

COMMENTS AND RESPONSE REPORT

CLIENT : eThekweni Municipality Coastal Stormwater and Catchment Management Department

PROJECT : Lower Umgeni River Widening Project

PROJECT No : J25130D

PURPOSE : Collation of all the comments and summary of all the issues raised by Interested and Affected Parties (I&APs) on the Background Information Document (November 2012) and Draft Basic Assessment Report (BAR) (December 2012); and GIBB's response to the issues that were raised. All I&APs listed below were registered on the I&AP database for the project.

COMMENTS PERIOD : 02 January 2013 to 12 February 2013

DATE OF REPORT : April 2013

COMPILED BY : Katherine de Jong

REVIEWED BY : Gisela Fechter

Acronyms

BA	Basic Assessment	eThekweni	eThekweni Municipality Coastal Stormwater and Catchment Management
BAR	Basic Assessment Report	GIBB	GIBB (Pty) Ltd
BID	Background Information Document	I&AP	Interested and Affected Party
CBD	Central Business District	IRPTN	Integrated Rapid Public Transport Network
CPEPD	Climate Protection and Environmental Planning Department	KZN	KwaZulu-Natal
CSIR	Council for Scientific and Industrial Research	NCP	National Chemical Products
DAEA	Department of Agriculture and Environmental Affairs	PES	Present Ecological State
DAFF	Department of Agriculture, Forestry and Fisheries	PRASA	Passenger Rail Agency of South Africa
DoT	Department of Transport	RDM	Resource Direct Measures
DUCT	Duzi Umgeni Conservation Trust	SANBI	South African National Biodiversity Index
DWA	Department of Water Affairs	UEC	Umgeni Estuary Conservancy
DWAF	Department of Water Affairs and Forestry	WESSA	Wildlife and Environment Society of South Africa
EAP	Environmental Assessment Practitioner		
ECO	Environmental Control Officer		
EHI	Estuarine Health Index		
EIA	Environmental Impact Assessment		
EIS	Estuarine Importance Score		
EKZNW	Ezemvelo KZN Wildlife		
EMP	Environmental Management Programme		
EPCPD	eThekweni Planning and Climate Protection Department		

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
1	Umgeni Estuary Conservancy (UEC) Margaret Burger Tel: 031 573 1054 Fax: 031 573 1058 Cell: 083 630 5380 Email: margaret@burgerip.co.za http://umgeniestuary.blogspot.com/	<u>Email:</u> 7 December 2012	<p>“There is a Notice on Riverside Road in respect of a Public meeting on 12 December 2012, 5.30pm, City Engineers Dept., meeting room above the 6th floor to which we have just been alerted. The attached Notice was given to us by Abdul Karim the fruit seller at the market area opposite the Bird Park.</p> <p>We, as the Umgeni Estuary Conservancy, have not been informed of this meeting via email or other means, of which I am aware.</p> <p>Please could you email us the Notice of that meeting so that I am able to distribute this to our committee and members via email.”</p>	<i>Meeting Notification and inappropriate timing of the commencement of public participation</i>	GIBB sent a copy of the Notice of meeting to Ms Burger on the 7 th December 2012. A second meeting was also scheduled and held on 29 January 2013, all I&APs were given longer than two weeks to prepare and confirm their attendance.
2	A G Jeffrey SC Tel: 031 304 3676 Fax: 031 301 2876 Cell: 082 83 84 002 Email: alex.jeffrey@law.co.za 3rd Floor North Wing 6 Durban Club Place DURBAN 4001	<u>Email:</u> 7 December 2012	<p>“I refer to the Notice of Basic Assessment dated December 2012.</p> <p>I would like to register as an Interested and Affected Party. My contact information is set out below.</p> <p>Please will you attend to this.</p> <p>I am not in a position to forward my comments at this stage but I intend to do so in due course.</p> <p>Kind regards”</p>	<i>(I&AP registration)</i>	Noted. Registered as an I&AP.
3	Gavin Gow Inc. Attorneys & Conveyancers of Umhlanga Tel: 031 561 1011 / 031 561 1057 / 031 561 1058 Fax: 031 561 1059 Cell: 072 150 2988 Email: grg@gavingow.co.za Suite 15, Chartwell Centre Chartwell Drive Umhlanga Rocks, 4320 P O Box 610, Umhlanga Rocks, 4320 Docex 1, Umhlanga	<u>Email:</u> 9 December 2012	<p>“Please register ourselves (attorneys) as contributors. Thank you”</p>	<i>(I&AP registration)</i>	Noted. Registered as an I&AP.
4	Tony Carnie Environment Writer The Mercury Tel: 031 308 2314 Fax: 031 308 2333 Cell: 082 781 7904	<u>Telephone Call:</u> 10 December 2012	Requested a site location map for use in a Newspaper article.	<i>(Information requested)</i>	GIBB sent Mr Carnie a site location map on the 10 th December 2012. This map was used by Mr Carnie for his newspaper article advertised in The Mercury Newspaper on 11 December 2012.

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	18 Osborne St Greyville Durban South Africa 4001				
5	WESSA Ms Carolyn Schwegman EIA Co-ordinator, WESSA KZN Region Tel: +27 (0)39 975 2147 Cell: +27 (0)83 9814814 Fax: +27 (0)39 9752147 (on request) Email: afromatz@telkomsa.net Website: www.wessa.org.za Address: P O Box 343, Pennington, 4184	<u>Email:</u> 10 December 2012	<p>“After our recent correspondence with respect to the public participation process for the project it is with some concern that after you had assured me that Margaret Burger and Penny Rees would be included as I&APs the information with respect to the public meeting was not circulated. Also, I don’t seem to have been notified of a public meeting.”</p> <p>“Thanks for your call following the concerns which I raised with Jesse of Gibb’s Port Elizabeth office with respect to the inappropriate timing of the commencement of public participation, and it seems that not all registered I&APs were notified of the public meeting. I am satisfied that interested parties are now aware of the meeting on the 12th and that the uMngeni Conservancy and DUCT have been included (through WESSA) and will be afforded opportunities to meet the project team for specific issues should representatives not be able to attend on the 12th.</p> <p>I will not be attending the meeting and I raise the following as issues:</p> <ul style="list-style-type: none"> • Need. The project received environmental authorisation in 2006 but it then lapsed. That the authorisation lapsed leads us to question the need for the project; • The project is said to be required to prevent flooding of the Umgeni Business Park Phase 2 yet the EAP undertaking the EIA for the Business Park extension was unaware of eThekweni’s project to address the flood risk. Clearly the two projects are being looked at in isolation which is not acceptable; • A concerned person has notified me that the studies done for the ‘canalisation’ are dated 2005. A review of the studies should be undertaken; • Estuarine Health. It must be assessed what the proposed activities will do to the Estuarine Health Score and this must be assessed in terms of other impacts such as removal of discharged treated water for re-use, and be assessed against National legislation, policy and principles ie National Water Act, SANBI National Biodiversity Assessment, Conservation Plans – National, Provincial, eThekweni. 	<p><i>Meeting Notification and registration of I&APs</i></p> <p><i>Inappropriate timing of the commencement of public participation</i></p> <ul style="list-style-type: none"> • It seems that not all registered I&APs were notified of the public meeting. <p><i>Project Motivation</i></p> <ul style="list-style-type: none"> • Questions the need for the project <p><i>Projects to Prevent Flooding at Umgeni Business Park</i></p> <ul style="list-style-type: none"> • The project is said to be required to prevent flooding of the Umgeni Business Park Phase 2 yet the EAP undertaking the EIA for the Business Park extension was unaware of eThekweni’s project to address the flood risk. <p><i>Specialist Studies dated and need to be reviewed</i></p> <p><i>Estuarine Health</i></p> <ul style="list-style-type: none"> • It must be assessed what the proposed activities will do to the Estuarine Health Score. 	<p>Ms de Jong called Ms Schwegman on the 10th December 2012 to clarify her concerns. She apologised for the late notice and indicated that a second public meeting would be held (this was scheduled for 29 January 2013). Ms de Jong also stated that she would note any apologies at the meeting and circulate the meeting minutes to WESSA.</p> <p>Noted. A second meeting was scheduled and held on 29 January 2013, all I&APs were given longer than two weeks to prepare and confirm their attendance.</p> <p>Refer to Table 2, GIBB Response 1 below.</p> <p>Refer to Table 2, GIBB Response 2 below.</p> <p>Refer to Table 2, GIBB Response 3 below.</p> <p>Refer to Table 2, GIBB Response 4 and 6 below.</p>

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9	Ezemvelo KZN Wildlife Jenny Longmore Principal Conservation Planner Planning Division: IEM Section Ezemvelo KZN Wildlife Tel: 033 845 1349 Fax: 033 845 1499 Email: longmorj@kznwildlife.com Queen Elizabeth Park 1 Peter Brown Drive P O Box 13053 Cascades 3202	<u>Email:</u> 09 January 2013	"Compliments of the Season to you. I trust a hard copy has been forwarded to Ezemvelo? Projects are due to be distributed to Planners this week..."	(Information requested)	GIBB delivered a hard copy of the Draft BAR to EKZNW on the 19 th of December 2012.
10	Sarah Fernandes Kantey and Templer Cell: +27 71 851 6976 Tel: +27 31 266 6535 Fax: +27 31 266 5786 Email: sarahf@dbn.kanteys.co.za P O Box 1621, Wandsbeck, 3631 Physical: 9 - 11 University Rd, Westville	<u>Email:</u> 11 January 2013	"Kindly register me as an I&AP for the abovementioned project. I have a love of estuaries and would be interested in knowing more about the project. Many thanks."	(I&AP registration)	Noted. Registered as an I&AP.
11	Geoff D A Pullan Cell: 083 6959190	<u>Email:</u> 17 January 2013	"We had a presentation at council last year for Umgeni River barge tours. The contact was Barry 071 9950606, barryvt@telkomsa.net. Maybe he would be interested/affected with this project".	(I&AP registration)	Noted. GIBB sent Mr Barry VT an invite to attend the public information sharing meeting on the 17 th of January 2013 and registered him as an I&AP.
12	WESSA Ms Carolyn Schwegman EIA Co-ordinator, WESSA KZN Region (See contact details under 7 above)	<u>Email:</u> 28 January 2013	"Please tender my apologies for the 2nd public information session to be held tomorrow. I would like to receive a copy of the minutes, please."	(Information requested)	Noted. A copy of the minutes from the second public information sharing meeting was e-mailed to all attendees and Ms Schwegman on 26 April 2013.
13	Lauren Anthony laurena@dbn.caxton.co.za	<u>Email:</u> 29 January 2013	"Hi Katherine, I contacted you last week to enquire if I could be emailed a draft of the basic assessment report for the river widening project but haven't received it yet - would you be able to send it to this email address or laurie_ant20@hotmail.com if it bounces back? Thanks for your help." She also requested a high resolution map.	(Information requested)	GIBB sent a copy of the Draft BAR and a site location map on the 28 th January and 30 th January 2013 respectively.

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14	Frederike Liasides (031 207 1437)	<u>Email:</u> 30 January 2013	<p>“Thank you to you and your team for your presentation yesterday afternoon.</p> <p>I attach hereto a photograph taken by Rosemary of the swamp fig (ficus trichopoda). You will see the NCP buildings in the background.</p> <p>Kind regards”</p>	<i>Impact on Swamp Fig (ficus trichopoda)</i>	Refer to Table 2, GIBB Response 5 below.
15	Umgeni Estuary Conservancy Margaret Burger Tel: 031 573 1054 Fax: 031 573 1058 Cell: 083 630 5380 Email:margaret@burgerip.co.za http://umgeniestuary.blogspot.com/	<u>Email:</u> 1 February 2013	“Please could you send me the link to the GIBB website for access to the uMgeni canalisation at Springfield / Connaught – would like to post this on our blog for our members to view as part of our reporting back to them.”	<i>(Information requested)</i>	GIBB sent the project link for the Reports to Mrs Burger on the 1 st February 2013.
16	Department of Agriculture, Forestry and Fisheries W. Rodzani Tel: 033 392 7761 Fax: 033 342 8783 Email: WisemanR@daff.gov.za P/Bag X9029 Pietermaritzburg 3200	<u>Fax:</u> 1 February 2013	<p>COMMENTS FOR THE DRAFT BASIC ASSESSMENT REPORT FOR THE PROPOSED WIDENING OF THE LOWER UMGENI RIVER. REF NO: DM/0068/2012</p> <p>The Department of Agriculture, Forestry and Fisheries (DAFF) appreciates the opportunity given to comment on the Draft Basic Assessment Report for the above mentioned development.</p> <p>Following the site inspection conducted on the 18th of January 2013, the proposed flood control embankment site consists of some exotic tree species and weeds. The Department does not object hence there is no natural forest or protected tree(s) under the National Forests Act, 1998 (Act No. 84 of 1998) as Amended that will be affected by the construction.</p> <p>The indigenous trees that from part of the park on the outer/above bank, which is opposite the bird park should not be disturbed.</p> <p>This letter does not exempt you from considering other environmental legislations. Should any further information be required, please do not hesitate to contact this office.</p>	<p>√ <i>The Department does not object</i></p> <p><i>Protection of Indigenous tree species</i></p> <ul style="list-style-type: none"> The indigenous trees that from part of the park on the outer/above bank, which is opposite the bird park should not be disturbed <p>Note: <i>the letter does not exempt the applicant from considering other environmental legislations.</i></p>	<p>Noted.</p> <ul style="list-style-type: none"> The eThekweni Municipality Project Leader advised that the indigenous trees that from part of the park on the outer/above bank, which is opposite the bird park falls outside the affected area and will not be disturbed or impacted on in any way. Furthermore, the EMP (Appendix F) Section 6.4.2 was updated to ensure that the relevant park will be demarcated as a no-go area. Noted.
17	Department of Water Affairs Mr S.C Sikhosana Tel: 031-336 2933 Fax: 031-305 9915 Email:sikhosanas2@dwa.gov.za	<u>Email:</u> 8 February 2013	<p>“(1) RIPARIAN AREA, WETLANDS AND WATERCOURSES</p> <p>(1.1) The proposed development must not have adverse impact on the flow regime habitat (physical structure and vegetation), biota and water quality of the Umgeni River.</p> <p>(1.2) The in-stream water quality must be analysed on a two weekly basis during construction both upstream and downstream of the activity for the following variables: Ph, Electrical conductivity (mS/M), suspended solids (mg/l), E Coli. Total</p>	<p><i>Riparian Area, Wetlands and Watercourses</i></p> <ul style="list-style-type: none"> No adverse impact on the flow regime habitat In-stream water quality must be analysed on a two weekly basis both upstream and downstream of the activity 	<ul style="list-style-type: none"> Refer to Table 2, GIBB Response 4 below. Refer to Table 2, GIBB Response 6 below.

