



**Environmental Management Consultants**

NATIONAL PREMIUM AWARD 2002 & 2004  
INTERNATIONAL ASSOCIATION FOR IMPACT ASSESSMENT  
SOUTH AFRICAN CHAPTER

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9 May 2014

Dear Len,

**CITY OF UMHLATHUZE LOCAL MUNICIPALITY**

**REQUEST FOR PROPOSAL AND COST ESTIMATE TO UNDERTAKE A HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED UPGRADING OF THE HILLVIEW SEWER RISING MAIN AND SOUTHERN OUTFALL BULK SEWER PIPELINE IN EMPANGENI, KWAZULU-NATAL**

The City of uMhlathuze Local Municipality's proposed Southern Outfall Sewer Upgrade in Empangeni is necessary due to the frequent localized over flow problems as a result of the existing pipelines being too old and under sized to cope with current and future flows. The upgrade will, entail the installation of an entirely new rising main which will flow from the Hillview Pumping Station for approximately 1.5 km into an existing discharge chamber, and a new gravity main sewer pipeline, which will run from the discharge chamber for approximately 5.3 km and into the Empangeni Waste Water Treatment Works.

UWP Consulting (Pty) Ltd (UWP) has appointed ACER (Africa) Environmental Management Consultants (ACER), on behalf of the City of uMhlathuze Local Municipality, as the independent Environmental Assessment Practitioner to manage and undertake the process required to apply for environmental authorisation for the project. ACER is undertaking a Basic Assessment in terms of the Environmental Impact Assessment Regulations of 2010, published in Government Notices R 543, R 544, R 545 and R 546 of 18 June 2010 under Section 24 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).

From the Basic Assessment process certain environmental issues have been identified for further investigation, and from a design and planning perspective, it is an imperative to have these specialist studies completed as soon as possible. It would therefore be appreciated if you could please provide a proposal and cost estimate to undertake a **Heritage Impact Assessment** on the potential impacts of the project on **Cultural Heritage Resources** as per the accompanying terms of reference provided in Appendix 2, by **13 May 2014**.

Should you require any further information regarding the proposed project or the terms of reference, please contact me on 035 340 2715 or 084 411 1187.

Yours sincerely,

**ACER (Africa) Environmental Management Consultants**  
Keagan Kruger  
Environmental Assessment Practitioner

## 1. Introduction

On behalf of the proponent, the City of uMhlathuze Local Municipality, ACER would like to commission a **Heritage Impact Assessment** for the proposed Southern Outfall Sewer Upgrade.

## 2. Project Need and Desirability

The Southern Outfall Sewer Upgrade is located to the west of Empangeni, within the City uMhlathuze Local Municipality within the uThungulu District Municipality. The project includes the upgrading of the Hillview Pumping Station, the installation of a new rising main from the Hillview Pumping Station into an existing discharge chamber, and gravity main which will flow from this discharge chamber and into the existing Empangeni Waste Water Treatment Works.

The Hillview Pumping Station upgrade has progressed ahead of the pipeline upgrade, due to the severity of the flooding and the fact that no environmental approvals were necessary for this work. This project deals with the existing rising main and gravity main which are at present operating beyond capacity and as a result are subject to frequent sewer spills and overflows. Given the current and planned future development within the area these spills and overflows are expected to become more frequent and it is essential to install new rising main and gravity main pipelines of a suitable size to cope with the current and future planned sewer volumes.

The new 450 mm diameter sewer rising main alignment will run largely within the servitude of the existing pipeline, from the existing Hillview Sewer Pump Station for approximately 1.5 km to an existing discharge chamber. The 700 mm diameter, gravity outfall foul sewer, will also fall largely within an existing servitude and will run from the discharge chamber around the west of Empangeni for approximately 5.3 km and discharge into the existing Empangeni Wastewater Treatment Works, south of Empangeni. The need to establish new servitudes in some places is likely and the route will cross several major roads and a number of streams.

## 3. Project Location and Main Components

The proposed sewer pipeline upgrade is located to the west of Empangeni, KwaZulu-Natal (Appendix 1). It falls within the uThungulu District Municipality and City of uMhlathuze Local Municipality.

