

Brake Village Sri Siva Soobramaniam Alayam

**DM/0037/2014: PROPOSED
EXPANSION OF THE BRAKE
VILLAGE TEMPLE, TONGAAT**

Draft Basic Assessment Report

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For:	Brake Village SSS Alayam
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**BRAKE VILLAGE SRI SIVA SOOBRAMANIAR ALAYAM
PROPOSED EXPANSION OF THE BRAKE VILLAGE TEMPLE
IN TONGAAT**

REF. NO: DM/0037/2014

DRAFT BASIC ASSESSMENT REPORT

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agriculture, environmental affairs
& rural development

Department:
Agriculture, Environmental Affairs
& Rural Development
PROVINCE OF KWAZULU-NATAL



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EIA File Reference Number:
NEAS Reference Number:
Waste Management Licence Number:
(if applicable)
Date Received:

DC/
KZN/EIA/

BASIC ASSESSMENT REPORT

Submitted in terms of the Environmental Impact Assessment Regulations, 2010 promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998)

This template may be used for the following applications:

- **Environmental Authorization** subject to basic assessment for an activity that is listed in Listing Notices 1or 3, 2010 (Government Notices No. R 544 or No. R 546 dated 18 June 2010); or
- **Waste Management Licence** for an activity that is listed in terms of section 20(b) of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) for which a basic assessment process as stipulated in the EIA Regulations must be conducted as part of the application (refer to the schedule of waste management activities in Category A of Government Notice No. 718 dated 03 July 2009).

Kindly note that:

1. This **basic assessment report** meets the requirements of the EIA Regulations, 2010 and is meant to streamline applications. This report is the format prescribed by the KZN Department of Agriculture, Environmental Affairs & Rural Development. Please make sure that this is the latest version.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not 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 text.
3. Where required, place a cross in the box you select.
4. An incomplete report will be returned to the applicant for revision.
5. 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 will result in the rejection of the application as provided for in the regulations.
6. No faxed or e-mailed reports will be accepted.
7. The report must be compiled by an independent environmental assessment practitioner ("EAP").
8. 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.
9. The KZN Department of Agriculture, Environmental Affairs & Rural Development may require that for specified types of activities in defined situations only parts of this report need to be completed.
10. The EAP must submit this basic assessment report for comment to all relevant State departments that administer a law relating to a matter affecting the environment. This provision is in accordance with Section 24 O (2) of the National Environmental Management Act 1998 (Act 107 of 1998) and such comments must be submitted within 40 days of such a request.
11. **Please note that this report must be handed in or posted to the District Office of the KZN Department of Agriculture, Environmental Affairs & Rural Development to which the application has been allocated (please refer to the details provided in the letter of acknowledgement for this application).**

DEPARTMENTAL REFERENCE NUMBER(S)

File reference number (EIA):	DM/0037/2014
File reference number (Waste Management Licence):	

SECTION A: DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER AND SPECIALISTS

1. NAME AND CONTACT DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

Name and contact details of the EAP who prepared this report:

Business name of EAP:	SIVEST SA (Pty) Ltd		
Physical address:	4 Pencarrow Crescent, La Lucia Ridge Office Estate, Umhlanga Rocks, 4320		
Postal address:	PO Box 1899, Umhlanga Rocks		
Postal code:	4320	Cell:	
Telephone:	031 581 1500	Fax:	031 566 2371
E-mail:	info@sivest.co.za		

2. NAMES AND EXPERTISE OF REPRESENTATIVES OF THE EAP

Names and details of the expertise of each representative of the EAP involved in the preparation of this report:

Name of representative of the EAP	Education qualifications	Professional affiliations	Experience at environmental assessments (yrs)
Michelle Nevette	MSc (Environmental Management)	IAIAsa	13
Luvanya Naidoo	BSc (Environmental Science) - current	IAIAsa	4
Lloyd Ndlovu	BSocSc (Geography and Environmental Management)	IAIAsa	2

3. NAMES AND EXPERTISE OF SPECIALISTS

Names and details of the expertise of each specialist that has contributed to this report:

Name of specialist	Education qualifications	Field of expertise	Section/ s contributed to in this basic assessment report	Title of specialist report/ s as attached in Appendix D
Frans Prins	MS Archaeology	Heritage Specialist	Section C6	A First Phase Heritage Impact Assessment of the Proposed Expansion of the

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				Brake Village Sri Siva Soobramaniam Alayam Temple, ERF 5478, Tongaat Extension 48, Kwazulu Natal.
Doug McColloch	BSc. Agric	Wetland Ecologist	Section C3	Wetland Delineation Report: Brake Village Development Site
V K Ori	Pr Tech (Eng)	Civil and Structural Engineers and Project Managers	Section C3	New Place of Worship for Brake Village Shri Siva Soobremaniar Alayam Tongaat – Stormwater Management Report
S Pather	BSc Hons	Geotechnical Specialist	Section C3	Geotechnical Assessment Report

SECTION B: ACTIVITY INFORMATION

1. PROJECT TITLE

Describe the project title as provided on the application form for environmental authorization:

The proposed expansion of the Brake Village Temple in Tongaat.

2. PROJECT DESCRIPTION

Provide a detailed description of the project:

The Brake Village Sri Siva Soobramaniam Alayam is proposing the expansion of the existing temple in the Brake Village area in Tongaat. The proposed site where the expansion will take place is Erf 5478 of Tongaat Extension 48, on Hospital Hill Road, adjacent to the M43 Watson Highway.

The current temple situated on the site has been in existence for over a hundred years. The temple stands as a monument to the indentured labourers that came to this country in 1860 to work in the fledgling sugar industry.

The “Brake Barracks” was an area where the workers of Indian origin for the Tongaat Sugar Mill were housed. Public places of worship were few in this time, hence the need arose for the construction of the Temple. After negotiations between the community of the Brake Barracks and the management of the Tongaat Sugar Mill, a wood and iron structure was constructed in 1909. Initially built to cater for the community at Brake Village, the temple soon became firmly

established in the lives of the people of the greater Tongaat and surrounding areas.

The Brake Village SSS Alayam proposes new buildings on the site in addition to the existing buildings in order to accommodate the vast number of worshippers visiting the temple. The expansion will entail the construction of a single building and will be built to meet religious specifications. The size of the temple will be 751.8m² and the platform on which the temple stands will be raised 1.2 metres above the ground level at its lowest point. Gabion structures will be constructed on the river banks fronting the temple.

3. ACTIVITY DESCRIPTION

Describe each listed activity in Listing Notice 1 (GNR 544, 18 June 2010), Listing Notice 3 (GNR 546, 18 June 2010) or Category A of GN 718, 3 July 2009 (Waste Management Activities) which is being applied for as per the project description:

GN R544 (18 June 2010)	11 (x)	The construction activities for the expansion of the temple will occur within 32m of the Hlawe River as well as delineated wetlands.
GN R544 (18 June 2010)	18 (i)	The infilling of the floodplain wetland will be required for the proposed expansion as the current soil is not stable and would need to be excavated and filled with G7 type material.
GN R544 (18 June 2010)	40 (iii)	The expansion of the current temple will take place within 32m of the Hlawe River and within a floodplain wetland.

