plan.	To maximise potential for rehabilitation success by preventing the introduction and/or spread of weeds and plant pathogens into rehabilitation areas.	As specified in the Weed, Plant Pathogen and Pest Animal Management Sub-plan	LANDCORP / KAI	Refer to EMP 62–67	Conformant	Refer to EMP 62–67	NR	Rehabilitation not yet commenced.
<b>Pest Control</b>									
EMP 143.	Control stock within buffer area in accordance with the Weed, Plant Pathogen and Pest Management Sub-plan.	To maximise potential for rehabilitation success by preventing stock from entering rehabilitation areas.	As specified in the Weed, Plant Pathogen and Pest Animal Management Sub-plan	LANDCORP / KAI	Refer to EMP 72	Conformant	Refer to EMP 72	NR	Construction not yet commenced.
<b>Construction sites</b>									
EMP 144.	Ensure all foreign material is removed from the site to be recycled or reused where practicable, or disposed of off-site before rehabilitation is carried out.	To enable rehabilitation to commence.	Prior to rehabilitation	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	No new rehabilitation during this audit period.	NR	Construction not yet commenced.
EMP 145.	Areas suspected to be contaminated by spills or leaks of hydrocarbons and/or inappropriate disposal of wastes will be investigated to determine the presence and/or level of contamination.	To determine whether rehabilitation areas are required to be remediated.	Prior to rehabilitation	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	No new rehabilitation during this audit period. <i>Note:</i> (refer to EMP 29) a small spill was observed in Area 11, an area which will require rehabilitation in the future (currently it is still being used as a quarry). The auditors recommend KAI inform SWEK of the spill to initiate clean-up and to highlight the potential compliance risk to KAI if SWEK does not ensure good spill management practices are in place. Area 11 is not proposed to be rehabilitated in the near future.	NR	Construction not yet commenced.
EMP 146.	Remediate any soils that are determined to be contaminated.	To maximise potential for rehabilitation success by ensuring rehabilitation areas are not contaminated.	Prior to rehabilitation	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	No new rehabilitation during this audit period. Refer to EMP 145.	NR	Construction not yet commenced.
<b>Erosion/Landform stability</b>									
EMP 147.	Disturbed areas will be stabilised through a combination of contouring and slope stabilisation as required.	To minimise erosion of rehabilitated landforms.	Progressively as disturbed areas are no longer required	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 148.	All rehabilitation areas will be reshaped and contoured to blend with adjacent relief and drainage as far as practicable. This will include: <ul style="list-style-type: none"> <li>the removal of impediments to run-off</li> <li>diversion of surface run-off around borrow pits to prevent flooding and potential instability of pit walls</li> <li>where necessary filling of borrow pits with subsoil to level of natural ground surface.</li> </ul>	To minimise erosion of rehabilitated landforms.	During the rehabilitation process	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	No new rehabilitation during this audit period.	NR	Rehabilitation not yet commenced.
EMP 149.	All tracks to be rehabilitated will be ripped or scarified to minimise compaction.	To maximise potential for rehabilitation success by allowing roots and water to penetrate the soil profile.	During the rehabilitation process	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	No new rehabilitation during this audit period.	NR	Construction not yet commenced.
<b>Topsoil management</b>									

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 150.	Remove topsoil from cleared areas and manage in accordance with the Biodiversity and Habitat Management Sub-plan.	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Clearing not yet commenced.
EMP 151.	Ensure material to be used for rehabilitation (e.g. topsoil, cleared vegetation, etc.) does not contain declared weeds.	To maximise potential for rehabilitation success by preventing the introduction and/or spread of declared weeds into rehabilitation areas.	Prior to rehabilitation	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	No new rehabilitation during this audit period.	NR	Clearing not yet commenced.
EMP 152.	Relocate stripped topsoil and (if applicable) cleared vegetation directly to areas required to be rehabilitated, where possible.	To maximise the benefits of using topsoil and mulch by minimising storage time.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 153.	Spread stripped topsoil evenly across areas to be rehabilitated (to a nominal depth of approximately 100-150 mm). Work parallel with the contours as far as practicable, to minimise the creation of preferential drainage pathways.	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During rehabilitation process	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	No new rehabilitation during this audit period.	NR	Rehabilitation not yet commenced.
