



An Environmental
Presentation from Triplo4



Agenda

- Opening, and Introductions
- Attendance Register
- Courtesies
- Purpose of the Meeting
- Overview of the Project
- Specialist Studies
- Discussion
- Way Forward & Closure

Attendance and Apologies

- Attendance Register
 - for minute purposes and to ensure the comment register is accurate
- Meeting Recording
- Apologies

Courtesies

- Cellphone
- Language of choice
- Focus on issues relating to the EIA
- Equal participation from all parties
- Introduce yourself and organisation prior to question – for minute taking purposes
- Please wait until the discussion session to ask questions

Purpose of the meeting

- Provide Interested & Affected Parties (I&AP's) with information regarding the proposed project.
- Provide an overview of the Environmental Impact Assessment (EIA) & Public Participation Process (PPP) being followed
- Provide an opportunity for I&AP's to seek clarity, raise issues and concerns, and provide input into the project
- To record issues, comments raised and include them in the final EIR
- Take all comments into consideration in EIA Process and include in Comments and Responses Report to the Dept. of Economic Development, Tourism & Environmental Affairs (EDTEA).

Introductions – Triplo4 Overview

WHO

- Triplo4 Sustainable Solutions
- Level 1 BBB-EE Company – 51% Black owned; 100% Women Owned
- ISO 9001:2015 & 14001:2015 Certified

EAP EXPERTISE

- Senior Sustainability Consultant – Ms. Melissa Gopaul
- > 8 years of experience in environmental management
- EAPASA and SACNASP Accredited

WHAT

- Scoping & Environmental Impact Assessment
- Current Status: EIA Phase

WHY

- Triggers activities in terms of EIA Regulations 2014 (as amended)



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

- ▶ Register for the project via melissa@triplo4.com
- ▶ Public Hardcopy
 - ▶ Nonoti Community Hall
- ▶ Online platform links
- ▶ Communicate with the EAP via email or telephone - 032 946 3213

Proposed location of housing development and various locations being investigated for the proposed WWTW.



Preferred Layout

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

DATE: September 2011

SCALE: NTS on A0 paper

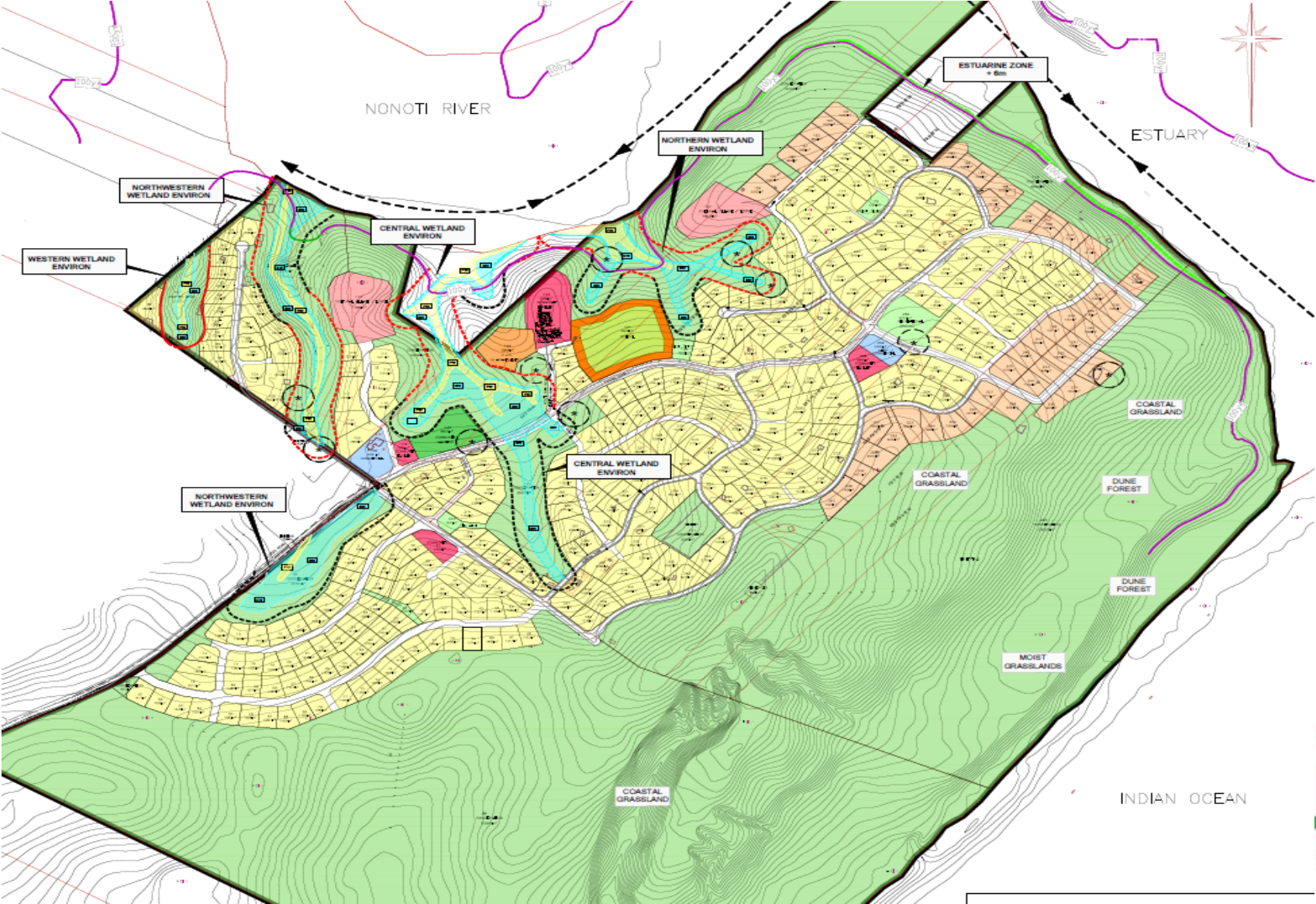
NOTES:

All dimensions are approximate, subject to survey

Contour Intervals = 2m



Alternative Layout



Project Overview – DC29/0010/2021

- In-situ upgrade (brownfields – 80%) and greenfields site
- Provision of 500 residential opportunities, school and community facility
- Associated bulk infrastructure and services
 - Roads and electricity (already provided) as part existing brownfields;
 - New: water, sanitation (brownfield) and all services greenfields
 - Potable water – Offtake 5A (preferred) to boreholes or JoJo's
 - Waste Water Treatment Package Plant as preferred sanitation option (waterborne sewage disposal).
- Current Status: Scoping & PoS was accepted – 17 August 2021
- EIA Phase has commenced.

Package Plant Alternatives

- Site location for the WWTW (5 layout alternatives):
 - 1) Sustainability considerations
 - Environmental (wetlands & estuary, resource usage, topography),
 - Economic (construction, operation, pumping costs) &
 - Social (precinct considerations)
 - Engineering (electricity supply, topography pumping cost, opportunities for breakdowns and spillage)
- Preferred Site with re-use options in preference to disposal: most practical given costs & water shortage
 - Alternative 1 (Preferred): 0.25ML/day Waste Water Treatment Works (WWTW) - Treated effluent will be used for agricultural purposes
 - Alternative 2 (Not Supported): 0.25ML/day Waste Water Treatment Works (WWTW) - Discharge treated effluent into the Nonoti River or Estuary

Specialist Studies

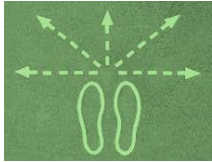
- Not required – Visual Impact Assessment
- Specialist studies conducted previously:
 - Heritage Impact Assessment
 - Socio-economic Assessment
 - Preliminary Bio Physical Review
 - Soil and Agricultural Assessment Report
- Specialist studies updated & conducted in:
 - Wetland Delineation And Functional Assessment (2015)
 - Wetland Rehabilitation (2015)
 - Geotechnical Assessment (2015 & comment in 2019)
 - Geohydrological Assessment (2015)
 - Biodiversity Assessment (2018)
 - Groundwater Comment (2019)
 - Estuarine Assessment (2015 and 2020)

Key Findings – Previous Studies

- Heritage
 - Identified a Shembe place of worship to be preserved.
- Socio-economic
 - A suitable need and desirability is associated to the proposed development and is believed that the socio economic aspects of such an upgrade are hugely beneficial to the community.
- Ecological
 - Sensitive coastal grassland.
- Impacts mitigated or can be mitigated via the EMPr included in the EIA Phase.



Wetland Delineation and Functional Assessment - Aeon Nexus



Current status

- ▶ Confirmed 7: on-site delineation (4) and identified wetlands within 500m (3)
- ▶ All four wetlands - transformed channelled valley bottom wetlands



Critical areas, if any

- ▶ No direct loss of wetland habitat as the preferred location of the WWTP will be located outside of any sensitive wetland environments.