4. 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 report. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity 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.

Alternatives

No Alternatives are being assessed for the proposed expansion of the Brake Village Temple. No site alternatives have been considered since the proposed project involves the expansion of the current religious facilities on the site. There will be no location or design alternatives considered as the Temple is required to face the “True East” direction for religious purposes. The temple has also been designed to meet religious specifications.

No-go Alternative

The no-go alternative refers to the option of not implementing the activity (no expansion of the current Brake Village Temple). The Brake Village Sri Siva Soobramaniar Alayam has been in existence for over a hundred years. Thousands of worshippers from all over South Africa and other countries visit the Temple as part of pilgrimage and to partake religious and other festivals. The current Brake Village Temple is relatively small and is filled to more than its capacity during Hindu festivals throughout the year. Therefore the expansion of the temple is necessary in order to accommodate the vast number of worshippers.

Sections B 5 – 15 below should be completed for each alternative.

5. ACTIVITY POSITION

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, minutes and seconds. List alternative sites were applicable.

No alternatives are being considered for the proposed expansion.

Alternative:	Latitude (S):			Longitude (E):		
	31°	7'	13.56"	29°	33'	11.24"
Alternative S1 ¹ (preferred or only site alternative)	0	€	"	0	€	"
Alternative S2 (if any)	0	€	"	0	€	"
Alternative S3 (if any)	0	€	"	0	€	"

In the case of linear activities:

Alternative:	Latitude (S):			Longitude (E):		
	0	€	"	0	€	"
Alternative S1 (preferred or only route alternative)	0	€	"	0	€	"
• Starting point of the activity	0	€	"	0	€	"
• Middle point of the activity	0	€	"	0	€	"
• End point of the activity	0	€	"	0	€	"
Alternative S2 (if any)	0	€	"	0	€	"
• Starting point of the activity	0	€	"	0	€	"
• Middle point of the activity	0	€	"	0	€	"
• End point of the activity	0	€	"	0	€	"

¹ "Alternative S.." refer to site alternatives.

Alternative S3 (if any)

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

0	€	€	0	€	€
0	€	€	0	€	€
0	€	€	0	€	€

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

6. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:

Alternative A1² (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

751.8m ²
N/A
N/A

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

N/A
N/A
N/A

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:

3720.76m ²
N/A
N/A

7. SITE ACCESS

Does ready access to the site exist?

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

Describe the type of access road planned:

YES ✓	NO
	N/A

N/A

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.

² "Alternative A.." refer to activity, process, technology or other alternatives.

8. SITE OR 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 report.

The site or route plans must indicate the following:

- 8.1. the scale of the plan which must be at least a scale of 1:500;
- 8.2. the property boundaries and numbers/ erf/ farm numbers of all adjoining properties of the site;
- 8.3. the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 8.4. the exact position of each element of the application as well as any other structures on the site;
- 8.5. the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 8.6. walls and fencing including details of the height and construction material;
- 8.7. servitudes indicating the purpose of the servitude;
- 8.8. sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - rivers, streams, drainage lines or wetlands;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation including protected plant species (even if it is degraded or infested with alien species);
- 8.9. for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 8.10. the positions from where photographs of the site were taken.

9. 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.

10. FACILITY ILLUSTRATION

A detailed illustration of the facility must be provided at a scale of 1:200 and attached to this report as Appendix C. The illustrations must be to scale and must represent a realistic image of the planned activity/ies.

11. ACTIVITY MOTIVATION

11.1. Socio-economic value of the activity

- What is the expected capital value of the activity on completion?
 What is the expected yearly income that will be generated by or as a result of the activity?
 Will the activity contribute to service infrastructure?
 Is the activity a public amenity?
 How many new employment opportunities will be created in the development phase of the activity?
 What is the expected value of the employment opportunities during the development phase?
 What percentage of this will accrue to previously disadvantaged individuals?
 How many permanent new employment opportunities will be created during the operational phase of the activity?
 What is the expected current value of the employment opportunities during the first 10 years?
 What percentage of this will accrue to previously disadvantaged individuals?

R 7 million	
N/A	
YES	NO ✓
YES ✓	NO
Unknown at this stage	
Unknown at this stage	
Unknown at this stage	
Unknown at this stage	
Unknown at this stage	
Unknown at this stage	

11.2. Need and desirability of the activity

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

The Brake Village Sri Siva Soobramaniam Alayam has been in existence for over a hundred years. During the Hindu festivals, thousands of worshippers from around the country visit the temple. The current temple is not big enough to accommodate all the visitors. As such, the temple is being expanded to accommodate the vast number of worshippers visiting the temple.

Indicate any benefits that the activity will have for society in general:

The expansion of the temple will assist in accommodating the vast number of worshippers during the Hindu festivals. These festivals and activities assist in bringing society together.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

The expansion of the temple will assist in accommodating the vast number of worshippers during the Hindu festivals. These festivals and activities assist in bringing society together.

12. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Date:
Animals Protection Act, Act No 71 of 1962	Department of Agriculture	1962
Atmospheric Pollution Prevention Act, No 45 of 1965	DEAT	1965
Conservation of Agricultural Resources Act, No 43 of 1983	Department of Agriculture	1983
Constitution of the Republic of South Africa Act 108/1996	The Constitutional Court	1996

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Title of legislation, policy or guideline:	Administering authority:	Date:
Environmental Planning Act, Act No 88 of 1967	Development Planning and Management Unit	1967
Forest Act, No 122 of 1984	Department of Agriculture, Forestry and Fisheries	1984
Forest and Veld Conservation Act, Act No 13 of 1941	Department of Agriculture, Forestry and Fisheries	1984
Hazardous Substances Act, No 15 of 1973	Department of Health	1973
Land Survey Act, No 9 of 1921	Department of Land Affairs	1921
Minerals Act, No 50 of 1991	Department of Minerals and Energy	1991
National Environmental Management: Waste Act 59 of 2008	DWEA	2008
The National Heritage Resources Act 25 of 1999	South African Heritage Resource Agency (SAHRA)	1999
National Water Act, Act 36 of 1998	Department of Water Affairs	1998
Occupational Health and Safety Act, No 85 of 1993	Department of Labour	1993
Provincial and Local Government Ordinances and Bylaws	Department of Provincial and Local Government	
Soil Conservation Act, Act No 76 of 1969	Department of Agriculture	1969
Water Services Act No 108 of 1997	Department of Water Affairs	1997

13. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

13.1. Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? **YES**✓ NO

If yes, what estimated quantity will be produced per month? **10m³**

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

Solid waste (construction waste and regular household waste) will be collected by independent contractors and disposed of at a registered licensed municipal landfill site with proof of safe disposal required.

Where will the construction solid waste be disposed of? (provide details of landfill site)

Durban currently has three fully permitted landfill sites:

- Bisasar Landfill Site
- La Mercy Landfill Site
- Mariannahill Landfill Site

The La Mercy landfill site will be the closest to the proposed site for waste disposal.

