

**INQUBO YOKUHLOLA UMTHELELA OZOBA KHONA KWEZEMVELO  
KANYE  
NESICELO SOKUPHATHWA KOKUNGCOLA**

**UKUNWETSHWA OKUHLONGOZWAYO KWAMADAMU OMLOTHA ESITESHINI  
SIKAGESI SASE-HENDRINA, EMPUMALANGA**



**DEA Reference Number: 12/12/20/2175**

**INCWADI YOLWAZI OLUYISIZINDA**



**Meyi 2011**

**YINI LE NCWADI EKUTSHELA YONA?**

Injongo yale Ncwadi Yolwazi Oluyisizinda (BID) iwukuhlinzeka Amalungu Anesasa Lokwazi kanye/noma Athintekayo (I&APs) ngolwazi oluyisizinda ngomkhankaso ohlongozwayo weDamu Lomlotha LaseHendrina kanye nezinqubo zokwenza isicelo ezizoqaliswa (i.e. inqubo ye-EIA kanye nenqubo Yesicelo Selayisensi Yokuphathwa Kokungcola). Iphinde ichaze indlela ongabandakanyeka ngayo kule phrojekthi, uthole ulwazi njengoba i-EIA iqhubeka, usike elijikayo futhi/noma uveze ukukhathazeka ngemithelela engaba khona yale phrojekthi kwezemvelo. Ngakho uyamenywa ukuba ubhalise njenge-I&AP ngokugcwalisa bese ubuyisa lezi zimvo nephepha lokubhalisa elifakiwe.

Le ncwadi ye-BID izokusiza ukuba:

- Unqume ukuthi unaso yini isifiso kanye/noma uyathinteka yini kule phrojekthi ehlongozwayo;
- Uyiqonde kangcono le phrojekthi ukuze ukwazi ukuveza izimvo; futhi
- Uqonde inqubo yokugunyaza ethinta ezemvelo ukuze ukwazi ukubamba iqhaza elibhekile.

**KUNGANI KWANDISWA AMADAMU OMLOTHA ESITESHI SIKAGESI?**

Ibhizinisi eliwumgogodla lika-Eskom ukuphehla, ukudlulisa nokusabalalisa ugesi kulo lonke elaseNingizimu Afrika. Ugesi ngokwesimo sawo awunakugcinwa kodwa kumelwe usetshenziswe ngesikhathi uphehlwa. Ngakho-ke ugesi uphehlwa ngesikhathi uphakelwa ngokuvumelana nesilinganiso sofunwayo. Ukuphakelwa kukagesi okuthembekile ngabakwa-Eskom kubaluleke kakhulu entuthukweni yezezimboni nasemizamweni yokuthiba iphango kuleli zwekazi.

Uma u-Eskom ezohlangabezana nesibopho sakhe sokuphakela izidingo eziqhubeka zanda kumsebenzisi kagesi eNingizimu Afrika, enye yezindlela okumelwe azikhethe ukwandisa ukuphila kwengqalasizinda yakhe yokuphakelwa, ukudluliswa nokusabalaliswa kolayini bakhe bakagesi. Lokhu kwandiswa akubandakanyi nje kuphela ukwakhiwa kweziteshi ezintsha zikagesi kodwa futhi nokwandiswa nokuthuthukiswa kweziteshi zikagesi

ezikhona njengamanje ukuze kuqinisekiswa ukuthi isikhathi sokusebenza kweziteshi zikagesi zingandiswa.

Isiteshi Sikagesi SaseHendrina eSifundazweni saseMpumalanga okwamanje sisebenzisa uhlelo lomlotha omanzi lokuchitha umlotha. Isiteshi Sikagesi Sase-Hendrina okwamanje sinamadamu omlotha amahlanu, phakathi kwawo okunamadamu omlotha (idamu lomlotha 3 no-5) asebenzayo njengamanje, amanye amadamu amathathu (Idamu lomlotha 1, 2 & 4) awasetshenziswa ngenxa yokuthi asegcwele phama (Amadamu 1 no-4) noma ngenxa yokuthi awasasimeme (Idamu 2). Ezingeni lamanje lokuchitha Amadamu 3 no-5 azobe esegcwele phama eminyakeni emihlanu (kusukela ekupheleni kuka-2010). Isiteshi Sikagesi Sase-Hendrina kulindeleke ukuba sithwale umlotha olinganiselwa ezigidini ezingu-64.2 m<sup>3</sup> kuze kube sekupheleni kokuphila kwaso okulinganiselwa ukuthi kuzoba ngo-2035.