EMP 154.	Rake rehabilitation areas to minimise potential impacts from compaction.	To maximise potential for rehabilitation success by allowing roots and water to penetrate the soil profile.	After spreading of topsoil and prior to placement of cleared vegetation	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	No new rehabilitation during this audit period.	NR	Rehabilitation not yet commenced.
EMP 155.	Where direct replacement of rehabilitation material (e.g. topsoil, cleared vegetation, etc.) is not possible, stockpile material for later use in rehabilitation activities.	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	During construction of shared infrastructure	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Clearing not yet commenced.
EMP 156.	Locate stockpiles of rehabilitation material (e.g. topsoil, cleared vegetation, etc.) within already disturbed areas wherever possible.	To minimise disturbance.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	No new rehabilitation during this audit period.	NR	Clearing not yet commenced.
EMP 157.	Restrict topsoil stockpile height to less than 2 m.	To conserve native seed banks for direct propagule return, reduce the risk of self-composting and provide opportunities for the roots of temporary vegetation growing on the topsoil stockpile to reach the deepest parts of the stockpile, thereby sustaining many micro-organisms.	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14-17-Sept-2015) R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Conformant	No new rehabilitation during this audit period.	NR	Clearing not yet commenced.
EMP 158.	Where topsoil is not available, import topsoil in consultation with the Department of Parks and Wildlife (DPW) Kununurra office.	To provide a natural source of seed, organic matter and microorganisms for areas to be rehabilitated.	Prior to rehabilitation	KAI	NA	NR	No importation of topsoil has occurred to date. <b>Recommendation:</b> The auditors recommend deletion of this action in future revisions of the EMP if topsoil is never intended to be imported.	NA	Item not included in Knox EMP.
<b>Fencing</b>									
EMP 159.	Provide temporary fencing and signage around rehabilitation areas.	To minimise disturbance to rehabilitation areas by restricting access.	During rehabilitation process	KAI	Site inspection (15-Sept-2015)	Conformant	Signage and earthen bunds (fences) to prevent access observed.	NR	Rehabilitation not yet commenced.
<b>Inspection</b>									
EMP 160.	Inspect borrow pits no longer required following construction to ensure all pits are backfilled and rehabilitated such that they are free draining.	To ensure timely and appropriate rehabilitation of borrow pits.	As required	KAI	NA	NR	Inspections not required as Area 11 is still in use.	NR	Construction not yet commenced.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 161.	Where there is insufficient subsoil for backfilling: <ul style="list-style-type: none"> <li>import material for backfilling in consultation with DPW if applicable</li> <li>ensure pits are rehabilitated to minimise standing shallow water as much as possible.</li> </ul>	To minimise the creation of mosquito breeding habitat.	As required	KAI	NA	NR	Not required to date.	NA	Item not included in Knox EMP.

Rehabilitation monitoring regime

Item	Activity and location	Frequency/ timing	Target	Corrective action	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
							Status	Comment	Status	Comment
EMP 162.	Native species richness, density and % cover within rehabilitation sites as outlined in the monitoring procedures.	Twice annually (in May and October).	Mean native species richness, plant density and % cover in the rehabilitation site after five years (including at least two wet seasons where >75% of the long-term average rainfall has fallen) is greater than: <ul style="list-style-type: none"> <li>70% of the mean % cover of natives in the reference sites</li> <li>70% of the mean native species richness in the reference sites.</li> </ul>	<ol style="list-style-type: none"> <li>Identify cause.</li> <li>Implement approach to remedy cause, which could include:                             <ul style="list-style-type: none"> <li>application of fertilisers or wetting agents etc. if applicable</li> <li>implement supplementary direct seeding or seedling planting program in accordance with procedures</li> <li>review rehabilitation process and amend if appropriate.</li> </ul> </li> <li>Monitor success of approach.</li> </ol>	LANDCORP / KAI	R_050_Botanical North_Ord Stage 2 rehabilitation assessment May 2015_14072015 R_076_Botanical North_Ord Stage 2 rehabilitation assessment - Oct 2015_29112015	Potentially non-conformant	Rehabilitation assessments were undertaken in May and October and assessed native species richness, and % cover; however, plant density (number of plants/m <sup>2</sup> ) was not consistently measured in all rehabilitation areas. As such the Auditors have assessed this item as potentially non-conformant. <u>Recommendation:</u> The auditors recommend the revision of this action to remove the requirement to measure plant density as there is no specific target for plant density outlined in this action.	NR	No rehabilitation sites associated with Knox Creek Plain.
