



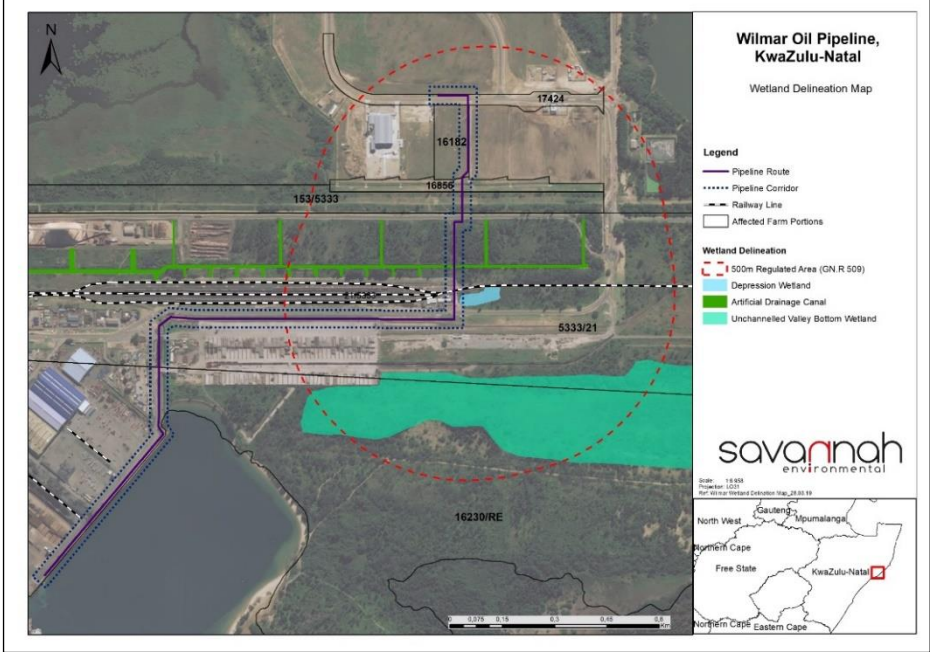
**SUPPLEMENTARY WATER USE INFORMATION**  
**Section 21(c) and (i) Water Uses**  
Section 21(c) ~ impeding or diverting the flow of water in a watercourse  
Section 21(i) ~ altering the bed, banks, course or characteristics of a watercourse

**Please read:**

- (1) The requirements of this form should be discussed with the relevant Regional Office and Primary Responsible Official for these water uses during a pre-application consultation meeting and documented agreement reached in terms of:
  - (a) Assistance and information to be supplied by the Department (e.g. procedures (refer items 1.2.3 and 1.2.4), management objectives etc.) - this is of particular reference to emerging water users that are not in a position to provide the information as required in this form; and
  - (b) The scale and level of detail required.
- (2) Should any of the supporting documentation to the licence application (e.g. Technical Report, Environmental Impact Assessment Report, Environmental Management Plan or Programme) already contain the requested information below, the applicant is not required to duplicate the information. In such instances, a comprehensive list of these documents must be compiled and this form must be completed by referring to the relevant sections in the supporting documentation.
- (3) All maps, Google images, drawings and plans must be at an appropriate detailed scale and have sufficient annotations (North arrow, line scale, legend, co-ordinates, etc.) and must be recent (at least 6 months) representations.
- (4) All supporting documentation and reports must be final documents signed off by both the applicant and the compiler of the report.
- (5) Information requirements in respect of Section 27 of the National Water Act, 1998 (Act No. 36 of 1998)[NWA] that have to be considered in the issuing of a licence, are appropriately incorporated and indicated in this form (e.g. item 2.2.3 <Provide information to support efficient and beneficial use of water in the public interest [refer Section 27(1)(c)]>).
- (6) This form may be updated from time to time as required to comply with best practice and legal requirements. When completing this form, clearly date it since it will be evaluated against the information requirements related to the edition of the form at that time.

