PO Box 494,
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8000
Email: Claire.blanche@aurecongroup.com

30 November 2012

Dear Sir / Madam,

WORKING FOR WETLANDS REHABILITATION PROJECT

DEA REFERENCE NUMBERS:
MPUMALANGA Province Wetlands rehabilitation projects: 14/12/16/3/3/1/760
LIMPOPO Province Wetlands rehabilitation projects: 14/12/16/3/3/1/761
KZN Province Wetlands rehabilitation projects: 14/12/16/3/3/1/762
GAUTENG Province Wetlands rehabilitation projects: 14/12/16/3/3/1/759

NEAS REFERENCE NUMBERS:
MPUMALANGA Province Wetlands rehabilitation projects: DEA/EIA/0001565/2012
LIMPOPO Province Wetlands rehabilitation projects: DEA/EIA/0001566/2012
KZN Province Wetlands rehabilitation projects: DEA/EIA/0001567/2012
GAUTENG Province Wetlands rehabilitation projects: DEA/EIA/0001564/2012

40 DAY COMMENT PERIOD ON DRAFT REPORTS

This letter is available in any of the official languages on written request.

BACKGROUND INFORMATION

Aurecon South Africa (Pty) Ltd was appointed by the South African National Biodiversity Institute (SANBI) to undertake the various project activities and associated reporting required for the various phases of the wetland rehabilitation planning cycle. These include both Phase 1 & 2 Reports, the Wetland Rehabilitation Plans as well as the Basic Assessment Reports required for each project area within the nine provinces.

As part of the planning process, the Phase 1 reports prioritised the wetlands to be visited for Phase 2. The field work was subsequently undertaken by the project team (consisting of the Environmental Practitioner, the Engineer, the Wetland ecologist as well as the Working for Wetland's Provincial Coordinator) whereby the selected wetland sites were visited and the rehabilitation measures for each of the wetland sites agreed. This information has been included in the Phase 2 reporting in the form of a Wetland Rehabilitation plan (written for each project) and the draft Basic Assessment Report (BAR) which has been compiled for each of the affected Provinces, for the upcoming planning cycle (2013/2014).

LEGAL PROCESSES UNDER THE NATIONAL WATER ACT (NO. 36 OF 1998) AND THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NO. 107 OF 1998)

In terms of Section 39 of the National Water Act (NWA), a General authorisation (GA) is granted for certain activities that are listed under the NWA (Act No. 36 of 1998) that usually require a Water Use

Licence. Government Notice (G.N.) 1198 of 18 December 2009 introduced a GA for activities undertaken for the rehabilitation of wetlands for conservation purposes. Applications for a GA will be submitted to the competent authority, *viz*. the Department of Water Affairs simultaneously with the other authorisations required for this work.

EIA listed activities

The programme is listed in terms of the National Environmental Management Act (NEMA) (Act No. 107 of 1998) and therefore requires authorisation from the competent authority, viz. the Department of Environmental Affairs (DEA) via the Environmental Impact Assessment (EIA) process (GN R543 of 18 June 2010). The proposed rehabilitation project triggers the following listed activities:

- 11 and 18 of Listing Notice 1 in Government Notice R. 544, 2010; and
- 13 and 16 of Listing Notice 3 in Government Notice R. 546, 2010.

Accordingly, the EIA application form notes all triggered 2010 listed activities.

EXEMPTION FROM INDEPENDENCE

Aurecon applied for exemption from independence as its engineers are undertaking the design work for the interventions. DEA is currently considering the request.

PUBLIC PARTICIPATION PROCESS AND WAY FORWARD

This letter, a national advertisement in the *Sunday Times* and *Die Rapport* on 1 and 2 December 2012; along with site notices (in at least two official languages), forms the official notification of the Public Participation process (PPP) for the 2013/2014 planning cycle. The draft rehabilitation plans (written for each project) and the draft Basic Assessment Report (BAR) (compiled for each Province) has been made available for public comment.

Please find enclosed a copy of the Summary document which provides an overview of the Working for Wetlands programme, as well as highlights the key findings for each project located within the affected Province. A response form has also been provided whereby Interested and Affected Parties (I&APs) can provide written comment on the proposed wetland rehabilitation measures and associated projects.

The Draft BAR as well as the Draft Rehabilitation plans for the proposed wetland rehabilitation activities for each affected Province (four in total) have been made available for a 40 day review period from **Wednesday, 5 December 2012**. The SANBI PC and implementer have hard copies of the Phase 2 Reporting for their Province. Should you wish to review the report, please contact Franci Gresse to have this arranged. The draft Reports have also been made available for download from the Aurecon website (http://www.aurecongroup.com - - click on the "**South Africa**", "***Public Participation"***, "***Environmental Projects***" and finally the "***SANBI Working for Wetlands***" project). I&APs have until **4 February 2013** to submit comments on the draft Phase 2 reports. Electronic copies of the Phase 2 reporting will also made available on written request.

After the 40 day public comment period, the draft BAR as well as the draft Rehabilitation Plans will be updated via incorporating I&AP comments received on the reports. The updated, final Reports will then be submitted to DEA for their decision. Registered I&APs will simultaneously be afforded a further 21 days to provide comment on the Final BAR. Further comments received will be collated

by Aurecon and submitted to DEA. Once DEA have made their decision on the proposed project, all registered I&APs on the project database will be notified of the outcome of the decision within twelve (12) calendar days of the date of the decision. Should anyone (a member of public, registered I&AP or the Applicant) wish to appeal DEA's decision, a Notice of Intention to Appeal must be lodged with the Minister within twenty (20) calendar days of the date of the decision.

If no appeals are received and the landowner(s) have signed (i.e. approved) the proposed rehabilitation work detailed in the Final Rehabilitation plan, the interventions will be constructed from April 2013 until March 2014.