EMP 163.	Indicator species in rehabilitation sites.	Twice annually (in May and October).	As determined in accordance with Item EMP 136	<ol style="list-style-type: none"> <li>Identify cause.</li> <li>Implement approach to remedy cause, which could include:                             <ul style="list-style-type: none"> <li>application of fertilisers or wetting agents etc. if applicable</li> <li>implement supplementary direct seeding or seedling planting program in accordance with procedures</li> <li>review rehabilitation process and amend if appropriate.</li> </ul> </li> <li>Monitor success of approach.</li> </ol>	LANDCORP / KAI	Refer to EMP 162	Conformant	Rehabilitation assessments were undertaken in May and October and included identification of any indicator species in monitoring sites.	NR	No rehabilitation sites associated with Knox Creek Plain.
EMP 164.	Exotic species richness and % cover within rehabilitation sites as outlined in the monitoring procedures.	Twice annually (in May and October).	Exotic flora species: <ul style="list-style-type: none"> <li>no greater than 10% increase in weed species density/cover/distribution compared to reference sites</li> <li>no Declared Plants present on-site six months following completion of construction.</li> <li>no infested areas as defined in the Weed, Plant Pathogen and Pest Animal Management Sub-plan</li> <li>no local priority areas as defined in the Weed, Plant Pathogen and Pest Animal Management Sub-plan</li> <li>no new weed species present.</li> </ul>	<ol style="list-style-type: none"> <li>Identify cause.</li> <li>Identify the weeds, their location and coverage.</li> <li>Implement remedy which could include:                             <ol style="list-style-type: none"> <li>implementing a weed control program</li> <li>reinforcing management actions in the Weed, Plant Pathogen and Pest Animal Management Sub-plan and Rehabilitation Management Sub-plan.</li> </ol> </li> <li>Monitor success of control.</li> </ol>	LANDCORP / KAI	Refer to EMP 162	Conformant	Rehabilitation assessments were undertaken in May and October and included exotic species richness and % cover.	NR	No rehabilitation sites associated with Knox Creek Plain.
EMP 165.	Erosion within and adjacent to rehabilitation sites.	Opportunistically following heavy rainfall events.	Ensure landform is safe and stable with no erosion occurring 18 months after rehabilitation.  Reconstructed landform can withstand exceedance of average rainfall occurrences for a period of 10 years.	<ol style="list-style-type: none"> <li>Identify cause of erosion.</li> <li>Consult expert to determine appropriate remedy which may include                             <ul style="list-style-type: none"> <li>Installing culverts</li> <li>Installing stormwater diversion structures.</li> </ul> </li> <li>Implement remedy.</li> <li>Monitor success of remedy.</li> </ol>	LANDCORP / KAI	Refer to EMP 162	Conformant	Observation for erosion within and adjacent to the rehabilitation sites was included in the May and October rehabilitation assessment. Very little erosion was observed.	NR	No rehabilitation sites associated with Knox Creek Plain.

