



An Environmental
Presentation from Triplo4



Agenda

- Ukuvula nezethulo
- Ukubhaliswa kwabakhona
- Ukuzithoba
- Inhloso yomhlangano
- Ukubuka konke ngokweproject
- Imibiko yochwepheshe
- ingxoxo
- Indlela eyaphambili nokuvalwa

Ababekhona Nokuxolisa

- Ukubhaliswa kwabaphambili
 - Ukuqoshwa kwenkulumo ngenhloso yokuqinisekisa ukuthi okuphawuliwe kuqondile
- Ukuqoshwa komhlangano
- Ukuxolisa

Ukuzithoba

- Umakhale'khukhwini
- Ulimi oluthandayo
- ukugxila ezindabeni eziphathelene ne-EIA
- Ukubamba iqhaza elilinganayo kuzo zonke izinhlangothi
- Sicela uzazise kanye nehlangano oyimele ngaphambi kokubuza umubuzo – ngenhloso yokuqopha kwenkulumo
- Sicela ulinde kuze kube yisikhathi sengxoxo ukuze ubuze imibuzo

Inhloso yomhlangotho

- Nikeza Amaqembu Anentshisekelo Nathintekayo (ama-I & AP's) ngolwazi maqondana nephrojekthi ehlongozwayo.
- Nikeza ngokubuka konke koHlelo Lwemvelo Lokuhlolwa Komthelela (i-EIA) Nenqubo Yokubandakanywa Komphakathi (PPP) elandelwayo
- Nikeza ithuba kuma-I & AP ukuze afune ukucaciseleka, aphakamise izingqinamba nokukhathazeka, futhi anikele ngemibono kuphrojekthi
- Ukurekhoda izingqinamba, ukuphawula okuphakanyisiwe nokukufaka ku-EIR yokugcina
- Thatha yonke imibono uyibhekisise kwiNqubo ye-EIA bese uyifaka eMbikweni Wokuphawula Nezimpendulo kuMnyango Wezokuthuthukiswa Kwezomnotho, Ezokuvakasha nezeMvelo (i-EDTEA).

Izingeniso - Uhlolajikelele lwe-Triplo4

Obani

- Triplo4 Sustainable Solutions
- Inkampani eku-Level 1 BBB-EE – 51% Abaphathi abamnyama; 100% Abaphathi besifazane
- Iqinisekiswa i-ISO 9001:2015 kanye 14001:2015

UCHWEPHESHE LWE-EAP

- Umxhumanisi Omkhulu Wokusimama - UNkk Melissa Gopaul
- > Iminyaka engu-8 yesipiliyoni ekuphathweni kwemvelo
- Igunyaziwe i-EAPASA neSACNASP

INI

Ukuhlola kanye Nokuhlolwa Komthelela Wemvelo

KUNGANI

Iqala imisebenzi ngokwemigomo ye-EIA 2014 (njengoba ichitshiyelwe)



Public Participation Engagement – Draft Environmental Impact Assessment (EIA) Phase

- ▶ Bhalisela iphrojekthi nge melissa@triplo4.com
- ▶ Ikhophi yomphakathi
 - ▶ Eholo lomphakathi lase Nonoti, eNonoti
- ▶ Izixhumani zezinkundla ze-inthanethi
- ▶ Xhumana ne-EAP nge-imeyili noma ngocingo - 032 946 3213

Indawo ehlongozwayo yokwakhiwa kwezindlu kanye nezindawo ezahlukahlukene eziphenyelwa i-WWTW ehlongozwayo.



Isakhiwo Esikhethwe

PORTIONS OF THE FARM CHANTILLY NO. 1804;
PROPOSED PORTION "A" (OF 33) OF THE FARM HYDE PARK NO. 1233
STRATTON DIVISION FU, PROVINCE OF KWAZULU-NATAL