Will the activity produce solid waste during its operational phase? **YES**✓ NO

If yes, what estimated quantity will be produced per month? **<10m³**

How will the solid waste be disposed of? (provide details of landfill site)

The solid waste generated during the month will be collected by the municipal services on a weekly basis.

Where will the solid waste be disposed 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 the further requirements of the application.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

YES	NO ✓
-----	------

If yes, contact the KZN Department of Agriculture, Environmental Affairs & Rural Development to obtain clarity regarding the process requirements for your application.

Is the activity that is being applied for a solid waste handling or treatment facility?

YES	NO ✓
-----	------

If yes, contact the KZN Department of Agriculture, Environmental Affairs & Rural Development to obtain clarity regarding the process requirements for your application.

13.2. Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

YES	NO ✓
-----	------

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

N/A	
-----	--

Will the activity produce any effluent that will be treated and/or disposed of on site?

YES	NO ✓
-----	------

If yes, contact the KZN Department of Agriculture, Environmental Affairs & Rural Development to obtain clarity regarding the process requirements for your application.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

YES	NO ✓
-----	------

If yes, provide the particulars of the facility:

Facility name:	N/A		
Contact person:	N/A		
Postal address:	N/A		
Postal code:	N/A		
Telephone:	N/A	Cell:	N/A
E-mail:	N/A	Fax:	N/A

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

N/A

13.3. Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	NO ✓
-----	------

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

YES	NO
-----	----

If yes, contact the KZN Department of Agriculture, Environmental Affairs & Rural Development to obtain clarity regarding the process requirements for your application.

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

N/A

13.4. Generation of noise

Will the activity generate noise?

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

YES **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.

If no, describe the noise in terms of type and level:

Noise, during normal working hours associated with the construction phase of the project is anticipated. Any equipment used during the construction or operational phase will not exceed a noise level of 80 decibel amperes (dbA).

Noise during religious festivals is also anticipated. However, these functions occur occasionally and the noise levels during these festivals are unlikely to exceed 80 decibel amperes (dbA).

Measures to control daily noise activities during construction will be included in the Environmental Management Programme (EMPr – attached as **Appendix F**) for the project.

14. WATER USE

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

municipal ✓	water board	groundwater	river, stream, dam or lake	other	the activity will not use water
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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/A

Does the activity require a water use permit from the Department of Water Affairs?

YES✓ NO

If YES, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this report.

Yes, Department of Water Affairs has been consulted during the Public Participation Process. Should it be required, an application for a Water Use License will be applied for in due course and proof of submission will be provided to the Department.

15. ENERGY EFFICIENCY

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

N/A

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

N/A

SECTION C: SITE/ AREA/ PROPERTY DESCRIPTION

Important notes:

- 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 C and indicate the area, which is covered by each copy No. on the Site Plan.

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

- Subsections 1 - 6 below must be completed for each alternative.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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 S2 (if any): N/A

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): N/A

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
------	--------------	---	--------------	---	-------------	---------------	---	-------------	---------------------

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site (Please cross the appropriate box).

Alternative S1 (preferred site):

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Plain✓	Undulating plain/low hills	Dune	Sea-front
-----------	---------	-----------------------------	---------------	-------------	--------	----------------------------	------	-----------

Alternative S2 (if any): N/A

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Plain	Undulating plain/low hills	Dune	Sea-front
-----------	---------	-----------------------------	---------------	-------------	-------	----------------------------	------	-----------

Alternative S3 (if any): N/A

Ridgeline	Plateau	Side slope of hill/mountain	Closed valley	Open valley	Plain	Undulating plain/low hills	Dune	Sea-front
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3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Has a specialist been consulted for the completion of this section?

YES✓ NO

If YES, please complete the following:

Name of the specialist:	Syncline Geotechnical Engineering (Pty) Ltd – S Pather (<i>Pr. Sci. Nat</i>)		
Qualification(s) of the specialist:	BSc (Hons), Pr. Sci. Nat.		
Postal address:	Unit 417, Mazars House, 197 Peter Mokaba Road		
Postal code:	4001		
Telephone:	0312071383	Cell:	0845005095
E-mail:	sundras@syncline.co.za	Fax:	0312071349

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Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?	YES	NO ✓
If YES, specify and explain: N/A – the EKZN database has been consulted and no endangered flora or fauna species were identified.		
Are there any special or sensitive habitats or other natural features present on any of the alternative sites?	YES ✓	NO
If YES, specify and explain: <ul style="list-style-type: none"> - The area proposed in which the temple will be constructed has been classified as floodplain wetland. - The site is adjacent to the Hlawe River and is situated in the floodplain of the river. - The site falls within the 1:100 year floodline. 		
Are any further specialist studies recommended by the specialist?	YES	NO ✓
If YES, specify: No further specialist studies have been recommended by the geotechnical specialist. However, the specialist has recommended piling and the use of G7 classified material to promote stability of the building. A detailed pile design will need to be undertaken by a piling contractor.		
If YES, is such a report(s) attached in <u>Appendix D</u> ?	YES	NO ✓

Signature of specialist: Refer to attachment in Appendix D Date: 25/11/2013

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

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
	YES	NO	YES	NO	YES	NO
Shallow water table (less than 1.5m deep)	YES ✓	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO ✓	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES ✓	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO ✓	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO ✓	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO ✓	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO ✓	YES	NO	YES	NO
An area sensitive to erosion	YES	NO ✓	YES	NO	YES	NO

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).

GEOTECHNICAL REPORT SUMMARY

Syncline Geotechnical Engineering (Pty) Ltd conducted the geotechnical investigation for the proposed expansion of the Brake Village SSS Alayam. The report (dated 27th November 2014) sets out the results of the geotechnical investigation carried out for the site.

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The site is underlain by sandy fill/colluvium and residual clayey soils. Shale bedrock of the Pietermaritzburg Foundation is anticipated to occur at depths in the range 4.0 to 5.0 metres below existing ground level. Groundwater seepage was encountered at depths in the range 1.3 to 2.0 metres below existing ground level.

All earthworks should be carried in a manner to promote stable development of the site.

The specialist recommends the following:

- All earthworks be carried out in line with the SANS 1200 guidelines.
- The proposed structures be supported on a piled foundation.
- Prior to piling, a number of trial holes must be carried out using an auger piling rig to identify any unforeseen problem ground conditions and to confirm the depths to bedrock before the main piling contract commences.
- A detailed pile design will need to be carried out by the piling contractor.

WETLAND REPORT SUMMARY

Doug McClough conducted the Wetland Delineation and Functional Assessment for the proposed expansion of the Brake Village SSS Alayam. The report (dated June 2014) sets out the results of the wetland delineation carried out for the site.

The site is located within the floodplain of the Hlawe River and is associated with severely modified riparian B-channel. The floodplain has a moderate present ecological state and ecological importance and sensitivity. The features of importance are flood attenuation, erosion control and phosphate trapping with limited biodiversity value.