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			<p>dissolve solids, nitrate/nitrite, ammonia, chemical oxygen demands, chlorine and ortho-phosphate.</p> <p>(1.3) A monitoring programme for both surface and groundwater must be commissioned by the Applicant.</p> <p>(1.4) Activities that lead to elevated levels of turbidity of any watercourse/s must be prevented, reduced or remediated. Activities must be scheduled to take place during the dry seasons when flows are lowest where reasonable possible. The natural in-stream hydrology must be used to determine which months constitute the low flow months.</p> <p>(1.5) The applicant must ensure that the quality of the water to downstream water users does not decrease because of the proposed activity.</p> <p>(1.6) Pollution of and disposal/spillage of any material into the watercourse must be prevented, reduced or remediated through proper operation, maintenance and effective protective measures. Any hazardous substances must be handled according to the relevant legislation relating to transport, storage and use of the substance.</p> <p>(1.7) The activities must start up-stream and proceed into a downstream direction so that the recovery processes can start immediately without further disturbance from upstream works.</p> <p>(1.8) Slope/bank stabilisation measures must be implemented</p> <p>(1.9) The applicant must take all reasonable steps to allow movement of aquatic species, including migratory species.</p> <p>(1.10) All reasonable steps must be taken not to disturb the breeding nesting and or feeding habitats and natural movements patterns of the aquatic biota.</p> <p>(1.11) Adequate measures must be implemented to prevent siltation during the construction phase.</p> <p>(1.12) Due to the location of the proposed development to water resource, it is expected that there will be disturbance/destruction of wetland/riparian areas occurring.</p>	<ul style="list-style-type: none"> A monitoring programme for both surface and groundwater must be commissioned by the Applicant. Activities that lead to elevated levels of turbidity of any watercourse/s must be prevented, reduced or remediated. Activities must be scheduled to take place during the dry seasons. Applicant to ensure that the quality of water to downstream water users does not decrease due to the activity Pollution of and disposal/spillage of any material into the watercourse must be prevented, or remediated through effective protective measures. The activities must start up-stream and proceed into a downstream direction so that the recovery processes can start immediately without further disturbance from upstream works Slope/bank stabilisation measures must be implemented. Allow movement of aquatic species, including migratory species. All reasonable steps to be taken not to disturb breeding, nesting and or feeding habitats and movements patterns of the aquatic biota Adequate measures to prevent siltation It is expected that there will be disturbance/destruction of wetland / riparian areas. 	<ul style="list-style-type: none"> Refer to Table 2, GIBB Response 6 below. Refer to Table 2, GIBB Response 4, 6 and 7 below. Noted. Refer to Table 2, GIBB Response 4 and 6 below. Noted. Refer to Table 2, GIBB Response 6 below. Contrary to the DWA requirements, according to the recommendation from the eThekweni engineers, construction will need to start downstream and proceed upstream. GIBB agrees with the latter as it will also allow for the upstream outer embankment to remain intact and as such 'shield' the site from the force of floodwater. Refer to Table 2, GIBB Response 7 below for further clarification. Refer to Table 2, GIBB Response 7 below. Refer to Table 2, GIBB Response 8 below. Refer to Table 2, GIBB Response 8 below. Refer to Table 2, GIBB Response 4 and 7 below. Noted. Contractor to abide by conditions of the EMP to mitigate/reduce potential impacts on the wetland/riparian areas. Refer to EMP

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			<p>(1.13) The extent of damage must be minimised</p> <p>(1.14) The banks adjacent to the construction site must be stabilized to prevent collapse and erosion. Increased sedimentation must be minimised as far as possible.</p> <p>(1.15) Areas to be utilised by heavy machinery, etc must be clearly demarcated and a responsible person must be appointed to ensure that there is full compliance with the EMP.</p> <p>(1.16) There must be no unacceptable impact on the quality of both surface and groundwater in the area. If pollution of any surface or groundwater occurs, it must be immediately reported to this Department and the appropriate mitigation measures must be employed.</p> <p>(1.17) Stockpiling of soil or any other materials used during the construction phase must not be allowed on or near steep slopes, near watercourse or water body. This is to prevent pollution or the impediment of surface runoff.</p> <p>(2) WATER USE AUTHORISATIONS</p> <p>(2.1) There must be no adverse impacts on the uMgeni River, uMgeni Estuary and other water resources in the vicinity of the proposed development. For the purpose of Section 21 (c) and (i) water use i.e. "impeding or diverting the flow of a water in water course and altering the bed, banks, course or characteristics of a watercourse" the watercourse encompasses the extent of (i) of the riparian habitat or the 1:100 year flood line, whichever is the greater or (ii) within 500m radius from the boundary of any wetland.</p> <p>(2.2) The applicant must apply for a Water use Licence under section 21 (c) and (i) of the National Water Act of 1998 (Act No 36 of 1998) "for impeding or diverting the flow of a water in a water course and altering the bed, banks, course or characteristics of a watercourse.</p>	<ul style="list-style-type: none"> The extent of damage must be minimised The banks adjacent to the construction site must be stabilized to prevent erosion. Sedimentation must be minimised as far as possible. Areas utilised by heavy machinery, etc must be clearly demarcated and a responsible person must be appointed to ensure compliance with the EMP. There must be no unacceptable impact on the quality of both surface and groundwater in the area. Any pollution to be reported to this Department. Stockpiling of soil etc. must not be allowed on steep slopes, near watercourses. This is to prevent pollution or the impediment of surface runoff. <p><i>Water Use Authorisations</i></p> <ul style="list-style-type: none"> There must be no adverse impacts on the UMgeni River and Estuary or other water resources. The applicant must apply for a Water Use Licence (WUL) under Section 21 (c) and (i) of the National Water Act of 1998 (Act No 36 of 1998). 	<p>Section 6.6.17 which provides measures to Protect Sensitive Environments and Conservation of Vegetation and Wildlife. Also refer to EMP Section 6.4.2 on designation of no-go areas. Note that for the operational phase the impact on the wetland/riparian areas will be minimal (and might even be reduced) due to the use of porous and reno-matress and gabion structures.</p> <ul style="list-style-type: none"> Noted. Refer above. Refer to Table 2, GIBB Response 7 below. Noted. Refer to EMP Section 6.4.2 on 'Working Areas and No-go Areas'. Noted. eThekweni Municipality advised that an engineer, technician and Environmental Control Officer (ECO) would be on site to monitor all activities and water quality. EMP Section 6.9.1 on 'General Inspection Monitoring and Reporting Report' was amended to include the specification for the RE to report any major spills to the Department of Agriculture and Environmental Affairs (DAEA) and Department of Water Affairs (DWA) immediately. Refer to Table 2, GIBB Response 4 and 7 below. Effectively, through the widening a small portion of land which has historically been reclaimed from the river course is returned to the river channel. eThekweni is in possession of Licence B191/2/1920/40 dated 22 June 2006 issued in terms of the National Water Act 36 of 1998 for "Altering the bed, banks, course or characteristics of a water course in terms of

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			<p>(2.3) Mr Norman Ward from the Water resources Management Section of this Department must be contacted on (031) 336 2700 in order for necessary authorisation with regards to any alterations to the bed, banks, course or characteristics of a watercourse or any impedance or diversions of flow of a water course as well as any abstraction and or storage of water.</p> <p>(3) SOLID WASTE MANAGEMENT</p> <p>(3.1) Removal and disposal of solid waste to a permitted waste disposal site is required and this is the responsibility of the Applicant</p> <p>(3.2) Contaminated/hazardous materials are to be disposed of at a permitted hazardous landfill site that is authorised to accept such waste material.</p> <p>(3.3) All waste generated at the proposed development should be disposed of in a suitable manner so as not to cause any surface and groundwater pollution or a health hazard.</p> <p>(3.4) Should private contractors be used, all solid waste must be disposed of at a permitted landfill site and proof of this must be made available to this Department.</p> <p>(3.5) Please note, that all waste material prior to being collected for safe disposal, must be stored under cover and within a designated waste collection/storage area. Access control to this area must be properly managed.</p> <p>(3.6) The recycling of suitable material (i.e. glass, paper, plastic, etc) is encouraged by this Department, provided it is properly managed.</p>	<ul style="list-style-type: none"> Mr Norman Ward from the Water resources Management Section of this Department must be contacted on (031) 336 2700 in order for necessary authorisation with regards to any alterations to the bed, banks, course or characteristics of a watercourse. <p><i>Solid Waste Management</i></p> <ul style="list-style-type: none"> Removal and disposal of solid waste to a permitted waste disposal site is required Contaminated/hazardous materials are to be disposed of at a permitted hazardous landfill site All waste generated at the proposed development should be disposed of in a suitable manner Should private contractors be used, all solid waste must be disposed of at a permitted landfill site. Proof sent to Department Waste material prior to being collected for safe disposal, must be stored under cover and within a designated waste collection/storage area. The recycling of suitable material (i.e. glass, paper, plastic, etc) is 	<p>section 21(i) for the proposed Umgeni Project. The WUL is valid for 40 years. The BAR Section B14 on 'Water Use' was amended to make reference to this WUL and a copy of the document was enclosed in Appendix G.3. Also, EMP Section 6.3.3 on 'Permits and Permissions' was amended to make reference to the WUL. Note that DWA previously informed the Municipality that this work does not constitute a river diversion. Furthermore, eThekweni are proposing alternatives to certain conditions of the WUL and advised that they would liaise with the DWA on these matters.</p> <ul style="list-style-type: none"> Noted. <p>Refer to Solid Waste Management in Section 6.6.8 of the EMP</p> <ul style="list-style-type: none"> As noted in EMP Section 6.6.8, general solid waste will be disposed of at the nearest suitably registered municipal landfill site. As noted in EMP Section 6.6.7, hazardous waste will be appropriately removed and disposed. Noted. All waste will be disposed of to a suitably registered municipal landfill site. Noted. Refer to comments above. Noted. A contractor to take note as this is a condition in the EMP Section 6.6.8. This will be dependent on the contractors appointed. Where reasonably possible recycling will be encouraged and as such is

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			<p>(5) EROSION CONTROL</p> <p>(5.1) The soil erosion on site must be prevented at all times i.e. pre-, during- and post- construction activities. Suitable erosion control must be implemented in areas sensitive to erosion such as near water supply points and edges of slopes. These measures could include:</p> <ul style="list-style-type: none"> • The suitable use of sand bags or hessian sheets, retention or replacement of vegetation. • The Prompt rehabilitation of exposed soil areas with indigenous vegetation to ensure that soil is protected from the elements • The removal of vegetation, only as it becomes necessary for work to proceed. • Preventing the unnecessary removal of vegetation especially on steep areas. • Taking necessary precautions in terms of design and construction of earthworks, cuts and fills must be taken. • The time taken on stripped areas left open to exposure must be minimised. • Construction should be timed in order to coincide with the dry winter months if possible • Planting on cut slopes as soon as possible after completion of earthworks. <p>(6) STORMWATER MANAGEMENT</p> <p>(6.1) Clean and dirty areas must be separated. The runoff or stormwater from the dirty areas must be treated as water containing waste and must not enter the stormwater system.</p> <p>(6.2) The stormwater drainage network system must be kept separate from the waste water (water containing waste) system.</p> <p>(6.3) The water containing waste emanating from within the dwellings or any other building on the property must not contaminate the storm water system.</p>	<p>encouraged by this Department</p> <p><i>Erosion Control</i></p> <ul style="list-style-type: none"> • The soil erosion on site must be prevented at all times i.e. pre-, during- and post- construction activities. Suitable erosion control must be implemented in areas sensitive to erosion such as near water supply points and edges of slopes. <p><i>Stormwater Management</i></p> <ul style="list-style-type: none"> • Clean and dirty areas must be separated. The runoff or stormwater from the dirty areas must be treated as water containing waste and must not enter the stormwater system. • The stormwater drainage network system must be kept separate from the waste water (water containing waste) system. • The water containing waste emanating from within the dwellings or any other building on the property must not contaminate the storm water system. 	<p>included as a mitigation measure in the EMP Section 6.6.8.</p> <ul style="list-style-type: none"> • Refer to Table 2, GIBB Response 7 below. <p>Refer to Stormwater Management in Section 6.6.811 of the EMP</p> <ul style="list-style-type: none"> • There will be no dirty areas during operation since the embankment will be vegetated. However during construction any waste waters or contaminated sites must be managed responsibly. Refer to EMP Section 6.6.11 as amended. • Refer to EMP Section 6.6.11 as amended. • This is not applicable during the operational phase since there will be no other buildings on site. Water containing waste during the construction operations will mainly be sewage waste and waste water from cement activities. Refer to Table 2, GIBB Response 4 below.

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			<p>(6.4) These networks must be designed and constructed in such a manner that stormwater of a suitable quality will drain into the Municipal Stormwater System.</p> <p>(6.5) Ethekewini Municipality must be contacted regarding any discharging of stormwater into the municipality system.</p> <p>(6.6) A storm water management plan/system needs to be drawn up and implemented to ensure proper management of stormwater on the site during and after construction.</p> <p>(6.7) After construction, the site should be contoured to ensure free flow of runoff and to prevent ponding of water.</p> <p>(6.8) Drainage must be controlled to ensure that runoff from the site will not culminate in off-site pollution or result in damage to properties downstream of any stormwater discharge.</p> <p>(6.9) The Stormwater Management Plan should ensure that the ultimate flow from the development does not result in any negative impacts watercourse and must therefore ensure that stormwater is managed within the overall site as effectively as possible.</p> <p>(7) GENERAL</p> <p>(7.1) Contaminated wastewater including cement-contaminated water shall not enter any watercourse and shall be managed by the site manager to ensure that the existing water resources on and off site are not polluted by activities emanating from the above development.</p> <p>(7.2) The proposed development must not be in conflict with any South African legislation, local municipal plans, or by-laws.</p> <p>(7.3) The developer must exercise suitable precautions with the storage, handling and transport of all materials that could adversely affect the environment. If pollution of any surface or groundwater occurs, it shall immediately be reported to this Department and appropriate mitigation measures must be employed.</p>	<ul style="list-style-type: none"> • These networks must be designed and constructed so that stormwater of a suitable quality will drain into the Municipal Stormwater System. • Ethekewini Municipality must be contacted regarding any discharge of storm water. • A storm water management plan/system needs to be drawn up. • After construction, the site should be contoured to ensure free flow of runoff and to prevent ponding of water. • Drainage must be controlled to ensure that runoff from the site will not culminate in off-site pollution or result in damage to properties downstream of any stormwater discharge. • The Stormwater Management Plan should ensure that the ultimate flow from the development does not result in any negative impacts watercourse and must therefore ensure that stormwater is managed within the overall site as effectively as possible. <p><i>General</i></p> <ul style="list-style-type: none"> • Contaminated wastewater including cement-contaminated water shall not enter any watercourse • The proposed development must not be in conflict with any South African legislation, local municipal plans, or by-laws. • The developer must exercise suitable precautions with the storage, handling and transport of all materials that could adversely affect the environment 	<ul style="list-style-type: none"> • The embankment design accommodates the existing storm water systems. Runoff from the 'new' embankment will flow directly towards the river without any engineered channels. • Since it is an eThekewini project, the relevant authorities are fully aware of the project. • The entire project is effectively a storm water management project and has been designed accordingly. Refer to Table 2, GIBB Response 7 below. • The embankment design provides for effective storm water management • Refer to Table 2, GIBB Response 9 below. • Noted. Refer to EMP Section 6.6.11 as amended. Also refer to Table 2, GIBB Response 7 below. • Refer to Table 2, GIBB Response 4 below. • Noted. • Noted. Refer to EMP Section 6.6.7 on 'Fuels, Oils, Hazardous Substances and other Liquid Pollutants'.