Should you wish to raise any issues, concerns and/or suggestions on the draft Phase 2 reports, and/or register as an I&AP, please contact Franci Gresse at Tel: (021) 526 6022; Fax: (021) 526 9500; Mail: PO Box 494, Cape Town, 8000; or Email: franci.gresse@aurecongrou.com or Claire.Blanche@aurecongroup.com; by **4 FEBRUARY 2013**.

Should you have any queries, please do not hesitate to contact us.

Yours sincerely
AURECON

CLAIRE BLANCHÉ *(Pr. Sci. Nat).*
Practitioner: Environmental & Advisory Services

Annexure A – Executive Summary

WORKING FOR WETLANDS REHABILITATION PROJECT IN THE MPUMALANGA PROVINCE: DRAFT BASIC ASSESSMENT REPORT

Summary Document

The South African National Biodiversity Institute (SANBI) appointed Aurecon South Africa (Pty) Ltd to undertake the project activities and associated reporting required for the various phases of the rehabilitation planning cycle. These include Phase 1 Reports, the wetland rehabilitation plans as well as the BARs required for each project area within four provinces. Refer to Figure 1 below that graphically depicts the entire 24 month planning and implementation process which begins in Phase 1 and ends in Phase 3. Phase 1 and 2 are undertaken in the first twelve months and Phase 3 in the second twelve months.

Objectives of the Working for Wetlands Programme

Working for Wetlands (WfWetlands) is a government funded programme that started in 2001 with a R20 million budget that was implemented across 14 projects. The programme is managed by SANBI and is currently implemented across 35 projects countrywide with a budget of R83 million. Being part of the Expanded Public Works Programme (EPWP), more than 1 500 local people are recruited to work in projects on limited term contracts. Typical activities undertaken within the projects include:

- constructing structures (gabions, berms, weirs) in wetlands;
- removing invasive alien plants from the wetland and immediate catchment;
- plugging artificial drainage channels in the wetland;
- raising awareness of wetlands among workers, landowners and the general public;
- providing adult basic education and training, and technical skills; and
- developing management plans for the rehabilitated wetlands.

The two main objectives of the programme are **wetland conservation** in South Africa and **poverty reduction** through **job creation** and **skills development** amongst **vulnerable** and **marginalised** groups.

Environmental legislation

EIA listed activities

The proposed project(s) triggers listed activities 11 and 18 of Regulation 544 and activities 13 and 16 or Regulation 546 of 18 June 2010of the National Environmental Management Act (No. 107 of 1998) (NEMA), as amended.

A Basic Assessment (BA) process must therefore be undertaken before the authorities, in this instance the national Department of Environmental Affairs (DEA), can make a decision

on whether the proposed activities and ultimately the proposed projects should be authorised.

Exemption from independence

The Public Participation process (PPP) was formally initiated with notifications to Interested and Affected Parties (I&APs) of the availability of this Draft BAR for comment on 5 December 2012. Adverts were also placed in *Die Burger* and *Sunday Times* on 1 and 2 December 2012, respectively. Aurecon applied for exemption from independence as its engineers are undertaking the design work for the interventions.

As part of the BA process, environmental (biophysical and socio-economic) impacts are identified and assessed to ascertain the consequences of the project on the environment and the people that live in it. Based on the findings from the impact assessment, specific mitigation measures are recommended to reduce the significance of negative impacts and enhance positive impacts (those that improve the integrity and health of an ecosystem or human health and well-being). The process also gives I&APs an opportunity to comment and to be kept informed about decisions that may impact them or the environment.

As planning continues over a 24 month period, prioritisation and planning (in terms of identifying which wetlands will be rehabilitated and how) is undertaken within the first 12 months, while the actual implementation (via the construction of the interventions) is undertaken within the second 12 months. Interventions may be postponed even if they have received environmental authorisation due to issues such as lack of budget, logistical problems in the area, and / or dramatic changes to the receiving environment (flooding etc.). In other words these structures would be 'banked' for implementation as/ when suitable or appropriate.

In terms of Section 39 of the National Water Act (No. 36 of 1998), a General Authorisation (GA) has been granted for certain activities that are listed under the NWA that usually require a Water Use Licence. Such a GA exists for wetland rehabilitation as long as the activities are for **conservation purposes**. As some of the rehabilitation activities entail '*impeding or diverting the flow of water in a watercourse*' and / or '*altering the bed, banks, course or characteristics of a watercourse,* a number of GAs have been registered with the Department of Water Affairs (DWA) for structures that would ordinarily require a Water Use Licence. For each planning cycle the proposed rehabilitation work will be submitted to DWA, the requisite approval sought and project monitoring reported as required.

Phase 1, 2, and 3 explained

The purpose of **Phase 1** and the associated reporting is to identify within a province:

1. which are the priority catchments and associated wetlands / sites within which rehabilitation work needs to be undertaken; and to
2. identify key stakeholders who would review and comment on the detailed planning (Phase 2) reports.

As part of Phase 1, the Engineers peg / set-out the previous year's interventions that had been authorised by DEA. Refer to Figure 1 below that graphically depicts the entire 24 month planning process which begins in Phase 1 and ends in Phase 3.

Wetland ecologist working in the Mpumalanga wetlands.

Regular monitoring and evaluation (M&E) of the interventions is undertaken to establish the effectiveness of the structure in rehabilitating the identified wetland. This baseline data is also included in the Phase 2 reporting. BARs are compiled as separate documents (one for each province), while the Rehabilitation Plans are compiled for each project and are attached as an Appendix to the provincial BAR and submitted to DEA for their environmental authorisation decision. Summaries of the wetland prioritisation, problems and rehabilitation objectives are included in the rehabilitation plans.

As part of Phase 2, a maintenance inventory is undertaken by the PC, in consultation with the Engineer of any existing interventions that are damaged and/ or failing and thus requires maintenance.