4. GROUND COVER

Has a specialist been consulted for the completion of this section?		YES	NO ✓
If YES, please complete the following:			
Name of the specialist:	N/A		
Qualification(s) of the specialist:	N/A		
Postal address:	N/A		
Postal code:	N/A		
Telephone:	N/A	Cell:	N/A
E-mail:	N/A	Fax:	N/A
Are there any rare or endangered flora or fauna species (including red data species) present on any of the alternative sites?		YES	NO ✓
If YES, specify and explain:		N/A – the EKZN database has been consulted and no endangered flora or fauna species were identified.	
Are there any special or sensitive habitats or other natural features present on any of the alternative sites?		YES ✓	NO
If YES, specify and explain:		<ul style="list-style-type: none"> - The area proposed in which the temple will be constructed has been classified as floodplain wetland. - The site is adjacent to the Hlawe River and is situated in the floodplain of the river. - The site falls within the 1:100 year floodline. 	
Are any further specialist studies recommended by the specialist?		YES	NO ✓
If YES, specify:		N/A	
If YES, is such a report(s) attached in Appendix D?		YES	NO

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Signature of specialist: _____ Date: _____

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	Natural veld with scattered aliens^E ✓	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens ✓
Sport field	Cultivated land	Paved surface	Building or other structure ✓	Bare soil

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.

The vegetation on the Brake Village Temple property is characterised by mown grass lawns with interspersed Natal Fig (*Ficus natalensis*) and Giant-leaved Fig (*Ficus lutea*) on the edges, some of which have been chopped to a 1m stump height. The periphery of the property on its northern and north-western sides is bordered by small streams with riparian vegetation, including numerous stands of Wild Date Palm (*Phoenix reclinata*), a single Kosi Palm (*Raphia australis*), two Common Coral Trees (*Erythrina lysistemon*), a Pigeonwood (*Trema orientalis*), two stands of Natal Wild Banana (*Strelitzia nicolai*), and the grass dominating the river banks is Broad-leaved Bristle Grass (*Setaria megaphyllum*). Several invasive alien plant species are present in this region, including Castor-oil Bush (*Ricinus communis*), Bugweed (*Solanum mauritanum*), Balloon Vine (*Cardiospermum grandiflorum*), and the western edge of the site, along the rivercourse, is dominated by a large row of Saligna Gum (*Eucalyptus grandis*).

5. LAND USE CHARACTER OF SURROUNDING AREA

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

Land use character			Description
Natural area	YES ✓	NO	Natural floodplain wetland and floodplain of the Hlawe River
Low density residential	YES	NO ✓	
Medium density residential	YES ✓	NO	Brake Village suburb
High density residential	YES	NO ✓	Brake Village suburb
Informal residential	YES	NO ✓	
Retail commercial & warehousing	YES ✓	NO	Tongaat Central
Light industrial	YES ✓	NO	Tongaat Central
Medium industrial	YES	NO ✓	
Heavy industrial	YES	NO ✓	
Power station	YES	NO ✓	
Office/consulting room	YES ✓	NO	Tongaat Central
Military or police base/station/compound	YES ✓	NO	Tongaat Central
Spoil heap or slimes dam	YES	NO ✓	

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Quarry, sand or borrow pit	YES	NO✓	
Dam or reservoir	YES	NO✓	
Hospital/medical centre	YES✓	NO	Victoria Hospital
School/ crèche	YES✓	NO	Various schools
Tertiary education facility	YES	NO✓	
Church	YES✓	NO	
Old age home	YES	NO✓	
Sewage treatment plant	YES	NO✓	
Train station or shunting yard	YES	NO✓	
Railway line	YES	NO✓	
Major road (4 lanes or more)	YES✓	NO	M43 Watson Highway
Airport	YES	NO✓	
Harbour	YES	NO✓	
Sport facilities	YES✓	NO	Various field within surrounding nearby suburbs, including Brake Village
Golf course	YES	NO✓	
Polo fields	YES	NO✓	
Filling station	YES✓	NO	
Landfill or waste treatment site	YES	NO✓	
Plantation	YES✓	NO	Sugarcane farming
Agriculture	YES✓	NO	Sugarcane farming
River, stream or wetland	YES✓	NO	Tributaries of the Tongati River
Nature conservation area	YES	NO✓	
Mountain, hill or ridge	YES	NO✓	
Museum	YES	NO✓	
Historical building	YES✓	NO	Brake Village SSS Alayam Temple
Protected Area	YES	NO✓	
Graveyard	YES	NO✓	
Archaeological site	YES	NO✓	
Other land uses (describe)	YES	NO✓	

6. 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 palaeontological sites, on or within 20m of the site?

YES✓	NO
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If YES, contact a specialist recommended by AMAFA to conduct a heritage impact assessment. The heritage impact assessment must be attached as an appendix to this report.

Briefly explain the recommendations of the specialist:

Mr Frans Prins of Active Heritage conducted a Heritage Impact Assessment for the proposed expansion of Brake Village Temple. The report is attached in Appendix D. Below is a summary of the findings:

- No prehistoric archaeological sites or other heritage features were identified during the assessment for the proposed site.
- The existing temple however, is older than 60 years old and is therefore protected by heritage legislation but will not be altered or destroyed in any way.
- Being a site of worship the existing temple complex also has living heritage values, these are also protected by heritage legislation.
- The proposed development may proceed from a heritage point of view. However, the existing temple complex may not be changed or altered before the building has not been evaluated by a built heritage specialist as part of a Second Phase Heritage Impact Assessment.
- It should also be pointed out that the South African Heritage Resources Act, 1999 (Act No. 25 of 1999) and the KwaZulu-Natal Heritage Act (Act No 4 of 2008) requires that operations exposing archaeological and historical residues should cease immediately pending an evaluation by the heritage authorities.

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

YES	NO ✓
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Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

YES	NO ✓
-----	-------------

If YES, please submit the necessary application to AMAFA and attach proof thereof to this report.

The existing Brake Village SSS Alayam will not be altered or destroyed in any way. The new temple to be constructed is in addition to the existing temple and will be constructed adjacent to the existing temple.

SECTION D: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

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- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the local and district municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity (as identified in the application form for the environmental authorization of this project); and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
 - (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
 - (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that an application for environmental authorization has been submitted to the KZN Department of Agriculture, Environmental Affairs & Rural Development in terms of the EIA Regulations, 2010;(ii)
 - (iii) a brief project description that includes the nature and location of the activity to which the application relates;
 - (iv) where further information on the application can be obtained; and

- (iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE PROCESS

The EAP must ensure that the public participation process is according to that prescribed in regulation 54 of the EIA Regulations, 2010, but may deviate from the requirements of subregulation 54(2) in the manner agreed by the KZN Department of Agriculture, Environmental Affairs & Rural Development as appropriate for this application. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate.

Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before this application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations (regulation 57 in the EIA Regulations, 2010) and be attached as Appendix E to this report.

6. PARTICIPATION BY DISTRICT, LOCAL AND TRADITIONAL AUTHORITIES

District, local and traditional authorities (where applicable) are all key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of this application and provided with an opportunity to comment.

Has any comment been received from the district municipality?

YES NO ✓

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If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

N/A

Has any comment been received from the local municipality?

YES NO

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

N/A

Has any comment been received from a traditional authority?