Kuye kwatholakala, ngocwaningo, ukuthi izindawo ezikhona zokuchithwa komlotha azanele ukuhlinzeka ngokuchithwa komlotha okwanele ngalesi silinganiso somlotha kukho konke ukuphila kwalesi siteshi. Ngakho-ke Isiteshi Sikagesi SaseHendrina sihlangoza ukunweba izindawo zaso zokuchithwa komlotha kanye nengqalasizinda ehlobene naso ngalesi zilinganiso ezilandelayo zentuthuko:

- Isikhala esisemoyeni sika-43.3 million m<sup>3</sup>
- Indawo ephansi ezosetshenziswa ka-139 ha
- Indawo ephansi yengqalasizinda ehlobene njengamaDamu Okubuyisela Amanzi Omlotha ka-70 ha

Isidingo salokhu kunweba esokuvumela Isiteshi Sikagesi Sase-Hendrina ukuqhubeka sichitha umlotha ngendlela ebonisa ukukhathalela imvelo ngaso sonke isikhathi sokusebenza kweSiteshi Sikagesi, esihlobene nezinga lomlotha otholakala emalahleni, nesidingo esiphuthumayo sokunweba ukuphila kwalesi siteshi.

## **IZOHLANGANISANI IPHROJEKTHI YOKUNWETSHWA KWEDAMU LOMLOTHA LASE-HENDRINA?**

Le phrojekthi ihlanganisa ukunwetshwa kwezakhiwo zeDamu Lomlotha eSiteshini Sikagesi Sase-Hendrina eSifundazweni saseMpumalanga. Ukunwetshwa kwedamu lomlotha kuzodingeka kube kukhulu ngokwanele ukuze likwazi ukuchitha izigidi ezingu-43.3 m<sup>3</sup> zomlotha. Nakuba indawo ephansi yokunwetshwa okuhlongozwayo ilinganiselwa ku-200 ha, isimo nomklamo wokugcina wendawo yaphansi kusazonqunywa ngobuchwepheshe bobunjiniyela nobuklami.

Ngaphezu kokunwetshwa kwamadamu omlotha, le phrojekthi izobandakanya ukunwetshwa kwengqalasizinda ehambisanayo ehlobene nohlelo lokuchithwa komlotha, njengamadamu amanzi Omlotha, amapayipi, imisele yamanzi emvula, izihlelo zokukhongozela amanzi avuzayo, iziteshi zokupompa amanzi, amadamu okukhongozela amanzi avuzayo nokunye.

## **UKUCHITHWA KOMLOTHA**

Inqubo yokuphehlwa kukagesi kusetshenziswa amalahle abaselwe ikhiqiza intilibathwa yomlotha, olahlwa ezindaweni zokuchitha umlotha nasemadanyini. U-Eskom usebenzisa amalahle ezinga eliphansi (abizwa ngokuthi ama-middlings) akhiqiza umlotha omningi lapho esha. Amalahle ezinga eliphezulu athengiselwa ngokuyinhloko amazwe angaphandle. U-Eskom usebenzisa izindlela ezimanzi noma ezomile zokuchitha umlotha. Zombili zisebenzisa amanzi agelezayo noma amanzi asetshenzisiwe, okuwumkhiqizo wenqubo yokusetshenziswa kwamanzi aseke asetshenziswa futhi. Ukuchithwa komlotha omanzi kuhlenganisa ukuhanjiswa komlotha ngezinto eziphehlwe ngamandla amanzi, kuyilapho ukuchithwa komlotha owomile kuhlenganisa ukuhanjiswa komlotha omanzanyana (partially wet) ngamabhande okuhambisa izinto (conveyer belts).

