Yellow-fronted Canary (*Serinus mozambicus*)	Wide variety of **woodland habitats**: lightly wooded thornveld, moist broadleaved woodlands, along river courses. Avoid *Acacia* woodlands. Alien plantations.		Common resident				
Brimstone Canary *(Serinus sulphuratus)*	**Bushy streamside vegetation**, coastal bush, thickets, wooded kloofs, forest clearings, montane scrub, gardens, cultivated lands with rank secondary growth.		Uncommon to fairly common resident, nomadic in winter.				
Streaky-headed Seedeater *(Serinus gularis)*	Vegetation associated with mountains and hilly topography: Fynbos, wooded valleys. **Well-wooded areas**; drier deciduous woodland and miombo. Avoids open grassland, arid *Acacia* woodland. Edges of evergreen forests and scrub on mountain slopes.		Fairly common resident and nomad				
74. Buntings							
Cinnamon-breasted Bunting *(Emberiza tahapisi)*	**Rocky ridges and hillsides**, eroding stony slopes and gullies, bare stony areas. Mountain sides, granite and dolerite outcrops with scattered bushes or trees, almost bare rocky and stony patches in woodlands on hills and plains, eroding stony slopes and gullies, dry watercourses.	Nest placed in shallow scrape in ground at base of grass tuft, against rock or clod on rocky slope, on earth bank, in crevice in small rock face, on open stony ground, or among scattered rocks in a hollow.	Locally common resident				
Goldenbreasted Bunting (*Emberiza flaviventris*)	Open broadleaved and **mixed woodlands and savanna.**		Common resident				

Appendix 10: MAMMALS: Available habitat, expected occurrence and observed presence of mammals during the survey (Friedman & Daly 2004).
Different biotopes surveyed:

1. Weir and abstraction - riverine 2. Canal – woodland and grassland 3. Pipeline and hydro plant – woodland 4. Power line – woodland and grassland	

Listed below are the mammals expected to occur in the available natural habitats of the Donora environment (see table above). The words in **bold font** illustrate the qualifying habitat (preferred habitat) for each species, and the *underlined italics* indicate the disqualifying habitat (the reason why it is unlikely to find the mammal in the surveyed biotopes). The shaded cells indicate the area of proposed development that incorporates the preferred habitat, and the number inside a cell gives the number of individuals or definite signs detected during surveys.

MAMMAL	HABITAT	Status (SA)	1	2	3	4
Order: Insectivora						
Family: Soricidae						
Dark-footed forest shrew (*Myosorex cafer*)	**Montane grasslands;** wet sponges in mistbelt. Dense scrub and grass in damp areas fringing mountain streams. Moist densely vegetated habitat, mountainous country. **Nest on bank of stream** in heavy overhead cover of grass and undergrowth. Runways of vlei rats.	Data deficient				
Forest shrew (*Myosorex varius*)	Highveld: In moist, densely vegetated habitat; burrows under rocks and uses rodent/molerat burrows. Dense grass along the banks of streams.	Data deficient				
Greater dwarf shrew (*Suncus lixus*)	Very little known of this species	Data deficient				
Least dwarf shrew (*Suncus infinitesimus*)	Commonly associated with termitaria. Terrestrial.	Intermediate				
Lesser dwarf shrew (*Suncus varilla*)	Reliant on termite mounds.	Data deficient				
Swamp musk shrew (*Crocidura mariquensis*)	Moist habitats, **thick grass along riverbanks**, in reedbeds and in swamp. Tangled masses of semi-aquatic grasses along fringes of water. Litter piles deposited by receding floods. Runways of vlei rats. Nests deep in clumps of tussock grasses on slightly raised patches of ground on fringes of swamp.	Data deficient				
Tiny musk shrew (*Crocidura fuscomurina*)	**All latitudes, wide tolerance**. Terrestrial. Cover such as debris, fallen trees, wood piles or dense grass clumps.	Data deficient				
Reddish-grey musk shrew (*Crocidura cyanea*)	Dry terrain: **Among rocks, in dense scrub and grass**. Grassland and thick shrub bordering streams. Wet vleis with good grass cover.	Data deficient				
Greater red musk shrew (*Crocidura flavescens*)	**Broken country with a dense cover of vegetation, areas of decaying leaf litter in damp places, thick undergrowth in vleis or along the banks of streams.**	Least concern. Population trend: Unknown				
Lesser grey-brown musk shrew (*Crocidura silacea*)	**Catholic in habitat requirements; damp places.**	Data deficient				
Lesser red musk shrew (*Crocidura hirta*)	**In damp situations along rivers and streams. Low bushes, dense undergrowth, piles of debris and fallen logs.**	Data deficient				
Family: Chrysochloridae						

Rough-haired golden mole *(Chrysospalax villosus)*	**Grassland, dry ground on the fringes of marshes or damp vleis.** Excavate burrows; loose piles of soil.	**TOPS NEMA: Critically endangered species; IUCN 2010: Vulnerable; Endemic.** Population trend: Unknown.				
Family: Pteropodidae						
Wahlberg's fruit bat (*Epomophorus wahlbergi*)	Tropical forests and **evergreen riverine forests**; thickets where there are fruit-bearing trees. Penetrate up river valleys carrying evergreen forests. Hang during day in dense canopy of evergreen trees.	Least concern				
Gambian epauletted fruit bat (*Epomophorus gambianus*)	Open savanna **woodland and forests**.					
Egyptian fruit bat (*Rousettus aegyptiacus*)	**Almost all habitats**. Availability of caves	Least concern				
Family: Molossidae						
Little free-tailed bat *(Chaerephon (Tadarida) pumila*	**Rocky environment** with an abundance of crevices.	Least concern				
Midas free-tailed bat(*Tadarida (Mops) midas*)	**Woodland**. Cracks in tree trunks.					
Angola free-tailed bat (*Tadarida (Mops) condylura*)	**Catholic in habitat requirements.**					
Egyptian free-tailed bat (*Tadarida aegyptiaca*)	**Open grassland: Rock crevices**, caves, hollow trees, behind loose bark of trees	Least concern				
Family: Vespertilionidae						
Schreibers' long-fingered bat (*Miniopterus schreibersii*)	Cave dweller: Caves and subterranean habitats. **Wide range of vegetational association.**					
Lesser long-fingered bat (*Miniopterus fraterculus*)	Cave dweller: Caves and subterranean habitats. **Wide range of vegetational association.**					
Welwitsch's hairy bat (*Myotis welwitschii*)	**Savanna woodland**	Least concern; Population trend: Unknown				
Temminck's hairy bat (*Myotis tricolor*)	**Savannah woodland**: Cave dweller- availability govern distribution.	Least concern; Population trend: Unknown				
Rusty bat (*Pipistrellus rusticus*)	**Savanna woodland: riverine associations.**					
African pipistrelle (*Pipistrellus hesperidus*)	Roosts in **trees** and man-made structures.	Least concern				
Yellow house bat (*Scotophilus dinganii*)	**Savanna & mixed bushland**: Narrow crevices, hollow trees.	Least concern				
Lesser yellow house bat (*Scotophilus viridis*)	**Savanna woodland. Riverine conditions.**					

Cape serotine bat *(Neoromicia (Eptesicus) capensis)*	**Savannah**: Under bark of trees, base of aloe leaves.	Least concern				
Banana bat *(Neoromicia (Pipistrellus) nanus)*	**Forest and woodland savanna**: Near bananas or Strelitzia trees, rolled-up terminal leaves of banana plants.					
Family: Nycteridae						
Egyptian slit-faced bat / Common slit-faced bat (*Nycteris thebaica*)	**Open savannah woodland**: caves, hollow trees or holes in the ground. Caves and subterranean habitats; temperate savanna and shrubland. Man-made structures.	Least concern				
Family: Rhinolophidae						
Darling's horseshoe bat (*Rhinolophus darlingi*)	**Woodland savanna**: Caves, and amongst piles of loose boulders.	Least concern. Population trend: Unknown				
Geoffroy's horseshoe bat (*Rhinolophus clivosus*)	**Savannah woodland**: Forest fringes. Caves, rock crevices.	Least concern. Population trend: Unknown				
Lander's horseshoe bat (*Rhinolophus landeri*)	**Forests and savanna woodlands. Riverine conditions** and with well-watered terrain. Cave dweller.					
Bushveld horseshoe bat (*Rhinolophus simulator*)	**Savanna woodland**; dependent on substantial shelter in form of caves & mine shafts.	Least concern				
Family: Hipposideridae						
Sundevall's leaf-nosed bat (*Hipposideros caffer*)	**Savanna woodland**: Caves and subterranean habitats	Data deficient				
Short-eared trident bat *(Cloeotis percivalli)*	**Savanna woodland**. Rest in caves. Sufficient cover in the form of caves and mine tunnels for day roosting.	Very sensitive to disturbance				
Family: Lorisidae						
Thick-tailed bush baby (*Otolemur crassicaudatus*)	**Forests, thickets and well developed woodland**. Penetrate into dry terrain in riverine forests and woodland. During the day - in the thick foliage of trees.	Least concern				
Southern lesser bushbaby (*Galago moholi*)	**Woodland**: Nocturnal; arboreal – holes in trees, thick foliage, disused bird nests	Least cocern				
Family: Cercopithecidae						
Chacma baboon (*Papio ursinus*)	Widespread, diurnal: At night - **Cliffs & high trees**	Least concern				
Samango monkey / Blue monkey (*Cercopithecus mitis*)	**Open forest**	**TOPS NEMA: Vulnerable species**				
Vervet monkey (*Cercopithecus aethiops*)	**Woodland**, diurnal: At night – **Heavy foliage in high trees**, rocky cliffs	Least concern			2	
Family: Protelidae						
Aardwolf (*Proteles cristatus*)	Savannah woodland and in scrub, grassland. **Open country**, nocturnal, and solitary. Rests in hole in ground. Independent on water. Dependant on availability of termites.	Least concern				
Family: Hyaenidae						

Brown hyaena (*Hyaena brunnea*)	Semi-desert, **open scrub and open woodland savanna**. Nocturnal, holes in ground.	**TOPS NEMBA: Protected species; IUCN 2010: Near threatened.** Population trend: Decreasing.				
Family: Felidae						
Leopard (*Panthera pardus*)	Widespread. **Broken country or forests**. Nocturnal & solitary.	**IUCN (2010): NT Near-threatened. TOPS NEMBA: Vulnerable species.** Population trend: Decreasing.				
Caracal (*Felis caracal*)	Widespread – **open scrub & woodland**, open vleis and open grassland. Nocturnal & solitary. Litters born in holes in ground.	Least concern				
African wild cat (*Felis lybica*)	Widespread – **Wide habitat tolerance**. Rocky hillsides, underbush, reedbeds, stands of tall grass. Litters born dense underbrush or other substantial cover.	Least concern				
Serval (*Felis serval*)	Proximity to water essential requirement, coupled with availability of **adequate cover; tall grass, underbrush or reed beds - during day. Wet grassland, vleis and reed beds.**	**TOPS NEMA: Protected species.** IUCN Least concern. Population trend: Stable.				
Family: Canidae						
Black-backed jackal (*Canis mesomelas*)	Widespread. **Wide habitat tolerance**. Open terrain. Litters born in holes in ground.	Least concern				
Family: Mustelidae						
Cape clawless otter (*Aonyx capensis*)	**Predominantly aquatic; freshwater an essential requirement: Rivers**, lakes, swamps and dams. Widespread. Tributaries of rivers into small streams - habitat with food. Litters born in holes in banks of rivers. Estuarine and sea water.	**TOPS NEMBA: Protected species.** IUCN Least concern. Population trend: Stable.				
Spotted-necked otter (*Lutra maculicollis*)	**Aquatic, confined to larger rivers**, lakes, swamps and dams with extensive areas of open water. Stay close to water edge. Lie up in holes of river banks, in rock crevices or in dense reed.	**TOPS NEMBA: Protected species.** IUCN Least concern. Population trend: Decreasing.				
African weasel / Striped weasel / White-naped weasel (*Poecilogale albinucha*)	Savannah: **Moist grassland**. Litters born in burrows.	Data deficient				
Striped polecat (*Ictonyx striatus*)	Widespread. Wide habitat tolerance. Scrub cover, **open grassland, and savannah woodland**. Holes in the ground.	Least concern				
Honey badger (*Mellivora capensis*)	Widespread. Not in desert. Use crevices in rocky areas, will also dig refuges. **Rocky koppies, scrub sandveld, open grassland, open woodland,** riverine woodland and floodplain grassland.	**TOPS NEMA: Protected species.** IUCN Least concern. Population trend: Decreasing.				
Family: Viverridae						
Small-spotted genet / Common genet (*Genetta genetta*)	Widespread. Open arid: **Woodland, open scrub and dry grassland or dry vlei areas**. Trees. Nocturnal – nests in holes in the ground or in hollow trees.	Least concern				
Large-spotted genet (*Genetta tigrina*)	Better watered parts: **Woodland, open scrub and dry grassland or dry vlei areas**. Trees. Nocturnal – nests in holes in the ground or in hollow trees.	Least concern				

African civet (*Civettictis civetta*)	Widely distributed – **forest and woodland where water is available**. Nocturnal & solitary. Litters born in holes or dense underbrush.	Least concern				
Slender mongoose (*Galerella sanguinea*)	**Widespread. Open areas**. Underbrush or holes in the ground, holes in termitaria.	Least concern				
Meller's mongoose (*Rhynchogale melleri*)	**Montane and tall grassland areas**					
White-tailed mongoose (*Ichneumia albicauda*)	**Savannah woodland**: Well watered areas. Not in desert, semi-desert or forest.	Least concern				
Water mongoose / Marsh mongoose (*Atilax paludinosus*)	Well-watered terrain: **Rivers, streams, marshes**, swamps, wet vleis, dams and tidal estuaries - adequate cover of reed beds or dense stands of semi-aquatic grasses. Coastally in mangrove swamps in brackish water.	Least concern				
Banded mongoose (*Mungos mungo*)	**Wide habitat tolerance**. Essential habitat requirement: woodland, underbush, substrate detritus such as fallen logs and other vegetable debris. Acacia woodland.	Least concern				
Dwarf mongoose (*Helogale parvula*)	Widespread. **Dry open woodland and on grassland** where there is substrate litter and termitaria. Lives in permanent holes – termitaria, burrows deeply.	Least concern				
Family: Orycteropodidae						
Aardvark / Antbear (*Orycteropus afer*)	Widespread. Wide habitat tolerance. **Open woodland, scrub and grassland**. Nocturnal. Lives in extensive burrows.	Least concern				
Family: Procaviidae						
Rock dassie (*Procavia capensis*)	Widespread where there is rocky habitat. **Outcrops of rock** – rocky crevices. Krantzes, rocky koppies, hillsides, piles of loose boulders – accompanied with bushes and trees to provide browse. Crannies and crevices provide shelter. Granite formations with piles of huge boulders, from which overlying soil has been washed away. Sandstone krantzes with loose, rocky, overhanging slabs. Erosion gulleys.	Least concern				
Family: Suidae						
Bushpig (*Potamochoerus porcus*)	**Forests, thickets, riparian underbrush**, reed beds or stands of tall grass where there is water. Nests of grass in secluded places.	Least concern				
Warthog (*Phacochoerus aethiopicus*)	**Open areas of grassland**, floodplain, vleis and around waterholes and pans. Deserted antbear holes. Linear forest.	Least concern				
Family: Bovidae						
Common / Grey duiker / Grimm's duiker (*Sylvicapra grimmia*)	Widespread. Presence of bush. **Woodland with ample underbush, grassland** of medium and tall grass. Rest in bushes or tall grass.	Least concern				
Oribi (*Ourebia ourebi*)	Open habitat. **Open grassland**, flood plain; sparse scattering of trees and bushes.	**TOPS NEMA: Endangered species.** IUCN Least concern. Population trend: Decreasing.				
Klipspringer (*Oreotragus oreotragus*)	Restricted to **rocky areas**. Mountainous areas with krantzes, rocky hills or outcrops, extensive areas of rocky koppies, gorges with rocky sides. Rocky shelter and steep rock faces. Boulder-strewn river beds.	Least concern				
Steenbok (*Raphicerus campestris*)	Widespread. **Open country**: Open grassland with stands of tall grass, scattered bushes or scrub and forbs. Avoid densely wooded areas.	Least concern				
Kudu (*Tragelaphus strepsiceros*)	Widespread in **savanna woodland**. Areas of broken, rocky terrain with woodland cover & open water.	Least concern				
Bushbuck (*Tragelaphus scriptus*)	**Riverine and thickets near water.**	Least concern				

