ANNEXURE 1

SUMMARY OF THE STAKEHOLDER CONSULTATION PROCESS

TABLE OF CONTENTS

INTRODUCTION

Planning of biodiversity offsets must take into account the socio-economic context within which the offsets are being planned including, landuse, tenure, the relationship between people (social systems) on natural resources, development initiatives that may pose a risk to offsets, and existing conservation and natural resource initiatives among other things in order that the offsets are appropriate and aligned with the aims, objectives of local roleplayers, and build on existing initiatives. It is also important that the offsets are compliant with the relevant legal framework. The consultation undertaken in the preliminary planning process to achieve this understanding and plan accordingly is summarized below in terms of the different stakeholder groups that were engaged and a description of how they were consulted.

- ***Authorities***

In order to ensure compliance with the conditions of authorisation and other relevant legislation, it has been important to engage the relevant authorities. Two authorities meeting were held in the previous phase of the planning process and a further meeting was held in this phase, on 10 September 2014 to present the draft outcomes of the Preliminary Planning Process. This meeting included representatives of the relevant national and provincial government departments. The minutes of this meeting are included in this document. Several of the representatives from these authorities also attended the Environmental Monitoring Committee (EMC) Meetings and the Offset Working Group Meetings which was important because it provided them with exposure to the views and requirements of other roleplayers, and allowed for the authorities to likewise explain their position in terms of the government policy and legal framework within which they undertake their mandate. This this involvement provided for a transparent process.

- ***Broad Stakeholder Groups***

In acknowledgement of the need to obtain acceptance of the plans and ensure that the plans optimize any synergies with other initiatives in the offset planning area, an offsets working group was established in the previous phase. This involved conservation NGOs operating in the area, private landowners, authorities, government agencies responsible for natural resource management, municipalities and infrastructure/basic service providers such as Umgeni Water, representatives of the EMC and the agricultural sector in the area. These roleplayers were engaged in various ways:

- Ongoing and numerous engagement via one-on-one meetings, telephonic and email engagement with various key roleplayers currently involved in conservation and natural resource management initiatives, and who have a role to play in the further planning and implementation of the offsets. These included the Endangered Wildlife Trust, Ezemvelo KZN Stewardship and Conservation Planning Units, the Mpofana Irrigation Project, IP project, the DEA NRM programmes. These organisations also contributed significantly in by providing landowner and conservation relevant information about the offset sites - for example the location and history of crane nest sites, costs for establishing stewardship sites etc.

- The INR presented progress on the planning progress at bi-annual meetings of the Umgeni Ecological Infrastructure Partnership (UEIP) where several of these roleplayers were also represented.
- Formal presentation of the Draft Offset Plans at a meeting of the Spring Grove Dam Offsets Working Group on Friday 12 September 2014. The minutes of this meeting are included in this document.

Minutes were not taken of these numerous ongoing interactions and the information generated through them. The outcomes of the discussions are generally referenced in the text and the outcomes of the planning – costs, site selection etc.

- ***Offset Site Landowners***

The offsets cannot take place without the interest, support and agreement of the private landowners on whose properties the offset options are identified. These landowners were engaged in the following ways:

- Through representative bodies such as the Mpofana Irrigation Project, the Mooi River Farmers Association and the Hlatikulu Collaborative Management Association (HCMA).
- Through direct engagement, which was in most instances facilitated by the organisations that have been working with landowners over some period, notably the Endangered Wildlife Trust, WWWF, Midlands Conservancies and Ezemvelo KZN Wildlife Stewardship programme. These organisations made introductions and in many cases joined the specialist team in the initial field work and added significantly to the understanding of the sites given their intimate knowledge gained over long term work in these areas. The offset process stands to benefit the work of these organisations. Their willingness to assist in facilitating engagement and information played a major role in the relatively successful stakeholder engagement process.
- Once a relationship had been established with landowners, the Offset team leader and specialist teams engaged directly with landowners regarding accessing sites, further information regarding the ecosystems and species inhabiting their farms.
- The summaries per property were circulated to landowners for comment prior to circulating the draft report to broader stakeholders.
- The outcomes of all direct interaction with owners of the offset sites are recorded in Appendix 4.

MINUTES OF THE FOCUS GROUP WORKSHOP TO REVIEW CRITERIA AND DATA FOR APPLICATION IN THE IDENTIFICATION AND PRIORITIZATION OF OFFSET SITES

MOOI-MGENI TRANSFER SCHEME 2

SPRING GROVE DAM OFFSET PLANNING PROCESS

Workshop to Review Criteria and Data for Application in the Identification and Prioritization of Offset Sites

Institute of Natural Resources, 3 April 2014

ATTENDANCE

Attendance register (Appendix I).

INTRODUCTION

Dave Cox (DC) welcomed attendees and asked everyone to introduce themselves. He then explained that the purpose of the workshop was to:

i. Review the objectives and criteria data established for the offsets, as defined at the end of the baseline investigation.
ii. Present and discuss the suitability of the data sets selected to use in addressing each of the criteria.
iii. Agree on the prioritization of data sets in selecting sites.

Dave Cox then gave a presentation (Appendix II) that provided context for discussions. The presentation summarised the outcomes of the baseline study, and the offset objectives and criteria that need to be met in selecting sites.

REVIEW OF DATA SETS

The approach taken was to review the sets listed below to discuss whether the data sets:

- Were the most appropriate in relation to the selected criteria?
- Needed to be amended or adapted in any way to address the selection criteria more accurately.

The data sets had been loaded on the GIS which was set up with background aerial imagery. This was used in the process of analysing the accuracy and relevance of the data sets or reflecting criteria, and comparing data sets.

A series of maps had also been developed prior to the workshop to show general areas emerging from initial application of the data sets. The data sets were reviewed for each system in turn i.e. grasslands, wetlands, rivers.

Table 1 List of data sets and for use in the selection and prioritization of offset sites

MMTS 2 - OFFSETS PLANNING GIS Coverages to inform identification and prioritization of Offset Sites		
MAIN ASPECT	**DETAIL**	**RELEVANT OFFSET CRITERIA/ PRINCIPLE**
ECOSYSTEMS		
GRASSLANDS	EKZNW grassland types and conservation status	Offset Like for Like (LfL)
	Grassland condition - landcover categories	Secure good quality sites and rehabilitate degraded, BUT not highly degraded systems.
WETLANDS	NFEPA	Offset in high conservation priority systems
	Priority wetlands- cranes	Offset in high conservation priority systems
RIVERS	M&M catchments	Offset as close to site of impact and within defined offset area.
	Provincial PES	Conserve good quality systems
	NFEPA	Offset in high conservation priority systems
	Provincial river type classification.	Offset Like for Like
	Waterfalls	Offset Like for Like
ECOLOGICAL PROCESS AND FUNCTION		
SPECIES MOVEMENT	EKZNW Corridors coverage	Offset in high conservation priority systems
WATER RELATED ECOSYSTEM SERVICES	Water quality	Enhance purpose of MMTS II by improving water quality.
	Water regulation - grassland and wetlands	Enhance purpose of MMTS II by improving water regulation.
SPECIES		
CRANES	EWT crane priority areas	Offset in high conservation priority systems
BIODIVERSITY PLANNING		
PROVINCIAL CONSERVATION	Boundaries and current status	Offset in high conservation priority systems
EXISTING PROTECTED AREAS		Offset in high conservation priority systems
CONTEXTUAL INFORMATION		
Cadastrals		Offset criteria not applicable
Roads		
Towns		
Dams	Large dams (Midmar/Spring Grove)	
	Farm dams	
Topography	Contours	
LANDOWNER COMMITMENT		
WWF Stewardship Sites	Stewardship sites - existing/planned.	Secure offset sites in the long term (for operational life span of the dam - 50 years).
Midlands Conservancies Stewardship Sites	Stewardship sites - existing/planned.	
EKZNW stewardship sites	Stewardship sites - existing/planned.	
MMTS Bridging study properties	Properties were wetland rehabilitation was planned.	
De Beers properties	Two properties in the upper Mgeni system, nearby to Umgeni Vlei Nature Reserve	
Hlatikulu conservation association	These properties are	
Conservancies		
RISK ANALYSIS		
Development Plans	SDFs/LUMS/Housing projects	Offset on sites with the lowest risk of future negative impact.
Mpofana Irrigation Project	Dam sites, irrigation and cultivation planned as part of the Mpofana Irrigation Project	

RECORD OF DISCUSSION

Discussion	Action
Grasslands 1. The EKZNW veg-type cover shows the distribution of the two affected grassland types (Mooi-River Highland Grassland and Drakensberg Foothill Moist Grassland). DC pointed out that more than 90% of the loss within the basin was MRHG, but showed that there was little of this grassland type occurring within the offset area i.e. the upper Mooi River and Mgeni catchments. DC suggested that this may not be an issue as they were both rated as 'Vulnerable' in terms of threat status and so it may not be an issue to offset across the two types. Tanya Smith thought that the MRHG was of a higher threat status and that generally there was less good quality grassland of this type available. 2. The coverage does not indicate the condition of grassland. Tanya Smith suggested that the Natural Resources Section of DAEA had undertaken veld condition assessments across many properties as part of the services they provide to farmers. While it was acknowledged that the coverage of these assessments would be 'patchy' it would save time and effort it had been undertaken on potential offset sites. 3. At a more general level, it was suggested that the landcover data be used to extract "transformed" and 'natural' grassland from the veg type coverage to derive a 'grassland condition' coverage.	▪ DC - to confirm the conservation status of grassland types with EKZNW. ▪ DC - to check with EKZNW about offsetting across grassland types. ▪ Shaun Anderson – To apply provincial landcover in distinguish between natural and transformed grassland. ▪ DC - to approach natural resources section of DAEA to get veld assessment data produced for specific properties.
Wetlands A variety of wetland coverages are available for use including the NFEPA coverage, the EKZNW coverage and the EWT wetland prioritization coverage (which indicates priority wetlands from a crane point of view). The EWT coverage was based on an analysis of the NFEPA coverage using nest and siting data for all three crane species. The following discussion took place: 1. DC asked TS to confirm which of the 4 categories in the prioritization should be used. Tanya explained that categories 1, 2 and 4 should be used because they were related to Wattled and Blue crane which provided the best indicator of good wetland and grassland habitat. 2. Ian Bredin queried whether it wouldn't be better to use the EKZNW wetland coverage than the NFEPA one which is a national coverage so the accuracy of the number, location and boundaries of wetlands was likely to be lower than the NFEPA layer. Upon examination of the data sets on the GIS it was evident that: ▪ The NFEPA layer had included the provincial data layer so the accuracy was as good as possible. ▪ Many of the degraded wetlands had been removed from the EKZNW layer because they focussed biodiversity. From an ecosystem services perspective however the focus would be on rehabilitating the degraded systems. So it	▪ TS - to provide a motivation explaining the selection of wetland priority rankings for selecting wetlands.

was decided to use the NFEPA layer – as prioritized for Crane conservation to meet biodiversity and ecosystem function purposes. 3. Ian Bredin also queried whether the work undertaken by Swedish Student, Yentz would be useful. Following discussion it was agreed that it was not appropriate as it would require significant analysis and would not add major value.	
Rivers DC summarized the data sets collated for use in prioritizing river sections for offsetting. 1. It was agreed that NFEPA is again available for use in terms of prioritizing rivers for biodiversity. It is however a national coverage so the resolution is poor – for example, the entire Mooi River is categorized as a priority. The provincial PES study will be used to indicate "river health" or condition. 2. In terms of achieving "like-for like", the provincial rivers classification will be used. The data had been received but there was some difficulty in identifying the appropriate river type field in the GIS data". DC needed engage Nick Rivers Moore to establish how best to apply the data. 3. Water quality has been collected from Umgeni Water, DWA National Office and the sampling undertaking pre, during and post construction of Spring Grove. The upper Mgeni catchment management plan also plotted point sources of pollution. All this data needs to be analysed to identify "Water quality 'hotpots or catchments" - the motivation is that rehabilitation/protection of wetlands and grasslands in these areas will enhance water quality and regulation. 4. DC also noted that the loss of unique habitat and associated plant community at Inchbrakie Falls was effectively 'not off-settable'. The most that could be achieved was to protect and rehabilitate (if necessary) a waterfall with similar habitat. The 2004 bridging study had identified 'Riekie-Lyn' falls as the most similar in the region. The co-ordinates of this and the other waterfalls within the catchment identified in the 'Bridging study" have been captured.	▪ DC –to contact NRM to establish how to use river data.
Prioritization Upon review of the maps showing areas meeting the various criteria, it was clear that there are many sites that meet several criteria. Following discussions, it was agreed that. 1. Where sites met several criteria, landowner commitment would the key factor in prioritizing sites, given: a. The lack of budget to pay landowners out for 'opportunity cost' for accessing priority sites. b. The lack of time to engage landowners - which from experience can take several years. 2. It was decided that negotiations would start with these landowners already engaged by roleplayers in the catchments – notably	▪ DC - to obtain contact details and status of negotiations with landowners from various organisations. This includes database from EKZNW.