Isiteshi Sikagesi sase-Hendrina sisebenzisa indlela emanzi yokuchitha umlotha futhi ngaleyo ndlela idamu Elisha lomlotha elihlongozwayo lizokwakhiwa ukuze kube khona ukuxhunyaniswa nohlelo oselukhona kakade.

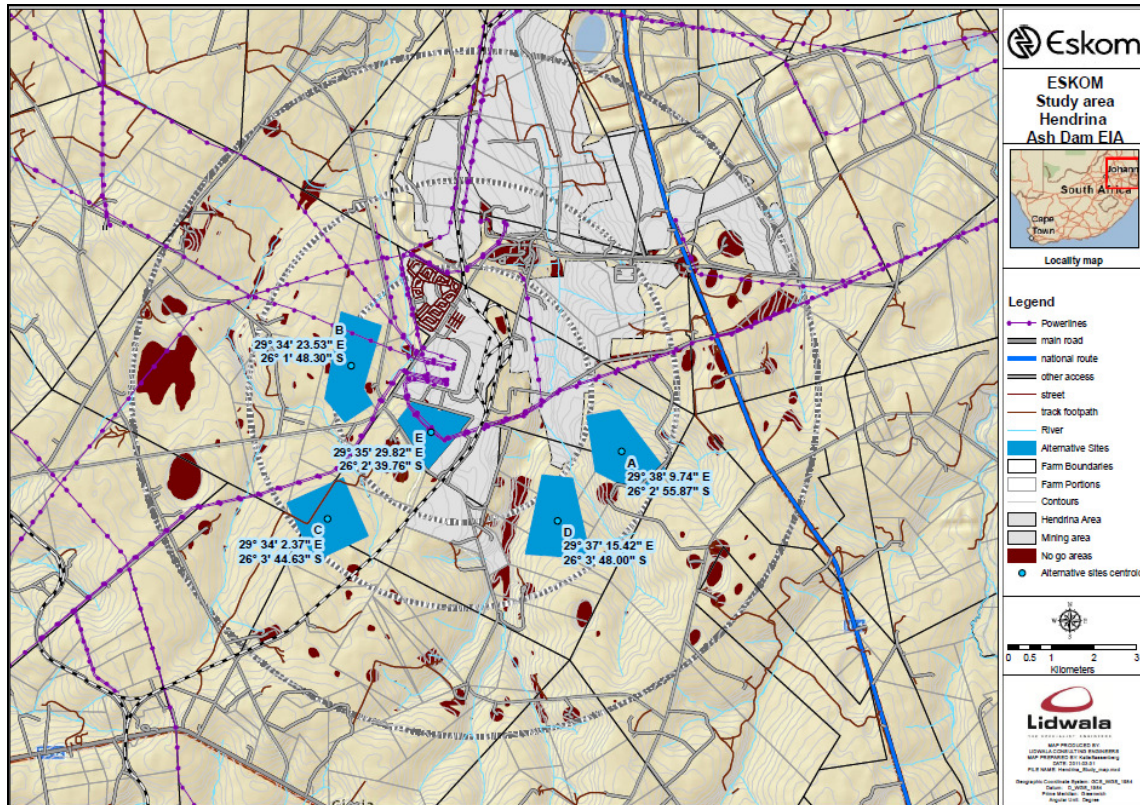
## **EZINYE IZINDLELA ZALE PHROJEKTHI**

- ***Ezinye izindawo zokusetshenziswa:***

**Umdwebo 1** uveza ezinye izindawo ezibonisiwe zokunwetshwa kwedamu Elisha elihlongozwayo kanye nengqalasizinda ehlobene. Amanye amaphaseji (corridor) axhumanisayo angaba khona engqalasizinda ahlelwe ngokulandelana okuwumugqa azoboniswa ngesigaba sokuhlola se-EIA.