**1. Watercourse Attributes**

<b>1.1 Locality</b>	<p><i>1.1.1. &lt;Provide a description of the location of the watercourse at which the water use/s is to take place&gt;</i></p> <p>Wilmar Processing (Pty) Ltd (Wilmar) is proposing the development of a vegetable oil pipeline in the Richards Bay area, KwaZulu Natal Province (the “proposed development”). The proposed vegetable oil pipeline will be approximately 2.5km in length and run from the Port of Richards Bay and connect to the proposed oil processing facility planned on Lot 17442 (site) within Phase 1A of the Richards Bay IDZ. The planned processing facility <b>does not</b> form part of this application for a general authorisation.</p> <p>The first draft of the layout initially crossed a depression wetland feature. Following revision of the proposed pipeline route to specifically avoid crossing any wetland features, the updated layout rerouted the proposed pipeline to pass approximately 15m west of the depression wetland identified, although ~8m of the depression wetland boundary still remained within the 50m pipeline servitude. The pipeline therefore does not cross directly or directly impact any wetland feature identified on site.</p> <p>A wetland delineation and impact assessment report focussing on providing an assessment of the wetlands to be affected along the proposed vegetable oil pipeline in Richards Bay, KwaZulu-Natal Province is attached in this regard. In addition, a Risk Assessment was compiled to ascertain the risk involved to the watercourses on site and to inform the water use authorisation process – this report is also attached to this application</p> <p>The in-field delineation assessment confirmed <b>one depression wetland</b> as well as an <b>unlined artificial drainage channel</b>, along the proposed pipeline route (<b>Figure 1</b>). The depression wetland was not identified in the databases consulted at a desktop level. The pipeline is within</p>
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<b>1. Watercourse Attributes</b>	
<b>1.2 Description</b>	<p>the regulated area of the depression wetland and the surrounding wetlands identified which included an estuarine wetland to the south of the proposed pipeline route as per the NFEPA (2011) database (not shown) , as well as the <b>unchanneled valley-bottom wetland</b> as per the SiVEST (2016) assessment, to the south of the proposed pipeline route.</p> <p>The unchanneled valley-bottom wetland is located approximately 150m to the south of the proposed pipeline route.</p> <div style="text-align: right; margin-bottom: 10px;">  </div> <p><b>Figure 1:</b> A wetland delineation map illustrating the wetland identified within the vicinity of the project development corridor for the Wilmar Vegetable Oil Pipeline project.</p> <p>Please note: the estuarine wetland as well as the man-made, channelled wetland features on site are not regarded “watercourses” as per the National Water Act (NWA) definition, and therefore are excluded from requiring water use authorisation under the NWA. Subsequently, these features are omitted from this application hence forth.</p> <p><i>1.1.2. &lt;Provide the catchment reference number&gt;</i></p> <p>The catchment reference number for the proposed Water Use is: <b>W12F</b></p> <p><i>1.2.1. &lt;Provide the name and/or description of the affected watercourse&gt;</i></p> <p style="padding-left: 40px;">» The proposed development corridor for the Vegetable Oil Pipeline will be located within the regulated area of a <b>Depression Wetland</b> and an <b>Un-Channelled Valley-Bottom Wetland</b>.</p> <p><i>1.2.2. &lt;Provide a map with accompanying photographs (dated) indicating the segment and affected reach/es of the watercourse in which the water use/s is to take place, and which indicates/delineates the regulated area<sup>1</sup> including:</i></p> <p>Only two watercourses (wetlands) are likely to be impacted by the proposed development, namely the Depression Wetland, and the Un-Channelled Valley-Bottom Wetland (please refer to <b>Figure 1</b> above).</p>

<sup>1</sup> The applicant will require a water use authorisation from the Department for any activity within the *regulated area* which is the outer edge of the riparian habitat or 1:100 year flood line, whichever is the greatest distance from the watercourse. The outer edge of the watercourse must be delineated using the Departmental guideline, *A Practical Field Procedure for Identification and Delineation of Wetlands and Riparian Areas* or *Field method for the delineation of Riparian Zones for South African Rivers*

## 1. Watercourse Attributes

Photographs illustrating the wetlands within the vicinity of the project development corridors for the vegetable oil pipeline are included below as Figure 2 and 3. Please also note that the wetlands will not be directly impacted by the proposed construction infrastructure or methodology, due to the support structures being located outside the footprint of the identified wetlands, and where required, the structures will span the features (i.e. the wetlands) to allow for flexibility.



**Figure 2:** Dense vegetation cover within the un-channelled valley-bottom wetland. This photograph was taken on 2 July 2019.



**Figure 3:** The depression wetland with distinctive *P.australis* growth on the right. Photograph taken on 2 July 2019

### 1.2.2.1. *The extent of the riparian habitat; and*

Please refer to the Wetland Delineation and Impact Assessment Report for the boundaries of the wetland features identified on site.

