



Feasibility Study for Foxwood Dam (WP10580)

Environmental Screening Assessment Report

Final Issue

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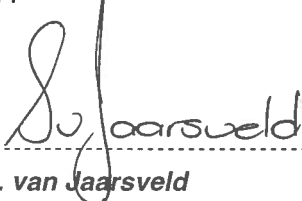
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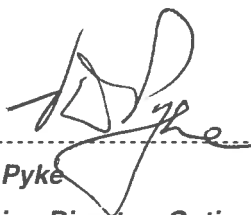
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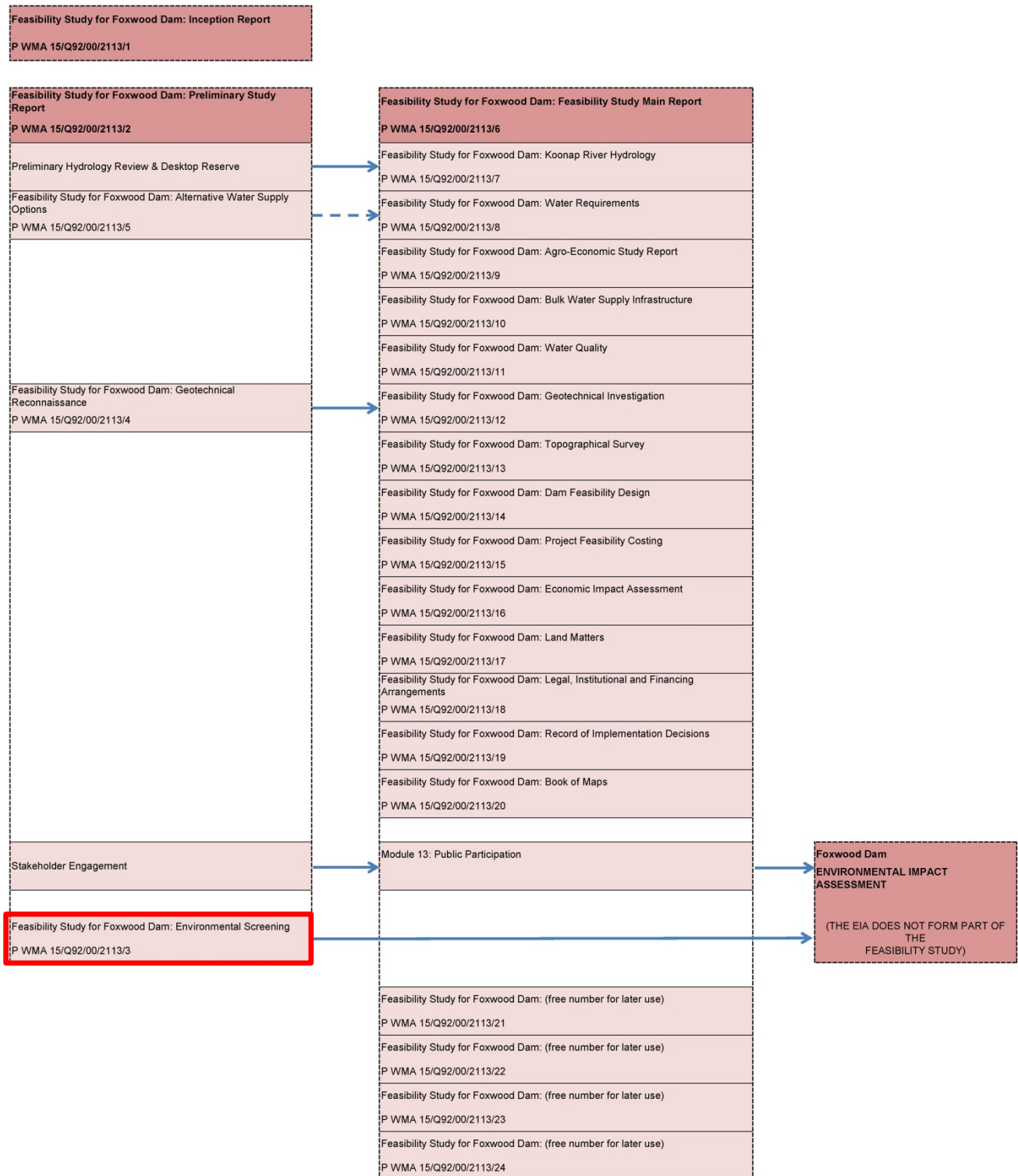


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REPORT STRUCTURE



EXECUTIVE SUMMARY

Arup (Pty) Ltd was appointed by the Department of Water Affairs to carry out a Feasibility Study for the proposed Foxwood Dam project located near the town of Adelaide in the Eastern Cape.

The environmental screening exercise is a best practice approach to determining the environmental legal requirements for a proposed development. This involves understanding the environmental opportunities and constraints on a particular site and the manner in which the proposed development impacts on these opportunities and constraints. The outcome of the screening exercise details the type and nature of the environmental impact assessment that will be required together with any potential 'red flags' or fatal flaws with the development proposal.

The outcome of the exercise confirms that this project requires a full Scoping and EIA process to be followed based on the dam having a wall higher than 5 metres and inundating an area greater than 10 hectares. The only uncertainty revolves around the complete list of triggers and this is subject to further discussions with the client and stakeholders and will become clearer as the project progresses and moves into subsequent phases.

There is a need for further investigation in order to address those activities which have been identified as potentially triggering the need for prior authorisation. A specific recommendation is for an ecologist to confirm the status of the ecosystem and vegetation within the inundated area to confirm if any of the activities within Listing Notice 3 apply.

At this stage there have been no 'red flags' identified which would preclude the project from proceeding subject to the receipt of the relevant authorisations from the competent authorities.