Grey rhebok (*Pelea capreolus*)	Rocky hills, rocky mountain slopes and mountain plateau with **good grass cover**.	Least concern				
Reedbuck (*Redunca arundinum*)	Open water with cover; stands of tall **grass or reed beds**	**TOPS NEMA: Protected species**				
Mountain reedbuck (*Redunca fulvorufula*)	**Dry, grass-covered, stony slopes** of hills and mountains; some form of trees and bushes	Least concern				
Order: Manidae **Family: Pholidota**						
Pangolin (*Manis temminckii*)	**Wide habitat tolerance**, absent from forests. Day – piles of leaves or other vegetable debris, holes in the ground	**TOPS NEMA: Vulnerable species.** IUCN Least concern. Population trend: Decreasing.				
Order: Rodentia						
Family: Hystricidae						
Cape Porcupine *(Hystrix africaeaustralis)*	**Widespread**: All types of country apart from swampy areas, very moist forests and barren desert areas. Nocturnal. Shelter - resting in caves, rock cavities, holes in ground. Absent from forest. Use abandoned antbear and other types of holes in the ground or lie up under the roots of trees exposed by erosion.	Least concern				
Family: Sciuridae						
Tree squirrel (*Paraxerus cepapi*)	Widespread in **woodland**: Diurnal – resting in holes in trees.	Least concern				
Family: Thryonomyidae						
Greater Canerat *(Thryonomys swinderianus)*	Forest belts and open woodland wherever there is tall and **matted grass or reeds** growing in damp or wet places. Reedbeds or areas of dense tall grass with thick reed or cane-like stems. In vicinity of rivers, lakes and swamps - never found far from water. Resting place densest part of reed bed. Cover - matted tussock grasses, holes in stream banks, under root systems of trees adjacent to grass and reeds. Use existing holes ore simply use matted vegetation.	Least concern				
Family: Bathyergidae						
Common Molerat *(Cryptomys hottentotus)*	Loose sandy soils to stony soils and hills to montane and escarpment conditions. **Tendency to loose sandy soil - especially alluvial soils along major rivers and streams**. Karroid veldtypes, coastal rhenosterbushveld, coastal forests, thornveld, mopaneveld, savanna and pure grassveld, as well as temperate and transitional forests, scrub and bushveld.	Least concern				
Family: Cricrtidae						
Giant rat (*Cricetomys gambiensis*)	**Evergreen forests and woodland**. Urban areas. Linear forest, termite mounds.	**TOPS NEMA: Vulnerable species**				
Bushveld gerbil (*Tatera leucogaster*)	Widespread – light **sandy soils or sandy alluvium**. Nocturnal – lives in burrows under low bushes	Least concern				
Brants' (Highveld) Gerbil *(Tatera brantsii)*	Widespread – **light sandy soils or sandy alluvium** substrate with some scrub or grass cover. Peaty soils around marshes and pans. Prefer sandy soils, irrespective of the type of vegetation cover. Nocturnal – lives in burrows under low bushes	Least concern				
Vlei Rat *(Otomys irroratus)*	Grass-covered ground in **proximity to streams and marshes**. Associated with wet habitat. Lush grasses, sedges, herbaceous vegetation associated with damp soil in vleis; similar habitat along streams and rivers or on fringes of swamps. Nests: seldom burrow; nest of rising dry ground or in clump of grass	Least concern				

Angoni Vlei Rat *(Otomys angoniensis)*	Savanna woodlands and grasslands – in drier areas in wet **vleis, swamps and swampy areas along rivers**. Fringes of rivers with reed beds, sedges and semi-aquatic grasses. Nests in tussock grass near permanent water; above water level on raised ground.	Least concern				
Laminate Vlei Rat *(Otomys laminatus)*	Tied to **moist habitats** - grasslands in submontane and coastal areas.	Least concern. Endemic				
Family: Muridae						
Striped mouse (*Rhabdomys pumilio*)	Widespread – grass cover: Diurnal – burrows under grass. Wide variety of habitat types (broad niche species). Prefers **grassland**, habitat includes bushy and semi-dry vlei country as well as dry riverbeds, high grassveld areas, the edges of forests and the bases of hills.	Least concern				
Water Rat *(Dasymys incomtus)*	Wet habitat: **Streams, rivers, reed beds**, swamps and is partially aquatic. Long grass close to water, semi-aquatic grasses, in swampy areas along rivers and streams, or in in grassy or bracken covered areas close to water. Between reeds and among rotting vegetation. Fringes of marshes and backwaters. Nest: Constructed in a depression on the sloping ground bordering the swampy edge of the river.	IUCN: Least concern. Population trend: Unknown.				
Pouched mouse (*Saccostomus campestris*)	**Widespread and catholic**: In burrows, sandy soil or sandy alluvium, open short grass fringes of pans, rocky koppies, fringes of lowland forests.	Least concern				
Grey climbing mouse (*Dendromus melanotis*)	**Grassland** with high grass.					
Chestnut climbing mouse (*Dendromus mystacalis*)	**Grassland** with high grass.					
Brant's climbing mouse (*Dendromus mesomelas*)	Tall grass or **rank vegetation near water**.	Least concern				
Fat mouse (*Steatomys pratensis*)	**Grassland and savannas** over sandy soils or sandy alluvium. On sandy ground in scrub or in sandy alluvium on the fringes of swamps, streams and rivers. Open woodland and abandoned cultivated lands.	Least concern				
Tete Veld Rat *(Aethomys ineptus)*	Temperate **grassland and savanna**: Rocky crevices and piles of boulders.	Least concern				
Namaqua Rock Mouse *(Aethomys namaquensis)*	Widespread – where there are **rocky koppies**, outcrops or boulder-strewn hillsides - preferred areas. Cracks and rock crevices of rocky koppies or outcrops, or on piles of stones in the veld, low lying ridges and stony country and is often plentiful in old ruins, holes in trees or under bushes. Calcareous outcrops.	Least concern				
Tree Rat/mouse *(Thallomys paedulcus)*	**Acacia woodland**: Living in crevices in the trunks, under loose strips of bark or in holes in the ground between the roots of the tree (Especially Acacia). Nocturnal.	Least concern				
Single-striped Mouse *(Lemniscomys rosalia)*	**Savanna woodland** to dry open scrub. Common factor: Grassland - excavates burrows under the cover of matted grass.	Data deficient				
Multimammate mouse (*Mastomys coucha*)	**Wide habitat tolerance, fond of grassland** where there is some cover of low scrub. In dry watercourses or fringes of swamps. Frequents the fringes of pans where there are calcareous outcrops nearby. Partial to sandy ground, overgrown with scrub and grass. Under fallen logs, crevices between rocks, cavities inside pile of stones or debris or even holes in termite mounds. Nocturnal.					
Multimammate mouse *(Mastomys natalensis)*	**Wide habitat tolerance**: Households; fringes of agricultural land; In riverine associations running westwards into arid country. Degraded forests, fields					
Woodland mouse (*Grammomys dolichurus*)	Predominantly arboreal: in **forests and thickets**, usually in damp places; constructs nests of grass or leaves in dense underbrush	Least concern				
Pygmy Mouse *(Mus minutoides)*	**In all types of vegetation**. Wide variety of habitats. Fairly damp country where there is high grass, bush or other cover. Under debris, fallen tree trunks and similar type of cover. Piles of debris, boulders or holes in termite mounds.	Least concern				
Family: Gliridae						

Rock Dormouse *(Graphiurus platyops)*	**Rocky terrain**. A rock-frequenting dormouse. Near or on rocky outcrops. In association with dassies. Also dry scrub thickets or dry riverbeds, frequenting trees when no rocks available. Live in rock crevices, under exfoliation of granite bosses and in piles of boulders.	Data deficient				
Woodland Dormouse *(Graphiurus murinus)*	**Widespread in woodland**. Wooded areas. Large trees provide holes for shelter. Live in holes in trees or under loose bark.	Least concern				
Family: Leporidae						
Scrub hare (*Lepus saxatilis*)	**Savannah woodland** and in scrub, tall grass. Absent from forest, desert and open grass. Open forest, savanna.	Least concern				
Hewitt's red rock rabbit (*Pronolagus saundersiae*)	Top of rocky **outcrops**	Least concern				
Natal red rock rabbit *(Pronolagus crassicaudatus)*	**Rocky habitat**: Rocky terrain or boulder-strewn areas – rest deep in rock crevices	Least concern				
Family: Macroscelididae						
Rock elephant shrew (*Elephantulus myurus*)	**Rocky areas**: Rocky koppies or piles of boulders – sufficient holes crannies and crevices in rocks for shelter. Absent on granite domes. Needs broken and exfoliated granite. Prefer rocky habitat with overhanging ledges or vegetation. Cover from aerial predation. Keep to shady cover of overhanging rocks or bushes/trees.	Least concern				

APPENDIX E:
PUBLIC PARTICIPATION PROCESS:
Issues and Responses Report
Copy of Newspaper Advertisement
Copy of Site Advertisement
Minutes of Meetings
Copies of E Mails, Notifications and Receipt of Reports
Copies of Comments from I&AP's

Issues and Responses Report: Donora Falls Hydro Project: Brondal Area: Project Reference: 17/2/3/E-7

Interested and Affected Party: **Note: Questions/queries posed by members attending the Focus Group Meeting on 28 October 2010 and the Meeting with DWA Officials on 6 December 2010 are included.**	Response
1. **Electricity:** Barry enquired whether the farmers downstream could benefit from the electricity that will be generated at the hydro plant?	No. The electricity will be sold to the National Grid. Many reports have been submitted recently especially in the press by ESKOM where ESKOM is requesting for the establishment of private enterprise partnerships and for these partnerships to supply green energy to the national grid.
2. **Electricity**: Van Zyl wanted to know how much power would be generated?	1.8 Mega Watt of electricity will be generated and put into the National Grid.
3. **Project Costs**: What will the project cost?	In the region of R 15 million.
4. **Project Costs**: Will the costs of the project be covered by the sale of the power generated?	Yes, but it is a long term project.
5. **Condition of Canal**: The meeting agreed that the canal required quite a lot of maintenance and that any improvement to the condition of the canal would be beneficial to all parties downstream. The members were positive about the canal being fixed albeit for 1278 metres.	Comments noted.
6. **Water Rights**: The members at the meeting wanted assurance that the water rights would not be affected in any way **AND** that their allocations would be guaranteed?	All water rights would be honoured and all allocations per user would be maintained. Ralf also reiterated that a specialist (Althea van der Merwe) had been appointed to handle all aspects pertaining to water use; water licensing; registration, and liaison with the Department of Water Affairs.
7. **Water Supply during Construction**: Rob enquired how their water supply in the canal would be affected during construction. The downstream farmers require a sustainable supply of water at all times?	Paul and Johan confirmed that the construction process would be staggered to ensure a sustainable supply of water through the canal; during construction. Johan also added that he would augment the supply of water in the canal from his storage dam as and when required to ensure a steady flow into the canal. Both confirmed that the timing of construction and repair of the canal would have to be pre-planned carefully and one would have to adapt according to prevailing weather conditions. As it is the canal is often shut down for repair work. Liaison with all parties, as has been the case up until now, will be important. These aspects will however be defined in the Construction Environmental Management Programme (CEMP) which will form part of the EIA documentation.
8. **Water Supply**: How much water must be diverted into the canal over and above the allocated amount to generate the power in the hydro plant?	$3m^3$ per second. The minimum instream flow requirement of the river will be maintained. See Specialist Report from Dr. Andrew Deacon.
9. **Construction Timing**: The meeting had different views as to the timing of	This aspect would have to be refined; however the water supply to the farmers

construction. There are pro's and con's for both a winter and a summer construction period.	through the canal must be maintained at all costs during the construction period (winter or summer).
10. **SS: Oxygen Levels**: When the water is returned to the river after it has been through the turbine the oxygen levels of the water will be different to what it was before it was used to generate electricity!	1. The project team does not agree with this observation however Dr. Deacon will look into this aspect during his studies. If there are differences, Dr. Deacon will assess whether the change in oxygen levels are significant. 2. Dr. Deacon also requested that members in the meeting please send him any applicable literature which they may have on these types of issues or previous studies which may be of use to him in this regard. Please submit these documents to Ralf Kalwa at rhengu@mweb.co.za and he will ensure that Dr. Deacon obtains copies of all documentation.
11. **SS: Fish Ladder**: Will a fish ladder be constructed at the weir?	1. Yes, a fish ladder will be included at the weir to ensure a connectivity between the upper weir waters and the below weir waters. Dr. Deacon has worked on many fish ladder proposals over the past 20 years (especially in sensitive areas) and is well known for his expertise in this field.
12. **PD and SS: Lawful Water Use**: Is there an existing lawful water use registered for the water in the canal and from the river? Additional to this from which entitlement will the additional volume of water into the canal be sourced?	1. Yes, all water use has been registered and entitlements are in place. Althea van der Merwe will handle all water related aspects and applications (DWA) and will ensure that copies of these rights are submitted as per due process. 2. The **Project Engineers and AvdM** will address the comment on source of additional water and under which entitlement it will be registered. Dr. Deacon's survey results will also guide the decision making process in this regard.
13. **General: Water Abstraction vs Water Diversions**: A discussion ensued between various members in the meeting around the technicality of whether this project was about a water abstraction versus a water diversion and or whether we are dealing with water storage? Also an argument was raised pertaining to the relevance of applying for S (21) (h)?	1. Althea van der Merwe (AvdM) will take this discussion further with the various role players at DWA. This technicality does not however affect the EIA investigation at this stage of the process. AvdM's interpretation is that we are dealing with a water diversion as the water is returned 1.2 km further down back into the river. **AvdM** will finalise all DWA application implications (list of activities) following further discussions with DWA.

14. **MS: Temperature and Water Quality:** Please check up on the temperature and the quality of the water that is **returned** into the Nels River (after discharge) and **before it is diverted out of the river** into the canal.	1. Dr. Deacon will include these aspects into his study and he will also recommend that a Bio-Monitoring System is included in his recommendations for future monitoring programmes.
15. **General: Water Flow (Quantity and Volume)**: A discussion ensued between various members in the meeting around the quantity of water in the river, in the canal and how this will be controlled and measured? SS also wanted to know what the long term flow average was in the river?	1. It was decided that 3 water measuring sites/meters would be installed: One at the canal entrance, one at the sluice gate to the farmers and one at the hydro station. 2. **PO/Ian de Jager** will enquire about the water flow average of the river!
16. **LR: Riparian Zone, Elevation- and Floodline Levels**: The study must indicate the outline of the riparian zone and the 1:100 year floodline levels.	1. Dr. Deacon will demarcate/delineate the riparian zone. 2. **PO/Ian de Jager** will demarcate the floodline and elevation levels.
17. **SS: Crocodile Irrigation Board**: Do the farmers that source water from the canal and weir belong to the Crocodile River Major Irrigation Board?	1. **RK/Ian de Jager** (Project Engineer with PO) will enquire from the farmers in question.
18. **General: Release of Water from the Hydro Plant**: How will the water be returned to the river?	1. A gabion mattress will be installed below the water release point to allow for a gradual dissipation of water back into the Nels River.