Stewardship, the various NGOs involved in stewardship and the EWT Crane Programme. 3. The focus would be on sites that qualified for long term security. This required that the INR obtain lists of landowners engaged by stewardship etc, or who had been approached and prioritize these based on the status of engagement e.g. a stewardship site that has already been proclaimed would be first on the list, followed by one where all studies had been undertaken, to one where there had been initial discussions only. TS indicated that there was a 'Yes/No' database held by EKZNW Stewardship (Greg Martindale) that listed all stakeholders engaged, including those who had contacted the SP, but where engagement had not continued due to a lack in capacity.	
<u>Addressing Additionally</u> A challenge on working on stewardship sites is that rehabilitation interventions and improved management have been planned on these sites. An important part of the initial investigation is establishing what 'Added value" the offset can bring. 1. TS and Gareth Boothwaite (GB) indicated that two major challenges faced by stewardship were: a. The time taken to go through the process due to lack the various steps, lack of finance and capacity (to undertake assessments etc). b. Capacity to provide long term monitoring and technical support. TS mentioned that EKZNW have launched an acquisition fund on 1 April. Of the R60 million, approximately 60% is understood to be allocated to funding monitoring and maintenance. But this is spread across the province and Midlands is severely under capacitated in terms of servicing existing and future stewardship. 2. TS suggested that securing sites through other mechanisms would reduce pressure on Stewardship. She said Kobus Theron from EWT was investigating the process and costs for establishing Conservation Servitudes on his own property. CSs have the following character and benefits compared with stewardship SS: a. Servitude requires survey of area which is included in title deed. Includes conditions that are written in support of 3rd party. These are written in the negative which may a negative issue. b. Benefits - Quicker process than SS. - Does not involve EKZNW which is sometimes an issue for landowners who have historical issues with the organization. The beneficiary can be an NGO, Umgeni Water, or the CMA etc. 3. The funding of capacity for monitoring and support capacity for existing and future stewardship sites was considered an important option for adding value.	▪ DC – to contact Greg Martindale to find out more about the 'Land Acquisition Fund'. ▪ DC – to contact Kobus Theron to establish mo0re information regarding Conservation Servitudes.

Way Forward Dave Cox thanked all for attending and explained the way forward would be: ▪ For the INR to finalise the prioritization matrix and apply it in highlighting properties that meet the criteria. ▪ Collect information data showing properties with existing levels of landowner commitment. ▪ Engage with the actors involved in speaking to each landowner to establish the level of commitment and what additional value could be added by the offset process. ▪ Engage landowners with assistance from relevant partner and discuss options.	

Attendance Register

Institute of Natural Resources

MOOI-MGENI TRANSFER SCHEME PHASE TWO (MMTS-2)

SPRING GROVE DAM OFFSETS – PLANNING PROCESS

Offset Site Selection Workshop,

1 April 2014, Institute of Natural Resources

Institute of Natural Resources

ATTENDANCE REGISTER

NAME	ORGANISATION	EMAIL	TELEPHONE	SIGNATURE
MANQOBA ZUNGU	INSTITUTE OF NATURAL RESOURCES	zungumm@gmail.com	0739793489	
DAVE COX	INSTITUTE OF NATURAL RESOURCES	DCOX@INR.ORG.ZA	0333460796	DCOX@INR.ORG.ZA
Ian Bredin	INR	ibredin@inr.org.za	0333460796	
Tanya Smith	EWT	tanyas@ewt.org.za	0823947476	
Pearl Gola	INR.	pgola@inr.org.za	033 3460796	
GARETH BOTHWAY	MIDLANDS CONSERVANCIES FORUM	gareth.bothway@gmail.com	0762334267	
SHAWN ANDERSON	TRUE NORTH MAPPING	SHAWN@TNMAPS.CO.ZA	083 3480300	

Introductory Presentation

MMTS - PHASE 2
SPRING GROVE DAM

Offset Planning Phase I:

Selection and Prioritization of Offset Sites

3 July 2013

Institute of Natural Resources

BACKGROUND

Conditions of Environmental Authorization

- A detailed plan for the ***rehabilitation of off-site wetlands*** in the ***Mooi and Mgeni catchments*** be prepared to ***mitigate the loss of wetland function and habitat***; separate plans to be submitted for each individual wetland to ensure site specific issues are included; to consult with Working for Wetlands programme [3.2.4.1.1.(l)]; and,
- A ***detailed plan of action*** be prepared to ***establish offset areas*** to ***compensate*** for ***loss of biodiversity*** and habitat, ***and*** for their ***management*** during the ***operational phase of the dam*** [3.2.4.1.1.(m)].

BASELINE ASSESSMENT

1. **DOCUMENTS THE RESIDUAL LOSS OF BIODIVERSITY** in the dam basin in terms of:
   a. *The **threat status** of the **ecosystem** and the associated **species**,*
   b. *The **health** of the affected ecosystems,*
   c. The type and value of ***ecosystem services*** to be lost.
   d. Ecological processes.
   e. Any unique features - which it is not possible to offset.

Information documented for the **3 ecosystems** occurring in the basin: **Wetlands, Grasslands and River.**

2. **ESTABLISHED BASELINE OFFSET TARGETS**
   Based on the application of the relevant policy to the loss.

Summary of residual biodiversity loss is the first step in the process of developing a Biodiversity Offset Plan and meeting conditions of authorisation.

SUMMARY OF LOSS

Regional Terrestrial Overview

- A large proportion of SGD Basin is classified as a Critical Conservation Area 1.
- According to the Draft EKZNW Guideline, CCA I areas are regarded as 'irreplaceable' because no other sites to meet targets.
- CCA status is based on range of ecosystems & notable species across different ecosystems.
- Shows the cumulative biodiversity value of the landscape and associated habitat.

SUMMARY OF LOSS

Regional Aquatic Overview

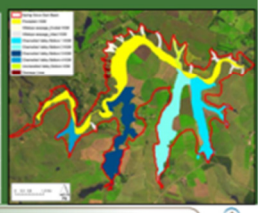
- *Mooi River identified as River Freshwater Ecosystem Priority Area (FEPA):*
  - Required to achieve biodiversity targets for river ecosystems and threatened fish species.
  - Rivers in a good condition (A or B ecological category).
  - Should remain in a good condition in order to contribute to national biodiversity goals.
- *Mooi River identified as a Fish sanctuary,*
  - Required for protecting threatened & near-threatened fish indigenous to SA.

SUMMARY OF LOSS – Ecosystems

Wetlands

- Cover a significant proportion of basin (462 ha, or approximately 45%).
- Reflects the flat topography within the basin - gives rise to an extensive floodplain & 4 extensive valley bottoms.
- No pristine systems – majority of systems, particularly valley bottoms affected to varying levels by agricultural use.

National Wetland Classification Sub-Assessment Grassland Group 3	WET-Health	Wetland Area (ha)
Floodplain	C	166
Channelled Valley Bottom (VBC 1)	D	70
Channelled Valley Bottom (VBC 2)	D	92
Channelled Valley Bottom (VBC 3)	D	88
Channelled Valley Bottom 4 (VBC 4)	C	18
Unchannelled Valley Bottom (VBU 1)	C	8
Hillslope Seepage linked to a stream channel, Intact (HSI)	B	11
Hillslope Seepage linked to a stream channel, Eroded (HSE)	C	9
	Total Area	462 ha



SUMMARY OF LOSS - Ecosystems

Grasslands – Both grasslands types classified as Vulnerable.

Vegetation Type	Condition			Total Area
	Good	Medium	Poor	
Mooi River Highland Grassland (GRM4)	70 ha	44 ha	78 ha	192 ha
Drakensberg Foothill Moist Grassland (GFM6)		23 ha		23 ha
			Total Area	215 ha

SUMMARY OF LOSS - Ecosystems

River

- 15.5 kms of river will be lost (represents 6.25% of this river type).
- **Conservation Value**
  - Entire Mooi River is ***classified as a Freshwater Ecosystem Priority Area*** in terms of being considered a fish sanctuary and in good condition.
  - Only ***a very small proportion of this river type is currently protected*** - approximately (1-2%). National target is 20% of all river types.
- **Ecosystem Health**
  - Ecological indices show system to be in B – class.
  - Water quality - B class.
- **Inchbrakie Falls**
  Provides a number of unique microhabitats that support a community of rare plants.

SUMMARY OF LOSS - Species

Summary Statement

There is a ***high concentration of South African and regional endemic species*** as well as a ***number of species with high threat status*** (ranging from Vulnerable to Critically Endangered) ***across all taxa*** (mammals, birds, amphibians, reptiles and plants) within the dam basin.

Mammals

- 22 species (5 ungulates, 5 carnivores, 4 rodents and 8 other mammals)
- Most will escape the rising waters and find new habitat.
- Oribi is one species of concern:
  - Endangered status due to habitat loss
  - Requires relatively specific grassland habitat.
  - 3 family groups utilising the basin (between 7 and 10 individuals)
  - Very territorial so there is the threat of losing individuals due to conflict.

SUMMARY OF LOSS - Species

Birds

- At least 150 bird species are well represented at the Spring Grove Dam site.
- Most water-loving species - 69 in all - will benefit, but all of these species are abundant and widespread.
- An additional 20 water birds that require running water, or wetland vegetation might benefit, depending upon the nature of the future shoreline and its vegetation.

Red Data Species

Most important issue is the ***number of Red Data, endemic and iconic species*** that are present (25).

Wetland Species

- Cranes: All three species of crane utilise the basin including a blue and Crowned crane nest sites.
- Other Wetland specialists - African Marsh Harrier, African Grass-Owl, Black Stork and Half-collared Kingfisher all make use of specialised wetlands, and would make little or no use of a large dam.

Grassland Species

All of the rest of the Red Data species affected by SGD are grassland specialists.

Endemic Species

Thirty-one bird species endemic to southern Africa are present in the SGD Basin, and all are regular inhabitants.

SUMMARY OF LOSS - Species

Plants

- The plant lists include several national and in some cases regional endemics and species with high threat status found in each of the broad wetland and grassland ecosystem types.
- The species list does not highlight the importance of the habitat and associated plant communities occurring at Inchbrakie Falls.

Fish

None of the four indigenous species occurring in this section of river is threatened but do contribute to the ***Mooi River being defined as a FEPA fish sanctuary.***

Aquatic Macro-invertebrates

- 5 of the 6 species of burrowing mayfly known from South Africa have been recorded from the Mooi River.
- Species are noteworthy because of their habitat requirements provided by the meandering channel in SGD basin.

OFFSET TARGETS

Ecosystem	Area/ Length of Loss	Ratios	Functional Equivalence Target (Area * Health)
Wetlands	462 ha	Application of Wet-Health	281 ha Functional equivalents = approximately 940 ha)
		Conservation Target (3:1)	1 386 ha
Grasslands	210 ha	Provincial(3:1)	630 ha
River	15.5 kms	NA	15.5 kms

OFFSET WORKING GROUP MEETING

Offset Working Group Workshop – 22 August 2013

Purpose

i. Define offset planning area (spatial extent of area within which offset will be identified).

ii. Select Offset types (protection and/ or rehabilitation).

iii. Criteria and the process for the selection, evaluation and prioritisation of offset sites.

ASPECT	FOCUS	CRITERIA/Notes
Offset Planning Area	Upper Mooi Catchment (including Little Mooi and Hlatikulu Catchments) & Upper Mgeni Catchment	▪ Prioritise Mooi River Catchment - as close to SPD as possible. ▪ Upstream of Spring Grove, Mearns and Midmar dams to protect water services infrastructure.
Like-for Like	i. Wetlands – Floodplain or Valley Bottom systems.	Consider linking floodplain to the river system.
	ii. Grasslands - Mooi River Highland Grassland (MRHG) and	Focus on MRHG as majority (>90%) of the loss is in this grassland type
	iii. River – same river type as per provincial classification	▪ If possible include waterfall to compensate for loss of inchbrakie. ▪ May need to separate river and waterfall.
Conservation Priority	i. Landscape - Provincial conservation priorities	Should be CCA areas so they qualify for PA status
	ii. Species – cranes used as indicator species.	Wattled cranes require climax habitat - grassland/wetland mosaic.
Functional Value	Focus on wetlands with capacity to address water quality issues in the catchment .	Need to identify point sources of pollution and distribution sites throughout the catchment.

ASPECT	FOCUS	CRITERIA/Notes
Offset Type	Focus on protection and rehabilitation	▪ Wetland creation not an option as there are large areas of degraded systems. ▪ Rehabilitation a priority in terms of securing functional value.
Security	Sites that qualify for PA status	▪ Focus on sites where there is existing landowner engagement through stewardship, EWT (crane custodians) or some level of legal requirement (Section 24G) . ▪ Offset must show additionality on existing stewardship sites.
Efficiency	i. Size	The larger the site the more efficient
	ii. Landscape Approach	Site that meets targets for wetlands, grasslands and river system preferred
	iii. Adjoining existing PA/Stewardship site	
Risk	Avoid sites were threat t exists from planned change in land-use or ownership	▪ Based on data from municipal IDPS and agricultural expansion plans (Mooi River Irrigation Project). ▪ Proposed ESKOM Powerlines, etc

MINUTES OF MEETING WITH MPOFANA IRRIGATION PROJECT

Date: 12 Aug 2014

Venue: Nottingham Road

Present:
Graham Armstrong (MIP)
Dave Cox (INR)

GA discussed with DC MIP's concerns that the offsets for Sprin Grove (SG) would impact on MIP's need for offsets when environmental issues were addressed for this project.

1. DC provided background on the status of the SG Offsets Planning. He explained that:
    a. They had identified sites across the Upper Mooi and Mgeni where a level of landowner willingness to consider conservation through stewardship already exists. This is because of the limited time for the offset planning does not allow for engagement to start from scratch. The suite of sites is shown in Figure 1. The INR team has worked with the 3rd parties who have a relationship with these landownrs. This includes EKZNW Stewardship, EWT Crane Project, Midlands Conservancies and WWF.