Upon approval of the wetland rehabilitation plan by DEA, DWA, and the directly affected landowners, the work detailed for the project will be implemented within a year with on-going monitoring being undertaken thereafter. This occurs within **Phase 3** of the project cycle. The Rehabilitation Plans are considered to be the primary working document for the implementation of the project via the construction / undertaking of interventions[2] listed in the Plan. Seventeen implementing agents (IAs) are currently employed and are responsible for employing contractors and their teams (workers) to construct the interventions detailed in each of the Rehabilitation plans.

[2] This could include soft options such as alien clearing, eco-logs, gabion structures as well as hard structures for example weirs

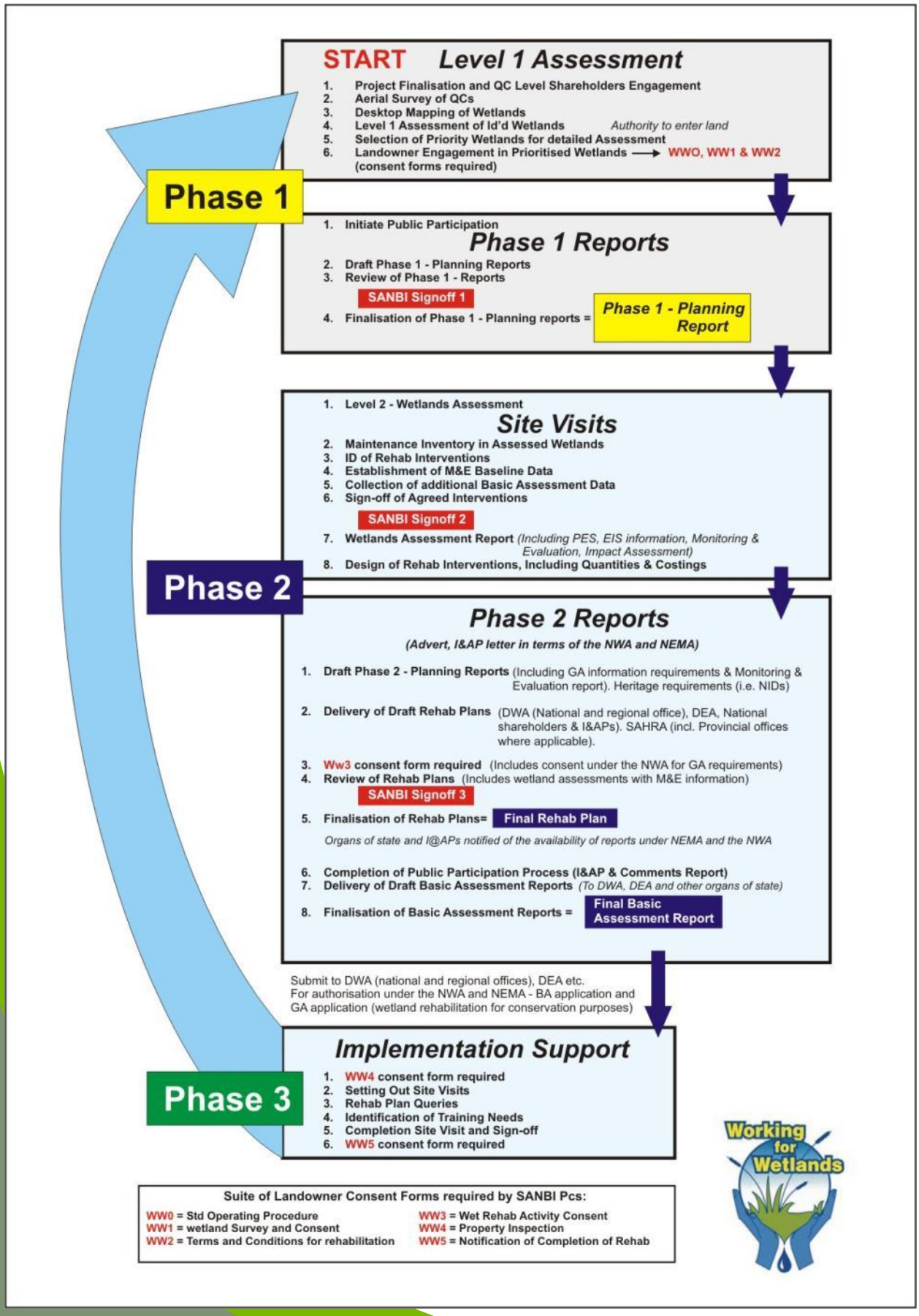

Figure 1: The Working for Wetlands planning process (Phase 1 to Phase 3)


A buttress weir being built and a site being prepared by the Implementing agents

Wetland Assessments

Time and resources required for detailed assessments of the wetlands is limited, and thus using the WET-Tools methodology, a rapid procedure was adopted to assist the project team in systematically carrying out the assessments under constraints. The assessments entailed the following steps:

1. Assessment of the impacts and threats within each wetland system via establishing the current 'health' of the wetland;
2. Establishment of rehabilitation objectives and the selection of appropriate interventions to achieve the identified rehabilitation objectives; and finally; and
3. Assessment of the likely contribution of rehabilitation interventions to the wetland health and ecosystem delivery via determining the spatial area likely to be affected by the proposed intervention(s) and assessing the benefits to the health and / or eco-system services of the specific wetland i.e. the difference between the current health and the projected health of the wetland with and without the intervention(s).

Screening process – Alternative

While on-site during Phase 2, the project team identify and locate the interventions that would meet the rehabilitation objectives as well as the programme's overall objectives (wetland conservation in South Africa and poverty reduction through job creation). The project team discuss and evaluate the potential intervention options; and factoring in environmental, social, and economic considerations into their discussions, they agree on the most appropriate intervention that would meet the rehabilitation objectives for the wetland.