List of Participants in Discussions and queries listed above:

- Mr. Douw Steyn — Weltevreden Boerdery.
- Mr. Rob Maguire — Waterberry Farm.
- Mr. Paul Oosthuizen — Project Engineer.
- Mr. Barry Victor — Neighbouring Farmer.
- Mr. Van Zyl Manktelow — Neighbouring Farmer.
- Mr. Johan van der Merwe — Applicant.
- Mrs. Stephnie van der Merwe — Applicant.
- Ralf Kalwa — Rhengu Environmental Services.
- Mrs. Stephnie van der Merwe — Applicant.
- Ms. Lufuno Rambau — DWA: EIA's.
- Ms. Mpho Sebola — DWA: Water Quality.
- Ms. Prudence Dzambukeri — DWA: Abstraction and Storage.
- Mr. Sampie Shabangu — DWA.
- Mr. Ian de Jager — Project Engineer.
- Ms. Liz Lambert — Maleka Environmental Consulting.
- Mrs. Althea van der Merwe — Maleka Environmental Consulting.
- Dr. Andrew Deacon — Project Ecologist: Specialist Studies.

0750 Wanted

Legals

0910 Public / Legal Notices

NOTICE

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS
PUBLIC PARTICIPATION PROCESS
INVITATION TO PARTICIPATE
Notice is given in terms of Regulation 54 of the Environmental Impact Regulations published in Government Notice R 544 in Government Gazette No. 33306 of 18 June 2010, under Section 24 (5) of the National Environmental Management Act, 1998 (Act, 107 of 1998) , as amended, to carry out the following activities:
Project Reference: 17/2/3/E-7:
Department of Economic Development, Environment and Tourism (Mpumalanga)
Property Description and Location: Donora Falls Hydro Project on Portion 5 of the Farm: Doornkraal 244 near the Brondal-Sabie tar road in the Ehlanzeni District of Mpumalanga.
Following discussions with Department of Economic Development, Environment and Tourism, and in terms of Government Notices R 544 a Basic Environmental Assessment is required in terms of the following listed activities:
Government Notice: 544 of 18 June 2010 Gazette Number 33306: Listing Notice1:
Activity 39: The expansion of canal/s, within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.
Activity 52: The expansion of facilities or infrastructure for the transfer of water from and to or between any combination of the following:
(i) water catchments,
(ii) water treatment works; or
(iii) impoundments, where the capacity will be increased by 50 000 cubic metres or more per day, but excluding water treatment works where water is treated for drinking purposes.
Activity 9: The construction of facilities or infra structure exceeding 1000 metres in length for the bulk transportation of water, sewage or stormwater,
(i) with an internal diameter of 0.36 metres or more; or
(ii) with a peak throughput of 120 litres per second or more;
excluding where:
(a) such facilities or infra structure are for bulk transportation of water, sewage or storm water drainage inside a road reserve; or
(b) where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.
Activity 11: The construction of canals,...., where such construction occurs within a water course or within 32 metres of a watercourse, measured from the edge of the watercourse, excluding where such construction will occur behind the development setback line.
Project Specifics include:
• Raise the existing weir by 500mm;
• Enlarge the existing canal to 2m X 1.5m wide where necessary over a distance of 1278m to convey water at 3m³/second (10 800 m³/hour= 259 200 m³/day);
• Install a sluice gate at the end of the canal to feed the rest of the canal for the farmers downstream;
• Install a pressure pipe (2m diameter)from the canal to the hydro station;
• Build the hydro building - (approx. design) with an outlet.
• Construct a maintenance road to the hydro site (distance 250m less than 4 m wide).
• Build 22kV overhead power line to join up with the Eskom network (400m).

0915 Sales In Execution

KENNISGEWING

KENNISGEWING VAN GEREGTELIKE VERKOPING IN DIE LANDDROSHOF VIR BARBERTON GEHOU TE BARBERTON.
SAAK NOMMER 704/09
In die saak tussen:
SHACKLETON CREDIT MANAGEMENT (EDMS) BPK
EISER EN
MSF JANSE VAN VUUREN
VERWEERDER
INGEVOLGE 'n vrywing van die Landdroshof van Barberton en daaropvolgende Lasbrief vir Eksekusie, sal die volgende goedere per publieke veiling verkoop word op SATERDAG, 27 NOVEMBER 2010 om 09.30 voor die Balju Stoorkamer, NATAL STRAAT, BARBERTON.
Naamlik Verweerder se reg titel en belang in tot:
1 x Philips radio
1 x Samsung TV
1 x TV eenheid
2 x 2 banke
1 x Philips DVD met "surround sound"
1 x Dstv dekodeerder
1 x Logik TV
1 x Yskas
1 x oefen fiets
1 x Trojan gimnasium bank
1 x TV rak
1 x volledige rekenaar
1 x Logic radio
1 x spieëlkas
1 x kamerstel
1 x LG Wasmasjien
1 x Lennar tuimeldroër
1 x Westpoint mikroggolfoond
2 x Defy Yskaste
2 x tafel & 12 x stoele
1 x Defy Yskas
1 x buffet
1 x L-vormige leersenaar
GETEKEN TE BARBERTON OP 13 OKTOBER 2010
EISER SE PROKUREUR
P J LEMMER PROKUREURS
PRESIDENTSTRAAT 65
BARBERTON 1300
POSBUS 11
TEL: (013) 71-2316/6
FAX: (013) 71-24176
Ons verw: PLL45.ms
TN000855

NOTICE

NOTICE OF SALE IN EXECUTION
IN THE HIGH COURT OF SOUTH AFRICA
(NORTH GAUTENG HIGH COURT, PRETORIA)
Case No: 6089/2010
In the matter between:
THE STANDARD BANK OF S.A. LIMITED PLAINTIFF And
AMINI CASSINGA ADAMS
ID: 16 JUNE 1976 1st DEFENDANT
KWENA JUNIA CASSINGA ADAMS
ID: 720505 0661 08 9 2nd DEFENDANT
In execution of a judgment of the High Court of South Africa (North Gauteng High Court, Pretoria) in the abovementioned suit, a sale without reserve will be held by the Sheriff, NELSPRUIT at SHERIFF'S OFFICE, 99 JAKARANDA AVENUE, WEST ACRES, NELSPRUIT, MPUMALANGA on WEDNESDAY, 17 NOVEMBER 2010 at 9H00 of the undermentioned property of the defendants subject to the conditions of sale which are available for inspection at the offices of the SHERIFF NELSPRUIT, 99 JAKARANDA AVENUE, WEST ACRES, NELSPRUIT.
A unit consisting of:
(a) Section No 39 as shown and more fully described on Sectional Plan No SS454/1998 in the scheme known as SUMMER PLACE II in respect of the land and building or buildings situate at REMAINING EXTENT OF ERF 2171 WEST ACRES EXT. 24 TOWNSHIP, MBOMBELA LOCAL MUNICIPALITY of which section the floor area according to the said Sectional Plan is 61 (SIXTY ONE) square metres in extent; and
(b) An undivided share in common property in the scheme apportioned to the said section in accordance with the participation quota as endorsed on the said sectional plan
Held by Deed of Transfer ST29812/2006
SUBJECT TO THE

(ID: 860513 5047 080) 1st Defendant
DUNCAN MILES CAMILLERI (ID: 810625 5895 083) 2nd Defendant
TAKE NOTICE THAT on the instructions of Stegmanns Attorneys 9Ref: CG375/10). Tel: (012) 342-6430 - A unit consisting of a SECTION NO.49 as shown and more fully described on Sectional Plan No SS97/2006 in the scheme known as LE MIRELL in respect of ground and building or buildings situate at ERF 1032 STONEHENGE EXTENSION 8 TOWNSHIP, LOCAL AUTHORITY: MBOMBELA, of which section the floor area according to the said Sectional Plan, is 83 square metres in extent, and an undivided share in the common property in the scheme apportioned to the said section in accordance with the participation quota as endorsed on the said sectional plan and an exclusive use area described as COVERED PARKING P49 measuring 14 (fourteen) square metres being as such part of the common property, comprising the land and the scheme known as LE MIRELL in respect of the land and building or buildings situate at ERF 1032 STONEHENGE EXTENSION 8 TOWNSHIP, MBOMBELA LOCAL MUNICIPALITY, as shown and more fully described on Sectional Plan No. SS97 /2006 held by Notarial Deed of Cession No. SK658/2006 - Measuring 83 m - situate at DOOR NO 49 LE MIRELL, 2 HERON STREET, STONEHENGE EXTENSION 8, NELSPRUIT - Improvements - Nothing is guaranteed and/or no warranty is given in respect thereof) ("VOETSTOOTS"): 2 BEDROOMS, 1 BATHROOM, OPEN PLAN KITCHEN & LOUNGE, 1 CARPORT - (particulars are not guaranteed) will be sold in Execution to the highest bidder on 17/11/2010 at 9H00 by the Sheriff of NELSPRUIT at SHERIFF'S OFFICE being 99 JACARANDA STREET, CNR JACARANDA & KAAPSCHE HOOP STREET, NELSPRUIT. Conditions of sale may be inspected at the Sheriff NELSPRUIT at 99 JACARANDA STREET (CNR OF JACARANDA & KAAPSCHE HOOP STR), NELPSRUIT.
TN000907

NOTICE

NOTICE OF SALE
IN THE NORTH GAUTENG HIGH COURT, PRETORIA (REPUBLIC OF SOUTH AFRICA)
CASE NO: 10179/2009
NEDBANK LIMITED Plaintiff and
BHEKIZWE BEN NXUMALO (ID: 640210 5846 085) 1st Defendant
NONHLANHLA VIRGINIA NXUMALO (ID: 771212 0275 089) 2nd Defendant
TAKE NOTICE THAT on the instructions of Stegmanns Attorneys (Ref: CG415/09), Tel: (012) 342-6430 - PTN 45 OF ERF 1554 SONHEUWEL EXTENSION 1 TOWNSHIP, REGISTRATION DIVISION J.T., MPUMALANGA PROVINCE, MBOMBELA LOCAL MUNICIPALITY - Measuring 691 m - situate at CLARINET STREET 46 (PORTION 45 OF ERF 1554 SONHEUWEL) - Improvements - nothing is guaranteed and/or no warranty is given in respect thereof) ("VOETSTOOTS"): VACANT STAND - (particulars are not guaranteed) will be sold in Execution to the highest bidder on 17/11/2010 at 9H00 by the Sheriff of NELSPRUIT at SHERIFF'S OFFICE being 99 JACARANDA STREET, WEST ACRES, NELSPRUIT. Conditions of sale may be inspected at the Sheriff NELSPRUIT at 99 JACARANDA STREET (CNR OF JACARANDA & KAAPSCHE HOOP STR), NELSPRUIT.
TN000821

NOTICE

NOTICE OF SALE
IN THE NORTH GAUTENG HIGH COURT, PRETORIA (REPUBLIC OF SOUTH AFRICA)
CASE NO: 74209/2009
NEDBANK LIMITED Plaintiff and
FUTURE PERFECT INVESTRA

Copy of Newspaper Advertisement in the Lowvelder: 29 October 2010

Copy of Site Advertisement:

NOTICE OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESS
PUBLIC PARTICIPATION PROCESS
INVITATION TO PARTICIPATE

Notice is given in terms of Regulation 54 of the Environmental Impact Regulations published in Government Notice R 544 in Government Gazette No. 33306 of 18 June 2010, under Section 24 (5) of the National Environmental Management Act, 1998 (Act. 107 of 1998) , as amended, to carry out the following activities:

Project Reference: 17/2/3/E-7: Department of Economic Development, Environment and Tourism (Mpumalanga).

Property Description and Location: Donora Falls Hydro Project on Portion 5 of the Farm: Doornkraal 244 near the Brondal-Sabie tar road in the Ehlanzeni District of Mpumalanga.

Following discussions with Department of Economic Development, Environment and Tourism, and in terms of Government Notices **R 544** a **Basic Environmental Assessment** is required in terms of the following listed activities:

Government Notice: 544 of 18 June 2010 Gazette Number: 33306: Listing Notice1:
Activity 39: The expansion of canal/s, within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.
Activity 52: The expansion of facilities or infrastructure for the transfer of water from and to or between any combination of the following:
(i) water catchments,
(ii) water treatment works; or
(ii) impoundments, where the capacity will be increased by 50 000 cubic metres or more per day, but excluding water treatment works where water is treated for drinking purposes.
Activity 9: The construction of facilities or infra structure exceeding 1000 metres in length for the bulk transportation of water, sewage or stormwater,
(i) with an internal diameter of 0.36 metres or more; or
(ii) with a peak throughput of 120 litres per second or more; excluding where:
(a) such facilities or infra structure are for bulk transportation of water, sewage or storm water drainage inside a road reserve; or
(b) where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.
Activity 11: The construction of canals....., where such construction occurs within a water course or within 32 metres of a watercourse, measured from the edge of the watercourse, excluding where such construction will occur behind the development setback line.

Project Specifics include:

- Raise the **existing** weir by 500 mm.
- Enlarge the **existing** canal to 2m X 1.5m wide where necessary over a distance of 1278m to convey water at 3m³/second (10 800 m³/hour = 259 200 m³/day).
- Install a sluice gate at the end of the canal to **feed** the rest of the canal for the farmers downstream.
- Install a pressure pipe (1.2m diameter) from the canal to the hydro station.
- Generate 1.8 Mega Watt of electricity.
- Build the hydro building (approx. 48sqm) with an outlet.
- Construct a maintenance road to the hydro site (distance 250m and less than 4m wide).
- Build 22kV overhead power line to join up with the Eskom network (400m).

The purpose of this assessment process is to investigate the impact of implementing such activities at the Farm: Doornkraal Portion 5.

Proponent/Applicant:
Donora Farm Hydro Pty. Ltd.
Mr. Johan van der Merwe
P. O. Box 1229
Nelspruit
1200

Consultant and Contact Person Details:
RHENGU ENVIRONMENTAL SERVICES
Contact Person: Ralf Kalwa
P. O. Box 1046
MALELANE
1320

Cell: 082 557 6199
Tel: 013 755 6186
Fax: 013 755 3162
E-Mail: alpine@lantic.net

Cell: 082 414 7088
Tel: 013 790 0553
Fax: 086 685 8003
E-Mail: rhengu@mweb.co.za

In order to ensure that you are identified/registered as an interested and/or affected party please submit your name, contact information (e-mail/telephone-/fax number) and interest in the matter in writing to the contact person on or before **26 November 2010.**
Date of Notice: 4 November 2010.