- ***Ingqalasizinda Ehlobene:***

Ingqalasizinda ehlobene njengemigodi yamapayipi, amadamu avuzayo kanye namadamu okubuyisa amanzi anomlotha azodingeka ngale phrojekthi ehlongozwayo. Ezinye izindlela zokuqondisa kanye/noma namaphaseji axhumanisayo ezakhiwo ezilandelanayo azoboniswa ngenqubo yesigaba se-EIA.



**Umdwebo 1:** Ezinye Izindawo Zokusetshenziswa

**YIMIPHI IMITHELELA ENGABA KHONA KWEZEMVELO EHLOBENE NALE PHROJEKTHI EHLONGOZWAYO?**

Ububanzi bamanje Bokuhlolwa Komthelela Ongaba Khona Kwezemvelo (EIA) bubandakanya:

- Idamu lomlotha elihlongozwayo kanye nengqalasizinda yalo, ehlanganisa phakathi kokunye:
  - Imisele yamapayipi;
  - Iziteshi zokupompa;
  - Imisele yamanzi emvula;
  - Amasistimu okukhongozela amanzi avuzayo; kanye
  - Namadamu okugcina Amanzi Omlotha.

Kulindeleke ukuba kube nemithelela eminingana engaba khona kwezemvelo ehlobene nale phrojekthi. Njengengxenye ye-EIA, le mithelela engaba khona izohlolwa ngocwaningo lobungoti olulandelayo:

Ucwaningo Lobungoti			Inhlangano Ezokwenza Lolu Cwaningo
Imithelela komhlaba	emanzini	angaphansi	Metago Water GeoSciences Consulting
Imithelela komhlaba nezitshalo zasemanzini	emanzini kanye	angaphezu nasezilwaneni	Ecotone Freshwater Consultants

<b>Ucwaningo Lobungoti</b>	<b>Inhlangano Ezokwenza Lolu Cwaningo</b>
Imithelela ezilwaneni nasezitshalweni ezisemhlabathini owomile	Bathusi Environmental
Imithelela enhlabathini nengaba khona kwezolimo	Agricultural Research Council
Imithelela emithonjeni yezendabuko	Johnny van Schalkwyk
Imithelela kwikhwalithi yomoya	Airshed Planning Professionals
Imithelela ebangelwa umsindo	Francois Malherbe Acoustic Consultants
Imithelela kwezemvelo zezehlalo	Lidwala Consulting Engineers (SA)
Imithelela kuzo zonke izinhlob zezinyoni	Endangered Wildlife Trust
Ukuhlolwa kwemithelela ebonakala ngamehlo	MetroGIS
Ukuklama Kokuhlanganiswa Kwemiqondo	Lidwala Consulting Engineers (SA) and Alan Robinson
Ucwaningo Lwezesayensi Yobunjiniyela Nobuchwepheshe	Alan Robinson
I-GIS	Lidwala Consulting Engineers (SA)
Inhlolovo	Global Geomatics

Njengengxenywe Yocwaningo Lokuhlola, ongoti abasebenzisa imishini yezobuchwepheshe bazoveza izinkinga ezingaba khona ezidinga uphenyo olwengeziwe ngaphakathi kwesigaba se-EIA kubandakanya nokunye ukucwaninga okungase kudingeke. Izimvo ezivela kuma-I&AP ngenqubo yokubambisa umphakathi iqhaza nazo zizosihlinzeka ngombono owusizo ekuhlonzeni izinkinga ezidinga ukuphenywa ngaphakathi kwenqubo ye-EIA. Kuzophenywa ngocwaningo olwengeziwe noluningiliziwe ngemithelela engaba khona ngaphakathi kwesigaba se-EIA sale phrojekthi esicini ngasinye.

Ucwaningo Lokuhlola Ukuthinteka Kwezemvelo lwaqaliswa ukuze kuqokonyiswe izindawo ezibucayi okudingeka ukuba zigwenywe, ngokuqondene nezinye izindawo ezingase zikhethwe esikhundleni sezinye, ukuze ekuncishiswe imithelela engaphazamisa imvelo. Ucwaningo Lokuhlola luzofakwa eMbikweni Wokuhlola. Ucwaningo lwe-EIA luzohlola ezinye izindawo ezicatshangelwayo zokunwetswa kwedamu lomlotha elihlongozwayo. Ucwaningo lwe-EIA luzoncoma ukuba kusetshenziswe indawo nengqalazizinda eyisisekelo, ngokulandelana.

