

NORTHERN AQUEDUCT AUGMENTATION PHASE 4

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**REPORT ON BASIC ASSESSMENT STUDY, PUBLIC
PARTICIPATION**

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FOR KNIGHT PIESOLD (PTY) LTD

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1 INTRODUCTION

Duyaze Environmental Consultancy cc was approached by Knight Piésold (Pty) Ltd to conduct the public participation process for the Environmental Basic Assessment Investigation on the proposed Northern Aqueduct Augmentation, Phase 4, as per the 'Terms of Reference' provided. The Terms of Reference were as follows:

- Identification of I&APs and creation of comments and response register,
- Building of register/database,
- Telephonic correspondence with I&APs,
- Constant updating of I&AP Register
- Sending out BIDs to the IAPs,
- Contacting all individuals on the data base regarding the release of documents etc.,
- Placing advertisements in newspapers,
- Email and drop off pamphlets,
- Flyer drop off at houses and businesses,
- Landowner notification, and
- Conducting meetings for different stakeholders identified within the community.

2 OBJECTIVES

The objectives of this study were to ensure that all stakeholders and households situated close to the servitude were informed following the legislated protocol, enabling them to raise concerns and issues to be considered by the authorities in making an informed decision when issuing the Record of Decision (RoD). The process also informed the participants about the environmental processes and their role in participation in the Basic Assessment Process. Besides the households situated close to the servitude local businesses and residents were to be informed in order for them to register as I&APs.

3 DATA SOURCES AND METHODOLOGY

3.1 Preliminary visit to study area

Before meeting with the leadership and the community members in the study area the Public Participation Team (PPT) used the project drawings to identify the affected area with the purpose of identifying possible impacts. The team familiarized themselves with the route of the servitude and took photographs. This was to enable the PPT to understand the receiving environment and also to be informed about potential negative social impacts. This preparation was of benefit to the team when orientating the ward councillors about the project foot print. Preliminary observation of potential impacts and recording of such was also useful. The Background Information Document (BID) was

also used as a source of information as well the previous Environmental Impact Assessment (EIA) Public Participation Report on the Northern Aqueduct Augmentation (NAA).



Figure 1: Project team on site familiarizing themselves with the project footprint in Mount Moriah



Figure 2: Photograph showing gardens on the servitude at Mount Moriah

3.2 Briefing local councillors

After the preliminary site visit which also included identification of affected wards (48, 49, and 102 of EThekweni Metro) access to the project area was facilitated by the ward councillors (Cllr R. Veeran of Ward 49, Cllr R. Moodley of Ward 48 and Cllr M Dlodla of Ward 102). This was done via telephone discussions and then followed up with email messages to set up appointments with the purpose of introducing the proposed project (**see annexure 1**). Ward 48 and 49 councillors (Cllrs Moodley and Veeran) were met in one meeting at, Cllr Moodley's offices (Ward 48) on 12 November 2012. In Ward 102 Cllr M. Dlodla was met at his offices situated at the White House, in Phoenix on the 2nd December 2012.

The public participation team briefly introduced the project to the ward councillors and to ward committee members who were informed that the full details of the project will be covered by the Project Technical Team and the Environmental Team at the focus group and public meetings. The PPT emphasized the role of inviting the ward committee members to be part of the ward leadership focus group as well of community meetings. They also emphasized the role of the ward committees in this consultation process as they will represent the community views and also assist the community should they have any further concerns regarding making input to the process.

3.3 Distribution of Background Information Document

The need to do 'door-to-door' drop off of Background Information Document (See annexure 1 b) at households that are situated close to the proposed project area was emphasized. The ward councillors emphasized the need for using local people to conduct this process. The local people will be familiar with the route and in most cases they will be known by the local people. The PP Team requested that the ward councillors identify unemployed individuals for this task who would be provided with an allowance for doing this task. A week (7 days) was allowed for this process to take place. Ward 48 and ward 49 identified the need for two volunteers in each ward whereas ward 102 identified the need for four people as the area that they needed to cover was larger compared to the other two wards.

All 8 volunteers (6 ladies and two men) were inducted into this process by the public participation team, each in their own ward, and were provided the drawings (map) to use in order to identify the houses situated close to the servitude. They were trained in how to use the maps and on how to fill in the household notification form (See Annexure 2). They were also provided necessary support material to use on site. The project team consulted with them on continuous basis to ensure that they were on board with the process. At the end of the process they were asked to provide verbal and written feedback about the experience gained during this process (See annexure 3).

All three ward councillors provided necessary support to the Public Participation Team; thereafter the Project team was given a mandate to continue working in the proposed project area. Soon after meeting all three ward councillors the Public Participation team organised the Project Team (Environmental Consultant, Engineering Team and the Client) to make presentation to the ward councillors, ward committees and at community meetings. The meetings were organised as follows:

Ward	DATE	VENUE	Target Audience
48,49	12.11.12	Sheik Centre, Cllr Moodley's office	Ward Councillors
48,49	20.11.12	Sheik Centre, Cllr Moodley's office	Ward councillors and ward committees
48,49,	27.11.12,6.02.13	Stonebridge Community Hall,	Public Meetings
102	2.12.12, 6.12.12, 18.12.12	White House, Phoenix Cllr Dlodla's office	Ward councillor, ward committee members and volunteers

3.4 Informing the affected households

Houses that are situated next to the servitude were identified as main stakeholders in the project. The PP team requested that ward councillors to identify volunteers from their wards to assist in doing the door-to-door drop off of BIDs, BAR process and I&AP comment forms to the affected households. This was motivated by the fact that the proposed project will be situated close to most houses. It was therefore important to make sure that all of these households are notified and that they were given an opportunity to raise their concerns. The councillors also mentioned that not all people read the newspapers and they emphasized the need for this door-to-door notification process. The PP Team generated a form that was to be signed by an adult household representative as proof that they have been notified about this process by being issued the BID, flyer and I&AP comment form (See Annexure 4). The general feedback from the volunteers was that people were happy about being informed about the proposed development but they were concerned about their houses and fences being protected from cracking due to activities on site as well as accessibility of existing footpaths during the construction phase.



Figure 3: Example of a path situated on the servitude



Figure 4: Volunteers at Ward 102 with the Public Participation Team leader

3.5 Site Notices and Newspaper advertisements

Site notices were placed at strategic places to inform the public about the proposed development and the processes to be followed if they wanted to be part of the process or if they wanted further technical information (see Annexure 5).



Figure 5: Example of the site notice

There were three sets of newspaper advertisements that were issued. This Advertisements were published as follows: (See Annexure 6 a, b, c).

Newspaper	Date	
The Mercury	12.12. 2012	
Isolezwe	12.12.2012	
Phoenix Tabloid	29 .01.2013	

The first advertisement which was sent to the Phoenix Tabloid for publicising the community meeting on 27 November 2012 was not published. Following up with the newspaper Deputy Editor the next day, to determine the course for not placing the advertisement, he mentioned that the article was supposed to be paid for. He apologized on behalf of the staff member who did not forward that information to the project team. The project team was told that since the article was of community interest it was going to be placed in the newspaper at no cost. (See annexure 7 communication with the journalist concerned). It was arranged that the next advertisement in the Phoenix Tabloid was to be published only after the festive season. The advertisement appeared in the Phoenix Tabloid on 29 January 2013. (See annexure 6C). This advertisement also covered the date of the second public meeting in Phoenix which was held on 6 February 2013. The ward 102 leadership advised that there was no need for public meeting as all the affected households were notified individually through the 'door-to-door' consultation process. The affected community members did not highlight the need for the community meeting hence the leadership decided to forego a community meeting.

3.6 Community Meetings

There were two public meetings that were conducted in Phoenix. The first meeting was held on 27 November 2012 and the second one was held on 6 February 2013. Issues and concerns were collated as a record of Minutes (See annexure 8 a, b,). Both meetings were held at Stonebridge Community Hall in Phoenix within ward 48. The first meeting was advertised via the ward committee's public address system and by the ward councillors informing people. The attendance at both meetings was mainly by ward committees and councillors. The general public did not attend these public meetings. An assumption here is that the door-to-door notification of the households situated close to the proposed project area was sufficient and making them to sign for notification about this Basic Assessment Study made them to register as interested and affected parties. Even though community meetings were attended mainly by the leadership, the issues and concerns raised represented those of the public at large.



Figure 6: Some delegates at the community meeting held at Stonebridge Community Hall



Figure 7: Cllr R. Moodley addressing the public meeting



Figure 8: Cllr R. Veeran addressing the public meeting

3.7 Public Submissions

Data was also collected through public submissions. The following is the list of submissions received by fax, email and by I&AP registration form:

Submission by	Concern	Address
Joyce Lazarus	Very excited about the project	131,Golden Green gardens, Greenbury,Phoenix
Dolly Naidoo	This is a good project	54 Golden Green Gardens, Phoenix
Rashina Singh	Satisfied with the project	25 Drawbridge walk, Stonebridge, Phoenix
Baker Thayab	Community must be respected in this project	63 Cardinal Road, Phoenix
Veena Behari	This is a good project	65 Crabgreen end Greenbury,Phoenix
Naicker Muthulingum	No Objections if everything goes according to the proposed plan as discussed at meetings. How will the project benefit the community as a whole, there must be less interruptions as possible. All the people along the route must be consulted	74 Cardinal Road, Stonebridge, Phoenix
Ragunandn K	The pipeline must continue as long as it does not interfere with any property	
Lindinkosi Mhlongo	'We are a community organisation spearheading environmental awareness to ward 42 schools, without expecting anything in return. The project will help us learn a lot of things'.	G304,Ntuzuma Town Ship,4359,NTUZUMA
Tiny Ramsamy	See Attached emails, annexure 10	Phoenix
Solly Singh	"I am keen in the development and seek full details of the project. Thanks".	No Address provided

3.8 Project Team

The Public Participation Team leader is Mbaweni Manqele who has vast experience in Public Participation Processes. She has more than 16years' experience in public participation. Mbaweni Holds Master in Education (Environmental Education) with Rhodes University, Grahamstown campus. She was assisted by Sifiso Zungu an Honours Graduate (UKZN - Durban) in Public Participation who has worked for Duyaze Environmental Consultancy on a part time basis as a volunteer during

vacation periods and Samukelo Manqele an Environmental Science second year student at University of KZN, Pietermaritzburg.

4 RECEIVING ENVIRONMENT OVERVIEW

4.1 Biophysical Environment

In biophysical terms the project area is identified as the KwaZulu-Natal Coastal Belt, with its distribution extending from near Mtunzini in the North, via Durban and Margate and just short of Port Edward in the South (Mucina and Rutherford, 2006). The KwaZulu-Natal Coastal Belt possesses highly dissected undulating coastal plains, which in the past was covered to a great extent with various types of subtropical coastal forest.

The KwaZulu-Natal Coastal Belt is endangered, with some primary grassland being dominated by *Themeda triandra*, which still occurs in hilly, high rainfall areas where pressure from natural fire and grazing regimes prevailed. At the present however, the KwaZulu-Natal Coastal Belt is exceedingly affected by an intricate mosaic of extensive sugarcane fields, timber plantations and coastal resorts, with interspersed secondary *Aristida* grasslands, thickets and patches of coastal thornveld. Important taxa most found in KwaZulu-Natal Coastal Belt include: *Aristida junciformis* subsp. *galpinii*, *Digitaria eriantha*, *Panicum maximum*, *Themeda triandra*, *Alloteropsis semialata* subsp. *eckloniana*, *Cymbopogon caesius*, *C. nardus*, *Eragrostis curvula*, *Eulalia villosa*, *Hyparrhenia filipendula*, *Melinis repens.*, *Berkheya speciosa* subsp. *Speciosa*, *Cyanotis speciosa*, *Senecio glaberrimus*, *Chamaecrista mimosoides*, *Conostomium natalense*, *Crotalaria lanceolata*, *Dissotis canescens*, *Eriosema squarrosum*, *Gerbera ambigua*, *Hebenstretia comosa*, *Helichrysum cymosum* subsp. *Cymosum*, to name a few.

According to Mucina and Rutherford (2006), the KwaZulu-Natal Coastal Belt's landscape is dominated by the Ordovician Natal Group sandstone, Dwyka tillite, Ecca shale and Mapumulo gneiss (Mokolian). The weathering of old dunes has produced the red sand, called the Berea Red Sand. The soils supported by the above-mentioned rocks are shallow over hard sandstones and deeper over younger, softer rocks.

5 INTERESTED AND AFFECTED PARTIES

This list was collated using attendance registers at community and focus group meetings, 'door-to-door' data Base and also emails received during the consultation process (See annexure 9).

6 COMMENTS AND RESPONSES REGISTER

6.1 Comments, issues and responses

The table below is a summary of all comments received and issues raised.

Nr	Comment / Issue	Response	Action
1	EIA PROCESS		
(a)	There is no need to conduct the EIA process as the proposed project will make use of the existing registered servitude.	The BID does mention activities that had triggered the need for this study. It is a legislated requirement to conduct this process.	
(b)	Why conduct a Basic Assessment Process instead of a full EIA	The previous phase conducted a full EIA process in the area and a positive RoD was received. Currently DAEA has approved a BAR but should the BAR report not be sufficient for them to make a decision they will advise that the full EIA be conducted. The specialist reports will focus on details which will be made available as part of the BAR.	KP to inform I&APs should a need of a full EIA arise.
2.	WATER SOURCE, WATER CUTS AND DISTURBANCES		
(a)	Where will this water come from? [Source]	Water comes from Midmar Dam in Howick.	
(b)	The water in Phoenix sometimes doesn't have enough pressure, how will that be addressed?	The construction will be such that the pressure will be ample.	EWS to discuss this issue outside this process with the ward councillors.
(c)	What is the length of the entire route?	The entire proposed route is about 5km long.	
(d)	Was there another alternative for routing this pipe outside Phoenix?	The purpose of this project is to add more water to Phoenix 2 Reservoir. The project originates from Duffs Road and passes through Mount Moria before it reaches Phoenix. It affects 3 municipal wards: Numbers 48, 49 and 102.	
3.	COMMUNITY HEALTH AND SAFETY		
(a)	How will traffic be managed during construction?	The pipe will be laid in sections. For example, 200m will be excavated at a time. Before any other trench is opened the Engineers will ensure that backfilling has been completed. This will be strictly adhered to. There will be well managed 'Stop' and 'Go' signals at all times inclusive of peak hours.	
(b)	Will this project affect pedestrians and cars	Traffic will be affected directly at intersections where the pipe has to go through. Pedestrian crossings and passages will be provided during construction. The construction will be kept within the fence. OHS policies will be observed at all times	The open trenches will be barricaded at all times as the pipes are long there will be only one trench open at a given time.
c)	Will there be safety precautions?	There will be fences and danger tapes erected around the construction sites at all times.	
(d)	Construction must take place as long as the houses are not affected.	The pipes have external and internal lining. They are designed to handle the pressure.	

Nr	Comment / Issue	Response	Action
(e)	How many roads will be affected [by the trench]	The estimated number of roads to be affected for the entire route is 18 inclusive of minor and major roads. Minor roads will be trenched through (half of the road will be opened, pipeline laid, closed and vice versa- alternative access routes will be provided) Major roads will undergo pipe jacking.	PPT to count the affected intersections
(f)	What will happen to the old pipes that are currently used to supply water to Phoenix which are situated in the proposed servitude?	The pipe will still continue being used.	
4.TIME FRAME AND LOCAL NEWSPAPERS			
a)	Please make use of the Phoenix Tabloid as well to inform the community about the proposed project as most people do not buy newspapers	Noted.	
b)	How much time is allocated for the construction phase and when will construction begin?	The estimated time frame for construction will be 12-18 months. It is anticipated that if all goes well the project might begin by the latter part of 2013. It was emphasized that this is beyond the control of the EIA team. The Implementation of the project is managed by eThekwini. The project will still go out to tender like all other projects.	Ward committee to make follow up with the councillor and relevant portfolio committee.
c)	How old is the Aerial Photograph	It was taken a year ago.	
d)	The pipes must be laid in properly and this must not be rushed to make sure that the product is off good quality (100%)	Noted: the Engineer Representative explained the entire quality control process in detail including the 24 hour process of pressure testing.	
5 JOB CREATION FOR LOCAL PEOPLE			
a)	Door-to-door drops offs of information pamphlets and BID	Employment needs to be created within the ward so that the Councillor is seen to be acting for his people.	Proposed two people for the ward who will be paid a stipend.
b)	Will the project employ security guards?	eThekwini uses an in-house security company, to take guard at both ends of constructor corridor at night.	
c)	We recommend that the project appoint a ward Community Liaison Person (CLO) instead of employing one CLO for the entire project.	Noted.	
d)	The project must create jobs for local people during construction.	Noted. The Public participation process is focussing on collating issues and concerns that relates to the Environmental processes. The construction phase will be dealt with by EWS in consultation with the ward councillors.	

Nr	Comment / Issue	Response	Action
e)	Recruitment of labour, where will labour come from?	The tender document will inform that decision. EThekweni has policies that govern such processes. The project is at EIA phase. If the RoD support that the project goes ahead necessary policies will be implemented and such will be communicated to the ward councillors	EWS to communicate with Cllrs, all information regarding labour recruitment as soon as the project has been awarded to the contractor.
f)	Where will the workers stay? The construction contractor must not build shacks at the site camp to accommodate his staff	Noted.	
g)	As this project is still at the EIA stage, the project team must note that 'hopes' about jobs creation has been raised amongst community members that there will soon be created.	Noted. The community leadership will be informed of the RoD. The ward councillors will have to follow up with the EWS with reference to the Tender process.	
6	COMMUNITY ASSETS ON THE PROPOSED SERVITUDE WHICH IS CURRENTLY OWNED BY THE CITY		
a)	There are houses situated under the pylons between Mount Moria and Phoenix. What will happen to them?	These houses are built on the servitude, this will be communicated to the Technical team to consider	
b)	Under the pylons on St Mary's Park there are gardens and vegetable patches. There are other assets besides vegetables on the servitude.	EThekweni owns the land above the servitude unless they have given written consent for any activity that occurs on that land. EThekweni is not legally obliged to compensate for such.	Cllr Singh requested that the implicated people must be told now not to continue with planting on the servitude. The CLOs will let them know before constructions begins, to make sure that they remove their crops.
c)	What material is the pipe made of. Should the pipes burst, as the pipe is so large (1.2m) there will be a "tsunami", people are frightened.	New steel pipes are continuously welded. Cathodic protection over the pipe will prevent corrosion of the pipe. The pipeline can be laid in the ground indefinitely (i.e. 100s of years) provided that the cathodic protection is maintained.	
d)	If walls and boundaries are affected, are they insured?	In the Contract the contractor has to take out various insurances in the name of the Employer and the Contractor. The contractor will be responsible for the repair/reinstatement to any damage on site and it will be checked by the Resident Engineer from Knight Piésold/ Naidu Consulting.	
(e)	Will there be blasting of rocks?	There may be blasting along the pipeline route should hard rock be encountered. Should blasting be undertaken, this will be controlled with safety precautions in place. The South African Blasting Specifications will be followed. There will be limitations enforced on any blasting procedures	

Nr	Comment / Issue	Response	Action
7	ENVIRONMENTAL MANAGEMENT PLAN AND ECONOMIC PARAMETERS		
a)	What informed the project, were the economic parameters considered. (Beneficiaries compared to amount to be spent).	The process conducted is an EIA (BAR) process. The team has no mandate to discuss the economic status of EWS as it is not part of the Terms of Reference for this process. This must be discussed with the ward councillors or the engineering team and EWS outside this meeting.	IAP concerned to make contact with relevant officials for more details on the economics of the project.
b)	How will the environmental protection be adhered to during construction	The Tender document will include the EMP which will form part of the BAR report. This will enable the contractor to include the costs that will relate to environmental management when Bidding.	
8	WORKING SERVITUDE AND GEOLOGY UNDERNEATH		
a)	How deep is the working servitude	The working servitude will be 3 meters deep and 2.2 meters wide. The width of the trench will vary as this is topography dependent.	
(b)	What if the project need blasting	There may be blasting along the pipeline route should hard rock be encountered. Should blasting be undertaken, this will be controlled with safety precautions in place. The South African Blasting Specifications will be followed. There will be limitations enforced on any blasting procedures	

6.2 Mitigation Measures proposed by IAPS

Recommendations made below are for the project team to consider when drafting the EMP report. They are informed by previous experience that the PP team has experience in similar projects.