The proposed Southern Outfall Sewer Upgrade comprises the following main components:

- A new 450 mm diameter, uPVC or GRP, sewer rising main flowing from the existing Hillview Pumping Station for approximately 1.5 km to an existing discharge chamber in the vicinity of Fukwe Street (footprint: 1,500 m x 6 m = 0.9 ha).
- A new 700 mm diameter, gravity outfall foul sewer, flowing in a southerly direction from the discharge chamber around the west edge of Empangeni for approximately 5.3 km and discharging into the existing Empangeni Waste Water Treatment Works. (footprint: 5,300 m x 6 m = 3.18 ha)

Due to a number of reasons the new pipeline will not be able to follow the existing pipeline for the entire route, and the need to establish new servitudes is likely. The proposed route for the new rising main and gravity main is illustrated in Appendix 1.

#### 4. Project Time Frames

In order to fast-track specialist investigations, it is proposed that all specialist assessments be completed by **02 June 2014**. Please indicate if this time frame is problematic for your specialist study.

The following project time frames apply:

- |                          |   |              |
|--------------------------|---|--------------|
| <input type="checkbox"/> | Submission of proposal:                                 | 13 May 2014  |
| <input type="checkbox"/> | Acceptance of proposals and appointment of specialists: | 14 May 2014  |
| <input type="checkbox"/> | Finalise and submit draft specialist report:            | 2 June 2014  |
| <input type="checkbox"/> | ACER and UWP review (5 days):                           | 06 June 2014 |
| <input type="checkbox"/> | Submit final specialist report (3 days):                | 11 June 2014 |

#### 5. Use of Existing Information and Supporting Documents

Upon appointment, specialists must undertake a literature review and desktop investigation to collate relevant information and assess gaps in knowledge. All specialists are expected to acquire and familiarise themselves with existing information relevant to their specific investigations. Note that ACER can provide the following material (in electronic format):

- Maps and diagrams (as available).
- Preliminary pipeline design reports.

#### 6. Project Schedule and Deliverables

The following deliverables are required:

- One draft and one final copy of the report – electronically (MS Word).
- A final report will be required approximately two weeks after submission of the draft report (once comments have been provided by UWP and ACER).
- Submission of the required applications to Amafa aKwaZulu-Natali (**the associated application costs for submission must be included in your cost estimate**).

#### 7. Cost Estimate and Payment

Please provide ACER with an estimate of cost to undertake this work by 13 May 2014.

Payment will be made on completion of the work, once the client has accepted the final report, and within three working days of ACER receiving payment from the client.

Please note the following:

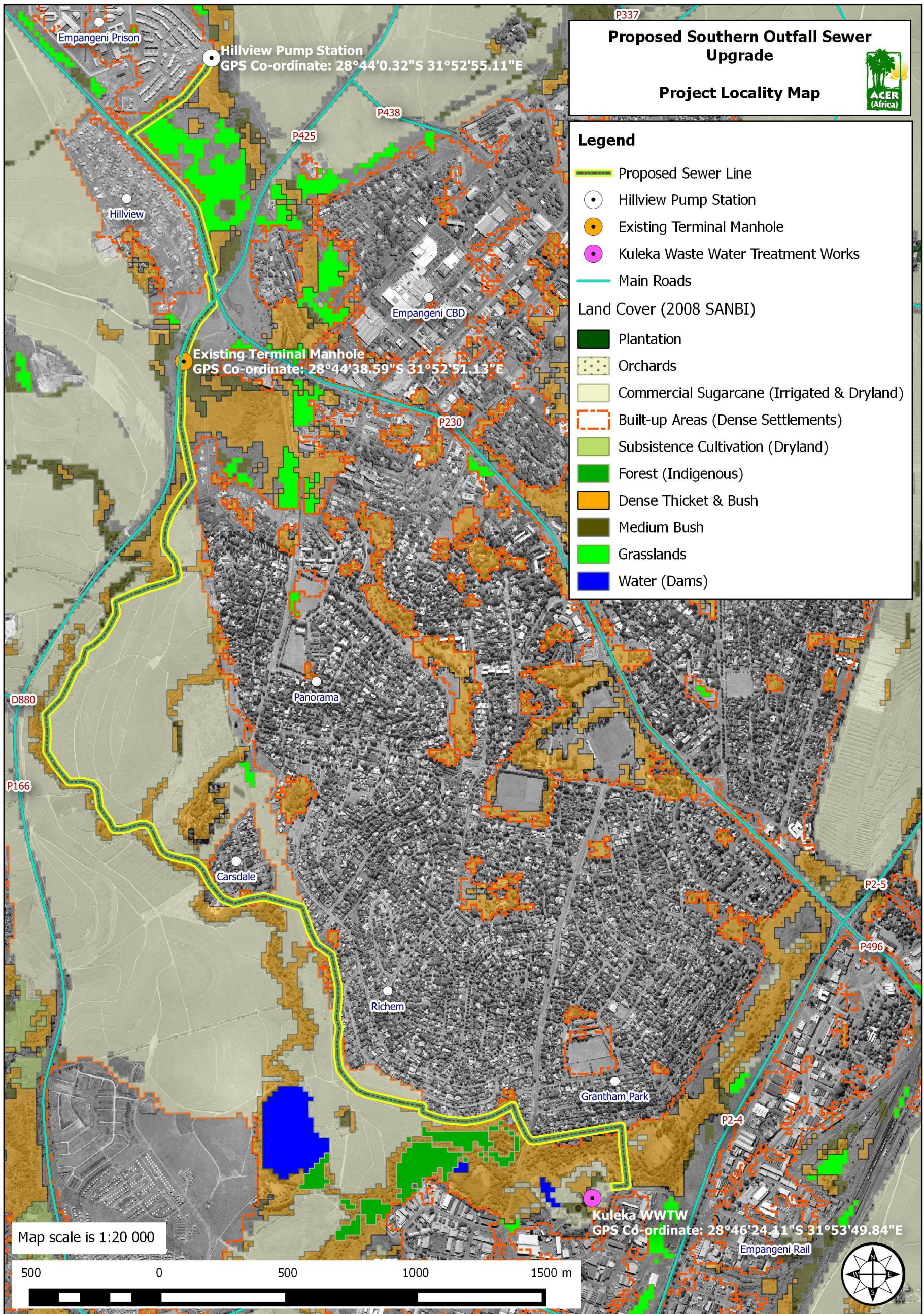
- Accommodation and subsistence on-site will be for your own account, and should form part of your cost estimate.
- Travel to, from and around site will be for your own account, and should form part of your cost estimate.