### 1.2.2.2. *The 1:100-year flood line>>*

- » During the pre-application meeting held with the Provincial Department of Water and Sanitation in Durban on Monday, 8 July 2019, the Department did

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	<p>not deem the determination of a flood line assessment for this application as necessary for this application.</p>
	<p><i>1.2.3. &lt;Describe within context of the immediate catchment and segment, the historic as well as current state (Present Ecological State or PES) of the affected reach/es of the watercourse with regards to the following characteristics (attributes)&gt;:</i></p> <ul style="list-style-type: none"> <li>» Details pertaining to the Present Ecological State of the two (2) wetlands identified within the vicinity of project development corridor are included in the <b>Risk Assessment</b> (included as <b>Appendix D</b> of the IWWMP) and the <b>Wetland Delineation Report</b> (included as <b>Appendix C</b> of the IWWMP) undertaken for the purposes of submitting this application to the Department.</li> </ul> <p><i>1.2.3.1. Flow and sediment regimes (quantity, pattern, timing, water level and assurance of in stream flow);</i></p> <ul style="list-style-type: none"> <li>» The development of the vegetable oil pipeline will not have an impact on the flow regime of water in and out of the identified wetlands, as no infrastructure is proposed directly within any of these features, rather only being within the regulated area . No construction activities or infrastructure will be undertaken and placed in the existing footprint of the wetland/s on site. . Therefore, the determination of the flow and sediment regime is not required for this application.</li> </ul> <p><i>1.2.3.2. Water quality (including the physical, chemical and biological characteristics of the water) in relation to the flow regime</i></p> <ul style="list-style-type: none"> <li>» As above (Section 1.2.3.1).</li> </ul> <p><i>1.2.3.3. Riparian and In stream Habitat</i></p> <ul style="list-style-type: none"> <li>» Detailed description of the riparian and instream vegetation associated with the two (2) wetlands is contained within <b>Appendix C</b> and <b>D</b> of the IWWMP.</li> </ul> <p><i>1.2.3.3.1. Morphology (physical structure)</i></p> <ul style="list-style-type: none"> <li>» The Risk Assessment and Wetland Delineation Report (included as <b>Appendix D</b> and <b>C</b> to the IWWMP) provide detailed descriptions of the morphology associated with each wetland delineated in the vicinity of the project development corridor for the vegetable oil pipeline.</li> </ul> <p><i>1.2.3.3.2. Vegetation</i></p> <ul style="list-style-type: none"> <li>» The Ecological Impact Assessment (included in <b>Appendix E</b>) compiled for the purposes of the basic assessment process provides detailed written and photographic descriptions of the vegetation identified within the project development corridor associated with the Wilmar Vegetable Oil Pipeline project. In addition, this detail is also contained within <b>Appendix C</b> and <b>D</b> of the IWWMP.</li> </ul> <p><i>1.2.3.4. Biota&gt;</i></p> <ul style="list-style-type: none"> <li>» As above (Section 1.2.3.3.2).</li> </ul>

<sup>2</sup> Refer to the WRC Reports on EcoClassification, specifically Report no TT 329/08 on determining EcoStatus

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1.2.4. <Describe the ecological importance and sensitivity (EIS)<sup>3</sup> as well as the Socio-cultural Importance (SI)<sup>4</sup> of the affected reach/es of the watercourse including the functions<sup>5</sup>>

EIS:

- » Please refer to the Wetland Delineation Report (included as **Appendix C**) for a description of the EIS results for both affected wetland features.

Socio-cultural Importance (SI):

- » An assessment of the wetland ecosystem services have been included in the Wetland Delineation Report (included as **Appendix C**), indicating that due to the location of both wetland features included in this water use authorisation, that their location within the existing harbour restricts their cultural and tourism potential, both scoring 1 only with the wetland ecosystem services assessment. Please refer to page 31 of the Wetland Delineation Report for a more detailed approach to the cultural, tourism and biophysical ecosystem services supplied by both wetlands.