Increased labour requirement for the Working for Wetlands Programme

As a result of changes to the donor fund requirements, an increase in the labour percentage requirement for the WfWetlands programme has been experienced since 2010. The project team were thus required to investigate more labour intensive intervention options for wetland rehabilitation. These included soft engineering options such as berms, eco-logs, as well as alien clearing.

This resulted in the project team having to investigate other wetland areas in order to meet the requirements. Consequently, some of the wetlands prioritised during 2012 in the Phase 1 reporting would not be rehabilitated during this planning cycle (due to the large amount of hard engineering required which was less labour intensive), while new additional wetlands were identified during the Phase 2 site visits as their rehabilitation requirements contributed towards meeting the increased labour component for the programme.

Rehabilitation work within floodplain systems

Based on lessons learnt and project team discussions had during the National Prioritisation workshop in November 2010 SANBI took an in-principle decision regarding work within floodplain systems.

Recognising the ecosystem services provided by floodplain wetlands and the extent to which they have been transformed, SANBI do not intend to stop undertaking rehabilitation work in floodplains entirely. Instead, SANBI propose to adopt an approach to the rehabilitation of floodplain areas that takes into account the following guiding principles:

1. As a general rule, avoid constructing hard interventions within an active floodplain channel; and rather
2. explore rehabilitation opportunities on the floodplain surface using smaller (possibly more) softer engineering options outside of the main channel.

When rehabilitation within a floodplain setting is being contemplated, it will be necessary to allocate additional planning resources, including the necessary specialist expertise towards ensuring an adequate understanding of the system and appropriate design of interventions.

Intervention design

After appropriate interventions have been decided upon by the project team, GPS coordinates and digital photographs are taken for record purposes. Appropriate dimensions of the locations are recorded in order to design and calculate quantities for the interventions. At the end of the site visit a location layout of the agreed interventions and rehabilitation objectives is agreed upon by the project team. Based on certain criteria and data measurements (water volumes, flow rates, and soil types); the availability of materials such as rock; labour intensive targets; maintenance requirements etc., the interventions are then

designed. Bills of quantity are calculated for the designs and cost estimates made. Maintenance requirements for existing interventions in the assessed wetlands are similarly detailed and costs calculated. The engineer also reviews and, if necessary, adjusts any previously planned interventions that are included into the historical rehabilitation plans.

Maintenance and amendments to authorized interventions

Based on discussions with DEA, it was agreed that variations and deviations (in design or location) to the already authorised intervention(s) could be made via written notification to DEA which would include a motivation, supporting information, and the proposed changes clearly detailed. The DEA have formalised this approach by including a condition in the WfWetlands EA whereby any changes to, or deviations from, the project description require written approval from DEA. The proposed changes (type, design, location), motivation, as well as other project-related information (redesigns, site photographs etc.) are provided to DEA. Anticipated reasons for the changes could include modifications to the aquatic system as a result of unforeseen circumstances such as flooding, fires etc., savings to the project budget, improved rehabilitation and/ or enhanced protection from erosion etc.

As per the definition of maintenance[3], modifications would be made to existing (built) interventions as long as the changes occur within the same footprint, location etc. DEA would be informed of the changes in writing.

For a list of interventions requiring redesign, maintenance and or new structures, please refer to the summary in **Table 5** below.

Maintenance The replacement, repair or the reconstruction of an existing structure within the same footprint, in the same location, having the same capacity and performing the same function as the previous structure ('like for like').

Monitoring and Evaluation

During the Phase 2 site visits, baseline monitoring is carried out prior to the rehabilitation of the wetland to provide comparable data for monitoring at a later stage (once the intervention(s) have been constructed). Monitoring and Evaluation (M&E) is thus a vital component of the project as it allows for the evaluation of the performance of the interventions in successfully rehabilitating the affected wetland. Baseline M&E data (fixed point photography, GPS co-ordinates, water quality measurements etc.) as well as information for the BAR is collected during the Phase 2 site visits.

[3] **Maintenance:** The replacement, repair or the reconstruction of an existing structure within the same footprint, in the same location, having the same capacity and performing the same function as the previous structure ('like for like').

Based on WET-Rehab Evaluate tool, protocols for data collection for monitoring purposes have been developed, which includes compulsory collection of certain data[4], while other data collection for monitoring would be considered to be optional[5] depending on the importance of the wetland, costs of rehabilitation undertaken etc.

Upon completion of the interventions within a wetland, the Engineer would revisit the site to sign-off on the interventions based on what was detailed in the rehabilitation plan; while the Wetland ecologist would assess the effectiveness of the intervention(s) in achieving the specified objectives and contributing towards the rehabilitation strategy. Appropriate corrective action would be specified if either of the project team members were unsatisfied with the intervention's effectiveness in terms of achieving the objectives and long-term stability. Ideally an annual M&E report would be compiled by the project team; however, this process is still being established and would require additional funding.

Future planning for the project areas

Table 2: Summary of possible budget allocations per project for the next 5 years in Mpumalanga

	2009-10	New project name	2010-11	2011-12	2012-13	2013-14	Tot for 5 years per Province
Draaikraal	R 920 000	Steelpoort project	R 1 674 540	R 1 758 267	R 1 846 180	R 1 938 490	R 8 709 877
Verloren Valei	R 572 400						-
Steenkampsberg	R 1 080 000	Inkomati Project	R 1 674 540	R 1 758 267	R 1 846 180	R 1 938 490	R 8 297 477
Save the Sand	R 1 132 000	Lowveld Project	R 1 674 540	R 1 758 267	R 1 846 180	R 1 938 490	R 9 429 477
Sterkspruit	R 1 080 000						-
Upper Usutu	R 682 014	Highveld Project	R 1 432 500	R 1 504 125	R 1 579 331	R 1 658 300	R 7 538 284
Nooitgedacht	R 682 014						-
Wakkerstroom	R 1 364 029	Wakkerstroom Project	R 1 432 500	R 1 504 125	R1 633 725	R 1 658 300	R 7 538 285
Total for year	**R 7 512 458**		**R 7 888 620**	**R 8 283 051**	**R 8 697 202**	**R 9 132 070**	**R 41 513 400**

Key project objectives include:

- Deactivation of head-cuts,
- restoration of hydrological integrity; e.g. rising the general water table or redistribution of water across wetland area;
- Recreation of wetland habitat;
- Biodiversity enhancement; and
- Job creation and social upliftment.