### **KUNGANI KUDINGEKA UCWANINGO LOKUHLOLWA KWEZEMVELO?**

Ngokwemibandela Yemithetho (ka-2010) Yokuhlolwa Kokuthinteka Kwezemvelo (EIA) kanye noMthetho Kazwelonke Wokuphathwa Kokungcola Kwezemvelo (uMthetho 59 ka-2008), u-Eskom Holdings Limited udinga ukugunyaza koMnyango Wezemvelo Kazwelonke (DEA) ukuze aqalise iphrojekthi ehlongozwayo. Ukuze athole ukugunyazwa ngabezemvelo futhi athole nelayisensi yokuphathwa kokungcola kwale phrojekthi, ucwaningo oluningiliziwe, oluzimele kumelwe luqaliswe ngokuvumelana neMithetho ye-EIA.

I-EIA iyithuluzi lesishayamthetho elisetshenziselwa ukuqinisekisa ukuthi imithelela engemihle engaba khona engadalwa ukwakha okuhlongozwayo iyahlonzwa ngaphambi

kokuba kuqaliswe umsebenzi, futhi ngaleyo ndlela igwenywe noma incishiswe. Esishayamthethweni saseNingizimu Afrika imvelo ihlanganisa imikhakha yezenhlo, ezomnotho, izilwane nezitshalo futhi i-EIA kumelwe ihlaziye lokhu ngokulinganayo.

Ngokwemibandela yeMithetho ye-EIA eyashicilelwa kuSomqulu kaHulumeni R543 wangomhla ka-2 Agasti 2010 ngokuvumelana no-Section 24 (5) woMthetho Wokuphathwa Kwezemvelo (uMthetho No. 107 k-1998), eminye imisebenzi ehleliwe njengoba ibekwe eZazisweni zikaSomqulu kaHulumeni R544 no-R545 naku-GN 718 Wokuphathwa Kwezemvelo Kukazwelonke: uMthetho Wokungcola (NEMWA) udinga ukugunyazwa ngabezemvelo kanye nelayisensi yokuphathwa kokungcola ngaphambi kokuba kuqhutshekwe.

Le phrojekthi ehlongozwayo yenza kube nesidingo seminye iMisebenzi Esohlwini ngokuvumelana neMithetho ye-EIA. Izinombolo zezikhombo zeMisebenzi Esohlwini ehlukehlukehene ziboniswe ethebuleni elingezansi. Uma ungafisa ukuthola ikhophi ephelele yohlu lwale misebenzi, sicela uthintane naBaxhumanisi Bokubamba Komphakathi Iqhaza.

<b>NEMA</b>	No. R. 544	9	10	22
	No. R. 545	6	15	
<b>NEMWA</b>	GN 718 - Category B	1	9	11

U-Eskom Holdings Limited umise i-Lidwala Consulting Engineers (SA) (Pty) Ltd, njengoNgothi Bokuhlolwa Kwemvelo (Environmental Assessment Practitioners (EAP)), ukuba baqalise ucwaningo lwezemvelo ukuze bathole imithelela engaba khona kwezemvelo ehlobene nephrojekthi ehlongozwayo. Njengengxenye yalolu cwaningo lwezemvelo, wonke ama-I&AP ayamenywa ukuba abambe iqhaza elikhulu ngenqubo yokubamba komphakathi iqhaza.

I-EIA ingahlukaniswa ngezigaba ezingu-4 eziyingqayizivele:

### **Isicelo nesaziso sokuqala**

Phakathi nalesi sigaba kwenziwa isicelo sokugunyazwa nguMnango Wezemvelo Kazwelonke (DEA). Uma i-DEA ivuma ukuthi iyitholile i-EIA nesicelo selayisensi (ezinsukwini ezingu-14), inqubo yokuqala yokukhishwa kwesaziso iyenzeka, lapho kwaziswa khona umphakathi ngokwakha okuhlongozwayo, phakathi kokunye, ngokusetshenziswa kwezikhangiso zamaphephandaba, izincwadi zezaziso, ama-BID nangamabhodi ezaziso. Lesi sicelo siyisicelo esenziwa ngokubambisana ngenxa yokuthi le phrojekthi idinga kokubili Ukugunyazwa Ngabezemvelo nge-NEMA kanye nelayisensi yokuphathwa kokungcola nge-NEMWA.