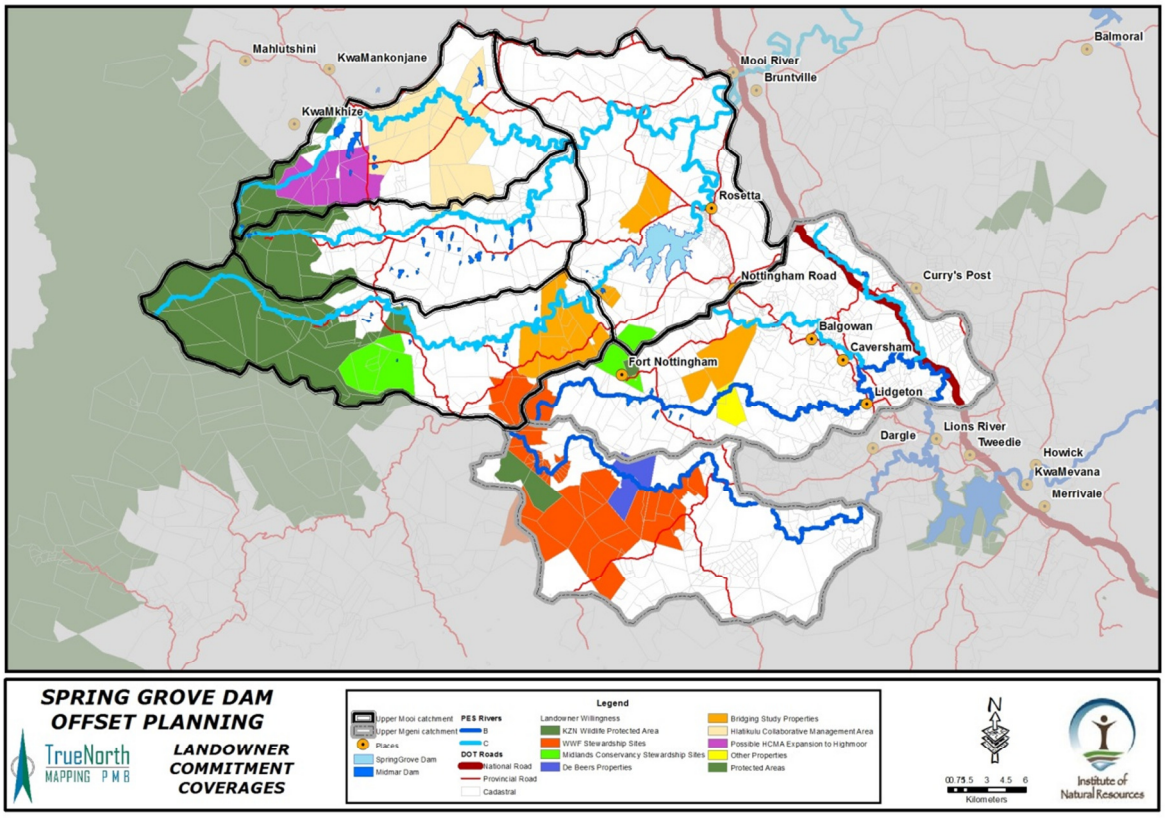


Figure 1 Properties with existing levels of landowner 'willingness' across the Upper Umgeni and Mooi River catchments.

    b. The INR team then applied a prioritization process to identify which of these properties would deliver the best offset options in terms of: a combination of systems (wetland, grassland and river), the largest areas of these systems, and the most appropriate (same types of systems and habitats) as what were lost in Spring Grove Basin.

The properties within the HCMA (Hlatikulu Collaborative Management Association) emerged as priorities, as well as a large property at the top of the Kamberg and several sites in the Mooi on the Lotheni Road.

c. The INR has engaged the HCMA who have been receptive and the team is developing high level plans for most of the HCMA properties – and some of those between the HCMA and the National Park.

2. SG requirements for grassland and river offset targets will more than likely be exceeded in the HCMA alone. The wetland target may however not be met within the HCMA but should with the other sites being investigated in the Mooi Catchment. There should therefore be additional offset options for consideration by MIP as well.

3. No approaches have been made to farmers in the Little Mooi catchment as:
    a. There had been little willingness from landowners when engaged in 2003 around offsets, DC did however recognize that that there were a number of opportunities, particularly for wetland rehabilitation.
    b. There is lower (not saying low) biodiversity value than in the HCMA due to the higher intensity of the agricultural activities in the Kamberg. There is therefore potential for these sites to contribute to the MIP requirements, where landowners may be more willing to make offset areas available given the benefits.
    c. DC had not approached Buy's (which is technically part of the Hlatikulu system) re the offsets and asked for introduction.

4. Mark Basle's Farm – DC indicated that MB was happy to consider the higher levels of Stewardship. DC also confirmed that there was now an established Wattle Crane Nesting site on one of MB's dams.

5. GA summarized the Dam Sites under consideration:
    a. Kamberg Dam
    b. Harleigh Dam
    c. Hlatikulu present dam site on Steyns
    d. Hlatikulu proposed Dam site on Dartington but at a reduced size so as not to interfere with MB farm significantly

    GA undertook to request MBB to forward these dam sites to DC.

6. Assessment of Offsets for SG and MIP
    - DC undertook to map the impacts of the MIP dams at a high level and establish the offset requirements based on the same ratios as those used for the Spring Grove study. He will include these in the SGD offset report
    - The draft SG offset report would be available in early September and MIP would be invited to the stakeholder workshop tentatively planned for 12 September.

    GA and DC concluded that the work DC was doing and the availability of offsets for both projects with the cooperation of farmers should enhance the MIP requirements for offsets.

    It was agreed that DC would cooperate to the mutual benefit of all parties and work closely with the MIP organisation.

MINUTES OF THE AUTHORITIES MEETING – 10 SEPTEMBER 2014

PO Box 10335 Centurion 0046
1st Floor Stinkhout Wing
Tuinhof Building 265 West Road Centurion
Tel: +27 12 683 1200 Fax: +27 12 683 1300
e-mail: info@tcta.co.za
Website: www.tcta.co.za

A new word for water

MOOI-MGENI TRANSFER SCHEME (PHASE 2) (MMTS-2)

SPRING GROVE DAM OFFSETS PROGRAMME

Phase II – Identification and Prioritization of Preliminary Planning for Selected Offset Sites

Minutes of Authorities Meeting

Held at 10:00 on Wednesday, 10 September 2014 at Loxley House Nottingham Road

ATTENDANCE

The attendance register is attached.

1. WELCOME AND INTRODUCTION

Donovan Henning (DH) chaired the meeting upon request by TCTA. DH opened the meeting by asking all participants to introduce themselves. He reflected on the purpose of the meeting and agenda that were circulated to check that everyone was in agreement with what had been proposed.

***Meeting purpose**: "Present the process followed, the draft outcomes and to obtain input that will inform the finalisation of the draft offset programme and plans to be circulated for comment".*

Agenda

ITEM	TIME	RESPONSIBILITY
1. Welcome and Introduction	10:00 – 10:15	Kogi Naidoo (TCTA) MMTS II: Environmental Manager
2. Presentation of Process and Draft Outcomes	10:15 – 11:00	Dave Cox (Institute of Natural Resources - INR)
3. Tea	11:00- 11:15	
4. Questions & Discussion	11:15 – 12:00	Facilitated by Donovan Henning Nemai Consulting
5. Way Forward – Summary of actions for finalising draft offset programme	12:00 – 12:30	Facilitated by Donovan Henning Nemai Consulting

DH then asked Kogi Naidoo (KN) of TCTA to provide background to and introduce the offsets process. KG's presentation summarised the requirements of the relevant conditions in the environmental authorisation pertaining to wetland and biodiversity offsets. It also summarized the offset targets as agreed to by the authorities based on the outcomes of the Phase I Report (which detailed the loss of biodiversity and ecosystem function in Spring Grove Dam Basin, and proposed targets based on the application of the relevant offset policy).

2. PRESENTATION OF PROCESS & DRAFT OUTCOMES

Dave Cox (DC), with support from Susie Brownlie (SB) made a presentation (appended) summarizing:

- The key requirements of the conditions of authorisation,
- Their interpretation of these requirements and offset principles in setting the aims, objectives and criteria against which success of the offsets could be measured,
- Their approach and methods applied in site selection, landowner consultation, technical field work and costing the offsets.
- The outcomes of the investigation and prioritization of offsets sites,
- A proposed governance framework for undertaking the final design, undertaking rehabilitation, securing the sites and long term management of the offsets.

The presentation was followed by tea.

3. RECORD OF DISCUSSIONS

Following tea, DH facilitated a question/answer session during which the following discussion took place and action items were agreed. The discussion centred around two main issues:

i. Report - additional information requirements and the steps required to finalise the report.
ii. Governance framework - specifically questions regarding responsibility for financing the offsets and the options for sourcing the necessary finance.

3.1 Report

i. There was acceptance and approval from the meeting of the approach followed and draft outcomes presented.
ii. The draft report for circulation for comment must be finalised by 10 October 2014.
iii. The outstanding actions to be undertaken before 10 October 2014 and content to be added to arrive at the final draft for circulation are:
    a. Budgeting
        - Document the different options for financing offsets e.g. DEA'sWorking for Wetlands programme, water tariff, DWS budget and issues/challenges relating to the use of each.
        - It was confirmed that the INR's current appointment concluded with the acceptance of the report (Phase II). As detailed planning (Phase III) is required to meet the conditions of environmental authorisation and there is no budget currently available to undertake this work, a budget for this phase will be included in the overall costing.
        - There is a need to include costs for environmental authorisation and potentially also water use licensing of rehab activities - specifically wetland rehabilitation.
        - An indication of the number of jobs that could potentially be generated through the various phases of the offset process particularly implementation, needs to be provided.
    b. Prioritization of offset sites from the suite of 40 odd properties based on the combined analysis of cost and biodiversity prioritization.
    c. Circulation of the report and information per property to landowners to confirm their acceptance of the information presented. Make any amendments based on landowner feedback before broader circulation of the report.

The above requirements are for the action of the service provider (Institute of Natural Resources).

Governance Framework

The governance framework presented showed:

- Finance for the implementation and long term management of the offsets to be provided by DWS as the developer and holder of the environmental authorisation.
- Flow of finance to a range of other agencies to design, implement, and monitor and maintain the offsets in the long term.

Following considerable debate it became clear that there is an opposing view between DEA and DWS regarding the responsibilities for financing (quantum and responsibility) the detailed planning, implementation and long term management of the offsets. These views are summarised below.

The DWS position presented by Jaap Kroon (JK) is as follows:

- The RoD requires the preparation of a plan.
- The definition of a government waterwork i.t.o. the National Watwer Act does not extend to setting up or managing offsets. It is therefore not within the mandate of DWS to undertake such activities. It is Constitutionally a competency of DEA. JK compared a situation where DWS realign a road to the same standard due to dam construction the future management is transferred to the relevant authorised road authority. The replace "like for like" principle was also used when the basin properties were acquired.
- Further, TCTA does not have budget to finance the offsets to the extent required by the proposed plan.
  - The capital budget of the TCTA for the construction of the dam is exhausted.
  - The water tariff is reviewed annually after consultation with the users, in terms of the prevailing Pricing Strategy. The downstream user municipalities were already unhappy with the increase arising from the cost of constructing Spring Grove to the point that several Municipalities such as Ugu were refusing to pay. The downstream users are unlikely to accept any further increase, especially when they understood that all costs of construction had already been included in the tariff.
- Further, it is DWS's position that as it is government who caused the impact, the offsets should be paid for and implemented by the range of other government agencies and programmes with the appropriate mandate, budget and capacity. These include the conservation agency and the Natural Resource Management Programme (NRM) – working for wetlands, water etc. This position was based on:
  - A discussion, held approximately 12 months previously between K Legge (DWS) and G Preston (NRM) based on which DWS understood that they would hand over the offset plan to NRM who would implement the offset plans on 'government's" behalf as the institution having that competency and authority. There is no record of this discussion.
  - The NRM programmes (barring Working for Wetlands which fall under SANBI) had fallen under what was previously DWA in the early stages of the Spring Grove Project. Under such an arrangement it is the opinion of DWS that the NRM budgets would have been allocated to the offsets. The fact these programmes have moved to DEA is considered a technicality and they should still take responsibility for the offsets using their budgets.
  - DWS consider that TCTA has complied with the condition to prepare the plan.

The position of DEA presented by Willeen Olivier (WO), Sindi Dlomo (SD) and Jafta Mofokeng (JM) is as follows:

- Offsets are mitigation, and like all costs for other mitigation on the project must form part of the overall cost of the project. Further, these costs must in terms of the polluter pays principle be borne by the developer and holder of the environmental authorisation - in this case DWS.
- It is not necessarily the mandate of DWS to implement rehabilitation activities or secure sites through stewardship. This is acknowledged in the draft plan where these activities are assigned to the conservation agency and NRM programmes. However, DEA stressed that while it is not DWS's mandate, it is their *legal responsibility* in terms of NEMA and they must therefore pay for the offset. This responsibility cannot be transferred to other agencies. In this regard, the case of SANRAL, Eskom (State owned enterprises) and other state institutions paying for biodiversity offsets were noted.
- There would be no conditional authorisation i.e.DEA will not approve the offsets plan until the finance is secured from DWS.