6.2.1 Protection of domestic livestock and troop of wild monkeys

The proposed project area has a lot of livestock e.g. chickens, dogs and cats roaming the streets as well as a troop of monkeys that frequent the proposed project area. They have been observed at almost every visit to the project area. The community meeting also highlighted the need to protect the animals during construction.



Figure 9: Example of livestock roaming on the streets

6.2.2 Liaising with the community during the construction phase

The I&APs recommended that the project appoint a community liaison person who will liaise with community during the construction phase. This person must be from the affected ward. As the project is transgressing in to 3 different wards, a recommendation was that the project must appoint a CLO per ward.

6.2.3 Road construction

The recommendation is that the project must have the 'Stop' and 'Go' signs. There must be a trained traffic control person at all times directing traffic. A pedestrian bridge must be constructed to enable them to walk safely and the trench must be fenced at all times to prevent pedestrians and animals such as dogs and cats from falling into the trenches.

6.2.4 Project Steering committee

The PP Team also recommend that the project establish a Project Steering Committee (PSC) that will form liaison forum between the contractor and the community. The PSC will attend monthly meetings with the Project Team and report any negative impacts that are as a result of the construction activities in the area. This PSC must consist of ward committee representatives of all three affected wards. It is suggested that this committee monitors the project from beginning to the end.

6.2.5 Gardens on the servitude

A recommendation is that the affected households must be notified in advance, that is before construction begins, that they should remove their vegetables or they must not plant on the servitude as soon as the project has gone out to Tender. This will be the function of the Community Liaison Officer and Ward Councillor concerned. The Project Team must make reference to the eThekwin

Municipality policies to determine whether they do compensate for crops that are grown on their servitude. This must be communicated to the community by the ward councillors.

6.2.6 Houses situated next to the servitude

There is a belief that operations of the heavy machinery might cause the walls and fencing of some houses to crack. Even though assurance was made that this is unlikely to occur, the participants recommended that the contractor must take photographs of the houses before and after construction. These must be kept in the file and must be used in the event of claims and disputes.

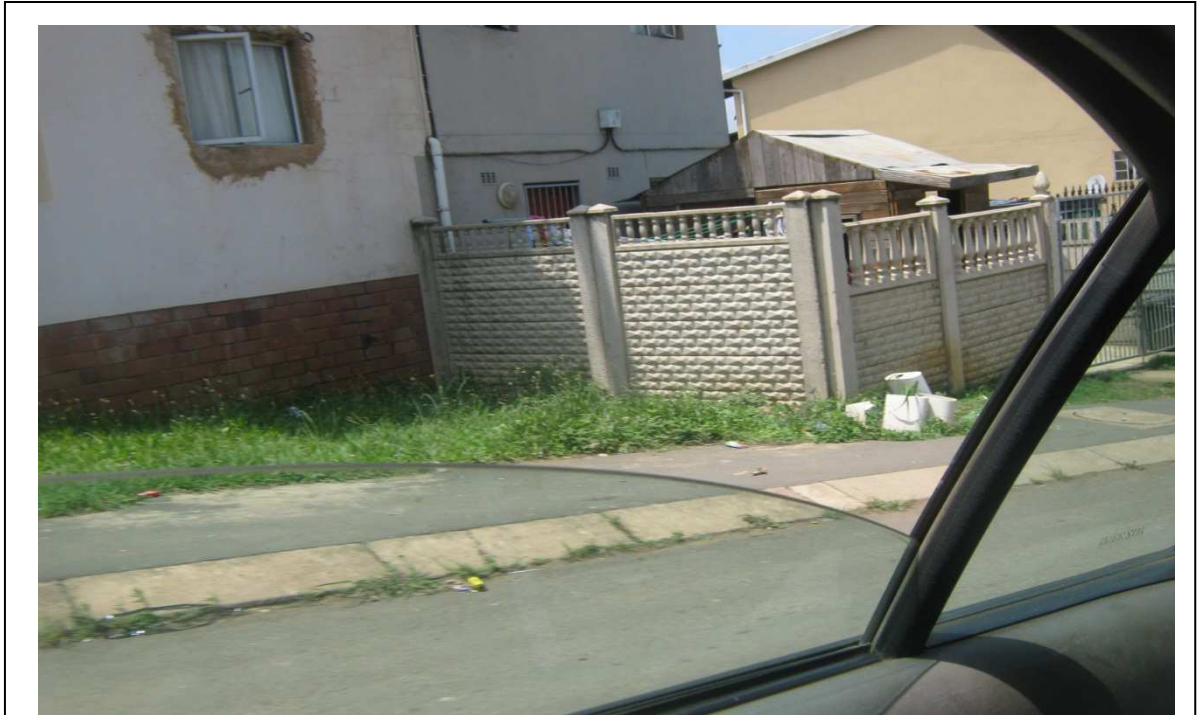


Figure 10: Example of House situated closer to the proposed servitude at Simunye Drive, Mount Moriah

6.2.7 Appointment of locals during the construction phase

To avoid erecting tents at the site office, it is recommended that the labour (excluding skilled personnel) should be sourced from local. This will minimize risks associated with crime and community safety as most workers will be known by the local residents.

6.3 Recommendations and overall public impression of the project

The overall Public impression is that the project must go ahead for the following reasons:

- The pipe will go through the existing servitude.
- All residents which are residing close to the servitude have been consulted and informed. There were no objections made by these residents.
- The low water pressure in Phoenix is a challenge hence the need for this project to add more water into the Phoenix 2 reservoir.

- Water is a basic need; there is no need to obstruct this proposed development, as there is more water needed to support the new infrastructure development at Umhlanga and Cornubia.
- The project will create jobs for the local people and on completion it might result to more jobs for the proposed developments in the area and in Cornubia.
- The Public participation process was thorough and fair and all questions and concerns were addressed to the leadership satisfaction.

The project must consider the following should it go ahead:

1. The main concern from the public was that the houses and fences must not be affected by the proposed construction.
2. The project must not affect traffic and that health and safety issues must be observed at all times by the contractor.
3. There is also a perception and hope that this project will solve the low pressure of water in the area as the community have been experiencing this challenge for a long time.
4. Even though this is not shared by most participants but one stakeholder believed that the economics are not justified for this proposed project, as it will not be fully functional as soon as NAA phase 3 is operational. This was disputed by the Technical Team and the other participants at the meeting but the concerned I&AP felt very strongly about this, supporting it by saying that the EAP had mentioned in the email that the 'proposed PHASE 4 pipe will be supplementary to PHASE 3 once it is operational' (see annexure 10).

7 SUMMARY OF FINDINGS

The following is the summary of findings:

7.1 Findings in Ward 102 – Mount Moriah

In discussion with the ward councillor he mentioned that he welcomed the consultation process as well as the involvement in this process. He mentioned that this has given him enough time to prepare for a sports facility and he will advise the ward committee to look for another alternate site as the one that they have identified is now earmarked for construction of the proposed pipe. He mentioned that the EIA process raises hopes amongst community members that it will create jobs, he hoped that the project will go ahead and that it will create jobs opportunities for the local people.



Figure 11: Area that was initially identified as a sports field at Mount Moriah

7.1.1 Traffic

At some places the pipe will have to go through the major roads. This will contribute to traffic congestion during the construction process if not managed properly. The main road in Mount Moriah is also used by school children. During peak hours it is a very busy street hence it is important for the construction process to consider all the potential hazards that might be linked to this process.



Figure 12: Mount Moriah Drive where the pipe will cross

In areas where the pipe will have to cross the road it is recommended that 'pipe jacking' be done to minimize traffic congestion, alternatively an alternate route should be provided for free flow of traffic.

Trucks next to the servitude between Mount Moriah and Phoenix (ward 102)

It is recommended that the security is enhanced in this area at night and during the day as this is area is not along the main road it is situated at the cul de sac of Marks gate Close, off Stonebridge Drive.



Figure 13: Trucks situated closer to the servitude at Marksgate close

7.1.2 Gardens on the servitude

One of the core functions of the CLOs will be to inform these individuals who have grown their vegetables and other crops on the servitude. It is very important that this issue be addressed with caution even though it is illegal to plant on the servitude. This must be explained to the affected community in detail so that they understand the motivation for the EWS to have them remove their crops or to delay planting their crops.



Figure 14: Example of community garden situated on the servitude

7.1.3 Non-disturbance of taxi rank

The proposed route will pass next to the taxi rank at the bottom of Mount Moriah Drive. It is recommended that this area is not disturbed at all by construction activities. Before construction begins the project manager and the ward councillor must introduce the contractor to the taxi rank management. They must agree on how to operate within this area. It is very important to inform the taxi managers about this as they will need to inform the commuters in advance should there be a need for them to look for an alternate space. It is important to include the operations next to the taxi rank in the EMP. Next to the taxi rank there is the Engen Filling Station. It is also important not to disturb the entrance to the filling station as this might affect business. Again the contractor must be introduced to the management of this filling station and there must be agreed upon 'Terms' that will be set for the constructor while on site to ensure that there are minimal disturbances (if any) on site.



Figure 15: Taxi rank at Mount Moriah



Figure 16: Filling station at Mount Moriah Drive

7.1.4 Vacant land

This area is not developed or inhabited at the moment but there are houses situated next to it. It is important that safety is adhered during this process to protect the households situated at both ends of this servitude.



Figure 17: open land situated between Mount Moriah and Phoenix

7.2 Findings at Ward 48 and 49 in Phoenix

7.2.1 Gardens on the servitude

This house next to Phoenix Highway has planted a beautiful garden on the servitude. They have been notified by dropping the BID and I&AP registration form. The ward councillor has mentioned that unless these people have authority to encroach on the servitude the servitude belong to the Municipality.



Figure 18: Example of gardens in the servitude

7.2.2 Safety issues

Some houses are situated closer to the servitude. This necessitates the need for security and caution during the construction phase. Some areas within the servitude are used by pedestrians and there are houses situated next to the servitude. It is proposed that areas like this one be fenced off at all times during construction phase to ensure that pedestrians are not exposed to danger. The walls of the concrete fencing need to be protected. The occupants of the households which are situated closer to

the servitude need to be given assurance that there will be no nuisance and unnecessary noises at night caused by the construction.



Figure 19: Example of path used by school children



Figure 20: Example of the well maintained servitude

The servitude is well maintained by the municipality. It is therefore important that the contractor maintain this cleanliness at all times. Road crossings of the pipe must be supervised during construction at all times.

8 CONCLUSION

In conclusion, all three ward councillors are in full support of the project. Participants that were consulted during this study from all three wards 48, 49 and 102 are also in full support of this project. The community member from Ward 48, who was initially not impressed at all about the proposed project, was provided time to make his input and after elaborate engagement with him via email as well as at the public meeting conducted on the 6.02.13 he did mention that his concerns are not environmental but are mainly economic concerns but eventually he did provide his support to the public participating process. I must congratulate the project team for their commitment in ensuring that this stakeholder was awarded all the dignity he deserved towards understanding the BA process.

I have consulted with all relevant stakeholders given the time allocated and budget, I can say that the affected communities were informed and they were awarded enough time and opportunity to participate in this process. Even though the process was transparent and fair it might be possible that there might be people who were left out of the process as the consultative process took place during the holiday season (November 2012 –January 2013) in South Africa. The majority of concerns raised are for the construction phase therefore it is very important to address the concern raised in the EMP.

9 THE PROFESSIONAL OPINION

I can comfortably say that:

1. The consultation, participation and engagement process has been fair, open and transparent.
2. The issues that have surfaced during the process underline the importance of ensuring the greatest degree of public participation and stakeholder engagement possible in the construction phase of the project.
3. The requirements of Section 24(7) (d) of the National Environmental Management Act No 107 of 1998, and the Regulations and Guidelines published in terms of the Act have been complied with.

March 2013

Mbaweni Manqele (M.Ed. (EE) Rhodes University

LIST OF ANNEXURES:

Annexure 1

Communication with ward councillors regarding the first appointment:

----- Original Message -----

Subject: Request for appointment - meeting for Project NAA Phase 4

From: mba@mail.ngo.za

Date: Thu, November 8, 2012 11:11 am

To: ronniev@saol.com

Cc: mlotz@knightpiesold.com

duyaza@gmail.com

Dear Councillor Veeran

Subject: Environmental Impact Assessment Process: Basic Assessment, Phase 4 of the Northern Aqueduct Augmentation - Duffs Road Link, Ethekwini Municipality, KwaZulu Natal

This is a follow up to our telephone discussion earlier.

Our company Duyaze Environmental Consultancy is conducting an EIA (Public Participation Component) for the above mentioned project.

We would like to have a meeting with the Cllr to present the project

Officially with the aim of seeking your guidance on how to proceed with Public participation within the ward.

The Background Information Document is attached for your information.

Please may you revert to me if it will be possible to meet on Tuesday 13 November at 10:00 at the venue that will be suitable to you. If not may You please suggest 2 other dates and time.

Thanking you in advance.

M. Manqele (Ms)

Public Participation Specialist

M.Ed. (EE) Rhodes University

Duyaze Environmental Consultancy

Tel: 033 3915094

Mobile: 073 7267210

Fax: 0866 142081

email: mba@mail.ngo.za

----- Original Message -----

Subject: Confirmation of Meeting- Project NAA phase 4

From: mba@mail.ngo.za

Date: Thu, November 8, 2012 11:55 am

To: deochandg@gmail.com

actionda@mweb.co.za

Cc: mlotz@knightpiesold.com

duyaza@gmail.com

zungusifiso99@gmail.co.za

duyaza@gmail.com

Dear Hon Cllr Deochand and Moodley

I would like to thank you for your hospitality and professionalism over the phone earlier today.

I would like to confirm that our meeting will take place as follows:

DATE: Monday 12 November 2012

Time: 11:00

Venue: Mr Moodley's office (Please provide me with street address)

In attendance will be: At this point it will be the Public Participation Team.(Sifiso, Sam and myself). We will set up a date at this meeting (on Monday) where our Engineering Team and the Project Team members including Ethekewini municipality representatives will attend to make a formal project presentation.

Purpose: To introduce the project with the aim of seeking guidance from the Cllrs on how to proceed to reach out to the affected communities.

I will be sending the Background Information Document as a separate email.

Thanking you again and I am looking forward to meet you on Monday next week.

Regards

Mbaweni Manqele (Ms)

Public Participation Specialist

M.Ed. (EE)Rhodes University

Duyaze Environmental Consultancy

Tel: 033 3915094

Mobile: 073 7267210

Fax to email: 0866 142 081



email: mba@mail.ngo.za

Umqingo Onikezela Ngolwanzi Ngentuthuko Ehlongozwayo

Nokuzokwenzeka

(Background Information Document)

Northern Aqueduct Augmentation Phase 4, KwaZulu-Natal:

On Behalf Of (Applicant):	By (Environmental Consultants):
	
EtheKwini – Water & Sanitation	Knight Piésold (Pty) Limited Tel: +27 31 276 4660, Fax: +27 31 266 4668 P O Box 338, Westville, 3630 mlotz@knightpiesold.com www.knightpiesold.com
EIA Number: PENDING KP Reference: 303-00213.03 Revision Date: October 2012	

1. YINI LENA E EHLONGOZWAYO

Lomqulu unikezela ngolwazi kuyo yonke iminyango kahulumeni, amalunga emphakathi afisa ukubamba iqhaza kulohlelo, ngenxa yokuthi bathinteka ngqo noma nje benesifiso sokubamba iqhaza ngokufaka imibono nezincwadi kuleprojekthi. Baziswa ukuthi uMasipala waseThekwini (EtheKwini Municipality Water and Sanitation) unenhloso yokuthi angeze elinye ipayipi elithwala amanzi angumthamo omkhulu wamanzi ahlanzekile (Northern Aqueduct (NAX) esifundazweni sakwaZulu Natal. Leprojekthi ebizwa ngokuthi yi Northern Aqueduct Augmentation (NAA) yiprojekthi vele esithole imvume yokuthi ingenziwa ubude bayo bungamakhilomitha angamashumi amahlanu (50km). Lelipayipi kuhlelwe ukuthi linikezele ngamanzi kulezindawo; EMachabeni kuya eMhlanga eNyakatho nedolobha laseThekwini. Lesicelo seProjekthi ehlongozwayo yamakhilomitha amahlanu (5km) ubukhulu balelipayipi bungu 1200mm diameter. Lizoxhumana nepayipi elikhona njengamanje eliphakela lezindawo (NAX) kuze lixhumane nepayipi leli elingubude obungu 50 km eselithole imvume emnyangweni Wezolimo neZemvelo nokuThuthukiswa Kwezindawo eziseMakhaya (DAEA&RD) ukuthi lingafakwa. Inhloso wukuthi kunciphe ingcindezi ekhona njengamanje ukuthi amanzi angakwazi ukufinyelela kahle ezindaweni ezakhele iNyakatho yedolobha laseThekwini kuleminyaka emihlanu ezayo.