Scale: September 2011

Scale: 1:5000 NTS on A0 paper

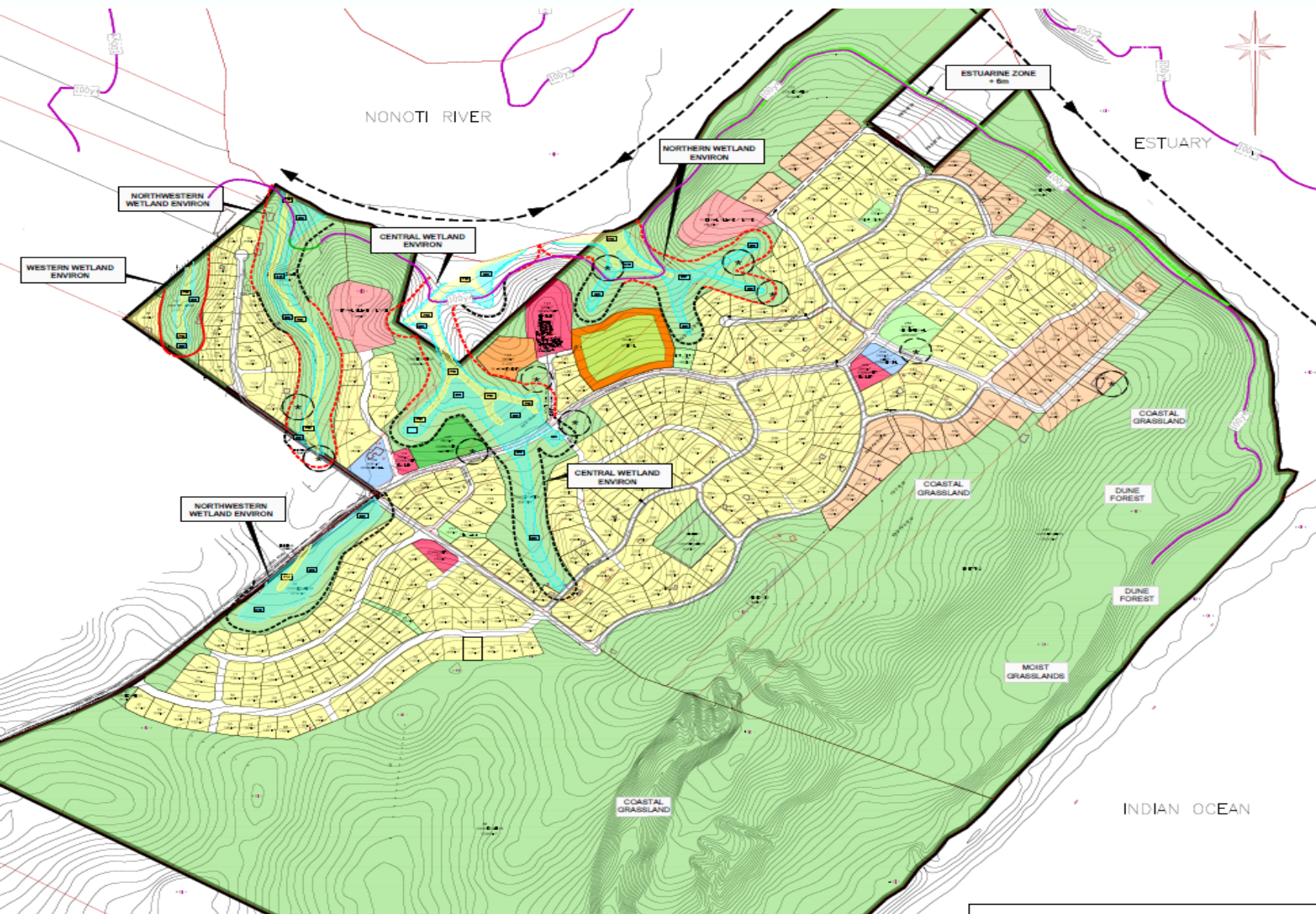
Scale: 1:5000

Scale: All dimensions are approximate, subject to survey

Scale: Contour Intervals = 2m



Okunye Ukuhlelwa



Ukubuka konke kwephrojekthi— DC29/0010/2021

- Ukuthuthukiswa kwezindlu sikamazakhele- 80%) kanye nesiza samadlelo
- Ukuhlinzekwa kwamathuba okuhlala angama-500, indawo yesikole neyomphakathi
- Ingqalasizinda ehlanganisiwe nezinsizakalo
 - Imigwaqo nogesi (osekuhlinzekiwe) njengengxenye yezinkundla ezinsundu ezikhona;
 - Okusha: amanzi, ukuthuthwa kwendle (brownfield) nazo zonke izinsiza eziluhlaza
- Amanzi aphuzwayo - I-Offtake 5A (encanyelwayo) kuma-boreholes noma e-JoJo's
- Indawo Yokuhlaza Amanzi Angcolile njengenketho ekhethiwe yokuthuthwa kwendle (ukulahlwa kwendle okusuka emanzini).
- Isimo Samanje: I-ukukala nePoS yamukelwe - 17 Agasti 2021
- Isigaba se-EIA sesiqalile.