Further points were made in relation to the above positions, and the practical implications by various members of the meeting:

- DC reported that through his consideration of the governance options he had the following feedback from roleplayers:
  i. There is an existing Memorandum of Association (MOA) between DWS and the DEA NRM programmes that provides for NRM to undertake rehabilitation work on DWS's behalf, but explicitly on condition that DWS fund it. It had further been explained to DC that the NRM budgets are significantly oversubscribed and the water sector needs to pay for their impacts' if they are to be met.
  ii. Ethekwini Municipality were instrumental in establishing the Umgeni Ecological Water Partnership (UEIP) which is focussed on investing in ecological infrastructure in the catchments that supply them. The recent head of water and sanitation considers it essential that DWS finance the offsets and that the water tariff is an appropriate mechanism – although he acknowledged the likely resistance owing to the impact Spring Grove has had on the cost and the fact that users understood all costs had already been accounted for in the tariff.
  iii. The annual Working for Wetlands Budget for the KZN Midlands is R2 million. This funding has already been allocated for the next 3 year funding cycle. This budget is therefore inadequate to finance the structures identified for the offsets (approximately R10 million) in the short to medium term. In summary, if WfWetlands were to use their existing funding to finance offsets it would take in the region of 10 or more years. Under this scenario it was possible that properties may have changed hands and options for rehabilitation would have been lost. There would also be a significant lag between the time of impact and mitigation. Greg Martindale (GM) emphasized this point – explaining that the EKZNW Stewardship Unit comprises 3 Staff who are working with over 300 000ha across the province. The stewardship unit is unable to take on any new sites without additional capacity.

- Mishelle Govender (MG) suggested that an alternative funding source may be the SIP 19.It was explained that the SIP's would not necessarily generate additional funds, but rather focus where existing funds should be spent (**ACTION** - INR to comment on this in the options in the report).

- An additional option raised was the proportion of the water tariff that is assigned to catchment management. It was suggested that Umgeni Water be asked how this money is spent (**ACTION** – INR).

- Technically the water tariff is the appropriate option for funding the offsets as it is the mechanism through which the costs of the dam, including other mitigation were repaid. It was however

acknowledged that using this mechanism would be challenging given the existing concern about the increase in the tariff resulting from the construction of Spring Grove Dam. It was agreed that it would still be useful to understand what the increase might be – if negligible it may be an option (**ACTION** – INR to consider in the report).

- The risk of losing momentum and trust, and the offsets not being implemented as a result was a grave concern amongst several agencies. This would also set a precedent of non-implementation of condition relating to offsets which was considered unacceptable.

- It was acknowledged that there are important lessons to be taken from this in dealing with other large projects currently being planned – such as the Mkomazi Scheme where the offsets requirements would likely be far greater than for Spring Grove. The key lesson was ensuring that offsets were considered earlier in the process and the cost implications accounted for in the overall project budget and financing mechanisms. This highlights the urgent need to overcome the obstacle of financing implementation of offsets for large government infrastructure projects (not only water).

In view of:

- The completely opposing positions held by the competent authority DEA (and associated/supporting agencies of DEDEAT, EKZNW and the NRM programmes) to that of DWS and TCTA,
- The implications of not resolving the issue quickly for ensuring compliance with the Spring Grove conditions of environmental authorisation, and
- The implications for other large scale government infrastructure e.g. Mkomazi, N2, etc.

It was agreed that the issue needs to be resolved as a matter of urgency. It was also agreed that it would not be resolved by the officials at the meeting and requires engagement by the respective Director General's (DGS) within DWS ad DEA. To achieve this it was agreed that all parties would take action to elevate the issue to the required level. These actions are listed as follows:

- TCTA to write a letter to DWS alerting them to the funding and governance issues. This would be supported by the report to be ready on 10 October.
- DWS would write to their DG level requesting them to address the issue with DEA at a similar level.
- SN to raise the issue at a higher level within DEA so that senior managers are sensitised to the issue when the DWS letter arrives.
- It was acknowledged that once on the agenda at a DG level, that representatives at the appropriate level within the relevant departments, including National Treasury, need to engage as a collective to arrive at an appropriate way forward.

The Environmental Monitoring Committee (EMC) chairperson, David Cooke raised an additional query regarding the role of the EMC and timing of their involvement in the process of accepting and signing off on the offsets plan.

- D Cooke highlighted that the role of the EMC in signing off on the offset plan was raised, given that the 8th October was the proposed disestablishment meeting. He asked who would take this responsibility forward, and would DEA sign off on the level of planning coming out of this phase?
- KG of TCTA explained that the EMC does not have a mandate to approve plans – they can only comment on them.
- Donovan Henning further confirmed that the final EMC meeting had been agreed to move out to March 2015. They would therefore have opportunity to comment on the draft plan given that the report was due to be circulated on 10 October.

MOOI-MGENI TRANSFER SCHEME PHASE TWO (MMTS-2)

SPRING GROVE DAM OFFSETS – PLANNING PROCESS

Authorities Meeting

10 September 2014, Loxley House - Nottingham Road

Institute of Natural Resources

TCTA A new word for water

ATTENDANCE REGISTER

NAME	ORGANISATION	EMAIL	TELEPHONE	SIGNATURE
S.Brownlie	dSA.	susie.brownlie@ deasa.co.za	021 6744263	
G. Martindale	EKZNW	greg.martindale@ kznwildlife.com	082 804 6412	
S. Harilal	DWS	harilals@dwa.gov.za	0610309121	
Dominic Wieners	Ezemvelo KZN Wildlife	dominic.wieners@ kznwildlife.com	033 8451455	
JAFTA MOFOKENG	DEA	jmofokeng@ environment.gov.za	012 399 9436	
Siboniso Mbense	DEA	smbense@environment.gov.za	0123999387 0823319764	S.E.
Sindi Dlomo	DEA	Sdlomo@environment.gov.za	012 399 9350	
KOGI NAIDOO	TCTA	knaidoo@tcta.co.za	0835649285	
Kobus BESTER BS (BLUE SCIPLAN)	DWA	besterk@dwa.gov.za	0845175560	

NAME	ORGANISATION	EMAIL	TELEPHONE	SIGNATURE
D. Henry	Nemai	donavanh@nemai.co.za		
J. Kroon	DWS	kroonj@dwa.gov.za	012 336 8187	
Mishelle Govender	DWS	govenderm@dwa.gov.za	012-3368681	
DAVID COOK	EMC.	cookenviro@futurenet.co.za	083-4475990	
DAVID COX	INSTITUTE OF NATURAL RESOURCES	DCOX@INR.ORG.ZA	033 3460796 082 3338341	
Kim V Heerden	DEDTEA	kim.vanheerden@ kzndae.gov.za	0824617695	
IAN FELTON	DEDTEA.	ian.felton@kzndae.gov.za	0824619101	

Presentation Made

MMTS - PHASE 2

SPRING GROVE DAM OFFSETS PROGRAMME

Phase II – Identification, Prioritization and Preliminary Planning for Selected Offset Sites

Authorities Meeting

10 September 2014

Institute of Natural Resources

PURPOSE

i. Present the process followed,

ii. Present the draft outcomes and to

iii. Obtain input that will inform the finalisation of the draft offset programme and plans to be circulated for comment".

CONDITIONS OF ENVIRONMENTAL AUTHORISATION

- A detailed plan for the ***rehabilitation of off-site wetlands*** in the ***Mooi and Mgeni catchments*** be prepared to ***mitigate the loss of wetland function and habitat***; separate plans to be submitted for each individual wetland to ensure site specific issues are included; to consult with Working for Wetlands programme [3.2.4.1.1.(l)]; and,
- A ***detailed plan of action*** be prepared to ***establish offset areas*** to ***compensate*** for ***loss of biodiversity*** and habitat, ***and*** for their ***management*** during the ***operational phase of the dam*** [3.2.4.1.1.(m)].

OFFSET TARGETS

Offset Loss & Targets

ECOSYSTEM	Extent	Policy	Ratio	Target
WETLANDS Functional Target	462 ha	Nat Wetland Guide	(Area * Health)	281 ha equivalents
WETLANDS Biodiversity Target	462 ha	EKZNW	1:3	1 386 ha
GRASSLANDS Biodiversity Target	210 ha	EKZNW	1:3	630 ha
RIVER Biodiversity Target	15.5 kms	None	NA	15.5 kms

- High concentration of SA & regional endemic species and species with high threat status (Vulnerable to Critically Endangered) across several taxa (mammals, birds, amphibians, reptiles and plants) within the dam basin.
- Loss of Inchbrakie Falls & associated habitat considered – non off settable.

OFFSET AIMS, OBJECTIVES & CRITERIA

Defined through 1st Offsets Working Group Meeting (Sept 2013)

REQUIREMENT	RESPONDING OBJECTIVE/CRITERIA
Requirements of the Conditions of Authorisation	
i. **'Detailed plans of action/ planning'** involving **'separate plans' for each offset site**	Develop detailed offset programme and specific plans per site including : designs, BOQs, Budgets, Signed Agreements, Financial Instruments
ii. Mitigate the loss of wetland function.	▪ Select sites located above the MMTS impoundments - benefits of water related ecosystem services (improved flow and quality) will be accrued. ▪ Consider the location of water quality issues in selecting offset sites.
iii. Compensate for the **"loss of biodiversity and habitat".**	▪ Use of biodiversity prioritization layers in offset site prioritization ▪ Consideration of biodiversity at an ecosystem and species level using Cranes as indicators. ▪ Consider condition of habitat.
iv. Management of the offsets for the duration of the **"operational phase of the dam".**	The operational phase of the dam is 50 years. A minimum of 30 years must be built into the mechanism selected for securing the offset site.
v. The offsets should be **identified in the Mooi and Mgeni Catchments".**	The offset study area is defined as the upper Mooi (including the Little Mooi and Hlatikulu Rivers), and the upper Mgeni River catchments.
vi. In the case of wetlands, **"work with the SANBI WfWetlands programme'.**	The Working for Wetlands and range of other 'Working for Programmes' will be engaged in the planning process given: – The potential for them to act as implementers, and – The potential for them to assist in the authorisation required for offset activities.

OFFSET AIMS, OBJECTIVES & CRITERIA

Defined through 1st Offsets Working Group Meeting (Sept 2013)

REQUIREMENT	RESPONDING OBJECTIVE
OFFSET PRINCIPLES	
i. Offset "like-for –like"	***Apply data sets to confirm 'like for like'.*** Data sets confirming wetland, grassland and river types as per provincial classification, and higher definition data.
ii. Offset as close to the site of impact as possible.	***Prioritize sites within the Mooi-River Catchment*** and ***adjacent Spring Grove Dam*** basin (see ii and iv).
iii. Secure the offset in 'perpetuity'.	***Only consider options that secure the offset in the long term***: - Nature reserve, protected environment or biodiversity agreement under the Stewardship options. - Conservation servitude.
iv. Optimize efficiency of offset sites.	▪ ***Prioritize sites that include all three systems*** – river, wetland and grassland and support indicator species. ▪ The larger the site or proportion of the target achieved, the higher the priority.
v. Consider features that cannot be offset.	It is acknowledged that the Inchbrakie Falls are unique and cannot be replaced. The ***selection of offset river sections including waterfalls*** with similar habitat ***should however be prioritized.***

OFFSET SITE SELECTION & PRIORITIZATION PROCESS

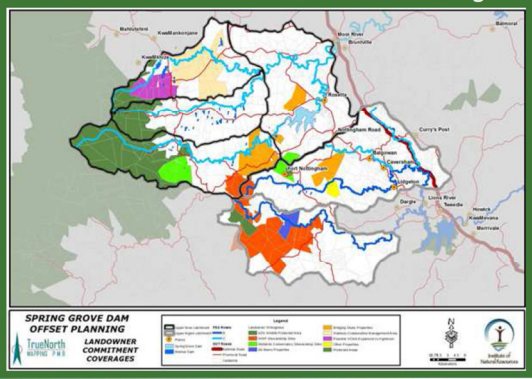
Stakeholder/team workshop to ID, analyse and prioritize data sets.