[4] Maintenance inventory, rehabilitation effectiveness, fixed point photography/ site photographs, and wetland assessments.
[5] Sediment and erosion control, hydrology, vegetation and water quality

Summary of the Final BAR findings

Wetlands that were prioritised during Phase 1 and visited during Phase 2 are located within the following quaternary catchments- refer to **Figure 2** below.

Phase 2 site visits were undertaken for the following projects:

- Goedgevonden (Wakkerstroom): 14 August 2012
- Paardeplaats (Wakkerstroom): 15 August 2012

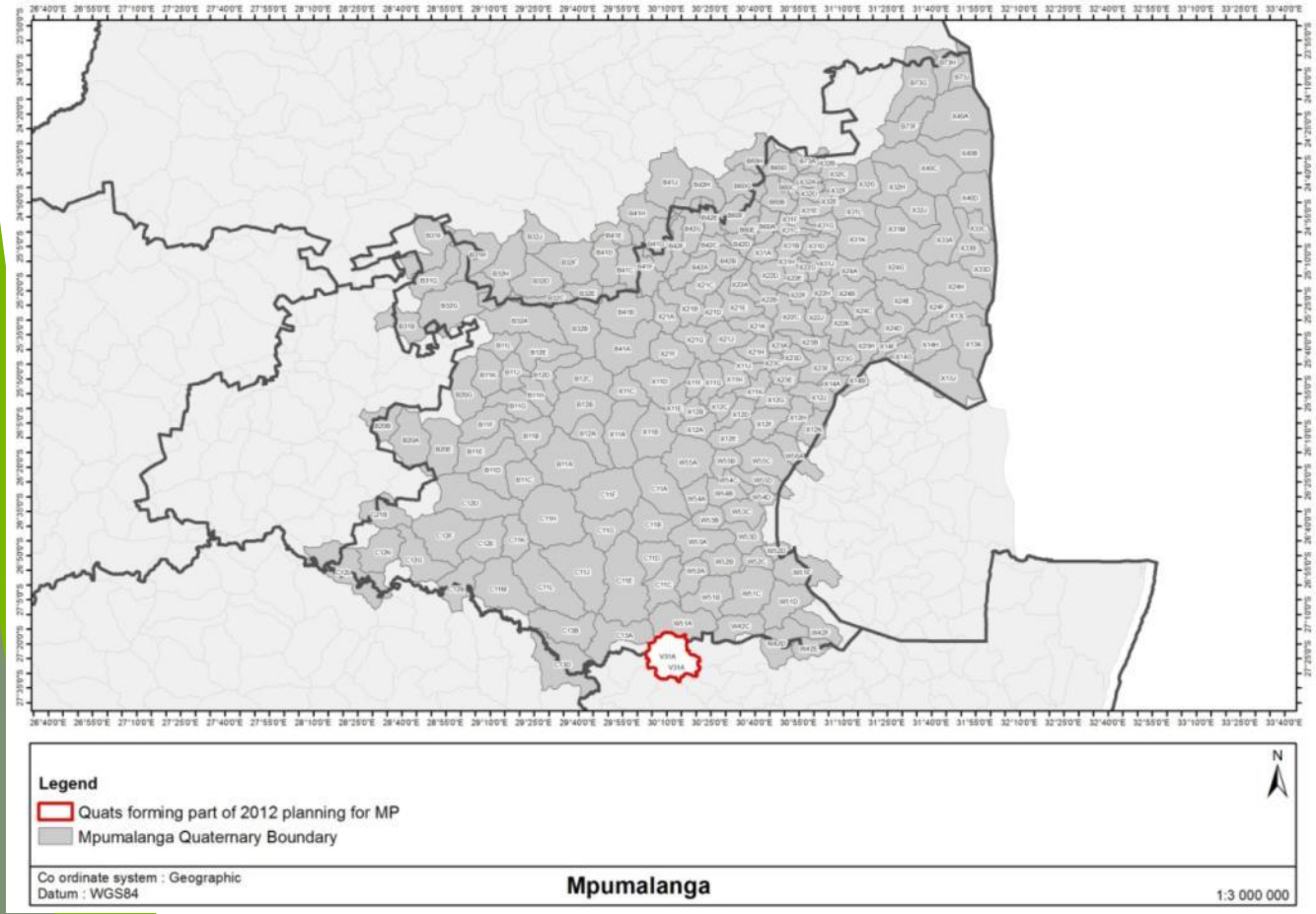

Figure 2: Quaternary catchments that were visited during the Phase 2 site visits for the Mpumalanga Province

Within the Mpumalanga Province, work for the 2012/2013 planning cycle will include the following:

WAKKERSTROOM – W42C

Goedgevonden:
The Wakkerstroom wetland rehabilitation project was historically located in the V31A and W42C quaternary catchments near the town of Wakkerstroom and Luneburg in the Mpumalanga province. After work in the Wakkerstroom wetlands was completed, the focus shifted to the Goedgevonden wetland (W42C) near Luneburg. The aim of the wetland

rehabilitation has been the stabilisation of active erosion and the deactivation of drainage canals and furrows resulting in the desiccation of the identified wetland systems. In 2011 work was also extended on the farm Goedgevonden to include alien clearing, follow up spraying of alien vegetation and the re-seeding of areas previously cleared by the landowner

The 2012/2013 planning cycle addresses the last interventions needed in the Goedgevonden wetland and future planning cycles will identify new wetlands and properties in the catchment area.