LeProjekthi ehlongozwayo inezinto ezizokwenziwa ekuthi uma zizokwenziwa kumele ngaphambi kokuthi zenziwe kutholakale imvume ngokulawula komthetho *National Environmental Management Act (No. 107 of 1998, eyabe seyishicilelwa kabusha ngo June 2010 Regulation R544, (Listing Notice 1, Activities 9,11,18 and 37) and Regulation No R545 (Listing Notice 2, Activity 10)*

Inkampani yabakwa Knight Piésold Consulting baqashwe Umasipala waseThekwini ukuthi kube yibo abayinkampani ezimele ukuthi kube yiyo ezosingatha uhlelo locwaningo lwezemvelo baqale ngohlelo olubizwa ngokuthi yi *Basic Assessment Report* ngenhloso yokuthi luguqulwe lube yi-*Environmental Impact Assessment (EIA)* eyenziwe ngokuphelele. I-EIA uhlelo lokuthola imithelela engaba khona kubantu, izilwane kanye nezemvelo ezizungeze lendawo ekuhlongozwa ukuthi ithuthukiswe. Ilungelo lokuthi kuqalwe nge *Basic Assessment* yize lokhu okuzokwenziwa kudinga ukuthi kwenziwe uhlelo oluphelele lwe EIA. (Bona lokhu okubhalwe ngezansi *). Uhlelo lwe Basic Assessment luzokhomba izinto ezidinga ukubhekelelwa luphinde luchaze ngemithelela engase ibe khona kulendawo ekuhlongozwa ukuthi ithuthukiswe. Kuzophinde futhi kubhalwe uhlelo olubizwa ngokuthi yi *Basic Assessment and Environmental Management Plan* esekela lolucwaningo le Project eyobe seyinikezelwa kwi Department of Agriculture, Environmental Affairs and Rural Development (DAEA&RD)

Inhloso yalomqulu kuwukuthi inikezele wena ngethuba lokuthi ubhalise igama lakho uma kuwukuthi ufuna ukubamba iqhaza uchaze futhi isizathu sokuthi ufune ukubamba iqhaza. Usize futhi ngokuthi usinikezele noma ingaluphi ulwazi

izincomo, okuhambisana nemithetho, nemigomo ekumele ilandelwe ngokwesifiso sakho, amaqoqo omphakathi, noma Umnyango kahulumeni ekumele kuqikelelwe ukuthi kuxhunyanwe nawo ngenkathi kwenziwa lolucwaningo lwezemvelo.

2. YINI LENA EKHULONGOZWA UKUTHI YAKHIWE?

i-Ethekwini Water and Sanitation (EWS) isohlelweni lokuthi lokuthi iqale ukufaka ipayipi elisha elithwala umthamo omkhulu wamanzi ukusuka eCato Ridge kuya e-Inchanga, Pinetown, Tshelimnyama nase Ntuzuma (nezindawo ezizungezile) lamanzi azogeleza ngaphandle kokuthi kusetshenziswe amaphampu ukuze ahambe. (The Western Aqueduct (WA)). Lelipayipi lizoxhumana nepayipi lakwa Mgeni Water elithwala umthamo omkhulu lamanzi ahlanzekile elikhona njengamanje. Ingqalasizinda yalo izosuka ngaphandle kwemingcele kaMasipala waseThekwini, lithola amanzi edamini I Midmar. Ipayipi elisafakwa njengamanje liyinsimbi elingu (1,6m – 0.6m).

Isicelo safakwa kwi *Department of Environmental Affairs and Rural Development* kwatholakala imvume yokuthi yokuthi iprojekthi yenziwe igama layo yi Northern Aqueduct ezonikezela ngamanzi kwi projekthi ebizwa ngokuthi yi Northern Aqueduct Augmentation (NAA) ezonikezela ngomthamo omkhulu wamanzi iwafake kwi Western Aqueduct ebe idlula endaweni esusa amanzi kwaDabeka. Lokhu kuzohlanganisa ukuthi kwakhiwe ipayipi Elisha lomthamo omkhulu wamanzi ukusuka endaweni yaseMachobeni kuya eMhlanga idlule kulelithangi lamanzi elihlongozwayo elizoba sendaweni yase Blackburn elizobizwa ngokuthi yi Blackburn Reservoir, ezonikezela ngamanzi ezindaweni eziseNtshonalanga nomfula uMgeni, neniNgizimu yomfula Uhlanga kanye nezindawo ezisempumalanga nendawo yaseNtuzuma (nezindawo ezizungeze lendawo). Amanzi aya kulezindawo awazukuphathswa kepha azozigelezela nje. Lelipayipi elizohamba umgudu ongamakhilomitha angamashumi amahlanu (50 km) eselithole imvume yokuthi lingafakwa lona lizokwakhiwa ngesteel elinamadayamitha ahlu kahlu kene lizobe seliqanjwa igama kuthiwe yi Northern Aqueduct Augmentation.

Manje sekuhlongozwa ukuthi kwakhiwe u Phase 4 weprojekthi onjiniyela bona bayibiza ngokuthi yi Phase 3 (ngezizathu ezingeke zichazwe lapha ngoba azithintene nalokhu). Kunepayipi vele elikhona elibizwa ngokuthi yi Northern Aqueduct (NAX) elizochezuka nge Northern Aqueduct Augmentation (NAA). Uma seliphothuliwe lelipayipi elingu Phase 1, lwe projekthi i- NAA izoxhumanisa lezindawo ezizothuthukiswa enyakatho neTheku njengendawo yase Cornubia, Umhlanga, Waterloo kanye neNyanninga. Iprojekthi lena ebizwa ngokuthi yi NAX okwamanje isinengcindezi ngoba isinikezela ngamanzi angasenele ukuthi asabalaliswe kuzo zonke izindawo eziwadingayo njenge Cornubia. Kuzoba nzima kakhulu-ke, ingcindezi iqhubeka uma lezindawo ezizothuthukiswa nazo sezidinga amanzi ahlanzekile. Ingcindezi yokunikezela ngamanzi itholakala kakhulu uma usuka e Durban Heights uya e Phoenix 2 Reservoir udlula ngaseDuffs Road.

Ingcindezi enkulu iba lapha ezindaweni ezixhumanisa i-Duffs Road kanye ne Phoenix 2 (exhumanisa i NAX kanye ne NAA Phase 1). Usayizi walamapayipi akhona njengamanje awukumele ukuthi umelana nezidingo zamanzi ahlanzekile kulezindawo ukuya ku Phase 1 we Northern Aqueduct. Osayizi bamapayipi bangu 525 mm ngokwedayamitha (diameter), lihamba liqondane nepayipi elingu 450 mm phakathi kwe Duffs Road nase Phoenix 1 lapho kusuka khona amanzi bese kuba ipayipi elingu 450mm elihamba maduze nepayipi elingu 375mm ukuya e Phoenix 2 Reservoir.

Ngenxa yokuthi ukufakwa kwepayipi i Western Aqueduct (Phase 2) lusamisiwe okwesikhashana, sekuphakamiswa ukuthi kwakhiwe elinye ipayipi elizoxhumanisa NAA 4(noma u Phase 3 ngokolimi lonjiniyela). Lokhu kuzonikezela kwi projekthi ekhona njengamanje engu NAA Phase 1, ukuze indawo yase Cornubia nezinye izindawo ezizothuthukiswa eNtshonalanga neTheku zikwazi ukuthi zinikezelwe ngamanzi ahlanzekile esikhathini esiyizinyanga eziyisishumi nesishiyagalombili (18 months) ezizayo,njengoba ukwakhiwa kwe Western Aqueduct Phase 2 iyofinyelela kwi Northern Aqueduct Augmentation (NAA) Phase 2 (endaweni yaseMachobeni) esikhathini esiyiminyaka emihlanu ezayo (ngokokufisa).

Kuphakamiswa ukuthi ipayipi elingu 1.2 m(ubukhulu) kumele lifakwe lihambe eceleni kwepayipi elikhona njengamanje (ukulekelela ukwehlisa ingcindezi) phakathi kwe Duffs Road ne Phoenix 2 Reservoir. Lelipayipi lenza iPhase 4 (bona umdwebho ngezansi) kumbiko obhaliwe wezemvelo (*Environmental Report*) kulindeleke ukuthi liqale ukusebenza ngonyaka ka 2014 kanye kanye no NAA Phase 1.

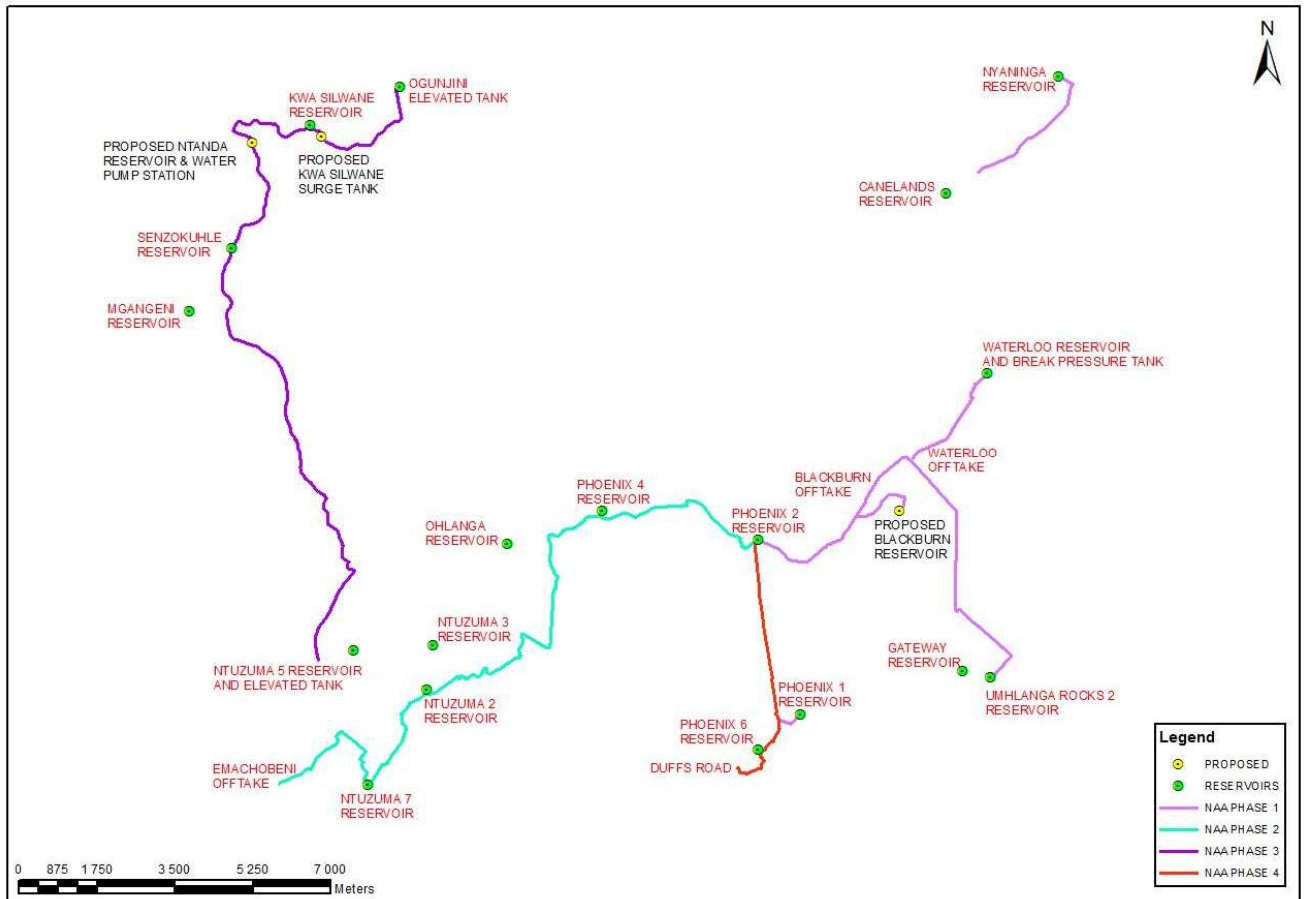


Figure 1: izigaba ze Projekthi i- Northern Aqueduct Augmentation (Phase 4 ingumbala obomvu)

* Izizathu zokwenza isicelo se Basic Assessment

Lamapayipi amanzi athwala umthamo omkhulu wamanzi ahlanzekile kuleprojekth ye NAX azoqhubeka asetshenziswe. Okwamanje amanzi asetshenziswayo ngosuku alinganiselwa ku 50,000m³). Lamapayipi amasha ahlongozwayo wona azoxhumana nalamapayipi akhona asenengcindezi yokungakwazi ukuthwala umthamo anikezele ngamanzi angaphezulu kwalawa adingakalayo. Lamapayipi azofakwa wona makhulu kunalawa akhona ngakho amanzi wona azogeleza aqoke ukuthi angene emapayipini amakhulu angu 1,2 m diameter azofakwa azoxhunywala nalawa. Ukudingeka kwamanzi okungokweminyaka engamashumi amathathu (30 year demand) kuloluhlelo kuzoholela ekutheni kube namanzi angu 120,000 m³ ngosuku, ekuwukuthi 100,000 m³ azongena epayipini Elisha elikhulu.

Ngenxa yokuthi umthamo omkhulu wamanzi uzodlula kulamapayipi kudingeka ukuthi kwenziwe uhlelo olugcwele lwe EIA.

Ngenxa yokuthi ipayipi lizohamba ibanga elifishane (5,5 km) ngenxa yokuthi lizohamba kumgudu okhona njengamanje, isibalo esincane sabantinteki ngqo kanti futhi ziyingcosana izindawo ezinemvelo engathikamezeka, yingakho-ke kwenziwe uhlelo lwe Basic Assessment. Ucwango olugcwele lwe EIA, olwenzelwa iprojekthi I Northern Aqueduct Augmentation lwenziwa maduzane nalendawo futhi akubanga khona izinto eziningi ezabikwa ukuthi zingathikamezeka yilabo ababe bambe iqhaza. Kodwa-ke abe Department of Environmental Affairs and Rural Development bangakwazi ukuthi banqume ukuthi akuphinde kwenziwe uhlelo lwe olugcwele lwe EIA noma ngabe inini kusenziwa lolu lwe Basic Assessment uma kuwukuthi uhlelo lwe Basic Assessment aluyisebenzeli kahle I projekthi.

3.1 Ikuphi lendawo ekuhlongozwa ukuthi ithuthukiswe

Lentuntuko ehlongozwayo yokufakwa kwepayipi izokwenzeka endaweni esingengethwe uMasipala waseThekwini, esifundazweni sakwa Zulu Natali. INorthern Aqueduct Augmentation (Phase 4) izoqala osebeni olungase Ntshonalanga nosebe lomfula uMhlangana, mamaphakathi nomgaqo u Curnick Ndlovu Highway nomgaqo ongu R102 lapho kusuka khona amanzi kwi NAX bese iphela eNingizimu nethangi lamanzi elisePhoenix elibizwa ngokuthi yi Phoenix 2 Reservoir ukuze kujombiwe I Northern Aqueduct Augmentation Phase 2 kanye ne Western Aqueduct Phase 2 ezisesohlelweni. Umhlaba wakulendawo ungumhlaba nje ovulekile ongumgudu, maduzane kunezindlu ezigqagqene nezisondelene kakhulu kanye namabhizinisi, kukhona nezinkundla zokudlala imidlalo ehluahlukene, imifudlana, ujatshi wesitimela kanye nezindawo lapho imigaqo iwelwa khona.

3.2 Ezemvelo

Lendawo ngokwezemvelo ichazwa ngokwe KwaZulu-Natal Coastal Belt, idlulele ngokudlulela iye Mtunzini eNyakatho ukudlula e Durban nase Margate kuya e Port Edward in the South (Mucina and Rutherford, 2006).

izindawo zaKwaZulu-Natal ezisondelene nolwandle (Coastal Belt) zisengcupheni yokushabalala ekakhulukazi uthsani. *Themeda triandra*, ngisho izindawo ezithola imvula kakhulu imililo yasendle ezivelelayo..

Funda kakhulu umbhalo ka Mucina and Rutherford (2006), the KwaZulu-Natal Coastal Belt's landscape, ochaza kabanzi ngalokhu.

Ucwaningo olugcwele lwezemvelo luzokwenziwa ukuthola izilwane nezilwanyana nezinambuzane ezitholakala kulomgudu ophakamiswayo. Kuzophinde futhi kulandelwe uhlelo lwe KZN Wildlife Conservation Plan (C – Plan).

3. ISIDINGO SALEPROJEKTHI

Ipapipi I - Northern Aqueduct (NAX) izinhlelo zokusebenza kwayo zisingethwe abe Ethekwini Water and Sanitation iyingxube yamapapipi anikezela ngamanzi ezindaweni ezise Nyakatho nomfula Umngeni ngaseMpumalanga nomfula i-OHlange nendawo yaseNtuzuma. Iprojekthi I NA Aqueduct inikezela ngamanzi ukusuka e ndaweni ekhuculula amanzi I Durban Heights Waterworks ibe isinikezela ngamanzi emathangini amaningi ebe isinikezela ngamanzi ezindlini nasezimbonini. Kuleminyaka embalwa edlule I Northern Aqueduct ibe seyifika ezingeni lokuthi ingabe isakwazi ukumela umthamo emiselwe wona kwezinye izingxenye ngenxa yokukhula kwezibalo zabadinga amanzi kanye nokuthuthukiswa kwendawo. Indawo yaseMhlanga iyona enenkinga yokuthi amanzi afinyelele kuyona ngenxa yokwehla komfutho wokuhamba kwamanzi. Intuthuko esahleliwe futhi nayo izokwakha ingcindezi kulezindawo ekupheleni kwe Northern Aqueduct.

4. UKUCHAZWA KOMGUDU OZOHAMBA IPAYIPI

Lelipapipi ekuhlongozwa ukuthi lifakwe iprojekthi ebizwa ngokuthi yi Northern Aqueduct Augmentation Ph3 (ngokolimi lonjiniyela) Ph4 ngokolimi lwe *(Environmental Report)* lilinganiselwa kubude obungamakhilomitha amahlanu nengxenye ubude. Ipapipi lona uqobo lizoba ngu 1.2m nge *diameter*.

Ikhasi 1: Indawo ephakamisiwe ye Northern Aqueduct Augmentation (Phase 4 – Environmental Reporting, Phase 3, ngokwe Engineering Reports) iqala osebeni lomfuna eNtshonalanga nomfula uMhlangana lihambe futhi amamitha angamakhulu embalwa ukuya e Nyakatho nendawo ekuhlongozwa ukuthi ithuthukiswe I NAA Phase 4 lapho yeqa khona). Iwela umfula futhi inyuke Indawo engumqansi inqamule ezindlini nasemfethini endaweni yaseMount Moria. Ipapipi kuhlelwe ukuthi liwele endaweni engagxilile kakhulu ukushona phansi iqhubeka ngomgaqo uMount Moria Drive. Lendawo ikhethelwe ukuthi kubalekelwe Indawo ephakeme kakhulu lapho kuvele kuhamba khona umgudu we NAX. Lomgudu futhi uzokwazi ukuthi uvumele izakhamizi nabahlala kulendawo ukuthi bangavimbeki uma bengena emakhaya abo noma ngabe inini noma behamba ngezimoto ngenkathi sekufakwa ipapipi.

