

06/06/2023

DRAFT BASIC ASSESSMENT REPORT

PROPOSED LINDLEY WASTEWATER TREATMENT WORKS, NKETOANA LOCAL MUNICIPALITY

DESTEA REF. NO.: EMB/19,25,27,12(b)(iv)/23/14

NEAS Ref. No.: FSP/EIA/0000520/2023



ENVIRONMENTAL & SOCIAL SCIENTISTS

EXECUTIVE SUMMARY

NSVT Consultants has been appointed by Babereki Consulting Engineers as the independent Environmental Assessment Practitioner to undertake a Basic Assessment process for the proposed development of the wastewater treatment works located on the Remaining Extent of the Farm Brandhoek No. 19. To ensure that the municipality has a facility in place to treat sewage from Lindley/Ntha as the responsible and mandated Water Services Authority. The proposed development entails construction of a new outfall sewer pipeline that connects to the new WWTW from pumpstation 3, near Ntha and upgrading of the existing access road. The extent of the area identified for the proposed development is approximately 17 hectares, therefore the area will be subjected to clearance of indigenous vegetation. The proposed outfall sewer pipeline located west of Ntha and the access road traverse in the northern site the unnamed watercourse east of the proposed site. The Vals River is located North of the proposed site. An Environmental Authorisation must therefore be obtained from the competent authority, namely, the Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs and a water use license will also be required from the National Department of Water and Sanitation in terms of the National Water Act, 1998 (Act No. 36 of 1998) for the proposed development. According to the consulting engineers, other technologies were considered based on various factors, such as energy usage, maintenance, the quality of treated effluent, and the oxidation ponds were the preferred system. The proposed site earmarked for the development is vacant and undeveloped and is located within an agricultural setting. There are no trees, only low growing grass cover and the topography is gently sloping towards the watercourse. The photographic history depicting the conditions and land uses within and surrounding the proposed sites and the Google Satellite Imagery is provided indicating the location of the proposed WWTW, outfall sewer pipeline and the access road in relation to Lindley/Ntha. As part of the Basic Assessment process, a public participation process was undertaken to ensure the proposed development will not have any long term impacts on the local community and that it is socially acceptable, thus not infringing on anyone's rights or affecting the health and wellbeing of the residents. Therefore consultation was done with the identified interested and affected parties including the Department of Water and Sanitation, Department of Agriculture and Land Reform, South African Heritage Resources Agency, as the Commenting Authorities for the Basic Assessment Process and former being a Competent Authority for the Water Use License Application. The means of contacting I&APs included advertising in a local digital newspaper, *i.e.*, the "Reitz Advertiser", on-site notice, posters at prominent places and the current phase, reviewing of the Draft BAR. From the notification phase, nobody registered as an I&AP and no objections were received. However, comments and/or inputs are expected as the public participation process is ongoing. The methodology that was adopted to complete the Basic Assessment process, included desktop study, site visit for ground truthing, consultation with I&APs as explained above and the involvement of specialists, *i.e.*, Agricultural Specialist, Ecologist, Heritage Specialist, Hydrologist, Geohydrologist and Geotechnical Engineers. Therefore, based on their findings, identification and assessment of impacts associated with the proposed development, mitigation and management measures and recommendations were presented. Due to the identified seepage wetland, the Ecologist recommended that it should be excluded from the development footprint, therefore, the preliminary layout will have to be amended, whereas there were no other findings that required areas to be identified as no-go areas. The potential impacts were assessed using the Significance Assessment Methodology that considers the nature of the potential impact, extent and duration, reversibility, probability, magnitude, whether the impact is cumulative and whether there will


be residual risks. The significance of the potential impacts was evaluated prior to implementing any mitigation measures and evaluated again with mitigation and management measures in place. The identified impacts were mostly associated with the construction phase and were therefore temporary and limited to the development footprint. The likely cumulative impact is if the WWTW discharges untreated effluent and the outfall sewer line experiences blockages and leaks, that will flow into the unnamed tributary that discharges to the Vals River as currently there are sewage leaks that are flowing in the watercourses. Thus, the municipality needs to immediately identify and address the leak to prevent soil, surface, and groundwater contamination.

From the assessment, the significance of potential impacts ranged between Low and Medium with mitigation measures proposed to avoid or at least minimize the impact. Therefore, the identified impacts will be reduced greatly with the implementation of the outlined mitigation measures and the likelihood of residual impacts will be limited. The identified impacts, which would mostly occur during the construction phase, included soil contamination and compaction, increased risks of soil erosion, surface, and groundwater contamination, impact on the health and safety of the workforce and neighbouring land users, etc. The development does not compromise the integrity of the municipality's Integrated Development Plan and local and provincial Spatial Development Framework because it will address the collection and treatment of wastewater, which is one of the major socio-economic challenges currently faced by Lindley/Ntha. It also fits in with the aim of the National Development Programme 2013, whereby on completion, the municipality will be able to provide access to sanitation especially to the residents that are currently using bucket system. The principles of the National Environmental Management Act, 1998 (Act No. 107 of 1998) have also been considered as part of the process. According to the Screening Tool Report, the specialists were in agreement with the rating for Plant Species Theme, Aquatic Theme, Terrestrial Theme, which were all rated "low sensitivity". The Agricultural specialist reduced the rating for the Agricultural theme to Medium. However, the Animal Species Biodiversity Theme of the assessment area is rated as being of 'medium and high sensitivity' for the potential presence of the Globally Endangered Red Listed bird species *Sagittarius serpentarius* (Secretary bird) as well as the Globally Vulnerable Red Listed reptilian Species 15, which were not observed during the site inspection and the proposed WWTW footprint area does however not provide any suitable nesting sites for this bird species but for the latter, DESTEA must confirm whether the presence/absence of this species must be specifically investigated by a specialist who is suitably registered with the South African Council for Natural Scientific Professions in the field of practice relevant to the taxonomic group ("taxa") of this species before decision-making. This is required in accordance with the Animal Species Theme Biodiversity Protocol. For Phase 2 of the Public Participation process, a draft Basic Assessment Report is sent for review and comments and/or input was received will be incorporated in the Final Basic Assessment Report before submission to DESTEA. Given the above information, the Environmental Assessment Practitioner is of the view that the proposed development be approved with the requirement that the recommendations, conditions of authorisation, and mitigation measures outlined in the Basic Assessment Report and Environmental Management Programme including the management plans be implemented. It is deemed that the information that has been provided in this report is adequate to enable the competent authority to make an informed decision regarding the proposed development of the WWTW entailing an new outfall sewer pipeline and upgrading of the existing dirt road

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BASIC ASSESSMENT REPORT

Basic Assessment Report (“BAR”) in terms of the Environmental Impact Assessment (“EIA”) Regulations, 2014 (as amended), promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (as amended) (“NEMA”).

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PROJECT INFORMATION

REPORT TITLE: Basic Assessment Report

REPORT STATUS: Draft

PURPOSE OF REPORT: The purpose of this BAR is to present information on the proposed development and the need for the development; provide details of the Environmental Assessment Practitioner (“EAP”) appointed to undertake the Basic Assessment (“BA”) process; provide an overview of the public participation process; and to set out the environmental outcomes, impacts, and the residual risks.

PROJECT TITLE: Proposed Lindley Wastewater Treatment Works

APPLICANT: Nketoana Local Municipality

PROJECT ENGINEERS: Babereki Consulting Engineers

ENVIRONMENTAL CONSULTANTS: NSVT Consultants

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destea

department of
economic, small business development,
tourism and environmental affairs
FREE STATE PROVINCE

(For official use only)

File Reference Number:

Application Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 as amended and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **13 February 2020**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.

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10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

<input type="checkbox"/>	<input type="checkbox"/> NO
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If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

The proponent, Nketoana Local Municipality, intends to construct new oxidation ponds for the treatment of wastewater with a daily throughput capacity of 6Ml per day and a new 4000m x 300mm Ø bulk outfall sewer line on the Farm Brandhoek No. 19 within Nketoana Local Municipality. This is to enable to municipality to fulfil their role as a Water Services Authority in the area. The proposed site is bordered by Vals River on the northern Side. To accommodate the proposed development, clearance of indigenous vegetation in an area of approximately 17 hectares, and a discharge point onto the Vals River would be required and within 100m of the watercourse. The 8metres long discharge point would be made up a gabion channel wire and rock with a 2m width. The ±1.2km in length outfall sewer and the ±2km existing access road to be upgraded cross a watercourse, which is an unnamed tributary that discharges into the Vals River , east of the proposed site, therefore, this would require excavation, removal, and infill of material to lay the pipe and construct the road.

The typical domestic or wastewater with a high domestic component will have typical characteristics of:

- BOD (as O₂): 250 to 350 mg/l
- COD (as O₂): 500 to 700 mg/l
- Suspended solids l
- Settleable solids: 8 to 10 ml/l • l • : 200 to 350 mg/l
- TKN: 60 to 85 mg/l
- Ammonia (NH₄ + -N): 40 to 50 mg/l
- Phosphate (P): 10 to 13 mg/l

The proposed wastewater system is oxidation ponds, which will comprise of the following:

- Inlet Works -for the wastewater treatment works forms part of pre-treatment of the wastewater. The pre-treatment includes removal of very large solid debris as well as grit (detritus) so as they do not interfere with the treatment processes downstream. It will require only a rake shovel to remove the debris, which will be disposed at the landfill side.
- Two (2) anaerobic ponds - The ponds play an important part by removing most of the solid organic matter which settles to the bottom of the pond due to the steadiness of the wastewater. Very light suspended matter floats at the top of water forming a scum which enhances the environment of the anaerobic status. The two ponds will be lined with a reinforced concrete lining of 150mm thick on top of a 1mm thick HDPE lining.

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- Two (2) oxidation pond arrangement-These two species work hand in hand in degrading the organic matter. Both ponds will be lined with a 3mm thick HDPE lining
- Four (3) maturation ponds - The maturation ponds' role is to effect bacterial die-off in the water due to inhospitable conditions. These will yield the quality of wastewater thus: • BOD = 50mg/liter • TKN = 0 mg/liter • FC = 1 org/100mL.
- One (1) evaporation dam •
- Chlorination Treatment Structure / Contact tank •
- Sludge drying beds

Although Vals River is located to the north and the watercourse on the east of the proposed site, the development footprint will be outside the 1:100 year floodline. Both the Lindley/Ntha will be able to connect on the existing sewage infrastructure bordering the development. No pumping will be required the system will gravitate to the required connection points. The security fencing for the proposed wastewater treatment works be constructed with "ClearVU wire", or similarly approved, fencing. The total perimeter of the new WWTW site to be fenced is approximately 2200m. The design criteria have been taken from the "Manual on the design of small sewage Works", First Edition 1988 published by the Water Institute of South Africa (WISA). The Inception Report outlining the process undertaken to opt for the proposed development during the pre-planning phase, and the Implementation Readiness Report, which provides detailed design information of the proposed project, associated costs, and readiness to implement are attached hereto as **Appendix J1a** and **b**. The proposed wastewater treatment works with a 2041 design flow of 6.8M/l is deemed necessary as the current facility has inadequate capacity to accommodate the additional loads from eradication of bucket system.