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<p>(7.4) The stockpiling of soil or any other materials shall not be allowed near a watercourse or water body to prevent pollution or impediment to surface runoff.</p> <p>(7.5) The developer must control and establish suitable mitigation measures to prevent the erosion of the stockpiles.</p> <p>(7.6) The runoff from site must not contaminate the water resource nearby.</p> <p>(7.7) No forms of secondary pollution should arise from the disposal of sewage and refuse. Any pollution problems arising from the above development is to be addressed immediately by the Applicant.</p> <p>(7.8) Storage of material, chemicals, fuels, etc must not pose a risk to the surrounding environment and this includes surface and groundwater. Such storage areas must be located outside the 1:100 year floodline of any watercourse and must be fenced to prevent unauthorised access into the area. Temporary bunds must also be constructed around chemical or fuel storage areas to contain possible spillages.</p> <p>(7.9) The removal of any indigenous trees would need to be authorised. Please contact Forestry on (033) 342 8101.</p> <p>(7.10) The use of temporary toilet facilities during the construction phase of the development must not cause any pollution to water sources as well as pose a health hazard. In addition, chemical toilets must be situated out of the 1:100 year floodline of any watercourse.</p>	<ul style="list-style-type: none"> The stockpiling of soil or any other materials shall not be allowed near a watercourse or water body to prevent pollution or impediment to surface runoff. The developer must control and establish suitable mitigation measures to prevent the erosion of the stockpiles. The runoff from site must not contaminate the water resource nearby. No forms of secondary pollution should arise from the disposal of sewage and refuse. Storage of material, chemicals, fuels, etc must not pose a risk to the surrounding environment and this includes surface and groundwater. Such storage areas must be located outside the 1:100 year floodline of any watercourse and must be fenced to prevent unauthorised access into the area. The removal of any indigenous trees would need to be authorised. Please contact Forestry on (033) 342 8101. The use of temporary toilet facilities during the construction phase of the development must not cause any pollution to water sources as well as pose a health hazard. 	<ul style="list-style-type: none"> The entire project will take place close to the water course. It is therefore inevitable that sand and soil will be excavated, handled and stockpiled close to the watercourse. However since the project takes place on the upper portion of the river embankment away from the normal flow regime channel and also the various mitigation measures provided for in the EMP risk associated with of flood water is lowered. Refer to Table 2, GIBB Response 7 below. Refer to Table 2, GIBB Response 7 below. Refer to Table 2, GIBB Response 4 and 7 below. Noted. Refer to EMP Section 6.6.7, 6.7.2 and 6.7.12 for detailed protective measures for pollution. Noted. EMP Section 6.6.7 states that "Storage of potentially hazardous materials shall be above the 1:100-year flood line, or as agreed with the ECO. These materials include fuel, oil, cement, bitumen, etc. Following the site inspection conducted by DAFF on the 18 January 2013, the Department does not object to the project however they stipulate that the indigenous trees that from part of the park on the outer/above bank, which is opposite the bird park should not be disturbed (refer to Item No 16 above). Since the project takes place on the river embankment, it would be impractical to locate the toilets outside the 1:100 year floodline. However, Section 6.6.9 of the EMP states that "Portable chemical toilets at a ratio of 1 toilet per 15 workers shall be provided within 100m of each working front. Portable toilets shall be located above (higher up) and outside the area for the

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			<p>(7.11) Ethekewini Municipality must implement a programme of action that will regularly inspect water quality issues and any possible spills and testing of water quality within the watercourse.</p> <p>(7.12) Every effort must be made by Ethekewini Municipality to ensure that any ecologically significant areas such as rivers, wetlands, pan or marshes are protected during incidents of this nature. Affected areas must be rehabilitated immediately.</p> <p>Please do not hesitate to contact this office should you have any concerns, comments or queries.”</p>	<ul style="list-style-type: none"> Ethekewini Municipality must implement a programme of action that will regularly inspect water quality issues and any possible spills and testing of water quality within the watercourse Every effort must be made by Ethekewini Municipality to ensure that any ecologically significant areas such as rivers, wetlands, pan or marshes are protected during incidents of this nature. Affected areas must be rehabilitated immediately. 	<p>proposed embankment works.”</p> <ul style="list-style-type: none"> eThekewini advised that a monitoring programme would be commissioned. An engineer, technician and Environmental Control Officer (ECO) will be on site to monitor all activities Refer to Section 6.6.17 of the EMP which provides measures to Protect Sensitive Environments and Conservation of Vegetation and Wildlife. Also refer to the Biodiversity Report in Appendix D.
18	<p>Umgeni Estuary Conservancy</p> <p>Margaret Burger</p> <p>Tel: 031 573 1054 Fax: 031 573 1058 Cell: 083 630 5380 Email:margaret@burgerip.co.za http://umgeniestuary.blogspot.com/</p>	<p><u>Email:</u> 12 February 2013</p>	<p>“Please will you also add the following point:</p> <p>Dramatic changes and interference such as the proposed canalisation of the Umgeni should consider other developments taking place in close time frame and proximity. Here we refer specifically to the ENVIRONMENTAL IMPACT ASSESSMENT REPORT (DEA/EIA/12/12/20/2392) ON THE PROPOSED UMGENI BUSINESS PARK – PHASE 2 SITUATED AT 130 INTERSITE AVENUE SPRINGFIELD ON REMAINDER OF ERF 251 WITHIN THE CENTRAL AREA ETHEKEWINI MUNICIPALITY, SOUTH OF THE UMGENI RIVER WITHIN THE PROVINCE OF KWAZULU-NATAL, as found in reports by Guy Nicolson Consulting cc: December 2012. The Umgeni Estuary Conservancy has not been an IAP in this process and has only become aware of the proposal more recently. It is recommended that a holistic overview is used considering the impacts of too much change in a single area within the same time frame. This will seriously inhibit adjustment and escape of any species affected by alteration to the Umgeni River and Estuary.</p> <p>I was not able to locate a website in order to download any documents referring to the above proposal. If it were not for kind colleagues the Umgeni Business Park proposal would not have been brought to our attention.</p> <p>I copy the location of the designated area with acknowledgement to Guy Nicolson Consulting cc and Google Maps. The N2 can clearly be seen on the map which will assist orientation and placement. I was not able to obtain information on dates for the Umgeni Business Park proposal and implementation. However just looking at location one can assess that extensive work east of the N2, will take place on the south bank, as well as the north bank as part of the canalisation process. This is a lot of critical change in a relative small area, limiting adaptive ability and resilience of the river and species that depend on it for survival. Should you wish to read the Guy Nicolson report I will be able to send you a Dropbox link to do so.</p>	<p><i>Consideration of the Cumulative effect on the Umgeni River of current and future developments in the vicinity.</i></p>	<ul style="list-style-type: none"> Refer to Table 2, GIBB Response 2 below.

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19	<p>WENDY FORSE & ASSOCIATES planning & development consultant</p> <p>Tel : 035-3402586 Cell : 082 722 3333 Fax : 035-3402586 E-mail : twiga@iafrica.com P.O. Box 611, Mtunzini 3867</p>	<p><u>Email:</u> 12 February 2013</p>	<p>“1.0 THE PROJECT</p> <p>1.1 It is understood that the project is the second phase of the widening of the Umgeni River through work on an approximately 1 km section of the northern embankment of the Umgeni, approximately 3 km inland of the river mouth.</p> <p>1.2 It is understood that a positive Record of Decision was issued for the above development on the 4th April 2006, but as the project was never implemented at the time, the application has had to be re-submitted.</p> <p>1.3 The activity which has triggered this environmental assessment in terms of Listing Notice 1 (GNR 544, 18 June 2010) is: 1.3.1 Activity 11: the construction of (i) canals, (ii) channels and (xi) infrastructure or structures covering 50m² or more; where such construction occurs within a water course or within 32 metres of a water course, measured from the edge of the watercourse, excluding where such construction will occur behind the development setback line.</p> <p>1.4 The purpose or the need for such widening of the bank at this point is stated as a flood protection measure for the Umgeni Business Park and is a second phase of a two phased development that started in the 1980's. The cost of the proposed development is anticipated at R 25 million.</p> <p>1.5 The physical effect of the project is a 16m high embankment which will be cut into the existing embankment with the result that it will be approximately 1 metre higher than the current height of the embankment.</p>	<p><i>The Project Facts</i></p> <ul style="list-style-type: none"> • This project is the second phase of the Umgeni River Widening • A positive record of decision was previously given in 2006, but as the project was never implemented, the application has had to be resubmitted • The activity which has triggered Activity 11 of Listing Notice 1 (GNR 544, 18 June 2010). • The purpose or the need of the project is for a flood protection measure for the Umgeni Business Park and is a second phase of a two phased development that started in the 1980's. The cost of the proposed development is anticipated at R 25 million. • The physical effect of the project is a 16m high embankment which will be cut into the existing embankment with the result that it will be approximately 1 metre higher than the current height of the embankment. 	<ul style="list-style-type: none"> • Yes, this is correct. The southern embankment had been canalised during the mid 1980th. • Yes, this is correct. • Noted, however additional activities were added to the application form sent to DAEA on 28 March 2013. Refer to Section 3 of the Draft BAR for further details on the triggered listed activities. • Yes, this is correct. Refer to Table 2, GIBB Response 2 below. • Yes, this is correct.

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			<p>2 BACKGROUND TO THE UMGENI ESTUARY CONSERVANCY</p> <p>2.1 The objectives of the Umgeni Estuary Conservancy, (in the process of registering as a Non-Profit Organisation, but registered with Ezemvelo KZN Wildlife as a Conservancy since 1991) are:</p> <p>2.1.1 To generate interest and active participation by interested parties in wildlife and indigenous fauna and flora conservation;</p> <p>2.1.2 To protect, regulate and improve the quality of the Estuary environment including wildlife, fauna and flora within the area of the Conservancy</p> <p>2.1.3 To monitor all present and future development in the area; and,</p> <p>2.1.4 To regulate and educate all river users.</p> <p>2.2 The Conservancy has been active in rehabilitation of the banks of the Lower Umgeni and estuarine environment, working on alien weed control, refuse clearing and working with the municipality on the creation of the new pedestrian walkway along the river, amongst many other ongoing projects and activities.</p> <p>2.3 With this background, it is clear that the over-arching concern of the Umgeni Estuary Conservancy is that the status of the Estuary is not further degraded, and that all possible measures should be put in place in general, and specifically in relation to the construction of this project to widen the river, to enhance the health of the Estuary. The Conservancy is particularly concerned with the long-term management of the river environment both in terms of physical parameters, inputs (stormwater, refuse and effluents etc) and most importantly, improving the aquatic and river bank habitat so that biodiversity increases and habitats such as the Beachwood Mangroves are not adversely affected.</p> <p>3 ISSUES OF CONCERN</p> <p>3.1 The issues of concern raised here have also been raised at some of the public meetings and some have been recorded in the comments and response report.</p> <p>3.2 It is understood that this project is a necessary one in order to decrease the flood risk and possible loss of life in the Umgeni / Springfield Business Park area; while the Environmental Assessment Practitioner (EAP) response to a question was that the 'normal' flow regime of the river will remain unaltered, there is still a concern about unforeseen downstream effects of the change in the profile of the embankment – for instance, creating an erosion problem because this is the nature and unpredictability of such a dynamic environment.</p> <p>3.3 The concern over the possible effect on the Beachwood Mangroves has been raised before and is recorded again. While it is stated in the BAR that it is not anticipated that there will be any impact on the mangroves, it is important that this be monitored,</p>	<p><i>Background to the Umgeni Estuary Conservancy</i></p> <p><i>Issues of Concern</i></p> <ul style="list-style-type: none"> • The issues of concern raised here have also been raised at some of the public meetings. • This project is necessary to decrease the flood risk and possible loss of life in the Umgeni / Springfield Business Park area. • Concern about unforeseen downstream effects of the change in the profile of the embankment. • Impact on Beachwood Mangroves, this must be monitored, particularly the spread of the White Mangrove. Altering of 	<ul style="list-style-type: none"> • Noted. • Noted. Refer to Minutes of meeting in Appendix E. • Yes, this is correct. Refer to Table 2, GIBB Response No 1 below. • Refer to Table 2, GIBB Response 4 below. • Refer to Table 2, GIBB Response 4 below.

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			<p>particularly the spread of the White Mangrove (<i>Avicennia marina</i>) which is invading the mud-flats. It is hoped that the altering of stream flow through this project will not contribute to any accelerated spread of this species. Further to this, the Conservancy would like assurances that should its members note any negative impacts on this area that could be a result of this canalization project, that they will be able to negotiate with the municipality around investigation of the cause of the impact, and possible measures to address any problems that may arise.</p> <p>3.4 There are some specific species that are found in the area, either directly within the proposed project area, or that may be affected by the Project either during the construction phase or afterwards or both. One of these is a particular swamp fig (<i>Ficus trichopoda</i>) which lies almost adjacent to the graveyard, very close to the project construction area. See photograph below. This fig tree should be protected during construction operations.</p> <p>3.5 In addition, there are other species rare urban species (species names available on request) evidence of which has been seen in the Beachwood Mangroves and further up the estuary. Such species need to be encouraged and protected, not chased away by further noise and construction. Therefore, it is important for all involved in the project – from the Project Manager to the person who ‘drives the bulldozer’ to recognise that while the Umgeni Estuary area may seem like a totally transformed environment with little to worry about in terms of biodiversity and important species, this is not the case. Every care must be taken to minimise the impact during and post construction of this project.</p> <p>3.6 The increased awareness that this project is bringing to the Lower Umgeni should be seen as an opportunity to build towards improving the health and biodiversity, and thus the recreation and tourism value of the Estuary and lower stretches of the river. By implication, in order to do this, the need to improve the health and biodiversity of the river as a whole, within Ethekewini boundaries and from the source (though catchment management agencies) should be emphasised as the lower reaches bear the brunt of mismanagement upstream.</p> <p>3.7 The Conservancy’s objectives of educating the public is enhanced through the ability of the public to enjoy the river through recreational activities: canoeing, cycling, walking. It is therefore important that project enhances the ability of the public to use that section of the river that has been altered. It was stated in the BAR that consideration is being given to a walkway either at the top of the embankment or intermediate in the structure. It would be appreciated if the Conservancy could be involved as an interested stakeholder in the finalisation of plans for this walkway and how it would link to the other recreation pathways and facilities.</p> <p>3.8 It is noted that new floodlines will have to be drawn once the project is complete. The Conservancy would, when they are redrawn, like to get a copy of these new floodlines for the Lower Umgeni / Estuary area.</p>	<p>stream flow should not contribute to any accelerated spread of this species.</p> <ul style="list-style-type: none"> • The Conservancy would like to negotiate with the municipality around investigation of the cause of any negative impacts, and possible measures to address any problems that may arise. • Impact on the swamp fig (<i>Ficus trichopoda</i>). • Protection of other rare urban species. Every care must be taken to minimise the impact during and post construction of this project • Increased awareness on the Lower Umgeni should be seen as an opportunity to build towards improving the health and biodiversity, and thus the recreation and tourism value of the Estuary and lower stretches of the river. • It is important that the project enhances the ability of the public to use the section of the river that has been altered. • Pedestrian walkway - it would be appreciated if the Conservancy could be involved as an interested stakeholder in the finalisation of plans for this walkway. • It is noted that new floodlines will have to be drawn once the project is complete. The Conservancy would, when they are redrawn, like to get a copy of these new 	<ul style="list-style-type: none"> • Refer to Table 2, GIBB Response 9 below • Refer to Table 2, GIBB Response 5 below. • Noted. Refer to Table 2, GIBB Response 8 below. • Noted. Refer to Table 2, GIBB Response 9 below. • Noted. Refer to Table 2, GIBB Response 9 below. • Noted. eThekweni advised that the new floodlines will be published on the municipal website once the project has been completed. Note that flooding of