YES NO✓

If "YES", briefly describe the feedback below (also attach any correspondence to and from this authority with regard to this application):

N/A

7. CONSULTATION WITH OTHER STAKEHOLDERS

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

YES✓ NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

Department of Water Affairs:

The Department of Water Affairs requested the following in their correspondence regarding the application:

1. Identification of any environmental sensitive areas and water resources such as wetlands, streams, rivers, etc. as well as possible pollution impacts and proposed mitigation measures to protect such water resources
2. Should the proposed fall within 500m radius from the boundary of a wetland, then an application for water use licence for Section (c) and (i) water use of the National Water Act, 1998 (Act 36 of 1998) must be done.
3. Wetland Delineation and Riparian Assessment to determine the proposed activity in relation to the wetland boundary, riparian area, the 1:50 and 1:100 year floodlines. The applicant will require an authorisation from this Department for any activity within riparian habitat or 1:100 year floodline, whichever is the greatest distance from the watercourse
4. Management of waste during construction phase
5. Wastewater, sewage treatment and ablution facilities for construction workers
6. Stormwater management
7. Spill contingency plans
8. Geotechnical report
9. Environmental Management Programme
10. A copy of Basic Assessment report

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the requirements in the EIA Regulations, 2010, 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. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

None to date

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached as Appendix E to this report):

None to date

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

2.1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the planning and design phase:

Alternative S1 (preferred alternative)

Direct impacts:

Surface Water/Stormwater

- **Flooding as a result of development within the 1:100 year flood line**

The site falls within the 1:100year flood line. However the existing temple which also lies within the 1:100 year flood line has not been affected by flood waters in the past 105 years of its existence. Several buildings including the Tongaat Fire Station, Tongaat Town Hall, Tongaat main Library and Sports field also lie within the 1:100 year flood line.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Local
DURATION	Long term
PROBABILITY	Probable
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	High
CUMULATIVE IMPACTS	High
SIGNIFICANCE RATING – PRE MITIGATION	High
SIGNIFICANCE – POST MITIGATION	Medium

- **Groundwater Seepage**

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Groundwater with a moderate to strong flow was encountered at a depth of 1.3 to 1.2 metres above natural ground level.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Local
DURATION	Long term
PROBABILITY	Definite
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	High
CUMULATIVE IMPACTS	High
SIGNIFICANCE RATING – PRE MITIGATION	High
SIGNIFICANCE – POST MITIGATION	Medium

Indirect impacts:

Cumulative impacts:

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Alternative S2

Surface Water/Stormwater

Flooding as a result of development in the 1:100 year flood line

- A 3 metre high gabion wall will be constructed on the site fronting the river.
- The building platform will be raised approximately 1.2 metres above the natural ground level at the lowest point.

Groundwater Seepage

- The building will be located on engineered fill ranging from 0.3 to 1.2 above natural ground level.
- The foundations will be supported on piles driven to a depth of approximately 5m and socketed into shale bedrock.
- Therefore the groundwater seepage will not have any influence on the stability of the building.

b. Process, technology, layout or other alternatives

List the impacts associated with any process, technology, layout or other alternatives that are likely to occur during the planning and design phase (please list impacts associated with each alternative separately):

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Alternative A1 (preferred alternative)

Direct impacts:

Indirect Impacts:

Cumulative impacts:

Alternative A2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:

Alternative A2:

2.2. IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the construction phase:

Alternative S1 (preferred site)

Direct impacts:

Geotechnical:

- **Unstable development of the site as a result of poor surface and groundwater control.**
The most important factor in the stable development of the site is the control and removal of both surface and groundwater from the site. Earthworks and drainage measures must be designed in such a way as to prevent ponding of, or high concentrations of, stormwater or groundwater anywhere on the site, both during and after the development so that the impact may be reduced.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
DURATION	Construction period/short term
PROBABILITY	Definite
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Low
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

- **Suitability of the Insitu materials for use as trench backfill during construction.**
Materials classifying as Selected Granular Materials i.e. “bedding sands” and Select backfill in terms of SANS 1200 LB definitions are not present on site.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
DURATION	Construction period/short term
PROBABILITY	Definite
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Low
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

- Subgrade Treatment for roads, parking areas and surface beds**
 The parking areas/driveways have yet to be designed on the project. The sandy fill and colluvial soils are inferred to classify as G9 to G10 in terms of TRH 14 (1985) classifications and do not satisfy the criteria for a G7 quality material should this be a required subgrade.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
DURATION	Construction period/short term
PROBABILITY	Definite
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Low
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

Wetlands:

Impacts associated with development within the current functioning floodplain wetland

- A loss of soil storativity in the soils within the development site.** Disruption to natural floodplain functioning and a consequent loss of attenuation capacity during the construction phase. The volume of water that would have been stored in the soil is now unable to enter the profile, and is discharged into the receiving environment as increased surface runoff.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Local
DURATION	Long Term
PROBABILITY	Probable
REVERSIBILITY	Irreversible
IRREPLACEABLE LOSS OF RESOURCES	Low
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

Stormwater Management

- Increased stormwater runoff during the construction phase**
 With the increase in hardened surfaces, the volume and velocity of Stormwater will increase

significantly.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
DURATION	Construction period/short term
PROBABILITY	Definite
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Low
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

SOCIAL AND ECONOMIC IMPACTS

Air pollution impacts:

- **Air pollution during the construction phase which may reduce the quality of life of local residents** - Air pollution may occur in the vicinity of the site and the immediate surrounds during the construction phase as a result of:
 - Exhaust fumes from heavy vehicles and machinery in particular poorly serviced vehicles;
 - Dust from exposed surfaces and soil stockpiles during windy days;
 - Dust on haulage and access roads emitted into the air by construction vehicles;
 - Odours through the inappropriate use and mismanagement of chemical toilets.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Local
DURATION	Construction period/short term
PROBABILITY	Probable
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	No Loss
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

Noise Impacts:

- **Noise pollution during the construction phase which may reduce the quality of life of local residents**
The generation of noise (from earth moving machinery, piling works etc.) during the construction phase may result in the disturbance to the surrounding Tongaat community. Disturbance may also be caused by construction starting too early or finishing too late. This disturbance may result in stress which could impact an individual's quality of life. However, this impact is likely to be sporadic and relatively short. Therefore, although the impact on the quality of life may be high during noise events, the duration is likely to be short.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
DURATION	Construction period/short term
PROBABILITY	Probable
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	No Loss
CUMULATIVE IMPACTS	Medium

SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

Traffic Impacts:

- **Traffic**

Traffic congestion and time delays may occur in the vicinity of the access points and associated intersections during the construction phase as a result of an increase in the number of heavy vehicles. Traffic congestion and time delays during peak hours are known to increase the stress and nuisance levels of regular users.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Local
DURATION	Short term
PROBABILITY	Probable
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	No Loss
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Low
SIGNIFICANCE – POST MITIGATION	Low

Indirect impacts:

General Construction Impacts:

- **Erosion from vegetation removal and/or compaction of sand**

Potential erosion problems as a result of the removal of vegetation and the compaction of sand during the construction phase. The stabilizing vegetation cover of soils will be removed from certain areas in order to facilitate construction. Soils may also be compacted by heavy vehicles and equipment used for construction. Once disturbed, soils become more susceptible to erosion.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
PROBABILITY	Possible
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Low
CUMULATIVE IMPACTS	Low
SIGNIFICANCE RATING – PRE MITIGATION	Low
SIGNIFICANCE – POST MITIGATION	Low

- **Degeneration of the Hlawe River and riparian areas as a result of direct construction related disturbances and alien vegetation encroachment during the construction phase.**

Disturbance of the soils in and around wetland and riparian areas will likely lead to further alien invasive encroachment into these areas if the construction sites are not properly rehabilitated and managed after construction.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
PROBABILITY	Possible
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Medium
CUMULATIVE IMPACTS	Medium

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SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

- Degeneration of the Hlawe River and riparian areas as a result of the contamination of the groundwater and/or runoff entering the wetlands and streams during the construction phase.**
 Groundwater and surface runoff contamination may occur during the construction phase as a result of negligence, inappropriate planning, lack of supervision and general handling errors. Pollutants include hydrocarbons i.e. diesel or hydraulic oils from construction machinery, stored fuels, bitumen based substances and cement in solution. The degree of contamination depends on the extent of the chemical spill or cumulative effects of a number of chemical spills.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Local
PROBABILITY	Possible
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Medium
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Wetlands:

- Slow degeneration in the health of the floodplain wetland over time.
- Continued degeneration of the Hlawe river

Employment:

- No employment/training opportunities for the local people during the construction phase.
- No disruption to the current worshippers at the temple.

Traffic

- No disruption to traffic.

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Alternative S2

Geotechnical:

Unstable development of the site as a result of poor surface and groundwater control.

- The terrace must be shaped to a gradient to prevent water ponding on the surface and must be graded to direct water away from the foundations.
- The stormwater management system must allow for the drainage of accumulated surface water. It is recommended that all surface water be piped to an attenuation tank with controlled release to the municipal system.
- The materials to be used for trench backfill must be classified as Selected Granular Materials i.e. "bedding sands" and select backfill.

Suitability of the Insitu materials for use as trench backfill during construction.

- Allowance for importing suitable sands for support and covering of the pipes in service trenches should be made.
- The materials on site may be used as trench backfill above pipes.

Subgrade Treatment for roads, parking areas and surface beds

- Areas where poor road subgrade is exposed will require undercutting into the unsuitable materials at a depth specified by the engineer to accommodate a select layer comprising of material of least G7 material.
- The pavement formation layer for the proposed roads and parking areas should be designed to take into account anticipated traffic loads, volumes and design life of the parking area and roads.

Wetlands:

Mitigation measures associated with development within river floodplains

A loss of soil storativity in the soils within the development site.

- The recommended buffer must be implemented in order to achieve the following:
 - o To trap potential sediment in surface wash leaving the site.
 - o To control erosion
 - o To adsorb nutrients from the subsurface leachate prior to entry into the receiving environment (maintain water quality)
 - o To improve ecological connectivity by providing corridors for faunal movement.
- Additional attenuation facilities will be constructed in addition to the existing structures at the site.
- The stormwater management system must effectively return stormwater to the ground as quickly as possible.

Stormwater Management

Increased stormwater runoff during the construction phase

- The existing temple is served adequately by an existing Stormwater system. However, a detention tank will be added to this system in order to reduce peak flows to pre-development flows. The new development will be on a separate system with its own detention tank.
- Stormwater pipes and inlets should be installed at an early stage in the development. Stormwater should be channelled to these points by the use of temporary measures such as earth drains, sand bags, earth bunds, etc.
- Trenches for sewers and other services should be backfilled as soon as possible and the backfill material should be left slightly proud of the surrounding surface

- so that Stormwater does not flow along the backfilled trenches.
- Pipes should be suitable plugged until manhole construction is complete to prevent Stormwater and debris entering the system.

Air pollution:

Air pollution during the construction phase which may reduce the quality of life of local residents

- Ensure compliance with the Atmospheric Pollution Act and the Air Quality Bill.
- Dust control measures must be addressed in the EMP for the construction phase.
- Dust control measures should be avoided during strong winds.
- Soil loads in transit should be kept covered or wetted.

Noise Impacts:

Noise pollution during the construction phase which may reduce the quality of life of local residents

- Construction activities should only take place within agreed working hours.
- A complaints register must be kept at all times.
- Construction staff should be provided with training regarding noise prevention and antisocial behaviour/conduct.

Traffic Mitigation Measures:

Traffic congestion during the construction phase as a result of increased heavy vehicles utilizing residential roads.

- Construction signs must be established warning traffic of the construction activities.
- If necessary speed limits must be reduced and alternative routes provided.

General Construction Mitigation Measures

Erosion from vegetation removal and/or compaction of sand

- Clearing activities should occur during agreed weather conditions to minimize runoff and therefore erosion.
- Clearing of vegetation must be undertaken in phases in order to prevent large areas at a time from being exposed and susceptible to erosion.
- Exposed areas must be revegetated as soon as possible.
- Silt fences and sandbags should be established within and around the development area to control soil erosion.

Degeneration of the Hlawe River and riparian areas as a result of direct construction related disturbances and alien vegetation encroachment during the construction phase.

- All wetland and riparian areas, including buffer zones must be fenced off as no-go areas, and the rehabilitation of all construction sites must be undertaken with indigenous vegetation.
- All alien vegetation starting to colonise disturbed areas during construction must be removed immediately. The Environmental Control Officer (ECO) should be

contacted with regards to the method of removal.

Degeneration of the Hlawe River and riparian areas as a result of the contamination of the groundwater and/or runoff entering the wetlands and streams during the construction phase.

- Hazardous storage and refuelling areas must be bunded prior to their use on site during the construction period. The number of bunds and their location and their construction should occur during the site setup phase.
- Mixing and/or decanting of all chemicals and hazardous substances must take place on a tray, shutter boards or on an impermeable surface and must be protected from the ingress and egress of stormwater.
- No vehicles transporting concrete, asphalt or any other bituminous product may be washed on site.
- Vehicle maintenance should not take place on site unless a specific bunded area is constructed for such a purpose.
- Ensure correct location of construction camps, equipment yards, concrete batching plants, etc. to avoid areas susceptible to soil and water contamination.
- Ensure that transport, storage, handling and disposal of hazardous substances is adequately controlled and managed. Correct emergency procedures and cleaning up operations should be implemented in the event of accidental spillage.
- Implement appropriate operation and maintenance of construction equipment to avoid petrochemical products from polluting the soil.
- Ablution facilities must not be placed in close proximity to the watercourses.
- A spill contingency plan for both the construction phase must be drawn up and incorporated into the EMP. This should include procedures to guide the clean-up of accidental spillages and its disposal.
- Bins should be provided to all areas that generate waste e.g. worker eating and resting areas and the camp site. General refuse and construction material refuse should not be mixed.

b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the construction phase (please list impacts associated with each alternative separately):

Alternative A1 (preferred alternative)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