Ikhasi 2:

Lomgudu ohlongozwayo uzobe sewuhamba ungenele e Nyakatho ne Simunye Avenue bese ihlangana nomgaqo u Eleka bese ingenela umgudu ovuluekile ongenalutho nje kagesi , idlula izindawo ezihamba amanzi nomgaqo ongu Str 121359 emgaqweni oyiringi .

kabili. Ithangi le Phoenix 6 reservoir ise Ntshonalanga nalomgudu ohlongozwayo uma nje uqeda ukuwela umgago ongu nombolo 121359. Lomgudu usetshenziswa I NAX kanye nogesi Kamasipala waseThekwini ngokuthi kuhambe izintambo zikagesi wabo phezulu. Lendawo inamasimu kanye nezindawo ezihamba amanzi. Lomgudu uyaqhubeka uye emgaqweni ongu nombolo 122 309 ngaphambi kokuba kokuba iqhubeka iye e **North**

Ikhasi 3

Lomgudu ohlongozwayo ube sewuwela umgaqo ongunombolo 122323 bese lingenela endaweni evulekile (ehlelelwe ukuthi ithuthukiswe) , bese ihamba ngomgudu onyukelayo ogcwele izihlahla ezicinene notshani ngasemaphethelweni kwePhoenix. IPhoenix 1 Reservoir isempumalanga nalendawo evulekile. Lomgudu ohlongozwayo ube sewuwela umgazo u Stonebridge Drive, bese igudla u Bush road iya ngase North.

Ikhasi 4

Umgudu uqhubeka uye e Ntshonalanga ne Bush Road, iwele u Eastwood Road, bese idlula eMpumalanga ne Burnhill Close e Phoenix bese ungenelela endaweni evulekile ngaphambi kokuba ufike e Rainhill Close

Ikhasi 5

Lomgudu ube usuqhubeka uya NgaseNyakatho , udlule inkundla yomdlalo I Cricket oval, (kodwa ibe ihamba kulomgudu okhona njengamanje) , uwele umgaqo u Cardinal kabili. Idlule phakathi kwe Longbridge Walk and Portbridge Place, (endaweni evulekile) engumdudu bese ihamba eceleni ilandela icala eliyiNtshonalanga yenkundla yebhola.

Ikhasi 6:

Ube sewuqhubeka udlule umgaqo u Catford Crescent esayidini eliyi Mpumalanga, isahleli kuwo umgudu, bese iwela umgaqo uClayfield Drive, endaweni yase Clayfield,. Liqhubeka njalo lisahamba ngomgudu liwele uJantshi ongumgudu abanikazi bawo kungu Petronet, bese iqhubeka ngo Eastbury Drive, bese futhi uphinde udlula Indawo evulekile idlule izingqalazizinda zamanzi. Lomgudu ohlongozwayo ube sewuqhubeka uhamba endaweni enyukelayo bese uwela umgaqo u Longbury Drive.

Ikhasi 7:

Uma umgudu uqeda ukudlula u-Longbury Drive, uqhubeka ngo Uppercliff Road uya ngaseMpumalanga, udlule Indawo enezihlahla eziningi ezisondelene iwele uRidgecroft Drive, bese iwela uWynbury Circle kabili.

Ikhasi 8:

Lomgudu udlula ngaphezu kuka Northbury Avenue, eceleni kuka Cliffbury Place iye ngaseNtshonalanga, ne Heathbury Place iye ngaseMpumalanga, ithinte izindawo ezidinga ukubhekelelwa kakhulu ku Edgebury Road no Brigbury Place, ngaphambi kokuthi lifike eNingizimu noPhoenix Highway, maqondana ne Phoenix 2 reservoir.

5. UMTHEHO

Njengoba besekuke kwashiwo , ukuthi leProjekthi ehlongozwayo ithi kumele kwenziwe uhlelo olugcwele lwe EIA, ngokulawula kwe *National Environmental Management Act (NEMA No 107 ka 1998 , yachibiyelwa ngo nyaka ka 2010*. Nazi izinto ezidale ukuthi kwenziwe uhlelo lochwano lwezemvelo. Lokhu sikushiye ngolimi lwesilungu ukuze umqondo wakho ungalahleki. Uma ufuna ukuchazeleka xhumana nalaba ababhalwe ngezansi.

Lombhalo ongezansi osuka kumqulu womthetho kahulumeni omkhulu sizowushiya ngolimi lwesiLungu ukubalekela ukuthi ukuhumusha kungalahlali umqondo nokuchaza . Lokhu kuzochazwa ngolimi lwakho emhlanganweni ozohlelwa ngaleprojekthi.

EIA Regulation	#	Notice Description	Activity Description
EIA Regulation No R 544 (Listing Notice 1)	9	<i>The construction of facilities or-infrastructure exceeding 1000metres in length for the bulk transportation of water, sewage or storm water</i> <i>(i) with an internal diameter of 0,36 metres or more; or</i> <i>(ii) with a peak throughput of 120 litres per second or more excluding where:</i> <i>a. such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or</i> <i>b. where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.</i>	<i>5.5km of 1.2m diameter bulk water pipeline installation, within road servitude in places, through urban area, and in some places within 32m of a watercourse. The throughput of the pipeline will exceed 120litres per second. This includes the pipe-yards, construction yards, reservoirs, pump stations, cathodic protection, access roads, spoil areas, and scour valves and outlets.</i>
	11	<i>The construction of:</i> <i>(xi) infrastructure or structures covering 50 square metres or more</i> <i>Where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</i>	<i>NAA Ph 4 is proposed to be laid across the Umhlangane River. The proposed project will also traverse various smaller watercourses and wetlands en-route.</i>
	18	<i>The infilling or deposition of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 cubic metres from:</i> <i>(i) Watercourse</i>	<i>NAA Ph 4 is proposed to be laid the Umhlangane River. The proposed project will also traverse various smaller watercourses and wetlands en-route. A large trench will be required to bury the 1.2m diameter pipe below water level.</i>
	37	<i>The expansion of facilities or infrastructure for the bulk transportation of water, sewerage or storm water where:</i> <i>a) The facility or infrastructure is expanded by more than 1000m in length; or</i>	<i>The development could be construed as 'Expansion' OR 'Construction'. There will be a new 1.2m pipe, but this will be augmenting the existing pipeline over the 5.5km, within road servitude in</i>

		<p>b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more – excluding where such expansion:</p> <p>i) relates to transportation of water, sewerage or storm water within a road reserve; or</p> <p>ii) where such expansion will occur in urban areas but further than 32m from a watercourse, measured from the edge of the watercourse.</p>	<p>places, through urban areas, and in some places within 32m of a watercourse. The throughput of the pipeline will exceed 120litres per second. This includes the pipe-yards, construction yards, reservoirs, pump stations, cathodic protection, access roads, spoil areas, and scour valves and outlets.</p>
EIA Regulation No R 545 (Listing Notice 2)	10	<p>The construction of facilities or infrastructure for the transfer of 50000 cubic metres or more water per day, from or to any combination below:</p> <ul style="list-style-type: none"> Water catchments Water treatment works Impoundments <p>Excluding treatment works where water is to be treated for drinking purposes.</p>	<p>The new pipeline will transfer 100,000m³ of water of water per day between water impoundments. The overall flow will increase by 60,000m³, but because water will chose the path of least resistance, the new, bigger pipe, will carry the bulk of this water, which amounts to 100,000m³ of water between Durban Heights and Phoenix 2 Reservoirs.</p>

6. NGABE LUYINI UHLELO LOKUXHUMANA NOMPHEKATHI?

Uhlelo lokuxhumana nomphakathi luyingxenywe yesicelo socwaningo lwezemvelo futhi luhlose ukuthi wonke umuntu othintwa yileprojekthi futhi nabanothando nje lokubamba iqhaza yize bengathintekile ngqo bayalithola ithuba lokubamba iqhaza. Wonke umuntu unelungelo lokwaziswa ngezinqumo esimthintayo nokungaba nemithelela ezingaba nemithelela kuyena. Lthuab liyanikezelwa-ke manje kuluhlelo ukuthi abantu banikezele ngezimvo zabo noma izincomo, banikezelwe ngezinto ezingaba nemithelela engemihle emvelweni nakubantu abakhele lendawo ekuhlongozwa ukuthi ithuthukiswe. Kuyacelwa futhi ukuthi banikezelwe ngezincomo zokuthi lemithelela ingagwenywa kanjani ngokuthi ingavikelwa ngaluphi uhlobo ukuze ingabi mibi kakhulu. Nantu uhlelo olumisiwe lokuthi lumiswe lwahlelelwa kanjani loluhlelo lokuxhumana nomphakathi.

Northern Aqueduct Advertisements & Articles	Izinsuku ezimisiwe
Amaphephandaba njengelawa alandelayo The Mercury, The Ilanga, isolezwe, The North Coast Courier, Phoenix Tabloid, The Rising Sun etc.	Kuzokwaziswa (October – December 2012) Uhlelo lokuxhuman nemphakathi
Siza usazise uma kuwukuthi khona amanye amaphepha ekumele asethsensizwe.	
Ukunikezelwa kwe Background Information document (Umqulu ochaza ngalentsuthuko ehlongozwayo.	
Usuku lokuqalwa kohlelo Start Date: October – November 2012	End Date Usuku lokuphuthula uhlelo: Ongoing (roughly January 2013)
ukufakwa kwezaziso zomphakathi	October / November 2012
Public Meeting / Open Day (potential date/s only)	November 2012/ December
Circulation of the Draft Basic Assessment Report	END January 2013

7. UKUBAMBA KWAKHO IQHAZA



Lomqingo uhlose ukukumema ukuthi ubambe iqhaza njengothintekile ngqo noma onesifiso nje sokubamba iqhaza yize ungathintekile ngqo. Kumele usazise ukuthi kungani unesifo sokubamba iqhaza kuleprojekthi, Amagama akho agcwele azofakwa ohlweni lwamagama abo bonke abazonikezelwa ngolwazi ngaleprojekthi kuze kube kuphuma isinqumo emnyangweni weZolimo neZemvelo nokuThuthukiswa kweZindawo Ezisemakhaya.

BAMBA IQHAZA NGOKUSIBHALELA: Lombhalo uyakucela ukuthi unikezele ngolwazi ngezinto ezizodinga ukubhekelelwa kungaba ezemvelo, ezokuhlalisana kwesintu nezomnotho kanye nemithelela engaba khona. Sicela usebenzise imidanti ekulelipheshana elinikezelwe kanye nalomqulu ukuthi usinikeze lokho . Ungalibuyisela kulaba ababhalwe kulona lelokhasi.

- **Bamba iqhaza ngokusibonisa:** Siyolijabulela futhi ulwazi ngokudingayo ngaleprojekthi, imithetho (*or regulations specific to your organisation, group, division or department* (if applicable) engadinga ukuthi siyibhekisise ngenkanthi kwenziwa lolucwaningo lwezemvelo. Siyakucela ukuthi usinikezele ngalokho kulemidanit ekulelikhasi onikezwe lona nalomqulu.

Background Information Document

For the Northern Aqueduct Augmentation Phase 4, KwaZulu-Natal:

On Behalf Of (Applicant):	By (Environmental Consultants):
	
Ethekewini – Water & Sanitation	Knight Piésold (Pty) Limited Tel: +27 31 276 4660, Fax: +27 31 266 4668 P O Box 338, Westville, 3630 mloz@knightpiesold.com www.knightpiesold.com
EIA Number: PENDING KP Reference: 303-00213.03 Revision Date: October 2012	

8. WHAT IS THIS ABOUT?

This Background Information Document (BID) serves to inform all authorities, stakeholders, and interested and affected parties of the applicant's (Ethekewini Municipality Water and Sanitation) intention to carry out an additional augmentation of the Northern Aqueduct (NAX) in KwaZulu-Natal. The Northern Aqueduct Augmentation (NAA) is a recently authorised 50km long water pipeline which is planned to service the areas from Emachobeni in the Umgeni Valley to Umhlanga, in the North. This new proposal consists of 5km of 1200mm diameter pipeline linking the existing NAX to the newly authorised NAA, in order to bypass a potential bottleneck in water provision to the northern suburbs of Durban in the next five years.

This newly proposed project constitutes a listed activity in terms of the National Environmental Management Act (No. 107 of 1998, revised June 2010) – Regulation No. R 544 (Listing Notice 1, Activities 9, 11, 18 and 37) and Regulation No R 545 (Listing Notice 2, Activity 10), and will therefore have to undergo environmental assessment. Knight Piésold Consulting have been appointed as the independent environmental consultants to apply for the necessary environmental approvals, commencing with a basic assessment report with the potential for conversion into a full Environmental Impact Assessment (EIA) Study. We have been granted authorisation to proceed with a basic assessment, even though a full EIA is triggered (see below*). The BA report will identify and describe potential issues and impacts the proposed project may have on the surrounding environment. A Basic Assessment and Environmental Management Plan in support of the proposed project will also be submitted to the Department of Agriculture, Environmental Affairs and Rural Development (DAEARD).

The purpose of this BID is to invite you to register your interest in the project, and to provide us with any information regarding specific requirements, guideline documents, legislation or regulations specific to you, your organisation, group, division or department that may need to be considered during our environmental investigations.

9. WHAT IS BEING PROPOSED?

EThekewini Water and Sanitation (EWS) is currently in the process of constructing a new bulk water pipeline from Cato Ridge to Inchanga, Pinetown, Tshelimnyama and Ntuzuma (and surrounds) with gravity-fed potable water (The Western Aqueduct (WA)). The pipeline ties into Umgeni Water's existing bulk water infrastructure beyond the municipal boundary, which receives potable water from the Midmar Dam system. The pipeline currently under construction consists of a steel pipe of varying diameters (1.6m – 0.6m). Construction of Phase 1 of the WA has been completed, but construction of Ph2 of the WA is on hold.

Application was made to the Department of Environmental Affairs, and a positive Record of Decision received, for the NAA which will inject water from the WA into the NAA system via an off-take at KwaDabeka. This will involve the construction of a new bulk water pipeline from Emachobeni to Umhlanga via the proposed Blackburn Reservoir, supplying areas north of the Umgeni River, south of the Ohlanga River and east of Ntuzuma (and surrounds) with gravity-fed potable water. The

50km pipeline recently authorised, will consist of a steel pipe of varying diameters, and will be named the 'Northern Aqueduct Augmentation'.

Phase 4, which is now being proposed, is named NAA Phase 3 by the engineers (for reasons un-necessary to describe here). There is an existing Northern Aqueduct (NAX), which will be augmented by the NAA. Once completed, Phase 1 of the NAA project will provide an important link between the existing NAX and the new developments in the north including Cornubia, Umhlanga, Waterloo and Nyanninga. The NAX however is presently operating very close to its maximum capacity and does not have spare capacity to supply the new developments such as Cornubia. The problem when the new demands are tagged onto the end of the system is the high velocities that will occur in the trunk mains running from Durban Heights to Phoenix 2 Reservoir via Duffs Road. This in turn results in high friction losses and inadequate flow through the system.

The most severe bottleneck in the existing NAX occurs in the section of trunk mains between Duffs Road and Phoenix 2 (linking the NAX to the NAA Phase1). This section of the existing system consists of a 525mm diameter pipe in parallel with a 450mm pipe between Duffs Road and the Phoenix 1 off-take and thereafter, a 450mm pipe in parallel with a 375mm pipe up to Phoenix 2 Reservoir. These pipelines are completely inadequate for the purposes of providing a water supply into the NA Phase 1.

Because the construction of the WA (Phase 2) has been put on hold, an alternative link (NAA Phase 4 (or the Engineers Phase 3) is currently being proposed. This is to provide water from the EXISTING NAX into NAA Phase 1, so that Cornubia and other developments in the north of Durban, can be provided with water within the next 18 months, as the construction of the WA Ph2 will only reach the starting point of the NAA Ph2 (at Emachobeni) in five years time (optimistically).

It is thus proposed that a new 1.2m pipe be laid in parallel with the existing pipelines (to remove the bottleneck in the system) **between Duffs Road and Phoenix 2 Reservoir**. This pipeline forms Phase 4 (See Diagram below) (in the Environmental Report) of the NAA and is required to be commissioned at the same time as NAA Ph 1, i.e. 2014.