MAIN ASPECT	DETAIL	SOURCE	NOTES	RELEVANT OFFSET CRITERIA/ PRINCIPLE
ECOSYSTEMS				
GRASSLANDS	EKZNW grassland types and conservation status	EKZNW		Offset Like for Like (Lfl.)
	Grassland condition - landcover categories	NLC	Landcover used to extract degraded from natural grassland to get a layer showing grasslands condition.	Secure good quality sites and rehabilitate degraded, BUT not highly degraded systems.
WETLANDS	NFEPA	SANBI	Included as background but Crane prioritization layer more appropriate as based on higher resolution analysis	Offset in high conservation priority systems
	Priority wetlands- cranes	KZN Crane Foundation	Use category 1,3, and 4	Offset in high conservation priority systems
RIVERS	M&Vi catchments	DWA	RoD requires that offsets are located within the Mooi and Mgeni catchments. Given the focus on water related ecosystem services and enhancing the quantity and quality of water transferred via MMMTS II.	Offset as close to site of impact and within defined offset area.
	Provincial PES	Groundtruth	Used to identify condition of systems.	Conserve good quality systems
	NFEPA	SANBI	Used to identify systems with high conservation value.	Offset in high conservation priority systems
	Provincial river type classification.	EKZNW	Primary coverage for selecting rivers to offset.	Offset Like for Like
	Waterfalls	Bridging study	Bridging study identified waterfalls with similar habitat	Offset Like for Like

OFFSET SITE SELECTION & PRIORITIZATION PROCESS

ECOLOGICAL PROCESS AND FUNCTION				
SPECIES MOVEMENT	EKZNW Corridors coverage	EKZNW	Not a priority layer as developed at a very high resolution (provincial). Will be used if required to decide between two sites considered equal in all other requirements.	Offset in high conservation priority systems
WATER RELATED ECOSYSTEM SERVICES	Water quality	Spring Grove Dam construction WQ monitoring data	Data analyzed and combined to identify sub catchments impacted by poor water quality. Focus on reducing nutrient and bacterial levels to prevent nutriciation of the impoundments and reduce treament costs. Other focus is on trapping sediments to prolong the life span of the dam. Therefore used to identify where offsets, particularly wetland rehab will contribute to improved water cullity and regulation.	Enhance purpose of MMTS II by improving water quality.
		Upper Mgeni Catchment Management Plan - point source pollution map		
	Water regulation - grassland and wetlands	As above	All wetlands and grasslands perform this function. Requires securing good habitat and rehabilitating degraded habitat, but focus on rehabilitation of degraded sites to improve situation in the catchment.	Enhance purpose of MMTS II by improving water regulation.
SPECIES				
CRANES	EWT crane priority areas	EWT (DC)	Cranes used as indicator species for wetland and grassland - see wetland category.	Offset in high conservation priority systems
BIODIVERSITY PLANNING				
PROVINCIAL CONSERVATION	Boundaries and current status	EKZNW C-Plan	Focus in CCA 1 areas.	Offset in high conservation priority systems
EXISTING PROTECTED AREAS		EKZNW PA coverage	Stewardship sites rather than formally protected (date owned) systems.	Offset in high conservation priority systems

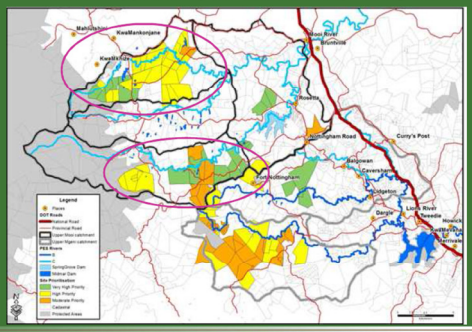
OFFSET SITE PRIORITIZATION - Landowner willingness



OFFSET SITE PRIORITIZATION - Matrix

OFFSET SITE PRIORITIZATION - Results

- HCMA and Mooi emerged as priorities
- Reduced opportunity for 'addiitionality' in Mgeni Sites'



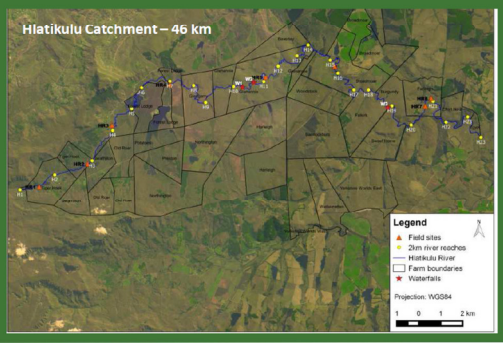
SITE INVESTIGATION - Process

i.Engage 3rd parties to make landowner introductions.

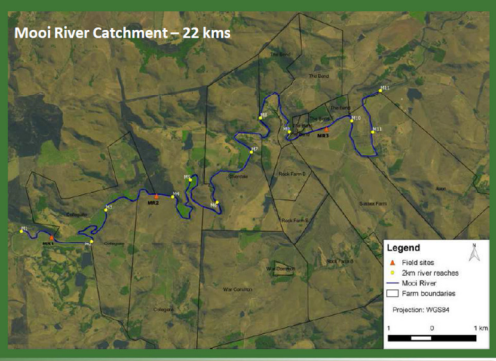
ii.Initial meeting & site visit.

iii.Specialist site mapping, classification, condition assessment.

SITE INVESTIGATION - River



SITE INVESTIGATION - River



SITE INVESTIGATION - River

- Applied technique for scoring state of Instream & Riparian Habitat (IHI)

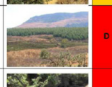
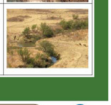
Table 3-3 Summary of the Index of Habitat Integrity (IHI) scoring system (After Kleynhans *et al.* 2008)

Percentage change	Classification	Category
0%-10%	Unmodified, natural.	A
11%-20%	Largely natural with few modifications. A small change in natural habitats and biota may have taken place but the ecosystem functions are essentially unchanged.	B
21%-40%	Moderately modified. Loss and change of natural habitat and biota have occurred, but the basic ecosystem functions are still predominantly unchanged.	C
41%-60%	Largely modified. A large loss of natural habitat, biota and basic ecosystem functions has occurred.	D
61%-80%	Seriously modified. The loss of natural habitat, biota and basic ecosystem functions is extensive.	E
81%-100%	Critically modified. Modifications have reached a critical level and the lotic system has been modified completely with an almost complete loss of natural habitat and biota. In the worst instances the basic ecosystem functions have been destroyed and the changes are irreversible.	F

SITE INVESTIGATION - River

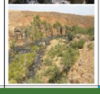
- **Applied scoring technique for Instream & Riparian Habitat**

Table 4-1 Summary of IHI assessments for 2km reaches of the Hlatikulu River collectively earmarked as potential offset targets for Spring Grove Dam.

Site	Site PES (Y/N)	SI	Instream IHI	Main instream impacts	Photo	Riparian IHI	Main riparian impacts	Photo
H1	Y	1.14	C	Recreational dam has altered flow and caused the settling of sediments within the dam.		C	Trout farms present in riparian area below the dam may result in some physicochemical impacts. Water quality in large dam is generally good	
H2	Y	1.08	C/B	The overcirculation of an earth weir has drastically altered flow regime and to a degree also the physicochemical properties (higher turbidity downstream of the weir).		C	Earth weir with adjacent diversion of flow has resulted in channel modification, flow modification and some physicochemical impacts. Trout farms present in riparian area may result in some physicochemical impacts. Water quality in large dam is generally good	
H3	N	1.09	C	Large sections of riparian land previously used for cultivation, many furrows/culverts and drains still present and functioning increasing flows. Large amounts forestry on left hand bank (facing downstream).		D	Large areas of riparian zone previously used for cultivation. Invaded by *Rubus cuneifolius* and *Acacia mearnsii*. Water abstraction has reduced water level narrowing the riparian zone.	
H4	Y	1.41	C	Eyesore community is in close proximity to the river on the left hand bank. Grazing and small amounts of rubbish dumping along with some nutrient enrichment from runoff and from grazing lands as well as the community has resulted in higher levels of algal growth and moderate physico-chemical impacts. Moderate sedimentation of stone biotope as a result of cattle access points along the reach.		D	Large areas of riparian zone subjected to cattle grazing. Cattle paths to the river have become eroded due to lack of vegetation caused by excess trampling. Construction of a dam has inundated a portion of the riparian zone within the reach and the excess nutrients in the active channel are now constantly supplied to the riparian zone. Riparian zone invaded by *Rubus cuneifolius* and *Acacia mearnsii*.	

SITE INVESTIGATION - River

Specific attention applied to waterfalls to allow for comparison with Inchbrakie habitat

	Biologically interesting features			
H18	Waterfall 3 (W3)	Lat: -29.247247° Long: 29.801413°	 	Three tiers of cascading waterfall flowing predominantly over bedrock , with a final drop of about 1m into a large plunge pool approximately 60m long and 15m wide. The pool is surrounded by dry sheer rock cliffs (~7-8m high) on the right hand bank (facing downstream). The left hand bank consists of stepped vegetated sides comprising large boulders and bedrock and largely indigenous trees and shrubs (species). Additionally the left bank contains some smaller sections of wet and dry cliffs (~1-2m high) that were inhabited by a diverse array of unidentified lithophytes that would need to be identified during the flowering season. There is some erosion evident above the sheer cliffs on the right hand bank. Water draining the plunge pool enters a braided channel immediately downstream with largely intact and diverse sections of riffle and run biotope including some large sections of vegetated islands. Surrounding vegetation upstream and downstream comprised of overgrazed grassland and riparian thicket of *Passerina filiformis*, *Leucosidea sericea* and *Gomphostigma virgatum*, respectively.

SITE INVESTIGATION - River

Table 4-5: Summary of instream IHI scores for the 2km reaches of the Hlatikulu and Mooi rivers in relation to each surrounding land owner.

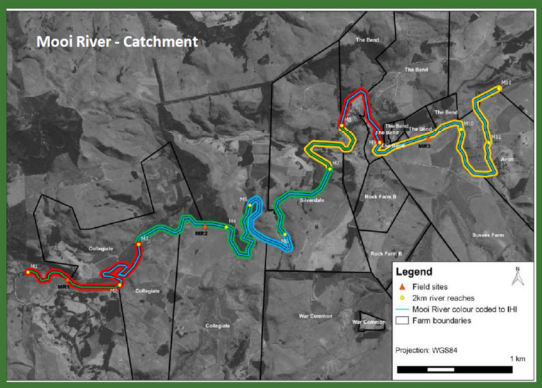
Farms/community	Percentage of unmodified river length surrounding by instream IHI score					Total
	Blue (A)	Green (B)	Orange (C)	Red (D)	Purple (E)	
Hlatikulu River (a total of 22 reaches, each 2km in length)						
Tiger Hoek	0	0	8.77	0	0	8.77
Sivenston	0	0	0.87	0	0	0.87
Old Roar	0	0	0.43	0	0	0.43
Eyesore Community	0	0	4.38	0	0	4.38
Forest Lodge	0	2.17	2.17	0	4.35	8.70
Glengarry	0.52	2.17	0	0	0	8.70
Glenannie	21.30	0	0	0	0	21.30
Stadlers Rust	1.30	0.00	0	0	0	1.30
Stadlers Rust shared with Broadmoor	10.00	1.30	0	0	0	11.30
Broadmoor shared with Falkirk	1.09	3.04	0	0	0	4.13
Falkirk shared with Burgundy	3.26	0	0	0	0	3.26
Burgundy	2.17	0	0	0	0	2.17
Burgundy shared with Sweet Home	3.91	0	0	0	0	3.91
Farleigh	5.65	0	0	0	0	5.65
Effort No. 2	8.26	0	0	0	0	8.26
Egypt	3.91	0	0	0	0	3.91
Unknown	9.00	0	5.22	0	0	9.22
Total	**81.22**	**8.70**	**21.74**	**0.00**	**4.35**	**100.00**
Mooi River (a total of 11 reaches, each 2km in length)						
Collegiate	33.54	5.45	0	0	0	39.00
Silverdale	11.82	6.36	0	0	0	18.18
Silverdale shared with The Bend	0	2.73	0	0	0	2.73
The Bend	50.00	0	0	0	0	50.00
The Bend shared with Sussex	0.10	0	0	0	0	0.10
Sussex shared with Avon	5.45	0	0	0	0	5.45
Avon	12.73	0	0	0	0	12.73
Unknown	0	3.64	0	0	0	3.64
Total	**81.82**	**18.18**	**0.00**	**0.00**	**0.00**	**100.00**

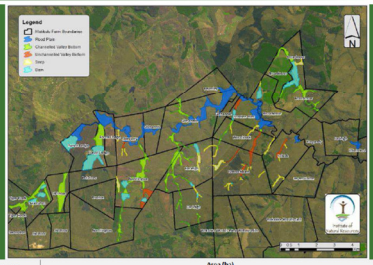
Table 4-6: Summary of riparian IHI scores for the 2km reaches of the Hlatikulu and Mooi rivers in relation to each surrounding land owner.

Farms/community	Percentage of river according to riparian IHI score					Total
	Blue (A)	Green (B)	Orange (C)	Red (D)	Purple (E)	
Hlatikulu River (a total of 22 reaches, each 2km in length)						
Tiger Hoek	0	0	8.70	0	0	8.70
Sivenston	0	0	0.87	0	0	0.87
Old Roar	0	0	0.43	0	0	0.43
Eyesore Community	0	0	0	4.35	0	4.35
Forest Lodge	0	4.35	0	0	4.35	8.70
Glengarry	2.17	0.52	0	0	0	8.70
Glenannie	19.57	1.74	0	0	0	21.30
Stadlers Rust	0	1.30	0	0	0	1.30
Stadlers Rust shared with Broadmoor	10.00	1.30	0	0	0	11.30
Broadmoor shared with Falkirk	4.13	0	0	0	0	4.13
Falkirk shared with Burgundy	3.26	0	0	0	0	3.26
Burgundy	0.43	1.74	0	0	0	2.17
Burgundy shared with Sweet Home	3.91	0	0	0	0	3.91
Farleigh	0	5.65	0	0	0	5.65
Effort No. 2	4.35	1.74	0	0	0	6.09
Egypt	0	3.91	0	0	0	3.91
Unknown	0	2.17	0	3.04	0	9.22
Total	**47.83**	**30.43**	**9.13**	**4.35**	**4.35**	**100.00**
Mooi River (a total of 11 reaches, each 2km in length)						
Collegiate	5.36	18.18	0	16.55	0	39.09
Silverdale	2.73	9.09	6.36	0	0	18.18
Silverdale shared with The Bend	0	0	2.73	0	0	2.73
The Bend	0	0	0.91	9.09	0	10.00
The Bend shared with Sussex	0	0	9.98	0	0	9.98
Sussex shared with Avon	0	0	5.45	0	0	5.45
Avon	0	0	12.73	0	0	12.73
Unknown	0	0	0	3.64	0	3.64
Total	**8.09**	**27.27**	**36.36**	**27.27**	**0.00**	**100.00**