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1 LIST OF ACRONYMS

CFRD	Concrete Faced Rockfill
CR	Critically Endangered Ecosystems
EIA	Environmental Impact Assessment
EN	Endangered Ecosystems
GNR 544, 545 and 546	The NEMA Listing Notices
GNR 718	National Environment Waste Act Listed Activities
NEMA	National Environmental Management Act
RCC	Roller compacted concrete
Sanbi	South African National Biodiversity Institute
VU	Vulnerable Ecosystems

2 INTRODUCTION

The Arup Environmental team has been tasked with undertaking an environmental screening assessment for the proposed Foxwood Dam project located in Adelaide which is within the Nxuba Local Municipality some 200 km west of East London in the Eastern Cape.

This screening assessment is the first step in determining the environmental requirements that may apply to the project. The aim is to determine the nature and type of the environmental authorisation required and will feed into the Environmental Impact Assessment (EIA) process that will commence in future. The environmental screening process is not an environmental impact assessment and does not quantify any environmental issues. It is also not required by current legislation, but is a valuable tool to identify issues that could influence the outcome of the project. The output from this environmental screening assessment will serve as the input for the EIA regulatory process.

A site visit was undertaken on 05 March 2013 where the project team members engaged with key stakeholders. The outcome of the site visit has informed the contents of this report.

3 PROCESS / METHODOLOGY FOLLOWED

The environmental screening exercise is a best practice approach to determining the environmental legal requirements for a proposed development. This involves understanding the environmental opportunities and constraints on a particular site and the manner in which the proposed development impacts on these opportunities and constraints. The outcome of the screening exercise details the type and nature of the environmental impact assessment that will be required together with any potential 'red flags' or fatal flaws with the development proposal.

The methodology employed includes the following:

- Discussions with the project engineers to understand the scope of the development and all the activities that are to be undertaken
- A site visit and discussions with stakeholders
- A desktop review of the site including accessing available GIS databases to determine if there are any environmental constraints on the site
- A review of the environmental regulations, i.e. The NEMA Listing Notices (GNR 544, 545 and 546) as well the National Environment Waste Act (GNR718) to determine if the project triggers any of them
- An assessment of the type and nature of environmental approvals that may be required by the project prior to construction commencing and
- An opinion of the author in terms of the overall screening exercise

The output of any environmental screening exercise is entirely dependent on the inputs. The opinion expressed in this document is based on the information contained herein. Therefore, the impact of any project changes that may occur in future will require that the screening assessment be revisited. Due to the nature of the regulations even a seemingly minor change to the project may potentially trigger a new listed activity.

4 SITE LOCATION AND KEY AREAS OF INTEREST

The map below has been provided by the project team which provides an overview of the site including key features of the site and areas where activities may be undertaken.

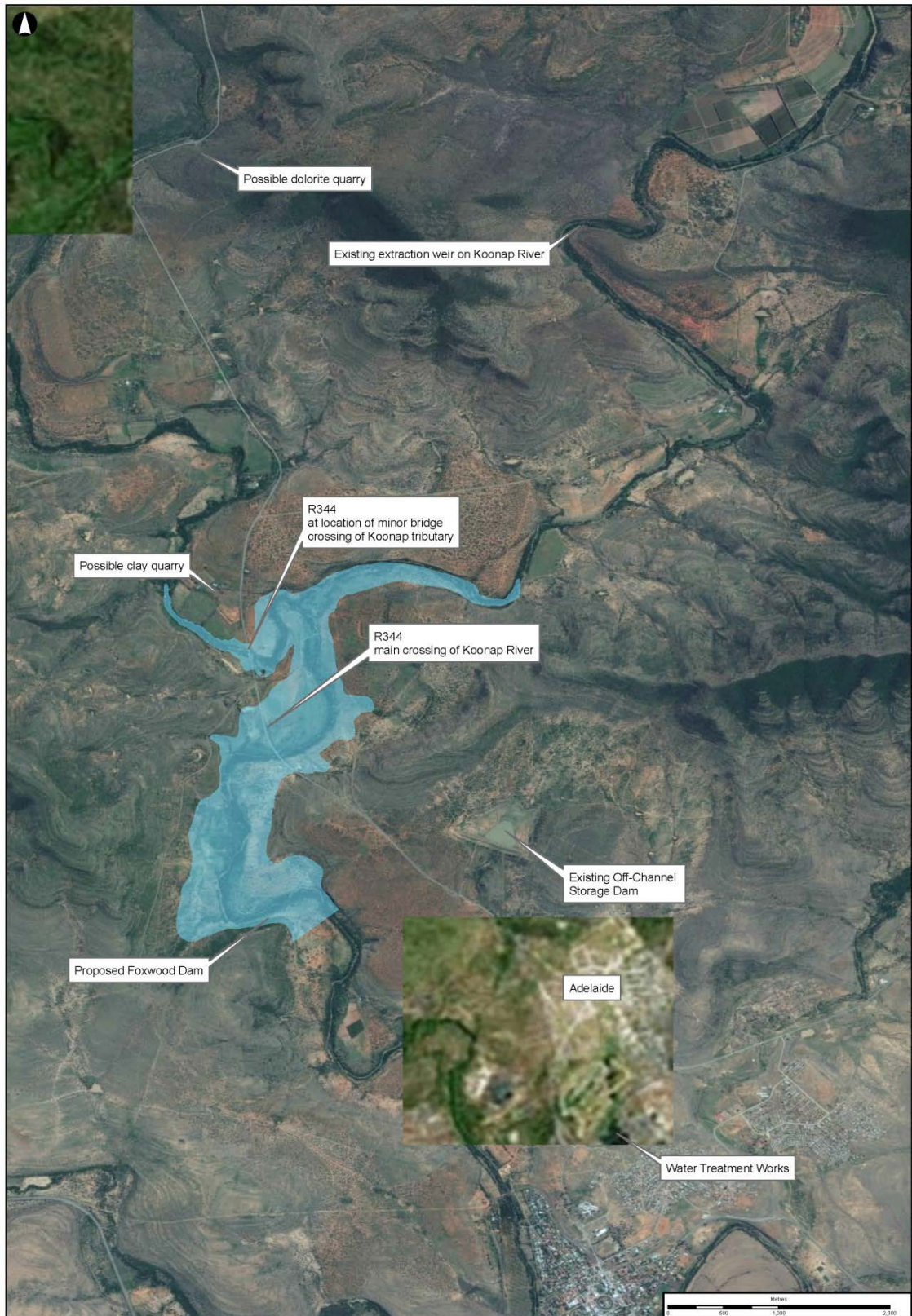


Figure 1 Site Location including Key Points of Interest

5 DESKTOP REVIEW

The desktop review includes viewing orthophotos of the site to identify any areas of environmental sensitivity. In addition, existing available databases, e.g. GIS databases from www.sanbi.org were interrogated.