1.2.5. <Discuss existing land and water use impacts (and threats) on the characteristics of the watercourse>

a) **Depression Wetland**

The features identified are located within an area which has been zoned for an industrial land use. Therefore, on-going activities near the depression wetland which is also adjacent the Richards Bay Harbour included the on-going parking of vehicles (on the very edge of) the wetland, where no formal parking areas have been created. Thus, vehicles make use of the available open space to park (**Figure 4**)



**Figure 4:** Vehicles park on the periphery of the depression wetland. Photograph was taken on 2 July 2019.

The parking of vehicles on the periphery of the depression wetland and the inadvertent spills of motor oils (**Figure 5**) when the vehicles are parked currently influences the depression wetland. Furthermore, numerous alien invasive plant species were observed on site, these include the Pinus trees and the herbaceous invaders, *Bidens pilosa* which are located within the

<sup>3</sup> The EIS of a watercourse is an expression of its importance to the maintenance of ecological diversity and functioning on local and wider scales. Ecological sensitivity refers to the system's ability to resist disturbance and its capability to recover from disturbance once it has occurred. Both biotic and abiotic components of the system are taken into account.

<sup>4</sup> SI reflects the dependency of people on a healthy functioning watercourse and also to its cultural and tourism potential.

<sup>5</sup> Refer to the RDM procedure for determining Ecological Importance and Sensitivity

## 1. Watercourse Attributes

depression wetland itself. In terms of the unchanneled valley-bottom wetland, the identified impact follows the deposition of plastic waste (**Figure 6**) by wind action from the storage and transfer facility near the Richards Bay Harbour, whilst another extensive impact on the ecological status of the depression wetland comes from the evidence of historical earthworks in the area (**Figure 7**)



**Figure 5:** Evidence of oil spills from vehicles parked adjacent to the depression wetland. This photograph was taken on 2 July 2019



**Figure 6:** Plastic waste near the unchanneled valley bottom wetland.



**Figure 7:** Evidence of historical earthworks evident within the depression wetland. This photograph was taken on 2 July 2019.

**b) *Unchanneled Valley Bottom Wetland***

Current land use activities within the proposed site pose the least amount of disturbance to the un-channelled valley-bottom wetland located approximately 150m south of the proposed pipeline project development corridor. This follows that the wetland is located to the extreme south of the corridor and adjacent to two (2) derelict access roads. The wetland is located approximately 20m away from the derelict roads and both features are separated from each other by the dense vegetation cover (**Figure 8**). The dense vegetation cover thus shields the wetland from incidental human interference. However, the wetland does experience impact from the ongoing operation of the nearby storage and transfer facility which stores a wide variety of materials transported by the rail network (to and from the Harbour). Furthermore, Chromium fines were evident during the site visit undertaken, with visible wind-blown fines evident throughout the site. Therefore, it is anticipated that other stored materials may also be introduced to the un-channelled valley-bottom wetland during windy conditions or rainfall events.

## 1. Watercourse Attributes



**Figure 8: Top)** A derelict tarred road adjacent to the un-channelled valley bottom wetland. **Bottom)** The Materials Handling and Storage Facility showing the temporary storage of materials.

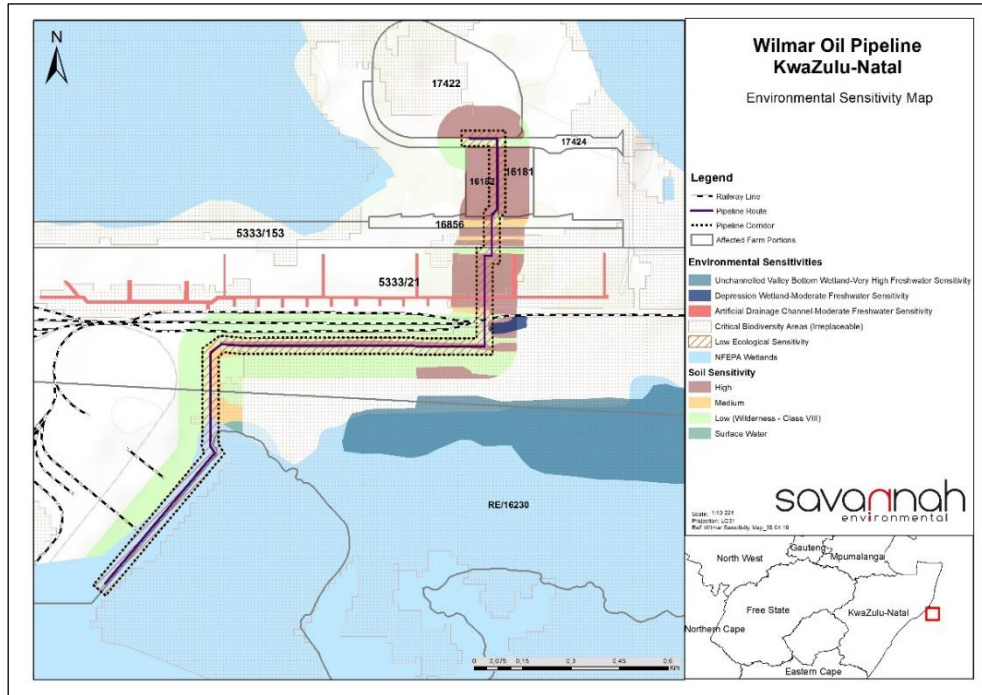
1.2.6. <List and map sensitive environments in proximity of the project locality - sensitive environments include wetlands, nature reserves, protected areas, etc.>