### **Isigaba sokuhlola**

Injongo yesigaba sokuhlola:

- Ukuphenya nokuqoqa ulwazi ngezinye izindawo ezingase zisetshenziswe ezihlongozwayo, ubuchwepheshe kanye nendawo yocwaningo ukuze leyo ndawo iqondwe kangcono;

- Ukuze kuvezwe indlela imisebenzi yokwakha ehlongozwayo engase ibe nomthelela ngayo endaweni ezungezile;
- Ukuze kutholwe Amaqembu Anesasa Nathintekayo (I&APs) nezikhulu ezifanelekile ngokwenza Inqubo Yokubambisa Umphakathi Iqhaza (PPP);
- Ukuthola imithelela engaba khona ezophazamisa imvelo edinga ukuhlola okuningiliziwe esigabeni se-EIA, ngophenyo ne-PPP; futhi
- Ukuchaza nokuphenya ngezinye izindlela ezingase zicatshangelwe.

### **Isigaba Se-EIA**

Ngalesi sigaba zonke izinkinga nezinye izindlela ezihlongozwayo ezihlonzwe ngesigaba sokuphenya ziyahlolwa bese zilinganiswa ngokuvumelana nesisindo sazo. Lapho kudingeke khona, kuyanconwa ukuba kuthathwe izinyathelo zokunciphisa izinkinga ukuze imithelela engemihle iphebezwe. Uhlelo Lokuphathwa Kwezemvelo luzobe seludidiyelwa okuyilona oluzonquma izinyathelo ezingokwemvelo okuzonanyathelwa kuzo ngesikhathi sesigaba sokwakha, ukusebenza kanye nokuqaqa kule phrojekthi, uma kutholakele Ukugunyaza Kwabezemvelo. Njengasesigabeni sokuphenya, i-PPP iyingxenye ewumgogodla nebaluleke kakhulu yesigaba sokuhlola. Once the Final EIR has been submitted to DEA, the decision making process will commence.