MINUTES OF THE MEETING/DISCUSSIONS HELD WITH INTERESTED AND AFFECTED PARTIES (I&AP's): DONORA FALLS HYDRO PROJECT: 28 OCTOBER 2010 09H00 Project Nr. 17/2/3/E-7

1. Participants:

• Mr. Douw Steyn	Weltevreden Boerdery.
• Mr. Rob Maguire	Waterberry Farm.
• Mr. Paul Oosthuizen	Project Engineer.
• Mr. Barry Victor	Neighbouring Farmer.
• Mr. Van Zyl Manktelow	Neighbouring Farmer.
• Mr. Johan van der Merwe	Applicant.
• Mrs. Stephnie van der Merwe	Applicant.
• Ralf Kalwa	Rhengu Environmental Services.

2. Apologies:

None.

3. Welcome and Background:

Ralf thanked the participants for the opportunity to meet. Ralf briefly explained the role of interested and affected parties in an Environmental Impact Assessment Process and encouraged everyone to participate in an open and transparent manner. They should feel free to voice their comments and provide input at any stage of the process.

Furthermore, Ralf indicated that the purpose of this Focus Group Meeting was specifically planned to inform those parties which were directly affected by the **irrigation from the canal** (4 farms are affected). This is being done to ensure that they are informed of the project specifics before the project is opened to the public domain. In this way the applicant wishes to maintain good neighbour relations and hopefully address any urgent issues timeously and in a sensitive manner.

This meeting is but one of a set of meetings which will be held during the Public Participation Phase. Comments and concerns raised today will however be included in the participation process and by attending this meeting the farmers/participants have registered their interest in the project. These minutes will be included in the Environmental Assessment documentation.

A detailed Background Information Document (BID) was handed to each member at the meeting.

Ralf and Paul provided the following Background Information:

- Discussions with Government authorities in Nelspruit have taken place recently and it was determined that the Donora Falls Hydro Project (Pty). Ltd. represented by Johan and Stephnie van der Merwe would have to undertake an **Environmental Impact Assessment** as per the following activities in Listing Notice Nr. 1:

- **Government Notice: 544 of 18 June 2010 Gazette Number: 33306: Listing Notice1:**
- **Activity 39:** The expansion of canal/s, within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.
- **Activity 52**: The expansion of facilities or infrastructure for the transfer of water from and to or between any combination of the following:
  (i) water catchments,
  (ii) water treatment works; or
  (ii) impoundments, where the capacity will be increased by 50 000 cubic metres or more per day, but excluding water treatment works where water is treated for drinking purposes.
- **Activity 9:** The construction of facilities or infra structure exceeding 1000 metres in length for the bulk transportation of water, sewage or stormwater,
  (i) with an internal diameter of 0.36 metres or more; or
  (ii) with a peak throughput of 120 litres per second or more; excluding where:
  (a) such facilities or infra structure are for bulk transportation of water, sewage or storm water drainage inside a road reserve; or
  (b) where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.
- **Activity 11**: The construction of canals....., where such construction occurs within a water course or within 32 metres of a watercourse, measured from the edge of the watercourse, excluding where such construction will occur behind the development setback line.

- To comply with **Environmental Legislation** an **Application** has been submitted to the Department of Economic Development, Environment and Tourism (DEDET), in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations of 2010.
- The purpose of this assessment process is to investigate the impact of implementing such activities at the Farm: Doornkraal Portion 5.

  Having said this, Rhengu Environmental Services (RES) were appointed to undertake this assessment process. As part of this assessment process a **Public Participation Process (PPP)** must be initiated to involve all potential interested and affected parties. This meeting would form part of this process.

  The project will include the following specific aspects:

- Raise the **existing** weir by 500 mm.
- Enlarge the **existing** canal to 2m X 1.5m wide where necessary over a distance of 1278m to convey water at 3m³/second (10 800 m³/hour = 259 200 m³/day).
- Install a **sluice gate** at the end of the canal to **feed** the rest of the canal for the farmers downstream.

- Install a **water meter** at this point to ensure that the correct allocated amount of water is sent down the canal to the farmers downstream.
- Install a **pressure pipe** (1.2m diameter) from the canal to the hydro station.
- Build the **hydro building** (approx. 48sqm) with an outlet.
- Generate **1.8 Mega Watt** of electricity.
- Construct a **maintenance road** to the hydro site (distance 250m and less than 4m wide).
- Build 22kV **overhead power line** to join up with the Eskom network (400m).

4. **Public Participation and Meeting:**

RES has met with officials from DEDET who are the lead authority for this authorisation. The department has issued an instruction to commence with the Basic Assessment. A **Newspaper Advertisement** inviting public participation will be published in the Lowvelder (regional newspaper) on **29 October 2010.**

Advertisements will also be placed at the entrance/access to the site on the Brondal tar road and at local communal sites/shops etc. in the area. Furthermore the advertisements will also be sent via e-mail to all direct neighbours and persons that register through the Public Participation Process.

Ralf concluded that the purpose of this meeting was geared towards informing all the relevant parties about the scope of the development and to ensure that all the parties remain up to date on the relevant issues that will be investigated in the assessment phase. Furthermore, this meeting will afford the parties an opportunity to raise their concerns and submit suggestions pertaining to the issues that require assessment.

The following issues were raised during the meeting:

Issue	Response
1. **Electricity:** Barry enquired whether the farmers downstream could benefit from the electricity that will be generated at the hydro plant?	No. The electricity will be sold to the National Grid.
2. **Electricity**: Van Zyl wanted to know how much power would be generated?	1.8 Mega Watt of electricity will be generated and put into the National Grid.
3. **Project Costs**: What will the project cost?	In the region of R 15 million.
4. **Project Costs**: Will the costs of the project be covered by the sale of the power generated?	Yes, but it is a long term project.
5. **Condition of Canal**: The meeting agreed that the canal required quite a lot of maintenance and that any improvement to the condition of the canal would be beneficial to all parties downstream. The members were positive about the canal being fixed albeit for 1278 metres.	Comments noted.
6. **Water Rights**: The members at the meeting wanted assurance that the water rights would not be affected in any way **AND** that their allocations would be guaranteed?	All water rights would be honoured and all allocations per user would be maintained. Ralf also reiterated that a specialist (Althea van der Merwe) had been appointed to handle all aspects pertaining to water use; water licensing; registration, and liaison with the Department of Water Affairs.
7. **Water Supply during Construction**: Rob enquired how their water supply in the canal would be affected during construction. The downstream farmers require a sustainable supply of water at all times?	Paul and Johan confirmed that the construction process would be staggered to ensure a sustainable supply of water through the canal; during construction. Johan also added that he would augment the supply of water in the canal from his storage dam as and when required to ensure a steady flow into the canal. Both confirmed that the timing of construction and repair of the canal would have to be pre-planned carefully and one would have to adapt according to prevailing weather conditions. As it is the canal is often shut down for repair work. Liaison with all parties, as has been the case up until now, will be important. These aspects will however be defined in the Construction Environmental Management Programme (CEMP) which will form part of the EIA documentation.
8. **Water Supply**: How much water must be diverted into the canal over and above the allocated amount to generate the power in the hydro plant?	$3m^3$ per second.
9. **Construction Timing**: The meeting had different views as to the timing of construction. There are pro's and con's for both a winter and a summer construction period.	This aspect would have to be refined; however the water supply to the farmers through the canal must be maintained at all costs during the construction period (winter or summer).

General Comments:

None.

The meeting adjourned at 11h30.

MINUTES OF THE MEETING/DISCUSSIONS
HELD WITH DEPARTMENT OF WATER AFFAIRS AND PROJECT ROLE PLAYERS:
DONORA FALLS HYDRO PROJECT:
06 DECEMBER 2010
09H00
Project Nr. 17/2/3/E-7

5. Participants:

• Mr. Douw Steyn	Farmer: Weltevreden Boerdery.
• Mr. Barry Victor	Neighbouring Farmer.
• Mr. Johan van der Merwe	Applicant.
• Mrs. Stephnie van der Merwe	Applicant.
• Ms. Lufuno Rambau	DWA: EIA's.
• Ms. Mpho Sebola	DWA: Water Quality.
• Ms. Prudence Dzambukeri	DWA: Abstraction and Storage.
• Mr. Sampie Shabangu	DWA.
• Paul Oosthuizen	Project Engineer.
• Liz Lambert	Maleka Environmental Consulting.
• Althea van der Merwe	Maleka Environmental Consulting.
• Dr. Andrew Deacon	Project Ecologist: Specialist Studies.
• Ralf Kalwa	Rhengu Environmental Services: EAP.

6. Apologies:

Ian de Jager: Project Engineer.

7. Welcome and Background:

Ralf thanked the participants for the opportunity to meet. Ralf requested everyone to introduce themselves and provide some background as to their specific role in this process and or their responsibilities where applicable.

Furthermore, Ralf indicated that the purpose of this Focus Group Meeting was specifically planned to:

- Inform DWA of the implications of the proposed project, and,
- To allow DWA an opportunity to submit their requests/ideas and queries in order to ensure that the Project Team take cognisance of these aspects during the EIA process.

A detailed Background Information Document (BID) was handed to each member at the meeting.

Ralf and Paul provided the following **Background Information**:

- Discussions with Government authorities in Nelspruit have taken place recently and it was determined that the Donora Falls Hydro Project (Pty). Ltd. represented by Johan and Stephnie van der Merwe would have to undertake an **Environmental Impact Assessment** as per the following activities in Listing Notice Nr. 1:

- **Government Notice: 544 of 18 June 2010 Gazette Number: 33306: Listing Notice1:**
- **Activity 39:** The expansion of canal/s, within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.
- **Activity 52**: The expansion of facilities or infrastructure for the transfer of water from and to or between any combination of the following:
  (i) water catchments,
  (ii) water treatment works; or
  (ii) impoundments, where the capacity will be increased by 50 000 cubic metres or more per day, but excluding water treatment works where water is treated for drinking purposes.
- **Activity 9:** The construction of facilities or infra structure exceeding 1000 metres in length for the bulk transportation of water, sewage or stormwater,
  (i) with an internal diameter of 0.36 metres or more; or
  (ii) with a peak throughput of 120 litres per second or more; excluding where:
  (a) such facilities or infra structure are for bulk transportation of water, sewage or storm water drainage inside a road reserve; or
  (b) where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.
- **Activity 11**: The construction of canals....., where such construction occurs within a water course or within 32 metres of a watercourse, measured from the edge of the watercourse, excluding where such construction will occur behind the development setback line.

- To comply with **Environmental Legislation** an **Application** has been submitted to the Department of Economic Development, Environment and Tourism (DEDET), in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations of 2010.
- The purpose of this assessment process is to investigate the impact of implementing such activities at the Farm: Doornkraal Portion 5.

  Having said this, Rhengu Environmental Services (RES) were appointed to undertake this assessment process. As part of this assessment process a **Public Participation Process (PPP)** must be initiated to involve all potential interested and affected parties. This meeting would form part of this process.

  The project will include the following specific aspects:

- Raise the **existing** weir by 500 mm.
- Enlarge the **existing** canal to 2m X 1.5m wide where necessary over a distance of 1278m to convey water at 3m³/second (10 800 m³/hour = 259 200 m³/day).
- Install a **sluice gate** at the end of the canal to **feed** the rest of the canal for the farmers downstream.

- Install a **water meter** at this point to ensure that the correct allocated amount of water is sent down the canal to the farmers downstream.
- Install a **pressure pipe** (1.2m diameter) from the canal to the hydro station.
- Build the **hydro building** (approx. 48sqm) with an outlet.
- Generate **1.8 Mega Watt** of electricity.
- Construct a **maintenance road** to the hydro site (distance 250m and less than 4m wide).
- Build 22kV **overhead power line** to join up with the Eskom network (400m).

8. Public Participation and Meeting:

RES has met with officials from DEDET who are the lead authority for this authorisation. The department has issued an instruction to commence with the Basic Assessment. A **Newspaper Advertisement** inviting public participation was published in the Lowvelder (regional newspaper) on **29 October 2010.**

Advertisements have also been placed at the entrance/access to the site on the Brondal tar road and at local communal sites/shops etc. in the area. Furthermore the advertisements have also been sent via e-mail to all direct neighbours and persons that registered through the Public Participation Process.

The following issues/comments/queries were raised during the meeting and the site visit:

Issue	Response and Action
1. **SS: Oxygen Levels**: When the water is returned to the river after it has been through the turbine the oxygen levels of the water will be different to what it was before it was used to generate electricity!	1. The project team does not agree with this observation however Dr. Deacon will look into this aspect during his studies. If there are differences, Dr. Deacon will assess whether the change in oxygen levels are significant. 2. Dr. Deacon also requested that members in the meeting please send him any literature which they may have on these types of issues or previous studies which may be of use to him in this regard. Please submit these documents to Ralf Kalwa at rhengu@mweb.co.za and he will ensure that Dr. Deacon obtains copies of all documentation.
2. **SS: Fish Ladder**: Will a fish ladder be constructed at the weir?	1. Yes, a fish ladder will be included at the weir to ensure a connectivity between the upper weir waters and the below weir waters. Dr. Deacon has worked on fish ladder proposals over the past 20 years and is well known for his expertise in this field.
3. **PD and SS: Lawful Water Use**: Is there an existing lawful water use registered for the water in the canal and from the river? Additional to this from which entitlement will the additional volume of water into the canal be sourced?	1. Yes, all water use has been registered and entitlements are in place. Althea van der Merwe will handle all water related aspects and applications (DWA) and will ensure that copies of these rights are submitted as per due process. 2. The **Project Engineers and AvdM** will address the comment on source of additional water and under which entitlement it will be registered. Dr. Deacon's survey results will also guide the decision making process in this regard.
4. **General: Water Abstraction vs Water Diversions**: A discussion ensued between various members in the meeting around the technicality of whether this project was about a water abstraction versus a water diversion and or whether we are dealing with water storage? Also an argument was raised pertaining to the relevance of applying for S (21) (h)?	1. Althea van der Merwe (AvdM) will take this discussion further with the various role players at DWA. This technicality does not however affect the EIA investigation at this stage of the process. AvdM interpretation is that we are dealing with a water diversion as the water is returned 1.2 km further down back into the river. **AvdM** will finalise all DWA application implications (list of activities) following further discussions with DWA.
5. **MS: Temperature and Water Quality:** Please check up on the temperature and the quality of the water that is **returned** into the Nels River (after discharge) and **before it is diverted out of the river** into the canal.	1. Dr. Deacon will include these aspects into his study and he will also recommend that a Bio-Monitoring System is included in his recommendations for future monitoring programmes.
6. **General: Water Flow (Quantity and Volume)**: A discussion ensued between various members in the meeting around the quantity of water in the river, in the canal and how this will be controlled and measured? SS also wanted to know what the long term flow average was in the river?	1. It was decided that 3 water measuring sites/meters would be installed: One at the canal entrance, one at the sluice gate to the farmers and one at the hydro station. 2. **PO/Ian de Jager** will enquire about the water flow average of the river!
7. **LR: Riparian Zone, Elevation- and Floodline Levels**: The study must indicate the outline of the riparian zone and the 1:100 year floodline	1. Dr. Deacon will demarcate/delineate the riparian zone. 2. **PO/Ian de Jager** will demarcate the floodline and elevation levels.

levels.	
8. **SS: Crocodile Irrigation Board**: Do the farmers that source water from the canal and weir belong to the Crocodile River Major Irrigation Board?	1. **RK/Ian de Jager** (Project Engineer with PO) will enquire from the farmers in question.
9. **General: Release of Water from the Hydro Plant**: How will the water be returned to the river?	1. A gabion mattress will be installed below the water release point to allow for a gradual dissipation of water back into the Nels River.

General Comments:

None.

The meeting and site visit adjourned at 12h30.