**Figure 9** below illustrates the sensitive environmental features identified within the vicinity of the pipeline project development corridor. The following watercourses identified within and adjacent to the project development corridor are regarded as sensitive. Furthermore, please refer to Wetland Delineation Report for additional detail pertaining to the sensitivities of the wetlands identified.

- a) The **un-channelled valley-bottom wetland** is associated with a **Very High** sensitivity; and
- b) The **depression wetland** which is associated with a **Moderate** sensitivity.



# 1. Watercourse Attributes



**Figure 9:** A combined sensitivity map (ecological, soils, wetlands, heritage and social) illustrating the sensitive features identified for the proposed development as part of the ongoing environmental impact assessment process.

2. Water Use Information	
2.1 Description and Methodology	<p>2.1.1. <i>&lt;Describe the activities associated with the water use/s&gt;</i></p> <p>The activity associated with the water use pertains to the construction and operation of a vegetable oil pipeline within 500m of each wetland identified as part of the infield delineation assessment. No construction-related activities will be undertaken within the wetland.</p>
	<p>2.1.2. <i>&lt;Describe the project phases for each activity (i.e. planning, construction, operation and maintenance, decommissioning) including, but not limited to, the programme for and duration of the various phases</i></p> <p style="text-align: center;"><b>The development of the Wilmar Vegetable Oil Pipeline will include the following stages:</b></p> <p><b>(a) Construction Phase</b></p> <ul style="list-style-type: none"> <li>» The construction phase is expected to be up to <b>6-months</b> and the pipeline will be constructed in the following sequence: <ul style="list-style-type: none"> <li>* Step 1: Surveying of the development area and negotiating with affected landowners;</li> <li>* Step 2: Final design and micro-sitting of the infrastructure based on geo-technical, topographical conditions and potential environmental sensitivities and obtaining the required environmental permits (i.e. the biodiversity permits from the KZN Ezemvelo Wildlife where necessary);</li> <li>* Step 3: Vegetation clearance;</li> <li>* Step 4: Construction of concrete pad foundation and other support structures required; and</li> <li>* Step 5: Assembly and erection of infrastructure on the project site.</li> </ul> </li> </ul> <p><b>(b) Operation and Maintenance</b></p> <ul style="list-style-type: none"> <li>» The anticipated life span for the pipeline is <b>20-years</b> within which maintenance activities will be undertaken at regular intervals; and</li> <li>» The operation and maintenance phase of the pipeline will include the following activities: <ul style="list-style-type: none"> <li>* Part-time security and maintenance staff will be required; and</li> <li>* On-going rehabilitation of areas disturbed during the construction phase.</li> </ul> </li> </ul> <p><b>(c) Decommissioning</b></p> <ul style="list-style-type: none"> <li>» The integrity of access to the pipeline will be confirmed;</li> <li>» Equipment required to undertake the decommissioning will transported to site;</li> <li>» The pipeline components will be disassembled, reused and recycled (where possible); and</li> <li>» Where the components can not be reused or recycled, these will be disposed of in accordance with the regulatory requirements at the time of the decommissioning; and</li> <li>» Disturbed areas, where infrastructure would have been removed will be rehabilitated, if required and depending on the future land-use of the affected areas and the relevant legislation applicable at the time of the decommissioning.</li> </ul>
	<p>2.1.3. <i>&lt;Provide a site lay-out plan/s (master plan) indicating the various activities and existing and proposed infrastructure in relation to the 1:100 flood line and edge of the watercourse, etc. – a letter or certificate by a qualified surveyor must also be submitted that verifies the correctness of the site lay-out plans, in particular for wetlands&gt;</i></p>