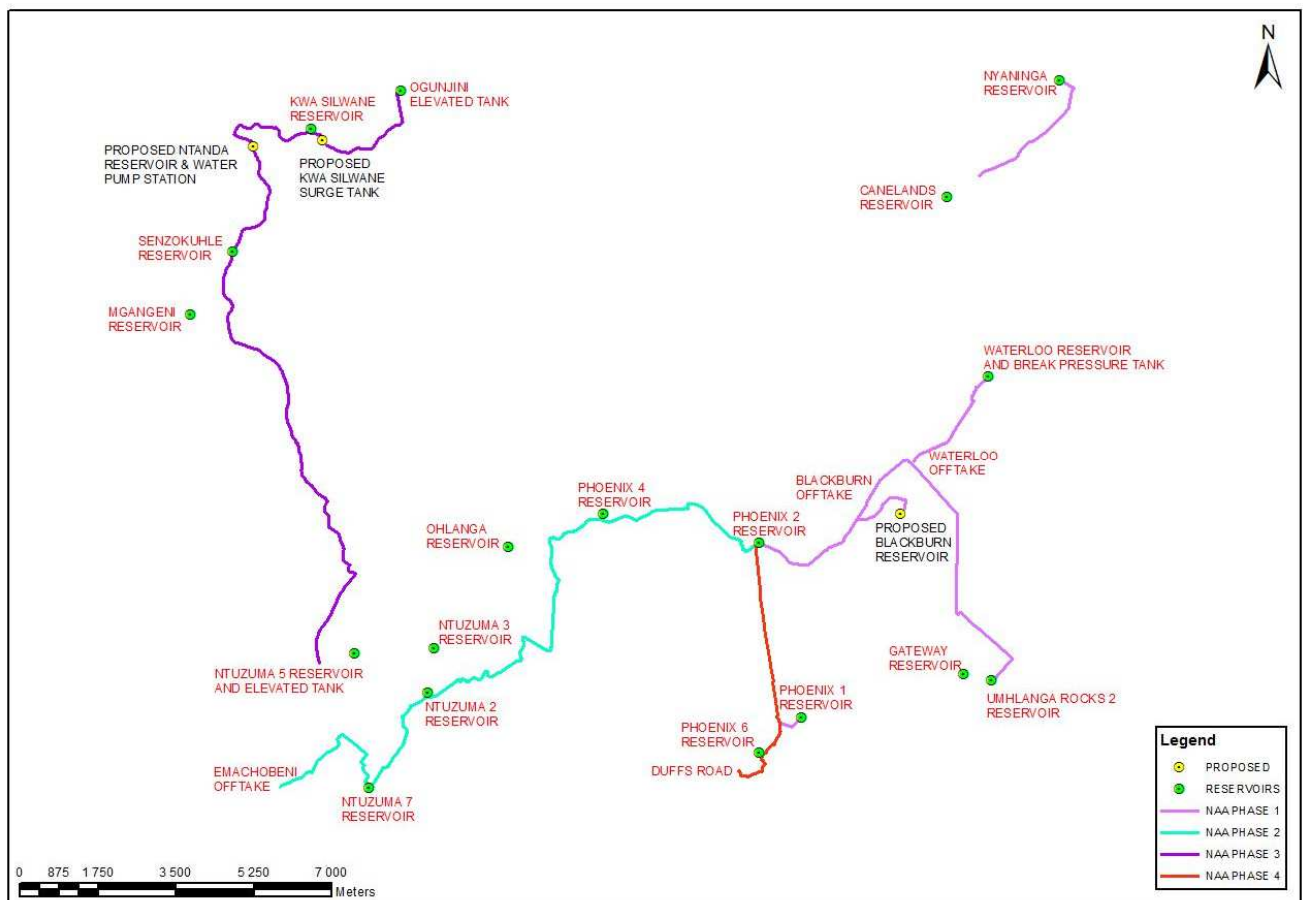


Figure 1: Phases of the Northern Aqueduct Augmentation Project (Phase 4 is in the colour red)

**Reason for Basic Assessment Application:*

The existing two pipes within the NAX servitude will continue to be used (current daily volume approximately 50,000m³). The new bigger pipe will merely augment the existing pipelines which are presently a bottleneck in the system. The old pipes are much smaller (450 – 500mm) in diameter, and as such when the new pipe (1,2m diameter) is tied into the system, the water will prefer the path of least resistance, and thus most of it, will ‘choose’ the bigger pipe. The ultimate 30-year demand in the system will result in a total flow of about 120,000 m³ per day, of which 100,000 m³ per day will flow in the new pipe as a result of its lower friction loss.

This large volume of water triggers a full EIA.

Considering the short length of the pipeline (5.5km), the fact that it is within an existing servitude, the few number of directly impacted IAPs and, by all appearances, few areas of extreme environmental (or biodiversity) concern, the environmental assessment would be well served in a basic assessment. The full EIA for the NAA has also recently been conducted in very close proximity to this area, and did not reveal many significant issues or comments from IAPs. Nevertheless the Department of Environmental Affairs may request a full EIA at any interval, should they decide that the project is not being effectively served by the Basis Assessment.

3.1 Location

The proposed pipeline augmentation will take place in the eThekweni Municipality, Province of KwaZulu-Natal. The Northern Aqueduct Augmentation (Ph4) is to start on the western bank of the Umhlangane River, between Curnick Ndlovu Highway and the R102, at an off-take from the existing NAX and will terminate on the southern side of Phoenix Highway, opposite Phoenix 2 reservoir. This section of proposed pipeline is virtually straight and continuously moving north, within an existing servitude for most of the way. This portion of pipeline will feed into the Phoenix 2 Reservoir, in order to bypass NAA Phase 2 and the WA Phase2, which are still some years ‘in the making’. The current land-use in this area is mostly open veld servitude, adjacent to medium to high density formal residential and business areas, with scattered sports fields, and some watercourse, railway and road crossings.

3.2 Biophysical Environment

In biophysical terms the project area is identified as the KwaZulu-Natal Coastal Belt, with its distribution extending from near Mtunzini in the North, via Durban and Margate and just short of Port Edward in the South (Mucina and Rutherford, 2006). The KwaZulu-Natal Coastal Belt possesses highly dissected undulating coastal plains, which in the past was covered to a great extent with various types of subtropical coastal forest.

The KwaZulu-Natal Coastal Belt is endangered, with some primary grassland being dominated by *Themeda triandra*, which still occurs in hilly, high rainfall areas where pressure from natural fire and grazing regimes prevailed. At the present however, the KwaZulu-Natal Coastal Belt is exceedingly affected by an intricate mosaic of extensive sugarcane fields, timber plantations and coastal resorts, with interspersed secondary *Aristida* grasslands, thickets and patches of coastal thornveld. Important taxa most found in KwaZulu-Natal Coastal Belt include: *Aristida junciformis* subsp. *galpinii*, *Digitaria eriantha*, *Panicum maximum*, *Themeda triandra*, *Alloteropsis semialata* subsp. *eckloniana*, *Cymbopogon caesius*, *C. nardus*, *Eragrostis curvula*, *Eulalia villosa*, *Hyparrhenia filipendula*, *Melinis repens*., *Berkheya speciosa* subsp. *Speciosa*, *Cyanotis speciosa*, *Senecio glaberrimus*, *Chamaecrista mimosoides*, *Conostomium natalense*, *Crotalaria lanceolata*, *Dissotis canescens*, *Eriosema squarrosum*, *Gerbera ambigua*, *Hebenstretia comosa*, *Helichrysum cymosum* subsp. *Cymosum*, to name a few.

According to Mucina and Rutherford (2006), the KwaZulu-Natal Coastal Belt’s landscape is dominated by the Ordovician Natal Group sandstone, Dwyka tillite, Ecca shale and Mapumulo gneiss (Mokolian). The weathering of old dunes has produced the red sand, called the Berea Red Sand. The soils supported by the above-mentioned rocks are shallow over hard sandstones and deeper over younger, softer rocks.

A detailed biodiversity study will be undertaken in due course to determine the actual species present along the route sections. The KZN Wildlife’s Conservation Plan (C- Plan), irreplaceable values will also be determined.

10. NEED FOR THE PROJECT

The Northern Aqueduct (NAX) operated by EWS is a network of bulk supply pipelines that serves the north eastern portion of their area of supply (in general): north of the Umgeni River, to the south of the Ohlanga River and east of Ntuzuma. The existing NA aqueduct conveys potable water from Durban Heights Waterworks to a large number of terminal reservoirs and pressure reducing valves (PRVs) in the system that in turn supply water to residents and businesses in the respective reservoir and PRV supply zones. In recent years, the Northern Aqueduct has reached capacity on various sections of the trunk mains as a result of exponential growth in development and in demand. The Umhlanga region which receives water at the tail end of the aqueduct suffers from low residual pressures as a result of friction losses in the trunk mains. In addition, planned developments in the north east will add a substantial new demand at the tail end of the Northern Aqueduct, exacerbating its capacity problems.

11. ROUTE TECHNICAL DETAIL

The proposed Northern Aqueduct Augmentation Ph3 (Engineers) Ph4 (Environmental Report) is approximately 5.5km in length. The pipeline will be 1.2m in diameter.

Sheet 1: The proposed new section of Northern Aqueduct Augmentation (Phase 4 – Environmental Reporting, Phase 3, according to the Engineering Reports) starts on the western bank of the Umhlangane River, between Curnick Ndlovu Highway and the R102, at an off-take from the existing NAX (which also crosses the Umhlangane River, a few hundred metres to the north of the proposed NAA Ph4 crossing point). The NAX crosses this river up a steep bank along the existing servitude, and between townhouses and adjacent low cost housing in Mount Moria. The proposed crossing point of the NAA Ph4 is further south, up a shallower bank, and along Mount Moria Drive. This route has been selected to avoid the steep bank traversed by the NAX. This route option will also allow residents access to their homes during construction via alternative routes, i.e. residents will not be prevented from accessing their homes by vehicle at any stage during construction.

Sheet 2: The proposed route then turns left (north) into Simunye Avenue, and then turns right (north east) at the junction with Eleka Road into the open veld (servitude), crossing an existing watercourse and the Str 121359 ring road (an off-shoot of Mount Moria Drive), twice. The Phoenix 6 reservoir is located to the west of the proposed route, just prior crossing Str 121359. This servitude is shared with the NAX water trunk main and eThekweni Electricity Overhead lines. A number of watercourses and areas of market gardening are traversed within this servitude. The proposed route then crosses Str 122309 before heading off into a northerly direction.

Sheet 3: The proposed route crosses Str 122323 and then a large open space (designated for housing development), before crossing a steep bank and denser vegetation on the outskirts of Phoenix. The Phoenix 1 reservoir is located to the east of this open space. The proposed route (within the existing servitude) crosses Stonebridge Drive and then runs alongside Bush Road in a northerly direction.

Sheet 4: The servitude passes alongside (west of) Bush Road, crosses Eastwood Road, and then passes east of Burnhill Close in Phoenix. It then traverses a small open space south of Parkmead Avenue, crosses Parkmead, adjacent to Rainbird Close, crosses Greenbury Drive, into an open space, just before Rainhill Close.

Sheet 5: The route then continues in a northerly direction, passes west of a cricket oval (still within the servitude), and crosses the circular Cardinal Road twice. It passes between Longbridge Walk and Portbridge Place, (through open space) under Phoenix Highway, and east of Roseclay Place (also in open space (servitude)), and west of a sportsfield.

Sheet 6: The route passes Catford Crescent to the east, still within the servitude, crosses Clayfield Drive, in the area of Clayfield. Continuing along the servitude, it passes under the railway line, a petronet servitude, and the under Eastbury Drive, again crossing into open space, and through a watercourse. The proposed pipeline then traverses a fairly steep bank and across Longbury Drive.

Sheet 7: After Longbury Drive, the route continues northerly, within the servitude, passing Uppercliff Road to the east, through some denser vegetation, across Ridgicroft Drive, and across Wynbury Circle (twice).

Sheet 8: The route passes over Northbury Avenue, alongside Cliffbury Place to the west, and Heathbury Place to the east, touches on the terminal points of Edgebury Road and Brigbury Place, before coming to an end on the southern side of Phoenix Highway, opposite Phoenix 2 reservoir.

12. LEGISLATION

As mentioned previously, the proposed activity triggers Environmental Impact Assessment (EIA) regulations, promulgated under the National Environmental Management Act (NEMA, No. 107 of 1998), amended in 2010. In this case the following activities have been identified and need to undergo environmental assessment.

<i>EIA Regulation</i>	<i>#</i>	<i>Notice Description</i>	<i>Activity Description</i>
<i>EIA Regulation No R 544 (Listing Notice 1)</i>	<i>9</i>	<i>The construction of facilities or-infrastructure exceeding 1000metres in length for the bulk transportation of water, sewage or storm water</i> <i>(i) with an internal diameter of 0,36 metres or more; or</i> <i>(ii) with a peak throughput of 120 litres per second or more excluding where:</i> <i>a. such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or</i> <i>b. where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.</i>	<i>5.5km of 1.2m diameter bulk water pipeline installation, within road servitude in places, through urban area, and in some places within 32m of a watercourse. The throughput of the pipeline will exceed 120litres per second. This includes the pipe-yards, construction yards, reservoirs, pump stations, cathodic protection, access roads, spoil areas, and scour valves and outlets.</i>
	<i>11</i>	<i>The construction of:</i> <i>(xi) infrastructure or structures covering 50 square metres or more</i> <i>Where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</i>	<i>NAA Ph 4 is proposed to be laid across the Umhlangane River. The proposed project will also traverse various smaller watercourses and wetlands en-route.</i>
	<i>18</i>	<i>The infilling or deposition of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 cubic metres from:</i> <i>(ii) Watercourse</i>	<i>NAA Ph 4 is proposed to be laid the Umhlangane River. The proposed project will also traverse various smaller watercourses and wetlands en-route. A large trench will be required to bury the 1.2m diameter pipe below water level.</i>
	<i>37</i>	<i>The expansion of facilities or infrastructure for the bulk transportation of water, sewerage or storm water where:</i> <i>a) The facility or infrastructure is expanded by more than 1000m in length; or</i> <i>b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more –</i> <i>excluding where such expansion:</i> <i>i) relates to transportation of water, sewerage or storm water within a road reserve; or</i> <i>ii) where such expansion will occur in urban areas but further than 32m from a watercourse, measured from the edge of the watercourse.</i>	<i>The development could be construed as 'Expansion' OR 'Construction'. There will be a new 1.2m pipe, but this will be augmenting the existing pipeline over the 5.5km, within road servitude in places, through urban areas, and in some places within 32m of a watercourse. The throughput of the pipeline will exceed 120litres per second. This includes the pipe-yards, construction yards, reservoirs, pump stations, cathodic protection, access roads, spoil areas, and scour valves and outlets.</i>
<i>EIA Regulation No R 545 (Listing Notice 2)</i>	<i>10</i>	<i>The construction of facilities or infrastructure for the transfer of 50000 cubic metres or more water per day, from or to any combination below:</i> <ul style="list-style-type: none"><i>Water catchments</i><i>Water treatment works</i><i>Impoundments</i> <i>Excluding treatment works where water is to be treated for drinking purposes.</i>	<i>The new pipeline will transfer 100,000m³ of water of water per day between water impoundments. The overall flow will increase by 60,000m³, but because water will chose the path of least resistance, the new, bigger pipe, will carry the bulk of this water, which amounts to 100,000m³ of water between Durban Heights and Phoenix 2 Reservoirs.</i>

13. WHAT IS PUBLIC PARTICIPATION?

The Public Participation Process (PPP) forms part of the Environmental Application, and aims to ensure that anyone who has an interest in, or who is affected by the proposal has an opportunity to participate. Every person has the right to be informed of decisions that affect them and to influence these decisions. Opportunities are provided during this process for people to indicate their viewpoints or concerns, identify potential environmental issues, suggest alternatives or mitigation options, and identify or enhance positive benefits of the proposal. The PPP for the proposed project will be detailed in the months to come in the following ways:

Northern Aqueduct Advertisements & Articles	Published Dates
Newspapers – such as The Mercury, The Ilanga The North Coast Courier, The Rising Sun etc.	To be announced (October – December 2012) Public Participation
Please advise if there are other more suitable newspapers	
Circulation of Background Information Document	
Start Date: October – November 2012	End Date: Ongoing (roughly January 2013)
On Site Notice Installation	October / November 2012
Public Meeting / Open Day (potential date/s only)	November 2012
Circulation of the Draft Basic Assessment Report	<i>END January 2013</i>

14. BECOMING INVOLVED

The purpose of this BID is to invite you to register your interest in the project. Your name and details will be entered into a database that will be used to circulate any further project information. As a registered I&AP there will be opportunities for you to contribute towards a comprehensive environmental investigation that offers the environmental authority the most accurate information to make an informed decision:

- **BECOME INVOLVED IN WRITING:** The BID also invites you to provide your input with regards to perceived biophysical or socio-economic impacts or issues by submitting your comments on the form below to the relevant contact person.
- **BECOME INVOLVED IN GUIDANCE:** We would also value any information regarding specific requirements, guideline documents, legislation or regulations specific to your organisation, group, division or department (if applicable) that may need to be considered during our environmental investigations. Kindly submit these in writing on the form below to the relevant contact person.

BID WITH REVISED TIME FRAMES AND EIA REF NUMBER

Background Information Document

For the Northern Aqueduct Augmentation **Phase 4**, KwaZulu-Natal:

On Behalf Of (Applicant):	By (Environmental Consultants):
	<i>Knight Piésold</i> CONSULTING
Ethekewini – Water & Sanitation	<i>Knight Piésold (Pty) Limited</i> Tel: +27 31 276 4660, Fax: +27 31 266 4668 P O Box 338, Westville, 3630 dseepersad@knightpiesold.com www.knightpiesold.com
EIA Number: DM / 0065 / 2012	
KP Reference: 303-00213.03	
Revision Date: January 2013	

15. WHAT IS THIS ABOUT?

This Background Information Document (BID) serves to inform all authorities, stakeholders, and interested and affected parties of the applicant's (Ethekewini Municipality Water and Sanitation) intention to carry out an additional augmentation of the Northern Aqueduct (NAX) in KwaZulu-Natal. The Northern Aqueduct Augmentation (NAA) is a recently authorised 50km long water pipeline which is planned to service the areas from Emachobeni in the Umgeni Valley to Umhlanga, in the North. This new proposal consists of 5km of 1200mm diameter pipeline linking the existing NAX to the newly authorised NAA, in order to bypass a potential bottleneck in water provision to the northern suburbs of Durban in the next five years.

This newly proposed project constitutes a listed activity in terms of the National Environmental Management Act (No. 107 of 1998, revised June 2010) – Regulation No. R 544 (Listing Notice 1, Activities 9, 11, 18 and 37) and Regulation No R 545 (Listing Notice 2, Activity 10), and will therefore have to undergo environmental assessment. Knight Piésold Consulting have been appointed as the independent environmental consultants to apply for the necessary environmental approvals, commencing with a basic assessment report with the potential for conversion into a full Environmental Impact Assessment (EIA) Study. We have been granted authorisation to proceed with a basic assessment, even though a full EIA is triggered (see below*). The BA report will identify and describe potential issues and impacts the proposed project may have on the surrounding environment. A Basic Assessment and Environmental Management Plan in support of the proposed project will also be submitted to the Department of Agriculture, Environmental Affairs and Rural Development (DAEARD).

The purpose of this BID is to invite you to register your interest in the project, and to provide us with any information regarding specific requirements, guideline documents, legislation or regulations specific to you,

your organisation, group, division or department that may need to be considered during our environmental investigations.

16. WHAT IS BEING PROPOSED?

EThekweni Water and Sanitation (EWS) is currently in the process of constructing a new bulk water pipeline from Cato Ridge to Inchanga, Pinetown, Tshelimnyama and Ntuzuma (and surrounds) with gravity-fed potable water (The Western Aqueduct (WA)). The pipeline ties into Umgeni Water's existing bulk water infrastructure beyond the municipal boundary, which receives potable water from the Midmar Dam system. The pipeline currently under construction consists of a steel pipe of varying diameters (1.6m – 0.6m). Construction of Phase 1 of the WA has been completed, but construction of Ph2 of the WA is on hold.

Application was made to the Department of Environmental Affairs, and a positive Record of Decision received, for the NAA which will inject water from the WA into the NAA system via an off-take at KwaDabeka. This will involve the construction of a new bulk water pipeline from Emachobeni to Umhlanga via the proposed Blackburn Reservoir, supplying areas north of the Umgeni River, south of the Ohlanga River and east of Ntuzuma (and surrounds) with gravity-fed potable water. The 50km pipeline recently authorised, will consist of a steel pipe of varying diameters, and will be named the 'Northern Aqueduct Augmentation'.