Given the above, the Basic Assessment Process is undertaken to determine the possible environmental impacts that the proposed development may have on the environment and help ensure that there will be no long-term consequences to the environment and the community of the area. A water use license application is in progress with the Free State Region Department of Water and Sanitation, in terms of Section 21 of the National Water Act (Act 36 of 1998).

b) Provide a detailed description of the listed activities associated with the project as applied for

Listed activity as described in GN 327,325 and 324	Description of project activity
GNR. 327 Listing Notice 1 Activity 19 The infilling or depositing of any material of more than <u>10 cubic metres</u> into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur	The excavation, removal from and infilling of more than 10m ³ material from a watercourse for the construction of a new discharge point, outfall sewer pipeline and upgrading of the access road.

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<p>behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies; (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>	
<p>GNR. 327 Listing Notice 1 Activity 25 The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater, or sewage with a daily throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.</p>	<p>Development of oxidation ponds with a daily throughput of 6MI.</p>
<p>GNR. 327 Listing Notice 1 Activity 27 The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for— i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>	<p>Clearance of an area of approximately 17 hectares for the construction of new oxidation ponds</p>
<p>GNR. 324:- Activity 12 (b)(iv): The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. b. Free State i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within critical biodiversity areas identified in bioregional plans;</p>	<p>Clearance of an area of approximately 17 hectares of indigenous vegetation for the construction of oxidation ponds within 100m of Vals River and discharge point</p>

iii. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or iv. Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland.	
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2. FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h) of GN 326, Regulation 2014 as amended. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
WWTW	27°52'13.67"	27°53'17.81"
Discharge Point	27°52'08.53"	27°53'25.95"
Access Road (Watercourse crossing)	27°52'37.82"	27°53'50.83"
Outfall Sewer (Watercourse crossing)	27°52'49.74"	27°53'52.30"
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

Alternative S1 (preferred)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Alternative S3 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

The outfall sewer and access road specifications are below the EIA Listed Activities threshold, thus co-ordinates for the watercourse crossings are provided above.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

The coordinates of the proposed site for the WWTW are contained in **Appendix A1**, the Locality Map.

b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
	27°52'13.67"	27°53'17.81"
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

c) Technology alternative

Alternative 1 (preferred alternative)
Oxidation ponds-Alternatives as outlined in Section 15 of the Implementation Readiness were considered for the proposed development, looking at land availability, energy input, required operation and maintenance, treatment of wastewater to acceptable standards, level of skill and technical expertise of the municipality, etc., and the preferred option was the oxidation ponds, thus no assessment of the technology was undertaken as this was done during the pre-planning stage by Babereki Consulting Engineers.
Alternative 2
Alternative 3

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

Alternative 1 (preferred alternative)		
None		
Alternative 2		
Alternative 3		

e) No-go alternative

The proposed development of the wastewater treatment works not going ahead as planned and the proposed site remaining vacant and undeveloped as well as the access road. The outfall sewer will not be required if the wastewater treatment works aren't constructed. Therefore, the municipality will continue to use the existing facility, which is unable to meet the additional sewage as a result of the eradicated bucket system in Ntha. This will result in sewage not being able to be collected and treated

at a fully functional facility and this will result in sewage outflows thus creating inhumane living and unsightly conditions and contamination of the receiving environment, especially water resources. The municipality will not be able to accommodate future human settlement developments in the Lindley/Ntha area by providing the required bulk sanitation infrastructure. There opportunity of creating new jobs and skills development for local SMMEs through implementation of the project, will not be realised, thus the municipality will not be able to support the objectives outlined in their economic development plan.

Paragraphs 3 – 13 below should be completed for each alternative.

3. PHYSICAL SIZE OF THE ACTIVITY

a) Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Alternative A1¹ (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

Size of the activity:

170 000m²
m ²
m ²

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

(Outfall sewer) 1.44m²
(Access road) 3.61m²
Discharge point 4m²
m
m

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

170 009.05m ²
m ²
m ²

4. SITE ACCESS

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

YES	
	m

¹ "Alternative A.." refer to activity, process, technology or other alternatives.

Describe the type of access road planned:

The approximately 2km long gravel road will be paved as part of the development of the wastewater treatment works so that the driving conditions are improved and there will be an all-weather access to the proposed site.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

Locality Map is attached hereto as **Appendix A1**.

6. LAYOUT/ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;

- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

Layout Plan is attached hereto as **Appendix A2**.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

Sensitivity Map is attached hereto as **Appendix A3**.

8. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Site Photographs are attached hereto as **Appendix B**.

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

Facility Illustration (Design Drawings) are attached hereto as Appendix **C** and contained in the Implementation Readiness Report.

10. ACTIVITY MOTIVATION


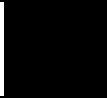


Motivate and explain the need and desirability of the activity (including demand for the activity):

1. Is the activity permitted in terms of the property's existing land use rights?	YES	[REDACTED]	Please explain
A land use right will be amended to be aligned with the proposed development as it is not a prohibited activity.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	[REDACTED]	Please explain
This proposed project is in line with the Provincial efforts to improve sanitation infrastructure and service in the area and in turn improve the quality of life, as the community will have access to increased level of sanitation.			
(b) Urban edge / Edge of Built environment for the area	YES	[REDACTED]	Please explain
The urban edge will not be impacted by the proposed development.			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES	[REDACTED]	Please explain
According to the Nketoana Local Municipality IDP 2020/2021, the council has prioritized the maintenance of infrastructure and replacement of ageing infrastructure as a priority. However, upon recommendations from the Babereki Consulting Engineers, that is would not be financially feasible to upgrade the existing wastewater treatment plant and that its location is unsuitable from engineering view, thus instead of upgrading, then a new wastewater treatment plant was deemed suitable and sustainable option. Therefore, this will enable the municipality to meet its Constitutional mandate and role as a Water Service Authority to improve access to sanitation in the Lindley/Ntha area. The households that had their buckets eradicated, will then be connected to the municipal sewer network, without stressing the system as it would have the capacity to accommodate the additional loads.			
(d) Approved Structure Plan of the Municipality	[REDACTED]	NO	Please explain
Nketoana Local Municipality does not have an approved structure plan.			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	[REDACTED]	NO	Please explain
Although there is no adopted EMF for the area, the development can be justified in terms of sustainability.			

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(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain
<p>The proposed development is aligned with the Free State Provincial Growth and Development Plan, i.e., ensuring an appropriate skill base for growth and development as it will enable the municipality to realise its strategic response of indirectly supporting schools and education initiatives in the form of infrastructure provision, and maintenance, including sanitation. Therefore, the municipality will be able to accommodate the additional loads from the schools at the new wastewater treatment plant.</p>			
<p>3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?</p>	YES		Please explain
<p>Nketoana Local Municipality as a Water Services Authority is responsible for ensuring that they provide a facility that will be able to treat effluent to acceptable levels and in the IDP, it is indicated that the SDF support the IDP priority of ensuring that 100% of households in formal settlement have access to basic level by 2021 and since it is 2023, and this priority is not met. Therefore, this can be realised if there is a functional facility and system that is able to collect, remove and treat domestic wastewater to acceptable standards before discharge.</p>			
<p>4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)</p>	YES		Please explain
<p>It is crucial that the proposed development takes place in order to provide a wastewater treatment facility that is able to accommodate the sewage generated in Lindley/Ntha, thus ensuring that the wellbeing of the community will not be affected by malfunctioning system that could result in sewage running in the streets, thus affecting the health and wellbeing of the residents.</p>			
<p>5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	YES		Please explain
<p>The proposed facility will enable the municipality to render wastewater treatment services. The service that will be required is water and electricity and since the municipality is the applicant, the new development will be provided with the required services.</p>			

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<p>6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p>	<p align="center">YES</p>		<p>Please explain</p>
<p>The municipality is the applicant; therefore, the proposed development is provided for in the municipality's infrastructure planning documents.</p>			
<p>7. Is this project part of a national programme to address an issue of national concern or importance?</p>		<p align="center">NO</p>	<p>Please explain</p>
<p>The proposed project will address a local concern, as it will benefit the residents of Lindley/Ntha.</p>			
<p>8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)</p>	<p align="center">YES</p>		<p>Please explain</p>
<p>The project entails the development of oxidation ponds as a water treatment technology and the proposed site is able to accommodate the required ample land for this type of technology, the topography does not require extensive pumping for sewage to reach the proposed facility. The required point to discharge the treated effluent into the nearest watercourse is less than 100m. There is an existing access road, although it would need to be upgraded</p>			
<p>9. Is the development the best practicable environmental option for this land/site?</p>	<p align="center">YES</p>		<p>Please explain</p>
<p>The proposed development is the best practical environmental option as no issues were identified during the design phase to render the proposed site unsuitable as well as the findings of the specialists. The impacts that would occur as a result of the proposed development, mitigation measures are outlined to lessen the significance where avoidance is not possible. The municipality have considered to construct a new wastewater treatment plant on the proposed development to be cost-effective in the long run in comparison with upgrading the existing facility. The proposed site will not require displacement of any household or change in land use as it is currently vacant and undeveloped. The location of pumpstation 3 will enable untreated to be pumped to the new water treatment plant and measures have been outlined to mitigate impacts at the watercourse crossing, which is deemed the highly sensitive aspect along the pipeline route. The access road is existing thus an upgrade will in the long run lessen the impact on the watercourse, thus improve its functionality. The topography of the site does not pose any difficulty in excavations required for the construction of the ponds.</p>			