Impact, if any

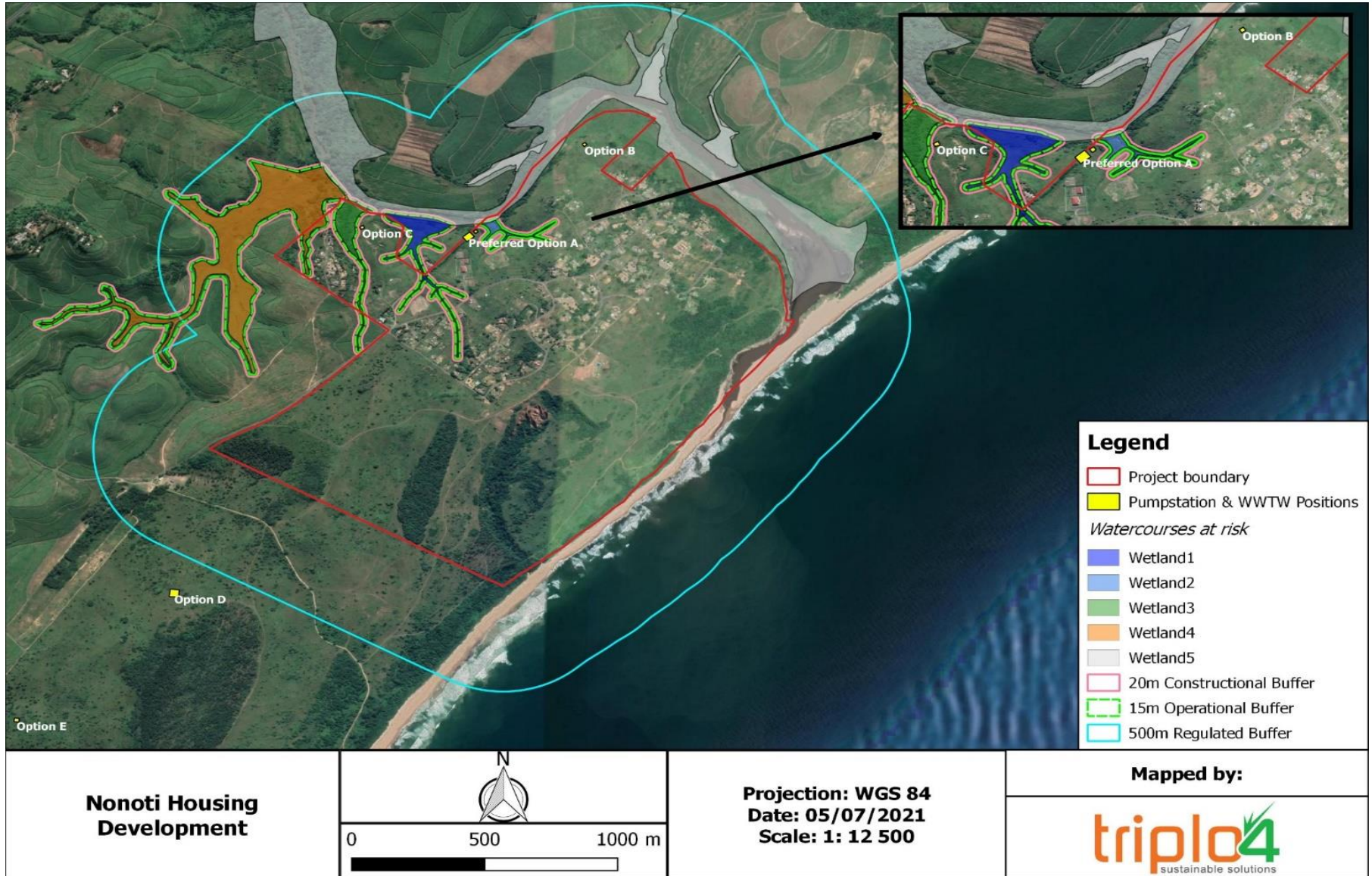
- ▶ Increased surface run-off from excavated areas,
- ▶ sedimentation of the wetland area,
- ▶ alteration of hydrological regimes and
- ▶ proliferation of invasive alien plant species



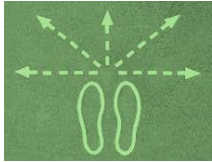
Mitigation - if needed

- ▶ Different buffer zones specified - existing infrastructure, sensitivities, existing activities (agriculture / food gardens)
- ▶ General mitigation measures outlined in the wetland report must be followed.
- ▶ Implementation of WRP

Wetland Delineation and Functional Assessment - Aeon Nexus (cont.)