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			<p>4 CLOSING REMARKS</p> <p>4.1 The Conservancy is a particularly involved and concerned IAP in this process and would appreciate being kept actively informed of the progress of the project and consulted on any particular environmental and ecological issue that may arise during the final planning and construction stages.</p>	<p>floodlines for the Lower Umgeni / Estuary area.</p> <p><i>Closing Remarks</i></p> <ul style="list-style-type: none"> The Conservancy is a particularly involved and concerned IAP in this process and would appreciate being kept actively informed of the progress of the project and consulted on any particular environmental and ecological issue that may arise during the final planning and construction stages. 	<p>the surrounding area will not be entirely eliminated but the frequency of flooding will be reduced and the flood damage considerably mitigated.</p> <ul style="list-style-type: none"> Noted. Refer to Table 2, GIBB Response 9 below.
20	<p>Rosemary Harrison</p> <p>Email: rosemary@ecoimvelo.com</p>	<p>Email: 13 February 2013</p>	<p>“Sorry for the lateness of this email. I know that the Comments closed yesterday. I also know a Concern was brought up in the 2nd Public Participation Meeting. This Concern was mistakenly omitted from the Comments sent in yesterday.</p> <ul style="list-style-type: none"> The Umgeni Estuary Conservancy is worried about the time-span of construction. We were told 9 months. Construction will be started in the dry season. But, even if they start early in the dry season, they will not be completed until the spring rains are well underway. Also, KZN Coastal area, is especially prone, to unforeseen weather conditions in spring and early autumn. Therefore there will have to be a major lookout for any damage done to the river, due to run-off from the construction area.” 	<p><i>Construction timeframes</i></p> <ul style="list-style-type: none"> Concerns were raised about the construction during the dry season 	<ul style="list-style-type: none"> Noted. Refer to Table 2, GIBB Response 4 and 7 below.
21	<p>WESSA Ms Carolyn Schwegman EIA Co-ordinator, WESSA KZN Region</p> <p>Tel: +27 (0)39 975 2147</p> <p>Cell: +27 (0)83 9814814</p> <p>Fax: +27 (0)39 9752147 (on request)</p> <p>Email: afromatz@telkomsa.net Website: www.wessa.org.za Address: P O Box 343, Pennington, 4184</p>	<p>Email: 14 February 2013</p>	<p>“WESSA and Coastwatch, a member of WESSA’s Friends Group (herein collectively referred to as WESSA) are compelled to raise concern with respect to the proposed widening of a section of the lower Mngeni river. We find that –</p> <ol style="list-style-type: none"> Motivation <p>The project is cited simply as being the reinstatement of a project begun in the 1980’s. Information is not presented which justifies the project in light of current scenarios, possible improved technologies, accepted best practice and long term plans for estuary management (as provided in the Integrated Coastal Management Act).</p> <ol style="list-style-type: none"> eThekwini Internal Processes <p>The proposed project will be undertaken by the eThekwini Coastal, Stormwater and Catchment Management Department. WESSA considers that input from the eThekwini Climate Protection and Environmental Planning Department (CPEPD) would add value to understanding the project and its alignment with the City’s response to climate change.</p> <ol style="list-style-type: none"> Specific Information 	<p><i>Motivation</i></p> <ul style="list-style-type: none"> Information is not presented which justifies the project in light of current scenarios, possible improved technologies, accepted best practice and long term plans for estuary management <p><i>eThekwini Internal Processes</i></p> <ul style="list-style-type: none"> Input from the eThekwini Climate Protection and Environmental Planning Department (CPEPD) would add value to the project. <p><i>Specific Information</i></p>	<ul style="list-style-type: none"> Noted. Refer to Table 2, GIBB Response 1 <p>The CPEPD was involved in the project and have submitted comment. See comment from eThekwini CPEPD in 22 below.</p>

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			<p>Information relevant to the system (the estuary) in its current state is not provided and seemingly not considered in assessing the proposed project. Notwithstanding a positive record of decision having been issued for the project (referred to as the Umgeni Project) under EIA/6008 in May 2006, following which the validity of the authorisation lapsed, the implementation of a project conceived and designed in the 1980's needs, in our opinion, to be re-evaluated. It is said, somewhat simply, that eThekwini intends to reinstate the project and that there is no change in the technical aspects.</p> <p>WESSA seeks to ensure that –</p> <ul style="list-style-type: none"> - Public funds are justifiably spent, and - Should the project proceed opportunities to improve the functioning of the Mngeni estuary are maximised. <p style="text-align: center;">• Project Motivation</p> <p>The development proposal is very specific: to deal with the flooding of businesses in the Umgeni Business Park, and it is the second phase of a two phased development that started in the 1980's.</p> <p>It is significant that an environmental impact assessment is currently being undertaken for the Umgeni Business Park Phase 2 (EIA Ref: 12/12/20/2392) and in raising the issue of flood risk with the Environmental Assessment Practitioner during the scoping phase WESSA was informed that the Umgeni Project had no relevance to the Business Park expansion (personal communication) although, following WESSA's query the Floodline Assessment undertaken by SRK Consulting (November 2012) refers to the Umgeni Project and SRK expresses uncertainty whether the river widening will be implemented.</p> <p>This strongly suggests that the applicant for further development of the Umgeni Business Park has no concerns with respect to a potential flood risk and seems confident that it is of low significance as reported in the documentation for EIA 12/12/20/2392.</p> <p>Should flooding be considered as a significant risk to properties on the Mngeni floodplain further development should not be authorised below the 1:50 year floodline as is proposed in the expansion of the Umgeni Business Park.</p> <p>It must be noted that WESSA, in commenting on the initial assessment for the Umgeni Project (comment dated 14 June 2005, refer final Scoping Report, 10.3) stated the following –</p> <ul style="list-style-type: none"> • WESSA is never in favour of interfering with a rivers natural flow but in this case, there is no alternative now due to the past canalisation that has taken place which we 	<ul style="list-style-type: none"> • Information relevant to the system in its current state is not provided and seemingly not considered in assessing the proposed project. • A positive record of decision having been issued for the project in 2006, following which the validity of the authorisation lapsed <p><i>WESSA seeks to ensure that –</i></p> <ul style="list-style-type: none"> • Public funds are justifiably spent, and • Should the project proceed opportunities to improve the functioning of the Mngeni estuary are maximised. <p><i>Project Motivation - Cumulative effect on the Umgeni River of current and future developments in the vicinity.</i></p> <ul style="list-style-type: none"> • The development proposal is to deal with the flooding of businesses in the Umgeni Business Park. This does not align with other developments in the area being undertaken e.g. for the Umgeni Business Park Phase 2 (EIA Ref: 12/12/20/2392) • The applicant for further development of the Umgeni Business Park has no concerns with respect to a potential flood risk and seems confident that it is of low significance. • Should flooding be considered a significant risk to properties on the Mngeni floodplain further development should not be authorised below the 1:50 year floodline <p><i>WESSA Comment on 2005 Umgeni Report</i></p> <ul style="list-style-type: none"> • WESSA is never in favour of interfering with a rivers natural flow but in this case, there is no alternative now due to the past canalisation that was ill advised and to 	<ul style="list-style-type: none"> • Noted. Refer to Table 2, GIBB Response 3, 4 and 11 below. • Noted. Refer to Table 2, GIBB Response 1 below. • Noted. • Refer to Table 2, GIBB Response 2 below. • Refer to Table 2, GIBB Response 2 below. • eThekwini advised new floodlines will be published on the municipal website once the project has been completed. However, restrictions on authorisations for development, falls outside the scope of this specific EIA process. • Noted that this refers to WESSA's position in 2005.

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			<p>believed in the 1980's was ill advised and to which we strongly objected at the time and still hold this opinion to date.</p> <ul style="list-style-type: none"> WESSA is concerned that the Umgeni Project is a foregone decision and regard the development as a "fait accompli". <p>While WESSA elected not to participate further in what was then considered to be a pre-determined proposal, now with further opportunity to comment, we would like all options which could add value to the system considered and the Umgeni Project needs to be justified in terms of the City's long terms for the estuary.</p> <ul style="list-style-type: none"> Technical Aspects <p><u>Lack of Current and Pertinent Information</u></p> <p>The specialist report included for decision making is a Biodiversity Assessment undertaken in 2005 (CSIR Report, August 2005) and it is described as a preliminary assessment based on desk top data and one rapid qualitative field assessment. It does not specifically consider the estuary in its current state and potential short, medium and long term impacts on the system.</p> <p>WESSA understands that the river system is disturbed through catchment development and pollution however with the ecological resilience strained any further impacts on the estuary are indeed undesirable, and unacceptable to WESSA. In reinstating a project designed in the 1980's, with the second phase being considered and assessed in 2005, WESSA is concerned that changed and changing scenarios have been overlooked and information is inadequate to ensure that opportunities are maximized to improve the Mngeni estuary habitat and function.</p> <p>WESSA considers that –</p> <ul style="list-style-type: none"> The 2005 Biodiversity Assessment should be updated and/or an estuarine study conducted to determine whether the Umgeni Project has the potential to impact on habitat and function of the estuary; An estuarine ecologist provides mitigation and rehabilitation measures for estuarine habitat that may be impacted; In recognition of the value of estuarine systems in coastal processes an estuarine ecologist, in collaboration with eThekweni CPEPD, vigorously pursues opportunities within the Umgeni Project should it be implemented, to maximize habit recreation. 	<p>which we strongly objected at the time and still hold this opinion to date.</p> <ul style="list-style-type: none"> WESSA is concerned that the Umgeni Project is a foregone decision and regard the development as a "fait accompli". WESSA would like all options which could add value to the system considered. The Umgeni Project needs to be justified in terms of the City's long term plans for the estuary. <p><i>Technical Aspects - Lack of Current and Pertinent Information</i></p> <ul style="list-style-type: none"> The Biodiversity Assessment undertaken in 2005 does not specifically consider the estuary in its current state and potential short, medium and long term impacts on the system. WESSA is concerned that changing scenarios have been overlooked and information is inadequate to ensure that opportunities are maximized to improve the Mngeni estuary habitat. <p><i>WESSA considers that –</i></p> <ul style="list-style-type: none"> The 2005 Biodiversity Assessment should be updated and/or an estuarine study conducted An estuarine ecologist provides mitigation and rehabilitation measures for estuarine habitat that may be impacted; In recognition of the value of estuarine systems in coastal processes an estuarine ecologist, in collaboration with eThekweni CPEPD, vigorously pursues opportunities within the Umgeni Project should it be implemented, to maximize habit recreation. 	<ul style="list-style-type: none"> Noted that this refers to WESSA's position in 2005. Noted. Refer to Table 2, GIBB Response 1 below. Refer to Table 2, GIBB Response 3 below. Noted. Refer to Table 2, GIBB Response 3 and 11 below. Refer to Table 2, GIBB Response 3 below. Refer to Table 2, GIBB Response 3 and 4 below. Refer to Table 2, GIBB Response 8 below. Note that CPEPD was included as an I&AP and provided input and comment (refer to Item 22 below).

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<p><u>Scope of Works and Potential Impacts</u></p> <p>Being unable to find clarity on the work to be undertaken WESSA is unable to allay concerns with respect to impacts on estuarine habitat. It is said, variously, that:</p> <ul style="list-style-type: none"> • Construction activities will remain outside of the present flow channel; • Construction activities will only affect the higher embankment, the habitat in the lower embankment close to the low water mark will remain undisturbed; • And while there is the possibility that work will be restricted to the higher embankment the environmental management programme 3.4.4 Construction of the New Embankment and Associated Structure, makes reference to “shaping of new river bed” • In addition the following needs to be explained: “Natural conservational areas will not be impacted on extensively” (BAR C.5.). Where are and what is the nature of the ‘conservational areas’ and although extensive impacts are not expected, what is the nature of the possible less extensive impacts? <p>WESSA is uncertain about the scope of works and whether soft habitat could be affected. We require confirmation that should soft habitat be impacted the impacts, once described, are mitigated if revised designs cannot be considered in order to avoid loss; with what confidence can the habitat be re-established either on the site or elsewhere, and whether the engineered vegetated gabion structures result in an overall improvement in habitat.</p> <p><u>Cumulative Impacts</u></p> <p>The Umgeni Project can no longer be considered in isolation in view of the eThekweni Rapid Transport Network Plan which when implemented will include expansion of the Connaught Bridge and construction of a new trunk road involving infilling and deposition of material close to the Mgeni river.</p> <p><u>Environmental Management Programme (EMPr)</u></p> <p>It must be ensured that the EMPr is as specific and detailed as possible for management and monitoring requirements of the proposed activity. We note that the recommended mitigation, in particular that work is undertaken during the winter months and that sediment control measures are in place, is adopted however –</p> <ul style="list-style-type: none"> • What monitoring to ensure effectiveness of the sediment 	<p><i>Scope of Works and Potential Impacts</i></p> <ul style="list-style-type: none"> • Construction activities will remain outside of the present flow channel; • Construction activities will only affect the higher embankment, the habitat in the lower embankment close to the low water mark will remain undisturbed; • Although work will be restricted to the higher embankment, the EMPr, Section 3.4.4, makes reference to “shaping of new river bed”. • The following needs to be explained: “Natural conservational areas will not be impacted on extensively” (BAR C.5.). Where are and what is the nature of the ‘conservational areas’ and although extensive impacts are not expected, what is the nature of the possible less extensive impacts? <p>Should soft habitat be impacted on, the impacts, once described, are mitigated if revised designs cannot be considered in order to avoid loss; with what confidence can the habitat be re-established either on the site or elsewhere, and whether the engineered vegetated gabion structures result in an overall improvement in habitat.</p> <p><i>Cumulative Impacts</i></p> <ul style="list-style-type: none"> • Umgeni Project can no longer be considered in isolation. <p><i>Environmental Management Programme (EMPr)</i></p> <ul style="list-style-type: none"> • What monitoring to ensure effectiveness of the sediment control measures? 	<ul style="list-style-type: none"> • Noted. Refer to Table 2, GIBB Response 4 below. • Noted. Refer to Table 2, GIBB Response 4 below. • Noted, this statement has been reworded and makes reference to “shaping of the new upper river embankment”. • Noted. Refer to Table 2, GIBB Response 3 and 4 below. • Refer to Table 2, GIBB Response 3, 4 and 8 below. • Refer to Table 2, GIBB Response 2 below. • Refer to Table 2, GIBB Response 6 below.