Paardeplaats:
Work on the farm Paardeplaats commenced in 2011 and included alien clearing, follow up spraying of alien vegetation and the re-seeding of areas previously cleared by the landowner.

The 2012/2013 planning cycle extended work on the farm to include the rehabilitation and stabilisation of an eroded dirt road, the decommissioning of a highly degraded dirt road, stabilisation of headcut erosion, rehabilitation of gullies and rehabilitation of a hillside seep area.

The project as a whole has further been aligned with the extent of the National Grasslands Biodiversity Programme's (NGBP) demonstration area in the Wakkerstroom/Luneburg area. Both Goedgevonden and Paardeplaats fall within the newly proclaimed Kwa Mandlangampisi Protected Environment. The project area does extend into KwaZulu-Natal, but the focus of the wetland rehabilitation is the wetlands and tributaries within the Mpumalanga province.

The Wakkerstroom project area in the W42C catchment occurs within the upper reaches of the KwaNtombe River, which is considered to be an important water resource within the region. A range of wetland types, characteristic of the region, are represented in the area, including permanent and seasonal marshes, peatlands and seepage areas. The wetlands within the area are considered to be important from a water quantity and quality perspective, especially due to their position in the upper reaches of the river.

A review of the Mpumalanga Biodiversity Conservation Plan (MBCP) highlights that the majority of the Wakkerstroom project area is considered as 'Irreplaceable' in terms of its contribution towards aquatic biodiversity and terrestrial biodiversity. The rehabilitation of the wetlands within the catchment is likely to contribute towards the maintenance of the aquatic and terrestrial biodiversity of the region. The Wakkerstroom wetland is also considered to be regionally important in terms of the maintenance of biological diversity, with the reserve supporting a number of Red Data species, mostly bird species**.**

Figure 3: Goedgevonden wetland (left-hand image) and Paardeplaats seep area (right-hand image)

The rehabilitation of the Goedgevonden wetland would involve the following interventions *inter alia*:

- Gabion and concrete weir
- Gabion diversion walls
- Earthen diversion berms
- Concrete diversion berm
- Reno Matrass
- Earthworks

Rehabilitation activities on the farm Paardeplaats would involve the following interventions *inter alia*:

- Concrete road strips
- Gabion diversion wall
- Earthen diversion berms
- Rock packs
- Surface cross drains

The number, type, scale and location of each of these interventions would vary according to the nature and magnitude of the problem and the state of the receiving environment.

The list of interventions which form part of this Basic Assessment process is summarised in **Table 3** below. The engineering designs for each of these interventions are included in the Final Wakkerstroom Rehabilitation Plan which forms part of the BAR.

Summary of the potential impacts identified

Table 3:Summary of impacts

***Construction Phase*: Description of Impact**	***Significance of Impact***		
	Preferred Alternative		
	No Mitigation	***With mitigation***	***No Go***
Job creation	Medium (+)	High (+)	Medium (-)
Increased awareness of wetland importance	Medium (+)	High (+)	Medium (-)
Fire risk	High (-)	Low (-)	Neutral
Nuisance impacts	Low (-)	Very Low (-)	Neutral
Heritage impacts	Very Low (-)	Neutral	Neutral
Worker safety	Medium (-)	Low (-)	Neutral
Flora & Fauna	Medium (-)	Low (-)	Medium (-)
Aquatic eco-system impacts	Medium (-)	Low (-)	Medium (-)
Sourcing borrow material	Medium (-)	Low (-)	Neutral
Work within conservation areas	Medium (-)	Low (-)	Neutral
Disturbance of wetland soil profile	Medium (-)	Low (-)	Neutral
***Operational Phase*: Description of Impact**			
Changes in land use	Low (+)	Medium (+)	
	Medium (-)	Low (-)	Low (-)
Reduced water storage and treatment costs	Medium (+)	Medium (+)	Low (-)
Employment	Medium (+)	Medium (+)	Medium (-)
Ecosystem functioning	Medium (+)	Medium (+)	High (-)
Flora and Fauna	Medium (+)	Medium (+)	Medium (-)
Reduced soil erosion	Medium (+)	Medium (+)	Medium (-)
Public safety	Medium (-)	Low (-)	Neutral

Key mitigation measures recommended

A summary of the key mitigation measures recommended to reduce the significance of the potential negative impacts and enhance potential positive impacts is provided in Table 3 below.

Table 4: Key mitigation measures recommended for potential operational phase impacts

Construction phase impacts
Impacts on aquatic ecosystems
Implement and enforce the CEMP
Impacts on flora & fauna
Consult the Crane Working Group with regards to identified wattled crane breeding sites and crowned crane foraging areas.
Implement and enforce the CEMP
Impacts on heritage resources
Contact the provincial heritage resource agency should any artefact be found or cultural use of a wetland be noted
Nuisance impacts
Workers to be given environmental awareness "toolbox talks"
Implement and enforce the CEMP
Liaise with landowner
Socio-economic impacts
Draw labour from the local community
Workers to be aware of fire risks and contingency plans
Operational phase impacts
Impact on flora and fauna
Consult with the Crane Working Group with respect to power line electrocutions
Consult Crane Working Group with respect to best practice relating to periodic burning of wetland.

Regarding the construction phase impacts, the standard Construction Phase Environmental Management Programme (CEMP) (included as **Appendix G** of the BAR) and must be on site and complied with during the construction phase.

Need and desirability

Wetlands play a critical role in improving the ecological health of an ecosystem by performing many functions that include flood control, water purification, sediment and nutrient retention and export, recharge of groundwater, as well as acting as vital habitats for diverse plant and animal species. Wetlands are thus considered to be extremely important in preserving biodiversity and are regarded as fundamental to the sustainable management of South Africa's water resources.