The outcome of this process is illustrated within Figures 2, 3, and 4. The following salient points have been noted:

- There are small wetlands within the inundated area and the potential clay quarry site (i.e. to west and the north)
- There will be 2 bridges that will be inundated
- The footprint is within the Albany Thicket ecosystem
- The site is not located within or in close proximity to any World Heritage Sites or Protected areas, i.e. it is not within a protected area identified in terms of the National Environment Management: Protected Areas Act

5.1 Ecosystems

The environmental team interrogated the South African National Biodiversity Institute (Sanbi) GIS databases to determine whether there are any sensitive ecosystems within the project area. Sanbi classifies ecosystems as follows:

- critically endangered (CR) ecosystems: being ecosystems that have undergone severe degradation of ecological structure, function or composition as a result of human intervention and are subject to an extremely high risk of irreversible transformation;
- endangered (EN) ecosystems: being ecosystems that have undergone degradation of ecological structure, function or composition as a result of human intervention, although they are not critically endangered ecosystems;
- vulnerable (VU) ecosystems: being ecosystems that have a high risk of undergoing significant degradation of ecological structure, function or composition as a result of human intervention, although they are not critically endangered ecosystems or endangered ecosystems;
- protected ecosystems: being ecosystems that are of high conservation value or of high national or provincial importance, although they are not listed as critically endangered, endangered or vulnerable.

Figure 2 overleaf depicts the ecosystems within the project area and surrounds. The proposed dam falls within the Albany Thicket ecosystem which is classified as an endangered ecosystem in terms of Government Notice R1002.

Activity 12, 13 and 14 in Listing Notice 3 relates to the clearance of vegetation, which will trigger a basic assessment within any critically endangered or endangered ecosystem listed in terms of Section 52 of the Biodiversity Act. This means any development that involves loss of natural habitat in a listed critically endangered or endangered ecosystem is likely to require at least a basic assessment in terms of the EIA regulations. It is important to note that a basic assessment report in terms of the EIA regulations is triggered only in remaining natural habitat within each ecosystem and not in portions of the ecosystem where natural habitat has already been irreversibly lost.