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<p>control measures will be in place? Method statements must make provision for unseasonal weather conditions associated with weather patterns disrupted by climate change;</p> <ul style="list-style-type: none"> • EMPr 6.6.17 Protection of Sensitive Environments and Conservation of Vegetation and Wildlife. <ul style="list-style-type: none"> ○ The recommendation that 'sweeps' are undertaken for animal rescue and relocation is not included; (See response from public meeting minutes that eThekwini undertook to work with the local Conservancy groups to undertake an animal search and rescue before construction starts) ○ Corridors which allow animal movement away from the construction site need to be identified and secured with temporary fencing; • EMPr 6.6.23 Community liaison. The Umgeni River Estuary Conservancy needs to be included as an organisation. WESSA recognises the valuable and effective work undertaken along the Mngeni river banks by this group of volunteers. • EMPr Rehabilitation. A specific rehabilitation and longer term vegetation establishment plan should be set out in addition to grass seeding. • Operational Phase. A River Servitude will be established. Will this be registered to eThekwini or landowners? What controls will be in place in terms of permitted uses? Who will manage, and how will the Servitude be managed? <p>In conclusion, WESSA reiterates concern for a project which we feel is not well justified at this stage. Should it be implemented we trust that a decision will be based on current information and sound ecological advice, our desire being to achieve improvements to the system</p>	<ul style="list-style-type: none"> • Method statements must make provision for unseasonal weather conditions associated with weather patterns disrupted by climate change; • The recommendation that 'sweeps' are undertaken for animal rescue and relocation is not included. • Corridors which allow animal movement away from the construction site need to be identified and secured with temporary fencing; • EMPr 6.6.23 Community liaison. The Umgeni River Estuary Conservancy needs to be included as an organisation. • EMPr Rehabilitation. A specific rehabilitation and longer term vegetation establishment plan should be set out. • Operational Phase. Will the River Servitude be registered to eThekwini or landowners? • What controls will be in place in terms of permitted uses? Who will manage, and how will the Servitude be managed? 	<ul style="list-style-type: none"> • Refer to Table 2, GIBB Response 7 below on stormwater management and erosion control. • Noted. EMP Section 6.5.1 on 'Site Clearance' was amended and now includes the following specification: "The Contractor shall notify the ECO of any site clearing at least one week prior to such clearing commencing. The ECO shall investigate/search the site prior to the commencement of clearing to identify any species that may need to be rescued. Where appropriate the ECO will arrange for specialist assistance. • Refer to Table 2, GIBB Response 8 below. Temporary fencing is not considered an appropriate measure for this project since a habitat corridor is available just outside the construction footprint. • Refer to Table 2, GIBB Response 9 below. • Noted. The proposed embankment stabilisation works includes long term rehabilitation e.g. through vegetation of the reno-mattress and use of vegetation stabilisation for the upper portion of the 'new' embankment. EMP Section 6.8.1 on Rehabilitation was amended to include the requirement for a Rehabilitation Plan. • eThekwini owns the proposed site, as all acquisition and it will therefore be incorporated in the appropriate land use and zoning. • The proposed site will form part of service servitudes (road, rail, overhead transmission line, stormwater system) where applicable, while the remainder will be incorporated as part of the municipal green area (e.g. parks, conservancy) • Refer to Table 2, GIBB Response 1 below.

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			wherever the potential exists.		
22	<p>Environmental Planning & Climate Protection Department Development Planning, Environment and Management Unit eThekweni Municipality</p> <p>Greg Mullins and Cameron McLean</p> <p>Tel: +27 31 322 4560 Fax: +27 31 311 7134 Address:</p> <p>166 KE Masinga Road Durban 4001</p> <p>Or</p> <p>P.O Box 680 Durban 4000</p>	Email: 19 February 2013	<p>"The biodiversity specialist report is dated (August 2005) and requires revision in order to incorporate other relevant literature, viz: key findings of the uMngeni Estuarine Reserve determination (DWA identified by various conservation plans, "Estuaries of Durban" (Forbes and Demetriades 2010), and water bird counts collected by David Allan of the Natural Science Museum. Furthermore, habitat restoration in the upper uMngeni has been identified as a critical intervention in the "Reserve" process, the outcomes of the Reserve need to be assessed and related to the current proposal. As it stands the biodiversity report is inadequate and requires redrafting prior to EPCPD making formal comment. "</p> <p>As such we will require an updated report prior to being in a position to comment or accept the application. the updated report should also look to update the biodiversity and ecological components of the study in order to remain relevant.</p> <p>Secondly, in reviewing the Basic Assessment I have noted that only one listed activity is included – while the 2011) , the conservation significance of the system as activity is correct, there are a number of other activities and potential activities that must be included – the implications of excluding them is that when an authorisation comes through it is for a specific activity – if you carry out an activity without it being included in your authorisation you will be liable regarding the non-compliances. As such I feel that these activities need to be considered: GNR 544 - 11, 16 and 18 (possibly 56). In addition I feel that GNR 546 – 12, 13, 16 and 26 should be investigated too.</p> <p>Lastly – there are a number of developments planned in this area – your project, the IRPTN Corridor 1 bridges and the Umgeni Business Park on the PRASA land near Makro. The consultant (and estuarine specialist) should make some assessment of potential cumulative impacts that could result from these projects (be aware that the IRPTN project has their own estuarine report compiled earlier this year – make sure your updated report is aligned with this study or clarifies discrepancies)"</p>	<ul style="list-style-type: none"> • <i>Specialist studies to be reviewed</i> • <i>Listed Activities to be Updated</i> • <i>Consideration of other projects taking place in close proximity to the site</i> 	<ul style="list-style-type: none"> • Noted. Refer to Table 2, GIBB Response 3 below. GIBB and Ms Shamilla Pillay of the CSIR met with Mr Greg Mullins and Mr Cameron McLean on 5 March 2013 to discuss their specific requirements. Ms Pillay considered these requirements in finalising the 2013 CSIR report. GIBB sent Mr Mullins and McLean a copy of the 2013 CSIR report on 22 March 2013. • Noted, the listed activities were amended and re -submitted to DAEA on the 28th March 2013. • Refer to Table 2, GIBB Response 2 below.
23	<p>DUCT</p> <p>Penny Rees Cell: 082 340 7571</p>	Email: 26 February 2013	<p><u>"Canalisation of the uMngeni River</u></p> <p>Your correspondence and our telephonic conversation this morning refers. Thank you for the extension with regard to me submitting comment due to the confusion regarding my registration as an IAP.</p> <p>Our interest lies in the potential impacts to the uMngeni River, particularly the downstream section from the proposed canalization. Thus, in reviewing your document, the following concerns have influenced DUCT comment:</p> <ul style="list-style-type: none"> • Effects on local Hydrology <ul style="list-style-type: none"> ○ Effects on river flows 	<p><i>Note: The comment period was extended to accept comment from DUCT</i></p> <ul style="list-style-type: none"> • Effects on Hydrology 	<ul style="list-style-type: none"> • Refer to Table 2, GIBB Response 4 below.

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<ul style="list-style-type: none"> ○ Effects on estuary • Climate Change <ul style="list-style-type: none"> ○ increased rain ○ increasing storm intensity ○ increased flooding events • Cumulative effect on the Umgeni River of current and future developments in the vicinity <p>DUCT understands the need for flood attenuation in the area, however we feel that the potential impacts and mitigation measures on downstream areas (estuary) have not been satisfactorily dealt with.</p> <p>We note the statement that the estuary is 3km downstream of the project area. It should however be made clear that whilst the mouth of the estuary may be 3km downstream, the upper reaches of the estuary are in fact in the lower end of the project area, as the estuary begins at the Connaught Bridge.</p> <p><u>Draft Basic Assessment Report</u></p> <p>1 Our primary concerns are that the following have not been sufficiently investigated and dealt with:</p> <ul style="list-style-type: none"> • Climate Change <ul style="list-style-type: none"> ○ Specifically regarding Climate Change we disagree with the statement on page 46 / 7 that The development proposal has not changed in terms of...site application ○ Storm Water with regard to new and proposed developments in the area since 2005 ○ See points 8 and 10, page 4 below for further comment • Flood lines <ul style="list-style-type: none"> ○ We request that this aspect be reinvestigated as we are uncertain that the statement made in 2005 will still be applicable: Flood line studies indicate that the Umgeni Project would result in only a slight increase of flood levels in the Umgeni Estuary downstream of the proposed site between Connaught Bridge and Athlone Bridges during major flood events ○ See point 10 page 4 • Potential impacts on the estuary resulting from the proposed development have not been sufficiently researched or addressed <ul style="list-style-type: none"> ○ See point 9, page 4; point 12, page 5; Climate change and flood line comments • Potential impacts of reducing the flows from upstream dams have not been investigate <ul style="list-style-type: none"> ○ See page 3 	<ul style="list-style-type: none"> • Climate Change • Cumulative effect on the Umgeni River of current and future developments in the vicinity. • Mitigation measures on downstream areas (estuary) have not been satisfactorily dealt with • Whilst the mouth of the estuary may be 3km downstream, the upper reaches of the estuary are in fact in the lower end of the project area <p><i>Climate Change</i></p> <ul style="list-style-type: none"> • Disagree with the statement that the development proposal has not changed in terms of technical and site application. <p><i>Floodlines</i></p> <ul style="list-style-type: none"> • Request that this aspect be reinvestigated • Potential impacts on the estuary resulting from the proposed development have not been sufficiently researched or addressed • Potential impacts of reducing the flows from upstream dams have not been investigated 	<ul style="list-style-type: none"> • The proposed flood protection works are relevant for extreme storm events. • Refer to Table 2, GIBB Response 2 below. • Refer to Table 2, GIBB Response 7 below. • Noted. eThekweni Municipality will adopt mitigation measures to reduce any potential impacts on the upper reaches of the estuary. Refer to Section 6.6.17 of the EMP. Refer to Table 2, GIBB Response 4 below. • Noted. The wording of the BAR Section F on 'Recommendation of EAP' was amended to improve on its clarity. • Noted. eThekweni advised that the new floodlines will be published on the municipal website once the project has been completed. • Refer to Table 2, GIBB Response 3 and 4 below. • Noted. The eThekweni Project Engineers advise that during the 1987 floods the Inanda dam filled up in 5 days, while at the time it had been expected that it would take many months to do so. Under such major floods, the dam provides little flood attenuation.

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			<ul style="list-style-type: none"> Prevention of silt entering the uMngeni River and mitigation measures <p>We would thus recommend the inclusion of the following specialist studies and reports</p> <ul style="list-style-type: none"> Estuarine specialist report: <ul style="list-style-type: none"> overall potential impact of the canalisation on the estuary impact of reduced flow from Inanda Dam on the estuary impact of flooding / siltation (during and post construction) on the estuary Estuarine specialist to have available updated flood information including flood lines, projected velocity and angles etc River / aquatic specialist report: <ul style="list-style-type: none"> impact of the proposed reduced flow from Inanda Dam on the river upstream of the canalisation site Climate change specialist report: <ul style="list-style-type: none"> impact of climate change / flooding events on the estuary impact of climate change / flooding events on the canalised site impact of climate change / flooding events on upstream areas where floods would back up. Flood specialist report: <ul style="list-style-type: none"> an updated report taking climate change predictions into account Storm water management plan during and post construction <p>All the above to include mitigation & rehabilitation measures</p> <p>2 Page 11 / 47: We understand the statement that : Without further flood attenuation, properties adjacent to the proposed Umgeni Project site and upstream at the Umgeni Business Park will remain prone to unacceptable high and frequent flood risk, which could potentially include loss of life.</p> <ul style="list-style-type: none"> However, of concern is that very little mention is made of potential impacts on the areas downstream of the proposed canalisation <p>3 Page 12 / 47 Solid Waste No mention is made of the large amount of soil that will have to be disposed of from the excavations.</p> <p>4 Page 25 / 47 Impacts that may result from the Construction phase Water Quality Impacts</p> <ul style="list-style-type: none"> As construction work will be in the actual river bed, this sub heading should be included under direct impacts (also on 	<ul style="list-style-type: none"> Prevention of silt entering the uMngeni River and mitigation measures <p><i>Recommend the inclusion of the following reports:</i></p> <ul style="list-style-type: none"> Estuarine specialist report River/ River / aquatic specialist report: Climate change specialist report: Flood specialist report: Storm water management plan during and post construction <ul style="list-style-type: none"> Very little mention is made of potential impacts on the areas downstream of the proposed canalisation <p><i>Solid Waste</i></p> <ul style="list-style-type: none"> No mention is made of the large amount of soil that will have to be disposed of from the excavations <p><i>Water Quality Impacts</i></p> <ul style="list-style-type: none"> As construction work will be in the actual river bed, this should be 	<ul style="list-style-type: none"> Refer to Table 2, GIBB Response 4 and 8 below. Noted. Refer to Table 2, GIBB Response 1, 3, 4 and 9 below. Refer to Table 2, GIBB Response 4 and 8 below. Noted. Refer to EMP Section 3.4.4. and 6.7.1. Sand and soil removed from excavations will be utilised as cap material for landfills. The municipality is not permitted to sell the soil. Noted. Refer to Table 2, GIBB Response 3, 4, 7 and 8 below.

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<p>pages 28, 35 and 37 / 47)</p> <ul style="list-style-type: none"> Although the impact on the estuaries water quality is mentioned under Cumulative Impacts, we are concerned that there are few mentions of impacts on the estuary such as changed flow regimes and silt deposition <p>5 Mitigation Measures Currently all manner of items such as litter, engine oil, factory effluent (visible in the BID aerial photograph) and sewage is conveyed by storm water drains and dumped into the river.</p> <ul style="list-style-type: none"> We would suggest that this would be an ideal opportunity to remedy to some extent this problem. <ul style="list-style-type: none"> The new end points of these storm water drains should be designed with some type of trap or filter or some other system to prevent the unwanted material entering the river. This would have an enormous positive impact on the rivers water quality and would go a long way to mitigate the artificial widening of the river. <p>6 Page 28 / 47 <i>If at all possible, construction should occur during the dry season when risk of heavy rains is low.</i></p> <ul style="list-style-type: none"> If construction is not to be totally restricted to the dry season, what planning and mitigation measures will be in place should the area receive high rainfall and flooding as it has this past summer? The statement The control of water flow from upstream dams is of major concern, as <ul style="list-style-type: none"> Inanda Dam currently already has below minimum water releases which are already impacting on the river downstream of the dam. <ul style="list-style-type: none"> Lesser flows will impact the river further, and the long term damage that such reduced flows will do to the river needs to be weighed up with extreme caution. We would recommend a specialist report be carried out to determine potential impact of such suggested reduced flows before this decision is finalised. (also page 32, 35 & 37 /47) <p><i>No construction activities must be allowed within the normal 'non-flood' river channel and inner bank of the Umgeni River that could result in any disturbance thereof.</i></p> <p>We battle to understand this statement, as the entire channel is effected by floods and by widening the river, this area will surely have activity.</p> <p>7 Page 31 / 47</p>	<p>included under direct impacts</p> <ul style="list-style-type: none"> There are few mentions of impacts on the estuary such as changed flow regimes and silt deposition <p><i>Mitigation Measures</i></p> <ul style="list-style-type: none"> Currently litter, engine oil, factory effluent and sewage is dumped into the river via stormwater drains. Ideal opportunity to remedy to some extent this problem. <ul style="list-style-type: none"> The new end points of storm water drains should be designed with some type of trap or filter This would have positive impact on the rivers water quality and would go a long way to mitigate the artificial widening of the river. Construction should occur during the dry season when risk of heavy rains is low. If construction is not in the dry season, what planning and mitigation measures will be in place. "The control of water flow from upstream dams is of major concern: <ul style="list-style-type: none"> Inanda Dam already has below minimum water releases. <ul style="list-style-type: none"> Lesser flows will impact the river Recommend a specialist report to determine potential impact of reduced flows. <p>The entire channel is affected by floods and by widening the river, this area will surely have activity.</p>	<ul style="list-style-type: none"> The municipality is focused on addressing the problem at the source. This is done through the Pollution Control Department of the Municipality. The installation of litter traps at the stormwater outlets has not been incorporated at this stage. Litter traps have pro's and con's which need careful consideration. Refer to Table 2, GIBB Response 4 and 6 below. Refer to Table 2, GIBB Response 7 below. Refer to Table 2, GIBB Response 7 below. The relevant mitigation in the BAR has been amended to read "Advising relevant stakeholders responsible for the control of water flow from the upstream dams of the imminent construction phase." Noted. Refer to Table 2, GIBB Response 4 below.