Wetlands also function as valuable open spaces and create recreational opportunities for people that include hiking, fishing, boating, and bird-watching. Many wetlands also have cultural and spiritual significance for the communities living nearby. Commercially, products such as reeds and peat, are also harvested from wetlands. Wetlands are thus considered to be critically important ecosystems as they provide both direct and indirect benefits to the environment and society.

Extensive damage to wetlands has occurred as a result of poor land use practices which has resulted in erosion and further degradation to aquatic ecosystems. Without the implementation of the planned rehabilitation activities (the **'no-go'** option or retaining the status quo), the programme's objectives would not be realized; and the loss of wetland habitat and its associated eco-system services would be significantly greater. The strategic importance of the WfWetlands programme is clear as evidenced by the distinct positive impacts associated with the programme which has resulted in a ***net benefit / gain*** as wetland health and integrity is improved and the associated eco-services enhanced. Overall the cumulative impact of wetland rehabilitation would thus be positive (refer to the summary of potential impacts identified above) to both human beings and the environment, now and in the future. Based on the above information, it is clear that rehabilitating wetlands is considered to be the '***best practicable environmental option***' as a result of the positive impact that the programme has on both the natural and socio-economic environment.

Figure 4: Commercial products made by locals from reeds harvested from wetlands

Conclusions and recommendations

The potential impacts associated with the rehabilitation of various wetlands within the Mpumalanga Province would result in impacts (both biophysical and social) that would positively affect the area and result in a net environmental gain for the project. These include:

- Job creation and skills transfer for local communities;
- Increased habitat for conservation worthy species (Oribi, Wattled, Grey Crowned and Blue Cranes);
- Improvements in wetland functioning and area; and
- Improved water quality and quantity downstream.

Based on the above, the EAP (Aurecon) is of the opinion that the proposed wetland rehabilitation activities being applied for should be authorised, as the substantial benefits (both biophysical and socio-economic) substantially outweigh the minimal localised negative impacts that have been identified. Furthermore, the proposed activities undoubtedly meet the principles prescribed in NEMA.

Public Participation Process and Way Forward

Public participation is an important part of the BA process, as it allows I&APs opportunity to obtain information about the proposed project and to provide input and raise any concerns at defined stages throughout the project.

The Public Participation process (PPP) was formally initiated with notifications to I&APs of the availability of this Draft BAR for comment on 5 December 2012. Adverts were also placed in *Die Burger* and *Sunday Times* on 1 and 2 December 2012, respectively. As part of the PPP, SANBI's Provincial Coordinators have been engaging with the directly affected landowners, while posters (in the key languages spoken in the Province) were erected at strategic locations in/ near the prioritised wetland(s).

As part of the 40 day public comment period on the draft Phase 2 reports, registered I&APs were sent copies of this Summary document, a letter notifying them of the public comment period as well as a response form. Based on the comments received, the draft reports will be updated. The final reports will then be made available for a 21 day comment period.

The Draft BAR for the proposed wetland rehabilitation activities for the Mpumalanga Province has been made available for review from Monday, 5 December 2012 for a 40 day comment period. SANBI's PC's and implementers have hard copies of the Phase 2 Reporting for their Province. Should you wish to review the report, please contact Franci Gresse to have this arranged. The Reports are also available for download from the Aurecon website (**http://www.aurecongroup.com** - follow the public participation links). I&APs have until **Monday, 4 February 2013** to submit comment on the Draft BAR.

After the 40 day public comment period, any I&AP comments received on the final BAR will be submitted directly to DEA for their consideration during the decision making phase. Once DEA have made their decision on the proposed project, all registered I&APs on the project database will be notified of the outcome of the decision within twelve (12) calendar days of the date of the decision. If no appeals are received and the landowner(s) have signed (i.e. approved) the proposed rehabilitation work detailed in the Final Rehabilitation Plans, the interventions will be constructed from April 2013 until March 2014.

Should you wish to raise any issues, concerns and/or suggestions, and/ or register as an I&AP, please contact Franci Gresse at Tel: 021 526 6022, Fax: 021 526 9500, Mail: PO Box 494, Cape Town, 8000 or Email: franci.gresse@aurecongroup.com on/before **Monday, 4 February 2013.**

List of Acronyms

BAR	Basic Assessment Report
CEMP	Construction phase Environmental Management Programme
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DWA	Department of Water Affairs
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
EPWP	Expanded Public Works Programme
GA	General authorisation in terms of the NWA
IA	Implementing Agent
I&APs	Interested and Affected Parties
M&E	Monitoring and evaluation
NEMA	National Environmental Management Act (Act 107 of 1998)
NWA	National Water Act (Act 36 of 1998)
PC	Provincial Coordinator
SANBI	South African National Biodiversity Institute

Table 5: Summary of the interventions included as part of this Basic Assessment process

Descriptive name	Old intervention number (if applicable)	New Intervention number	Proposed action	Reference document
NEW				
Goedgevonden				
Earthen Diversion Berm	W42C-01-027	W42C-01-203-00	Construct an earthen diversion berm to divert all flows out of the eastern channel.	Wakkerstroom Final Rehab Plan
Earthen Diversion Berm	W42C-01-028	W42C-01-204-00	Construct an earthen diversion berm to divert all flows out of the eastern channel	Wakkerstroom Final Rehab Plan
Reno Matrass	N/A	W42C-01-205-00	Construct a reno mattress in-channel protection structure to set the base level of the eastern channel.	Wakkerstroom Final Rehab Plan
Gabion Weir	N/A	W42C-01-206-00	Construct a gabion weir to divert flow out of the western channel onto the western parts of the wetland.	Wakkerstroom Final Rehab Plan
Gabion Diversion Wall	N/A	W42C-01-207-00	Construct a gabion diversion berm to divert flow out of the eastern channel	Wakkerstroom Final Rehab Plan
Earthen Diversion Berm	N/A	W42C-01-208-00	Construct an earthen diversion berm to divert all flows out of the eastern channel onto the eastern parts of the wetland.	Wakkerstroom Final Rehab Plan
Concrete Diversion Berm	N/A	W42C-01-209-00	Construct a concrete diversion berm to divert flow out of the eastern channel onto the eastern parts of the wetland.	Wakkerstroom Final Rehab Plan