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10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	<input checked="" type="checkbox"/>	Please explain
<p>The identified potential environmental impacts are short-term, therefore with careful planning and the practising of due diligence during the construction phase, together with proper site re-instatement, any potential residual environmental impacts will be of low significance. After rehabilitation, the receiving environment will largely return to its natural state and functionality reinstated. This will negate the long-term environmental impacts associated with the proposed permanent structures.</p> <p>On completion of the project, the residents of Lindley/Ntha will benefit from the proposed infrastructure development, as they will no longer suffer the consequences of a wastewater treatment facility that is not functioning effectively thus resulting in sewage overflowing in the streets. The residents who were using bucket system, will not be able to use a toilet system that is not compromising their dignity. This will be a long-term positive impact. Therefore, the positive impacts of the proposed development therefore outweigh the negative impacts.</p>			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	<input checked="" type="checkbox"/>	NO	Please explain
<p>No, as the proposed infrastructure will to ensure that the municipal area have a wastewater treatment plant that operates efficiently and will be able to accommodate the sewage influent from Lindley/Ntha.</p>			
12. Will any person's rights be negatively affected by the proposed activity/ies?	<input checked="" type="checkbox"/>	NO	Please explain
<p>No person's rights will be negatively affected, although the public participation process is ongoing, no objections were received during the first phase, <i>i.e.</i>, notification.</p>			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	<input checked="" type="checkbox"/>	NO	Please explain
<p>The urban edge of the municipality will not be compromised as it is located further from the residential area thus lessening the risks of theft and vandalism as it has occurred at the existing wwtw.</p>			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Please explain
<p>The proposed development will contribute to SIP 18: Water and Sanitation Infrastructure because it will enable Nketoana Local Municipality to address the basic sanitation backlog as all the households within the formal settlement will be connected to the municipal sewer network that will ensure the sewage will be treated at a functional wastewater treatment works, Thus the overall sanitation infrastructure will be improved in the area, thus contributing to SIP 6: Integrated municipal infrastructure project.</p>			
15. What will the benefits be to society in general and to the local communities?	Please explain		
<p>The municipality will ensure the society of Lindley/Ntha have access to basic level of sanitation and households that were using buckets will now have a dignified sanitation system.</p>			

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16. Any other need and desirability considerations related to the proposed activity?	Please explain
The municipality will have a wastewater treatment facility that will not require high energy and operational costs due to its topography.	
17. How does the project fit into the National Development Plan for 2030?	Please explain
The aim of the NDP is to eliminate poverty and reduce inequality by 2030 and one of the challenges is poor and inadequate infrastructure. The proposed infrastructure development is therefore in line with the NDP, as it will enable the municipality to address sanitation infrastructure backlogs as well as help to eradicate the undignified bucket system toilets more efficiently. Therefore, eventually the municipality's water treatment will not be poorly located and will have operation and maintenance plan that will ensure that it is properly/adequately maintained. During operation, the municipality will be able to provide basic services, i.e., sanitation to its citizens in an equal and balanced manner.	
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.	
The objectives of IEM have been considered because NLM, as the applicant will be accountable and take the responsibility of ensuring implementation and compliance with the conditions that will be set out in the Environmental Authorisation and Water use License. The National Department of Water and Sanitation will ensure that the outlined mitigation measures are adequate to address the anticipated impacts on the nearby watercourse to a greater extent so that the residual impacts are limited. Some of the identified aspects were addressed by specialists to ensure that proper mitigation measures and recommendations are outlined to minimize the negative impacts on the receiving environment. The Mitigation and management measures that are outlined will help ensure that no-one is adversely affected, particularly vulnerable and disadvantaged individuals. The Public Participation Process was undertaken and during the process, means of empowering people so that they can have meaningful involvement were sought. The Draft BAR will be sent for review to the Interested and Affected and their input will be captured and responded so that they can be considered during decision-making. The information obtained during the Basic Assessment and Water Use License Processes will be submitted in the form of a report to the DESTEA and to the DWS so that informed decisions can be made on the proposed wastewater treatment plant. On completion of the project, the municipality's Green Drop will be improved because they will have a fully functional wastewater treatment plant, which will be in line with the applicable regulations and wastewater management in the municipal area will be improved.	

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

The proposed development will enable the municipality to improve level of sanitation to the local community. The needs of people have therefore been placed at the forefront of Environmental management regarding this application. The sensitivity of the receiving environment has been taken into consideration and specialist studies have been undertaken to help ensure aspects related to the proposed development are addressed so that the negative environmental impacts can be minimised.

During construction, containers will be provided to contain general and construction waste and the contents thereof will be disposed of appropriately at a licensed waste disposal site and hazardous waste will be properly stored in clearly marked containers before being collected by registered service providers. All the legislation and regulations relevant to the proposed development will be complied with and the municipality will implement the mitigation and management measures outlined in the environmental reports. Public participation process was undertaken as part of the BA and Water Use License Application Process to help ensure that meaningful input is received.

11. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
The Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996)	Chapter 2-Bill of Rights Section 24: Environmental Right Section 32: Right to access of Information. No-one's environmental right is infringed upon as a result of the proposed development. During the public participation process, information regarding the proposed development would be made available and no-one will be prohibited from accessing the environmental report. The local community will have access to basic sanitation that is dignified.	Government of South Africa	04 February 1997
National Environmental Management Act, 1998 (Act 107 of 1998)	Chapter 1-National Environmental Management Principles Section 2: National Environmental management principles. Chapter 5-Integrated Environmental Management Section 24: Environmental	Department of Environmental Affairs	29 January 1999

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	<p>Authorisation (control of activities which may have a detrimental effect on the environment).</p> <p>Section 28: Duty of care and remediation of environmental damage.</p> <p>Section 29: Protection of workers refusing to do environmentally hazardous work.</p> <p>Measures must be in place to ensure activities that are to be undertaken during the duration of this project will not result in environmental degradation. The environmental legislation must be complied with, and no-one must be exposed to hazardous working conditions. The outlined principles must be considered when a decision for the proposed development is issued.</p>		
Environmental Impact Assessment Regulations, 2014 as amended	Listing Notice 1 of 2014 (GNR 327) and Listing Notice 3 (GNR 324)– which set out activities, of which some are triggered by the proposed gauging weir, which require a Basic Assessment process to be undertaken before an Environmental Authorisation may be issued.	The DESTEA	07 April 2017
National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004)	<p>Chapter 5-Species and organisms posing threat to the Biodiversity</p> <p>Section 75: Control and eradication of Listed Alien Invasive Species</p> <p>To ensure measures are in place to eradicate and control establishment of alien invasive species within the project construction footprint with the intent of protecting the biodiversity and protection of species and ecosystem.</p>	Department of Environmental Affairs	01 September 2004
National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)	<p>Chapter 4-Air Quality Management. Measures</p> <p>Section 32: Control of Dust</p> <p>Section 34: Control of Noise.</p> <p>Measures must be in place to control excessive generation of dust and noise during the construction phase to prevent pollution that could affect the land</p>	Department of Environmental Affairs	11 September 2005

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	and water systems, and decrease agricultural yields, as well as ecological degradation.		
National Environmental Management: Waste Act, 2008 (Act 59 of 2008)	<p>Chapter 4-Waste Management Measures</p> <p>Section 21: General Requirements for Storage of Waste</p> <p>Section 26: Prohibition of unauthorised disposal</p> <p>Section 27(2)(a): Littering</p> <p>To ensure waste generated is handled and disposed efficiently in a way that it would not pollute the receiving environment. Overall waste management measures must be aimed at reducing, re-using, recycling and recovering of waste.</p>	Department of Environmental Affairs	01 July 2009
National Water Act, 1998 (Act No. 36 of 1998)	<p>Chapter 3 – Protection of Water Resources.</p> <p>Section 19 – Prevention and remedying effects of pollution.</p> <p>Section 20 – Control of emergency incidents.</p> <p>Chapter 4 – Use of Water</p> <p>Section 21: Licensing of Water Uses</p> <p>Section 39-Dishcharge of Water containing waste into a water resource.</p> <p>To ensure measures are in place to prevent pollution of the Vals Spruit and al water uses associated with the proposed development to be authorised/licensed. In case of any incidents, they should be reported to DWS. The wastewater quality must meet the set quality requirements.</p>	Department of Water and Sanitation	06 December 1999
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)	<p>Section 5: Prohibition of spreading of weeds.</p> <p>Section 6(e)(f)(j)(l): Control Measures - To ensure there are measures in place to control spreading of weeds.</p>	Department of Agriculture, Forestry and Fisheries	01 June 1984
National Heritage Resources Act (Act 25 of 1999)	<p>Section 34: Protection of Structure Older than 60 years</p> <p>Section 35: Protection of Heritage</p>	National Heritage Resources Agency	28 April 1999

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	<p>Resources</p> <p>S36: Protection of graves and burial grounds</p> <p>Section 38: Heritage Impact Assessment for linear development exceeding 300m in length, development exceeding 5000m² in extent.</p> <p>It provides for the protection and management of conservation-worthy places and areas by local authorities and preservation. A Letter of Exemption for undertaking Heritage Impact Assessment was obtained from the Heritage Specialist.</p>		
Mineral and Petroleum Resources Development Act (Act 28 of 2002)	<p>Chapter 4: Mineral and Environmental Regulation</p> <p>Section 38A</p> <p>It provides for equitable access to and sustainable development of the nation's mineral and petroleum resources.</p> <p>Environmental Authorisation and Mining Permit/Right must be obtained for quarries and borrow areas to be created to obtain construction material (e.g., concrete aggregates and earth embankment) alternatively material should be sourced from commercial quarries.</p>	Department of Mineral Resources	01 May 2004
Occupational Health and Safety Act, 1993 (Act No. 15 of 1993)	<p>Provisions for Occupational Health & Safety in the workplace.</p> <p>Therefore, it is important that everyone involved in the project implementation is working in a safe environment without any risks to their health.</p>	Department of Labour	23 June 1993
Water Services Act, 1997 (Act No 108 of 1997)	<p>To provide for the rights of access to basic water supply and basic sanitation</p>	Nketoana Local Authority	19 December 1997

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

If YES, what estimated quantity will be produced per month?

YES	NO
<p align="right">m³</p> <p>It is not possible to estimate the amount of solid waste that will be generated during the construction phase, and spoil material from the trenches may vary greatly. It is expected that very little general waste will be generated.</p>	

How will the construction solid waste be disposed of (describe)?

Refuse bins with lids will be provided on the construction site and when full the bins will be transported from the site for the waste to be appropriately disposed of at a licensed waste disposal site. For excess construction material, e.g., bricks, the resident engineer will indicate how the spoil material will be disposed or re-used.

Where will the construction solid waste be disposed of (describe)?

It will be disposed at the Lindley solid waste site

Will the activity produce solid waste during its operational phase?

If YES, what estimated quantity will be produced per month?

YES	NO
<p align="right">m³</p> <p>General waste will be generated by the workforce thus it can't be estimated</p>	

How will the solid waste be disposed of (describe)?

It will be collected in refuse bins, then disposed of at the Lindley solid waste site when full.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

Lindley solid waste site

Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?

N/A

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA? [REDACTED] **NO**
 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility? [REDACTED] **NO**
 If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? [REDACTED] **NO**
 If YES, what estimated quantity will be produced per month? m³
 Will the activity produce any effluent that will be treated and/or disposed of on site? [REDACTED] **NO**
If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility? [REDACTED] **NO**
 If YES, provide the particulars of the facility:

Facility name: [REDACTED]
Contact person: [REDACTED]
Postal address: [REDACTED]
Postal code: [REDACTED]
Telephone: [REDACTED]
E-mail: [REDACTED]

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

The proposed development is a wastewater treatment facility, whereby oxidation ponds will be used to treat sewage/influent. However, at the moment, there are no plans to reuse/recycle the treated effluent. It will be discharged into the Vas River. However, if the irrigation standards are met of the treated effluent, the municipality could reconsider.