Ezinye Izindlela Zokutshala Iphakheji

- Indawo okuyiWWTW (izindlela ezi-5 zokwakheka):
 - 1) Sustainability considerations
 - Ezemvelo (amaxhaphozi nolwandle, ukusetshenziswa kwezinsizakusebenza, ukwakheka komhlaba),
 - Ezomnotho (ukwakhiwa, ukusebenza, izindleko zokumpompa) &
 - Okomphakathi (ukucatshangelwa kuqala)
 - Ubunjiniyela (ukunikezwa kukagesi, izindleko zokupompa ubume bendawo, amathuba okwehla nokuchitheka)
 - Isiza Esikhethwayo esinezinketho zokusebenzisa kabusha okuncamela ukulahlwa: izindleko ezisebenzayo ezinikeziwe nokushoda kwamanzi
 - Enye indlela 1 (Okuncanyelwayo): 1-0.25ML / imisebenzi Yokwelapha Amanzi Waste (WWTW) - Ukungcola okuphuzwayo kuzosetshenziselwa izinjongo zezolimo
 - Enye indlela 2 (Akusekelwa): 0.25ML/ukusu Ukusebenza Kokuhlanzwa Kwamanzi(WWTW) - Ukukhishwa kokungcola okuphethwe emfuleni iNonoti noma ischweba

Izifundo zochwepheshe

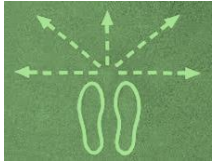
- Akudingeki - Ukuhlolwa Komthelela Wokubonakalayo
- Ucwangingo lochwepheshe olwenziwe phambilini:
 - Ukuhlolwa Komthelela Wamagugu (Heritage Impact Assessment)
 - Ukuhlolwa Kwezenhlalo Nezomnotho (Socio-economic Assessment)
 - Ukubuyekezwa Kwangaphambili Kwe-Bio
 - Umbiko Wokuhlolwa Komhlabathi Nezolimo (Soil and Agricultural Assessment Report)
- Specialist studies updated & conducted in:
 - Ukuhlolwa kwamaxhaphozi nokusebenza kwawo
 - Ukuvuselelwa kwamaxhaphozi(2015)
 - Geotechnical Assessment (2015 & ukuphawula ngo-2019)
 - Ukuhlolwa kwamanzi namatshe ngaphasi komhlaba (2015)
 - Ukuhlolwa Kwezinto Eziphilayo (2018)
 - Ukuphawula ngesimo samanzi angaphansi komhlaba (2019)
 - Ukuhlolwa kwesichweba (2015 and 2020)

kuthola Okubalulekile - Izifundo Ezedlule

- Umbiko wamafa (Heritage)
 - Kwatholakala indawo yokukhonza yamaNazaretha edinga ukugcinwa ingaphazamiseki.
- Ezomnotho nezenhlalo (Socio-economic)
 - Isidingo esifanelekile nokufiswa kuhlotshaniswa nentuthuko ehlongozwayo futhi kukholakala ukuthi izici zezomnotho zenhlalo yalokhu kukhushulwa zinenzuzo enkulu emphakathini.
- Ezemvelo (Ecological)
 - Indawo inotshani basogwini obuzwelayo.
 - Imithelela incishisiwe noma ingancishiswa (EMPr) esigabeni se-EIA



kudilizwa KweWetland Nokuhlola Okusebenzayo- Aeon Nexus



Isimo samanje

- ▶ Kuqinisekisiwe i-7: kutholakale amaxhaphozi ama - 4 endaweni ekuzokwakhiwa kuyona; kwatholakala ama-3 endaweni engaphakathi kwama-500m
- ▶ Wonke lamaxhaphozi amane - ama- "transformed channelled valley bottom wetlands"