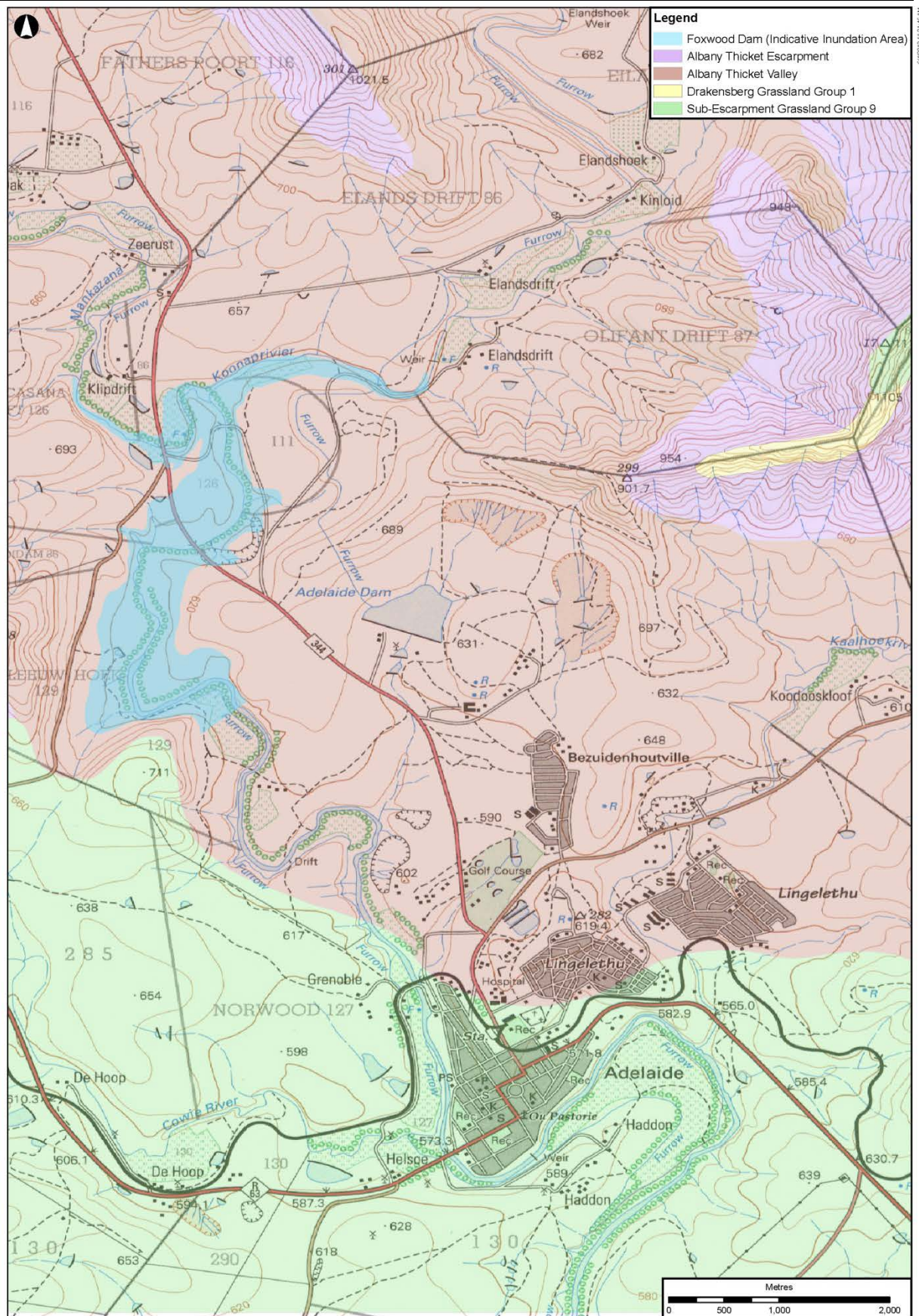



Figure 2 Foxwood Dam Site with Ecosystem Overlay

There are 3 wetland areas that have been noted on Figure 3, (shown within  box). These are:

- On the upper reaches of the proposed dam near the minor bridge crossing the Koonap tributary
- Near the possible clay quarry site
- Near the western bank of the Koonap River

Development within a watercourse is a listed activity and will require prior environmental authorisation.

5.3 Protected Areas

Figure 4 confirms that there are no protected areas, threatened ecosystems, conservation areas or focus areas within a 5km radius of the proposed dam.

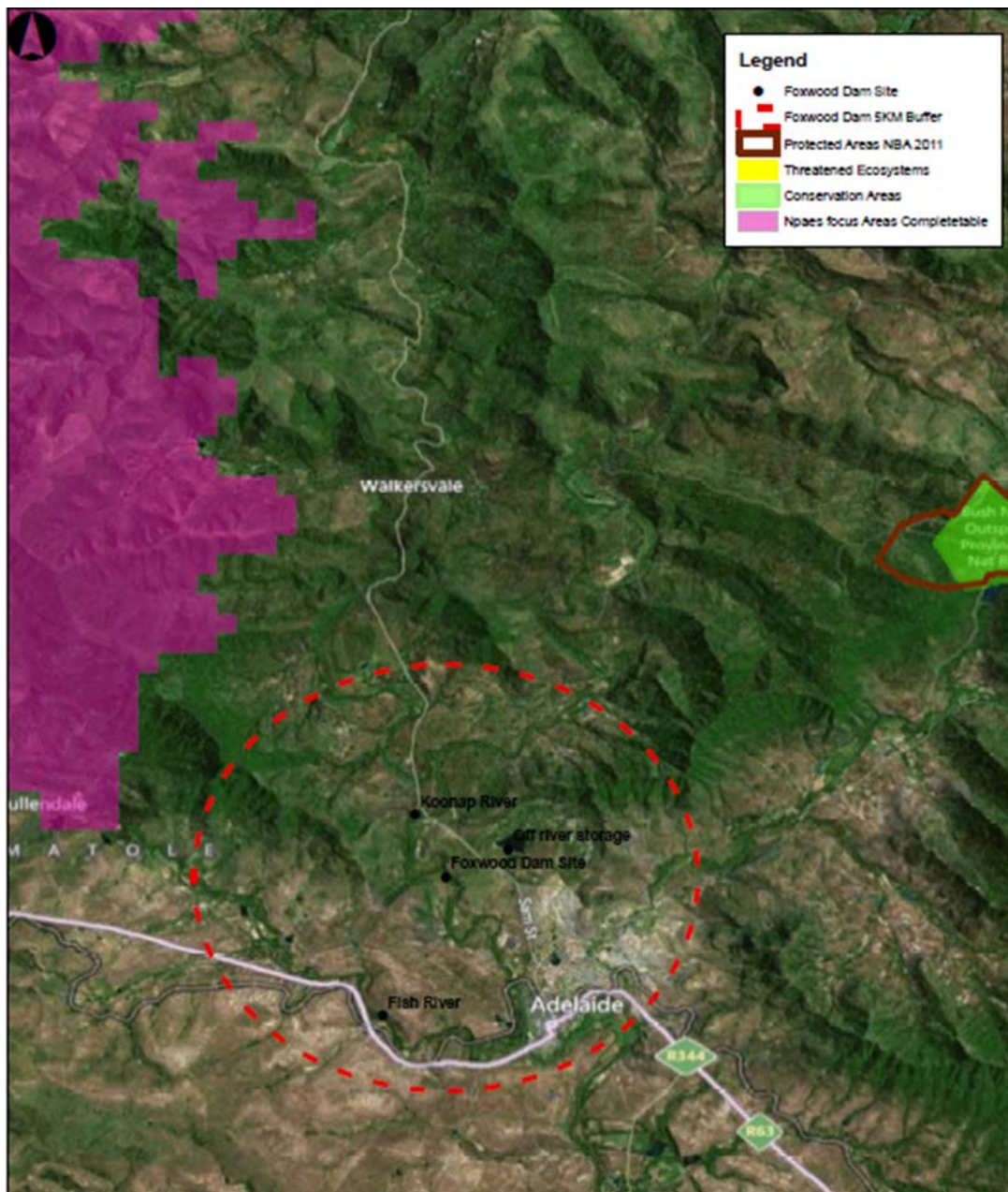


Figure 4 Protected Areas within the Adelaide Region and Surrounds

5.4 Social

Based on available information there are no households or communities located within the inundated area and therefore no displacement is expected. This must be confirmed during the EIA process.

During the construction process social aspects which need to be considered and investigated include labour sourcing and availability, skills development, gender, access, health and safety, as well as transmission of diseases such as HIV/AIDS.

There are potential positive socio-economic impacts which this project will bring to the local communities.