Phase 4, which is now being proposed, is named NAA Phase 3 by the engineers (for reasons unnecessary to describe here). There is an existing Northern Aqueduct (NAX), which will be augmented by the NAA. Once completed, Phase 1 of the NAA project will provide an important link between the existing NAX and the new developments in the north including Cornubia, Umhlanga, Waterloo and Nyaninga. The NAX however is presently operating very close to its maximum capacity and does not have spare capacity to supply the new developments such as Cornubia. The problem when the new demands are tagged onto the end of the system is the high velocities that will occur in the trunk mains running from Durban Heights to Phoenix 2 Reservoir via Duffs Road. This in turn results in high friction losses and inadequate flow through the system.

The most severe bottleneck in the existing NAX occurs in the section of trunk mains between Duffs Road and Phoenix 2 (linking the NAX to the NAA Phase1). This section of the existing system consists of a 525mm diameter pipe in parallel with a 450mm pipe between Duffs Road and the Phoenix 1 off-take and thereafter, a 450mm pipe in parallel with a 375mm pipe up to Phoenix 2 Reservoir. These pipelines are completely inadequate for the purposes of providing a water supply into the NA Phase 1.

Because the construction of the WA (Phase 2) has been put on hold, an alternative link (NAA Phase 4 (or the Engineers Phase 3) is currently being proposed. This is to provide water from the EXISTING NAX into NAA Phase 1, so that Cornubia and other developments in the north of Durban, can be provided with water within the next 18 months, as the construction of the WA Ph2 will only reach the starting point of the NAA Ph2 (at Emachobeni) in five years time (optimistically).

It is thus proposed that a new 1.2m pipe be laid in parallel with the existing pipelines (to remove the bottleneck in the system) **between Duffs Road and Phoenix 2 Reservoir**. This pipeline forms Phase 4 (See Diagram below) (in the Environmental Report) of the NAA and is required to be commissioned at the same time as NAA Ph 1, i.e. 2014.

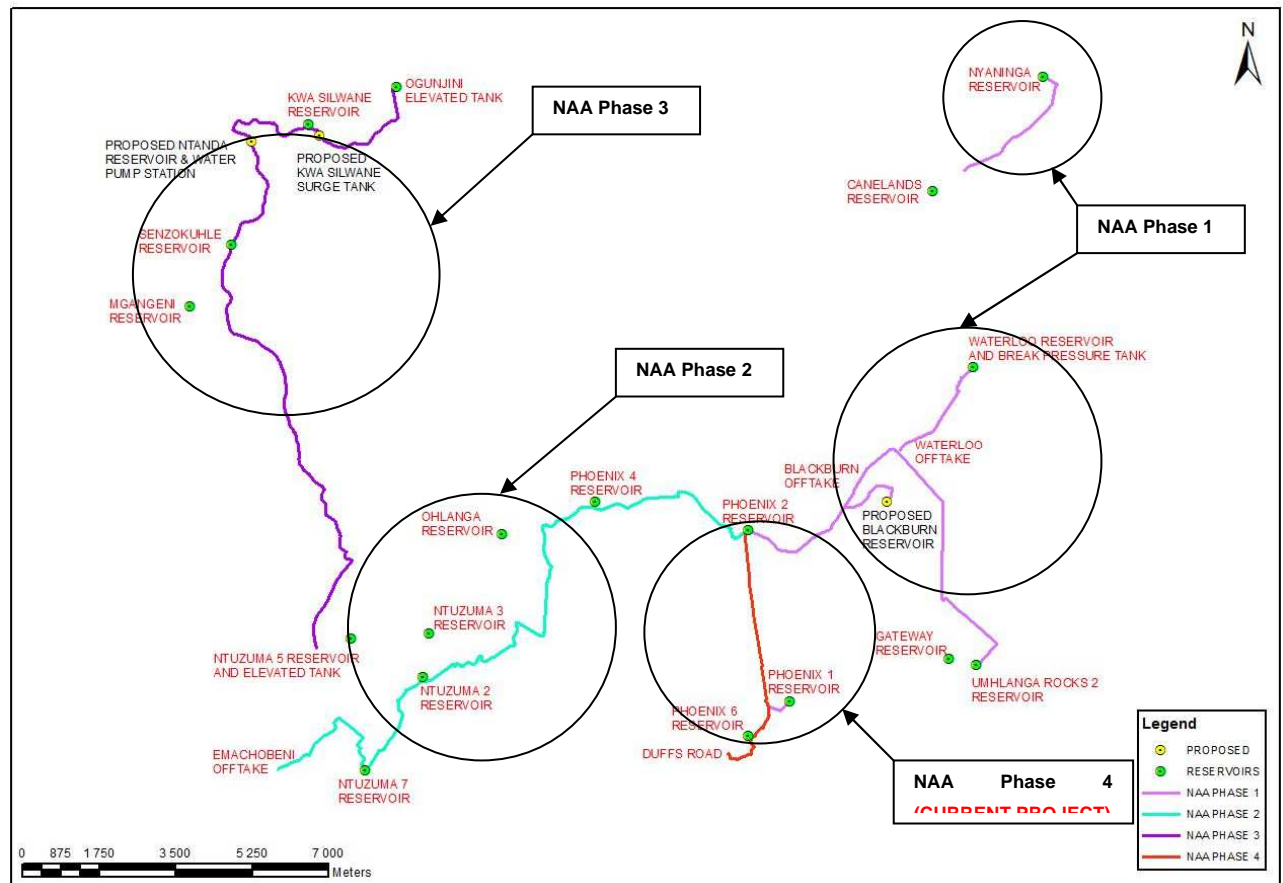


Figure 1: Phases of the Northern Aqueduct Augmentation Project (Phase 4 is in the colour red)

***Reason for Basic Assessment Application:**

The existing two pipes within the NAX servitude will continue to be used (current daily volume approximately 50,000m³). The new bigger pipe will merely augment the existing pipelines which are presently a bottleneck in the system. The old pipes are much smaller (450 – 500mm) in diameter, and as such when the new pipe (1,2m diameter) is tied into the system, the water will prefer the path of least resistance, and thus most of it, will ‘choose’ the bigger pipe. The ultimate 30-year demand in the system will result in a total flow of about 120,000 m³ per day, of which 100,000 m³ per day will flow in the new pipe as a result of its lower friction loss.

This large volume of water triggers a full EIA.

Considering the short length of the pipeline (5.5km), the fact that it is within an existing servitude, the few number of directly impacted IAPs and, by all appearances, few areas of extreme environmental (or biodiversity) concern, the environmental assessment would be well served in a basic assessment. The full EIA for the NAA has also recently been conducted in very close proximity to this area, and did not reveal many significant issues or comments from IAPs. Nevertheless the Department of Environmental Affairs may request a full EIA at any interval, should they decide that the project is not being effectively served by the Basis Assessment.

3.1 Location

The proposed pipeline augmentation will take place in the eThekweni Municipality, Province of KwaZulu-Natal. The Northern Aqueduct Augmentation (Ph4) is to start on the western bank of the Umhlangane River, between Curnick Ndlovu Highway and the R102, at an off-take from the existing NAX and will terminate on the southern side of Phoenix Highway, opposite Phoenix 2 reservoir. This section of proposed pipeline is virtually

straight and continuously moving north, within an existing servitude for most of the way. This portion of pipeline will feed into the Phoenix 2 Reservoir, in order to bypass NAA Phase 2 and the WA Phase2, which are still some years ‘in the making’. The current land-use in this area is mostly open veld servitude, adjacent to medium to high density formal residential and business areas, with scattered sports fields, and some watercourse, railway and road crossings.

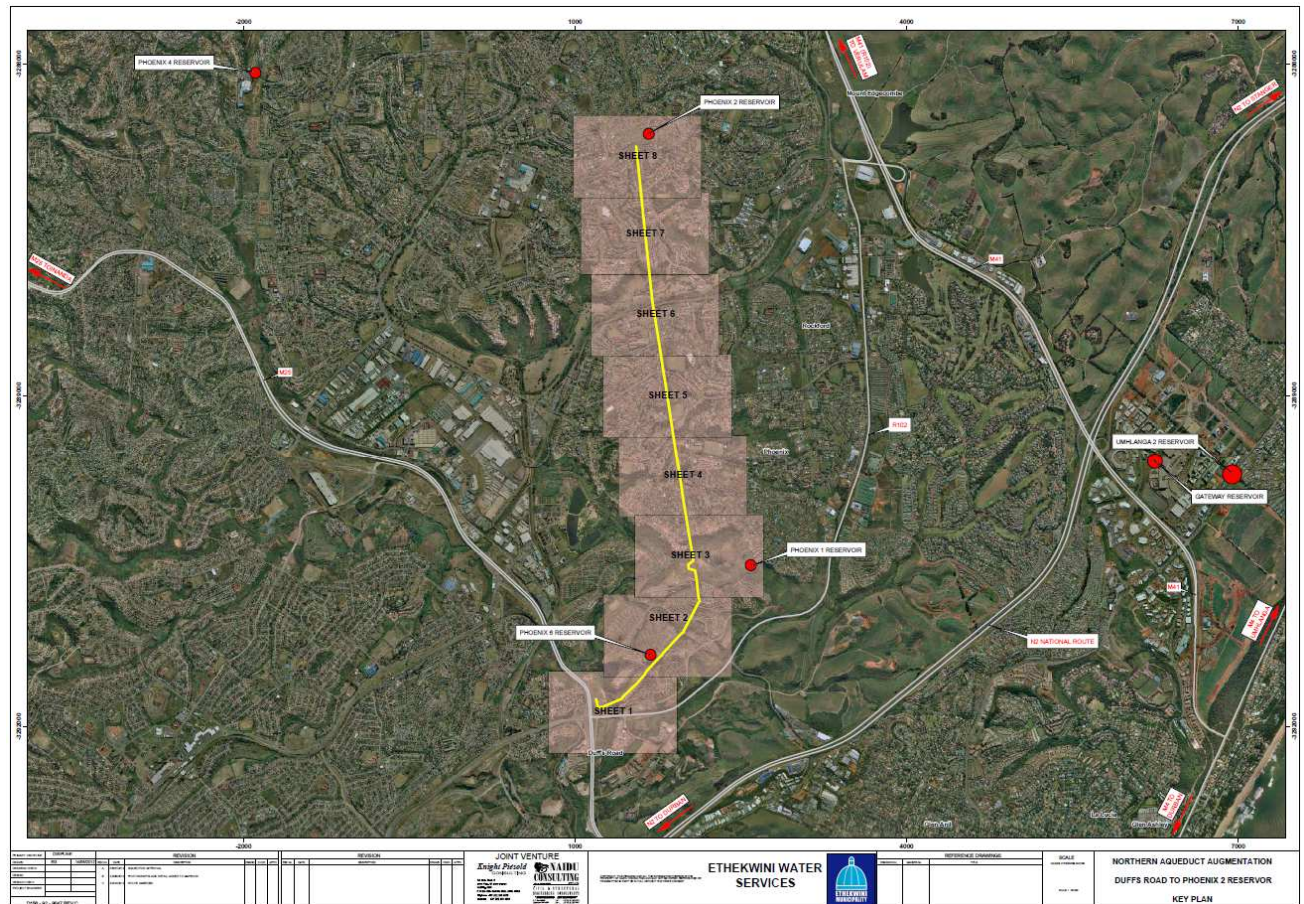


Figure 2: Key Plan of the Northern Aqueduct Augmentation Project (Phase 4)

3.2 Biophysical Environment

In biophysical terms the project area is identified as the KwaZulu-Natal Coastal Belt, with its distribution extending from near Mtunzini in the North, via Durban and Margate and just short of Port Edward in the South (Mucina and Rutherford, 2006). The KwaZulu-Natal Coastal Belt possesses highly dissected undulating coastal plains, which in the past was covered to a great extent with various types of subtropical coastal forest.

The KwaZulu-Natal Coastal Belt is endangered, with some primary grassland being dominated by *Themeda triandra*, which still occurs in hilly, high rainfall areas where pressure from natural fire and grazing regimes prevailed. At the present however, the KwaZulu-Natal Coastal Belt is exceedingly affected by an intricate mosaic of extensive sugarcane fields, timber plantations and coastal resorts, with interspersed secondary *Aristida* grasslands, thickets and patches of coastal thornveld. Important taxa most found in KwaZulu-Natal Coastal Belt include: *Aristida junciformis* subsp. *galpinii*, *Digitaria eriantha*, *Panicum maximum*, *Themeda triandra*, *Alloteropsis semialata* subsp. *eckloniana*, *Cymbopogon caesius*, *C. nardus*, *Eragrostis curvula*, *Eulalia villosa*, *Hyparrhenia filipendula*, *Melinis repens.*, *Berkheya speciosa* subsp. *Speciosa*, *Cyanotis speciosa*, *Senecio glaberrimus*, *Chamaecrista mimosoides*, *Conostomium natalense*, *Crotalaria lanceolata*, *Dissotis canescens*,

Eriosema squarrosus, *Gerbera ambigua*, *Hebenstretia comosa*, *Helichrysum cymosum* subsp. *Cymosum*, to name a few.

According to Mucina and Rutherford (2006), the KwaZulu-Natal Coastal Belt's landscape is dominated by the Ordovician Natal Group sandstone, Dwyka tillite, Ecca shale and Mapumulo gneiss (Mokolian). The weathering of old dunes has produced the red sand, called the Berea Red Sand. The soils supported by the above-mentioned rocks are shallow over hard sandstones and deeper over younger, softer rocks.

A detailed biodiversity study will be undertaken in due course to determine the actual species present along the route sections. The KZN Wildlife's Conservation Plan (C- Plan), irreplaceable values will also be determined.

17. NEED FOR THE PROJECT

The Northern Aqueduct (NAX) operated by EWS is a network of bulk supply pipelines that serves the north eastern portion of their area of supply (in general): north of the Umgeni River, to the south of the Ohlanga River and east of Ntuzuma. The existing NA aqueduct conveys potable water from Durban Heights Waterworks to a large number of terminal reservoirs and pressure reducing valves (PRVs) in the system that in turn supply water to residents and businesses in the respective reservoir and PRV supply zones. In recent years, the Northern Aqueduct has reached capacity on various sections of the trunk mains as a result of exponential growth in development and in demand. The Umhlanga region which receives water at the tail end of the aqueduct suffers from low residual pressures as a result of friction losses in the trunk mains. In addition, planned developments in the north east will add a substantial new demand at the tail end of the Northern Aqueduct, exacerbating its capacity problems.

18. ROUTE TECHNICAL DETAIL

The proposed Northern Aqueduct Augmentation Ph3 (Engineers) Ph4 (Environmental Report) is approximately 5.5km in length. The pipeline will be 1.2m in diameter.

Sheet 1: The proposed new section of Northern Aqueduct Augmentation (Phase 4 – Environmental Reporting, Phase 3, according to the Engineering Reports) starts on the western bank of the Umhlangane River, between Curnick Ndlovu Highway and the R102, at an off-take from the existing NAX (which also crosses the Umhlangane River, a few hundred metres to the north of the proposed NAA Ph4 crossing point). The NAX crosses this river up a steep bank along the existing servitude, and between townhouses and adjacent low cost housing in Mount Moriah. The proposed crossing point of the NAA Ph4 is further south, up a shallower bank, and along Mount Moriah Drive. This route has been selected to avoid the steep bank traversed by the NAX. This route option will also allow residents access to their homes during construction via alternative routes, i.e. residents will not be prevented from accessing their homes by vehicle at any stage during construction.

Sheet 2: The proposed route then turns left (north) into Simunye Avenue, and then turns right (north east) at the junction with Eleka Road into the open veld (servitude), crossing an existing watercourse and the Str 121359 ring road (an off-shoot of Mount Moriah Drive), twice. The Phoenix 6 reservoir is located to the west of the proposed route, just prior crossing Str 121359. This servitude is shared with the NAX water trunk main and eThekweni Electricity Overhead lines. A number of watercourses and areas of market gardening are traversed within this servitude. The proposed route then crosses Str 122309 before heading off into a northerly direction.

Sheet 3: The proposed route crosses Str 122323 and then a large open space (designated for housing development), before crossing a steep bank and denser vegetation on the outskirts of Phoenix. The Phoenix 1 reservoir is located to the east of this open space. The proposed route (within the existing servitude) crosses Stonebridge Drive and then runs alongside Bush Road in a northerly direction.

- Offtake to the Phoenix 1 Reservoir: Having crossed Str 122323the proposed pipeline link to the Phoenix 1 Reservoir will branch off and head east along the boundary of ERF 989, before turning left, in a north eastern direction towards the Phoenix 1 Reservoir.

Sheet 4: The servitude passes alongside (west of) Bush Road, crosses Eastwood Road, and then passes east of Burnhill Close in Phoenix. It then traverses a small open space south of Parkmead Avenue, crosses Parkmead, adjacent to Rainbird Close, crosses Greenbury Drive, into an open space, just before Rainhill Close.

Sheet 5: The route then continues in a northerly direction, passes west of a cricket oval (still within the servitude), and crosses the circular Cardinal Road twice. It passes between Longbridge Walk and Portbridge Place, (through open space) under Phoenix Highway, and east of Roseclay Place (also in open space (servitude)), and west of a sportsfield.

Sheet 6: The route passes Catford Crescent to the east, still within the servitude, crosses Clayfield Drive, in the area of Clayfield. Continuing along the servitude, it passes under the railway line, a petronet servitude, and the under Eastbury Drive, again crossing into open space, and through a watercourse. The proposed pipeline then traverses a fairly steep bank and across Longbury Drive.

Sheet 7: After Longbury Drive, the route continues northerly, within the servitude, passing Uppercliff Road to the east, through some denser vegetation, across Ridgicroft Drive, and across Wynbury Circle (twice).

Sheet 8: The route passes over Northbury Avenue, alongside Cliffbury Place to the west, and Heathbury Place to the east, touches on the terminal points of Edgebury Road and Brigbury Place, before coming to an end on the southern side of Phoenix Highway, opposite Phoenix 2 reservoir.

19. LEGISLATION

As mentioned previously, the proposed activity triggers Environmental Impact Assessment (EIA) regulations, promulgated under the National Environmental Management Act (NEMA, No. 107 of 1998), amended in 2010. In this case the following activities have been identified and need to undergo environmental assessment.