Izindawo ezibucayi, uma zikhona

- ▶ Akukho ukulahleka okuqondile kwendawo yokuhlala yamaxhaphozi njengoba indawo encanyelwayo yeWWTP izobekwa ngaphandle kwanoma yiziphi izindawo ezizwelayo ezingamaxhaphozi



Imithelela , uma ikhona

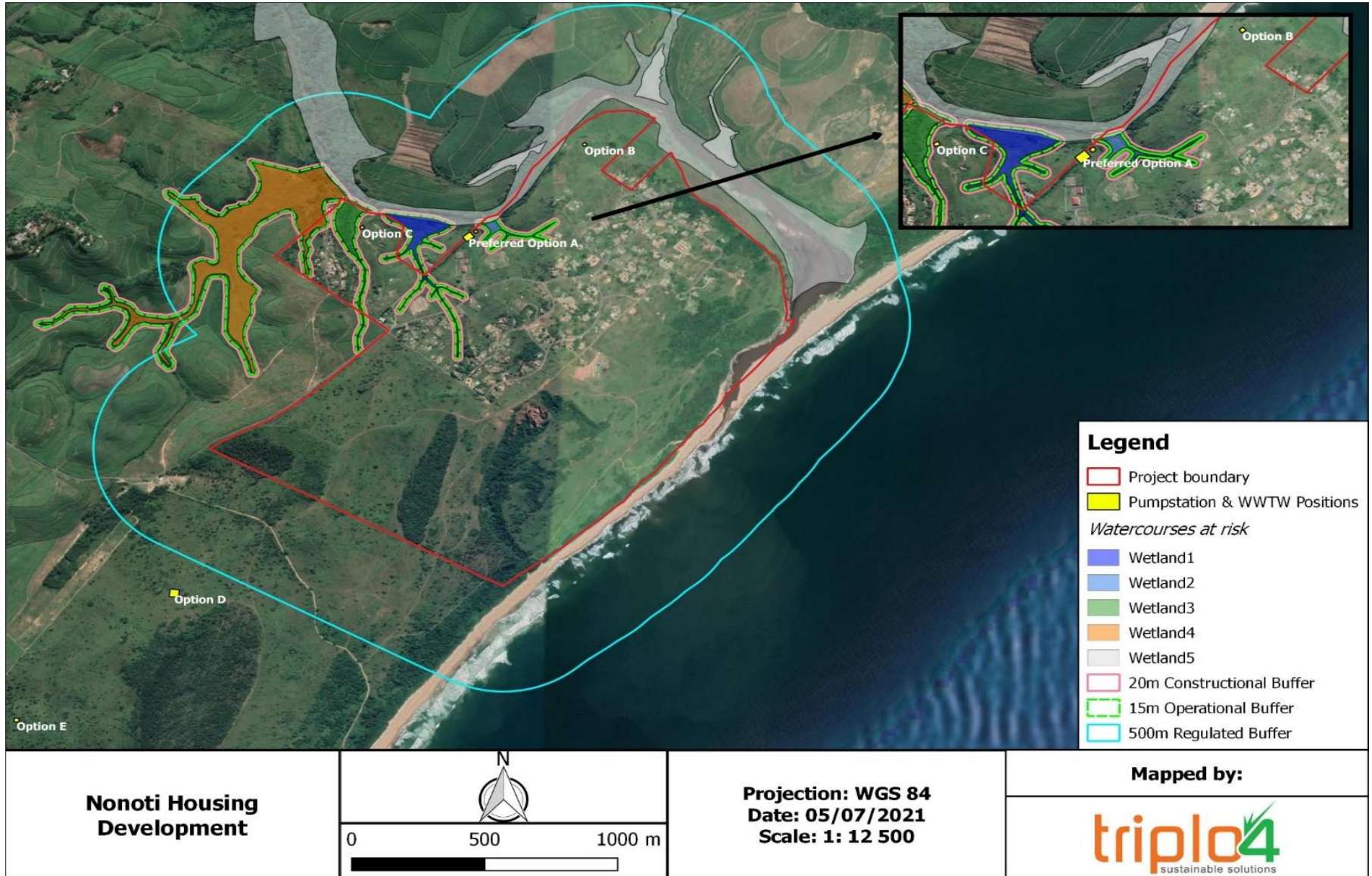
- ▶ Ukukhuphuka kwamanzi ahamba phezu komhlaba (surface run-off) okuqhamuka ezindaweni ezigebhukile, ukudilika komhlaba endaweni eyixhaphozi, ukuguqulwa kwemibuso ye-hydrological nokwanda kokhula