Copies of E Mails, Notifications and Receipt of Reports

From: Johan Eksteen [johan@mtpa.co.za]
Sent: 12 April 2011 09:37
To: Hannes Botha
Cc: rhengu@mweb.co.za
Subject: FW: DONORA HYDRO PROJECT NELS RIVER SPECIALIST STUDY DR ANDREW DEACON AQUATIC AND TERRESTRIAL
Attachments: Microsoft Word - EXECUTIVE SUMMARY AND CONCLUSIONS.pdf

Mpumalanga
TOURISM AND PARKS AGENCY

Johan Eksteen
Manager Ecological Services
Mpumalanga Tourism and Parks Agency

Tel: (+27) 13 759 5576
Mobile: (+27) 83 579 2427
Fax: (+27) 13 759 5590
E-mail: johan@mtpa.co.za
Postal: P/Bag X11338, Nelspruit, 1200
Website: www.mpumalanga.com

From: Ralf Kalwa [mailto:rhengu@mweb.co.za]
Sent: Tuesday, April 12, 2011 9:21 AM
To: 'Ralf Kalwa'; Barry Victor; Douw Steyn; Frans Buys; John; L Potgieter; Louis Marais; Morathi Tseki; Rob Maguire; Van Zyl Manktelow
Cc: Ian@IFEngineering.co.za; 'althea van der merwe'; 'Paul Oosthuizen'; alpine@lantic.net; 'Andrew Deacon'; Michael Nyirenda; SSLanga@mpg.gov.za; Rambau Lufuno Patricia; Sebola Mpho (NSP); dzambukerip@dwa.gov.za; Shabangu Sampie Howard (NSP); Johan Eksteen
Subject: RE: DONORA HYDRO PROJECT NELS RIVER SPECIALIST STUDY DR ANDREW DEACON AQUATIC AND TERRESTRIAL

Project Reference: 17/2/3/E-7

Dear Interested and Affected Party and Government Officials

The Specialist Study: **Aquatic and Terrestrial Ecology: Dr. Andrew Deacon** for the EIA on the proposed Donora Hydro Station on the Nels River has been completed.

Hard Copies are available for perusal at the following venues:

1. The Mbombela Library: Nelspruit: Contact Person: Ms. Pinky Shabangu.
2. On the farm: Nora Falls: Contact Person: Ms. Stephnie van der Merwe: Cell: 082 829 7912

CD Copies:
I have sent copies of the Report on CD to all of you that have supplied me with your postal address.

Executive Summary and Discussion, Conclusions and Recommendations:
I have made copies of the executive summary, discussion, conclusions and recommendations in the document attached.

Hard Copies have also been delivered to:

1. DEDET: Nelspruit: Mr. Michael Nyirenda.
2. MTPA: Nelspruit: Mr. Johan Eksteen.
3. DWA: Mr. Sampie Shabangu (3 copies).

I would like you to peruse the report as a stand-alone document and submit your comments, changes and responses to this office by **close of business on 20 May 2011** to the contact points listed below:

Address: P. O. Box 1046 Malelane, 1320 or,
Fax: 086 685 8003 or,
E Mail: rhengu@mweb.co.za

My thanks go out to all of you that have participated in this important process to date.

Kind regards,

Ralf Kalwa
Rhengu Environmental Services
Cell: 082 414 7088

From: John Crawford-Brunt [John@klf.co.za]
Sent: 14 April 2011 11:41
To: Ralf Kalwa
Subject: RE: DONORA HYDRO PROJECT SPECIALIST STUDY

Brooklands postal address:

P.O. Box 1397
Sabie
1260

From: Ralf Kalwa [mailto:rhengu@mweb.co.za]
Sent: 11 April 2011 08:11 AM
To: Fransbuys@nelweb.co.za; Van Zyl Manktelow; Barry Victor; Rob Maguire; Douw Steyn; John Crawford-Brunt; L Potgieter; Louis Marais; Morathi Tseki
Subject: RE: DONORA HYDRO PROJECT SPECIALIST STUDY

Dear All

I am ready to send you a CD with a copy of the Specialist Report: Aquatic- and Terrestrial Ecology included. Could you please each confirm your postal addresses by return e-mail?

Kind regards,

Ralf Kalwa
Rhengu Environmental Services
Cell: 082 414 7088

Ralf Kalwa

From: "Ralf Kalwa" <rhengu@mweb.co.za>
To: "Frans Buys" <Fransbuys@nelweb.co.za>; "Van Zyl Manktelow" <gomogomo@mweb.co.za>; "Barry Victor" <MVictor@global.co.za>; "Rob Maguire" <robmag@iafrica.com>; "Douw Steyn" <gerbrandsteyn@gmail.com>; "John" <John@KLF.co.za>; "L Potgieter" <llpot@vodamail.co.za>; "Louis Marais" <Louismar@lantic.net>; "Morathi Tseki" <Morathi.tseki@sasol.com>
Sent: 04 November 2010 15:30
Attach: ADVERT.doc; Microsoft Word - BID DONORA FALLS.pdf
Subject: ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Dear Interested and Affected Party

Please take note of the intention to develop a hydro plant on the farm Doornkraal 244 Portion 5. This is a call on all neighbours who have not registered their interest to participate in the Public Participation Process as part of the Environmental Impact Assessment Study.

Please peruse the attached advertisement and Background Information Document.

In order to ensure that you are identified/registered as an interested and/or affected party please submit your name, contact information (e-mail/telephone-/fax number) and interest in the matter in writing to the contact person on the advertisement on/or before **26 November 2010.**

Kind regards,

Ralf Kalwa
Rhengu Environmental Services

Ralf Kalwa

From: "Ralf Kalwa" <rhengu@mweb.co.za>
To: "Douw Steyn" <gerbrandsteyn@gmail.com>; "Barry Victor" <MVictor@global.co.za>; <alpine@lantic.net>; <mec1@lantic.net>; "Andrew Deacon" <AndrewD@sanparks.org>; "Paul Oosthuizen" <OosthuPJ@eskom.co.za>; <mec2@lantic.net>; <shabangus2@dwa.gov.za>; "Rambau Lufuno Patricia" <RambauL@dwa.gov.za>; <sebolam@dwa.gov.za>; <dzambukerip@dwa.gov.za>
Cc: <Ian@IFEngineering.co.za>
Sent: 07 December 2010 15:36
Attach: MIN MEETING NR 2 DWA DECEMBER 2010.doc
Subject: COPY OF MINUTES DONORA FALLS DWA MEETING 6 DECEMBER 2010

Dear All

Many thanks for your attendance and positive involvement at yesterday's meeting.
Please peruse the attached minutes for correctness and submit changes before or at close of business on 17 December 2010. If I do not hear from you again then I will assume that the contents of the minutes are correct.

Kind regards,

Ralf Kalwa
Rhengu Environmental Services
Cell: 082 414 7088

Ralf Kalwa

From: "Ralf Kalwa" <rhengu@mweb.co.za>
To: "Van Zyl Manktelow" <gomogomo@mweb.co.za>; "Barry Victor" <MVictor@global.co.za>; "Rob Maguire" <robmag@iafrica.com>; "Douw Steyn" <gerbrandsteyn@gmail.com>
Cc: <Ian@IFEngineering.co.za>; "Paul Oosthuizen" <paul.oosthuizen@eskom.co.za>; <alpine@lantic.net>; "Andrew Deacon" <AndrewD@sanparks.org>; <mec1@lantic.net>
Sent: 29 October 2010 11:41
Attach: MIN MEETING NR 1 I&P's OCTOBER 2010.doc
Subject: MINUTES OF FOCUS GROUP MEETING DONORA FALLS HYDRO PROJECT

Dear Interested and Affected Party

Project Reference: 17/2/3/E-7: Donora Falls Hydro Project: Brondal Area.

Many thanks for your participation at the Focus Group Meeting on 27 October 2010. Please find attached the Minutes of the meeting.
Please peruse the contents of the minutes and submit any changes by return mail before or on 5 November 2010. If I do not hear from you I will accept that the minutes are correct.

Kind regards,

Ralf Kalwa
Rhengu Environmental Services
Cell: 082 414 7088

PLEASE SIGN AND FAX BACK 086 685 8003

RHENGU ENVIRONMENTAL SERVICES

PO Box 1046
Malelane
1320

Cell: 082 414 7088
Fax: 086 685 8003
E-mail: rhengu@mweb.co.za

RECEIPT OF DOCUMENTATION:
SPECIALIST STUDY: AQUATIC AND TERRESTRIAL ECOLOGY:
DONORA HYDRO EIA PROJECT
PROJECT REFERENCE: 17/2/3/E-7

RECEIVED BY: DEDET:

SIGNATURE:

DATE: 11/4/2011

FROM: **RALF KALWA**

SIGNATURE:

DATE: 11/4/2011

PLEASE SIGN AND FAX BACK 086 685 8003

RHENGU ENVIRONMENTAL SERVICES

PO Box 1046
Malelane
1320

Cell: 082 414 7088
Fax: 086 685 8003
E-mail: rhengu@mweb.co.za

RECEIPT OF DOCUMENTATION:
SPECIALIST STUDY: AQUATIC AND TERRESTRIAL ECOLOGY:
DONORA HYDRO EIA PROJECT
PROJECT REFERENCE: 17/2/3/E-7

RECEIVED BY: DWA / SAMPIE SIMBANEGU

SIGNATURE: 11 Apr 2011

DATE: 11/4/2011

FROM: **RALF KALWA**

SIGNATURE:

DATE: 11/4/2011

PLEASE SIGN AND FAX BACK 086 685 8003

RHENGU ENVIRONMENTAL SERVICES

PO Box 1046
Malelane
1320

Cell: 082 414 7088
Fax: 086 685 8003
E-mail: rhengu@mweb.co.za

RECEIPT OF DOCUMENTATION:
SPECIALIST STUDY: AQUATIC AND TERRESTRIAL ECOLOGY:
DONORA HYDRO EIA PROJECT
PROJECT REFERENCE: 17/2/3/E-7

RECEIVED BY: Mbombela library

SIGNATURE: (Pinky Shabangu)

DATE: 11/4/2011

FROM: **RALF KALWA**

SIGNATURE:

DATE: 11/4/2011

PLEASE SIGN AND FAX BACK 086 685 8003

RHENGU ENVIRONMENTAL SERVICES

PO Box 1046
Maleiane
1320

Cell: 082 414 7088
Fax: 086 685 8003
E-mail: rhengu@mweb.co.za

RECEIPT OF DOCUMENTATION:
SPECIALIST STUDY: AQUATIC AND TERRESTRIAL ECOLOGY:
DONORA HYDRO EIA PROJECT
PROJECT REFERENCE: 17/2/3/E-7

RECEIVED BY: MTPA: Johan Ekstrom

SIGNATURE:

DATE: 11/4/2011

FROM: **RALF KALWA**

SIGNATURE:

DATE: 11/4/2011

Mpumalanga
TOURISM AND PARKS AGENCY

Ref: 4624
Enquiries: Dr. H. Botha
Tel: 013 262 4844
Fax: 013 262 4858

Mr. Ralf Kalwa
Rhengu Environmental Services
P.O. Box 1046
MALELANE
1320

Fax: 086 685 8003

Dear Mr Kalwa

SPECIALIST STUDY: AQUATIC AND TERRESTRIAL ECOLOGY: DONORA FALLS HYDRO PROJECT: BRONDAL AREA: MPUMALANGA PROVINCE

Your letter reference 17/2/3/E-7 of date April 2011 has reference.

The Mpumalanga Tourism and Parks Agency (MTPA) do not object to the proposed construction of the Donora Hydro-electrical Station on portion 5 of the farm Doornkraal 244 JT. After studying the Aquatic Specialist Study for this development the MTPA require the following mitigation measures to be implemented by the developers:

1. A measuring device and an operated sluice gate must be in place to provide the appropriate flows in the stretch of river between the weir and the hydro station.

2. Fishways should be constructed with rock and concrete to form pools in a rough ladder formation to enable fish to migrate up and down over the weir. The placements of these fish ladders must be established by a acknowledged fish specialist and the fish ladders built to fit in with the natural contours of the site. The steps should not be higher than 15cm and the pools should be large enough to facilitate areas for fish to rest.

3. Large trees, but especially *Breonadia salicina* (Matumi) and *Pterocarpus angolensis* (Kiaat) may not be removed or damaged.

4. The existing canal is constructed largely of soil and should be retained to assist small mammals and other animals which may accidentally fall into the canal with a means of escape from the water.

5. The pipeline route must be aligned in such a way that no damage is done to large indigenous trees such as *Breonadia salicina* (Matumi) and *Pterocarpus angolensis* (Kiaat) along the route.

SPECIALIST STUDY: AQUATIC AND TERRESTRIAL ECOLOGY: DONORA FALLS HYDRO PROJECT: BRONDAL AREA: MPUMALANGA PROVINCE

6. The completed pipeline must be covered with soil removed from the trench to assist burrowing animals such as *Leptotyphlops distanti* (Distant's Thread Snake), *Amblyodipsas concolor* (Natal Purple-glossed Snake), *Scelotes mirus* (Montane Dwarf Burrowing Skink), *Acontias gracilicauda gracilicauda* (Thin-tailed Legless Skink), *Acontias breviceps* (Short-headed Legless Skink) and *Chrysospalax villosus* (Rough-haired Golden Mole)

7. Water released from the hydro station must be dissipated over rock piles to prevent eroding the river bank, aerate the water, and also prevent fish from trying to swim up-stream towards the hydro station.

8. The transmission line route must be aligned in such a way that no damage is done to large indigenous trees such as *Breonadia salicina* (Matumi) and *Pterocarpus angolensis* (Kiaat) along the route.

9. Collisions are the biggest single threat posed by transmission lines to birds. Methods to make transmission lines more visible to birds include the standard Eskom bird perch, marking wires and conductors with white wire spirals and black crossed bands, bird flappers and diverters which swivel in the wind, glow in the dark, and use fluorescent colours designed specifically for bird vision, anti-perching devices, covering of the central phase with insulating material and the modification of the structures to increase the distance between conductors.

10. No animals including snakes, should be killed or injured by workers during the construction and operation phases of the project.

11. A suitable qualified aquatic scientist must be appointed to design and implement an aquatic monitoring programme in the river reach between the Donora weir and the hydro-electric station. This programme must at least monitor the effect of the reduced flow in the river due to the abstraction of water for hydro-electricity, water quality (especially oxygen) and temperatures at sites upstream and downstream of the hydro-electric station releases and the ability of fish species to use the fishway at the weir.

Kind Regards

MR. C. NDABENI
CHIEF EXECUTIVE OFFICER
DATE: 23-05-2011

APPENDIX F:
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PROGRAMME

CONSTRUCTION OF A HYDRO PLANT AND ASSOCIATED INFRA-STRUCTURE AND WORKS:
DONORA FALLS HYDRO PROJECT: PORTION 5 OF THE FARM DOORNKRAAL 244: BRONDAL AREA,
MPUMALANGA PROVINCE
PROJECT REFERENCE: 17/2/3/E-7

1. ENVIRONMENTAL MANAGEMENT PLAN: CONSTRUCTION ACTIVITIES

This environmental management plan consists of a Construction Environmental Management Plan (CEMP), and will address the construction phase of the Hydro Plant, the canal and the raising of the weir. It will also address the construction of the fishway/fishladder and the trenching and placement of the pipeline and ESKOM cable.

1.1. Monitoring and Auditing

Rhengu Environmental Services (RES) represented by Ralf Kalwa, will ensure that all the **conditions** as set out in the **Record of Decision (ROD), and the requirements as issued by DEDET**, are met and implemented as stipulated.