<i>EIA Regulation</i>	<i>#</i>	<i>Notice Description</i>	<i>Activity Description</i>
<i>EIA Regulation No R 544 (Listing Notice 1)</i>	<i>9</i>	<i>The construction of facilities or-infrastructure exceeding 1000metres in length for the bulk transportation of water, sewage or storm water (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 infrastructure are for bulk transportation of water, sewage or storm water 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.</i>	<i>5.5km of 1.2m diameter bulk water pipeline installation, within road servitude in places, through urban area, and in some places within 32m of a watercourse. The throughput of the pipeline will exceed 120litres per second. This includes the pipe-yards, construction yards, reservoirs, pump stations, cathodic protection, access roads, spoil areas, and scour valves and outlets.</i>
	<i>11</i>	<i>The construction of:</i>	<i>NAA Ph 4 is proposed to be laid across</i>

		<p>(xi) infrastructure or structures covering 50 square metres or more</p> <p>Where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>the Umhlangane River. The proposed project will also traverse various smaller watercourses and wetlands en-route.</p>
	18	<p>The infilling or deposition of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 cubic metres from:</p> <p>(iii) Watercourse</p>	<p>NAA Ph 4 is proposed to be laid the Umhlangane River. The proposed project will also traverse various smaller watercourses and wetlands en-route. A large trench will be required to bury the 1.2m diameter pipe below water level.</p>
	37	<p>The expansion of facilities or infrastructure for the bulk transportation of water, sewerage or storm water where:</p> <p>a) The facility or infrastructure is expanded by more than 1000m in length; or</p> <p>b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more –</p> <p>excluding where such expansion:</p> <p>i) relates to transportation of water, sewerage or storm water within a road reserve; or</p> <p>ii) where such expansion will occur in urban areas but further than 32m from a watercourse, measured from the edge of the watercourse.</p>	<p>The development could be construed as 'Expansion' OR 'Construction'. There will be a new 1.2m pipe, but this will be augmenting the existing pipeline over the 5.5km, within road servitude in places, through urban areas, and in some places within 32m of a watercourse. The throughput of the pipeline will exceed 120litres per second. This includes the pipe-yards, construction yards, reservoirs, pump stations, cathodic protection, access roads, spoil areas, and scour valves and outlets.</p>
EIA Regulation No R 545 (Listing Notice 2)	10	<p>The construction of facilities or infrastructure for the transfer of 50000 cubic metres or more water per day, from or to any combination below:</p> <ul style="list-style-type: none"> • Water catchments • Water treatment works • Impoundments <p>Excluding treatment works where water is to be treated for drinking purposes.</p>	<p>The new pipeline will transfer 100,000m³ of water of water per day between water impoundments. The overall flow will increase by 60,000m³, but because water will chose the path of least resistance, the new, bigger pipe, will carry the bulk of this water, which amounts to 100,000m³ of water between Durban Heights and Phoenix 2 Reservoirs.</p>

20. WHAT IS PUBLIC PARTICIPATION?

The Public Participation Process (PPP) forms part of the Environmental Application, and aims to ensure that anyone who has an interest in, or who is affected by the proposal has an opportunity to participate. Every person has the right to be informed of decisions that affect them and to influence these decisions. Opportunities are provided during this process for people to indicate their viewpoints or concerns, identify potential environmental issues, suggest alternatives or mitigation options, and identify or enhance positive benefits of the proposal. The PPP for the proposed project will be detailed in the months to come in the following ways:

Northern Aqueduct Augmentation Phase 4	Published Dates
Advertisements & Articles	
Newspapers –The Mercury, The Isolezwe, The Phoenix Tabloid	November 2012
Please advise if there are other more suitable newspapers	
Circulation of Background Information Document	
Start Date: October – November 2012	End Date: Ongoing (roughly January 2013)
On Site Notice Installation	November 2012 – January 2013
Public Meeting / Open Day (potential date/s only)	November 2012 – Early February 2013
Circulation of the Draft Basic Assessment Report	<i>End February 2013</i>

21. BECOMING INVOLVED

The purpose of this BID is to invite you to register your interest in the project. Your name and details will be entered into a database that will be used to circulate any further project information. As a registered I&AP there will be opportunities for you to contribute towards a comprehensive environmental investigation that offers the environmental authority the most accurate information to make an informed decision:

- **BECOME INVOLVED IN WRITING:** The BID also invites you to provide your input with regards to perceived biophysical or socio-economic impacts or issues by submitting your comments on the form below to the relevant contact person.
- **BECOME INVOLVED IN GUIDANCE:** We would also value any information regarding specific requirements, guideline documents, legislation or regulations specific to your organisation, group, division or department (if applicable) that may need to be considered during our environmental investigations. Kindly submit these in writing on the form below to the relevant contact person.

Annexure 2

Household Notification Form



Knight Piésold
CONSULTING

Name and Surname	House Address	Signature	Owner/Tenant	ERF Number	Contact details

Annexure 3.

Letters from Volunteers

Ward 102 Report IsiZulu

Sisebenze kahle kule project yepayipi lamanzi. Kweminye imizi besiba nezinkinga yokuthi angeke asayine engakafundi. Kodwa ke agcine esayinile.abanye bebencoma bethi yinhle le ntuthuko ngoba basazosizakala ngamanzi.

Abanye baba nenkinga yamanzi aphuma kancane ezindlini zabo. Ngokufika kwale project azophuma kahle amanzi. Abanye bebuza ukuthi ngeke ibe nenkinga yini imizi yabo. Bese siyaba phendula ukuthi ngeke ithintekke imizi yabo.

Bathi abanye bayojabula umasekuqalwa ukusetshenzwa kwalelipayipi kuphephe kubantwana babo. Bangaphoseki emgodini ezobe imbiwe ngolokhu isebenze kahle. Asitholanga nezinkinga eziningi . Inkinga esibenayo futhi eya-ERF Number, besingawatholi emzini yabantu besithola amaLot Number.

Translated version:

We enjoyed working in this water project. Some households refused to sign the receipt forms without reading the documents. However they did concede to signing and others even expressed delight in the development because they will receive water.

Others have a problem with the water pressure in their households and this project will help them. Others asked if their houses will be impacted and we answered them that their houses will not be impacted.

Others expressed that they will be satisfied when construction begins and their children are safe and don't fall into the trenches.

We did not encounter a lot trouble except that ERF numbers were not available, we used LOT numbers.

Ward 49

----- **Original Message** -----

Subject: NAA Phase 4 - Community queries raised

From: reneilmahabeer@gmail.com

Date: Wed, December 19, 2012 10:52 am

To: mba@mail.ngo.za

Our discussion yesterday has reference. It is advised that whilst most people in the community where originally upset when told about the aquaduct, they calmed down once they where informed that it was going to be underground. The one query that was constantly raised by most members was whether the public pathways that are built on the land to be used will be replaced as they are important routes used on a daily basis and allow access to the area. You will be advised if any further queries are noted in the future. See you next year.

Sent from my BlackBerry®

Ward 48 Volunteers

"Firstly I would like to thank you for creating jobs for us. It was not easy out there.

Some of the consumers were very rude, they did not want to sign, give any details. Some of them didn't even want to open their doors. Sum of the flats has dogs that came to attack us.

Some consumers argued that there is no such thing as pipes will be placed under the pylons.

We tried our best and did the job to the best of our ability.

I truly and honestly appreciate your kindness in this regard. It was good experience.

May God bless you".

Thank you.(Sandra, 074 3421216

Original letter is handwritten'

Annexure 4:

I&AP comment form (isiZulu and English), BAR Process Flyer

Northern Aqueduct Augmentation (Phase 4)

Basic Environmental Assessment

(Uhlelo lokuthola imithelela engaba khona kubantu nakwezemvelo ezizungeze lendawo uma imvume yokwenza lokhu itholakala)

Public Participaiton Process

(Uhlelo lokuxhumana nomphakathi)

_ Ifomu lokubhalisa ukuthi unesifiso sokubamba iqhaza kuloluhlelo lokuxhumana nomphakathi.

Igama/Name:

Isibongo/Surname:

Ikheli/ Address:

Ikhodi yeposi/ Postal Code:

Inombolo Yocingo/ Phone number:

Isikhahlamezi/ Fax:

Umakhalekhukhwini/Cell No:

Email:

— Sicela uchaze isizathu sokuthi ufise ukubamba iqhaza kuloluhlelo lwentuthuko ehlongozwayo:

Izincomo nemibono:

— Ngabe lukhona yini olunye ulwazi oludingayo, chaza?

— Abanye ofisa ukuthi kuxhunyanwe nabo ngaloluhlelo: siza unikeze imidanti yabo

Ukubamba kwakho iqhaza nokufaka izincomo kubaluleke kakhulu futhi siyakubonga ngalokho. Izincomo zakho ziyobe sezibhalwa kumbiko wokugcina (Final Report) ngaloluhlelo oyonikezelwa emnyangweni kahulumeni weZoLimo neZemvelo kanye nokuThuthukiswa koMphakathi wezindawo zasemakhaya okuyiwo onegunya lokuthatha isinqumo sokuthi iproject ingaqhubeka noma cha.

Ukuze ubhalise njengonesifiso sokubamba iqhaza ngoba uthinteka ngqo noma ungathintekile ngqo kepha nje unesifiso sokubamba iqhaza siza uxhumane na laba:

P.O. Box 252, Luxmi, 32007, Ucingo: 033 3915094, Fax: 0866 142081, Email: duyaza@gmail.com

Uma ufuna ulwazi mayelana ngomgudu noma imidanti ngobuchwepheshe obuzosetshenziswa kuleprojekhi, siza uthinane no:

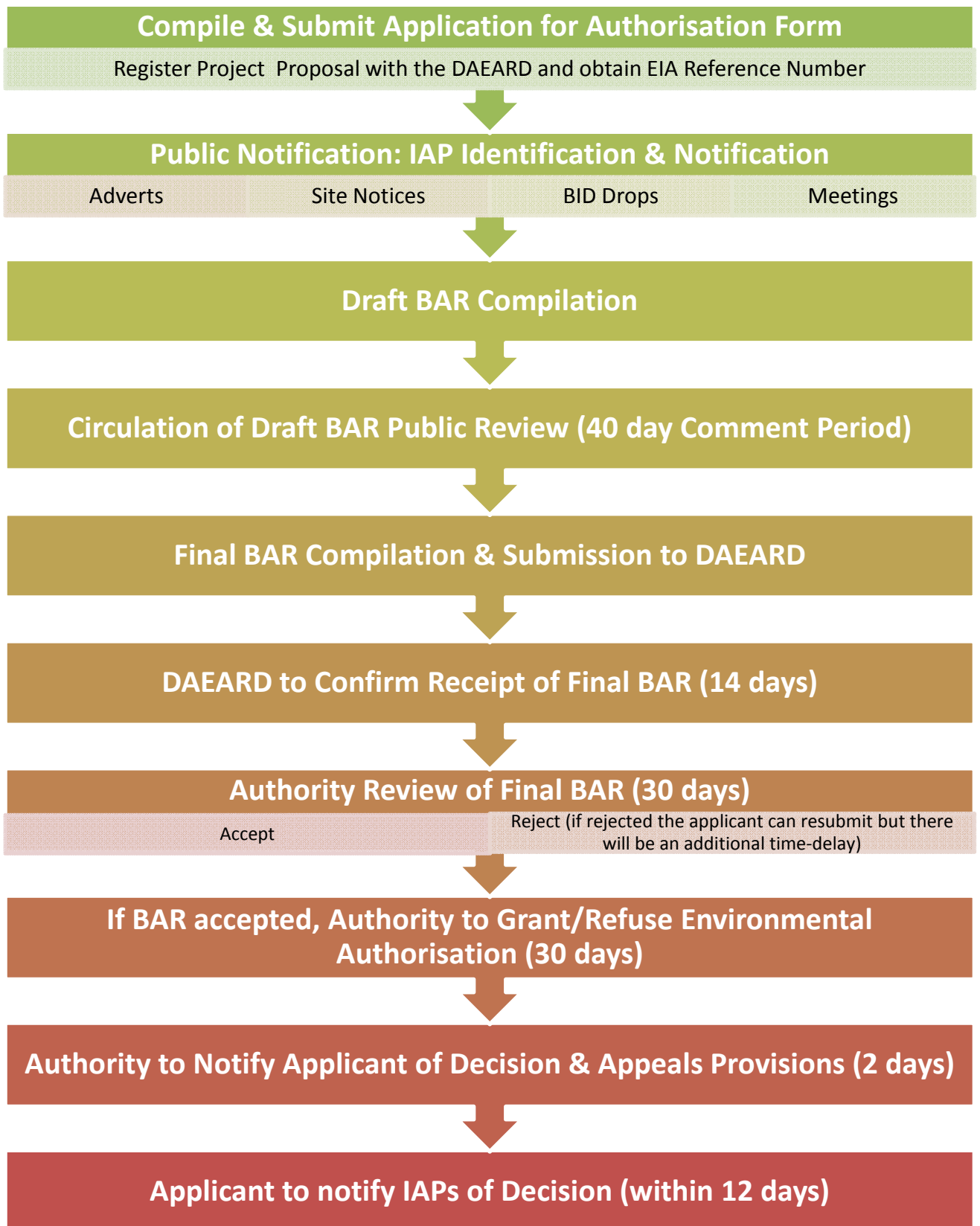
Ms Michelle Lotz, Knight Piesold (Pty) Ltd, P.O. Box 383, Westville, 3630, Tel: 031-276 4660

Fax: 031- 262 2950, Email: mlotz@knightpiesold.com

Uma ungeke ukwazi ukubuyisa lelifomu ngalezindlela ezibhalwe ngenhla sicela uliyisele ehovisini lika khansela weward yakho, kukhona ibhokisi elibhalwe igama leProjekthi uyolifaka khona. Usuku lokugcina umhlaka 20 January 2013

**NORTHERN AQUEDUCT AUGMENTATION (PHASE 4) BASIC ENVIRONMENTAL ASSESSMENT
PUBLIC PARTICIPATION PROCESS**

Registration Form
Name: Surname: Address: Postal Code: Tel No: Fax No: Cell No: Email:
Please state your interest in the proposed project:
Comments:
Do you require any additional information?
Other parties which you think should be included in the process:
<i>Your comments are highly appreciated and will be included in the final report to be submitted to the decision-making authorities.</i>
<u>To Register as an I&AP Please Return this sheet to:</u> Duyaza Environmental Consultancy P.O.Box 252, Luxmi, 3207 Tel: 033 391 5094 Fax: 086 614 2081 e-mail: duyaza@gmail.com <u>For Technical Enquiries or Route Concerns, Please Contact:</u> Ms Deepa Seepersad Knight Piesold (Pty) Ltd. P O Box 383, Westville, 3630 Tel: 031 276 4660 Fax: 031 262 2950 email: dseepersad@knightpiesold.com



Annexure 5: Site Notices



Annexure 6
News Paper Advertisements
Isolezwe

Mercury

Phoenix Tabloid

Annexure 7: Communication with Phoenix Tabloid

----- Original Message -----

Subject: RE: [Fwd: Re: Phoenix tabloid adverts.]
From: "Michelle Lotz" <mlotz@knightpiesold.com>
Date: Wed, November 14, 2012 4:19 pm
To: mba@mail.ngo.za

Don't worry about the mistake, that's what reviews are for... :-)
Oh that's cool, I didn't know about the free advert, thanks Mba.

Michelle Lotz

-----Original Message-----

From: mba@mail.ngo.za [mailto:mba@mail.ngo.za]
Sent: 14 November 2012 15:49
To: Michelle Lotz
Cc: dseepersad@knightpiesold.co.za
Subject: [Fwd: Re: Phoenix tabloid adverts.]
Importance: High

----- Original Message

Subject: Re: Phoenix tabloid adverts.
From: mba@mail.ngo.za
Date: Wed, November 14, 2012 2:00 pm
To: sizwerogmail.com@wisenet.co.za
Cc: duyaza@gmail.com

--

Dear Michell

Thank you, have done editing, Thanks for picking the error, was working underpressure trying to meet deadline, liaising with more than 3 people at the same time, venue, address, newspaper etc.

Please note that there is no cost for this advert as this is for the benefit of the community. (policy of the Phoenix tabloid).

We still have to make contacts with the Mount Moria community and leadership.

I am sending a separate email for the invitation to public meetings.

Thanks.

Mba

Dear Sizwe

Please receive the attached advert as initially discussed.

We also note that there will be no charge for this advert.

Mba Manqele

073 7267210

Subject: Re: Phoenix tabloid adverts.

From: mba@mail.ngo.za

Date: Wed, November 14, 2012 2:00 pm

To: sizwerogmail.com@wisenet.co.za

Cc: duyaza@gmail.com

Dear Sizwe

Please receive the attached advert as initially discussed.

We also note that there will be no charge for this advert.

Mba Manqele

073 7267210

Annexure 8

NORTHERN AQUEDUCT AUGMENTATION, KWAZULU-NATAL
MINUTES OF PUBLIC MEETING HELD ON
DATE: 27TH NOVEMBER 2012
VENUE: STONEBRIDGE HALL, PHOENIX
TIME: 19.00

0. In Attendance: See Attendance Register

Apologies: Cllr Veran of Ward 49

1. WELCOME AND INTRODUCTION

The Ward Councillor (A. Singh) welcomed all present at the meeting. He introduced the Project Team from Knight Piésold (Pty) Limited, Naidu Consulting, EWS and Duyaze Environmental Consulting. The councillor thanked the PPT for organizing the meeting and apologized for the advert not being published in the newspaper. This was beyond control of the Public Participation Team as well as the local leadership as they were all under the impression that the advert will be placed in the Phoenix Tabloid.

Cllr Singh told the meeting that the ward committee has met with the Technical team inclusive of the Engineering team. He acknowledged that the project team has made presentation to them as leadership and they do support the project as it will not have negative impacts to the community. They see this as opportunity of providing service delivery (water) as well as an opportunity of creating jobs to the unemployed. He encouraged the participants to raise concerns and issues so that their issues may be recorded in the BAR. He also welcomed the transparency in this process that it allows the community to have a say in the proposed development and that it also serves to ensure that the environmental rights of the locals are enhanced.

The Ward Councillor then handed the meeting over to M. Manzele (MM) the team leader for public participation team. MM thanked the ward Councillor for making an effort to publicize the public meeting. She also thanked all present for attending the meeting. She read the draft Agenda to guide the meeting as well as house rules for conducting the meeting. The Agenda was adopted by all.

2. PURPOSE OF MEETING

MM explained the purpose of meeting as follows:

- Introduce the Project Team and EWS
- Introduce the proposed project and provide full details of the proposed route, Environmental and Public Participation Processes.
- Provide opportunity to the interested and affected parties to make comments regarding the proposed development with the aim of collating issues and concerns that will be included in the BAR
- To distribute the BID, I&APs registration and comment form
- To collate names of interested and affected parties so that they may be included in the data base of organisations and individuals that will be kept informed about progress on this study.