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<p><i>Operational Phase</i> <i>Visual and aesthetic impacts</i></p> <ul style="list-style-type: none"> • The items listed below from the dBAR are not only visual and aesthetic impacts, but are also essential to the health of the river and should thus be recognised and listed as such. • Details as to how the tasks will be carried out and who the responsible authority will be should be included in the following: <ul style="list-style-type: none"> ○ Controlling of alien vegetation after the removal of grass. ○ Covering or partial covering of soil over the gabions to promote the establishment of plant cover, for which indigenous, endemic species should be used. ○ Planting of indigenous trees on the top of the embankment to enhance the landscape features. ○ Ensuring that the Umgeni Project design features are aesthetically well designed and implemented <ul style="list-style-type: none"> ▪ and benefit river health in a positive way ○ Planting of suitable indigenous trees may provide for a visual shielding of industrial sites and be considered to improve the visual appearance <ul style="list-style-type: none"> ▪ as well as contributing to positive river health <p>8 Page 32 / 47 (also page 32, 35 & 37 /47) Process, technology, layout or other alternatives <i>Impacts on topography and natural drainage:</i></p> <ul style="list-style-type: none"> • The modifications to the northern embankment of the Umgeni River will impact the local topography of a very small area. <ul style="list-style-type: none"> ○ It is not the size of the impacted area that is important, but the full extent of such impacts • We acknowledge that the project will widen the bottle neck, reduce upstream flood levels and allow for greater flow, reducing the risk of flooding to Umgeni Business Park. However we are still concerned that the potential impacts downstream have not been fully investigated. <ul style="list-style-type: none"> ○ What is the projection for the lower lying properties at the downstream end of the project - the Umgeni Bird Park area and the road between the Bird Park and the estuary? ○ Have calculations taken into effect the amount of water in the estuary during spring tide highs combined with flooding volumes the likes of which have occurred recently? 	<p><i>Visual and aesthetic impacts</i></p> <ul style="list-style-type: none"> • The items listed from the dBAR are not only visual and aesthetic impacts, but are also essential to the health of the river • Details as to how the tasks will be carried out and who the responsible authority will be should be included in the following: <ul style="list-style-type: none"> ○ Controlling of alien vegetation ○ Covering or partial covering of soil over the gabions promoting plant cover, ○ Planting of indigenous trees for visual shielding and for positive river health ○ Design features are aesthetically well designed and benefit river health. <p><i>Impacts on topography and natural drainage</i></p> <ul style="list-style-type: none"> • The modifications to the northern embankment will impact the local topography of a small area. <ul style="list-style-type: none"> ○ It is not the size of the area, but the full extent of such impacts • We acknowledge that the project will widen the bottle neck, reducing the risk of flooding to Umgeni Business Park. <ul style="list-style-type: none"> ○ What is the projection for the lower lying properties at the downstream end of the project - the Umgeni Bird Park area and the road between the Bird Park and the estuary? ○ Have calculations taken into effect the amount of water in the estuary during spring tide highs combined with flooding volumes? 	<ul style="list-style-type: none"> • Noted. • Noted. If the Municipality receives authorisation for this project, suitable contractors and an ECO will be appointed to implement and oversee/monitor the various aspects of the project including rehabilitation. Also refer to Table 2, GIBB Response 9 below. • Noted • Refer to Table 2, GIBB Response 4 below. • Yes.

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<ul style="list-style-type: none"> • the eThekwini Rapid Transport Network Plan and • any other proposed plans for the area should also be included in such studies <ul style="list-style-type: none"> • Although the widening and canalising of the river is intended to lessen flooding impacts on surrounding areas, any such interference with a river can have dangerous impacts whether the entire river bed and banks are concreted or not. • It is acknowledged that canalisation speeds up stream flow and creates not only a higher peak but also an earlier one with a steeper curve which results in higher speeds of water moving in the flooded areas, hence higher potential of destruction as well as sever impacts on banks and downstream areas. <p>It is vital that such a new study should be conducted with reference to the eThekwini climate change studies and policies.</p> <p>11 Page 34 / 47 See above comments where applicable</p> <p>12 Appendix D1 Bio Diversity</p> <ul style="list-style-type: none"> • The report is dated August 2005 and is thus over 7 years old, and we feel that this should be redone and updated, particularly as it is stated that the report is only a preliminary assessment. • Concerns we raised above regarding the estuary are highlighted in the statements that <ul style="list-style-type: none"> ○ if correct mitigation measures are not executed, can nonetheless extend into the estuary and thus effect estuarine fish populations. ○ The Mgeni estuary system is functional as a nursery area for marine spawned fish species. ○ Several rare and endangered fish species, including sleepy goby <i>Glossogobius biocellatus</i> and checked goby <i>Redigobius dewaali</i>, are also expected to occur in the system <ul style="list-style-type: none"> ▪ This needs farther investigation <p>Environmental Management Plan</p> <p>We feel that the EMP is not site specific, and that more details relevant to the site need inclusion In addition, more detailed specifics need inclusion in the EMP for:</p> <ul style="list-style-type: none"> • Environmental Awareness : <ul style="list-style-type: none"> ○ Frequency of follow up courses, ○ due to the close proximity of the river emphasise aquatic ecosystem importance • Please specify that the following should be as far from the river as possible : 	<ul style="list-style-type: none"> • Any such interference with a river can have dangerous impacts whether the entire river bed and banks are concreted or not. • It is acknowledged that canalisation speeds up stream flow, hence higher potential of destruction as well as sever impacts on banks and downstream areas. <p><i>Dated Specialist Studies</i></p> <ul style="list-style-type: none"> • The 2005 Biodiversity Report should be redone and updated. • Concerns we raised regarding statements made about the estuary – which require further investigation. <p><i>Environmental Management Plan</i></p> <ul style="list-style-type: none"> • More detailed specifics for the EMP: <ul style="list-style-type: none"> ○ Environmental Awareness ○ Frequency of follow up courses, ○ Emphasise aquatic ecosystem importance 	<ul style="list-style-type: none"> • Noted. Refer to Table 2, GIBB Response 4 below. • In the case of this project the river is widened and the canalisation means that formal embankment stabilisation measures will be implemented along the northern embankment to 'formalise' the widening. • Refer to Table 2, GIBB Response 3 below. • Refer to Table 2, GIBB Response 3 and 4 below. • Noted. The EMP was updated based on various comments received from I&APs to include more specifics. This includes EMP Section 6.3.7 on 'Environmental Training and Awareness' which now makes specific reference to aquatic ecosystems.

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<ul style="list-style-type: none"> ○ All storage areas, latrines, vehicle cleaning areas, waste disposal areas, contractors camp, soil stockpiles etc to be as far from the river as possible <p>The following need more detailed explanations and plans. Thus please include details of:</p> <ul style="list-style-type: none"> • The storm water drainage system • Type of suitable facilities for bathing, washing clothes or vehicles • Type of suitable sanitation – if portable toilets, please include details as to their emptying • Type of facilities for solid waste collection – to include that they are fenced • Facilities for waste water management • Stabilising of cleared areas • Planned manner of vegetation clearance • Stabilisation of areas cleared of vegetation • Appropriate procedures should any hazardous substances be discovered • Protection methods for the prevention of wind and water erosion of soil stock piles • Suggested indigenous grass species for planting on soil stock 	<ul style="list-style-type: none"> • All storage areas, latrines, vehicle cleaning areas, waste disposal areas, contractors camp, soil stockpiles etc to be as far from the river as possible. <p>The following need more detailed explanations and plans:</p> <ul style="list-style-type: none"> • The storm water drainage system • Type of suitable facilities for bathing, washing clothes or vehicles • Type of suitable sanitation – if portable toilets, please include details as to their emptying • Type of facilities for solid waste collection – to include that they are fenced • Facilities for waste water management • Stabilising of cleared areas • Planned manner of vegetation clearance • Stabilisation of areas cleared of vegetation • Appropriate procedures should any hazardous substances be discovered • Methods for the prevention of wind and water erosion of soil stock piles • Suggested indigenous grass species 	<ul style="list-style-type: none"> • Noted. The EMP Section 6.4.1 was updated to include: “The working area including all storage areas, latrines, vehicle cleaning areas, waste disposal areas, contractors camp, soil stockpiles etc. should be located well away from normal flow regime channel; and where reasonably feasible in an area above the new embankment stabilisation works.” • Refer to Table 2, GIBB Response 7 below. • Site staff will not be permitted to use open water bodies for washing activities. All washing of equipment shall be undertaken in the workshop or maintenance areas, which shall be equipped with suitable impermeable floor and sump/oil trap. (EMP, Section 6.6.2) • A service provider will be appointed to remove sewage from the chemical toilets. Each will have their own method of emptying portable toilets. Refer to Section 6.6.9 of the EMP which includes specifics on Sanitation. • Noted and updated. Refer to Section 6.4.4 of the EMP. • Bunded areas are required for storage of hazardous substances. • Refer to Table 2, GIBB Response 7 below. • Refer to EMP Section 6.5, Site Clearance. • Refer to Table 2, GIBB Response 7 below. • The EMP states that the contractor should provide for and arrange for the safe removal and legal disposal of any and all hazardous substances from the area to be rehabilitated. Hazardous materials uncovered shall be adequately fenced in and secured to prevent any access of public members and unauthorised people (Refer to EMP Section 6.4.3 and 6.5.2) • Refer to EMP Section 6.5.3 which details soil stockpiling. • Noted.

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<p>piles</p> <ul style="list-style-type: none"> • Drainage measures for temporary construction roads • How to ensure that there is no contamination of the soil, vegetation or surface water in workshop and other plant or emergency maintenance facilities. • Treatment of any rainwater or wastewater accumulated in bunded areas <ul style="list-style-type: none"> ○ Who will test, monitor and ensure compliance? • Records to be kept of disposal of Redundant drums or containers in which hazardous substances were kept • Prevention methods for runoff loaded with sediment and other suspended materials from the site/working areas (including stockpiles) from discharging to adjacent watercourses and/or water bodies • The manner to contain, store and use potential pollutants to avoid ground and surface water contamination. <ul style="list-style-type: none"> ○ Details needed • The manner that wash areas shall be placed and constructed so as to ensure that the surrounding areas are not polluted • Treated wastewater to be discharged to any canal, stream or the other water resource must be adequately monitored for compliance to appropriate standards on a daily basis. <ul style="list-style-type: none"> ○ Who will monitor ○ who will they report to, ○ how will monitoring be undertaken ○ where will monitoring points be situated • Measures to effectively contain and treat any storm water contaminated with silt, soil or any other substance • Areas affected by construction related activities and/or susceptible to erosion must be monitored regularly for evidence of erosion 	<p>for planting on soil stock piles</p> <ul style="list-style-type: none"> • Drainage measures for temporary construction roads • How to ensure no contamination of the soil, vegetation or surface water in workshop and other maintenance facilities. • Treatment of rainwater or wastewater accumulated in bunded areas <ul style="list-style-type: none"> ○ Who will test, monitor and ensure compliance? • Records of redundant drums/containers disposal to be kept • Prevention methods for runoff from the site discharging to water bodies • The manner to contain, store and use potential pollutants to avoid ground and surface water contamination. <ul style="list-style-type: none"> ○ Details needed • The manner that wash areas shall be placed and constructed • Treated wastewater to be discharged to water resource must be monitored. <ul style="list-style-type: none"> ○ Who will monitor ○ who will they report to, ○ how will monitoring be undertaken ○ where will monitoring points be situated • Measures to contain and treat any contaminated storm water. • Areas affected by construction, susceptible to erosion must be 	<ul style="list-style-type: none"> • Access to the construction site and works area shall utilise existing roads and tracks where possible. The Contractor is to maintain the haul roads. Maintenance includes adequate drainage and side drains, dust control and restriction of edge use as per the Environmental Specifications (Refer to EMP Section 6.5.4) • Refer to EMP Section 6.6.2 which details Workshop, Equipment Maintenance and Storage. • This will be monitored by the ECO. • Noted. Refer to EMP Section 6.6.7. • Refer to Table 2, GIBB Response 7 below. • Noted. Refer to EMP Section 6.6.7 which includes General Materials Handling, Use and Storage. (this has been updated) • Noted. Refer to EMP Section 6.6.10 (g) where this has been indicated under Wastewater and Contaminated Water Management • Refer to Table 2, GIBB Response 6 below. • Refer to Table 2, GIBB Response 4 and 7 below. • Refer to Table 2, GIBB Response 4 and 7 below.

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<ul style="list-style-type: none"> ○ Who will monitor ○ who will they report to, ○ how will monitoring be undertaken <ul style="list-style-type: none"> • Where erosion does occur on any completed work/working areas, the Contractor shall reinstate such areas and areas damaged by the erosion <ul style="list-style-type: none"> ○ Who will monitor and enforce this post construction. Upstream of the canalisation site is the new high bridge over the uMngeni River whose construction has left the river banks in a badly eroded state infested with invasive. What measures will prevent a repeat of this? • Proof of legal supply for all rock and sand to be supplied • No bitumen spraying in windy conditions • Scour valves: Details of Erosion protection measures to be installed and when such would be required • Details of who will check drip trays beneath non-submersible pumps, frequency of inspections and remedial action to be taken <p>Rehabilitation:</p> <ul style="list-style-type: none"> • Please supply a detailed rehabilitation program to include a list of recommended locally indigenous grasses, shrubs and trees for planting • Who will be responsible for the checking and eradicating of young invasive/alien species post construction • Grass seeding – who will check that it is growing satisfactorily • Please include locally indigenous trees in the replanting program <p>Method statements</p> <ul style="list-style-type: none"> • As the contractor is an expert in his field (construction), so the EAP is an expert in environmental matters and we feel that the EAP should therefore include in the EMP appendices the 	<p>monitored regularly</p> <ul style="list-style-type: none"> ○ Who will monitor ○ who will they report to, ○ how will monitoring be undertaken <ul style="list-style-type: none"> • Where erosion does occur on any completed work/working areas, the Contractor shall reinstate such areas and areas damaged by the erosion <ul style="list-style-type: none"> ○ Who will monitor and enforce this post construction. Upstream of the canalisation site is the new high bridge whose construction left the river banks in a badly eroded state ○ What measures will prevent a repeat of this? • Proof of legal supply for all rock and sand to be supplied • No bitumen spraying in windy conditions • Scour valves: Details of Erosion protection measures to be installed and when such would be required • Details of who will check drip trays beneath non-submersible pumps, frequency of inspections and remedial action to be taken <p><i>Rehabilitation</i></p> <ul style="list-style-type: none"> • Detailed rehabilitation program to include a list of recommended locally indigenous grasses, shrubs and trees for planting • Who will be responsible for the checking and eradicating of young invasive/alien species post construction • Grass seeding – who will check that it is growing satisfactorily • Please include locally indigenous trees in the replanting program <p><i>Method Statements</i></p> <ul style="list-style-type: none"> • EAP should include in the EMP appendices the following programmes: 	<ul style="list-style-type: none"> • Refer to Table 2, GIBB Response 4 and 7 below. • Noted. • Noted. • Refer to EMP Section 6.5.17. • Refer to EMP Section 6.6.7. • Refer to EMP Section 6.8. • There is an existing programme known as the River Rangers which employs local people to maintain the reno- mattresses and remove any alien invasive species. Maintenance on the mattresses will also be included in the Engineering works to maintain the project area one year after construction. • The ECO will be responsible. • Refer to EMP Section 6.6.17 and 6.8. • The ECO will assist in the identification of alien plant species to be removed and will advise on the methods of eradication.