The ECO must submit to DEDET, a monthly audit report on the construction activities of the development.

The role of the ECO and independent audit teams are well defined in the framework of Integrated Environmental Management (IEM). The developer, together with the ECO will ensure **compliance** in terms of this process.

1.2. Roleplayers: Contact Details:

1. Project Engineer: Ian de Jager	Cell: 082 577 0677
2. Developer/Applicant: Johan van der Merwe	Cell: 082 557 6199
3. ECO: Ralf Kalwa	Cell: 082 414 7088

2. CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

This plan must be read in conjunction with the **Contract Documents**, the **Building Specifications** and where applicable the **Bill of Quantities**. This environmental management plan consists of a Construction Management Plan (Construction Environmental Management Plan: CEMP) and will address the construction phase of the proposed development as described in Basic Assessment Report.

KEY ISSUES: Construction Management Plan

1. This plan is designed for the entire construction period, and includes the rehabilitation of areas where construction activities took place.
2. The Contractor, together with the Environmental Control Officer (ECO) will be responsible to ensure that all construction workers, sub-contractors, suppliers and relevant personnel associated with the construction:

- Understand the contents of the Construction Environmental Management Plan (CEMP).
- Ensure that all the construction personnel are fully aware of all environmental issues relating to the construction activities.
- Adhere to all the precautionary and mitigating measures described in the CEMP.
- Ensure that all the construction personnel understand the implications and stipulations of the Environmental Rules and Regulations described in the Construction Contract.

3. The ECO shall instruct the Project Manager to suspend the works if the Contractor and/or any Sub-Contractors do not comply with the contents of the CMP.
4. The ECO will submit monthly audit reports to DEAT, the Contractor and the Developer.
5. The CEMP describes the responsibility of all the staff during the construction phase.
6. The ECO will oversee the operations and ensure **compliance** with the CEMP.

- **Non Compliance:** The Contractor is deemed NOT to have complied with the CEMP, the ROD and the EIA if:
- Within the boundaries of the site, site extensions and haul/access roads there is evidence of contravention of the Specifications,
- Environmental damage ensues due to negligence,
- The Contractor fails to comply with corrective or other instructions issued by the ECO within a specific time,
- The Contractor fails to respond adequately to complaints from the public, and/or,
- Legal action is instituted against the developer in terms of the Environmental laws applicable in South Africa.

7. Prior to construction, the Contractor, in liaison with the ECO will submit a layout plan of the construction site indicating all of the following: storage areas, hazardous substances storage area (if applicable), different stockpile areas, batching plant (where applicable), material stores, waste disposal areas, on site offices, workshops, ablutions, access roads etc. This construction site layout plan must be submitted to DEDET and the ECO prior to site establishment.

2. CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN: The ECO will monitor compliance of this CEMP		
ACTIVITY	**MANAGEMENT/MITIGATION ACTION**	**RESPONSIBLE PERSON**
1. Site Establishment and Management.	1.1. A final walk through the site with the ECO to point out the presence sensitive areas, e.g. Rare Plants/Habitat, Archaeological- and Historical sites/artefacts or **any other aspect** which requires protection has to be undertaken prior to site establishment. 1.2. All staff must be trained to respect the importance of rare/conservation importance plants and artefacts (where applicable). 1.3. All cultural finds must be reported to the ECO. The ECO will initiate a process to handle the find. 1.4. Special features (rocky outcrops; large indigenous trees; rivers; etc.) must be indicated on the development map and demarcated on site prior to construction. Damage to such features must be rehabilitated and or monetary compensation must be made to the developer. 1.5. Establish a Site Office where copies of the EIA, EMP, ROD and a register of all applicable procedures (e.g. handling of hazardous materials) must be kept.	**Contractor**
	2. Limit construction/development site to existing infrastructure and/or to disturbed areas.	
	3. The construction site and storage areas must be safeguarded against fire.	
	4.1. Ensure that the Contractors Site is fully functional in terms of water, sewerage and power supply prior to the contractors coming on site. 4.2. Ensure that only approved workers and Sub-Contractors are accommodated and allowed access to the site.	
	5. Demarcate the boundaries of the total construction site for management purposes using steel droppers spaced at regular intervals with a nylon rope/barrier tape between the droppers or any other effective demarcation material/method.	
	6.1. The Contractor shall maintain the demarcation line and ensure that materials used for construction on site do not blow on/or move outside the site or pose a threat to any neighbours or adjoining property owners. 6.2. Where applicable, structures must be located in such a manner as to reduce visual intrusion and minimal disturbance to neighbouring properties. Make use of coloured netting or corrugated cladding to hide unsightly features.	

	7.1. Construction activities are restricted within these boundaries, thus all construction equipment, materials and personnel will remain within this demarcated area at all times. 7.2. Ensure that access to the site including related infra-structure and machinery is restricted to authorised personnel only.	**Contractor/s**
	8.1. Temporary access routes and haul roads are to be used within demarcated areas, and vehicle movement is strictly confined to these roads. No vehicle movement outside these areas is permitted without authorisation from the ECO. 8.2. Dust control measures, i.e. dampening access routes with water, must be implemented where necessary. The construction process will largely be undertaken by hand. The impact of dust should therefore be limited. 8.3. Damage to any existing roads as a result of construction activities will be repaired to the satisfaction of the ECO and the Developer.	
	9. Indicate clearly which activity is designated to each area within the site, e.g. stockpiling of materials etc. Limit these activities to single sites as per 1.2.	
	10. The Contractor shall ensure that all temporary structures/facilities, equipment, materials and waste used for construction activities are removed after completion of development.	
	11. The contractor shall clear and clean the construction site to the satisfaction of the ECO and the developer upon completion of the development.	
	12. Remove all components of demarcation when the construction phase is completed.	
	13. Rehabilitate disturbed areas. This will include but not be limited to: 13.1. Break up any hardened soil surfaces allowing seeds and rainwater an opportunity to penetrate the soil surface. 13.2. Brush pack/landscape bare areas and reduce the potential run off of water. 13.3. Shape/level off any unnatural areas to fit in with the surrounding landscape.	

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
2. Site Preparation and Site Management. (The ECO must be consulted at all times during this process).	1. Vegetation clearing must be kept to an absolute minimum. The ECO must be consulted prior to any removal of vegetation.	**Contractor/ECO**
	2. Selective trimming of woody vegetation (where applicable) may be considered to allow for worker access or infrastructure placement. The ECO will approve all actions in this regard.	
	3. No large trees (trunk diameter>250 mm) may be removed. ECO to be consulted if a tree must be removed. Special attention must be afforded to ***Breonadia salicina*** (Matumi) and ***Pterocarpus angolensis*** (Kiaat) trees. These two species may not be damaged and or removed.	
	4.1. Control of **alien invasive species** will be undertaken on the route/construction footprint in line with the requirements of the Conservation of Agricultural Resources Act. The ECO will identify plants (where applicable) which require removal and management. 4.2. Alien invasive plant material will be preferentially removed in entirety through mechanical means (e.g. chainsaw, hand-pulling of smaller specimens). 4.3. Chemical control is only required as a last resort or as a support mechanism to control coppicing and sprouting. 4.4. All exotic trees must be identified and earmarked for removal. The ECO will assist with identifications (where applicable). 4.5. A number of workers must be used to remove the vegetation i.e. 2-4. ECO to monitor. 4.6. Alien invasive plant material will not be stockpiled on site. All plant material controlled will be removed from the site and disposed of at an approved dump site as per Provincial procedures. 4.7. If during the establishment period, any noxious or excessive weed growth occurs, such vegetation will be removed by the contractor.	
	5. Collection of firewood/seeds/fruit or any biological material (where applicable) is strictly prohibited.	
	6. No animals including snakes should be killed or injured by workers during the construction- and or the operational phases of the project.	

	7. The Contractor is not allowed to deface, paint or mark and/or damage natural features/vegetation on the site.	
	8. Topsoil will have to be removed from all areas where permanent structures are to be constructed and where construction related activities will occur, e.g. pipeline route, building for hydro equipment.	
	9. Topsoil to be handled twice only; once to strip and stockpile and secondly to replace along the contour, level, shape and scarify. The topsoil must be replaced as soon as possible.	
	10. Topsoil is not be compacted, nor should any object be stored/stockpiled upon it.	
	11. The Contractor shall prevent pollution incidents on the top soil. ECO to monitor.	
	12. Contractor to be held responsible for providing construction-, drinking-, and washing water for all the activities on site.	

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
3. Excavation, Backfilling and Levelling.	1. During excavation topsoil has to be stockpiled as specified in 2.7 –2.9.	**Contractor**
	2.1. Excavation of sand to solid ground to be done carefully and to ensure proper drainage. 2.2. Remove sand and debris, and expose all rocky material to ensure proper binding with concrete.	
	3. Construction to be done preferably over a stable substratum (rocky substrate) to provide maximum anchoring opportunity.	
	4. Excess sand (after construction) must be filled in and landscaped into natural sandbanks blending in with the topography of the surroundings.	
	5. Excess excavated rocky material (rock and boulders) to be used for erosion control/cladding where applicable or for purposes of landscaping.	
	6. The Contractor shall backfill according to the requirements of progressive reinstatement, i.e. reinstatement of disturbed areas to topsoil profile on an ongoing basis, immediately after selected construction activities are completed, which will allow for passive rehabilitation.	
	7. Excess stockpiled building material must be removed completely, and all areas levelled.	
	8. Excess sand and soil resulting from levelling activities of the work area to be stored in low heaps on the access road/or already disturbed areas.	
	9. Excess topsoil to be spread evenly over the area in a manner that blends in with the natural topography.	
	10. When heavy machinery has cleared the bulk of material stockpiles, the disturbed areas are to be levelled and cleared of any unnatural foreign material manually using shovels.	
	11. The existing canal is constructed largely of soil and this approach should be retained to assist small mammals and other animals which may accidentally fall into the canal with a means of escape from the water.	

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
4. Stockpiling of Building Materials.	1. Limit to the demarcated sites only. This site must be located above the 1:100 year flood line preferably on the access road.	**Contractor**
	2. Consider single sites a priority where possible.	
	3. Stockpiles of expensive materials i.e. cement, should be removed easily from site in times of no construction or rainy weather. The use of a shipping container should be considered.	
	4. Allocate space for waste specific sites e.g. waste site for empty cement bags, cement rubble, wooden rubble, metal off cuts etc. These sites must be fenced off and waste must be removed weekly to the designated landfill site in Nelspruit.	
	5. Specific sites must be allocated for the storage and handling of fuels (where applicable) and liquids required for operational purposes, e.g. oils, lubricants etc.	
ACTIVITY	**MANAGEMENT/MITIGATION ACTION**	**RESPONSIBLE PERSON**
5. Materials: Handling and Storage.	1. Fuels and other operational liquids (grease, oils, soaps etc.) required during the construction phase to be stored at a central depot in the construction camp at Donora.	**Contractor**
	2. Fuel Stores and diesel generators to be placed on a concrete, or similar base surrounded by a brick bund/wall.	
	3. Bunded area to have the volume of 100% of the volume of the largest tank in the storage area plus 100% of the volume of all other tanks.	
	4. Concrete slab to be sloped towards a sump to enable any spilt fuel/liquid to be removed.	
	5. Liquid fuel and gas not be stored in the same storage area. Gas to be stored in a locked metal cage.	
	6. Tanks containing fuel to have lids, which are to remain firmly shut.	
	7. Only clean empty tanks/drums to be stored on bare ground.	
	8. Any waste water collected at the sump to be disposed of at hazardous waste site.	
	9. A "No Smoking" restriction must be enforced inside and within 5m of these stores.	
	10. Contractor to ensure that there is adequate fire fighting equipment at the fuel stores. The OHAS Act will apply at all times in this regard.	

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
6. Servicing and Refuelling of Construction Equipment.	1. Contractor to ensure refuelling/servicing of equipment to be undertaken within the confines of the construction camp.	**Contractor**
	2. Contractor to change oils/lubricants at designated locations in the construction camp, except for a breakdown or an emergency.	
	3. Contractor to ensure that drip trays are available to collect any fluid. Any accidental spillages to be cleaned/removed with immediate effect.	
	4. Ground surface at refuelling/service areas to be protected against pollution caused by spills and or overfills. Drip trays, absorption blankets and plastic sheeting for protection and clean-up to be used at all times.	
	5. All water run-off from these refuelling/service areas to be collected, contained on site and stored in watertight containers prior to disposal off-site at a hazardous waste site.	
	6. All equipment that leaks to be repaired immediately or to be removed from site.	
	7. All soils, which are contaminated accidentally by spillages, must be stored in closed containers and handled by an approved/accredited Spill Control Expert, e.g. Chops Raats - Savuti Spill Control - Cell: 082 678 6399 (Nelspruit).	
ACTIVITY	**MANAGEMENT/MITIGATION ACTION**	**RESPONSIBLE PERSON**
7. Waste Management: Solid Waste.	1. All waste to be disposed of off-site at an approved landfill site (Nelspruit Landfill Site).	**Contractor**
	2. Contractor not to dispose of any waste and/or construction debris through burning or by burying.	
	3. Contractor to supply tamper proof waste bins throughout the site at locations where construction workers are working.	
	4. If construction workers are to eat on site, contractor has to designate specific areas for this purpose and to provide for access to adequate refuse bins.	

	5. Tamper-proof refuse bins to be emptied on a daily basis. Refuse bins not to be used for any other purpose. The waste to be removed daily to a recognised landfill site. (Nelspruit Landfill Site).	
	6. No mixed concrete/cement to be deposited directly onto the ground. Concrete may only be mixed on top of a protective plastic layer/sheeting/conveyor belt sheet. Excess concrete or cement from mixing to be deposited in a designated area awaiting removal to an approved landfill site. (Nelspruit Landfill Site).	
	7. Old cement bags/mixing bags/platforms to be discarded in wind and spill proof containers. No cement bags closed and or open and empty to lie around the site.	
	8. All loose building rubble and waste from the site to be disposed of at an appropriate fenced off rubble site for future removal to the Nelspruit Landfill site.	
	9. All waste including cigarette boxes, cigarette butts, paper, plastic bags, tin, glass, wires, cable ties, and organic waste e.g. peels and bones to be disposed of in **separate/designated** refuse bins. This waste to be transported weekly in an appropriate manner (plastic bags) to the approved waste site for disposal and recycling at the Nelspruit Landfill Site.	
ACTIVITY	**MANAGEMENT/MITIGATION ACTION**	**RESPONSIBLE PERSON**
8. Waste Management: Liquid Waste.	1. Construction water refers to all water affected by construction activities.	**Contractor**
	2. Contractor may discharge "clean" water over land and allow this water to filter into the ground. Contractor to ensure that no erosion occurs as a result of overland discharge.	
	3. Water released from the hydro plant must be dissipated over rock piles/gabion mattress to prevent any potential erosion of the river bank and to prevent fish from swimming upstream towards the hydro building.	
	4. Contractor is encouraged to recycle dirty wash water in minimizing the amount of water to be removed from site.	
	5. No River/Stream/Natural Drainage Line must be used for cleaning of tools and equipment. This includes the washing of clothes and bathing/recreational purposes.	
	6. All washing of equipment to be undertaken at the designated facilities in the construction camp.	
	7. All cleaning operations to take place off-site at a location where wastewater can be disposed of in an acceptable manner. **Trucks delivering concrete are not to be washed on site or anywhere on site.**	

	8. Water from any other cleaning operations to be collected in a "conservancy" tank removed from site and disposed of in the agreed manner.	
	9. Contractor to contain wash water from cement mixing operations by directing the water into a sump for collection. Waste in the sump to be removed to an appropriate landfill site.	
	10. Water and slurry to be contained to prevent the pollution of the ground surrounding the mixing and/or disposal points.	
	11. All visible remains of excess concrete to be physically removed and disposed of as waste.	
	12. A drainage system to be installed to divert run-off from areas of potential contamination/pollution, e.g. vehicle maintenance area, workshops and batching areas.	
	13. No spills to be channeled into natural environment. Contractor to take reasonable precautions to prevent pollution of the ground and water resources.	
	14. Construction waste to be discarded at a registered landfill site (Nelspruit).	
	15. Adequate temporary (e.g. Enviro-loos) ablution facilities to be put in place on site located near to working areas. 1 Enviro-loo per 15 workers. Toilet paper must be provided by the contractor.	
	16. All contaminated soil e.g. refuelling spills/leaks, to be excavated to the depth of contamination, and to be removed to an appropriate landfill site. See par. 6.7.	
	17. Contractor to ensure that no fuels (petrol/diesel), oils, lubricants and/or other chemicals are discarded onto the ground. Use drip trays in all potentially risky situations.	