6 STAKEHOLDER INTERACTION AND COMMENTS

Although aspects pertaining to stakeholder engagement are addressed separately within the Feasibility Study, it is considered prudent to include some of the key comments and issues raised during the stakeholder interaction to date and these comments could shape the project components moving forward. The impact being that some of the comments and recommendations could if included, potentially add a listed activity which may trigger the EIA regulations to the list and therefore require prior environmental authorisation.

The author attended the consultation with stakeholders on 05 March 2013 and has captured the following key aspects which could potentially impact of the EIA process:

- Potential exploitation of renewable energy in the form of hydro-electric power generation and distribution
- Downstream canalisation of the stream for agricultural take-off
- Expanded pumping and distribution to commercial and small scale farmers
- Potential aquaculture opportunities and
- Tourism opportunities may require additional infrastructure

The above list contains potential listed activities which may trigger the EIA regulations. These are discussed in further detail below and in Appendix A.

7 PROJECT DESCRIPTION

An important input for the screening exercise is to determine the scope and activities that will be undertaken as part of the project, Section 6 forms part of this process. However, it is also important to document the process that has been through in arriving at the preferred option.

7.1 Project Alternatives

An important component of the EIA process is the discussion on alternatives. An alternatives assessment can be based on the following:

- Location alternatives for the dam
- Site layout alternatives pertaining to the positioning of various permanent structures
- Material alternatives for the construction of the dam. There are 3 types to consider:
 - Zoned or homogeneous earthfill
 - Roller compacted concrete (RCC)
 - Concrete faced rockfill (CFRD) or rockfill dam

All have some differences in material scale and potential source of material. The general consensus at present is that the zoned earthfill option is the most likely to be selected

- Technology alternatives in terms of plant and equipment

Whilst every project of this scale goes through an iterative process of arriving at the final design, capturing the considerations can often be a challenge. As the EIA regulations require a comprehensive consideration of alternatives (including the no-go option) it is prudent to capture as much of this valuable information during the current feasibility study stage so that it can be carried into the EIA process in future.

7.2 Temporary and Permanent Works

Based on interaction with the project engineers it is understood that the project will comprise the following temporary and permanent works:

- A contractors laydown area / construction camp with a workshop, offices and limited site accommodation. The contractors lay down area and office shall be located on municipal land on the left bank of the Koonap River with the exact area and extent to be confirmed. It is anticipated that no onsite overnight accommodation will be provided for the labour force due to the proximity of the site to the nearby towns of Lingeletu, Bezuidenhoutville and Adelaide. Access to the construction site camp from the main road may require the temporary or permanent construction of a road
- The construction of a temporary cofferdam which is a watertight enclosure pumped dry to permit construction work below the waterline
- Exploitation of borrow pits / quarry for construction material. Temporary haul roads from the borrow pit to the site may be required
- The inundation of land including the R344 bridge across the Koonap River. This would also involve the re-routing of the road including a new road design and construction and possible temporary utilisation of an alternate route for road users until the new road can be completed
- Construction of a pump station and associated pipeline(s) from the dam to the water treatment works which serves as the main potable supply point for the local communities. The extent of the supply and reticulation has not been finalised at this stage
- Upgrade of the water treatment works due to the increase supply from the new dam
- Potential upgrade of existing off-take canal and storage dam
- Potential upgrade of the Fish River pumping scheme
- Installation of boreholes
- Potential construction of irrigation water supply infrastructure to local farmers.

The above excludes the list of potential activities contained in Section 6. However, both lists have been considered in the environmental legislative review below and in Appendix A.

8 ENVIRONMENTAL LEGISLATION

The new NEMA EIA regulations including Listing Notices 1, 2 & 3, i.e. GNR 544, 545, 546 as well as GNR 718 pertaining to the NEM: Waste Act were taken into consideration and the outcome of this review is attached in its entirety to this document as Appendix A for ease of reference.

GNR 544 (Listing Notice 1) contains all the activities which trigger the need for prior environmental authorization and for which a Basic Assessment application is required. A Basic

Assessment application is a shortened version of the Full Scoping and EIA application process as the activities listed are considered to be of lower impact.

GNR 545 (Listing Notice 2) contains all the activities which trigger the need for prior environmental authorization and for which a full Scoping and EIA is required. This is a comprehensive and longer application process as the activities listed are considered to be of greater impact.

GNR 546 (Listing Notice 3) contains all the activities which trigger the need for prior environmental authorization in the form of a Basic Assessment application process and which relate to aspects of biodiversity and development upon environmentally protected areas.

GNR 718 contains all the listed activities related to waste management and for which prior environmental authorization is required. The Notice has divided the activities which require a Basic Assessment and those which require a full Scoping and EIA process.

The table overleaf includes a list of only the actual and potential triggers that have been identified together with a comment on its applicability. No listed activities within GNR 718 were identified.

It is important to note that since there are many potential triggers within each of the Listing Notices above, it only requires one of these triggers to be within Listing Notice 2 for a full Scoping and EIA process to be followed.

GNR 544 – Basic Assessment			
Activity Number	Activity Description	Applicable (Yes/ No/Maybe)	Comments
1.	The construction of facilities or infrastructure for the generation of electricity where: i. the electricity output is more than 10 megawatts but less than 20 megawatts; or ii. the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare.	Maybe	This could be triggered if hydro-electric power generation is included as part of the project
6.	The construction of facilities, infrastructure or structures for aquaculture of: i. finfish, crustaceans, reptiles or amphibians where such facility, infrastructure or structures will have a production output exceeding 20 000 kg but less than 200 000 kg per annum (wet weight); ii. molluscs where such facility, infrastructure or structures will have a production output exceeding 30 000 kg but not exceeding 150 000 kg per annum (wet weight); iii. aquatic plants where such facility, infrastructure or structures will have a production output exceeding 60 000 kg but not exceeding 200 000 kg per annum (wet weight); excluding where the construction of facilities, infrastructure or structures is for purposes of offshore cage culture in which case activity 7 in this Notice will apply.	Maybe	This could be triggered if aquaculture is included as part of the project. It is subject to volume limits being met.
10.	The construction of facilities or infrastructure for the transmission and distribution of electricity – (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more.	Maybe	This is linked to the potential for hydro power generation from Item 1 above
11.	The construction of: (i) canals; (ii) channels; (iii) bridges (iv) dams; (v) weirs; (vi) bulk storm water outlet structures; (vii) marinas; (viii) jetties exceeding 50 square metres in size; (ix) slipways exceeding 50 square metres in size; (x) buildings exceeding 50 square metres in size; or (xi) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres	Yes	This listed activity will definitely be triggered. Confirm the need and/or requirements for a Water Use License