	<p>» Please see attached draft master layout plan as approved by the project engineers (<b>Appendix D</b>).</p>
	<p>2.1.4. &lt;Provide work method statements for the various water use activities&gt;</p> <p>» Please see attached work method statements for the activities envisaged as per <b>Appendix C</b>.</p>
	<p>2.1.5. &lt;Provide engineer design drawing(s) for construction activities within the watercourse&gt;</p> <p>» Design drawings of the pipeline are included in the IWMMP as <b>Appendix I</b> and the construction activities associated with the development of the pipeline will not be undertaken within the wetlands.</p>
	<p>2.1.6. &lt;Provide a description and a map/s indicating any Storm Water Management Practices (SWMPs) specifically addressing 'end of pipe' practices&gt;</p> <p>Please refer to the Stormwater Management Plan (SWMP) included in the IWWMP as <b>Appendix E</b>.</p>
	<p>2.1.7. &lt;Provide information on all existing lawful water uses [refer Section 27(1)(a)]&gt;</p> <p>» The Department authorised the development of infrastructure for Transnet (Ref: <b>11/W12F/C1/4426</b>) within the regulated area near the Richards Bay Port entrance on Portion 21 of Richards Bay.</p>
	<p>2.1.8. &lt;Provide information on investments already made and to be made by the water user in respect of the proposed water use/s [refer Section 27(1)(h)]&gt;</p> <p>» The applicant, Wilmar Processing SA (Pty) Ltd has invested at present approximately R 500 000 in professional costs towards the project. Furthermore, the pipeline for which the applicant requires authorisation will transport vegetable oil from the Richards Bay Port for processing at this facility. The proposed value of the pipeline development upon completion will be R60 000 000 which would have also created 50 employment opportunities within the City of uMhlathuze Local Municipality. The operational phase of the processing facility (not considered in this application) and the pipeline will create at least 100 employment opportunities for the anticipated 20-year life span.</p>
	<p>2.1.9. &lt;Indicate and motivate the probable duration of any undertaking for which the water use/s should be authorised [refer Section 27(1)(k)]&gt;</p> <p>» The applicant requires authorisation for the water use for a period of 20-years. The 20-year period is the anticipated life span for the operations of the pipeline. This period will enable the applicant to contribute positively towards the economic development of the Richards Bay and the KwaZulu-Natal Province as the Richards Bay Industrial Development Zone (which has been gazetted under the Special Economic Zones Act (Act No. 16 of 2014) of 2014) has been earmarked for the development of agro-processing facilities.</p>
<b>2.2 Motivation</b>	<p>2.2.1. &lt;Provide information on the need/intention/objective of the water use/s&gt;</p> <p>» Please refer to Chapter 2 of the Basic Assessment Report provides the motivation for the need and desirability of the Vegetable Oil Pipeline.</p>

<p>2.2.2. <i>&lt;Provide information on contributions to rectify the results of past racial and gender discrimination<sup>6</sup> [refer Section 27(1)(b)<sup>7</sup>&gt;</i></p> <ul style="list-style-type: none"> <li>» It is anticipated that should the Department proceed with granting the applicant the authorisation required, this will lead to the creation of at least 50 employment opportunities during the 6-month construction phase within this municipal area. The recruitment process for the project will adopt a local's first approach and opportunities will be made available to women throughout the construction and operation phase of the vegetable oil pipeline. Furthermore, at least 500 employment opportunities created during the operation phase of the processing facility. It is therefore, anticipated that employment opportunities will be provided to low skilled and semi-skilled, male and female candidates employing staff from the communities in Richards Bay, amongst others.</li> </ul>
<p>2.2.3. <i>&lt;Provide information to support efficient and beneficial use of water in the public interest [refer Section 27(1)(c)]&gt;</i></p> <ul style="list-style-type: none"> <li>» The development of the Wilmar Vegetable Oil Pipeline will require water which will be outsourced from the local municipality or another service provider upon signing a service level agreement. Therefore, the development of the pipeline will not have a direct impact on the available water resources to the public in the Richards Bay. Please note: no 21a water uses (abstraction) is required for this application as municipal water sources will be employed, and no natural water abstraction is proposed for any of the project phases.</li> </ul>
<p>2.2.4. <i>&lt;Provide information on relevant catchment management strategies<sup>8</sup> and local government planning frameworks that support the proposed water use [refer Section 27(1)(e)]&gt;</i></p> <ul style="list-style-type: none"> <li>» The development of the vegetable oil pipeline complies with the Spatial Development Framework for the City of uMhlathuze which has listed economic development and opportunities as one of its pillars for the framework. Therefore, the proposed development/water use feeds directly into the municipalities development framework as it will create employment and business opportunities for the communities in Richards Bay.</li> <li>» In addition, the development of the oil pipeline further contributes to the economic activity of the RBIDZ, thus promoting the intended land use locally and in terms of the broader goals of economic development within the country.</li> </ul>
<p>2.2.5. <i>&lt;Provide information on the strategic importance of the water use to be authorised [refer Section 27(1)(i)]&gt;</i></p> <ul style="list-style-type: none"> <li>» The authorisation will lead to a positive contribution to the Richard Bay's local economy through the generation of employment and business opportunities for SMMEs in the area. The authorisation will increase the desirability to conduct business within the Richards Bay Industrial Development Zone for other investors, which will have a positive net benefit for the local economy.</li> </ul>