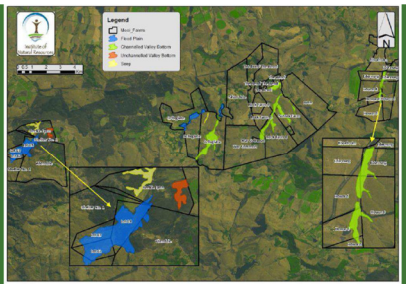
Hlatikulu Catchment

Mooi River - Catchment



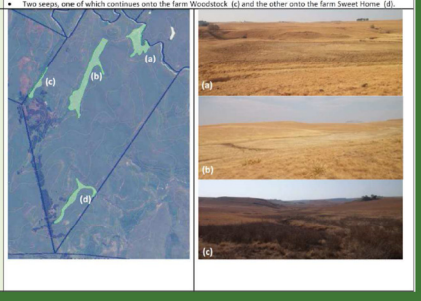


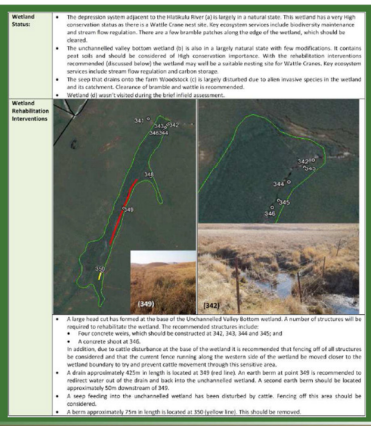
Hlatikulu Catchment Farms	Area (ha)					
	Dam	Floodplain	Unchannelled Valley Bottom	Channelled Valley Bottom	Seep	Total
Bannockburn	0.47		16.18	2.62	16.50	35.77
Broadmoor	52.25	16.44		47.94	5.71	122.34
Farleigh		6.42				6.42
Effort		3.44				3.44
Falkirk		1.99	10.99		0.88	25.86
Forest Lodge	107.23	68.18		37.99		213.39
Glenannie		131.64		24.37		155.81
Bowerley		12.41		3.10		15.51
Glengarry		40.05	2.44	4.57	3.75	50.81
Harleigh (Greg Symmons)	10.66			45.42	10.00	66.38
Harleigh (Moors)	1.50			10.74	2.19	14.43
Northington	34.53		18.74	68.79	6.64	118.54
Old Roar				53.55		53.55
Swarnston	17.77			39.89	0.88	58.54
Tiger Hoek				14.64		14.64
Stadlers Rust	5.53	50.53	7.23	1.46	1.79	66.52
Woodstock			12.25	6.71	5.24	24.21
Totals	220.00	334.69	67.83	353.78	66.05	1042.55



Mooi Catchment Farms	Area (Ha)					
	Dam	Flood Plain	Unchannelled Valley Bottom	Channelled Valley Bottom	Seep	Total
Allendale		13.20				13.20
Shelter Nek. 1		5.96				5.96
Lot 12		29.40				29.40
Lot 13		22.22				22.22
Lot 14		58.70				58.70
Ripekio Lynn		2.10	17.88		17.89	36.87
Collegiate		46.30		92.97	2.32	141.59
Rock Farm B				40.61		40.61
Sussex Farm				73.75		73.75
War Common				14.40		14.40
Ellenurg				10.76		10.76
Howard				21.16		21.16
Total	0.00	177.92	17.38	253.16	19.68	468.13

SITE INVESTIGATION – Wetlands

FALKIRK WETLANDS	
Wetland Classification:	Wetlands on the farm Falkirk include the following: • A large Unchannelled Valley Bottom system ; • A depression adjacent to the Hlatikulu River ; and • Two seeps, one of which continues onto the farm Woodstock (c) and the other onto the farm Sweet Home (d).
Wetland Location:	



- The depression system adjacent to the Hlatikulu River (a) is largely in a natural state. This wetland has a very High conservation status as there is a Wattle Crane nest site. Key ecosystem services include biodiversity maintenance and stream flow regulation. There are a few bramble patches along the edge of the wetland, which should be cleared.
- The unchannelled valley bottom wetland (b) is also in a largely natural state with few modifications. It contains peat soils and should be considered of High conservation importance. With the rehabilitation interventions recommended (discussed below) the wetland may well be a suitable nesting site for Wattle Cranes. Key ecosystem services include stream flow regulation and carbon storage.
- The seep that drains onto the farm Woodstock (c) is largely disturbed due to alien invasive species in the wetland and its catchment. Clearance of bramble and wattle is recommended.
- Wetland (d) wasn't visited during the brief infield assessment.

Wetland Rehabilitation Interventions

- A large head cut has formed at the base of the Unchannelled Valley Bottom wetland. A number of structures will be required to rehabilitate the wetland. The recommended structures include:
  - Four concrete weirs, which should be constructed at 342, 343, 344 and 345; and
  - A concrete sheet at 346.

  In addition, due to cattle disturbance at the base of the wetland it is recommended that fencing off of all structures be considered and that the current fence running along the western side of the wetland be moved closer to the wetland boundary to try and prevent cattle movement through this sensitive area.
- A drain approximately 425m in length is located at 349 (red line). An earth berm at point 349 is recommended to redirect water out of the drain and back into the unchannelled wetland. A second earth berm should be located approximately 50m downstream of 349.
- A seep feeding into the unchannelled wetland has been disturbed by cattle. Fencing off this area should be considered.
- A berm approximately 75m in length is located at 350 (yellow line). This should be removed.

Falkirk

Point	Problem	Dimensions (m)			Proposed Intervention	Cost Estimate
		Width	Depth	Length		
342	Headcut erosion	6	1		Concrete weir	R 113,460
343	Headcut erosion	6	1.3		Concrete weir	R 136,400
344	Headcut erosion	4	1		Concrete weir	R 97,960
345	Headcut erosion and disturbance by cattle	3	0.7		Concrete weir with off-take pipe to cattle drinking trough	R 108,120
346	Headcut erosion	4	0.3	48	Reno mattress chute	R 218,880
348	Disturbance by livestock	-	0.4	10	Fence & Ecologs	R 70,000
349	Disturbance by livestock	5	0.4	-	Create drinking point	R 30,000
						774,820

SITE INVESTIGATION – Grasslands/terrestrial

Mapped

i. Grassland area and condition grassland using same categories as SGD to allow for comparison

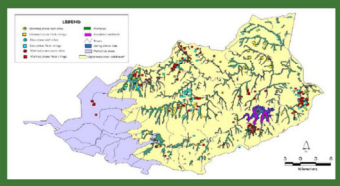
ii. Alien species – wattle, bramble

iii. Erosion gulleys

iv. Sheet erosion

SPECIES

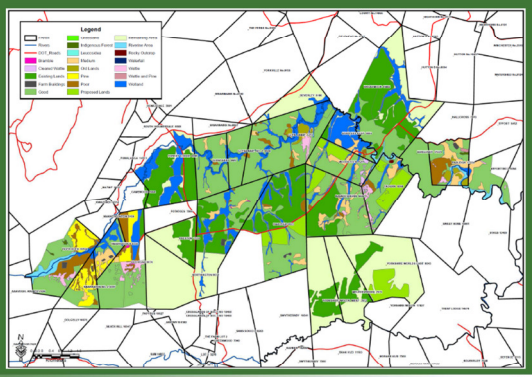
Overlay of use of areas by Wattled and Blue Cranes



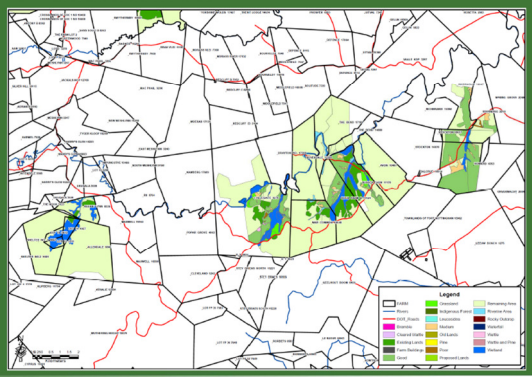
Summary table of species per property – including habitat used and conservation status

Ecosystem	Species	Common name	Bird	Mammal	Reptile	Amphibian	Insect	Plant	Forest	Wetland	Grassland	Wet & grassland	NE	DD	LC	NT	VU	EN	CR
Drakensberg Foothill Moist Grassland	*Afrixalus spinifrons intermedius*	Natal Banana frog																	
Temperate Alluvial Vegetation; Midland Floodplain Grassland	*Anthropoides paradiseus*	Blue crane																	
	Balearica regulorum	Grey crowned crane																	
	Bugeranus carunculatus	Wattled crane																	

SUMMARY AREAS



SUMMARY AREAS



COSTING – AVERAGE COSTS TO MEET TARGETS

Items Costed

i. Rehabilitation – alien clearing, rehab structures, sheet/gulley erosion.
ii. Other offset activities - strategy and actions to address poaching.
iii. Securing site (stewardship agreement)
iv. Long term management and monitoring– annual audit.
v. Other – annual audit and reporting.

Costing Method

Application of norms and standards to areas and features mapped :

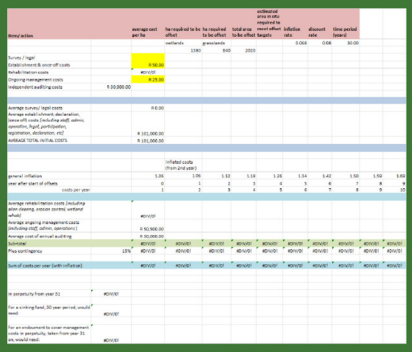
- NRM programme norms and standards for specific activities (clearing dense mature wattle & wetland rehabilitation structures.
- Stewardship R/ha for establishing site and ongoing management.

COSTING – per site costs

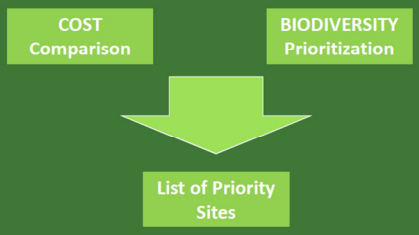
Comparative cost estimate for different sites

Site	Area	Survey/legal per ha	Survey/ legal for site	establishment, declaration, fence-off costs per ha	establishment, declaration, fence-off costs for site	rehabilitation cost per ha	rehabilitation cost for site	management costs per ha	management costs for site	Independent auditing	TOTAL COST IMPLICATIONS	Total cost implications plus 15% contingency
			0		0		0		0		0	0

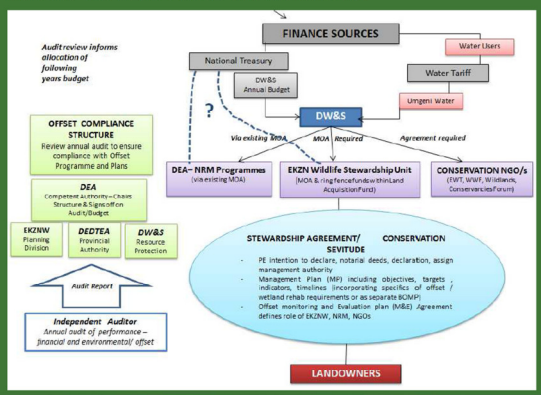
COSTING – Summary & budget implications over time



FINAL SITE SELECTION



OFFSET GOVERNANCE FRAMEWORK



WAY FORWARD

Phase II Outputs - Report

i. Process to identify and prioritize offset candidate sites.
ii. Detailed areas, offset activities and costs per property – 2-4 page summary per property.
iii. Overall costs for comparison purposes.
iv. Propose options for governance.
v. Recommendations for sites to take forward into detailed planning.

Phase III -Detailed Planning

i. Undertake detailed mapping, design and costing,
ii. Survey sites/areas.
iii. Agree on appropriate mechanism and sign agreements.
iv. Establish BMP and M&E
v. Set up governance structure - agreements/financial arrangements etc

MINUTES OF THE STAKEHOLDERS MEETING – 12 SEPTEMBER 2014

PO Box 10335 Centurion 0046
1st Floor Stinkhout Wing
Tuinhof Building 265 West Road Centurion
Tel: +27 12 683 1200 Fax: +27 12 683 1300
e-mail: info@tcta.co.za
Website: www.tcta.co.za

A new word for water

MOOI-MGENI TRANSFER SCHEME PHASE TWO (MMTS-2)

SPRING GROVE DAM OFFSETS PROGRAMME

Phase II – Identification and Prioritization of Preliminary Planning for Selected Offset Sites

Minutes of Stakeholders Meeting

Date: 12 September 2014
Time: 9:30 am – 1pm
Venue: Loxley House, Nottingham Road

1. WELCOME AND INTRODUCTION

Mr Dave Cox welcomed everyone and asked for a round of self-introductions from those present. The attendance register for the meeting is appended. DC indicated that numerous apologies had been received and that they would be noted in the minutes – they are as follows:

- Frank Reardon: Mooi River Landowner
- Mark Winter: Hlatikulu Landowner
- Greg Mullins: Ethekwini Municipality
- Nic Shaw: Hlatikulu Landowner
- Vaughan Koopman: WWF

Dave explained that the purpose of the meeting was to: *Provide an understanding of the process followed, methods applied and the draft outcomes of the investigation*". Feedback from the meeting would inform the final steps required to finalise a draft for comment. He further thanked everyone who has assisted the project team in various ways to this point in the process.

2. PRESENTATION OF THE PROCESS AND PRLEMIINARY OUTCOMES OF THE PLANNING PROCESS

Dave Cox gave a presentation on Phase 2 of the Spring Grove Offsets Planning Process, which covered the following main aspects. The presentation is circulated with these minutes.

2.1 Background

The presentation commenced by outlining the key requirements of the two conditions of environmental for Spring Grove Dam (SGD) environmental authorisation that related to offsets. These being:

- **Focus in the Mooi and Mgeni** catchments,
- Consider the **loss of biodiversity** and **ecosystem function for wetlands**,
- Prepare **detailed plans**, that provide for **management for the operational life of the dam**,
- **Engage Working for Wetlands** in undertaking the planning.