	of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.		
13.	The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic metres;	Maybe	This maybe triggered if there will be fuel stored especially during construction phase between 80 and 500 cubic metres.
18.	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from (i) a watercourse; (ii) the sea; (iii) the seashore; (iv) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater – but excluding where such infilling, depositing, dredging, excavation, removal or moving (i) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or (ii) occurs behind the development setback line.	Yes	The project is within the Koonap River
20.	Any activity requiring a mining permit in terms of section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) or renewal thereof.	Maybe	If licenced operators of quarries / borrow pits cannot be found and quarrying or extracting material then a new permit may be required in terms of the MPRDA for new borrow pit sites.

22.	The construction of a road, outside urban areas, (i) with a reserve wider than 13,5 metres or, (ii) where no reserve exists where the road is wider than 8 metres, or (iii) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Notice ?? of 2010.	Maybe	Although unlikely at this stage it is still to be determined if a road which meets the limits will be built.
26.	Any process or activity identified in terms of section 53(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).	Maybe	The ecological status of the land needs to be determined before the applicability of this listed activity can be confirmed
37.	The expansion of facilities or infrastructure for the bulk transportation of water, sewage or storm water where: (a) the facility or infrastructure is expanded by more than 1000 metres in length; or (b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more – excluding where such expansion: (i) relates to transportation of water, sewage or storm water within a road reserve; or (ii) where such expansion will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse	Maybe	The expansion / upgrade of the existing treatment works may trigger this listed activity
39.	The expansion of (i) canals; (ii) channels; (iii) bridges; (iv) weirs; (v) bulk storm water outlet structures; (vi) marinas within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.	Maybe	There are a few weirs within the project area. The fate of each will be determined at a later stage but if they are expanded it will trigger this listed activity

GNR 545 – Full Scoping and EIA

Activity Number	Activity Description	Applicable (Yes/No/Maybe)	Comments
1.	The construction of facilities or infrastructure for the generation of electricity where the electricity output is 20 megawatts or more.	Maybe	If hydro electric power generation exceeds

			20MW
19.	The construction of a dam, where the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, is 5 metres or higher or where the high-water mark of the dam covers an area of 10 hectares or more.	Yes	This listed activity will definitely be triggered
20.	Any activity which requires a mining right or renewal thereof as contemplated in sections 22 and 24 respectively of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	Maybe	For the quarry or borrow pit
GNR 546 – Listing Notice 3			
Activity Number	Activity Description	Applicable (Yes/No/Maybe)	Comments
12	The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation	Maybe	To be determined by an ecologist
13	The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation	Maybe	To be determined by an ecologist
14	The clearance of an area of 5 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation at all areas outside urban areas	Maybe	To be determined by an ecologist
GNR 718 – Waste Management Activities			
Activity Number	Activity Description	Applicable (Yes/No/Maybe)	Comments
	No listed activities were identified		

Table 1 List of Actual and Potential Triggers

It is important to note that since there are many potential triggers within each of the Listing Notices above, it only requires one of these triggers to be within Listing Notice 2 for a full Scoping and EIA process to be followed.

9 OPINION AND RECOMMENDATIONS

It is the opinion of the author that this project requires a full Scoping and EIA process to be followed. The average timeframe for completing this process can take between 12 – 18 months and this should be taken into consideration when developing the overall project programme.

There is need for further investigation in order to address those activities which have been identified as potentially triggering the need for prior authorisation. In this regard the following is recommended:

- An ecologist to confirm the status of the site
- A heritage specialist to confirm whether there are any areas / items of significance within the inundated area
- A wetland specialist to visit the site to determine the status of the wetlands identified and to confirm if any other wetlands are present on site
- A socio-economic assessment of the project and the impact (positive and negative) it will have on the surrounding communities
- An assessment of the sustainability opportunities that the project presents, e.g. Renewable energy, aquaculture, tourism, recreational, agriculture and skills development

It is recommended that the above actions are concluded prior to submission of the EIA application. It often transpires that in finalizing the feasibility study and in subsequent discussions with key stakeholders as the project develops, certain aspects of the project may change. Whilst this maybe the case it is advisable that at the time of submitting the EIA application to the relevant competent authority the scale, nature and location of all the project activities are confirmed with fundamental changes avoided where possible as this can have a

material impact on the smooth running of the EIA process and can cause delays with additional time and cost implications.

The information contained in this environmental screening exercise must be made available to the appointed Environmental Assessment Practitioner (EAP).

It is therefore concluded that environmentally, there are no 'red flags' or insurmountable issues that should preclude the project from being realized.