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## **8. Concluding Remarks**

ACER is responsible for the submission of a Basic Assessment Report to DAEA for purposes of environmental authorisation. This specialist study will form an integral component of this Basic Assessment and will help to ensure that the approach can be shown to meet current environmental management best practise in terms of sustainable development.

**Appendix 1  
 Locality Map**



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## Appendix 2

### Terms of Reference

ACER has been appointed by UWP on behalf of the City of uMhlathuze Local Municipality to undertake the application for environmental authorisation for the Southern Outfall Project, and to meet the requirements of the Environmental Impact Assessment (EIA) Regulations of 2010, a Basic Assessment must be undertaken for this proposed project.

Arising from the preliminary investigations, the following question:

***What effects will the Southern Outfall Project have on cultural and heritage resources?***

Specifically, the Heritage Impact Assessment must address the following key aspects:

- The identification and assessment of potential impacts on cultural heritage resources, including historical sites arising from the construction and operation of the proposed project.
- The early identification of any red flag and fatal flaw issues or impacts.
- Information must be provided on the following:
  - Results of an overview survey of the pipeline routes, and the identification of cultural heritage resources that may be affected by the proposed project or which may affect the proposed project during construction and operation.
  - Recommendations on site and route alternatives, and additional alternatives should they be identified, to avoid negative impacts.
  - Recommended mitigation measures for enhancing positive impacts and avoiding or minimizing negative impacts and risks (to be implemented during design, construction and operation).
- Address specific issues and concerns raised by stakeholders during the public review phase of the Basic Assessment process (an Issues and Response Report will be provided to specialists).
- Formulation of a protocol to be followed by the City of uMhlathuze Local Municipality for the identification, protection or recovery of cultural heritage resources during construction and operation, including a list of all necessary permit applications, which may be required.

In compliance with Section 38 of the National Heritage Resources Act 25 of 1999 (NHRA), a Phase 1 Heritage Impact Assessment (HIA) must address the following key aspects:

- The identification and mapping of all heritage resources in the area affected.
- An assessment of the significance of such resources in terms of heritage assessment criteria set out in regulations;
- An assessment of the impact of the development on heritage resources;
- An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
- The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
- If heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- Plans for mitigation of any adverse effects during and after completion of the proposed development.

Please note that the following is required in terms of Section 31 of GN R543 published under Section 24 of the NEMA.