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
9. Waste Management: Hazardous Waste (Where applicable).	1. Contractor to comply to all national, regional, and local legislation with regards to the storage, transport, use and disposal of petroleum, chemicals, harmful and hazardous materials and substances.	**Contractor**
	2. Contractor to provide the ECO with a list of all petroleum, chemical, harmful and hazardous materials and substances on site, together with all the storage, handling and disposal procedures for these materials. A **register** must be kept at the site office containing all the written/prescribed handling procedures.	
	3. Contractor to be responsible for training and education of workers that will be working with these materials. Training to include the proper use, handling and disposal of the substances.	
	4. Storage of chemicals to be safe, tamper proof and under strict control.	
	5. Storage and handling of fuels, lubricants, chemicals and other hazardous substances to be protected by placing an impermeable liner beneath the above ground storage tanks in order to prevent accidental contamination of the soil.	
	6. All storage areas to be bunded and equipped with a peripheral collection drain.	
	7. Bunded area must be large enough to contain a spillage equivalent to the volume of **each container** of the substances stored.	
	8. All petroleum, chemical, harmful and hazardous waste on site to be stored in enclosed bunded areas. Such waste including containers to be disposed of off-site at a hazardous waste disposal site.	
	9.1. The contractor will ensure that there is a supply of absorbent material (or absorption blankets) readily available on site to absorb, break down and where possible control any spillages that may occur. The amount and type of absorbent material must be appropriate to the volumes of hazardous liquids on site. 9.2. A staff member must be designated to manage this process. 9.3. Any accidental chemical fuel spills to be addressed and reported immediately. Savuti Spill Control in Nelspruit are well versed on the subject and can be contacted as follows: Chops Raats: Cell: 0826786399	

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
10. Access Roads	1. Adhere to the local speed limit on the farm (40km/h) at all times.	**Contractor**
	2. All construction roads created for the purposes of the development must be designed and planned in advance with the ECO.	
	3. Construction roads must be designed to incorporate adequate drainage and water attenuation structures.	
	4. Construction personnel should only use authorised paths and roads.	
	5. Contractors to limit the number of deliveries where possible through appropriate advance planning. Contractors will be required to submit a delivery timetable.	
	6. Cement and gravel spillage on the public roads must be cleared up immediately.	
	7. Any damage caused by the construction activities to any access or public roads must be rehabilitated thoroughly upon completion of the construction.	
ACTIVITY	**MANAGEMENT/MITIGATION ACTION**	**RESPONSIBLE PERSON**
11. Construction Staff	1. The Code of Conduct for Contractors as described in the Tender Document will apply to all Construction Staff. The **EMP will be included as a condition** of the Tender Document.	**Contractor**
	2.1. Adequate accommodation, ablutions and cooking facilities to be erected at the Contractors Camp (Donora). The farmer/applicant/developer will determine a suitable site in the event that construction staff will have to overnight on site. 2.2. If shower facilities (where applicable) are provided the following controls must be put in place: • Positioning of the shower and specifically its discharge point must be done to ensure that erosion and build up of detergents does not occur. • All discharge from the shower and other washing facilities must pass through a suitable filter to reduce the load of detergents to the environment. • Filtered water discharge may thereafter be released to the environment, but mechanisms will be investigated to ensure that the water is evenly dispersed so as to not lead to greening up and or swampy conditions in one limited area. • Where possible all waste water will be connected to existing service lines.	

	3. A water and sewerage service (Enviro-Loos) to be in place before construction commences. Water and Sewerage to be properly monitored to prevent over usage and overloading.	
	4. Boundaries of the accommodation, ablutions and cooking facilities to be clearly demarcated and fenced off where necessary. **Preferably the majority of labourers** will stay off site.	
	5.1. Dry chemical toilets/Enviro-loos to be available on site during the day. 5.2. Toilets to be cleaned and serviced regularly by an accredited service provider. 1 toilet per 15 workers. 5.3. Contractor to supply toilet paper. 5.4. The entrances to the toilets must be adequately screened from public view. 5.5. All temporary facilities must be connected to formal Donora service structures as soon as possible.	
	6.1. A designated place for food preparation and dining to be established on site. 6.2. Dishwashing facilities must be provided.	
	7. No open fires are allowed.	
	8. Adequate tamper proof refuse bins to be provided on site and at accommodation units. (Where applicable).	
	9. Staff may be transported in open vehicles, equipped with built up sides and a cover of some sort or type. Existing regulations of the Traffic Ordinance will apply at all times.	
ACTIVITY	**MANAGEMENT/MITIGATION ACTION**	**RESPONSIBLE PERSON**
12. Fire.	1. Contractor to take all the necessary precautions to ensure that no fires are caused as a result of activities on site.	**Contractor**
	2. Contractor to supply all accommodation and cooking facilities, site offices, workshop areas, storage areas, with **approved fire-fighting equipment**.	
	3. All fire fighting equipment to be maintained in good operating order.	
	4. No open fires for heating or cooking are allowed on site.	
	5. Closed fires/stoves shall only be permitted at agreed designated safe sites in the construction camp/staff village.	

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
13. Accidents.	1. Contractor to comply with the Occupational Health and Safety Act (OHASA), National Building Regulations and any other regulations with regard to safety on site.	**Contractor/ECO**
	2. Contractor to ensure that all staff is familiar with all the emergency procedures.	
	3. Contractor to ensure that lists of all emergency telephone numbers/contact people are available and are posted at relevant locations, e.g. site office, at all times; and that they are updated regularly.	
	4. Contractor to be responsible for establishing an emergency procedure for dealing with spills/releases of fuels, chemicals, and hazardous substances. All spills/accidents to be recorded (in the **Incident Register**) and reported to the ECO. The clean up of spills and any damage caused shall be for the Contractor's account.	
ACTIVITY	**MANAGEMENT/MITIGATION ACTION**	**RESPONSIBLE PERSON**
14. Adverse Weather Conditions and Erosion Protection.	1. Contractor to ensure that no sumps (where applicable) are emptied unnecessarily. Special care to be taken during rainy periods/adverse weather conditions to prevent contents from overflowing.	**Contractor**
	2. Contractor to set up a procedure for rapidly emptying any collection points to prevent them filling with rainwater.	
	3. Contractor to ensure that rainwater does not run off areas containing pollutants, which can result in a pollution threat.	
	4. Contractor to ensure that a procedure is established for dealing with potentially polluted rainwater. Procedures/method statements must be filed in the register in the site office.	
	5. Stockpiles of fine material such as sand, topsoil, cement etc. to be protected from rain runoff and wind.	
	6. During construction, Contractor to protect all areas susceptible to erosion by installing all the necessary temporary and permanent drainage works ASAP. Contractor must also prevent water scouring of the slopes, embankments (where applicable) and any other areas.	
	7. Correct any cause of erosion at the onset thereof through the most appropriate mechanism. Discuss any remedial actions with the resident ECO.	

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
15. Noise, Visual and Dust Impacts.	1.1. Contractor to use the equipment that is appropriate to the task in order to minimise the extent of damage to the environment and minimise the noise levels. 1.2. The provisions of SABS 1200A will apply to all areas within audible distance of the site.	**Contractor**
	2.1. Noise levels to be kept within acceptable limits for a conservation/tourism area, and not to be of such a nature as to detract from the experience of persons in the area. No amplified music will be allowed. 2.2. Construction activities generating output levels of 85dB or more will be confined to the hours 06h00 to 17h00 Mondays to Saturdays. 2.3. The Contractor will take preventative measures (e.g. screening, muffling, timing, pre-notification of affected parties) to minimise complaints regarding noise and vibration nuisances from sources such as power tools and high impact construction (blasting) activities. No blasting is however envisaged for this development.	
	3. The type and colour of both temporary and permanent structures to be of neutral non-reflective colours.	
	4. Lighting temporary/permanent to be placed in such a way not to be of a nuisance to residents/guests and the general public visiting the area.	
	5. Dust to be controlled on site at all times. Most of the work will be undertaken by hand and it is envisaged that the generation of dust will be low.	

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
16. Construction: Specific Activities	1. **Trenching** for the pipeline and the electrical cable will be undertaken as follows: • Trenching will be minimised through the use of single trenches for multiple service provision. • Planning and selection of trench routes will be indicated on the Site Development Plan, and will consider environmental factors such as erosion and "no go" areas. All large trees (more than 250mmin diameter) especially the species listed in the Specialist Study will receive right of way and may not be damaged and or removed. • Trench routes with permitted working areas will be clearly defined and marked with painted stakes prior to excavation. • All trenches must be clearly marked in order to alert people to the potential hazard thereof. • All open trenches must be patrolled on a minimum of a daily basis to ensure that animals, e.g. lizards, small rodents, have not become trapped. Such animals will be removed and released. • Stripping and separation of topsoil will occur as stipulated by the CEMP. • Soil will be excavated and used for re-filling trenches using the rollover method, i.e. progressive re-instatement: This entails the following approach: • Soil from the first trench section will be stockpiled. • Soil excavated from subsequent trench lengths will be used to backfill once the services have been laid on an ongoing basis. • The final trench length will be re-filled using the originally stockpiled soil. • Trench lengths will be kept as short as practically possible. • Trenches will be re-filled to the same level as, or slightly higher to allow for settlement of the surrounding land surface to minimise erosion. Excess soil will be stockpiled in an appropriate manner. • Immediately after refilling, the disturbed areas will be stabilised. 2.1. The Contractor will minimise the extent of any damage to any drainage line that is necessary to complete the works, and will not pollute any eco-system as a result of construction activities. 2.2. The Contractor will not cause any physical damage to any aspects of a watercourse (where applicable), other than that which is necessary to complete the works as specified and in accordance with the accepted method statement.	**Contractor/ECO**

	2.3. Construction activities will not permanently alter the surface or subsurface flow of water through the area. 3.4. In order to avoid erosion at storm water and hydro plant discharge points a 300mm thick gabion mattress will be constructed. This will allow for a gradual dissipation of water back into the receiving environment. 3.5. **Specialist Study: Ecology: Construction Specifics:** **Pipeline Route, Road Alignment and Electrical Cable Route:** • **Protection of Trees: Two protected tree species,** the Transvaal Teak (***Pterocarpus angolensis***) and the Matumi (***Breonadia salicina***) are commonly found on the site. All construction activities must avoid these two species at all times and none of these species may be removed and or damaged. The route alignments have been demarcated on the maps (Appendix A, preferred route and option), however an **on site final walk through** must be undertaken by the ECO and the contractor to ensure that all roleplayers take note of the trees which must be protected from damage. All trees will be marked by the ECO using danger tape. • **Levelling soil and filling trenches:** All trenches must be filled as soon as possible to limit the impact of animals falling into the trenches. All animals must be rescued from the trenches. A daily patrol along all trench routes is required prior to the commencement of construction activities. **Rehabilitation of the construction area:** • **Excavated soil:** Excavated soil should be worked into the surrounding area along the natural contours and to blend in with the lie of the land. **Construction of the weir and the fishladder:** • **Transporting equipment and materials to site:** Construction material not used should be removed from the riverine area and care should be taken not to leave any cement/concrete or other foreign material on site. • **Construction process:** It is necessary to deal with the construction of the weir (i.e. raising the weir in places) gradually or in phases to provide the local fish assemblages, an opportunity to retreat to new habitats. • **Measuring Water Flow:** It is critical that the recommended Maintenance Low Flows as described in the Specialist Study (Appendix D, Table 31) are maintained at all times. To ensure that this recommendation is implemented, measuring devices and sluice gates must be installed to ensure that water quantity in the canal and down to the hydro station remain within the recommended parameters.	

	• **Power Lines:** Once the electricity is generated at the hydro plant it will be fed into an electrical cable and sent up into a powerline which will link up with existing lines on the farm. A short section of powerline will be erected (approximately 400m). It is recommended that this new section of powerline is made visible to the birdlife in the area. Several ways are known to ensure that this new line does not impact upon the birdlife on the farm. Marking wires and conductors with white spirals and black crossed bands can reduce mortality by up to 75%. Other helpful devices include bird flappers and diverters, which swivel in the wind and glow in the dark. • **Monitoring:** Monitoring during and after construction should be undertaken. It is envisaged from the proposed development methods and the present ecological state of the site, that, if the project is put into operation in accordance to the prescribed environmental guidelines, **no major adverse effects will influence the ecological integrity of the site.** • To ensure a **sustainable system for future generations** it is important that an aquatic monitoring programme is implemented as a condition of the authorization. This monitoring programme must include the section of the river between the Donora Weir and the Hydro Electric Plant. This programme (under the auspices of an aquatic ecologist) will address and monitor the effect of the reduced flow in the river due to the diversion of water for the production of hydro electricity. Furthermore, water quality measurements (especially oxygen and temperature levels) up stream and down stream of the hydro plant should satisfy any uncertainties surrounding these parameters in the production of electricity. Finally, the monitoring programme will assess the capability of the local fish to utilize the newly constructed fishladder. • Dr. Andrew Deacon (fresh water ecologist) has many years of experience in the design and workings of **fishways**, especially in the Lowveld of South Africa. It is recommended that he oversees the construction process of the fishway as described in this report (BAR).	