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

	NO
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If YES, is it controlled by any legislation of any sphere of government?

YES	NO
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If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If NO, describe the emissions in terms of type and concentration:

The emissions will be from construction vehicles. The exhaust gases will be of negligibly low quantities. All the same, construction vehicles will be kept in a good working condition to minimise emissions. There will be some dust generated by construction related activities, which is temporary, and measures will be in place to ensure that it is controlled and does not cause any harm to human health or well-being. There is no sensitive receptor that could be affected by the dust generation and construction vehicles and equipment emissions except for the workforce, except for the neighbouring farmers that use the access road to access their properties.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

	NO
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If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

YES	
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If YES, is it controlled by any legislation of any sphere of government?

	NO
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Describe the noise in terms of type and level:

The noise that will be generated will be associated with construction activities, e.g., excavation, earthmoving, drilling, pumping, movement of construction machinery and equipment. However, these activities would be limited to normal working hours. Potential sensitive receptors within proximity of the construction site are the neighbouring households, therefore, it is imperative that mitigation measures be put in place to reduce noise as much as possible. The noise produced should be kept within the limits specified in the municipal by-laws.

13. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

Municipal	
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

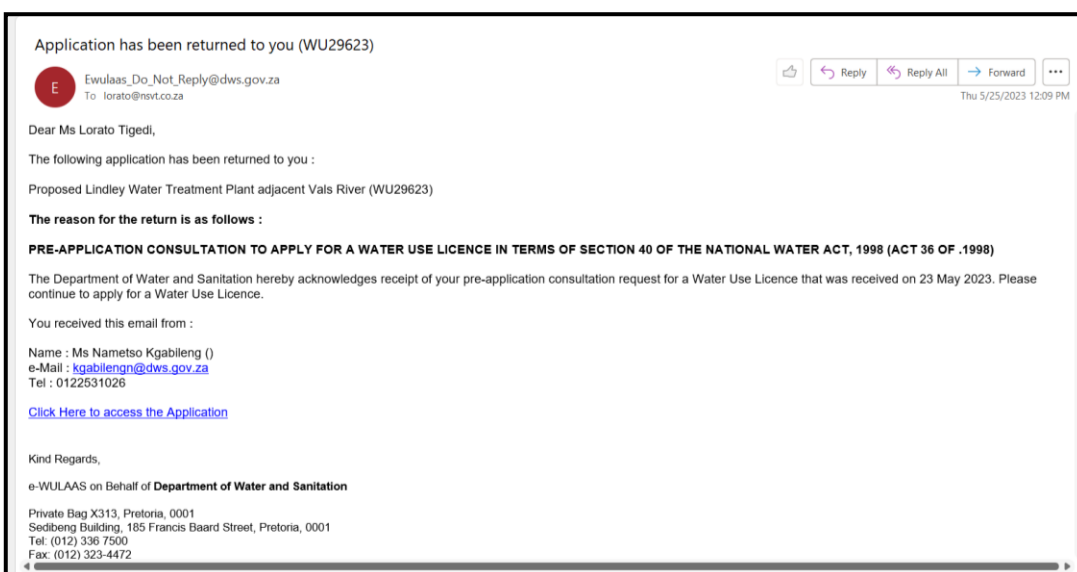
N/Alitres

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

YES	
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If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

Application submitted and in progress, see below



14. ENERGY EFFICIENCY

Describe the design measures, if any, which have been taken to ensure that the activity is energy efficient:

<p>The proposed technology for treatment of wastewater, <i>i.e.</i>, oxidation ponds require little to no energy to operate, as they rely on natural biological processes to treat wastewater. Although the facility will be connected to the municipal electrical connection, it would be mostly for lighting purposes.</p>

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

<p>Solar panels will be placed on top of the control room.</p>

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A):

2. Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section? **YES**
 If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:

Province	Free State
District Municipality	Thabo Mofutsanyana
Local Municipality	Nketoana
Ward Number(s)	3
Farm name and number	Farm Brandhoek No. 19
Portion number	-
SG Code	F02200000000001900000

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

Undetermined/Agriculture

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required? **YES**

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20					
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

2.1 Ridgeline	<input type="checkbox"/>	2.4 Closed valley	<input type="checkbox"/>	2.7 Undulating plain / low hills	<input type="checkbox"/>
2.2 Plateau	<input type="checkbox"/>	2.5 Open valley	<input type="checkbox"/>	2.8 Dune	<input type="checkbox"/>
2.3 Side slope of hill/mountain	<input type="checkbox"/>	2.6 Plain	<input checked="" type="checkbox"/>	2.9 Seafront	<input type="checkbox"/>
2.10 At sea	<input type="checkbox"/>				

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following?

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)			
Dolomite, sinkhole or doline areas			
Seasonally wet soils (often close to water bodies)			
Unstable rocky slopes or steep slopes with loose soil			
Dispersive soils (soils that dissolve in water)	YES (Water Crossings)		
Soils with high clay content (clay fraction more than 40%)			
Any other unstable soil or geological feature			
An area sensitive to erosion	YES		

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

The Geotechnical and Geohydrological Reports are attached hereto as **Appendix D1** and **2** respectively. The findings are contained in the EMPr attached hereto as Appendix G and recommendations in Section E below. However, no findings to suspend the project or render the site unsuitable for the proposed development were indicated.

4. GROUNDCOVER

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition^E	
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If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES	
Non-Perennial River		
Permanent Wetland		
Seasonal Wetland	YES	
Artificial Wetland		
Estuarine / Lagoonal wetland		

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

Vals River:

The Vals River flows past the proposed WWTW footprint area, approximately 170 m to the north and continues in a westerly direction, which drains its water with quaternary catchment C60A to C60B of the Vaal Water Management Area. It is located within the Rhenoster/Vals Sub Catchment of the Middle Waal Water Management Area. It is a second order river and geomorphic zone is characterized by Lower Foothills. The river condition is Moderately Modified. The Present Ecological State (PES), 2018 is classified as Class C (Moderately Modified), Ecosystem Tret Status (ETS), 2018 as Critically Endangered (CR), and the Ecosystem Protection Level (EPL), 2018 is Poorly Protected (PP). The Vals River form an important part of the local and broader quaternary surface water catchment and drainage area, towards the west. According to the National Freshwater Ecosystem Priority Areas Database (NFEPA, 2011), the portion of the C60B-2562 Quaternary Reach (SQR) associated with the assessment area, does not fall within any Fish Support Area, -Sanctuary, -Corridor or -Rehabilitation Area. No populations of conservationally significant threatened fish species have been recorded throughout the specific portion of the Vals River which flows past the proposed WWTW footprint area or the local downstream region or are expected to specifically utilise this portion of the river as refuge or for breeding, -foraging and/or persistence purposes. The Aquatic Biodiversity Theme of the specific portion of the Vals River is rated as being of "Very High sensitivity" and the specialist is in agreement with this rating.

Seepage Wetland:

A small seepage wetland is present along the central-northern boundary of the proposed WWTW footprint area. Two preferential water flow paths/drainage lines subsequently flow out of the wetland on the northern downstream side and discharge into the Vals River. The wetland mainly constitutes a small natural, actively functional semi-aquatic, waterlogged habitat. The semi-aquatic habitat is mainly dominated by the sedge species *Cyperus* spp. as well as the hydrophytic grass species *Eragrostis plana* and *Themeda Triandra*. A single cluster of the provincially protected succulent species *Aloe grandidentata* was also found to be present within the wetland. There is no Red Data Listed, nationally protected-, or other provincially protected species or any other plant species of conservational significance/value, were found to be present throughout the seepage area. Although no Conservationally significant or important avifaunal species/nests or other -faunal species were observed throughout the seepage wetland, during the site assessment, it provides locally distinct and important semi-aquatic habitat-, which could possibly be utilised by small numbers of common and habitat-specific aquatic bird-, amphibian-, and other aquatic faunal species as refuge and for breeding, foraging and/or persistence purposes. It is therefore evident from an aquatic biodiversity perspective, that the seepage wetland forms an important part of the aquatic ecology of the area. The PES of the seepage wetland is classified as Class A as it is unmodified, EIS as Class C (moderate) and the REC is classified as Class A (maintain).

Concentrated Water Drainage Area:

A small, elevated hill is situated approximately 100m south of the eastern portion of the proposed WWTW. It acts as a natural local linear surface water runoff- and drainage/watershed separator, between the areas situated north and south of the hill apex, respectively. The hill therefore creates a localised and confined watershed and catchment, from which surface water runoff and drainage is concentrated through the small south-eastern portion of the proposed site, during rainfall events. Due to the moderately sloping topography of the concentrated water drainage area along with a lack of continuous water flow through the local area, it does not possess any locally distinct or important semi-aquatic habitat. It rather houses a relatively similar terrestrial grassland habitat relative to the surrounding landscape, with merely a slight variation in species composition and representation. The concentrated water drainage area is mainly dominated by hydrophytic grass species *Eragrostis plana* and *Themeda triandra*, while the grass species *Eragrostis spp.* were also found to be present but to a significantly lesser extent. No Red Data Listed-, nationally protected- or provincially protected plant species or any other plant species of conservational significance/value, were found to be present throughout the area drainage area. There is no conservationally significant, or important avifaunal species/nests or other faunal species were observed. It is not expected that the area would be utilised by any common or habitat-specific aquatic bird-, amphibian- or other aquatic faunal species as refuge or for breeding, foraging and/or persistence purposes, due to the lack of any locally distinct or important semi-aquatic habitat. Therefore, the concentrated water drainage area is not viewed as being of high conservational/ecological significance or value, from an aquatic perspective. The Aquatic Biodiversity Theme of the assessment area, where the concentrated water drainage area is found, is rated as being of "Low Sensitivity" as the specialists is in agreement with this rating.