<sup>6</sup> Refer to the DWAF *Broad-Based Black Economic Empowerment (BBBEE) Guidelines For Water Allocation, Final Draft, June 2007* and the Department of Trade and Industry's requirements relating to compliance with the BBBEE Act, 2003 (Act No. 53 of 2003)

<sup>7</sup> The applicant must provide information on how he/she implements the seven elements of BBBEE (i.e. Ownership, Management, Employment equity, Skills development, Procurement, Enterprise development, Socio-economic development) and how this complies with the relevant Sector Charter and score card (e.g. Construction, Agriculture, Mining, Tourism etc). A BBBEE certificate or external verification must accompany the application (refer list of Verification Agents on the Department of Trade and Industry's website)

<sup>8</sup> Consult the relevant Regional Office and Primary Responsible Official

3. Impact Assessment and Management	
3.1 Impact Prediction and Assessment	<p>3.1.1. &lt;Provide a prediction and assessment of the likely environmental and socio-economic impacts or effects<sup>9</sup> associated with the water use/s for the different project phases:</p> <p>» The environmental and socio-economic impacts associated with the water use or the proposed development were considered as part of the BA process - The final Basic Assessment Report submitted to the KwaZulu-Natal Provincial Department of Economic Development, Tourism and Environmental Affairs (KZN EDTEA). Please refer to the Final Basic Assessment Report as included in this application as <b>Appendix E</b> for a detailed assessment of the project impacts.</p> <p>3.1.1.1. On the watercourse and its characteristics as set out in 1.2.3 above [refer Section 27(1)(f)]</p> <p>* The Wetland Delineation Report (<b>Appendix B</b>) includes the impacts the development of the pipeline will have on the characteristics of the two (2) wetlands identified within the vicinity of the development corridor.</p> <p>3.1.1.2. On other water users [refer Section 27(1)(f)]</p> <p>* Due to the location of both wetland features within the existing port area, no other water users will be affected by the proposed development.</p> <p>3.1.1.3. On the broader public and property</p> <p>* The anticipated impacts on the broader public have been assessed to be of a low significance, as per the final BAR submitted for authorisation (<b>Appendix E</b>). However, detailed information regarding the impacts of the proposed development to the surrounding environment is further provided within appendices <b>C</b> and <b>D</b> of the IWWMP.</p> <p>3.1.1.4. If the water use/s is not authorised [refer Section 27(1)(d)]&gt;</p> <p>* The project will not proceed as it is required by the National Water Act (Act No. 26 of 1998) 1998 to obtain water use authorisation from the Department prior to commencing with any construction-related activities. Therefore, should this be the case, the economic development injection this development brings to the municipality and the Richards Bay Industrial Development Zone will remain unrealised. This extends further to local SMMEs who will during the construction and operation phase of the pipeline provide the applicant with support services (i.e. transportation of employees etc.).</p> <p>3.1.2. &lt;Provide a description of the methodologies employed to undertake impact prediction and assessment as well as a motivation for these&gt;</p> <p>* A description of the impact assessment methodology is provided within the Final BA Report (<b>Appendix E</b>) under section 3.9.</p>
3.2 Risk Assessment	<p>3.2.1. &lt;Provide an assessment of the risks associated with the water use/s and related activities&gt;</p> <p>* An assessment of the risks associated with the water use are included in <b>Appendix B</b> which constitutes of the Risk Assessment Report) includes practical mitigation measures that will effectively mitigate against the risks associated with the project/water use on the surrounding environment during the various project stages.</p>
3.3 Alternatives	<p>3.3.1. &lt;Describe the alternatives considered to prevent negative impacts on the watercourse with regard to locality, procedures, materials, etc.&gt;</p>