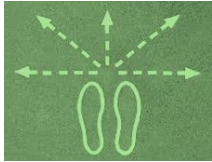
Ukulungisa - uma kunesidingo

- ▶ Ama-buffer ahlikene ezindawo ezihlukahlukene - ingqalasizinda ekhona, ukuzwela, imisebenzi ekhona (ezolimo / izingadi zokudla
- ▶ Izinyathelo zokunciphisa ezijwayelekile ezichazwe embikweni wexhaphozi kufanele zilandelwe.

Ukuhlolwa kwamaxhaphozi nokusebenza kwawo - Aeon Nexus(cont.)



Ukuhlolwa kwamaxhaphozi nokusebenza kwawo - Geosure



Isimo njengamanje

- ▶ Indawo - sizinzile futhi silungele ukwakhiwa kwezindlu kanye neWWTW



Izindawo ezibucayi, uma zikhona

- ▶ Ifanele ukulahlwa kwamanzi nendle ngezindlela zokugcotshwa (esizeni), ngaphandle kwezindawo ezinengozi yokungcola kwemvelo kanye nesimo samanzi angaphansi kanye / noma angajulile (bheka okutholwe yi-Geosure & i-MER



Imithelela, uma ikhona

- ▶ Ukusungulwa kwe-WWTW kanye ne-reticulation ngokungafani ne-VIP's esizeni ngeke kuthinte kabi ngokombono we-geotechnical



Ukulungisa - uma sikhona isidingo

- ▶ Izinyathelo zokunciphisa ezijwayelekile ezichazwe embikweni weGeotechnical kufanele zilandelwe

Ukuhlolwa kweGeohydrological-Geosure



Isimo samanje

- ▶ Izindlu zitholakala 20 to 94m amsl
- ▶ Imigodi yokuhlola eyi-17 kanye namasampula ayi-8 kwamanzi angaphezu komhlaba kanye namanzi angaphansi komhlaba
- ▶ Imigodi emithathu engaphansi kuka-3km - 2x ePrinces Grant ne-1 eNonoti ngenhla komfula ukusuka ku-WWTW ehlongozwayo
- ▶ Ukuqhekeka okukhonjisiwe: akukho okungahambi kahle ezindaweni ezihlongozwayo



Izindawo ezibucayi, uma zikhona

- ▶ Amasampula akhombisa izinga lamanzi elimpofu kakhulu nokungcola okuvele kukhona - izimbangela: izinkomo, izindlu zangasese zomgodi, amathuna nokulahlwa kukadoti nendawo yokusebenzela nokuwohloka
- ▶ I-seepage yamanzi angaphansi komhlaba - isphethu samanzi nokuhamba kwanza ngaphansi komhlaba (enhlabathini)



Umthelela, uma ukhona

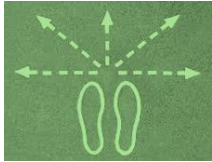
- ▶ -WWTW ingaba nomthelela uma ingalawulwa ngendlela efanele. Qinisekisa ukunciphisa
- ▶ Akukho ukukhathazeka okukhulu



Ukunciphisa - uma kudingeka

- ▶ Izinyathelo zokunciphisa ezichazwe embikweni wochwepheshe kufanele zilandelwe.
- ▶ Uhlelo Lokuqapha luyanconywa

Amazwana Amanzi Phansi - Iqembu leGeomeasure



Isimo samanje

- ▶ Azikho izimbobo zamanzi ezihlehlela phansi ezivela ezindaweni ezihlongozwayo zeWWTW.
- ▶ Iphutha le-Geological liwela engxenyeni esempumalanga yesiza.



Izindawo ezibucayi, uma zikhona

- ▶ Iphutha le-Geological lingasebenza njengendlela engaba khona yokufuduka kokungcola okuvela emisebenzini ye-WWTW esizeni 3 & 4.