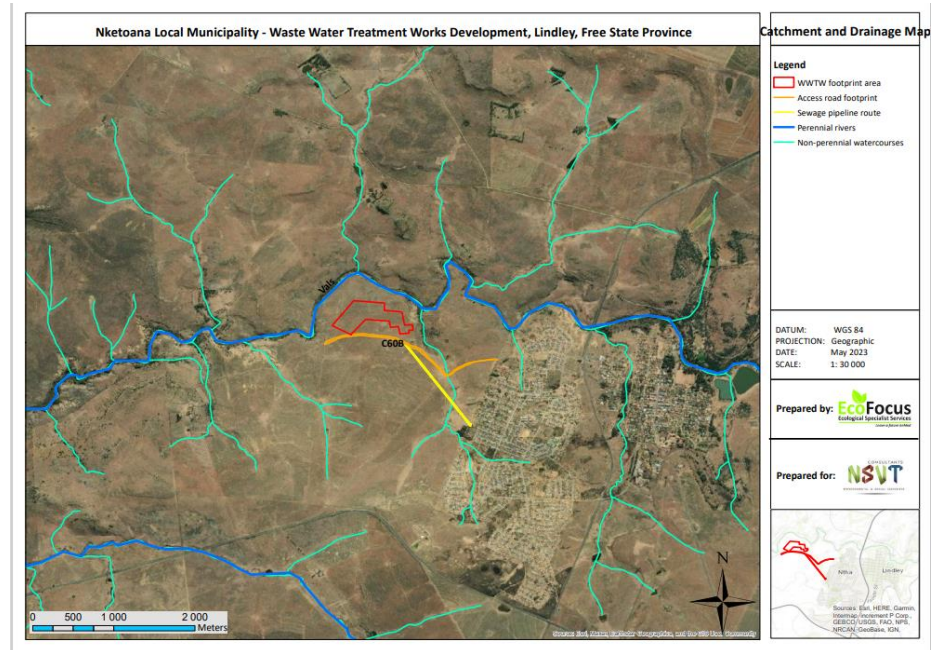
Watercourse (Access Road and Outfall Sewer Pipeline)

A significant second-order seasonal watercourse and associated floodplain flows past the proposed WWTW footprint and discharges into the Vals River approximately 200m east of the area. The proposed access road and sewage pipeline route will both transverse this watercourse and associated floodplain but at different locations. The watercourse commences within- and flows through Ntha township and is in a highly polluted and degraded state, mainly as a result of significant historical and continued raw sewage discharge into the watercourse by the township. The watercourse and associated floodplain mainly constitute a broad disturbed but actively functional semi-aquatic habitat, mainly dominated by the hydrophytic grass species *Setaria incrassate* and *Eragrostis plana*, while the sedge species *Cyperus spp.* was also found to be present but to a significantly lesser extent. No Red Data Listed-, nationally protected-, or provincially protected plant species or any other plant species of conservational significance/value, were found to be present. No Conservationally significant or important avifaunal species/nests or other -faunal species were observed throughout the watercourse and associated floodplain. Although the watercourse and associated floodplain provide local distinct semi-aquatic habitat, which can be utilised by aquatic bird-, Amphibian-, and other aquatic faunal species, the area is subjected to continued anthropogenic activity and disturbance due to the close proximity of the township. It is therefore unlikely that any conservationally significant or important faunal or avifaunal species would specifically utilise the portion of the watercourse and associated floodplain associated with the development, as refuge or for breeding, foraging and/or persistence purposes.

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It should be noted that the seasonal timing of the assessment was not favourable for successful identification of all plant species individuals. The Ecological including Aquatic Biodiversity Assessment and the Hydrological Reports are attached hereto as **Appendix D3** and **D4** respectively. The Screening Tool and Site Verification Sensitivity Reports are attached hereto as **Appendix J2A** and **B** respectively.

The Catchment and Drainage is shown below:



6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

Natural area	
Medium density residential (Outfall Sewer)	School (Access Road)
	Agriculture
	River, stream or wetland
	Mountain, koppie or ridge

	Other land uses (describe): Concentrated Drainage area
--	-------------------------------------------------------------------------

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)		NO
Core area of a protected area?		NO
Buffer area of a protected area?		NO
Planned expansion area of an existing protected area?		NO
Existing offset area associated with a previous Environmental Authorisation?		NO
Buffer area of the SKA?		NO

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

The Conservation Status Map is attached hereto as Appendix A4 .

7. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:		NO
N/A	Uncertain	

N/A

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If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

The Sensitivity Rating for the Palaeontology Theme is rated as High and for the Archaeological and Cultural Heritage Theme as “Low Sensitivity” and specialist is in agreement with both ratings. The Heritage Assessment Report is attached hereto as **Appendix D5**.

Will any building or structure older than 60 years be affected in any way?

NO

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

NO

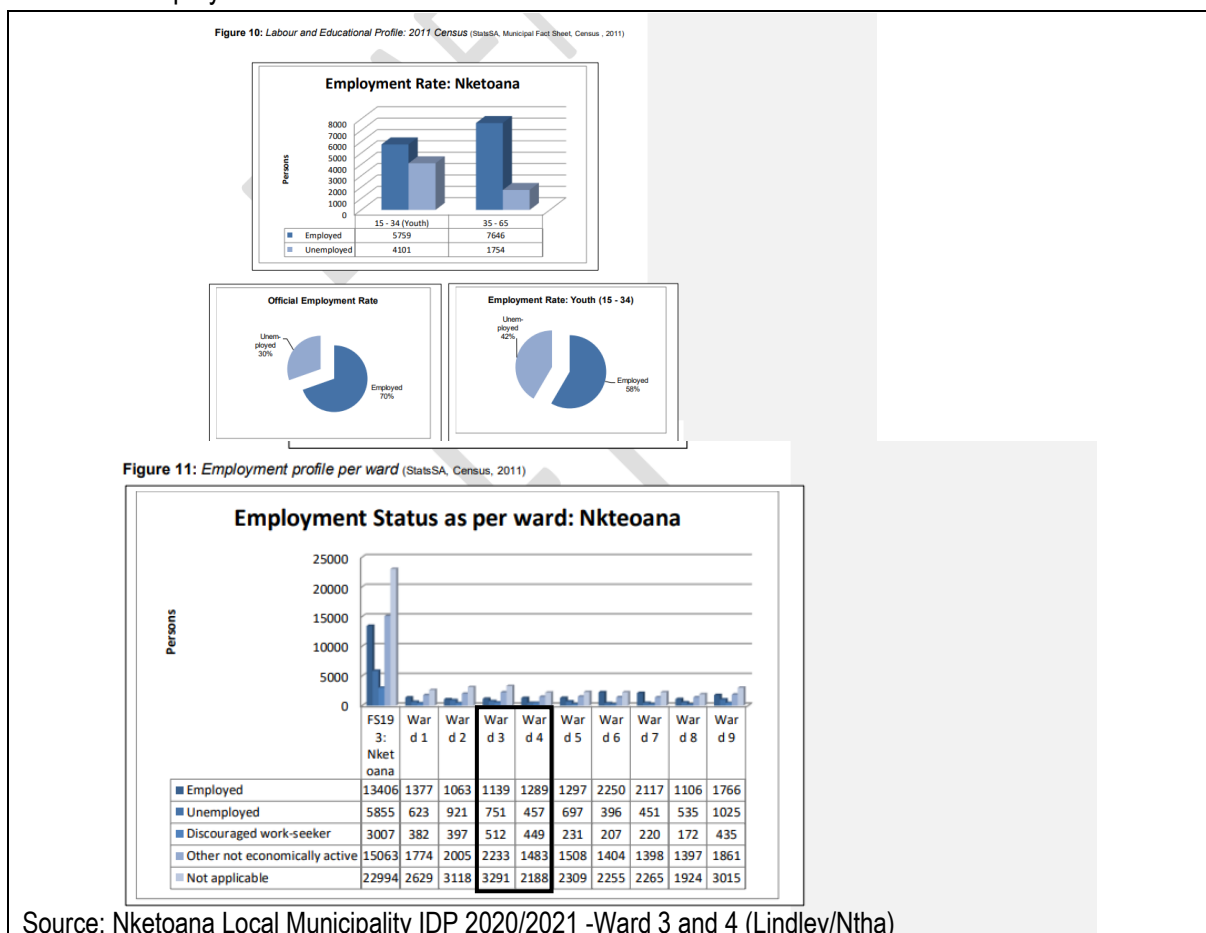
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:



Source: Nketoana Local Municipality IDP 2020/2021 -Ward 3 and 4 (Lindley/Ntha)

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Economic profile of local municipality:

Agriculture is the main economic activity in the municipality. Others of importance are private households, wholesale, retail and community and social services. Lindley has a linear CBD, along the north and south main road, hosting about 23 businesses. Ntha has a need for a business node, as there are currently only fragmented shops. There are industrial sites located on the southern side of Lindley, and also room for expansion adjacent to the railway. Ntha has a couple of light industrial sites on the northern part, located along the main connector road. It is characterised by brick building and associated industries. (Nketoana Local Municipality IDP 202/2021)

Level of education:

Table 25: Level of Education (StatsSA, Census, 2011)

	Grade 0 - Grade 7 / Std 5/ ABET 3	Grade 8 / Std 6 / Form 1 - N6 / NTC 6	Certificate with less than Grade 12 / Std 10 - Diploma with less than Grade 12 / Std 10	Certificate with Grade 12 / Std 10 - Post Higher Diploma Masters; Doctoral Diploma	Bachelors Degree - Bachelors Degree and Post graduate Diploma	Honors degree - Higher Degree Masters / PhD	Other - Not applicable
FS193: Nketoana	20994	24279	97	1338	440	222	12954
Ward 1	2253	2704	17	177	48	33	1553
Ward 2	2846	2869	2	91	15	12	1670
Ward 3	3063	2977	6	117	23	21	1719
Ward 4	1969	2377	5	152	57	26	1280
Ward 5	2219	2386	2	98	39	7	1290
Ward 6	2087	2387	30	283	120	62	1543
Ward 7	2105	2722	32	254	113	52	1174
Ward 8	1643	2386	1	115	9	2	978
Ward 9	2810	3472	1	51	16	6	1746

Source: Nketoana Local Municipality IDP 2020/2021

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R91 956 420.75
What is the expected yearly income that will be generated by or as a result of the activity?	R0
Will the activity contribute to service infrastructure?	YES
Is the activity a public amenity?	NO
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	53
What is the expected value of the employment opportunities during the development and construction phase?	R21 million rands
What percentage of this will accrue to previously disadvantaged individuals?	93%
How many permanent new employment opportunities will be created during the operational phase of the activity?	12
What is the expected current value of the employment opportunities during the first 10 years?	R24 million rands 100%
What percentage of this will accrue to previously disadvantaged individuals?	