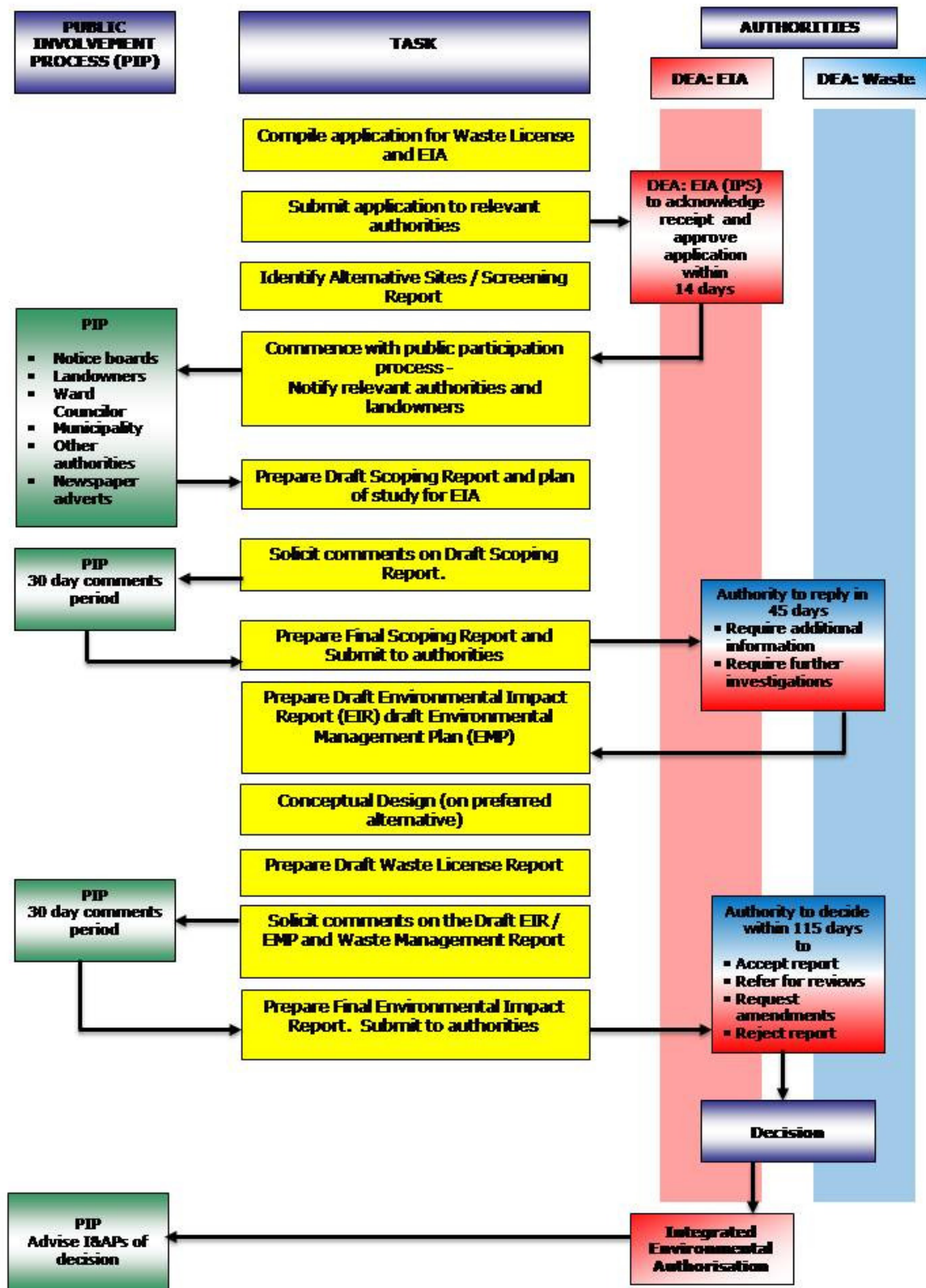
### **Ukugunyaza Kwabezemvelo Nelayisensi Yokuphathwa Kokungcola**

Ngenxa yokuthi idamu Elisha lomlotha lihlanganisa imisebenzi efakwe ohlwini ku-NEMA ne-NEMWA, kokubili Abagunyaza Ngezemvelo (EA) ngokwemibandela ye-NEMA kanye Nelayisensi Yokuphathwa Kokungcola (WML) ngokwemibandela ye-NEMWA kuyadingeka. Nokho, u-Eskom wenze isicelo seLayisensi Ebambisene ezohlanganisa kokubili Izenzo ezifanele nokugunyaza okuhlobene. Inqubo ye-EIA ichazwe kahle ngokudwetshwa **kuMdwebho 2.**

### **LUYINI UHLELO LWE-EIA LWALE PHROJEKTHI EHLONGOZWAYO?**

Uhlelo olulandelayo olwandulelayo luhloselwe isigaba sopenyo ne-EIA:

<b>Isigaba Sokwenza Isicelo</b>	<b>Isigaba Sopenyo</b>	<b>Isigaba Se-EIA</b>	<b>Ukuhlola kwe-DEAT nokwenziwa kwezinqumo</b>	<b>Ukugunyaza Kwabezemvelo</b>
Mashi 2011 (Siphelele)	Mashi ukuya kuJulayi 2011	Julayi ukuya ku-Okthoba 2011	Novemba 2011 ukuya kuJanuwari 2012	Febhruwari 2012