3. PROJECT PRESENTATION

The project drawings were placed on the wall for the participants to observe before and during the meeting.

MM described the public participation process and stated why it was important to involve the community in this process. She emphasized the need for community input in the proposed project as well as the processes that the PPT has undertaken before the public meeting:

- Meeting with Ward Cllrs, secretariat and ward committees.
- Project team has made presentation to the local leadership (Ward Cllrs for ward 48 and 49 as well as ward committee for ward 48). Issues and concerns were raised and answers were provided.
- The leadership has facilitated the booking of the venue. Cllr Singh assisted in publicizing the meeting as the newspaper advert was not covered by the Phoenix Tabloid.

After the presentation, MM handed over to Michelle Lotz (ML) of KP to make a presentation about the Environmental Process and the proposed route.

ML explained that the overall proposal as stipulated in the BID. She emphasized that the proposed route constitutes of listed activity in terms of the National Environmental Management Act (No 107 of 1998, revised June 2010) – Regulation No. R544 (Listing Notice 1, Activities 9, 11, 18 and 37) and Regulation No R545 (Listing Notice 2, Activity 10), and will therefore have to undergo environmental assessment. KP Consulting has been appointed as the independent environmental consultants to apply for the necessary environmental approvals commencing with a basic assessment report with the potential for conversion into a full EIA Study. She mentioned that authorization has been granted to proceed with a Basic Assessment, even though a full EIA is triggered. This Basic Assessment study will identify and describe all issues and impacts that the proposed project might have on the surrounding environment. The report will also produce an Environmental Management Plan.

The size of the pipe is 1.2m and it will be laid parallel with the existing pipelines (to remove the bottleneck in the system) between Duffs Road and Phoenix 2 Reservoir.

ML showed the route of the pipeline from ward 102, ward 48 and ward 49 to the participants using both the old and the new map, explaining the changes on Sheets 1-3. The pipeline is virtually straight and continuously moving north, within an existing servitude for most of the way.

ML also mentioned that the PPT will inform the entire affected household by dropping the BIDs at their residents and they will seek their signatures as proof of being notified. The project will attempt to minimize disturbances in the neighbourhood by putting only one pipe at a time. The construction will be supervised at all times. The project team will inform the stakeholders about the RoD as soon as it is received from DAEA&RD. The participants will be informed of the appeal period and process should they not be satisfied about the outcome of the decision made by DAEA&RD. It was emphasized that it was important that all participants write their contact details in the attendance register so that they may be informed about the RoD.

4. ISSUES AND COMMENTS

The following issues were raised at the meeting:

Nr	Comment / Issue	Response	Action
1	EIA PROCESS		
(a)	Why conduct a Basic Assessment Process instead of a full EIA	The previous phase conducted a full EIA process in the area and a positive RoD was received. Currently DAEA&RD has approved that the BAR be conducted but should the BAR report not be sufficient for them to make a decision they will advise that the full EIA be conducted. The specialist reports will focus on details which will be made available as part of the BAR.	KP to inform I&APs should a need of a full EIA arise.
2.	WATER SOURCE, WATER CUTS AND DISTURBANCES		
(a)	Where will this water come from? (Source)	Water comes from Midmar Dam in Howick.	
(b)	The water in Phoenix sometimes doesn't have enough pressure, how will that be addressed?	The construction will be at such an angle that the pressure will be ample.	EWS to discuss this issue outside this process with the ward councillors.
(c)	What is the length of the entire route?	The entire proposed route is about 5km long.	
(d)	Was there another alternative for routing this pipe outside phoenix?	The purpose of this project is to add more water to Phoenix 2 Reservoir. The project originates from Duffs Road and passes through Mount Moria before it reaches Phoenix. It affects 3 municipality wards 48, 49 and 102.	

Nr	Comment / Issue	Response	Action
3.	COMMUNITY HEALTH AND SAFETY		
(a)	How will traffic be managed during construction?	The pipe will be laid in sections. For example, 200m will be excavated at a time. Before any other trench is opened the Engineers will ensure that backfilling has been completed. This will be strictly adhered to. There will be well managed 'stop and go' signals at all times inclusive of peak hours.	
(b)	Will this project affect pedestrians and cars	Traffic will be affected directly at intersections where the pipe has to go through. Pedestrian crossings and passages will be provided during construction. The construction will be kept within the fence. OHS policies will be observed at all times	The open trenches will be barricaded at all times as the pipes are long there will be only one trench open at a given time.
c)	Will there be safety precautions?	There will be fences and danger tapes erected around the construction sites at all times.	
(d)	Construction must take place as long as the houses are not affected.	The pipes have external and internal lining. They are designed to handle the pressure.	
(e)	How many roads will be affected (trench)	The estimated number of roads to be affected for the entire route is 18 inclusive of minor and major roads. Minor roads will be trenched through (half of the road will be opened, pipeline laid, closed and vice versa- alternative access routes will be provided) Major roads will undergo pipejacking.	PPT to count the affected intersections
(f)	What will happen to the old pipes that are currently used to supply water to Phoenix which are situated in the proposed servitude?	The pipe will still continue being used. This was explained in details.	
4.TIME FRAME			

Nr	Comment / Issue	Response	Action
A	How much time is allocated for the construction phase and when will construction begin?	The estimated time frame for construction will be 12-18 months. It is anticipated that if all goes well the project might begin by the latter part of 2013. It was emphasized that this is beyond the capacity of the EIA team the Implementation of the project is managed by EThekwini. The project will still go out to Tender like all other projects.	Ward committee to make follow up with the councillor and relevant portfolio committee.
B	How old is the Aerial Photograph	It was taken a year ago.	
C	The pipes must be laid in properly and this must not be rushed to make sure that the product is off good quality (100%)	Noted, the Engineer Representative explained the entire quality control process in details including the 24 hour process of pressure testing.	
5	JOB CREATION FOR LOCAL PEOPLE		
A	Will the project employ security guards?	EThekwini uses an in-house security company, to take guard at both ends of constructor corridor at night.	
B	We recommend that the project appoint a ward Community Liaison Person (CLO) instead of employing one CLO for the entire project.	Noted.	
C	The project must create jobs for local people during construction.	Noted. The Public participation process is focussing on collating issues and concerns that relates to the Environmental processes. The construction phase will be dealt with by EWS in consultation with the ward councillors.	

Nr	Comment / Issue	Response	Action
D	Where will the workers stay? The construction contractor must not build shacks at the site camp to accommodate his staff	Noted.	
6	COMMUNITY ASSETS ON THE PROPOSED SERVITUDE WHICH IS CURRENTLY OWNED BY THE CITY		
A	Under the pylons on St. Maries Park there are gardens and vegetable patches. There are other assets besides vegetables on the servitude.	EThekweni owns the land above the servitude unless they have given written consent for any activity that occurs on that land. EThekweni is not legally obliged to compensate for such.	<p>Cllr Singh requested that the implicated people must be told now not to continue with planting on the servitude.</p> <p>Before constructions begins, the CLOs will let them know beforehand to make sure that they remove their crops.</p>
B	Should the pipes burst, as the pipe is so large(1.2m) there will be a "tsunami", people are frightened	New steel pipes are continuously welded. Cathodic protection over the pipe will prevent corrosion of the pipe. The pipeline can be laid in the ground indefinitely (i.e 100s of years) provided that the cathodic protection is maintained.	
C	If walls and boundaries are affected, are they insured?	In the Contract the contractor has to take out various insurances in the name of the Employer and the Contractor. The contractor will be responsible for the repair/reinstatement to any damage on site and it will be checked by the Resident Engineer from Knight Pieslod/ Naidu Consulting.	
D	Will there be blasting of rocks?	There may be blasting along the pipeline route should hard rock be encountered. Should blasting be undertaken, this will be controlled with safety precautions in place.	

Nr	Comment / Issue	Response	Action
		The South African Blasting Specifications will be followed. There will be limitations enforced on any blasting procedures.	
7	ENVIRONMENTAL MANAGEMENT PLAN		
A	How will the environmental protection be adhered to during construction	The Tender document will include the EMP which will form part of the BAR report. This will enable the contractor to include the costs that will relate to environmental management when Bidding.	
8	WORKING SERVITUDE AND GEOLOGY UNDERNEATH		
A	How deep is the working servitude	The working servitude will be 3 meters deep and 2.2 meters wide. The width of the trench will vary as this is topography dependent.	
B	What if the project need blasting	There may be blasting along the pipeline route should hard rock be encountered. Should blasting be undertaken, this will be controlled with safety precautions in place. The South African Blasting Specifications will be followed. There will be limitations enforced on any blasting procedures.	

5. WAYFOWARD

MM mentioned that the draft BAR report will be available for comments in the New Year. The copy of the BAR process was handed over to all participants and it was summarized again. She mentioned that they will consult with households that are situated closer to the servitude and inform them by giving them BIDs and comment forms. Cllr Singh thanked all present and wished everyone a safe trip home.

6. CLOSURE

There being no further business the meeting was adjourned.

Signed on this..... day of2013 in _____

Ward Councillor: _____

Secretary: _____

Client: _____

END

Annexure 9

I&AP DATA BASE

Annexure 10: Communication with T, Ramsamy

Email to mlotz@knightpiesold.com

Reference: Northern Aqueduct Augmentation

Request for information

Dear Michelle

Thanks for the door to door campaign to enlighten people along the proposed route of and for the above project. Apparently there was a meeting at the Stonebridge Community Hall which I missed as I was not aware of.

The document outlining the scheme leaves a lot to be desired and I would like a lot of background information. Firstly the need to save paper and print in such a small font irritates me.

The document has no definitive logic where one scheme logically leads to another scheme. I do not know which scheme is which and the jumble and overlapping scheme references leaves me confused. Each phase must be explained in its own discrete manner rather than the overlapping tendency.

Just today I have completed a comprehensive document which evaluates the waste water reclamation project of Golder for the Ethekeeni Municipality and I have read the water reconciliation strategy as well as the International Water Management Institute study in 118 countries. Your document leaves me completely baffled by its syntax. I am certain that a large percentage of the respondents will be in the same boat as I am in.

I did not know where phase 1 start and ends or which is phase 4 so my request may seem confusing as I am totally confused with your document.

Please furnish me with all background information

- Phase 1 – Phase 3 studies, plans and project scope including costing and implementation dates, demand, loads etc.
- Phase 4 – Proposed route and project plans including costing
- All licence agreements and delimitation and caveats.
- Carrying capacity and start dates of each implementation
- Studies which suggest limitation to existing schemes
- Problems seen and reported studies for upgrade
- Where parallel pipeline will depart from their parallelogram and why.
- The scope and brief to you from the municipality and dates.
- Any supporting document and studies to provide me with some knowledge and edification.

This information will allow me to partake and respond to the public participation process. It will allow me the knowledge to know where one phase finishes and the next takes off and the limitation thereof for an augmentation phase.

Within the phases was there a temporary abstraction of water to appease a certain sector and is such temporary measures considered. What is the demand capacity for the scheme and offset or buffer between the pipelines etc?

I hope to receive the information when acquired and therefore in a piecemeal manner and in electronic form. Please confirm receipt of this email.

Thanking you

Tiny.Ramsamy@gmail.com

Cellular 078 654 9632

7 Portbridge Place; Stonebridge Phoenix

I am a member of the monitoring committee at the Kwamashu Waste Water Works as well as the Stonebridge Civic and Ratepayers Association. Please register this association as an interested party in the public participation process for the process.

Subject: Confusion most confounded

Email to mlotz@knightpiesold.com

Reference: Northern Aqueduct Augmentation

Request for information

Dear Michelle

Thanks, once again, for the documents that you send to me. I have spent some time on them.

Before the documents I thought I had some intelligence, now I see I have none.

Why are name of the projects so silly, they are discreet entities with most likely different project builders, implementers, managers, EIA studies, budgets, municipalities but adding phase 1- phase x as a suffix is certainly creates a sense of obfuscation.

Repeated reference is made of the WA phase 2, there is no such legend on your maps but there is a western aqueduct. There is a NAX and some NAA with colour scheme which make no sense to me at all. The same route has different colours in the 2 maps you sent me. When I try to correspond with the other using the colour of the first I spend a couple of minutes trying to trace the route and suddenly I find myself irritated because they not the same. I am only certain of this project's augmentation (note I have not places an acronym here) route, all other are blurred. The colour schemes are a great help but the solid line and dot-dash lines make no sense at all. They mean something to you but what can I surmise from them.

Please enumerate when the project were started and finished, which are in build phase (I am scared to use this word here), which section completed and in implementation phase. The phases (ha ha) which are not done, to be done, put on hold are all merged into one another. Maybe a solid line would suggest build and implemented, dot-dash to be done etc.

The southern route into Phoenix2 is okay but when you show the west route into Phoenix 2 which I understand (tongue in cheek) is the route put on hold and then you say when completed in 5 years time I am confused.

I need to understand the 30 (your estimate) or rather 40 year solution (excepted lifecycle of pipelines with the IWGI) why a solution expected to kick-in in 18 months is an interim solution for another solution which is expected in 5 year. All the studies of population growth and industrial expansion for the project imperatives are not given, they are just glossed over. Who were the project initiators, cost estimates and escalation, and what were their guidelines, scope and goals.

Providing me with information over the telephone will, unfortunately, not suffice I need documents which I can peruse over and over again. I need to reference them against the maps you have given me and my own mind-map. Please do not embed your stories in the email but attach a document which I can use as I see fit.

I thought I will set aside Sunday (2012-12-07) to compile a report unfortunately I now cannot as I am confused. Will I now compile a report – who knows?

If you would like a copy of the report I have compiled for the waste water reclamation in eThekwin please request and I will sent them to you about 30 pages long.

Oh by the way – I have Google maps not earth. I have created my own wall map of Phoenix (1x2m²) using cut and paste and stitch so I am able to trace the rivers which supply water to the dams and reservoirs on your maps. These again are missing to consider abstraction imperatives and volumes.

Thank you

----- Original Message -----

Subject: FW: Why

From: "Deepa Seepersad" <dseepersad@knightpiesold.com>

Date: Wed, February 13, 2013 12:22 pm

To: mba@mail.ngo.za

From: Michelle Lotz

Sent: 10 December 2012 02:38 PM

To: Tiny Ramsamy

Cc: Deepa Seepersad

Subject: RE: Why

Hi Tiny

There are no additional documents to provide at this juncture.

If you meet with us we can explain the development to you in 30mins. You will save yourself a lot of time and possible frustration.

Kind Regards,

Michelle Lotz

From: Tiny Ramsamy [mailto:tiny.ramsamy@gmail.com]
Sent: 10 December 2012 12:18
To: Michelle Lotz
Subject: Why

Michelle

Thanks for the offer. As I said documents which I can peruse at my leisure is what I require. A visit to your office would not suffice, and would not, can not, fill the void

Thanks

Tiny Ramsamy

----- Original Message -----

Subject: FW: NAA Ph4 BAR

From: "Deepa Seepersad" <dseepersad@knightpiesold.com>

Date: Wed, February 13, 2013 12:21 pm

To: mba@mail.ngo.za

From: Michelle Lotz

Sent: 07 December 2012 01:14 PM

To: Tiny Ramsamy

Cc: Deepa Seepersad

Subject: RE: NAA Ph4 BAR

Hi Tiny

If you have Google Earth, the attached .KMZ file is very useful.

I am also attaching the route changes / alternatives report - this report shows where the route was originally proposed and how it has changed in the last few months after work on the ground and in liaison with interested parties and specialists (note, this is very much a DRAFT report!).

Kind Regards,

Michelle Lotz

From: Tiny Ramsamy [mailto:tiny.ramsamy@gmail.com]

Sent: 07 December 2012 11:58

To: Michelle Lotz

Subject:

Michelle

Thanks for the prompt reply.

Correspondence address as given. email any size

Prefer email

Will peruse attachmets.thanks

Tiny Ramsamy

Annexure 10. T. Ramsany Emails

----- Original Message -----

Subject: RE: NAA Phase4 PPP

From: "Michelle Lotz" <mlotz@knightpiesold.com>

Date: Mon, January 28, 2013 2:17 pm

To: "Tiny Ramsamy" <tiny.ramsamy@gmail.com>

Cc: mba@mail.ngo.za

"Samukelo Manqele" <duyaza@gmail.com>

"Deepa Seepersad" <dseepersad@knightpiesold.com>

Hi Tiny

We are not currently working on the Western Aqueduct, the project you have been commenting on is the Northern Aqueduct Augmentation Project, Phase 4.

A second public meeting will be held next week, on the 6th of February, please make an effort to attend.

Kind Regards,

Michelle Lotz

From: Tiny Ramsamy [mailto:tiny.ramsamy@gmail.com]
Sent: 28 January 2013 14:13
To: Michelle Lotz
Subject:

Hi,

Please keep me in the loop as to the status of the Western aqueduct
public participation project

Thanks

Tiny Ramsamy

----- Original Message -----
Subject: FW: FW: VKE Demands received from A Copley
From: "Deepa Seepersad" <dseepersad@knightpiesold.com>
Date: Wed, February 13, 2013 12:20 pm
To: mba@mail.ngo.za

From: Tiny Ramsamy [mailto:tiny.ramsamy@gmail.com]
Sent: 11 February 2013 01:58 PM
To: Deepa Seepersad
Subject: Re: FW: VKE Demands received from A Copley

Thanks will peruse

Tiny Ramsamy

On Thu, Feb 7, 2013 at 3:30 PM, Deepa Seepersad <dseepersad@knightpiesold.com> wrote:

<<VKE Demands received from A Copley.pdf>> Good day Tiny

Hope that you are well.

Attached, please find infrastructure demand data for the Northern Region of the EThekweni Municipality, for your perusal.

Should you have any technical enquiries, please do not hesitate to contact Amal Doorgapershad.

Thank you Tiny. Have a good day.

Regards,

Deepa Seepersad, (Cand.Sci.Nat)
Environmental Scientist
Knight Piésold (Pty) Ltd.

2nd Floor, Engen House, 171 Rodger Sishi Road (Blair Atholl Drive), Westville North
Durban | KwaZulu-Natal | South Africa | 3629
phone: +27 31 276 4660 | fax: +27 31 262 2950
direct: +27 31 276 8072
email: dseepersad@knightpiesold.com
web: <http://www.knightpiesold.com>
ISO 9001:2008 Certificate No: 212061140/1

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-----Original Message-----

From: Amal Doorgapershad
Sent: 07 February 2013 12:39 PM
To: Deepa Seepersad
Subject: Emailing: VKE Demands received from A Copley

Hi Deepa

Please forward this to Tiny, I don't have his email address.

Regards
Amal

Your message is ready to be sent with the following file or link attachments:

VKE Demands received from A Copley

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

Annexures: I&APs Data Base

Annexure 9

I&AP DATA BASE