Descriptive name	Old intervention number (if applicable)	New Intervention number	Proposed action	Reference document
Paardeplaats				
Gabions Diversion Wall and Earthen Berms with seeding and biojute	N/A	W42C-02-208-00	Decommission and rehabilitate old road	Wakkerstroom Final Rehab Plan
Concrete strips and gabion protection	N/A	W42C-02-209-00	Protection of road through construction of concrete strips and gabion cut off wall	Wakkerstroom Final Rehab Plan
Revegetation of hillslope	N/A	W42C-02-210-00	Contouring, reseeding	Wakkerstroom Final Rehab Plan
Rockpacks	N/A	W42C-02-211-00	Rock packs to control erosion next to road	Wakkerstroom Final Rehab Plan
Rockpacks	N/A	W42C-02-212-00	Rock packs to control erosion next to road	Wakkerstroom Final Rehab Plan
Surface cross drain	N/A	W42C-02-213-00	Construction of surface cross-drains	Wakkerstroom Final Rehab Plan
Revegetation	N/A	W42C-02-214-00	Contouring, reseeding	Wakkerstroom Final Rehab Plan
Rockpacks	N/A	W42C-02-215-00	Rock packs	Wakkerstroom Final Rehab Plan
Gully stabilisation	N/A	W42C-02-216-00	Rock packs and gabion diversion walls	Wakkerstroom Final Rehab Plan
Surface cross drains, gabion diversion walls and earthen berms	N/A	W42C-02-217-00	Deactivate old road and protect new road	Wakkerstroom Final Rehab Plan

Descriptive name	Old intervention number (if applicable)	New Intervention number	Proposed action	Reference document
Concrete strips and backfill trench	N/A	W42C-02-218-00	Protect sensitive area	Wakkerstroom Final Rehab Plan
Concrete weir	N/A	W42C-02-219-00		Wakkerstroom Final Rehab Plan
Surface Cross Drain	N/A	W42C-02-220-00	Construction of surface cross-drains	Wakkerstroom Final Rehab Plan
Surface Cross Drain	N/A	W42C-02-221-00	Construction of surface cross-drains	Wakkerstroom Final Rehab Plan
Surface Cross Drain	N/A	W42C-02-222-00	Construction of surface cross-drains	Wakkerstroom Final Rehab Plan
Surface Cross Drain	N/A	W42C-02-223-00	Construction of surface cross-drains	Wakkerstroom Final Rehab Plan
Surface Cross Drain	N/A	W42C-02-224-00	Construction of surface cross-drains	Wakkerstroom Final Rehab Plan
Surface Cross Drain	N/A	W42C-02-225-00	Construction of surface cross-drains	Wakkerstroom Final Rehab Plan
Surface Cross Drain	N/A	W42C-02-226-00	Construction of surface cross-drains	Wakkerstroom Final Rehab Plan
Surface Cross Drain	N/A		Construction of surface cross-drains	
MAINTENANCE				
Excavation	V31A-01-014	V31A-01-201-01	Excavate existing channel to spread a portion of the flows into the wetland area southwest of main channel	

Annexure B – Response Form

WORKING FOR WETLANDS REHABILITATION PROJECT IN THE LIMPOPO PROVINCE

DEA Reference No: 14/12/16/3/3/1/760 / NEAS Reference No: DEA/EIA/0001565/2012

Response Form for comment by Interested and Affected Parties

Please return this form to Aurecon on/ before 4 February 2013

Attention: Franci Gresse

Tel No: (021) 526 6022 Fax No: (021) 526 9500

Postal Address: PO Box 494, Cape Town, 8000

Email: franci.gresse@aurecongroup.com

REQUIRED INFORMATION

(Please note: the legislation governing EIA processes requires you to provide the following information). Should your details change during this process it is your responsibility to send us updated information.

1) Please provide your contact details:

NAME: .....

ORGANISATION (If applicable): .....

POSTAL ADDRESS: .....

..... **CODE:** .....

PHONE NUMBER: . ..... **FAX NUMBER:** .....

CELLPHONE NUMBER: ..... **EMAIL:** .....

2) How would you prefer to receive future project information?

Please tick ☑ the appropriate box ☐ Post ☐ Email ☐ Fax

3) Do you have any direct interest in the approval or refusal of the proposed project by the environmental authorities? Please tick ☑ the appropriate box/es below

BUSINESS/ FINANCIAL

Competing business ..... ☐ Yes ☐ No

Neighbouring business ..... ☐ Yes ☐ No

Potential employment opportunities ..... ☐ Yes ☐ No

Service provision (machinery etc) ..... ☐ Yes ☐ No

PERSONAL

Neighbour to proposed project site ..... ☐ Yes ☐ No

OTHER (please explain)

..... ☐ Yes ☐ No

.....

Please Turn Over…/

ADDITIONAL INFORMATION

4) Please list any other Interested and Affected Parties that should be contacted (with contact details if available):

Name/ Organisation	Postal and/ or email address	Tel No.	Fax No.

PLEASE LIST ANY COMMENTS, ISSUES OR CONCERNS THAT YOU MAY HAVE.
(These will be captured in a Comments and Responses Report in which responses will be provided. Feel free to submit additional pages if more space is required).

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Thank you for your time.