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Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1:

Alternative A2:

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2.3. IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the operational phase:

Alternative S1 (preferred alternative)

Direct impacts:

Wetlands:

- **The prevention of the establishment of the riparian vegetation, which protects the banks against lateral scouring.**
Soil erosion and sediment mobilisation associated with partially disrupted flows during the operational phase. With the increase in hardened surfaces, the volume and velocity of stormwater runoff will increase significantly and with it the risk of erosion and the inability of riparian vegetation to establish. Management and successful attenuation of runoff prior to it entering the wetland will reduce the impact on the environment.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
DURATION	Long Term
PROBABILITY	Possible
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Medium
CUMULATIVE IMPACTS	High
SIGNIFICANCE RATING – PRE MITIGATION	High
SIGNIFICANCE – POST MITIGATION	Medium

- **A loss of soil storativity in the soils within the development site.** Disruption to natural floodplain functioning and a consequent loss of attenuation capacity during the operational phase. The volume of water that would have been stored in the soil is now unable to enter the profile, and is discharged into the receiving environment as increased surface runoff.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
DURATION	Long Term
PROBABILITY	Definite
REVERSIBILITY	Irreversible
IRREPLACEABLE LOSS OF RESOURCES	High
CUMULATIVE IMPACTS	High
SIGNIFICANCE RATING – PRE MITIGATION	High
SIGNIFICANCE – POST MITIGATION	Medium

- **The disruption to natural floodplain functioning and a consequent loss of attenuation capacity** - An increased rate of runoff discharged from the development into the receiving

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environment thereby reducing the retention time, resulting in the immediate introduction of surface flow. With the increase in hardened surfaces, the volume and velocity of stormwater runoff will increase significantly.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
DURATION	Long Term
PROBABILITY	Definite
REVERSIBILITY	Irreversible
IRREPLACEABLE LOSS OF RESOURCES	High
CUMULATIVE IMPACTS	High
SIGNIFICANCE RATING – PRE MITIGATION	High
SIGNIFICANCE – POST MITIGATION	Medium

- Degeneration in the floodplain wetland health as a result of the contamination of the runoff entering the Hlawe River and other watercourses during operation** - It is highly likely that the surface runoff and storm water generated on site, particularly runoff generated from the roads and parking areas will pick up a number of urban pollutants before being discharged into the onsite storm water system. Without appropriate mitigation, this will result in the accumulation of pollutants within the stormwater system and ultimately the pollution of the watercourses into which the storm water drains. This, in turn, has a number of downstream water quality effects both indirect and cumulative depending on the ability of the watercourses to assimilate and/or trap the pollutants. Substantial contamination of the rivers in close proximity to the site can result in significant disturbances to the floral and faunal communities within the river. Disturbances include the domination of a particular species as a result of the competitive advantage created by pollutants or the dieback of floral and faunal species and the resultant loss of biodiversity.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Local
DURATION	Long Term
PROBABILITY	Possible
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Medium
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

- Improvement in the Hlawe River health as a result of rehabilitation and management.**
 The Hlawe River currently shows evidence of scouring and eroded bank beds. With proper management and rehabilitation, the Hlawe River can recover in health and functionality over time.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Local
DURATION	Long Term
PROBABILITY	Possible
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Low
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Medium (Positive)

Stormwater Management

- **Flooding as a result of increased rainfall and climate change.** Studies predict an increase in overall rainfall and severe storm events.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Local
DURATION	Long Term
PROBABILITY	Possible
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	High
CUMULATIVE IMPACTS	High
SIGNIFICANCE RATING – PRE MITIGATION	High
SIGNIFICANCE – POST MITIGATION	Medium

- **Inadequate maintenance of Stormwater facilities during the operational phase**
Any Stormwater system or facility will only function effectively if it is adequately maintained during the developments operational phases.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Site
DURATION	Long Term
PROBABILITY	Possible
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Medium
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Low

Indirect impacts:

Traffic

- **Increased traffic volumes/congestion on the road network**
On initial opening of the Temple, it is unlikely that there will be a need for immediate road upgrades as the current roads service the vast number of worshippers, but as the Temple grows in terms of numbers of visitors, there will be points where road upgrades may be required.

ASSESSMENT CRITERIA	RATING
EXTENT (GEOGRAPHICAL)	Local
DURATION	Long Term
PROBABILITY	Possible
REVERSIBILITY	Reversible
IRREPLACEABLE LOSS OF RESOURCES	Low
CUMULATIVE IMPACTS	Medium
SIGNIFICANCE RATING – PRE MITIGATION	Medium
SIGNIFICANCE – POST MITIGATION	Medium

Cumulative impacts:

Alternative S2 (if any)

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Wetland:

- The floodplain wetland will continue to function at the current level.
- Scouring of the river beds will continue resulting in increased erosion.
- The alien invasive species will eventually take over the riparian vegetation habitat.

Employment:

- No employment opportunities for the local community.
- The current temple will remain undersized for the number of people visiting during festivals.

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1

Alternative S2

Wetlands:

The prevention of the establishment of the riparian vegetation, which protects the banks against lateral scouring.

- Management and successful attenuation of runoff prior to it entering the Hlawe River will reduce the impact on the environment.
- The development proposes 3 metre high gabions on the river banks which will assist in reducing the velocity of the runoff entering the system.

A loss of soil storativity in the soils within the development site.

- The recommended buffer must be implemented in order to achieve the following:
 - To trap potential sediment in surface wash leaving the site.
 - To control erosion
 - To adsorb nutrients from the subsurface leachate prior to entry into the receiving environment (maintain water quality)
 - To improve ecological connectivity by providing corridors for faunal movement.
- Additional attenuation facilities will be constructed in addition to the existing structures at the site.
- The stormwater management system must effectively return stormwater to the ground as quickly as possible.

The disruption to natural floodplain functioning and a consequent loss of attenuation capacity - An increased rate of runoff discharged from the development into the receiving environment thereby reducing the retention time, resulting in the immediate introduction of surface flow.

- Additional attenuation facilities must be constructed in addition to the existing structures at the site.
- The stormwater management system must effectively return stormwater

to the ground as quickly as possible.

Degeneration in the health of the Hlawe River as a result of the contamination of the runoff entering the Hlawe River and other watercourses during operation

- No vehicles may be washed on site.
- Vehicle maintenance should not take place on site.
- Ablution facilities must not be placed in close proximity to any watercourses.
- A spill contingency plan for the construction and operational phase must be drawn up and incorporated into the EMP. This should include procedures to guide the clean-up of accidental spillages and its disposal.
- Bins should be provided to all areas that generate waste.

Improvement in the Hlawe River health as a result of post-construction rehabilitation and management.

- A riparian habitat rehabilitation plan should be compiled by a qualified wetland ecologist and implemented/managed by the Temple for the operational phase. Details of the rehabilitation plan must be included in the Final EMP.

Stormwater Management

Stormwater control during the operational phase. Mitigation measures to avoid flooding.