## Aboriginal heritage management actions

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
<b>Cultural heritage</b>									
EMP 166.	Implement an induction program for personnel and contractors/consultants, and an information package for farm owners/managers, both of which containing information on: <ul style="list-style-type: none"> <li>significance of Aboriginal heritage and the potential impacts of the project</li> <li>procedures to report potential new sites</li> <li>obligations under the <i>Aboriginal Heritage Act 1972 (WA)</i></li> <li>requirements for the protection of known Aboriginal sites.</li> </ul>	To ensure protection of known sites of Aboriginal heritage significance in accordance with the requirements of the <i>Aboriginal Heritage Act 1972 (WA)</i> , to improve knowledge of Aboriginal cultural heritage in non-indigenous people associated with the project.	Within one week of personnel commencing work on-site	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 R_004_KAI_Ord Irrigation Expansion Project Environment Induction_00002013 R_005_KAI_KAI Induction Register_00002015	Farm sales package – Completed  Induction program - Conformant	Farm sales package assessed as completed in a previous audit period.  KAI induction package includes relevant information for all requirements of this item.	NR	Construction not yet commenced.
EMP 167.	Document the location of protected areas on development design plans and make available to planners, agents, contractors, and relevant personnel.	To ensure protection of known sites of Aboriginal heritage significance in accordance with the requirements of the <i>Aboriginal Heritage Act 1972 (WA)</i> , to improve knowledge of Aboriginal cultural heritage in non-indigenous people associated with the project.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015 R_002_KBC_Knox Creek Plan Agricultural Development Final Project Design Plan_01082015 I_074_unknown_Knox Creek Plain Project Area Aboriginal Sites_15062015	Completed	Item assessed as completed in a previous audit period.	Conformant	FPDP confirms “that heritage sites are retained in the designated buffer areas.” A figure (I_074) provided by KAI confirms Aboriginal heritage sites are protected with Buffer Areas.  As construction has not yet commenced, this information is not yet required to be provided to relevant contractors and personnel.
EMP 168.	Flag the boundaries of project areas to ensure activities do not intrude into areas where Aboriginal sites are present.		Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 169.	Place 'No Go' signage along boundaries immediately adjacent to Buffer Areas around protected Aboriginal sites.		Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 170.	If a suspected heritage site is detected follow procedures as outlined in the Heritage Site Detection Procedure. Potential heritage sites include stone/shell scatters (middens), stone tools, rock paintings and engravings, grinding patches, scar trees, ochre sites/quarries, and skeletal remains.	To ensure protection of previously unrecorded Aboriginal heritage sites detected during construction/clearing activities in accordance with the <i>Aboriginal Heritage Act 1972 (WA)</i> .	Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015)	Conformant	No new sites reported.	NR	Construction not yet commenced.



Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 171.	Site heritage monitors from MG Corporation issued with a permit under Section 16 of the <i>Aboriginal Heritage Act 1972</i> (WA) will be on-site to monitor clearing and earthworks activities.		Ongoing from commencement of ground disturbance	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015)	Potentially non-conformant	Clearing of farm lots occurred during this audit period; however, KAI advised that site heritage monitors from MG Corporation were not present during this clearing. KAI advised that this requirement is unfeasible due to the high costs involved. KAI also advised: <ul style="list-style-type: none"> <li>it complies with the <i>Aboriginal Heritage Act 1972</i> (AH Act)</li> <li>is in regular contact and maintains a strong relationship with MG Corporation management and Directors</li> <li>MG Corporation is satisfied with the current arrangement.</li> </ul> To the auditors' knowledge a s 16 (of the AH Act) permit is only required if someone was intending to enter and excavate a known Aboriginal site; therefore, it appears unnecessary to require this permit for general clearing (the known sites have been excluded from clearing areas and retained in Buffer Areas). <u>Recommendation:</u> The auditors recommend revision of this action on the advice of the MG Corporation and in consultation with the Department of Aboriginal Affairs based on the reported unfeasibility of having a monitor present during all clearing events.	NA	Item not included in Knox EMP.
EMP 172.	A qualified archaeologist issued with a permit under Section 16 of the <i>Aboriginal Heritage Act 1972</i> (WA) will be available to come to site if a suspected heritage site is uncovered.		As required	KAI	Site inspection (15-Sept-2015) KAI advice (14–17-Sept-2015)	NR	No suspected heritage sites have been identified during this audit period.	NA	Item not included in Knox EMP.