Specialist reports and reports on specialised process must contain the following:

- ❑ Details of:
  - The person who prepared the report, and
  - The expertise of that person to carry out the specialist study or specialised process.
- ❑ A declaration that the person is independent in a form as may be specified by the competent authority.
- ❑ An indication of the scope of, and purpose for which, the report was prepared.
- ❑ A description of the methodology adopted in preparing the report or carrying out the specialised process.
- ❑ A description of any assumptions made and any uncertainties or gaps in knowledge.
- ❑ A description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives, on the environment.
- ❑ Recommendations in respect of any mitigation measures that should be considered by the applicant and the competent authority.
- ❑ A description of any consultation process that was undertaken during the course of carrying out the study.
- ❑ A summary and copies of any comments that were received during any consultation process.
- ❑ Any other information requested by the competent authority.

### Assessment Conventions

For purposes of the integrated assessment of potential impacts, and the determination of impact significance; the following list of conventions must be used by Specialists when undertaking their discipline-specific assessments.

- ❑ **Direct impacts** are impacts that are caused directly by the activity and generally occur at the same time and at the place of the activity. These impacts are usually associated with the construction, operation or maintenance of an activity and are generally obvious and quantifiable.
- ❑ **Indirect impacts** of an activity are indirect or induced changes that may occur as a result of the activity. These types of impacts include all the potential impacts that do not **manifest** immediately when the activity is undertaken or which occur at a different place as a result of the activity.
- ❑ **Cumulative impacts** are impacts that result from the incremental impact of the proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities. Cumulative impacts can occur from the collective impacts of individual minor actions over a period of time and can include both direct and indirect impacts.
- ❑ **Nature** – the evaluation of the nature is impact specific. Most negative impacts will remain negative, however, after mitigation, significance should reduce:
  - **Positive.**
  - **Negative.**

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- **Spatial extent** – the size of the area that will be affected by the impact:
    - **Site specific.**
    - **Local** (limited to the immediate areas around the site; < 2 km from site).
    - **Regional** (would include a major portion of an area; within 30 km of site).
    - **National or International.**
  
  - **Duration** – the timeframe during which the impact will be experienced:
    - **Short-term** (0-3 years or confined to the period of construction).
    - **Medium-term** (3-10 years).
    - **Long-term** (the impact will only cease after the operational life of the activity).
    - **Permanent** (beyond the anticipated lifetime of the project).
  
  - **Intensity** – this provides an order of magnitude of whether or not the intensity (magnitude/size/frequency) of the impact would be negligible, low, medium or high):
    - **Negligible** (inconsequential or no impact).
    - **Low** (small alteration of natural systems, patterns or processes).
    - **Medium** (noticeable alteration of natural systems, patterns or processes).
    - **High** (severe alteration of natural systems, patterns or processes).
  
  - **Frequency** – this provides a description of any repetitive, continuous or time-linked characteristics of the impact:
    - **Once Off** (Occurring any time during construction).
    - **Intermittent** (occurring from time to time, without specific periodicity).
    - **Periodic** (occurring at more or less regular intervals).
    - **Continuous** (without interruption).
  
  - **Probability** – the likelihood of the impact occurring:
    - **Improbable** (very low likelihood that the impact will occur).
    - **Probable** (distinct possibility that the impact will occur).
    - **Highly probable** (most likely that the impact will occur).
    - **Definite** (the impact will occur).
  
  - **Irreplaceability** – of resource loss caused by impacts:
    - **High** irreplaceability of resources (the project will destroy unique resources that cannot be replaced).
    - **Moderate** irreplaceability of resources (the project will destroy resources, which can be replaced with effort).
    - **Low** irreplaceability of resources (the project will destroy resources, which are easily replaceable).
  
  - **Reversibility** – this describes the ability of the impacted environment to return/be returned to its pre-impacted state (in the same or different location):
    - Impacts are **non-reversible** (impact is permanent).
    - **Low** reversibility.
    - **Moderate** reversibility of impacts.
    - **High** reversibility of impacts (impact is highly reversible at end of project life).



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- **Significance** – the significance of the impact on components of the affected environment (and, where relevant, with respect to potential legal infringement) is described:
    - **Low** (the impact will not have a significant influence on the environment and, thus, will not be required to be significantly accommodated in the project design).
    - **Medium** (the impact will have an adverse affect or influence on the environment, which will require modification of the project design, the implementation of mitigation measures or both).
    - **High** (the impact will have a serious affect on the environment to the extent that, regardless of mitigation measures, it could block the project from proceeding).
  
  - **Confidence** – the degree of confidence in predictions based on available information **and** specialist knowledge:
    - **Low.**
    - **Medium.**
    - **High.**