- All rainwater emanating from the roofs will be controlled by gutters and downpipes. The downpipes will connect to gullies and water will be piped to the detention facility.
- The water from the hardened surface will be controlled by grid inlets and will be reticulated to the detention tanks.
- The storage of capacity of the detention tanks should cope efficiently for up to a 50 year storm event. The tanks have been designed with a baffle located to act as a sand trap. This chamber will function as a detention facility to ease off peak flows.
- This chamber will require to be maintained by regular removal of accumulated sand. A 50mm diameter outlet pipe has been sized to discharge the water away from the chamber to an intermediate manhole and then via a 100mm diameter pipe to the municipal road. This will eliminate peaks flows away from the development.
- Two 300mm diameter holes will be left in the base of the tank to allow water to dissipate slowly into the ground when rains are over so that rain water will not be left standing over extended periods. This also eliminates the possibility of mosquito breeding.

Inadequate maintenance of Stormwater facilities during the operational phase.

- The permanent Stormwater system must be regularly checked.
- Inlets and manholes must be cleared of any debris and blockages must be removed.

<p><u>Traffic</u></p> <p>Increased traffic volumes/congestion on the road network</p> <ul style="list-style-type: none"> • A Traffic Impact Assessment may be required as the volumes of traffic are likely to increase however this will be dealt with as part of the town planning process. 	
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b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the operational phase (please list impacts associated with each alternative separately):

Alternative A1 (preferred alternative)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1	Alternative A2

2.4. IMPACTS THAT MAY RESULT FROM THE DECOMMISSIONING OR CLOSURE PHASE

a. Site alternatives

List the potential impacts associated with site alternatives that are likely to occur during the decommissioning or closure phase:

Alternative S1 (preferred alternative)

It is difficult to quantify the impacts that would likely result in the future should the proposed development be decommissioned.

The applicant will therefore need to assess the impacts that may result from the decommissioning or closure phase in terms of applicable legislation at the time of decommissioning.

Alternative S2

Direct impacts:

Indirect impacts:

Cumulative impacts:

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No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative S1	Alternative S2

b. Process, technology, layout or other alternatives

List the impacts associated with process, technology, layout or other alternatives that are likely to occur during the decommissioning or closure phase (please list impacts associated with each alternative separately):

Alternative A1 (preferred alternative)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Alternative A2

Direct impacts:

Indirect impacts:

Cumulative impacts:

No-go alternative (compulsory)

Direct impacts:

Indirect impacts:

Cumulative impacts:

Indicate mitigation measures to manage the potential impacts listed above:

Alternative A1	Alternative A2

2.5. PROPOSED MONITORING AND AUDITING

For each phase of the project and for each alternative, please indicate how identified impacts and mitigation will be monitored and/or audited.

Alternative S1 (preferred site)	Alternative S2
<ul style="list-style-type: none"> The EMPr (Appendix F) setting out procedures and mitigation measures will need to be adhered to during the planning, construction and operational phases. The EMPr must be approved by the relevant authority before construction commences. The contractor must sign that he has read and understands the EMPr. A qualified Environmental Control Officer must be appointed to conduct monthly audits and submit a monthly report to the contractor and relevant authority during construction. 	

Alternative A1 (preferred alternative)	Alternative A2

3. 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 S1 (preferred site)

The development of the proposed expansion of the temple has been assessed by a number of independent specialists and a summary of the findings and recommendations made by the following specialists are provided below:

- Geotechnical assessment
- Wetland Assessment
- Stormwater Management Plan
- Heritage Assessment

The geotechnical assessment was undertaken by Syncline Geotechnical Engineering (Pty) Ltd. They have indicated that the development is considered feasible provided that the geotechnical conditions contained in the report are accounted for during the design and construction of the development. The specialist has further recommended that a detailed piling design be carried out by a piling contractor for the structure as well as the use of G7 classified materials to promote the soil stability.

Mr Doug McClough conducted a wetland delineation and functional assessment for the site. The site consists of a floodplain wetland and riparian areas with the Hlawe River running adjacent to the site. The key ecoservices provided by the flood plain of the Hlawe River include sediment trapping, flood attenuation and erosion control. It must be noted that the banks of the Hlawe River shows evidence of erosion with scouring within the river which has resulted in exposure of the sewer reticulation pipe. However there is an existing development within the site, and hence the risk associated with the developing in the floodplain is already there.

A stormwater management plan (dated 27 February 2014) prepared by Vijay Ori and Associates concluded that the stormwater will be controlled effectively on site provided that the guidelines contained in the report are implemented. The impacts of the development on stormwater control included the increase in surface runoff as a result of hardened surfaces and development in the floodplain of the Hlawe River. However, upon assessing the impact significance post mitigation, the stormwater management on site may be controlled effectively.

Mr F Prins of Active Heritage was appointed to assess the site in order to establish whether the proposed development would impact on any features of heritage significance. The specialist identified the existing temple to be older than 60 years and is protected by Heritage Legislation. However, the existing temple will not be altered or destroyed in any way. The Heritage Specialist has advised that should the applicant wish to demolish the structures in the development process, a more detailed investigation would need to be undertaken by a built heritage specialist should be commissioned to obtain a demolition permit from Amafa aKwaZulu Natali (Provincial heritage agency).

In conclusion there are sensitive features on the site that need to be protected which make the site difficult to develop. However, with the correct mitigation a successful development may be achieved. The applicant would need to weigh up the costs of mitigating the impacts against the benefit.

Alternative S2
Alternative A1 (preferred alternative)
Alternative A2

No-go alternative (compulsory)

The no-go alternative refers to the option of not implementing the activity (no expansion of the current Brake Village Temple). The Brake Village Sri Siva Soobramaniam Alayam has been in existence for over a hundred years. Thousands of worshippers from all over South Africa and other countries visit the Temple as part of pilgrimage and to partake religious and other festivals. The current Brake Village Temple is relatively small and is filled to more than its capacity during Hindu festivals throughout the year. Therefore the expansion of the temple is necessary in order to accommodate the vast number of worshippers.

SECTION F. RECOMMENDATION OF EAP

Is the information contained in this report and the documentation attached hereto in the view of the EAPr sufficient to make a decision in respect of this report?

YES ✓	NO

If "NO", please contact the KZN Department of Agriculture, Environmental Affairs & Rural Development regarding the further requirements for your report.

If "YES", please attach the draft EMPr as Appendix F to this report and 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 Environmental Management Programme needs to be adhered to.
- A rehabilitation plan for the riparian vegetation along the banks of the Hlawe River must be submitted as part of the EMPr.
- A qualified Environmental Control Officer must be appointed to conduct monthly audits and submit a monthly report to the contractor and relevant authority.
- Recommendations contained within the Geotechnical Report prepared by Syncline Geotechnical Engineering (Pty) Ltd (25 November 2014) must be followed.
- Recommendations contained within the Wetland Delineation Report prepared by Doug McClough (June 2014) must be followed.
- Recommendations contained within the Stormwater Management Report prepared by Vijay Ori and Associates (27 February 2014) must be followed.
- Recommendations contained within the Heritage Impact Assessment prepared by Active Heritage (May 2014) must be followed.

SECTION G: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Draft Environmental Management Programme (EMPr)

Appendix G: Other information

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