No	Issue Raised by	Correspondence Date	Issue Text	Key Environmental Issues (Summarised)	Response
			<p>following programmes:</p> <ul style="list-style-type: none"> ○ Alien invasive Plant control – identification, different treatment methods, followup program etc ○ Emergency Procedures with respect to water contamination including emergency contact numbers (to include eThekweni water authorities and the Umgeni Estuary Conservancy) <ul style="list-style-type: none"> • We would recommend that the EMP includes detailed recommendations and conditions for inclusion in the method statements for: <ul style="list-style-type: none"> • Alien Plant Clearing' • Excavation • Contaminated water • Earthwork, Erosion Control and Storm water management • Rehabilitation <p>Thank you for the opportunity to comment and we look forward to receiving further information."</p>	<ul style="list-style-type: none"> ○ Alien invasive Plant control – identification, different treatment methods, followup program etc ○ Emergency Procedures with respect to water contamination including emergency contact numbers <ul style="list-style-type: none"> • We would recommend that the EMP includes detailed recommendations and conditions for inclusion in the method statements for: <ul style="list-style-type: none"> • Alien Plant Clearing' • Excavation • Contaminated water • Earthwork, Erosion Control and Storm water management • Rehabilitation 	<p>Methods may involve hand removal, hoeing by hand, or the application of herbicides. Refer to EMP Section 6.6.18 which includes specifics on Alien Invasive Plant Control.</p> <ul style="list-style-type: none"> • Section EMP 6.6.21 details specifics on Emergency Procedures, it is the responsibility of the contractor to assemble and clearly list the relevant emergency telephone contact numbers for staff and brief staff on the required procedures. The contractor shall submit Method Statements covering the procedures and response plan for the main activities, which could generate emergency situations • Noted. Refer to Annexure A of the EMP. Detailed recommendations and conditions for inclusion are detailed in the mitigation measures of the EMP and the contractor will need to take cognizance of these prior to formulating method statements for the construction activities.

Table 2: GIBB Response to Common I&AP Issues

GIBB Response No	Common Issue (i.e. Issue raised by more than one I&AP)	GIBB Response
GIBB Response No 1	Concerns that project received environmental authorisation in 2006 but it then lapsed. Since the authorisation lapsed, it leads I&APs to question the need for the project.	<p>The Umgeni Project is motivated by the need to continue with the flood attenuation project that was initiated as part of eThekweni's development plans for the Umgeni Business Park and surrounding area.</p> <p>The river channel is narrow in the vicinity of Connaught Bridge at the inland side of the estuary, and constrained as a result of historic reclamation of the flood plain and encroachment of developments into the river channel. This causes a 'bottleneck' which backs stormwater up during extreme flood event which in turn poses an unacceptable high flooding risk to portions of the Umgeni Business Park. Refer to the aerial photographs of the 1987 flood in Appendix B of the BAR as an example of such a flood.</p> <p>The widening of a section of the lower Umgeni River provides for additional flood protection for the properties and infrastructure already established within the floodplains of the river. The proposed project is designed to effectively 'pull back' the floodline for extreme flood events. Although flooding of the Springfield area may still occur during extreme storm events, the area affected by the floods will be much reduced. In addition, the risk of flood damage in areas that will still be affected will be significantly reduced since the flood velocities would be much attenuated in such areas. The proposed flood protection measures may become even more critical should predictions of more frequent extreme flood events as a result of climate change hold true.</p> <p>Without further flood attenuation, properties adjacent to the proposed Umgeni Project site and upstream at the Umgeni Business Park will remain prone to unacceptable high and frequent flood risk, which could potentially include loss of life.</p> <p>Therefore, essentially the proposed project concerns the completion of a widening project that had started in the 1980's. The first phase consisted of the canalisation of the southern embankment. A positive Record of Decision for the canalisation of the northern embankment was issued on the 4th April 2006 (EIA/6008) under the Environmental Conservation Act 73 of 1989. The proponent however failed to proceed with construction and to implement the development within the validity period for construction commencement (18 months) as stated in the RoD and the validity period of the RoD therefore lapsed. The canalisation of the northern embankment was delayed for various reasons, mainly as a result of land acquisition challenges. eThekweni has now acquired all the land, including through expropriation; and all issues regarding lease agreements have been resolved. It is for this reason that this Basic Assessment process is now undertaken in terms of the latest EIA Regulations.</p> <p><u>NOTE:</u> The description of the motivation in the Basic Assessment Report (BAR) Section B 11.2 was amended to provide more clarity on the motivation</p>
GIBB Response No 2	Cumulative effect on the Umgeni River of current and future developments in the vicinity.	<p>The flood risk of the Umgeni Business Park will be significantly lowered with the proposed widening/canalisation of the Umgeni river. As explained in GIBB Response 1, the project effectively addresses the 'bottleneck' of the river channel at the inland side of the estuary – therefore essentially at the furthest point downstream to the Umgeni Business Park. As such the proposed flood attenuation for the Umgeni Business Park will be the most effective and benefit the largest surrounding area.</p> <p>Additional more localised flood protection measures may need to be incorporated by developers upstream, dependent on their requirements. In doing so developers could potentially benefit from the floodline adjustment for extreme flood events that will result on completion of the proposed project.</p> <p>Note that flood attenuation more upstream, would not benefit the portions of the Umgeni Business Park closest to the estuary (in fact it could even marginally increase the flood risk).</p> <p>It is important to note that since the proposed development affects the upper portion of the river embankment higher up from the 'normal' flow channel of the river, it will only affect river flow during extreme flood events. The river channel for normal flow and less severe floods will not at all be affected by the proposed project.</p> <p>The query on whether other developers are aware of the proposed developments should be raised with the relevant Environmental Assessment Practitioners (EAPs) for projects in the vicinity of the lower Umgeni River, as the municipality cannot comment on the applicant's view of the flood risk and the process that they have followed.</p> <p>However, in response to the I&APs concern, GIBB has made an attempt to identify other projects within close proximity (2km radius) of the site as indicated in the summary below. GIBB has registered the respective EAPs on the I&AP register and as such they will be included in future correspondence to I&APs.</p>

GIBB Response No	Common Issue (i.e. Issue raised by more than one I&AP)	GIBB Response												
		<p style="text-align: center;"><u>Future Developments in the vicinity:</u></p> <table border="1" data-bbox="1151 464 2783 1318"> <thead> <tr> <th>Project Name</th> <th>Applicant</th> <th>EAP (details)</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="1151 464 1308 747">Umgeni Business Park Phase 2 development EIA</td> <td data-bbox="1308 464 1427 747">The Passenger Rail Agency of South Africa (PRASA)</td> <td data-bbox="1427 464 1673 747">Guy Nicolson Consulting cc Tel: 031 764 2515 Fax: 031 764 2515 Mobile: 082 772 9941 Email: guyn@saol.com</td> <td data-bbox="1673 464 2783 747">Umgeni Business Park Phase 2 development located on the Remainder of Erf 251 Springfield, which is situated in the north central area of eThekweni Municipality, of the province of KwaZulu-Natal. The Umgeni Business Park Phase 2 development EIA is located adjacent to the south bank of the Umgeni River within a dense urban environment of the north/central area of the city of Durban. The applicant for this project was sent details of the Umgeni River Widening Project on eThekweni Municipality is fully aware of this project and as such is registered on the I&AP database.</td> </tr> <tr> <td data-bbox="1151 747 1308 1318">Integrated Rapid Public Transport Network (IRPTN): Corridor 1</td> <td data-bbox="1308 747 1427 1318">eThekweni Traffic Authority (ETA)</td> <td data-bbox="1427 747 1673 1318">Sivest Tel: 031 581 1500 Fax: 031 566 2371 Email: michellen@sivest.co.za</td> <td data-bbox="1673 747 2783 1318">Phase 1 network will accommodate approximately 25% of the Municipality's total trunk public transport demand on road based IRPTN services with a further 40% being accommodated by the trunk rail network as part of Passenger Rail Association of South Africa (PRASA) implementation plans. This approach ensures recognisable benefit to the maximum number of users in the shortest period of time for the given level of investment required. Of the 190km of road based trunk corridors, 60km are planned for the Phase 1 implementation of the network by the first quarter of the 2015 financial year. Phase 1 will comprise of 3 Bus Rapid Transit (BRT) routes and 1 rail corridor. The 3 BRT routes are: C1 Bridge City to Durban CBD, C3 Bridge City to Pinetown, C9 Bridge City to Umhlanga Corridor and the rail corridor: C2: Bridge City and KwaMashu via Berea Road to Umlazi and Isipingo. The Draft Scoping Report for the Integrated Rapid Public Transport Network (irptn): Corridor 1 Project, January 2013 indicates that the proposed development may entail a new bridge to be constructed over the Umgeni River near Alpine Road which will accommodate two lanes in each direction, it also proposed the construction of a new bridge over the Umgeni River immediately seaward of the Connaught Bridge and that ETA is considering the Connaught Bridge which will be expanded over the Umgeni River. The Draft Scoping Report therefore notes that there may be environmental concerns due to construction across the Umgeni River, which will require concrete columns to be cast in and within the vicinity of the Umgeni River for a standard bridge construction. It also mentions that advantages of the IRPTN proposed activities improves the current Sea Cow Lake horizontal and vertical alignment. 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GIBB Response No 3	Dated Specialist Reports	<p>The GIBB team had observed during a site inspection that the affected site had been virtually unchanged since the 2005 Scoping Report (Arcus GIBB, Environmental Scoping for the Proposed Widening of the Lower Umgeni River. Final Scoping Report. Project No: J25130A, EIA No: EIA/ 6008, December 2005) and associated 2006 EMP were prepared. In a nutshell, while the site had clearly remained disturbed it retained some valuable habitat resources.</p> <p>Nevertheless, based on the request received from I&APs, GIBB appointed Ms Shamilla Pillay, a biodiversity specialist from the CSIR who had compiled the 2005 Biodiversity Report, to undertake a site inspection and comment on the validity and update of the 2005 Biodiversity Report. Note that the 2005 Biodiversity Report had informed and was attached to the 2005 Scoping Report. Ms Pillay presented her biodiversity assessment in a recent report titled: <i>Proposed Flood Control Embankments for the Lower Mgeni River at Springfield Park. Preliminary Biodiversity Assessment. Revised CSIR Report. March 2013</i> (Refer to BAR Appendix B.1)</p> <p>The scope and approach to the study is explained as follows: "The CSIR conducted a preliminary biodiversity study of the area affected by the proposed widening and stabilisation of the Mgeni River bank in the region of Springfield Park in August 2005. The terms of that study were chiefly to undertake a botanical survey and to note fauna observed during the field survey. Further assessment of terrestrial and aquatic fauna potentially present in the area was to be based on current knowledge i.e. without any additional field surveys. As the proposed development was not implemented at the time the permission granted by the EIA has since expired. The CSIR was contacted by Gibb (Pty) Ltd to re-survey the area to determine if there were significant changes since 2005 and to make any further recommendations as necessary. The 2005 report should be read prior to the current re-assessment as the detailed information on the survey, impact assessment and mitigation measures are indicted in this previous report. The findings of the re-assessment of the proposed development site are detailed in the 2013 report. In addition, the recently completed Resource Directed Measures (RDM) for the estuary has been</p>												

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		<p>reviewed in order to determine if there could be any new information that may present fatal flaws to the proposed development.”</p> <p>The CSIR draws the following conclusions in their 2013 report:</p> <p>“No significant changes to the previous survey within the terrestrial environment of the development area were noted. Given this, the previous impact assessment together with all recommendations and mitigation measures hold true if the bank widening and stabilisation is to be implemented as proposed. The only further recommendation emanating from the re-survey was the possible harvesting of truncheons from the <i>F. sur</i> for replanting in appropriate areas above the banks. If there are any confirmed sightings of the dwarf chameleon within the development area then capture and relocation of these animals to adjacent areas is recommended.</p> <p>There is also an opportunity for the development to contribute to improvement of the estuarine condition as recommended by the RDM study. Some interventions to consider include:-</p> <ul style="list-style-type: none"> • Removal of alien species on the banks and in-stream islands adjacent to the north bank • Replace aliens with swamp forest/riparian species on the in-stream islands and at the landward edge of the lower banks (species: <i>Ficus sur</i>, <i>Rauvolfia caffra</i>, <i>Voacanga thouarsii</i>, <i>Syzygium cordatum</i>, <i>Barringtonia racemosa</i>, <i>Hibiscus tiliaceus</i>)” <p>Refer to the CSIR 2005 Biodiversity Report as well as the CSIR 2013 Biodiversity Re-assessment Report in Appendix D of the Final BAR.</p>
GIBB Response No 4	Impact on the Flow Regime and Water Quality of the Groundwater, River and Estuarine Health	<p>While the CSIR has reviewed the recently completed Resource Directed Measures (RDM) for the estuary (see GIBB Response No 3 above), no detailed river or estuarine health study was commissioned as part of the Basic Assessment. This is since the impact of the proposed project on the ‘normal’ flow regime and river and estuarine health (and associated habitats – including mangroves) will be <u>insignificant</u>; provided mitigation measures specified in the EMP for erosion and sedimentation, stormwater management and hazardous substances management are effectively implemented and adhered to.</p> <p>The proposed development affects the upper portion of the river embankment much higher up from the ‘normal’ flow regime channel of the river. No in-stream activities will take place in the ‘normal’ flow regime channel and the normal flow regime will not be altered. Also, the water table will only reach the proposed affected area during a major flood.</p> <p>Operational Phase</p> <p>The proposed embankment stabilisation in the form of a vegetated reno-matress along the lower portion of the ‘new’ canalised embankment, the gabion basket structure running along the upper edge of this reno-matress and the vegetation of the upper portion of the ‘new’ embankment will provide effective erosion protection during the operational phase of the project. Effectively, through the widening a small portion of land which has historically been reclaimed from the river course is returned to the river channel.</p> <p>No groundwater contamination risk is associated with the operational phase of the project.</p> <p>Construction Phase</p> <p>During the construction phase only relatively small quantities of hazardous substances will be used or handled on site, and therefore the potential for groundwater and surface water contamination is very low. The project will not result in any significant increase in E. Coli, nitrogen or phosphates within the river or estuary. This is apart from potential accidental spillage from porter loos and during the decommissioning and replacement of sewer lines (if any).</p> <p>Due to the embankment excavation and cut activities a potential for erosion of exposed surfaces and handling of stockpiles may potentially result in increased turbidity of the water environments.</p> <p>Key mitigation measures that would protect the water quality, riverine and estuarine health effectively are:</p> <ul style="list-style-type: none"> • Undertake construction during the dry season when risk of heavy rains is low (within reason) (EMP (Appendix F) Section 6.3.1 – as amended) • Retain the lower unaffected portion of the river embankment (close to the ‘normal’ flow channel) as No-go area (EMP Section 6.4.2 – as amended) • Appoint a service provider to remove sewage from the chemical toilets on a regular basis; and provide and ensure for this sewage / sewage sludge to be disposed of at a municipal sewage treatment plant (EMP Section 6.6.9) • Removal of the soil/sand berm that will result between the cut for the ‘new’ embankment structure and the river only after construction of the embankment stabilisation works has been completed, so that this berm can form a protective flood barrier for erosion and siltation protection of the work face. For the same reason start construction down-stream and move upstream as well as retain the river side face of the berm undisturbed and vegetated so that the flood protection by the berm is maximised. (EMP Section 6.6.11)