10 APPENDIX A

Table 2 GNR 544 Listing Notice 1 – Requires Basic Assessment Process

Activity Number	Activity Description	Applicable (Yes / No / Maybe)	Comments
1.	The construction of facilities or infrastructure for the generation of electricity where: iv. the electricity output is more than 10 megawatts but less than 20 megawatts; or v. the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare.	Maybe	This could be triggered if hydro-electric power generation is included as part of the project
2.	The construction of facilities or infrastructure for the storage of ore or coal that requires an atmospheric emissions license in terms of the National Environmental Management: Air Quality Act (Act No. 39 of 2004).	No	
3.	The construction of facilities or infrastructure for the slaughter of animals with a product throughput of: (i) poultry exceeding 50 poultry per day; or (ii) game and red meat exceeding 6 units per day.	No	
4.	The construction of facilities or infrastructure for the concentration of animals for the purpose of commercial production in densities that exceed – <ul style="list-style-type: none"> 20 square metres per large stock unit and more than 500 units, per facility; 8 square metres per small stock unit and; <ul style="list-style-type: none"> a. more than 1 000 units per facility excluding pigs where (b) will apply; b. more than 250 pigs per facility excluding piglets that are not yet weaned; 30 square metres per crocodile at any level of production, excluding crocodiles younger than 6 months; 3 square metre per rabbit and more than 500 rabbits per facility; or 250 square metres per ostrich or emu and more than 50 ostriches or emus per facility; or 2500 square metres per breeding pair. 	No	
5.	The construction of facilities or infrastructure for the concentration of: (i) more than 1 000 poultry per facility situated within an urban area, excluding chicks younger than 20 days (ii) more than 5 000 poultry per facility situated outside an urban area, excluding chicks younger than 20 days.	No	
6.	The construction of facilities, infrastructure or structures for aquaculture of: (i) finfish, crustaceans, reptiles or amphibians where such facility, infrastructure or structures will have a production output exceeding 20 000 kg but less than 200 000 kg per annum (wet weight); (ii) molluscs where such facility, infrastructure or structures will have a production output exceeding 30 000 kg but not exceeding 150 000 kg per annum (wet weight); (iii) aquatic plants where such facility, infrastructure or structures will have a production output exceeding 60 000 kg but not exceeding 200 000 kg per annum (wet weight); excluding where the construction of facilities, infrastructure or structures is for purposes of offshore cage culture in which cast activity 7 in this Notice will apply.	Maybe	This could be triggered if aquaculture is included as part of the project. It is subject to volume limits being met.
7.	The construction of facilities, infrastructure or structures for aquaculture of offshore cage culture of finfish, crustaceans, reptiles, amphibians, molluscs and aquatic plants where the facility, infrastructure or structures will have a production output exceeding 50 000 kg but not exceeding 100 000 kg per annum (wet weight).	No	
8.	The construction of a hatchery or agri-industrial infrastructure outside industrial complexes where the development footprint covers an area of 2 000 square metres or more.	No	

9.	The construction of facilities or infrastructure exceeding 1000 metres in length for the bulk transportation of water, sewage or storm water – (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more, excluding where: a. such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or b. where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.	No	Although pipe length will be greater than 1000m the diameter and throughput will be less than 0.36m and 120lt per second.
10.	The construction of facilities or infrastructure for the transmission and distribution of electricity – (iii) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (iv) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more.	Maybe	This is linked to the potential for hydro power generation from Item 1 above
11.	The construction of: (xii) canals; (xiii) channels; (xiv) bridges (xv) dams; (xvi) weirs; (xvii) bulk storm water outlet structures; (xviii) marinas; (xix) jetties exceeding 50 square metres in size; (xx) slipways exceeding 50 square metres in size; (xxi) buildings exceeding 50 square metres in size; or (xxii) infrastructure or structures covering 50 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.	Yes	This listed activity will definitely be triggered.
12.	The construction of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 19 of Notice ??? of 2010;	No	
13.	The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic metres;	Maybe	This maybe triggered if there will be fuel stored during construction phase between 80 and 500 cubic metres. The contractor may store fuel on site.
14.	The construction of structures in the coastal public property where the development footprint is bigger than 50 square metres, excluding (i) the construction of structures within existing ports or harbours that will not increase the development footprint or throughput capacity of the port or harbour; (ii) the construction of a port or harbour, in which case activity 24 of Notice ?? of 2010 applies; (iii) the construction of temporary structures within the beach zone where such structures will be demolished or disassembled after a period not exceeding 6 weeks.	No	
15.	The construction of facilities for the desalination of sea water with a design capacity to produce more than 100 cubic metres of treated water per day.	No	

16.	<p>Construction or earth moving activities in the sea, an estuary, or within the littoral active zone or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater, in respect of –</p> <ul style="list-style-type: none"> (i) fixed or floating jetties and slipways; (ii) tidal pools; (iii) embankments; (iv) rock revetments or stabilising structures including stabilising walls; (v) building of 50 square metres or more; or (vi) infrastructure covering 50 square metres or more – <p>but excluding</p> <ul style="list-style-type: none"> (a) if such construction or earth moving activities will occur behind a development setback line; or (b) where such construction or earth moving activities will occur within existing ports or harbours and the construction or earth moving activities will not increase the development footprint or throughput capacity of the port or harbour; (c) where such construction or earth moving activities is undertaken for purposes of maintenance of the facilities mentioned in (i)-(iv) above; or (d) where such construction or earth moving activities is related to the construction of a port or harbour, in which case activity 24 of Notice ?? of 2010 applies. 	No	
17.	The planting of vegetation or placing of any material on dunes and exposed sand surfaces, within the littoral active zone for the purpose of preventing the free movement of sand, erosion or accretion, excluding where the planting of vegetation or placement of material relates to restoration and maintenance of indigenous coastal vegetation or where such planting of vegetation or placing of material will occur behind a development setback line.	No	
18.	<p>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from</p> <ul style="list-style-type: none"> (v) a watercourse; (vi) the sea; (vii) the seashore; (viii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater – <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving</p> <ul style="list-style-type: none"> (iii) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or (iv) occurs behind the development setback line. 	Yes	The project is within the Koonap River
19.	Any activity which requires a prospecting right or renewal thereof in terms of section 16 and 18 respectively of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	No	
20.	Any activity requiring a mining permit in terms of section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) or renewal thereof.	Maybe	If licenced operators of quarries / borrow pits cannot be found and quarrying or extracting material then a new permit may be required in terms of the MPRDA for new borrow pit sites.
21.	The establishment of cemeteries of 2500 square metres or more in size.	No	
22.	<p>The construction of a road, outside urban areas,</p> <ul style="list-style-type: none"> (iv) with a reserve wider than 13,5 metres or, (v) where no reserve exists where the road is wider than 8 metres, or (vi) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Notice ?? of 2010. 	Maybe	Although unlikely at this stage it is still to be determined if a road which meets the limits will be built.