Umthelela, uma ukhona

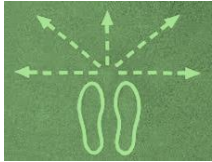
- ▶ Ukuchitheka kwendle kungaba nomthelela omubi emanzini angaphansi komhlaba



Ukunciphisa - uma kudingeka

- ▶ Izinyathelo zokunciphisa ezichazwe embikweni wochwepheshe kufanele zilandelwe.
- ▶ Phakamisa isampula samanzi angaphansi komhlaba - ama-boreholes Mitigation measures outlined in the specialist report must be followed.
- ▶ Propose groundwater sampling - boreholes

Ukuhlolwa Kwe-Estuarine- MER



Isimo samanje

- ▶ I-96th / 256 ikleliswe: ayikhonjwa njengebaluleke kakhulu ekulondolozweni kwemvelo ehlukahlukene
- ▶ I-Estuary incike emanzini angaphansi komhlaba
- ▶ Ukuhlinzekwa kwamanzi aphahekayo vs umthelela omuhle - we-borehole



Izindawo ezibucayi, uma zikhona

- ▶ I-WWTW, izimpompo namapayipi (okuncanyelwayo ne-alt 1-2) kungaphakathi kwendawo yokusebenza kwamachweba - umugqa wendlela eyi-5m



Umthelela, uma ukhona

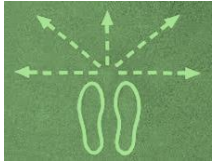
- ▶ Ukulahlwa kwamanzi angcolile emfuleni iNonoti Estuary kubhekwa njengephutha elibulalayo
- ▶ Ukulahleka kwemvelo okuqondile ngaphakathi kwe-Estuarine Functional Zone
- ▶ Ukuhlinzekwa kwamanzi aphahekayo vs umthelela omuhle - we-borehole



Ukunciphisa - uma kudingeka

- ▶ Izinyathelo zokunciphisa ezichazwe embikweni wochwepheshe kufanele zilandelwe.
- ▶ Phakamisa ibhafa engamamitha angama-40 iye kumugqa we-5m;
- ▶ Hambisa kabusha i-WWTW nengqalasizinda ngaphandle kwendawo esebenzayo ne-40m buffer
- ▶ Cabanga ngenye indlela yokulahla: Ukusetshenziswa kabusha kokungcola okuphethwe ngezinjongo zezolimo.

Ukuhlolwa Kwezinto Eziphilayo - UPeter Le Roux



Isimo samanje

- ▶ Indawo le imbozwe kakhulu yizihlahlana zesibili kanye nezihlahlana zomfula ngehlathi lasogwini olusogwini olwenzeka ngasogwini



Izindawo ezibucayi, uma zikhona

- ▶ I-Primary Coastal Belt Grassland
- ▶ I-Dune Thicket neHlathi
- ▶ Indawo yokwakhiwa kwama-Cranes Cranes



Umthelela , uma ukhona

- ▶ kulahleka kwamahektare ayi-5.2 endawo eyisisekelo yotshani kususwe indawo engagunyaziwe nokwakhiwa kwezindlu kuyindlela ekhathazayo enkulu yokubuka ukuhlukahluka kwezinhlobonhlobo.
- ▶ Ukuphazamiseka endaweni yokudla; sisebenzisa imithombo yemvelo



Ukunciphisa - uma kudingeka

- ▶ Izinyathelo zokunciphisa nokuqapha ezichazwe embikweni kufanele zilandelwe.
- ▶ Ukuqwashisa umphakathi ngezindawo zokudla eziwuthwelwe ngomqhele

Izingxoxo

Indlela Eya Phambili

- Okusalungiswa kwe-EIR
- <https://drive.google.com/drive/folders/1ea8OuWwtGugJv-9lZxiLQN8rO28p7dt2?usp=sharing>
- Isikhathi sokuphawula nge-Draft Scoping:
 - Izinsuku ezingama-30 kusukela **20th September – 25th October 2021**
- I-EIR yokugcina izothunyelwa kwa-EDTEA
- Lapho samukelwa - Onke ama-I & AP abhalisiwe azokwaziswa ngesinqumo.

Ukuvalwa

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Thank you