Item	Action	Purpose	Timing	Responsibility	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 173.	The MG Corporation will be briefed on proposed works and work schedules and informed of detailed aspects of the project.	Ensure regular ongoing involvement of the Miriwung and Gajerrong people in heritage management throughout the life of the project, in accordance with the OFA and OES.	Prior to ground disturbance	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 174.	The MG Corporation will be involved in inspections of the Project Area throughout construction (with supporting briefing).		Quarterly and as required	LANDCORP / KAI	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 175.	Meet with MG Corporation to discuss broader issues of Aboriginal cultural heritage and heritage protection in and around the buffer, and associated social impact.		Annually and as required	KAI	KAI advice (15-Dec-2015)	Potentially non-conformant	KAI advised it meets with MG Corporation representatives on a regular basis; however, minutes of these meetings are not kept. As no verifiable evidence was provided regarding this action, this item has been assessed as a potential non-conformance. KAI advised that MG Corporation attended a meeting with DotE in January 2015 where the management of the Weaber and Knox buffers was discussed. <b>Recommendation:</b> The auditors recommend that adequate documentation and records of all meetings with MG Corporation are maintained.	Potentially non-conformant	KAI advised it meets with MG Corporation representatives on a regular basis; however, minutes of these meetings are not kept. As no verifiable evidence was provided regarding this action, this item has been assessed as a potential non-conformance. KAI advised that MG Corporation Chairman Mr Des Hill and Director Mr Ted Hall attended the KAI briefing of DotE in Canberra in January 2015, in relation to the Knox Creek Plain proposal. The Knox Creek Plain Aboriginal Development Package has been subsequently endorsed by MG Corporation. <b>Recommendation:</b> The auditors recommend that adequate documentation and records of all meetings with MG Corporation are maintained
EMP 176.	Establish cultural heritage database with GIS records of site locations in the project area.	Establish and maintain up-to-date records on Aboriginal heritage sites within the project area.	Prior to ground disturbance	LANDCORP / KAI	Site inspection 01/09 to 04/09/2014 20130126_R_270_Strategen_ORIA Weaber Plain Development Project Compliance Audit Statement 830 I_074_unknown_Knox Creek Plain Project Area Aboriginal Sites_15062015	Completed	Item assessed as completed in a previous audit period.	Conformant	Figure of Aboriginal heritage sites within Knox Creek Plain provided by KAI verifies site locations are recorded and retained by KAI.

## Aboriginal heritage monitoring regime and corrective actions

Item	Activity and location	Frequency	Target	Corrective action	Evidence	Weaber Plain		Knox Creek Plain	
						Status	Comment	Status	Comment
EMP 177.	Signage or temporary fencing/ tape showing heritage site locations.	Daily during clearing and construction.	No disturbance to sites not approved to be disturbed under Section 18 of the Aboriginal Heritage Act 1972 (WA).	<ol style="list-style-type: none"> <li>Report as Environmental Incident and initiate Incident Procedure, including: <ul style="list-style-type: none"> <li>stopping work in the vicinity of the boundary</li> <li>investigating the cause of the disturbance</li> <li>redefining boundaries if due to inadequate boundary marking</li> <li>rehabilitating vegetation in the area as required in accordance with the Rehabilitation Management Sub-plan</li> <li>restore the 'site' (e.g. scatters or middens could have been buried, rock art altered, skeletal remains exposed) – develop a remedial plan in consultation with appointed archaeologist and MG Corporation</li> <li>monitoring the success of remedial action.</li> </ul> </li> <li>Consult with the Department of Aboriginal Affairs and MG Corporation to determine actions required to restore the site to its original condition.</li> </ol>	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NR	Construction not yet commenced.
EMP 178.	Aboriginal monitors to check ground-disturbance work areas.	For each new area to be disturbed.	To identify new sites before clearing occurs.	Refer to Heritage Site Detection Procedure.	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Completed	Item assessed as completed in a previous audit period.	NA	Item not included in Knox EMP.