The residual loss documented in the Phase I report was also summarised in terms of area for each system (river, wetland, grassland – see table below) as well as the conservation value and the condition of the impacted systems. It was also noted that:

- ***Species***: A high concentration of SA & regional endemic species and species with high threat status (Vulnerable to Critically Endangered) across several taxa (mammals, birds, amphibians, reptiles and plants) occur within the dam basin.
- ***Unique Features***: The habitat and associated plant community at Inchbrakie falls was considered unique and not possible to offset – but should be considered in selecting offsets.

The area based offset targets for each system agreed during Phase I are also summarised in the table below.

ECOSYSTEM	EXTENT OF LOSS	RATIO	TARGET
WETLANDS Functional Target	462 ha	(Area * Health)	281 ha equivalents
WETLANDS Biodiversity Target	462 ha	1:3	1 386 ha
GRASSLANDS Biodiversity Target	210 ha	1:3	630 ha
RIVER Biodiversity Target	15.5 kms	NA	15.5 kms

2.2 Setting Aims, Objectives and Criteria for the Offsets

Dave explained that the:

- Specific requirements of the conditions of authorisation, and
- Core principles for establishing an offset,

were analysed with stakeholders at the end of Phase I to establish agreed objectives and criteria to guide the offset planning.

2.3 Offset Site Selection

These objectives and criteria set with stakeholders were applied in the planning approach in the following way:

- A workshop was held with the study team and select stakeholders to identify data sets to reflect each offset criteria.
- These data sets were collated and a GIS project created.
- An overriding criteria was the need for an existing level of landowner willingness (LW) because establishing a level of commitment can take several years – and such timing was not available within this process. There has been engagement with landowners across the Mooi and Mgeni Catchments for different reasons by different organisation, and this was mapped to address this criteria.
- The data sets reflecting the other selection criteria were included in a prioritization matrix which was applied to the existing layer of 'willing landowners'. This resulted in a list of priority sites being identified within the overall suite of sites selected based on LW.
- The focus was on areas with high biodiversity value and securing sites with grassland, wetland and river, rather than scattered patches that will be difficult/inefficient to manage.
- The Hlatikulu Valley and several sites in the mid and top of the Mooi Valley emerged as priorities. The sites in the Mgeni provided less opportunity for Spring Grove to achieve 'additionality' because existing initiatives in these areas e.g. alien clearing and wetland rehab

planning was already taking place. Engagement with landowners therefore focussed in the Mooi and Hlatikulu catchments.

2.4 Landowner Engagement & Site investigations

Landowners were then engaged through the 3rd parties to explain the DWA requirements, establish what areas they would be willing to consider securing and discuss the benefits for them. Where the engagement was positive the next step involved assessment of the properties by the river, grassland and wetland specialist teams to:

- Classify the natural systems,
- Map the areas and the condition of the systems,
- Map impacts such as drains,
- Identify important features and species.

Dave summarised the outcomes of each of these investigations noting the following:

- ***Rivers***
  - 66kms (42 kms on Hatikulu and 22kms on the Mooi River) had been assessed in 2km reaches in terms of instream and riparian habitat integrity (IHI). There were areas on the Hlatikulu with good instream and riparian habitat.
  - While none of the 3 waterfalls on the Hlatikulu provide the same habitat as the Inchbrakie Falls, Waterfall '3' was considered the most similar and an important a feature worth conserving.
- ***Wetlands***
  - Approximately 1 600ha had been identified including a mix requiring rehab (500ha) and protection (790ha).
  - The majority are the same type as those lost within Spring Grove – floodplain and large Channelled Valley Bottom Systems.
- ***Grasslands***
  - A significant area of grassland, far exceeding the required target has been identified
  - Two grassland types were lost within Spring Grove, Mooi River Highland Grassland (MRHG moe than 90% of the area lost) and Drakensberg Foothill Moist Grassland (DFMG). The majority of the grassland is in the offset areas is DFMG.
- ***Species***

There is also an indication of what important species are on the various properties. As cranes have been used as an indicator species, nest and foraging sites have been overlayed on the potential offset properties.

2.5 Costing

The costs of establishing and managing the offsets in the long term have been established per property in the following way:

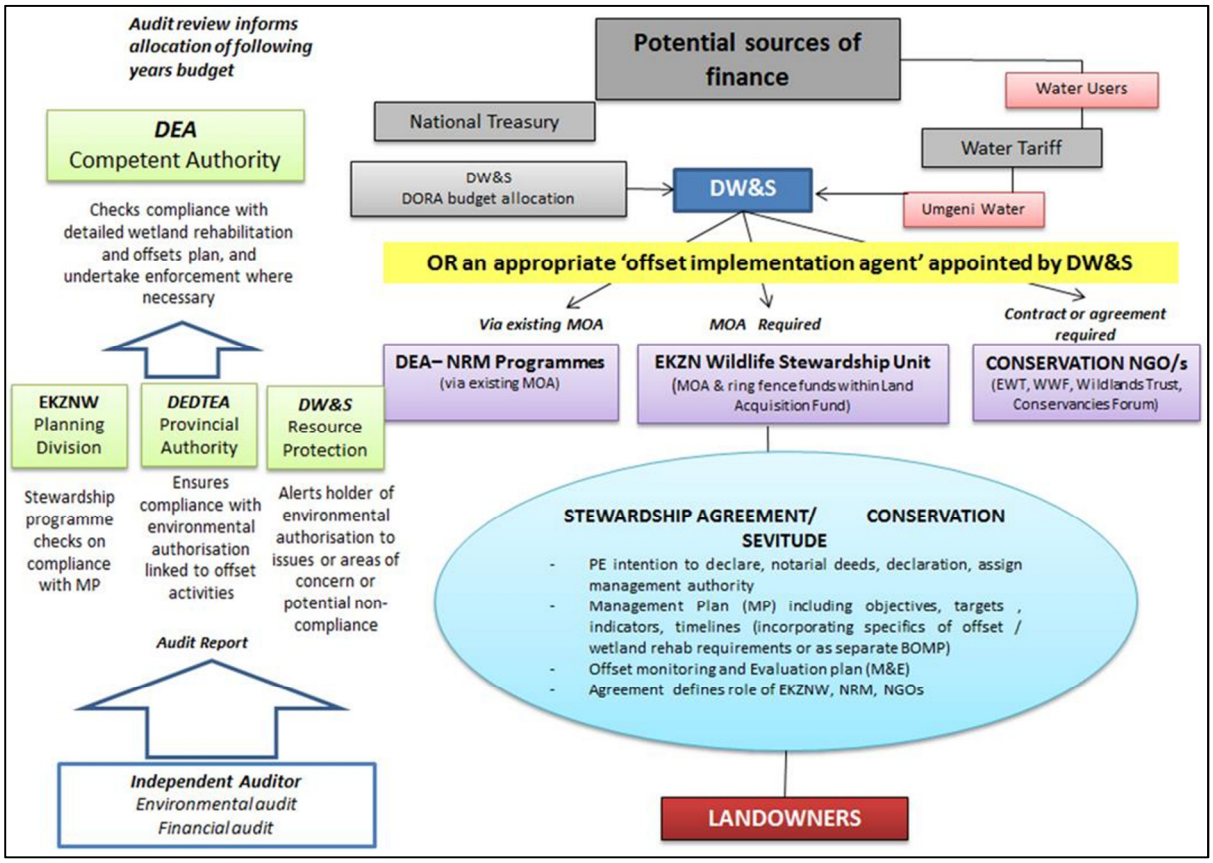
- *Items Costed*
  i. Rehabilitation – alien clearing, rehab structures in wetlands, sheet/gulley erosion.
  ii. Other offset activities - strategy and actions to address poaching.
  iii. Securing site (stewardship agreement)
  iv. Long term management and monitoring– annual audit.
  v. Environmental authorisation of offset activities e.g. wetland rehabilitation.
- *Costing Method*

- Norms and standards from the existing Natural Resources Management programmes have been applied to the area and features mapped per property to derive costs. For example, the per/ha costs for clearing wattle used by Working for Water and the per/ha costs for rehabilitation structures, supplied by Working for Wetlands.
- The KZN stewardship unit has also provided per/ha costs for securing sites under stewardships and providing long term management support.

A summary will be compiled for each property detailing the area and condition of wetland, river and grassland available on each property to meet the offset targets will be made available. This will include the areas of impacts and the costs associated with each property.

2.6 Governance Framework

Dave then introduced the need for establishing an appropriate governance framework if the Offsets were to be achieved. This framework needs to clearly define where the necessary finance is derived from, who spends it and how? The roles and responsibilities of the different roleplayers need to be appropriate to the mandate of the organisations and relationships between roleplayers needs to be defined via memorandums of understanding. Susie Brownlie presented the slide below and explained the various elements of the governance framework as follows:



- ***Finance***: As the holder of the environmental authorisation, Department of Water and Sanitation (DWS) should be responsible for financing the offsets. They could either use a portion of their annual budget allocation, or build the costs into the water tariff which would be appropriate in terms of the "polluter pays principle".

- ***Implementation***: DWS could request other agencies to implement the offsets, or contract an agent. This could be through an existing MOA, such as that which DWS had with the NRM programmes. Other options include Ezemvelo KZN Wildlife, or a Conservation NGO like EWT. TCTA could also fulfil this role. Some form of agreement would be required between DWS and the implementing agents where they don't exist. Different aspects of the work may be undertaken by different implementing agents. Landowners are key roleplayers. Their involvement will be defined by the Biodiversity Management Plan which is entered into with EKZN and is central to defining the role and responsibility of both the landowner and EKZNW.
- ***Monitoring & Auditing***

  Monitoring and checking for compliance is essential to confirm that conditions of the authorisation are being met i.e. that the restoration work is being carried out and that the natural systems are restoring as predicted. This will require technical monitoring. An annual audit will also be required to confirm the appropriate funds, the operation of the institutional framework and that technical work is being undertaken. The various authorities will need to comment on the audit before consideration by DEA as the competent authority, who need to sign off on the audit. The findings of the audit will potentially require changes in activities and finance for the upcoming year.

At this point Susie suggested that Dave Cox give feedback on the outcomes of the authorities meeting. Dave explained that:

- Ideally the cost of the offsets would have been determined early in the process, built into the overall capital budget for SGD and paid off through the water tariff along with all other construction and mitigation measures. The offsets should also have been planned and implemented prior to the dam being constructed.
- This did not take place and the current situation is that;
  - the capital budget has been exhausted,
  - DWS have not included the offsets in the annual budgeting.

    Although the water tariff is revised annually, there is concern about the costs that Spring Grove has added to the, per/litre cost to municipalities supplied by Umgeni Water. There would likely be further resistance to any further increases, especially because the users understood that all costs had been included. In this regard, Jaap Kroon (DWS) referred to Section 14 of the Constitution, which defines the roles and responsibilities of different levels of government. He explained that DWS is responsible for waterworks – the definition of which does not extend their mandate to managing areas for conservation or rehabilitation works.

  In summary, DWS's position is that:
  - They don't have the funds and can't pay.
  - More importantly DWS (as represented by Mr Kroon) are of the opinion that they should not pay for the offsets. This is based on the argument that it is a government impact and that there are various other government agencies that have both the mandate and budget to finance rehabilitation and manage areas for conservation.

The opposing view held by DEA (and provincial DEDTEA) and the various other agencies that DWS suggest should fund and implement the offsets (the NRM programmes, EKZNW, Conservation NGOs) is that:

- It is accepted that these other agencies are better suited to implement the offsets – as reflected in the proposed institutional framework, however
- While other agencies may establish and manage the offsets on behalf of DWS, it remains the legal responsibility of DWS and the developer (in terms of the polluter pays principle) to finance the offsets.
- DEA will not sign off on the offsets plan until the finance has been made available by DWS.
- The supporting agencies supported this position. It was explained by Dave Cox that the NRM programmes have an existing MOA with DWS that makes provision for them to undertake rehabilitation work for DWS, but on condition that DWS pay for this work. These implementing agencies all confirmed that they do not have adequate budget to meet their current commitments or demand. As an example, it would take in the region of 10 years for Working for Wetlands to undertake detailed design and implement the rehabilitation required for the offsets using their annual budget allocation for the KZN Midlands region. In this time it is likely that properties would change hands and the opportunity to implement and secure offsets would have been lost – as occurred for sites on which mitigation was planned in 2004. Similarly, the EKZNW Stewardship Unit is presently unable to take on any new sites due to lack of capacity.
- There was also a concern that Spring Grove will set a precedent for offsets required for large government funded infrastructure projects. The example of the upcoming Mkomazi dams and transfer scheme were noted. The cumulative impact on the budget and resources of the NRM programmes and other agencies from adding the responsibility for these would be significant – and unacceptable from their point of view.

It was agreed by officials at the authorities meeting that a decision needed to be made at the DG level between the departments. Actions have been agreed for representatives of each department to elevate the issue to the appropriate level as soon as possible.

- Duncan Hay asked for the definition of the project and if the project related to both the dam and the transfer scheme. Dave Cox responded that there are separate applications and environmental authorisations for Spring Grove Dam and the various other components of the transfer scheme. Jaap Kroon explained further that the Record of Decision for Spring Grove was issued in 2009, and that the Environmental Authorisation for the pipeline was issued in October last year.

- Duncan Hay pointed out that this project has served an important purpose regardless of who funded the rehabilitation and securing of the sites because the planning was in place for various initiatives looking to identify sites to invest in ecological infrastructure.