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

- a) **Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)**

Systematic Biodiversity Planning Category		If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
	Other Natural Area (ONA)	N/A

- b) **Indicate and describe the habitat condition on site**

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	97%	The habitat on site is intact to a greater extent. The proposed WWTW footprint area constitutes a moderately sloping, reasonably natural, medium-height terrestrial grassland habitat with moderate-to high-density low growing shrub layer. No individuals, nests or burrows of the species that have a potential presence of the Globally Endangered Red Listed bird species <i>Sagittarius serpentarius</i> (Secretary bird) as well as well as the Globally Vulnerable Red Listed reptilian species 15 in accordance with the Environmental Screening Tool. However, the reasonably natural grassland landscape provides suitable/favourable foraging habitat and prey availability for the potentially/likely presence of the former

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		<p>species. The area does not provide any suitable nesting sites for this bird species. The latter species almost exclusively inhabits flat or sloping Highveld Grasslands. This species lives in self-excavated burrows, although it can be opportunistic by inhabiting existing empty burrows. Although the reasonably natural grassland landscape of the proposed WWW footprint area provides potentially suitable habitat for this species, the shallow soils underlain by near-surface bedrock result in less favourable conditions for the digging of adequate burrows. The assessment does not fall within any important Bird Areas (IBA) as per the latest IBA map. No conservationally significant or important avifaunal species/nests, other faunal species or locally distinct avifaunal/other faunal habitats were observed throughout the assessment area, during the site assessment. Only common local resident bird species were found to be present.</p> <p>The seepage wetland provides locally distinct and important semi-aquatic habitat, which could possibly be utilised by small numbers of common and habitat-specific aquatic bird-, amphibian- and other aquatic faunal species as refuge and for breeding, foraging and/or persistence purposes. Due to the increased soil surface rockiness and presence of crevasses associated with the rocky ridge/outcrop, it is also reasonably expected that the ridge/outcrop is likely utilised by small numbers of common and habitat-specific reptilian species as refuge and for breeding, foraging and/or persistence purposes. The Site Ecological Importance is classified as low-medium. The assessment area is viewed as being of low to moderate overall conservational significance/value for habitat preservation and continued ecological functionality and - integrity persistence in support of the surrounding ecosystem, broader vegetation type as well as faunal and avifaunal habitats.</p>
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
Degraded	2%	A limited portion of the proposed sewage pipeline route

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(includes areas heavily invaded by alien plants)		transverses degraded land. The area constitutes a historically cultivated agricultural cropland. Soil erosion occurs east and west of the proposed development.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	4%	Th existing dirt road that is used to access the proposed site. The portion of the outfall sewer crosses an area which the Screening Tool rated the Agricultural Sensitivity as being High sensitivity due to the land being annual cultivated crops, but from site verification, sensitivity is reduced to Moderate. The Land Capability is found to be low because of the structured soils, erosion risks, salinization risks and poor drainage. The Agricultural Compliance Statement is attached hereto as Appendix D6 .

c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems				
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)		Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)	Estuary		Coastline	
	Least Threatened (Least Concerned)		YES		NO	

- d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The entire assessment falls within the Central Free State Vegetation Type (Gh 6), classified as Least Concerned. Virtually the entire assessment area and broader surrounding landscape is categorised as Other Natural Area (ONA). The grassland is mainly dominated by the grass species *Eragrostis chloromelas* and *E. curvula* while the species *Themeda triandra*, *Cymbopogon pospischilii*, *Eragrostis gummiflua*, *Eragrostis lacnantha* and *Aristida spp.* were also found to be present. The grass species *Digitaria eriantha*, *Elionurus muticus* and *Cynodon dactylodon* were merely found to be sparsely present. There is a low-growing shrub later and undesired indicator species of bush encroachment, *Seriphium plumosum*. There is no evident diverse forb- or succulent layer throughout the grassland habitat. A single individual of the provincially protected underground bulb species *Boophone disticha* was also found to be present. The Plant Species Biodiversity Theme is rated as being of “Low Sensitivity” and the specialist is in agreement. A prominent ridge/rocky outcrop with an abrupt approximate 1.5m elevation drop, runs along the central portion of the proposed WWTW footprint area and houses a similar vegetation species composition and representation to that of the rest of the grassland habitat, but with additional shrub species. The Terrestrial Biodiversity Theme Species Biodiversity Theme is rated as being of “Low Sensitivity” and the specialist is in agreement. The watercourse and associated floodplain mainly constitute a broad disturbed but actively semi-aquatic habitat. The concentrated water drainage area is mainly dominated by the hydrophytic grassland. The seepage wetland mainly constitutes a small natural, actively functional semi-aquatic, waterlogged habitat. The semi-aquatic habitat is mainly dominated by the sedge species *Cyperus spp.* as well as the hydrophytic grass species *Eragrostis plana* and *Themeda Triandra*. A single cluster of the provincially protected succulent species *Aloe grandidentata* was also found to be present within the wetland. No Red Data Listed-, nationally protected- or other provincially protected plant species s or any other species of conservational significance/value within the assessment area, rocky outcrop, and seepage wetland. The Aquatic Biodiversity Theme of the assessment area is rated as being of “Low Sensitivity,” and the specialist is in agreement. The Ecological Report is attached hereto as **Appendix D3**.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Reitz Advertiser	
Date published	12 April 2023	
Site notice position	Latitude	Longitude
	27°52'32.06"	27°54'10.36"
Date placed	12 April 2023	

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

Proof of Newspaper Advertisement, On Site Notice and Posters are attached hereto as **Appendix E1**.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 326

The measures that were undertaken to include the potential I&APs are as follows:

Posters were placed at the Lindley and Ntha Library and Lindley municipal offices. A telephonic discussion was held and subsequent to that, the Background information document was sent to the key stakeholder, *i.e.*, Councillor Mabaso of Ward 3.

No public meetings were held as no-one registered as an interested and affected party and no objections were received during the public participation process.

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 326

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Cllr. Mabaso	Councillor (Ward 3)	063 162 2559 mosondasemabaso@gmail.com

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- Electronic mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

The Background Information Document was e-mailed to the Ward Councillor as contained in **Appendix E6**, but no read receipt was received.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
A Heritage Impact Assessment must be done as per Section 38(3) and 38(8) of the National Heritage Resources Act, which include an archaeological component and any other applicable Heritage components.	HIA is included as part of the Basic Assessment Process.
Archaeological components should follow the SAHRA, 2007 Minimum Standards: Archaeological Component of Impact Assessment Report.	The Interim Comments were forwarded to the Heritage Specialists to ensure that their report will comply with the Minimum Standards.
A field-based Palaeontological Impact Assessment must be undertaken by a Qualified palaeontologist as the development area is mostly located within an area of a very high sensitivity in terms of Palaeontological Resources as per SAHRIS PalaeoSensitivity Map. The report must comply with the 2012 Minimum Standards: Palaeontological Components of HIA.	
Any other resources as defined in Section 3 of the NHRA that may be impacted, such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewsapes must also be assessed.	
The NEMA EIA Documents and appendices must be submitted at the start of the public review periods in order for an informed comment to be issued that can be incorporated into the final reports for submission to the competent authority.	
Protection of high potential agricultural lands	No loss of high potential agricultural lands,

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

The Comments and Responses Table is contained in the Draft Basic Assessment Report as **Appendix E3** and the Comments and Responses Report will be contained in the Final Basic Assessment Report.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Nketoana Local Municipality	Mr. Mokete Nhlapo	058 863 2811	058 863 2523	kiddokc@setsoto.co.za	P.O. Box 26 Reitz 9810
	Ms. Retshepile Semela		073 408 9729	semelarets@gmail.com	
	Mr. Mabaso		078 322 2708	mosondasemabaso@gmail.com	
Thabo Mofutsanyana District Municipality	Mr. Sabelo Nkosi	058 718 1000		nkosi@tmdm.gov.za	Private Bag X810 Witsieshoek 9870
DFFE Deployee (Thabo Mofutsanyana DM)	Mr. Lefu Mofokeng	-	-	lmofokeng@dfte.gov.za	-
Free State Department of Water and Sanitation	Mr Vernon Blair	051 405 9000	051 430	blairV@dws.gov.za	P.O. Box 528 Bloemfontein 9300
	Mr. George Nel		8146	NelG@dws.gov.za	
DESTEA	Ms. Boipelo Mogorosi	051 400 4804	-	interneae@destea.gov.za	Private Bag X20801 Bloemfontein

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					9300
South African Heritage Resources Agency	Sityhilelo Ngcatsha	021 462 4502	021 462 4509	info@sahra.org.za	P.O. Box 4637 Cape Town 8000
Free State Heritage Resources Authority	Ms. Loudine Philip	051 447 9609		Loudine.philip@nasmus.co.za	P.O. Box 6266 Bloemfontein, 9301

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

Proof that Authorities received written notification is contained in **Appendix E4**.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

Although a no-one registered as an I&AP, the I&APs database maintained during the Basic Assessment Process is attached hereto as **Appendix E5**.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

Copies of electronic mail notifications sent to identified I&APs are attached hereto as **Appendix E6**.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 as amended and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. IMPACTS THAT MAY FROM THE PLANNING AND THE DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
Poor design of the oxidation ponds that could result in poorly treated effluent being discharged into the Vals River and affecting the water quality	Direct impacts: <i>Surface water pollution as a result of increase in algal bloom and this threatening the survival of aquatic life</i>	Very High	The design must be able to meet the applicable engineering standards and designed by a professional engineer with the required expertise.
	Indirect impacts:		
	Cumulative impacts:		
Continuation of the project without obtaining relevant authorisations, licenses, etc.	Direct impacts: Result in imprisonment or fine being issued or both the fine and imprisonment	High	No commencement of the construction phase without obtaining the necessary authorisation and the applicant have been informed of the implications.
	Indirect impacts:		
	Cumulative impacts:		
Employment opportunities for the local	Direct impacts: Improvement of the local economy as there will be increased in	Low	Most of the unskilled job opportunities should be for the local labourers and

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Activity	Impact summary	Significance	Proposed mitigation
community and SMMEs	buying power by locals and decrease in unemployment in the short term.		involvement as well as upskilling of local SMMEs should be considered.
	Indirect impacts:		
	Cumulative impacts:		
Clearance of indigenous vegetation for the site preparation and establishment of the site camp resulting in the destruction of Red Date Listed-, Nationally and/or Provincially Protected species.	Direct impacts:	Medium	Vegetation clearance including construction activities must be confined to the development footprint. A Flora Permit must be obtained from DESTEA before commencement of the construction phase. Unauthorised footprint expansion into the surrounding environment must be prohibited. The identified seepage wetland with a 20m protective buffer must be excluded from the construction footprint and demarcated as a no-go area.
	Indirect impacts:		
	Cumulative impacts:		
Soil erosion due to increased runoff as a result of vegetation clearance.	Direct impacts:		
	Indirect impacts:	Medium	Vegetation clearance must be confined to the development footprint and topsoil must be stripped on work areas as needed to prevent prolonged exposure of bare soil to harsh conditions. Adequate stormwater and erosion management measures must be put in place. ECO must routinely inspect erosion management measures.
	Cumulative impacts:		
Soil	Direct impacts:		