**Appendix 4**  
**Evidence register**



Type_00x	Code_Author_Title/subject_Date	E.g. email writer	E.g. organisation	Amend for each document to be audited (e.g. CMP, Conditions etc). Add/delete				Subject of evidence
Code	Reference	Author	Owner	MS938	EMP	Electronic	Hard-copy	Topic
R_001	R_001_Strategen_Ord River Irrigation Area Stage 2 (M2 Supply Channel) Compliance Assessment Report - Statement 938_24032015	Strategen		4.3		Y	N	Previous compliance report
R_002	R_002_KBC_Knox Creek Plan Agricultural Development Final Project Design Plan_01082015	KBC		6.1		Y	N	Knox Creek FPDP
C_003	C_003_OEPA_Ord River Irrigation Area Stage 2 (M2) Suuply channel Shire of Wyndham-East Kimberley - Ministerial Statement 938 - Desktop Audit Report Results_17042015	P Zahra (OEPA)		4.6		Y	N	Evidence of submission of 2014 CAR
R_004	R_004_KAI_Ord Irrigation Expansion Project Environment Induction_00002013	KAI			2, 22, 57, 166	Y	N	Induction package
R_005	R_005_KAI_KAI Induction Register_00002015	KAI			2, 22, 57, 166	Y	N	Induction register
P_006	P_006		Strategen		18	Y	N	Repairs to drainage infrastructure (erosion)
P_007	P_007		Strategen		18	Y	N	Drain reinforcement
R_008	R_008_LandCorp_Goomig Asset Management post-LandCorp_00002015	LandCorp			18	Y	N	Transfer of Assets
P_009	P_009		Strategen		24	Y	N	Diesel storage on trailer
P_010	P_010		Strategen		25	Y	N	Bunded generator
P_011	P_011		Strategen		26	Y	N	Spill kits at generator
P_012	P_012		Strategen		26	Y	N	Spill kits at generator
R_013	R_013_KAI_KAI Spraying Log_18052015	KAI			30	Y	N	Spraying log
R_014	R_014_KAI_KAI Spraying Log_20052015	KAI			30	Y	N	Spraying log
R_015	R_015_Lone Eagle_Aerial Request_22062015	Lone Eagle			30, 35	Y	N	Aerial spraying log
R_016	R_016_Lone Eagle_Aerial Request_15072015	Lone Eagle			30, 35	Y	N	Aerial spraying log
P_017	P_017		Strategen		32	Y	N	AusChem certification Wayne Paul
R_018	R_018_AusChem_Statement of Reaccreditation Dick Pasfield_29022012	AusChem			32	Y	N	AusChem reaccreditation D Pasfield
R_019	R_019_Roundupag_Roundup Ultramax Herbicide_00000000	Roundup			34	Y	N	Roundup Ultramax application rates
R_020	R_020_Agbitech_Vivusmax_00000000	Agbitech			34	Y	N	Vivus application rates
R_021	R_021_Agbitech_Optimol_00072012	Agbitech			34	Y	N	Optimol application rates
R_022	R_022_OLW_Weed Control and Survey Goomig Farmland Buffer Area_00002015	Ord Land and Water			54, 127	Y	N	Weed survey and control
F_023	F_023_Ord Irrigation Coop_Tax Invoice 961049_15052015	Ord Irrigation Cooperative			61	Y	N	Aquatic weed control (Acrolein)
R_024	R_024_Ord Irrigation Coop_Acrolein Users Manual_00022015	Ord Irrigation Cooperative			61	Y	N	Aquatic weed control (Acrolein)
P_025	P_025		Strategen		62	Y	N	Buffer signage
P_026	P_026		Strategen		63	Y	N	Buffer signage near access track
P_027	P_027		Strategen		71	Y	N	Buffer Area access track
P_028	P_028		Strategen		71	Y	N	Onsite bins
P_029	P_029		Strategen		71	Y	N	Onsite bins
D_030	D_030_ChemCentre_Report of Examination_17082015	ChemCentre			84	Y	N	Groundwater monitoring results
D_031	D_031_ChemCentre_Report of Examination_12082015	ChemCentre			84	Y	N	Groundwater and surface water monitoring results
D_032	D_032_KAI_Groundwater Database_07112014		KAI		89, 90	Y	N	Groundwater monitoring database