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		<ul style="list-style-type: none"> • Construction site stormwater management and sedimentation control measures (EMP Section 6.6.11) • Appropriate management of waste and hazardous substances, e.g. sewage, fuel, lubricating oil (EMP Section 6.6.7 and Section 6.6.8) • Cement/Concrete Batching and Management, including <i>inter alia</i> that contaminated stormwater and wastewater runoff from the batching area and aggregate stockpiles shall not be permitted to enter the stormwater system or river but shall be led to a pit where the water can soak away (EMP Section 6.7.2) • Water Contamination and Pollution (EMP Section 6.7.12) • Pipeline Cleaning (EMP Section 6.7.15) <p>Note, that during the 2005 Scoping Study, Ezemvelo-KZN Wildlife requested that the mentioned soil/sand berm be removed after the new embankment structure has been constructed to prevent it from being washed into the estuary during a major flood event. (EMP Section 6.6.11)</p> <p>Refer to GIBB Response 3 on the biodiversity investigations that were undertaken. As explained in the CSIR 2013 Biodiversity Re-assessment Report, the recently completed Resource Directed Measures (RDM) for the estuary has been reviewed by the Biodiversity specialist in order to determine if there could be any new information that may present fatal flaws to the proposed development.</p>
GIBB Response No 5	Impact on the Swamp Fig (<i>ficus trichopoda</i>)	<p>GIBB received a photograph of the Swamp Fig (<i>ficus trichopoda</i>), which was located in close proximity to the site. The photograph was subsequently sent to the Ms Shamilla Pillay, Biodiversity Specialist, who during the site visit of the area found the specific specimen and confirmed it as <i>ficus trichopoda</i>. However, she noted that the concern from a stakeholder is not relevant to this project as this specimen was located on the river embankment next to NCP Alcohols which is just outside the development footprint. Ms Pillay advised that the tree was probably planted as the natural distribution for this species is along the north coast.</p> <p>Note that officials from the Department of Agriculture, Forestry and Fisheries (DAFF) had undertaken a site inspection and sent a letter (Refer to Item No 17 above.)</p>
GIBB Response No 6	Water Monitoring	<p>With reference to GIBB Response 4, GIBB considers it unlikely that in-stream water quality analysis (pH, Electrical conductivity (mS/M), suspended solids (mg/l), E-coli) would be appropriate and effective to measure any potential impact of this project on the in-stream water quality; and would therefore be unnecessarily onerous. Also, since it is unlikely that any significant groundwater contamination would result from the proposed project, groundwater monitoring is considered to be unnecessary.</p> <p>Even should small quantities of hazardous substances associated with the construction activities accidentally spill into the environment, it is highly unlikely that such events would be measurable through in-stream sampling and analysis, considering the background variables and variability of a large river that passes through urban areas upstream of the proposed development. GIBB proposes that such events should rather be monitored and controlled through regular site inspections by the contractor, Resident Engineer and Environmental Control Officer; and any issues addressed and spills cleaned up immediately.</p> <p>Through the appropriate erosion and sediment control measures, which are stipulated in the EMP, the impact on turbidity of the river and estuary during construction would be effectively controlled. This is with the exception of a major flood, in which case such mitigation might prove ineffective. However, during a major flood the background turbidity would be typically high. Since it is anticipated that the construction activities will take place outside the normal flow regime of the river, thus 'in the dry', spillage and erosion channels towards the river will be clearly evident. Therefore, again regular site inspections and observations of the site and surrounding area and ongoing control of erosion and sediment control measure would be effective.</p> <p>Due to the variability of the turbidity in the river, turbidity measurements would also unlikely provide meaningful results. Also turbidity impact may be effectively identifiable through visual observation. Nevertheless, it may be prudent to measure the turbidity upstream and downstream of the proposed site on a two weekly basis and keep record of such measurements.</p> <p>Note: eThekweni advises that a Resident Engineer, technician and ECO will be on site to monitor all activities. The municipality will respond to any complaints received from the public with regards to the river water quality associated with the proposed project. eThekweni proposes to implement a river water quality monitoring programme for the duration of the construction period and will discuss and confirm such a programme with DWA (EMP Section 6.6.17 – as amended).</p>
GIBB Response No 7	Stormwater Management and Soil and Stockpiling Erosion Control to prevent siltation/sedimentation	<p>Erosion is an expected event in all rivers as it is a natural process. By nature the lower Umgeni River bed is continually altering through erosion and sedimentation which causes sandbanks to build up and eroded. The rate at which such changes occur is dependent on <i>inter alia</i> the water flow rate (therefor seasonal and strongly influenced by storm events) and stabilisation of the embankments (e.g. through vegetation cover). Apart from the normal</p>

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		<p>flow regime channel and more recently formed sand banks, most of the channel of the lower Umgeni River is vegetated which provides valuable protection of the water quality of the estuary. However, through building of dams, ingress of developments into the flood plain and canalisation the Umgeni River is no longer in a natural state, which has a bearing on the erosion and sedimentation processes.</p> <p>Nevertheless, effective stormwater management and soil erosion control is necessary at all phases of the project and is vital in terms of protecting the site as well as ensuring that environmental degradation is prevented / mitigated.</p> <p>Operational Phase</p> <p>The project design provides for effective flood protection of the Umgeni Business Park during extreme storm events. Therefore the entire project is effectively a storm water management project and has been designed accordingly in terms of widening of the river channel and embankment slope and stabilisation works. By design the proposed embankment will include soil erosion control measures in the form of a reno-mattress, gabion structure and vegetation. Once vegetation has been established erosion will be effectively controlled (as is evident on the southern embankment that has been canalised before).</p> <p>Construction Phase</p> <p>Due to the embankment areas that will be cleared of vegetation and exposure of soils/sand/debri during excavations, as well as stockpiling of materials and soil/sand stockpiles, stormwater and erosion control is important. Key stormwater management and erosion control mitigation included in the EMP are as follows:</p> <p><i>Construction during dry season (within reason)</i></p> <p>While it may not be possible to complete the project within a dry season, it is nevertheless recommended that within reason most of the construction takes place during the dry season when risk of heavy rains is low, as this would reduce the stormwater and associated erosion and flood risk. (EMP Section 6.3.1 on 'Environmental Principles for the Construction Works')</p> <p><i>No-go areas</i></p> <p>An important mitigation measure is to confine the area of impact to a reasonable minimum and to retain areas outside of this impact area as 'No-go' areas. EMP Section 6.4.2 covers the 'Working Areas and No-go Areas' and associated mitigation measures. Areas specified as No-go Areas includes <i>inter alia</i> the following:</p> <ul style="list-style-type: none"> • D'MOSS areas outside the working areas • Watercourses outside the working (including the estuary and lower portion of the embankment near the normal flow regime channel) • The public park opposite the Umgeni Bird Park (and particularly the areas with indigenous trees on the fringe of the park) <p><i>Minimise clearing</i></p> <p>EMP Section 6.5.1 on 'Site Clearing' cover <i>inter alia</i>:</p> <ul style="list-style-type: none"> • No-go areas to be designated and demarcated before any site clearance is allowed to commence • No areas outside the site boundaries may be cleared of grass, scrub or tree vegetation unless formal written authorisation to do so has been obtained from eThekweni Development Planning and Management Unit. The RE and ECO must satisfy themselves that such removal is unavoidable or absolutely essential before applying for authorisation. • Ensure that the clearance of vegetation is restricted to that required to facilitate the execution of the works. Vegetation clearance shall occur in a planned manner, and cleared areas shall be stabilised as soon as possible. <p><i>Retain the existing outer embankment to serve as a flood protection measure</i></p> <p>GIBB proposes that the existing outer embankment is retained in its current form and remain vegetated to provide flood and erosion protection of the workface of the new embankment as it is cut (wedged out) and stabilised 'higher up' / 'behind it'. While it is understood that the outer embankment needs to be excavated at some point to provide access to the workface and eventually to complete the embankment works, the existing embankment would provide</p>

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		<p>valuable protection for most of the construction phase. (EMP Section 6.5.1 and 6.6.11.)</p> <p><i>Start with the embankment workface downstream and proceed upstream</i></p> <p>Contrary to the DWA requirements, in according to the recommendation from the eThekweni engineers, construction will need to start downstream and proceed upstream. This is to allow for the site along the workface to be self-draining. GIBB agrees with this approach as it will also allow for the upstream outer embankment to remain intact and as such 'shield' the site from the force of floodwater coming down the river should a flood event occur. Also, access to the workface at the downstream side of the proposed site is easier due to the adjacent public road. The eThekweni Engineers explain that the gabion mattresses will be initially laid and then the major earthworks will be carried out. Work will also be done progressively in sections as the workface of the embankment stabilisation works moves upstream. No construction activities will be allowed within the normal 'non-flood' river channel and inner bank of the Umgeni River that could result in any disturbance thereof.</p> <p><i>Construction site soil erosion stabilisation measures</i></p> <p>EMP Section 6.4.4 requires the contractor to implement a suitable stormwater drainage system and containment to prevent soil and silt erosion, protect storage areas, to prevent uncontrolled stagnant ponds forming and avoid siltation of water resources</p> <p>EMP Section 6.6.11 includes stabilisation measures for construction areas where the risk of erosion is evident, e.g.:</p> <ul style="list-style-type: none"> • Stabilisation measures are to be applied on any areas where the risk of erosion is evident (e.g. at water supply points, and edges of slopes) • Special measures may be necessary to stabilise the areas and prevent erosion • These Slope/bank stabilisation measures may include e.g. confining construction activities, using cut-off berms, applying soil stabilisers (e.g. geofabric, mulch, sand bags), anti-erosion berms. <p><i>Soil Stockpiling</i></p> <p>EMP Section 6.5.3 provides for topsoil stockpiles to exceed 2 m in height and will not be located on steep slopes or near watercourses. Soil stockpiles (topsoil and fill) will be located:</p> <ul style="list-style-type: none"> • Sufficiently away from water courses and other ecological sensitive areas • Preferably in areas that were already disturbed before the project activities commenced on site • In areas as indicated in the relevant approved and latest Site Layout Plan.
GIBB Response No 8	Species movement and protection	<p><i>Aquatic species</i></p> <p>The proposed project takes place on the outer embankment, well away from the normal flow regime channel of the river and will therefore not impede the movement or habitats of aquatic species. Management of potential impact of the construction activities on water quality are explained in GIBB Response No 4 and 7.</p> <p><i>Terrestrial habitat corridors</i></p> <p>Note that much of the area affected by the construction consists of sites previously used for industrial purposes and is thus completely disturbed. Once the Umgeni Project is complete these areas will effectively be greened and thereby widen the habitat corridor along a 1km stretch of the northern embankment of the lower Umgeni River. Impact on the affected green areas will be temporary since after the embankment stabilisation works are implemented the embankments will be vegetated.</p> <p>As explained in GIBB Response No 3 the CSIR has undertaken a biodiversity investigation in 2005 which was updated in March 2013. The 2013 CSIR report states the following:</p> <p>"As previously stated there was no in-depth survey of fauna undertaken. Most terrestrial fauna are likely to move out of the area once the development disturbance commences. This is especially true for the more mobile fauna such as birds, small mammals and insects. The development area is also relatively small leaving sufficient (similar) adjacent environment for fauna to recruit to. There was some concern from stakeholders that the area may have one or more resident crocodiles but these are likely to move to adjacent less disturbed areas. This is also true for the Nile monitor (<i>Varanus niloticus</i>) which is likely to occur in habitats adjacent to water. The other concern was that the dwarf chameleon may be present in the area. This was not observed during</p>

GIBB Response No	Common Issue (i.e. Issue raised by more than one I&AP)	GIBB Response
		<p>the field study so its presence cannot be confirmed or refuted.”</p> <ul style="list-style-type: none"> Retain the lower unaffected portion of the river embankment (close to the ‘normal’ flow channel) as No-go area (EMP Section 6.4.2 – as amended). This will retain a terrestrial habitat corridor between the construction site and the normal flow regime channel. EMP Section 6.6.17 (as amended) covers the ‘Protection of Sensitive Environments and Conservation of Vegetation and Wildlife’. E.g. this section includes recommendations from the mentioned CSIR reports <p><i>Estuarine</i></p> <p>The 2013 CSIR report states the following:</p> <p>“The proposed bank widening development is not envisaged to impact on the important estuarine habitats as long as the mitigation measures (as detailed in the previous report- Appendix 1) are implemented. One of the more important of these is obviously to avoid any sediment input into the stream by removing all excess sand that is excavated when the new banks are constructed. It is extremely important to avoid exacerbation of the siltation problem in the estuary as this would lead to overall loss of certain estuarine habitats.”</p>
GIBB Response No 9	Involvement of I&APs in the project – particularly environmental groups and specialists	<p>Operational Phase</p> <p>The eThekweni Project Engineers advised that the area will be handed over to the eThekweni Parks Department once the embankment stabilisation works and associated rehabilitation of the area has been completed. An eThekweni Parks Department’s landscaper or vegetation specialist will also be involved to render advice on the Rehabilitation Plan.</p> <p>Construction Phase</p> <p>EMP Section 6.6.23 covers ‘Community Relations and Control of Community Disruption’ inter alia:</p> <ul style="list-style-type: none"> The eThekweni Project Manager, ECO and/or the Resident Engineer shall liaise with local community representative (councillors), Umgeni River Estuary Conservancy and neighbouring property owners, eThekweni Environmental Branch and eThekweni Health to keep them informed of activities that may affect them (as amended). Train staff to respect the property and needs of the adjacent landowners and public areas to minimise any unnecessary disturbance. The Resident Engineer is to establish a formal grievance mechanism and implement adequate lines of communication through which affected people can lodge a grievance and to help ensure a speedy satisfactory resolution of any disputes. <p>The EMP provides for specialist assistance as follows:</p> <ul style="list-style-type: none"> The Contractor shall notify the ECO of any site clearing at least one week prior to such clearing commencing. The ECO shall investigate/search the site prior to the commencement of clearing to identify any species that may need to be rescued. Where appropriate the ECO will arrange for specialist assistance. (EMP Section 6.5.1 on ‘Site Clearance’) The Contractor shall notify the Resident Engineer if any previously unidentified graves or artefacts of archaeological or cultural significance are unearthed during site clearance. Work shall be stopped and the relevant heritage authorities notified (e.g. Amafa or an Amafa approved archaeologist/specialist). Works shall commence, upon instruction from the Resident Engineer, once confirmation has been received from the heritage authority that they have inspected the site and documented the findings. (EMP Section 6.5.1 on ‘Site Clearance’) Should fauna and indigenous flora show signs of deterioration or death as a result of construction activities, e.g. due to water pollution, specialist hydrological or ecological advice shall be sought for the appropriate treatment and remedial procedures to be followed by the Contractor. The requirements for such input shall be agreed with the engineer. If liability is found to rest with the contractor, the costs of containment and rehabilitation shall be on the contractor’s account, including the costs of specialist input. (EMP Section 6.6.17 on ‘Protection of Sensitive Environments and Conservation of Vegetation and Wildlife’) Planting of indigenous trees in accordance with the specifications of the CSIR Report “Proposed Flood Control Embankments for the Lower Mgeni River at Springfield Park. Preliminary Biodiversity Assessment. Revised CSIR Report. March 2013” as well as advice from the eThekweni Parks Department. (EMP Section 6.8.1 on the Rehabilitation Plan) Incompatible hazardous substances shall not be mixed unless required under supervision of suitably qualified specialist and shall be stored and handled in separated areas. (EMP Section 6.5.1 on ‘General Materials Handling, Use and Storage’)