2.7 Consideration of the Mpofana Irrigation Project (MIP)

Dave Cox introduced the need to consider the Mpofana Irrigation Project (MIP) in the offset planning for Spring Grove. DC explained that the Mpofana Irrigators had initially appealed the decision to build Spring Grove because it reduced the amount of water available to secure and expand agriculture in the catchment. This was due to the actual transfer of water out of the Mooi Catchment, and the prohibitive cost of water from the dam for irrigators. The Mooi River Irrigation Board had withdrawn the appeal on the agreement with DWS that, if they could prove there was still adequate water in the catchment, DWS would consider an application for the MIB to build dams of their own.

The MIP had subsequently been initiated and had undertaken a reconciliation of use in the catchment, which they are clear shows there is additional water available for agricultural expansion. Based on the outcomes of this investigation preliminary investigation has been undertaken for a range of dam sites on the Hlatikulu and Little Mooi Rivers, as well as several large farm dams. The dams will assist in securing water to irrigate approximately 3 000ha of existing dryland arable areas in the Mpofana District. It is likely that the MIP dams will require Offsets of their own. DC had been engaging with the chairman of the MIP, Graham Armstrong regarding the potential synergy and conflict between the SGD offset planning and the MIP process. The concern raised during the recent planning process was that several areas being investigated included landowners who were also involved in the MIP, and that use of sites on their properties would foreclose on these as options should they be required for the MIP. DC provided a slide summarizing initial estimates he had undertaken for wetland and river loss within the various MIP Dams:

- Wetland: 155ha
- River: 15 kms
- Grasslands: It is understood that limited, if any grassland will be transformed to make way for new arable lands.

DC explained that these offset requirements represented the worst case scenario, with all the dams being constructed at the largest capacities, which was unlikely. The MIP are hoping to engage DWS regarding use of water from Mearns Weir now that Spring Grove was providing additional storage and pumping costs from Spring Grove would be far lower than from Mearns. If this option was agreed to by DWS it would reduce the need for additional storage dams for MIP.

Given the areas identified for the SGD offsets, it would appear that there are 'additional' areas available to meet offset requirements for the MIP. DC also noted that there are many other sites available in the Kamberg Valley (particularly for wetland rehabilitation) where landowners had not been engaged during this preliminary planning process.

DC asked Graham if he would like to expand on what DC had presented with regards the MIP. Graham added the following understanding:

- He thanked the SGD Offsets planning team for engaging with them in the process.
- He noted that the difference between the Spring Grove Project and the Mpofana Irrigation Project is that the MIP has benefits for the community. Offsets for the MIP will lead to direct benefits for the community, thereby upgrading community of the Mpofana catchment.

- It is not certain whether the Hlatikulu Dam will be built, or built at a smaller scale than initially anticipated. Using the Mearns Dam carefully could result in not needing the Hlatikulu Dam at all. Synergies have been identified between the MIP and this project. Jaap Kroon (DWS) commented on the use of Mearns. He explained the philosophy behind the Mearns Dam is that it is the only way water can be harvested from the Little Mooi. The idea is to harvest 3.2 m^3/s of water from the Little Mooi and 1.2 m^3/s from Spring Grove Dam so that the water can go to Umgeni River. However the transfer scheme is not fully operational. Once the transfer is operational the *modus operandi* may change – but the intention was to still use Mearns to source water from the Little Mooi River.

DC thanked Graham for the additional understanding and confirmed that they would report on the MIP requirements in the SGD offset planning document.

Mr Jaap Kroon (DWS) and Nikara Mahedeo and Gareth Boothway (WWF), and Peter Greene (Nottingham Road Landowners Association) excused themselves from the meeting at which point the meeting adjourned for tea.

3. OVERVIEW OF STEWARDSHIP OPTIONS

Following tea, DC invited Greg Martindale, manager of the KZN Stewardship Unit (a unit of Ezemvelo KZN Wildlife) to provide further insights into the different options available to secure the offset sites and meet the key principle of offsets – that they are secured (protected) in the long term.

The Stewardship Programme is a partnership between EKZNW and various conservation NGOs. There is also a strong relationship with the KZN department of agriculture.

Greg presented the approach to Stewardship, explaining that it was viewed as a partnership that aimed to recognize and support landowners who enter into a stewardship agreement. He explained that in the case of all four options presented below, title remains with the landowner.

i. **Nature Reserve:** The aim on properties proclaimed under this option is that the land is managed for the primary purpose of Biodiversity conservation. It affords the highest level of protection, but also the highest levels of benefits in that it provides for tax and rates rebates, which are not available under other options.
ii. **Protected Environment:** Primarily used to create a buffer around a National Park or Nature Reserve. This option has also been applied in to SAPPI and Mondi properties where there are pockets of areas within the timber plantations that are protected. Here there is a Balance between production and biodiversity conservation. Nature Reserves and Protected Environment are stewardships primarily around increasing the amount of protected area. In terms of a Protected Environment, the whole property is proclaimed and with a Nature Reserve, certain survey areas can be declared a Nature Reserve, not necessarily the whole property. Dave confirmed that costs had been included for survey in the acse of the offsets in case a landowner entering into a PE wanted to survey specific portions of a property out.
iii. **Biodiversity management agreement:** Contract between Ezemvelo KZN Wildlife Board and the landowner focused on appropriate management of natural areas within a production landscape.
iv. **Conservation Area:** This is a voluntary level of stewardship, not legally binding. The landowner retains ownership of the land. The aim is not to tell the landowner what to do with his land.

Greg responded to the following questions.

- Matthew Haden: Asked what the minimum requirements for a nature reserve are. Greg responded by explaining that there is a fairly rigorous process for evaluation of the sites to determine if the property qualifies to be a nature reserve. If it does not qualify for a nature reserve the landowner can opt for a lower level of stewardship. It is not difficult or a lengthy process for the landowner to de-proclaim a nature reserve. The landowner can do so by withdrawing from the contract with the MEC.

- Duncan Hay: Asked what the value was in establishing a conservancy? Greg explaining that a conservancy does not have any legal standing, which could be problematic if one of the landowners wants to pull out of the agreement. It is however a good place to start and shows that the landowners have a good intention towards conservation. For consolidated areas involving several landowners there can be an overarching management plan, and the management plan may have an appendix that addresses each landowner within that overarching management plan. This way it is easier for the designated management authority to manage. Such a plan is normally developed in the case of a Protected Environment.

Greg further explained that the emphasis is on trying to create a consolidated area. When a property or area is identified for stewardship, a management authority is required – such as the Hlatikulu Collaborative Management Association (HCMA).

There is usually a lot of scepticism when initially engaging with the landowners. The landowners must see the benefits to join, in terms of them having ecologists assigned to them to assist them with conservation. There is a growing recognition of ecosystem services, and how the farmers or users can be compensated for conserving those services. The focus is on trying to retain natural habitat. There are a lot of options for compromise between farming and conservation.

- Mark Bassel: Asked which is more onerous on the landowner, the Protected Environment or the Biodiversity Management Agreement. Greg explained that with a Biodiversity Management Agreement, the farmer can continue developing in his farm as long as core biodiversity is maintained. A Protected Environment looks at biodiversity conservation as a priority and it is gazetted and so it has legal standing.

Greg went on to explain that:

- The purpose for the stewardship agreement is most important in determining which level to go for, and that this decision is a negotiated with the landowner based on what the landowner wants to achieve with his land and what KZN Wildlife wants to conserve.
- There are three documents, of which Greg explained the management plan to be the most important because it sets out the obligations of both KZN Wildlife and the landowner. Greg also indicated that EKZNW's obligations are often more onerous than the landowners.
- If a landowner's land qualifies for a higher level stewardship such as a nature reserve, they can opt for a lower level stewardship, and if the agreement is going well, the landowner can change to the higher level stewardship agreement.
- If the Biodiversity Management Agreement is 5 years, the land owner can extend it to 30 years, it does not have to be a Protected Environment just because it is a long-term agreement.

- If an area or a landowner's property is declared a Nature Reserve, it will affect the neighbours in terms of the EIA regulations in the following way:
    - Any neighbour located within 5kms of a nature reserve would have to undertake an EIA for the transformation of land.
    - This threshold is 10kms in the case of the World Heritage Site.
- DC asked whether the assistance afforded in terms of clearing aliens was ongoing? Greg explained that it was and that landowners can be offered.
- Greg emphasised that the stewardship costs are a minimal part of the overall costs of the Offsets, i.e. rehabilitation and alien clearing/control are far higher.

Susie Brownlie suggested that Dave discuss the question of Rehabilitation vs Protection. Dave explained that:

- It was important to regain degraded systems to 'get some of what had been lost back', but
- That it is not possible to return degraded systems to a 100% of their natural state – which is what many species require.
- So while rehabilitation is important, 'Averting Loss' of pristine/natural habitat is as/if not more important i.e. protection and ongoing good management does not have the same risk of failure that rehabilitation does.
- The importance of 'averting loss' had become evident during the landowner consultation process during which the pressure on landowners (increased costs, uncertainty regarding land tenure, etc) was clearly making it increasingly difficult for landowners to farm extensively (beef) and not transform to more intensive production (dairy, crops) which have also have a greater impact on natural systems.

Graham Moor: asked "Whether it was fair to constrain undeveloped areas to pay for areas that are already developed?" Dave responded that the view taken was rather, how the landowner might benefit from the stewardship arrangements. In this regard, the team had tried to identify a range of ways in which landowners might benefit. This has extended beyond the normal benefits of assistant with alien control to including costs for dealing with poaching. Dave further explained that, in recognition of the limited or direct 'financial' benefits available at this point in South Africa (in the USA, easements are available where the landowner is paid to retain their land in natural state) , the study team had tried to ensure that any areas on property with potential arable value were excluded from the mapping. He further reported that there was a move to actually compensate landowners via systems such as payment for ecosystem services (PES). Greg Martindale supported this by providing an example of the work WWF are doing with large companies paying for alien clearing to offset their water footprint, and the investigation of a PES scheme by EKZNW. Greg added that there was a pilot initiative that was seeking to establish carbon credits in grasslands.

4. WAY FORWARD

To finalise the project, per property reports will be circulated to landowners to comment on before they are circulated to the broader public.

- Mark Bassel: asked if he could have a one-on-one meeting with Greg so that he can get more information on the Stewardship options. He will extend an invitation to any other HCMA landowners and will compile a list of questions that they can address at a broader meeting of landowners. The need for one-on–one discussions between landowners and the

stewardship unit was acknowledged because of the unique circumstances of each landowner.

Dave Cox reflected on the issue of financing for the offsets, and that:
There are various initiatives focussed on investing in ecological infrastructure.
So if the money is not forthcoming from DWS/government, other sources of funding may be accessed to take the planning further and implement it i.e. the implementation may overtake the Spring Grove Offset requirements. This would place DWS in a position of non-compliance as they may be required to start identifying sites from scratch. Tanya Smith strengthened this point by indicating that they were making application for funds to invest in the area. She asked if the final report will include all the information, so that other agencies so that stakeholders could use the information. Dave confirmed that the report would be a public document as it was compiled in terms of an EIA process.

A final question was posed – was whether stakeholders could please be kept updated regarding a decision by DWS and DEA as to how the offsets would be funded. Dave assured everyone that he would keep stakeholders updated.

Dave thanked everyone for attending and closed the meeting at 1 pm.

MOOI-MGENI TRANSFER SCHEME PHASE TWO (MMTS-2)

SPRING GROVE DAM OFFSETS – PLANNING PROCESS

Stakeholders Meeting

Friday 12 September 2014, Loxley House - Nottingham Road

Institute of Natural Resources

TCTA A new word for water

ATTENDANCE REGISTER

NAME	ORGANISATION	EMAIL	TELEPHONE	SIGNATURE
Susie Brownlie	dSA	susie.brownlie@deltabus.co.za	021 6744 265	
Greg Mantindale	EKZNW	greg.mantindale@kznwildlife.com	082 806 4412	
GRAHAM ARMSTRONG	MPOFANA IRRIG PROJ/MMAA	gcarmstrong@bundunet.com	0828545746	
Tanya Smith	Endangered Wildlife Trust	tanyas@ewt.org.za	082 394 7476	
Pearl Gola	INR	pgola@inr.org.za	033 3460796	
Mbali Kubheka	SANBI – Working for Wetlands	m.goge@sanbi.org.za	072 819 4895	
Mangoba Zungu	Institute of Natural Resources	mzungu@inr.org.za	0739793489	
GARETH BOOTHWAY	WWF - SA (CONSULTANT)	gareth.boothway@gmail.com	0762396267	
NIKARA MAHADEO	WWF-SA	nmahadeo@wwf.org.za	033 343 1464 073 160 2745	

NAME	ORGANISATION	EMAIL	TELEPHONE	SIGNATURE
DAVID WORRALL	Land Owner Mhlahlala	dworrall@bundunet.com	0828857833	
MARK BASEL	LAND OWNER + HCMA CHAIRMAN	MARK@HIKKAR.CO.ZA	0832538788	
Jaap Kroon	DWS	kroonj@dwa.gov.za	012 336 8187	
Matthew Haden	Tierhoek Trout & Nature Estate. (General Manager)	tierhoek@bundunet.com	0761400745 033 263 2639	
Graham Moor	Land owner - Hlatikulu	gmoor@vodamail.co.za	0726356126	
Peter Greene	NRLA	greene@futurenet.co.za	082 556 3674	
Ian Felton	DEDTEA.	ian.felton@kzndae.gov.za	0824619101	
Duncan Hay	COORDINATOR UEIP (UKZN)	hayd@ukzn.ac.za	0836301749	