D_033	D_033_KAI_Trigger Values_00000000		KAI			93	Y	Groundwater monitoring trigger values
M_034	M_034_IRG_Agenda Weaber Plain Development Project Independent Review Group_29062015	IRG			84	Y	N	IRG support for change in groundwater monitoring requirements
R_035	R_035_DotE_Variation to conditions attached to Approval_07082015	DotE			93	Y	N	Varied condition 12G re: adopting GW monitoring trigger values
D_036	D_036_KAI_Groundwater Monitoring Weaber Plain and Knox Creek Plain_29072015	KAI			84, 89, 90, 126, KEMP	Y	N	Groundwater monitoring database 2015
R_037	R_037_WRM_ORIA Stage II M2 Expansion Risk Assessment of Weaber Plain Development on Keep River Listed Species_20082015	WRM			97,	Y	N	Tailwater retention
P_038	P_038		Strategen		101	Y	N	DW1 gauging station
R_039	R_039_IRG_Table of Recommendations Weaber Plain Development Project (EPBC 2010/5491) IRG 29 June 2015_29062015	IRG			100	Y	N	IRG approval of analytes for surface water monitoring
R_040	R_040_SCADA_SCADACONnect Network Visualisation DW1 GS_16092015		KAI		101	Y	N	SCADA DW1 Gauging station monitoring
P_041	P_041		KAI		96	Y	N	Lot 14 tailwater storage
R_042	R_042_LandCorp_Memorandum Update on OSWM Development_25062015	D Pearce (LandCorp)			107	Y	N	Dilution requirements/calculation
R_043	R_043_Bennett & George_Surface Water Characteristics of the Weaber Plain and lower Keep River Catchments: data review and preliminary results_00122011	D Bennet and R George			106	Y	N	Use of D4 drain data in OSWM
R_044	R_044_LandCorp_OSWM Progress Report_00002015	LandCorp			107	Y	N	OSWM update and description of use
R_045	R_045_KAI_KAI Environmental audits (Non Construction) 2015 Month - August_00082015	KAI			119, 120	Y	N	Environmental inspection log
R_046	R_046_KAI_KAI Ground disturbance log_00002015	KAI			119, 120	Y	N	Ground disturbance log
R_047	R_047_OLW_Vegetation Condition Assessment Goomig Farmland Buffer Area 2014_00002014	OLW			124, 125	Y	N	Vegetation condition assessment
P_048	P_048		Strategen		131	Y	N	Buffer perimeter fence
P_049	P_049		Strategen		131	Y	N	Buffer perimeter fence
R_050	R_050_Botanical North_Ord Stage 2 rehabilitation assessment May 2015_14072015	Botanical North			135	Y	N	Rehabilitation monitoring
P_051	P_051		Strategen		159	Y	N	Rehabilitation area signage and bund
R_052	R_052_unknown_Ord River Irrigation Area Expansion - Stage Two Weed Monitoring Program September 2012_00092012	Botanical North?			54	Y	N	Locations of permanent weed survey transects
R_053	R_053_WRM_ORIA Stage II expansion Keep River Baseline Aquatic Fauna and Targeted Sawfish surveys 2013_08022014	WRM			99	Y	N	AUSRIVAS trigger values for macroinvertebrates
R_054	R_054_Botanical North_Assessment and mapping of vegetation condition within the Weaber Plain Development Project Buffer Area 2011_00102011	Botanical North			124, 125	Y	N	Initial vegetation condition in the Buffer Area
C_055	C_055_DoW_RE Issue of a licence under the Rights in Water and Irrigation Act 1914 Property: Goomig Farm Area_15052015	DoW		S1_2.10		Y	N	Annual water requirements
I_056	I_056_GHD_Ord River Irrigation Expansion Project Stage 2 (Goomig Farmlands Overall Schematic_00042015	GHD		S1_2.13		Y	N	Operational Storage
C_057	C_057_D Pearce_RE Ord Outstanding audit evidence_13112015	D Pearce		S1_2.3		Y	N	Land for irrigable development