Geotechnical Assessment- Geosure



Current status

- ▶ The site generally stable and suitable for the housing development and package WWTW



Critical areas, if any

- ▶ Suitable for disposal of stormwater and sewage via percolation methods (on-site), excluding areas that have an environmental contamination risk and permanent and/or shallow groundwater condition (refer to geohydro & estuary findings)



Impact, if any

- ▶ The establishment of a WWTW and reticulation system as opposed to VIP's on site will not impact negatively from a geotechnical perspective.



Mitigation - if needed

- ▶ General mitigation measures outlined in the Geotechnical report must be followed.

Geohydrological Assessment - Geosure



Current status

- ▶ Housing situated 20 to 94m amsl
- ▶ 17 Inspection test pits & 8 surface & groundwater samples
- ▶ 3 boreholes within 3km - 2x Princes Grant & 1 Nonoti upstream from proposed WWTW
- ▶ Fracture identified: no major anomalies at proposed sites



Critical areas, if any

- ▶ Samples indicated very poor water quality & existing contamination - causes: cattle, pit latrines, graves & waste disposal & workshop & deterioration
- ▶ Shallow groundwater seepage - perched groundwater (spring) & interflow



Impact, if any

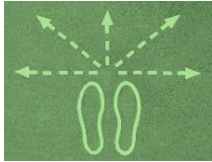
- ▶ WWTW may impact if not managed appropriately. Ensure mitigations
- ▶ There are no major concerns



Mitigation - if needed

- ▶ Mitigation measures outlined in the specialist report must be followed.
- ▶ Monitoring Programme recommended

Groundwater Comment - Geomeasure Group



Current status

- ▶ No water supply boreholes down-gradient from the proposed WWTW sites.
- ▶ Geological fault transverse to the eastern portion of the site.



Critical areas, if any

- ▶ Geological fault could serve as a potential pathway for the migration of contamination resulting from WWTW activities at site 3 & 4.



Impact, if any

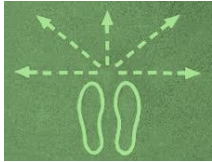
- ▶ Sewage spillage may impact negatively on groundwater



Mitigation - if needed

- ▶ Mitigation measures outlined in the specialist report must be followed.
- ▶ Propose groundwater sampling - boreholes

Estuarine Assessment - MER



Current status

- ▶ 96th / 256 ranked: not identified as being of significant biodiversity conservation importance
- ▶ Estuary is groundwater dependent
- ▶ Potable water provision vs borehole - positive impact



Critical areas, if any

- ▶ WWTW, pumpstations and pipelines (preferred & alt 1-2) are within the estuarine functional zone - 5m topographical contour)



Impact, if any

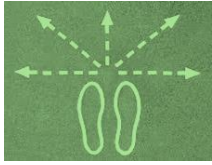
- ▶ Disposal of wastewater effluent to the iNonoti Estuary is considered to be a fatal flaw
- ▶ Direct habitat loss within the Estuarine Functional Zone
- ▶ Potable water provision vs borehole - positive impact



Mitigation - if needed

- ▶ Mitigation measures outlined in the specialist report must be followed.
- ▶ Propose 40m buffer to 5m contour;
- ▶ Relocate WWTW & infrastructure outside functional zone & 40m buffer
- ▶ Consider alternative disposal mechanism: Reuse of treated effluent for agricultural purposes.

Biodiversity Assessment – Peter Le Roux



Current status

- ▶ Site is predominantly covered by secondary grassland and riverine scrubs with coastal dune forest occurring along the coast



Critical areas, if any

- ▶ Primary Coastal Belt Grassland
- ▶ Dune Thicket and Forest
- ▶ Nesting area of Crowned Cranes



Impact, if any

- ▶ The loss of 5.2 ha of primary grassland to unauthorized site clearing and house construction is a serious concern from a biodiversity perspective.
- ▶ Disturbance to foraging area; utilizing natural resources



Mitigation - if needed

- ▶ Mitigation and monitoring measures outlined in the report must be followed.
- ▶ Community awareness of crowned crane foraging areas

Discussions

Way Forward

- Draft EIR
 - <https://drive.google.com/drive/folders/1ea8OuWwtGugJv-9lZxiLQN8rO28p7dt2?usp=sharing>
- Comment period for Draft EIR:
 - 30 days from **20th September – 25th October 2021**
- Final EIR to be submitted to EDTEA
- On acceptance – All Registered I&AP's to be notified of decision.

Closure

Triplo4 Sustainable Solutions

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Thank you