<sup>9</sup> Assess the potential impacts with regard to their nature, extent, magnitude, duration, probability and significance – each impact must be described in terms of source of impact, pathway (propagation of impact) and receptor (target that experience the risk or impact)

3. Impact Assessment and Management	
	<ul style="list-style-type: none"> <li>» Chapter 2 within the Basic Assessment Report (included as <b>Appendix E</b>) includes the alternatives considered in terms of the location and technology alternatives for the development of the vegetable oil pipeline.</li> </ul>
3.4 Mitigation and Management Measures	<p>3.4.1. <i>&lt;Provide mitigation measures<sup>10</sup> to prevent, reduce, remediate or compensate the pre-determined impacts; also provide emergency responses&gt;</i></p> <ul style="list-style-type: none"> <li>» Detailed mitigation measures required for the preservation of the natural environment during the various project phases are included in <b>Appendix F</b> (within Chapter 5 of the Basic Assessment Report and the Environmental Management Plan) of this application.</li> </ul>
	<p>3.4.2. <i>&lt;Provide a site map/s that marks the limits of disturbance to the watercourse and in particular indicates erosion and sediment controls&gt;</i></p> <p><u>Limits of disturbance:</u></p> <ul style="list-style-type: none"> <li>» As no infrastructure will be placed directly within the wetland features identified on site, and this application is only for construction activities occurring within the regulated area of these wetland, the limits of disturbance are deemed to be the outer extent of the delineated wetlands. Please refer to <b>Appendix C</b> and <b>J</b> for a maps of these delineated features.</li> </ul> <p><u>Erosion and sediment controls:</u></p> <ul style="list-style-type: none"> <li>» The proposed vegetable oil pipeline will occur entirely within the port area, which is currently serviced by artificial drainage channels and a well-developed stormwater system. In addition, please refer to Chapter 5 &amp; 6 in the EMP ( <b>Appendix E</b>) for project-specific mitigation measures relating to erosion and sediment controls. Finally, please also refer to the IWWMP for detailed information regarding the necessary stormwater and erosion control systems to be implemented by the applicant during the life cycle of the project.</li> </ul>
	<p>3.4.3. <i>&lt;If the developer (applicant) of water use related infrastructure is not the end user/beneficiary and will not be responsible for long term maintenance of the infrastructure, provide a programme for hand over to the successor-in-title<sup>11</sup> including a brief management/maintenance plan for infrastructure along with allocation of responsibilities&gt;</i></p> <ul style="list-style-type: none"> <li>» The applicant will undertake the long-term maintenance of the vegetable oil pipeline infrastructure.</li> </ul>
3.5 Changes to the Watercourse	<p>3.5.1. <i>&lt;Assess to what extent the impacts after mitigation will bring about <u>changes</u> in respect of the PES (and recommended ecological category, if this information is available at the stage of study) and functionality of the <u>watercourse</u>; as well as the <u>socio-economic environment</u> (including redress considerations as well impacts on other water users)&gt;</i></p> <ul style="list-style-type: none"> <li>» The Risk Assessment Matrix Report (<b>Appendix D</b>) and the Wetland Delineation Report (<b>Appendix C</b>) of the IWWMP include a detailed assessment of the nature of the two (2) wetlands following the implementation of the mitigation measures in respect of their PES scores.</li> </ul>
3.6 Monitoring and Compliance	<p>3.6.1. <i>&lt;Provide a detailed monitoring programme and describe the auditing, compliance and reporting mechanisms to ensure execution of the mitigation measures and for informing DWAF of incidents – ensure that these measures are appropriate in relation to the impacts, mitigation measures, status of the watercourse, etc.&gt;</i></p>

<sup>10</sup> The mitigation measures should be collated in an Environmental Management Plan (EMP) - refer to the Department of Environmental Affairs and Tourism's regulations, Government Notice No. R. 385 in Government Gazette No. 28753 of 21 April 2006 for minimum standards

<sup>11</sup> Refer Section 51 of the NWA

**3. Impact Assessment and Management**

- » A detailed monitoring of the construction and operation phase of the vegetable pipeline is included in the Environmental Management Programme included in the IWWMP as **Appendix G**.