Umdwebo 2: Inqubo Ye-EIA



## **INQUBO YOKUBAMBA IQHAZA KOMPHAKATHI**

Kubalulekile ukuba ama-I&AP afanelekayo avezwe futhi abandakanyeke enqubweni yokubamba iqhaza komphakathi zibekwa nje amadaka emkhankasweni ohlongozwayo. Izimvo ezizokwamukelwa kuma-I&AP zakha ingxenye ewumgogodla yenqubo ye-EIA futhi zizosiza igunya elenza izinqumo, i-DEA, ngokwenza kwaba izinqumo. Ukuze kuqinisekise ukubamba iqhaza komphakathi okuphumelelayo, le nqubo ihlanganisa lezi zinyathelo ezilandelayo:

- ISINYATHELO 1: Ukukhangisa kwiNqubo Ye-EIA (amaphephandaba esifundazwe nawendawo/omphakathi)
- ISINYATHELO 2: Ukubhalisa ama-I&AP nabanikazi bamasheya abayisihluthulelo (ngokuqhubekayo)
- ISINYATHELO 3: Ukuxhumana nama-I&AP nokudlulisa ulwazi kuma-I&AP ngokuxhumana, imihlangano yomphakathi, imihlangano yamaqembu agxilile kanye nama-workshop abanikazi bamasheya
- ISINYATHELO 4: Ukubhala konke ukuphawula, izinkinga nokukhathazeka okuphakanyiswe ngama-I&AP ngaphakathi kohlu lwezinkinga, okuzokwakha ingxenye ewumgogodla yeMibiko ye-EIA
- ISINYATHELO 5: Cela ukuphawula kwama-I&AP nezimvo oHlakeni lopheny nasemibikweni ye-EIA (inkathi yokuphawula yezinsuku ezingu-40)

## **UNGABANDAKANYEKA KANJANI?**

1. Ngokusabela (ngocingo, isikhahlamezi noma i-e-mail) esimemweni sethu ngokubamba kwakho iqhaza esikucele ngezikhangiso emaphephandabeni esifundazwe nawasendaweni.
2. Ngokuthumela ngeposi, ngesikhahlamezi, noma nge-e-mail ukuphawula okufakiwe kwi-Lidwala SA.
3. Ngokuba khona emihlanganweni ezobanjwa phakathi nale phrojekthi. Uma ungabhalisa njenge-I&AP uzomenywa ukuba ube khona kule mihlangano. Izinsuku zemihlangano nazo zizokhangiswa emaphephandabeni esifundazwe nawendawo.
4. Ngokuxhumana ngocingo nabakwa-Lidwala uma unemibuzo, ukuphawula noma udinga ulwazi olwengeziwe ngephrojekthi.
5. Ngokuhlola uHlaka lokuphenya, i-EIA neMibiko Yesicelo Selayisensi Yokungcola phakathi nezinkathi zokuhlola eziyizinsuku ezingu-40 nokuthumela ukuphawula kwakho kwa-Lidwala.

Uma uzibheka njenge-I&AP ngale phrojekthi ehlongozwayo, sikunxusa ukuba uwasebenzisekha. Izimvo zakho kule nqubo zakha ingxenye eyisihluthulelo ocwaninweni lokuhlola ukuthinteka kwemvelo futhi singathanda ukuzwa kuwe ukuze sithole imibono yakho ngephrojekthi ehlongozwayo.

Ngokugcwalisa nokuthumela ifomu lezimpendulo elihambisanayo, ubhalisa ngokuzenzekelayo jenge-I&AP kule phrojekthi, futhi uqinisekisa ukuthi ukuphawula kwakho, ukukhathazeka noma imibuzo okuphanyisiwe gale phrojekthi kuzosingathwa.

## UKUPHAWULA, IMIBUZO NEZIMPENDULO

**Thumela konke ukuphawula nemibuzo ku-:**

**Lidwala Consulting Engineers (SA)**

📮 PO Box 4221, Northcliff, 2115

**ATTENTION:**

**Nicolene Venter, Frank van der Kooy or  
Bongi Mhlanga**

☎ Ucingo: (0861) LIDWALA (0861 543 9252)

📠 Isikhahlamezi: 086 686 1628

✉ E-mail: [hendrinaeia@lidwala.co.za](mailto:hendrinaeia@lidwala.co.za)

🌐 Website: [www.lidwala.co.za](http://www.lidwala.co.za)