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Activity	Impact summary	Significance	Proposed mitigation
contamination from leaks and spills of construction vehicles, machinery and equipment.	Indirect impacts:	High	Regular check ups and routine maintenance and designated parking space. In case of leaks or spills, they should be reported immediately to the resident engineer to schedule a repair appointment. No uncontrolled movement of construction vehicles especially within the identified seepage wetland and 100m of the watercourse.
	Cumulative impacts:		
Spread of alien invasive species	Direct impacts:		
	Indirect impacts:	Medium	All identified alien invasive species must be actively eradicated. Alien Invasive Species Establishment Management and Prevention Plan must be implemented.
	Cumulative impacts:		
Contamination of the Vals River, the unnamed tributary by contaminated runoff and the identified seepage wetland.	Direct impacts:		
	Indirect impacts:	Medium-High	Construction vehicles must be operated efficiently and according to the specifications of the manufacturer. Mixing of concrete must be done on impermeable surfaces. Water for washing vehicles must be contained on site so that it does not enter the watercourses. Erosion control on disturbed areas must be implemented to avoid silts entering into the aquatic habitat and impacting water quality of downstream users.
	Cumulative impacts:		
Impact of the	Direct impacts:		

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Activity	Impact summary	Significance	Proposed mitigation
flow regime of the unnamed tributary during construction	Direct impacts:		
	Indirect impacts:	Medium-high	There will be temporary disturbance of the flow to allow placing of the pipe underground. An adequately sized culvert must be installed at the watercourse crossing for the roads. Therefore, it is important that construction is done during low flows as much as possible so that there is minimal disturbance of the flow. The construction portion must be adequately rehabilitated as practicably as possible after the construction of concurrent rehabilitation must be done. Water Use license must be obtained for the watercourse crossings before construction.
	Cumulative impacts:		
Destruction of the identified seepage wetland	Direct impacts:	Medium-High	The wetland must be buffered out of the development and construction footprint, with a minimum of approximately 20m buffer distance. No storage or construction material may be stored within the wetland, or its buffer and movement of construction vehicles must be prohibited.
	Indirect impacts:		
	Cumulative impacts:		
Poor handling, storage of waste generated during construction resulting in	Direct impacts:		
	Indirect impacts:	Medium High	Waste management measures must be put in place to help prevent litter and debris from entering the watercourse. Refuse bins with lids must be provided and a dedicated area

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Activity	Impact summary	Significance	Proposed mitigation
contamination of the receiving environment			for temporary storage of waste before disposal must be identified and communicated to the workforce. No burning or burying of waste will be allowed on-site. Records for waste disposal for both general and hazardous waste must be in place.
	Cumulative impacts:		
Impact on the Health and Safety of the Workers and Public	Direct impacts:		
	Indirect impacts:	Medium-High	Construction must adhere to the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) requirements and employees must be provided with suitable equipment to protect them from hazards being presented. An emergency preparedness plan must be compiled.
	Cumulative impacts:		
Loss of agricultural lands with high soil potential	Direct impacts:	Medium-High	Construction must be limited to the development footprint, to ensure that only a small footprint is transformed in relation to the local and broader area. Turning of soil during construction must be avoided.
	Indirect impacts:		
	Cumulative impacts:		
Contamination of groundwater from overflows, seepage and	Direct impacts:		
	Indirect impacts:	High	The significance will be reduced if the design of the oxidation ponds are done by a

DRAFT BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
leakages from ponds whereby untreated wastewater enters the environment during operation.			registered and experienced engineer. As the design specifications and size parameters will ensure adequate containment and subsequent evaporation of the required maximum potential volumes of general final effluent, even during significant rainfall events. The integrity of the lining must be inspected. Monitoring, controlling and regulating inflows must be in place. Removal of sediments must be done atleast once a year to prevent overflow due to the thick layer settling at the bottom of the ponds reducing the capacity to hold wastewater.
	Cumulative impacts:	Yes	Immediate steps must be undertaken by the municipality to locate and remediate the sources of the raw sewage in the unnamed tributary that discharged into Vals River.
Contamination of watercourse (unnamed tributary) due to blockages, leakages from the pipeline.	Direct impacts:		
	Indirect impacts:	Medium-High	The integrity of the established pipeline must be inspected on a minimum weekly basis in order to ensure continued functionality and prevent leakages or ruptures. In case of blockages, they must be reported to the municipality to

DRAFT BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
			that they attend to it swiftly. Community awareness must be raised with regards to flushing of unwanted materials that could cause blockages in the system.
	Cumulative impacts:	Yes	Immediate steps must be undertaken by the municipality to locate and remediate the sources of the raw sewage in the unnamed tributary that discharged into Vals River.
Contamination of the Vals River due to discharge of untreated effluent or effluent that does not meet the discharge limits.	Direct impacts:	Very-high	All wastewaters must go through the treatment process before being released into the environment. Groundwater and surface water monitoring must be included during the operation phase and the final treated effluent must be chemically and biologically tested by an accredited laboratory on a minimum weekly basis or as required.
	Indirect impacts:		
	Cumulative impacts:		
Generation of offensive and unpleasant odour	Direct impacts:	Medium	The screens must be removed and disposed of at the licensed landfill site. Proper maintenance including removal of accumulated solids, monitoring of pH and dissolved oxygen levels could minimize obnoxious emissions.
	Indirect impacts:		
	Cumulative impacts:		
Alternative 2			

DRAFT BASIC ASSESSMENT REPORT

Activity	Impact summary	Significance	Proposed mitigation
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
Alternative 3			
	Direct impacts:		
	Indirect impacts:		
	Cumulative impacts:		
No-go option			
Continued use of the existing wastewater treatment works, that is unable to treat wastewater due to theft and vandalism as well as accommodate additional loads from eradication of bucket sanitation system.	Direct impacts:	Medium-High	The proposed development should be authorised to help ensure the municipality have a facility that is able to treat wastewater to acceptable standards before discharge into the environment. The facility will be able to accommodate loads from Lindley/Ntha.
	Indirect impacts:		
	Cumulative impacts:		

Cumulative Impact:

There is sewage leak emanating from Ntha that has contaminated the watercourse that drains into Vals River. Therefore, as part of the proposed development to limit any cumulative impacts, the municipality must locate the source and make necessary repairs to the system. It is expected that discharge from the township will stop as the area will be connected to the municipal bulk sewer reticulation coupled with the proposed development.

A complete impact assessment in terms of Regulation 19(3) of GN 326 must be included as Appendix F.

Impact Assessment is attached hereto as **Appendix F**.

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

The Basic Assessment Report is prepared in accordance with the requirements of the NEMA, 1998 as amended, and the EIA Regulations, 2014 as amended. The report contains information on the assessed potential impacts and mitigation measures provided to help ensure that the impact of the proposed wastewater treatment works on the receiving environment is avoided or at least reduced in significance. This includes reducing the potential impact on the identified most sensitive areas within the development footprint, i.e., identified seepage wetland and within the surroundings, it would be Vals River bordering the north side, and the unnamed tributary bordering the eastern side, which will also be traversed by the associated development i.e., the outfall sewer and the upgrading of the Other identified areas within the footprint includes the high palaeontological sensitivity, the rocky ridge outcrop, the concentrated drainage area but they are not deemed to have high conservation value to render the proposed site unsuitable. However, the identified wetland seepage must be excluded from the development footprint and be a no-go area during construction.

The impacts including both the negative and positive, were identified for each phase of the proposed development if the project is authorised. The negative impacts were identified included impacts associated with the clearance of indigenous vegetation, the possible surface and groundwater pollution, activities that could result in soil contamination and compaction, increased risks of soil erosion, destruction of palaeontological artefacts, management of generated waste, and the loss of agricultural potential, the proliferation of alien invasive species on the proposed site and surrounding area, as well as the impacts that will occur if the proposed development does not go ahead as planned. The identified positive impact of construction is creation of job opportunities, which should benefit the local community so that the local people that become employed on the proposed site are able to contribute to the local economy. Although this positive impact will be temporary, the general workers and subcontractors will acquire new skills and an improvement in their Construction Industry Development Board level. It is important that local procurement of construction materials is prioritized.

As part of the pre-construction and construction phase, it is imperative for the municipality to ensure that the proposed development is implemented in a manner that is compliant with the relevant environmental legislation to help prevent unlawful commencement with any listed activity, as conducting a listed activity without an environmental authorisation could result in imprisonment or an administrative fine as this will minimise any residual impacts and minimise the significance of impacts identified during the operation phase. However, if the proposed measures are implemented, this will be avoided.

Most of the identified negative impacts will occur during the construction phase, therefore, with careful planning and adoption of the recommendations, the adequate mitigation and management measures with input from the specialist, the significance of the potential impacts will be reduced from medium high to low, as the impacts will largely be limited to the development footprint and on completion of the construction phase, they will cease to occur because the area will be rehabilitated, and this limits the residual impacts. The importance of not continuing with the proposed development without obtaining the necessary authorisation was communicated with the municipality so that they do not end up undertaking unlawful activities, that could result in a jail term or administration fine. From the specialists studies conducted, no grounds were found on which to suspend the proposed wastewater treatment works and the recommendations outlined to minimize the impact were deemed adequate.

Considering the impacts associated with the proposed wastewater treatment works, it is deemed suitable that they will be managed through proper design and on completion of the construction phase, i.e., during operation, the technology requires low operating costs and energy usage, thus considered to be cost-effective thus minimizing possible environmental impacts due to load shedding and required chemicals. With proper maintenance, the oxidation ponds will be able to effectively remove pollutants before the treated effluent is discharged into the environment, thus ensuring that there are no environmental impacts in the case of discharging poorly treated effluent. The positioning of the proposed site in relation to the nearest residential development is adequate thus risks of vandalism and theft are reduced. There will be an operation and maintenance manual that will be compiled as part of the development, and the proposed groundwater and surface water monitoring, therefore there is a limited probability of the system not being maintained properly and any pollution will be identified timeously so that it can be attended to.

Good construction site practices and effective site supervision must be kept in place. If the proper mitigation procedures are followed during the construction phase, the impacts on the environment during the operational phase will be of low significance, and the residual impacts limited. The impacted environment will be able to return to a functional state upon completion of the rehabilitation phase and the likelihood of any environmental degradation post-construction will be reduced significantly.

From the public participation process undertaken, no objections were received but more input is anticipated from the reviewing of the Draft Basic Assessment Report.

In addition to the mitigation measures outlined, the draft Environmental Management Programme has been compiled to help ensure that other issues that were not identified as key during the assessment process will also be addressed.

Given the above, it is recommended that the proposed development be authorised, as this will enable the municipality to protect public health by ensuring that there is no longer overflowing sewage on the streets as it will be properly collected by the bulk sewer reticulation network to the proposed facility for treatment to ensure that sewage from Lindley/Ntha is not left untreated.