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
17. Emergency Procedures: General.	1.1. The Contractor will take all reasonable and active steps to avoid increasing the risk of fire through their activities on site. 1.2. No general fires for heating or burning of waste material will be tolerated on site. In terms of the Atmospheric Pollution Prevention Act (APPA), burning is not permitted for waste disposal. 1.3. Precautions (e.g. suitable fire extinguisher, welding curtains) when working with welding or grinding equipment near potential sources of combustion will be taken. 1.4. All fire control mechanisms (fire fighting equipment) will be routinely inspected by a qualified investigator for efficiency thereof and be approved by local fire services. Such mechanisms will be present and accessible at all times. 1.5. All staff on site will be made aware of general fire prevention and control methods, and the name of the responsible person to alert to the presence of a fire. 1.6. The Contractor will advise the relevant authority of a fire outside of a demarcated area as soon as it starts and will not wait until he can no longer control it. 1.7. The Contractor will ensure that his employees are aware of procedures to be followed for dealing with spills and leaks, which will include notifying the relevant authorities and the ECO. 1.8. The Contractor will ensure that the necessary materials and equipment for dealing with spills and leaks are available on site at all times. 1.9. Treatment and remediation of the spill areas will be undertaken to the reasonable satisfaction of the ECO. 1.10. In the event of a hydrocarbon spill, the source of the spillage will be isolated and contained. The area will be cordoned off and secured. The Contractor will ensure that there is always a supply of an appropriate absorbent material readily available to absorb, breakdown and where possible treat a minor hydrocarbon spillage.	**Contractor**

ACTIVITY	MANAGEMENT/MITIGATION ACTION	RESPONSIBLE PERSON
18. Health and Safety	1.1. Contractor to provide an Occupational Health and Safety Management Plan to the ECO for approval prior to the commencement of works in terms of the Construction Regulations. 1.2. Ensure that there is an inspection schedule and log for use by security or contract staff. 1.3. Fencing and barriers will be in place in accordance with the Occupational Health and Safety Act (Act No. 85 of 1993). 1.4. Applicable notice boards and hazard warning notices will be put in place and secured. Night hazards will be indicated suitably (e.g. reflectors, lighting, traffic signage). 1.5. Emergency- and Management Staff contact details will be prominently displayed. 1.6. Security personnel will be briefed and have facilities to contact relevant management and emergency personnel. 1.7. No unauthorised firearms or weapons of any kind will be permitted on the site. 1.8. Fire hazards will be identified and the relevant local authority division notified of any such potential threats (e.g. large brush stockpiles, fuel sources) 1.9. In the event of use, scaffolding must be adequately secured. 1.10. Structures vulnerable to high winds must be secured. 1.11. Due to the nature of the project, the construction activities will not be able to be totally cornered off from adjacent land uses, thus making construction a safety issue. To this end, suitable warning mechanisms must be utilised – including but not limited to danger tape and signage.	**Contractor**

	1.12. Should the site be closed for a period of more than one week, a report on compliance will be lodged with the Site Manager and the ECO, and the following will be confirmed: • Stores will be left at as low a volume as practicable, with no leaks. • The store area will be secure and locked. • Fire extinguishers will be serviced and accessible. • The area will be secure from accidental damages. • Emergency- and contact numbers will be available and prominently displayed. • Toilets will be empty and secured. • Refuse bins will be empty and secured. • Access to the site must be limited to authorised personnel only. • Security staff will patrol and guard the site.	
ACTIVITY	**MANAGEMENT/MITIGATION ACTION**	**RESPONSIBLE PERSON**
19. Site Clean Up	1. Contractor to ensure that all temporary structures, materials, and water and waste facilities used for construction activities are removed upon completion of the project.	**Contractor/ECO**
	2. All signs of disturbance and contractor activity must be rehabilitated to a state as on day of site handover.	
	3.1. All **re-seeding** activities will be undertaken at the end of the dry season (middle to end October) to ensure optimal conditions for germination and rapid vegetation establishment. 3.2. When ripping for rehabilitation the contractor will rip to refusal or a minimum of 300 mm. 3.3. The rehabilitated and seeded areas must be harrowed after spreading the topsoil and fertiliser uniformly. 3.4. Inspect rehabilitated area at three monthly intervals during the first and second growing season to determine the efficacy of rehabilitation measures. 3.5. Take appropriate remedial action where vegetation establishment has not been successful or erosion is evident. 3.6. Only indigenous vegetation is to be used in any landscaping which may be undertaken.	
	4. The ECO **must sign off the works** and the site during a Final Audit Assessment.	

PROTECTION OF THE ENVIRONMENT: DECLARATION OF UNDERSTANDING: CONTRACTOR TO SIGN:

The Contractor will not be given right of access to the Site until this form has been signed.

I / we, _____ {Contractor} record as follows:

I / we, the undersigned, do hereby declare that I / we am / are aware of the increasing requirement by society that construction activities shall be carried out with due regard to their impact on the environment.

In view of this requirement of society and a corresponding requirement by the Employer with regard to this Contract, I / we will, in addition to complying with the letter of the terms of the Contract dealing with protection of the environment, also take into consideration the spirit of such requirements and will, in selecting appropriate employees, plant, materials and methods of construction, in-so-far as I / we have the choice, include in the analysis not only the technical and economic (both financial and with regard to time) aspects but also the impact on the environment of the options.

In this regard, I / we recognize and accept the need to abide by the "precautionary principle" which aims to ensure the protection of the environment by the adoption of the most environmentally sensitive construction approach in the face of uncertainty with regard to the environmental implications of construction.

I / we have signed the Declaration of Understanding with respect to the Environmental Management Programme.

I / we acknowledge and accept the right of the Employer to deduct, should they so wish, from any amounts due to me / us, such amounts (hereinafter referred to as fines) as the Construction Manager shall certify as being warranted in view of my / our failure to comply with the terms of the Contract dealing with protection of the environment, subject to the following:

The Project Manager, in determining the amount of such fine, shall take into account inter alia, the nature of the offence, the seriousness of its impact on the environment, the degree of prior compliance / non-compliance, the extent of the Contractor's overall compliance with environmental protection requirements and, in particular, the extent to which he/she considers it necessary to impose a sanction in order to eliminate / reduce future occurrences.
The Construction Manager shall, with respect to any fine imposed, provide me / us with a written statement giving details of the offence, the facts on which the Construction Manager has based their assessment and the terms of the Contract (by reference to the specific clause) which has been contravened.

Signed _____
Date _____

RHENGU ENVIRONMENTAL SERVICES
P O Box 1046 Cell: 082 414 7088
MALELANE Fax: 086 685 8003
1320 E–mail: rhengu@mweb.co.za

ACCEPTANCE OF EMP: Donora Hydro Plants Project:

DECLARATION

I/We, the undersigned as the proponent/s/person/s responsible for the above-proposed activity undertake to abide by the above-designated EMP and associated conditions.

Name: _____

Signature: _____

Date: _____

Name: _____

Signature: _____

Date: _____

CHECKED BY ENVIRONMENTAL CONTROL OFFICER

Name: _____

Signature: _____

Date: _____

APPENDIX G:
TITLE DEED

Page 1

4250,00 496,00 62537

OPGESTEL DEUR MY
TRANSPORTBESORGER
BOTHA H M

VERBIND	MORTGAGED
R 1 400 000,00	
B 151665 04	REGISTRATEUR VAN AKTES

08 12 04

AKTE VAN TRANSPORT 119402 99

Sy dit hiermee kenneliik

DAT HESTER MARGARETHA BOTHA

voor my Registrateur van Aktes te Pretoria, het verksyn, sy, die genoemde komparant daartoe behoorlik gemagtig uit krag van 'n volmag geteken te Nelspruit op die 23ste Julie 1999, en aan haar verleen deur

JOHANNES ERASMUS VAN DER MERWE
(Identiteitsnommer 580630 5059 08 6)
behoorlik daartoe gemagtig kragtens 'n Spesiale Volmag aan hom verleen deur

ZILLO DANIEL VAN DER MERWE
(Identiteitsnommer 190919 5031 08 4)
Getroud buite gemeenskap van goedere

geteken te PRETORIA, op die 22ste Julie 1999

Vir verdere endossement sien
For further endorsements see .....
6

Page 2

EN die genoemde komparant het verklaar dat sy prinsipaal waarlik en wettiglik verkoop het op 22 JULIE 1999, en dat die genoemde Komparant in haar hoedanigheid voormeld, by hierdie akte sedeer en transporteer in volle en vrye eiendom aan ten gunste van

DIE TRUSTEES VAN TYD TOT TYD VAN
DIE DONORA TRUST
I T 2122/99

diese opvolgers in titel of regsverkrygendes

RESTERENDE GEDEELTE VAN GEDEELTE 5 van die plaas DOORNKRAAL 244, Registrasie Afdeling J T, Provinsie MPUMALANGA;

GROOT 201,3619 (TWEEHONDERD EN EEN komma DRIE SES EEN NEGE) Hektaar;

AANVANKLIK GEREGISTREER kragtens Sertifikaat van Geregistreerde Titel T 11551/1931 met kaart daaraangeheg en gehou kragtens Akte van Transport T 2400/1966;

ONDERHEWIG aan die volgende voorwaardes :

A 1. The Lydenburg Estates Limited reserves to itself , its successors and assigns (hereinafter collectively referred to as "the Company") the sole right to all minerals, metals, oil, oil shale, coal, lime and other mineral deposits and precious stones, in or upon the said property with full right to the company to prospect. mine, work for and dispose of same and for the exercise of such right the company shall be entitled to a right of way for itself and its employees to the works so carried on to grazing for its transport animals to sink shafts and boreholes to construct dames, lay trams rail, pipe and electrical lines, erect buildings for

Page 3

further terms, rights and privileges as are embodied and contained in clauses 2 and 3 hereinafter mentioned.

2 The company shall be entitled to as much of the surface water as it is not required by the owner of the said land and shall further be entitled to all water which may be developed by it through boring and conserving in dams or reservoirs for the purpose of its mining operations but shall not be allowed to sink boreholes within a radius of 500 yards of the boreholes which the owner of the said land may have sunk for the purpose of developing water.

3. The company shall have the right to re-purchase for permanent mining establishment purposes so much surface area (not exceeding 42,8266 (Forty Two comma eight two six six) Hectare of the said land as it my require at a price reckoned on the then current market valuation of similar agricultural land in the district, which price shall not be enhanced by the mineral value whatsoever and failing mutual agreement as to the price then the matter shall be settled by arbitration under the provisions of the Arbitration Act then in force in the Transvaal.

4. Should any damage or injury to the buildings, crops, plantations and other improvements be caused through the prospecting or mining operations by the company it shall compensate the owner of the said land for such injury or damage and in case of disagreement between the parties as to the extent of the injury or amount of damages to be paid the same shall be decided by arbitration.

5. The company shall be obliged to fill up or properly enclose all disused holes and cuttings made by it in connection with its prospecting or mining operations.

6. The right to minerals above referred to shall include all claim licences and all other rights in respect of revenue derived from minerals to which an owner of land is entitled under and

Page 4

by virtue of the existing or future laws relating to precious and base metals and minerals and precious stones but shall not include the revenue derived from stand licences which shall be and remain the property of the owner of the said land, which said rights are held by the said company under Certificate of Mineral Rights No. 526/1931 S dated the 14th November 1931, welke voorbehou gemaak is ten opsigte van Gedeelte E genoem Noora Falls van die plaas Doornkraal No 244, Registrasie Afdeling J T, distrik Nelspruit.

B The property hereby transferred is entitled to a right of way over portion 6 of the farm DOORNKRAAL No. 244, Registration Division., district Nelspruit, measuring 284,0885 (Two hundred and eighty four comma nought eight eight five) Hectare, held under Deed of Transfer No 13711/1943 dated the 7th June 1943.

C. Die eienaar of sy regsopvolgers en regsverkrygendes van die eiendom hiermee getransporteer is nie geregtig op water van watter aard ookal nie, uit die publieke strome wat onstaan op of vloei oor -

(a) Gedeelte 7 ('n gedeelte van gedeelte genoem BRONDAL PARK) van die Plaas BOSCHJESKOP No. 250, Registrasie Afdeling J.T. (voorheen No. 131) distrik Nelspruit, Groot 100,1997 Hektaar, en

(b) Gedeelte 6 ('n gedeelte van gedeelte B genoem NOORA FALLS) van DOORNKRAAL No. 244, Registrasie Afdeling J T, (voorheen No. 105), distrik van Nelspruit, groot 284,0885 Hektaar, gehou onder Akte van Transport No. 13711/1943 gedateer 7 Julie 1943.

soos meer ten volle sal blyk uit Notariele Akte van Serwituut No. 492/1954 S.

D. Kragtens Notariele Akte No K1319/89 S gedateer 2 Maart 1989, is die hierinvermelde eiendom geregtig tot 'n reg van weg oor Gedeelte 25 van die Plaas Boschjeskop 250, J.T Transvaal; soos meer volledig sal blyk uit gemelde Notariele Akte waarvan 'n afskrif daaraan geheg is.

EN verder onderhewig aan sodanige voorwaardes as wat in gemelde aktes vermeld staan of na verwys word.

Page 5

WESHALWE die komparant afstand doen van al die reg en titel wat sy genoemde prinsipaal voorheen op genoemde eiendom gehad het en gevolglik ook erken dat hy geheel en al uit die besit daarvan onthef is en nie meer daartoe geregtig is nie, en dat kragtens hierdie akte, die genoemde

DIE TRUSTEES VAN TYD TOT TYD
DIE DONORA TRUST

diese opvolgers in titel or regsverkrygendes tans en voortaan daar toe garegtig is, ooreenkomstig plaaslike gebruik, behoudens die regte van die Staat, en ten slotte erken hy dat die koopprys die som van **R495 000,00 (VIERHONDERD VYF EN NEGENTIG DUISEND RAND)** bedra.

TEN BEWYSE WAARVAN ek, die genoemde Registrateur tesame met die komparant hierdie akte onderteken ne met die ampsseel begraktig het.

ALDUS GEDOEN EN GETEKEN te PRETORIA op die 11 10 99

In my teenwoordigheid:

q q.

REGISTRATEUR VAN AKTES.

Page 6

BLADSY/PAGE 6

T119402/99

VERBIND MORTGAGED

VIR FOR R 800 880,00

B 004540/06

11 01 06.

REGISTRATEUR/REGISTRAR

APPENDIX H:
CORRESPONDENCE WITH DEDET

MPUMALANGA PROVINCIAL GOVERNMENT

Building No. 4
No. 7 Government Boulevard
Riverside Park Extension 2
Nelspruit
1200
South Africa

Private Bag X 11215
Nelspruit, 1200
Tel: 013 766 4004
Fax: 013 766 4614
Int: +27 13 766 4004
Int: +27 13 766 4614

Department of Economic Development, Environment and Tourism

Litiko Letekutfutfukiswa Kwetemnotfo, Simondzvo neteku Vakasha | Umnyango WezokuThuthukiswa KoMnotho, iBhoduluko nezamaVakaljho | Departement van Ekonomiese Ontwikkeling, Omgewing en Toerisme

Enquiries: Michael Nyirenda, 18 Jones Street, Nelspruit, 1200, Tel: (013) 759 4151/4000, Fax: (013) 759 4165
Reference: 17/2/3/E-7

Att: Ralf Kalwa
Rhengu Environmental Services CC.
P.O. Box 1046
Malelane
1320

Fax no: 086 685 8003

Dear Sir,

APPLICATION FOR ENVIRONMENTAL AUTHORISATION: THE PROPOSED DONORA FALLS HYDRO-PROJECT ON PORTION 5 OF THE FARM DOORNKRAAL 244, MBOMBELA LOCAL MUNICIPALITY, MPUMALANGA PROVINCE.

The Department confirms having received the application form for environmental authorisation of the abovementioned project on 27 September 2010. You may proceed with the basic assessment process required in terms of the Environmental Impact Assessment Regulations, 2010.

The application has been assigned the reference number **17/2/3/E-7**. Kindly quote this reference number in any future correspondence in respect of the application and in all methods of notification used during the public participation process. The responsible officer is **Mr. Michael Nyirenda** and all correspondence must be directed to: The Deputy Director, Environmental Impact Management, Ehlanzeni District Office, marked for the attention of the responsible officer.

Please be advised that in terms of the provisions of Regulation 67, this application will lapse if the applicant fails for a period of 6 months to comply with a requirement of the EIA Regulations, 2010, or if reasons for failure to comply are not communicated in writing to and accepted by this Department.

Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.

Yours faithfully

MR. P. SHONGWE
ACTING HEAD OF DEPARTMENT

DATE: 12/10/2010

MPUMALANGA
A Pioneering Spirit