Alternative B

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Alternative C

No-go alternative (compulsory)

If the proposed project does not take place, Nketoana Local Municipality will continue to use a wastewater treatment works that has been subjected to vandalism and theft, which the existing capacity is unable to accept the loads from current and future human settlement in the Lindley/Ntha are. Therefore, there will be constant collapsing of the bulk reticulation network. It is not feasible from engineering point of view to upgrade the existing site because it is located in a topographical high, therefore would require high energy costs. If the municipality does not have a fully functional wastewater treatment system, it would basically mean there will be not proper collection and treatment of sewage in the area, therefore, it will be released into the environment untreated. The unsightly aesthetic view of sewage on the streets, will not be addresses and this could result in breakout of waterborne diseases associated with exposure to untreated sewage.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES

If “NO”, indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

However, DESTEA must confirm if the presence or absence of the Globally Vulnerable Red Listed Reptilian 15 assessment would be required for further assessment.

If “YES”, please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

- The draft EMPr on acceptance by DESTEA must form part of the tender documentation for construction activities during provision of services and approval of the building plans so that contractors and subcontractors can adhere to it during the construction phase.
- The local community must be informed prior to the commencement of construction activities so that they are motivated and improve local ownership. The implementation of the recruitment of the general workers must be done according to the municipality’s standards and the councillor of the ward must be involved in the process.
- The identified seepage wetland must be adequately buffered out of the proposed development footprint area, with a minimum of approximately 20m buffer distance around the wetland, thus the layout must be amended.
- A Provincial Permit must be obtained from Free State DESTEA prior to the commencement of any construction activities and the identified provincially protected species Boophone distich as

well as any other individuals of the species potential found to be present must be adequately relocated to another suitable and similar area as to where they were removed from. A Protected Plant Relocation Management Plan must be compiled by a qualified and experienced Ecologist.

- Immediate steps must be taken by Nketoana Local Municipality to locate and remediate the sources of the raw sewage discharge into the watercourse by the township. This must be done in order to prevent continued pollution and degradation of the watercourse and associated floodplain. The water quality and quantity of flow at all the leaking sewer infrastructure must be determined and regulated and restricted from the further flow.
- An Alien Invasive Species Establishment and Management Prevention Plan must be compiled by a suitably qualified and experienced Ecologist for implementation during both the construction and operation phases.
- An Erosion and Stormwater Management Plan must be implemented during the construction and operation phase. Site water management especially if the construction phase is during the wet season, in order to avoid concentrated water flow that may result in severe erosion in the upper soil horizon and /or undercutting structures.
- Erosion inspection must be completed six (6) months after the project is completed by a suitably registered SACNASP professional.
- An Environmental Control Officer must be appointed prior to the commencement of construction activities.
- Any excavations exceeding >1m into intact, Normandien Formation should be monitored by a professional palaeontologist on a regular basis during the construction phase.
- Should unexpected Archaeological and/or Palaeontological Finds be made, then SAHRA must be notified accordingly. A professional Archaeologist or Palaeontologist must be contacted to inspect the heritage resources. If the newly discovered heritage resource proves to be of archaeological or palaeontological significance, a Phase 2 rescue operation must be required subject to permits issued by SAHRA. If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves Unit must be contacted.
- All oxidation ponds must be lined to reduce seepage to the groundwater.
- There should be regular monitoring of inflows into the plant to prevent wastewater overflows.
- Plant operating guidelines and sustaining ponds storage volume capacity through sludge disposal.
- The Surface Water Monitoring Plan compiled by the Hydrologist must be implemented during operation.
- A Groundwater Monitoring Plan must be compiled and implemented, including the drilling of

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additional boreholes due to the limited site-specific groundwater monitoring site.

- Any unmonitored increased abstraction of groundwater by the future drilling of boreholes within 1km radius of the Vals River abstraction position should be reported and discouraged should it be considered by the municipality of land users.
- Community awareness programme be conducted to inform the local community about the health and pollution risks associated with the current surface and groundwater qualities as well as the qualities associated with the WWTW sites.
- Awareness should be raised aimed at informing the residents that materials such as rugs, carcasses, hides, etc., should not be flushed down the toilets or in manholes because they increase the likelihood of blockages.

Is an EMPr attached?

YES

The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

The details of the EAP and expertise are attached hereto as **Appendix H**.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

The Declaration of Interest for the Specialists are attached hereto as **Appendix I**.

Any other information relevant to this application and not previously included must be attached in Appendix J.

Additional Information is attached hereto as **Appendix J** is the Technical Report.

Lorato Tgedi Reg. EAP (EAPASA) Pr. Sci. Nat.

NAME OF EAP

SIGNATURE OF EAP

DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information

APPENDIX A

MAPS AND PLAN

APPENDIX A1

LOCALITY MAP

APPENDIX A2

SITE PLAN

APPENDIX A3

SENSITIVITY MAP

APPENDIX A4

CONSERVATION STATUS MAP

APPENDIX B

PHOTOGRAPHS

**PROPOSED LINDLEY WASTEWATER TREATMENT WORKS
NKETOANA LOCAL MUNICIPALITY-DRAFT BASIC ASSESSMENT REPORT
DESTEA REF. NO.: EMB19,25,27,12(b)(iv)/23/14
NEAS REF. NO.: FSP/EIA/0000520/2023**



Photo 1: Existing access road to be upgraded



Photo 2: Western view towards Lindley/Ntha

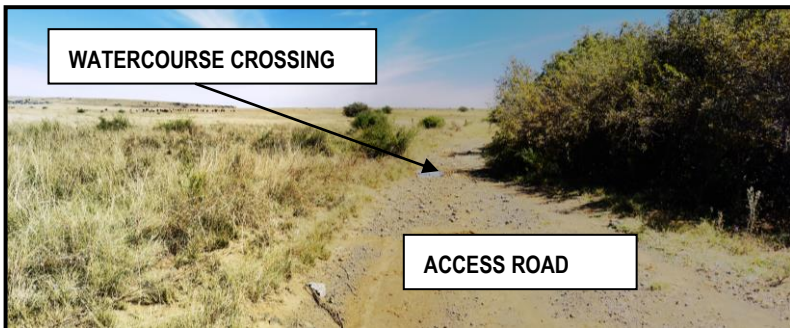


Photo 5: Watercourse crossing on the access road



Photo 4: Southern side of the watercourse



Photo 3: Northern side of the watercourse crossing



Photo 6: North-eastern view of the wastewater treatment works proposed site



Photo 7: Access Road in relation to the proposed site (Eastern view)



Photo 8: Panoramic view of the proposed site (North-eastern view)



Photo 9: View of Ntha from the proposed site (South-eastern view)



Photo 10: View of the Vals River close to the WWTW outflow

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Photo 11: Proposed pipeline route



Photo 12: Pipeline watercourse crossing

APPENDIX C

FACILITY ILLUSTRATION (DESIGN DRAWINGS)

PROPOSED LINDLEY WASTEWATER TREATMENT WORKS
NKETOANA LOCAL MUNICIPALITY-DRAFT BASIC ASSESSMENT REPORT
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APPENDIX D

SPECIALISTS' REPORT

PROPOSED LINDLEY WASTEWATER TREATMENT WORKS
NKETOANA LOCAL MUNICIPALITY-DRAFT BASIC ASSESSMENT REPORT
DESTEA REF. NO.: EMB19,25,27,12(b)(iv)/23/14
NEAS REF. NO.: FSP/EIA/0000520/2023

APPENDIX D1

GEOTECHNICAL REPORT

PROPOSED LINDLEY WASTEWATER TREATMENT WORKS
NKETOANA LOCAL MUNICIPALITY-DRAFT BASIC ASSESSMENT REPORT
DESTEA REF. NO.: EMB19,25,27,12(b)(iv)/23/14
NEAS REF. NO.: FSP/EIA/0000520/2023

APPENDIX D2

GEOHYDROLOGICAL REPORT

PROPOSED LINDLEY WASTEWATER TREATMENT WORKS
NKETOANA LOCAL MUNICIPALITY-DRAFT BASIC ASSESSMENT REPORT
DESTEA REF. NO.: EMB19,25,27,12(b)(iv)/23/14
NEAS REF. NO.: FSP/EIA/0000520/2023

APPENDIX D3

ECOLOGICAL REPORT

PROPOSED LINDLEY WASTEWATER TREATMENT WORKS
NKETOANA LOCAL MUNICIPALITY-DRAFT BASIC ASSESSMENT REPORT
DESTEA REF. NO.: EMB19,25,27,12(b)(iv)/23/14
NEAS REF. NO.: FSP/EIA/0000520/2023

APPENDIX D4

HYDROLOGICAL REPORT

PROPOSED LINDLEY WASTEWATER TREATMENT WORKS
NKETOANA LOCAL MUNICIPALITY-DRAFT BASIC ASSESSMENT REPORT
DESTEA REF. NO.: EMB19,25,27,12(b)(iv)/23/14
NEAS REF. NO.: FSP/EIA/0000520/2023

APPENDIX D5

HERITAGE REPORT

APPENDIX D6

AGRICULTURAL COMPLIANCE STATEMENT

APPENDIX E

PUBLIC PARTICIPATION RECORDS

APPENDIX F

IMPACT ASSESSMENT

APPENDIX G

DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME

APPENDIX H

DETAILS OF EAP AND EXPERTISE

APPENDIX I

DECLARATION OF SPECIALISTS

APPENDIX I1

DECLARATION OF GEOTECHNICAL ENGINEER

APPENDIX I2

DECLARATION OF GEOHYDROLOGIST

APPENDIX I3

DECLARATION OF ECOLOGIST

APPENDIX I4

DECLARATION OF HYDROLOGIST

APPENDIX I5

DECLARATION OF HERITAGE SPECIALIST

APPENDIX I6

DECLARATION OF AGRICULTURAL SPECIALIST

APPENDIX J

ADDITIONAL INFORMATION

PROPOSED LINDLEY WASTEWATER TREATMENT WORKS
NKETOANA LOCAL MUNICIPALITY-DRAFT BASIC ASSESSMENT REPORT
DESTEA REF. NO.: EMB19,25,27,12(b)(iv)/23/14
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APPENDIX J1A

INCEPTION REPORT

PROPOSED LINDLEY WASTEWATER TREATMENT WORKS
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DESTEA REF. NO.: EMB19,25,27,12(b)(iv)/23/14
NEAS REF. NO.: FSP/EIA/0000520/2023

APPENDIX J1B

IMPLEMENTATION READINESS REPORT

APPENDIX J2A

SCREENING TOOL REPORT

PROPOSED LINDLEY WASTEWATER TREATMENT WORKS
NKETOANA LOCAL MUNICIPALITY-DRAFT BASIC ASSESSMENT REPORT
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APPENDIX J2B

SITE VERIFICATION REPORT