23.	The transformation of undeveloped, vacant or derelict land to – (i) residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares, or (ii) residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares; - except where such transformation takes place for linear activities; or for the purposes of agriculture or afforestation, in which case Activity 16 of Notice R545 applies.	No	
24.	The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule such land was zoned open space, conservation or had an equivalent zoning.	No	
25.	The release of genetically modified organisms into the environment, where assessment for such release is required by the Genetically Modified Organisms Act, 1997 (Act No. 15 of 1997) or the National Environmental Management: Biodiversity Act, 2004 (Act No.10 of 2004)	No	
26.	Any process or activity identified in terms of section 53(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).	Maybe	The ecological status of the land needs to be determined before the applicability of this listed activity can be confirmed
27.	The decommissioning of existing facilities or infrastructure, for – (i) electricity generation with a threshold of more than 10MW; (ii) electricity transmission and distribution with a threshold of more than 132kV; (iii) nuclear reactors and storage of nuclear fuel; (iv) activities, where the facility or the land on which it is located is contaminated; (v) storage, or storage and handling, of dangerous goods of more than 80 cubic metres; but excluding any facilities or infrastructure that commenced under an environmental authorisation issued in terms of the Environmental Impact Assessment Regulations, 2006 made under section 24(5) of the Act and published in Government Notice No. R. 385 of 2006, or Notice No. ??? of 2010.	No	
28.	The expansion of existing facilities for any process or activity where such expansion will result in the need for a permit or license in terms of national or provincial legislation governing the release of emissions or pollution, excluding where the facility, process or activity is included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case that Act will apply.	No	If required it will be covered in GNR 718
29.	The expansion of facilities for the generation of electricity where: (i) the electricity output will be increased by 10 megawatts or more, excluding where such expansion takes place on the original development footprint; or (ii) regardless the increased output of the facility, the development footprint will be expanded by 1 hectare or more;	No	
30.	The expansion of facilities for the slaughter of animals where the daily product throughput will be increased by more than: (i) 50 poultry or (ii) 6 units of red meat and game.	No	
31.	The expansion of facilities for the concentration of animals for the purpose of commercial production in densities that will exceed – (i) 20 square meters per large stock unit, where the expansion will constitute more than 500 additional units; (ii) 8 square meters per small stock unit, where the expansion will constitute more than: a. 1 000 additional units per facility or more excluding pigs where (b) will apply; b. 250 additional pigs, excluding piglets that are not yet weaned; (iii) 30 square meters per crocodile at any level of production where the expansion will constitute an increase in the level of production, excluding crocodiles younger than 6 months; (iv) 3 square metres per rabbit where the expansion will constitute more than 500 additional rabbits; or (v) 250 square metres per ostrich or emu where the expansion will constitute more than 50 additional ostriches or emus; and	No	

	(vi) 2500 square metres per breeding pair, where the facility will be increased by 2500 square metres or more.		
32.	The expansion of facilities for the concentration of poultry, excluding chicks younger than 20 days, where the capacity of the facility will be increased by: (i) more than 1 000 poultry where the facility is situated within an urban area; or (ii) more than 5 000 poultry per facility situated outside an urban area.	No	
33.	The expansion of facilities, infrastructure or structures for aquaculture of – (i) finfish, crustaceans, reptiles or amphibians, where the production output of such facility, infrastructure or structures will be increased by 20 000 kg (wet weight) or more; (ii) molluscs where the production output of such facility, infrastructure or structures will be increased by 30 000 kg (wet weight) or more; (iii) aquatic plants where the production output of such facility, infrastructure or structures will be increased by 60 000 kg (wet weight) or more.	No	
34.	The expansion of facilities, infrastructure or structures for aquaculture of offshore cage culture of finfish, crustaceans, reptiles, amphibians, molluscs and aquatic plants where the production output of such facility, infrastructure or structures will be increased by 50 000 kg (wet weight) or more.	No	
35.	The expansion of facilities for agri-industrial purposes outside industrial complexes, where the development footprint of the facility will be increased by a 1 000 square metres or more, with the exception of hatcheries, where activity 36 in this Notice applies.	No	
36.	The expansion of hatcheries, outside industrial complexes, where the development footprint of the hatchery will be increased by 2 000 square metres or more.	No	
37.	The expansion of facilities or infrastructure for the bulk transportation of water, sewage or storm water where: (c) the facility or infrastructure is expanded by more than 1000 metres in length; or (d) where the throughput capacity of the facility or infrastructure will be increased by 10% or more – excluding where such expansion: (iii) relates to transportation of water, sewage or storm water within a road reserve; or (iv) where such expansion will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse	Maybe	The expansion / upgrade of the existing treatment works may trigger this listed activity
38.	The expansion of facilities for the transmission and distribution of electricity where the expanded capacity will exceed 275 kilovolts and the development footprint will increase.	No	
39.	The expansion of (vii) canals; (viii) channels; (ix) bridges; (x) weirs; (xi) bulk storm water outlet structures; (xii) marinas within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, where such expansion will result in an increased development footprint but excluding where such expansion will occur behind the development setback line.	Maybe	There are a few weirs within the project area. The fate of each will be determined at a later stage but if they are expanded it will trigger this listed activity
40.	The expansion of (i) jetties by more than 50 square metres; (ii) slipways by more than 50 square metres; or (iii) buildings by more than 50 square metres	No	

	within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, but excluding where such expansion will occur behind the development setback line.		
41.	The expansion of facilities or infrastructure for the off-steam storage of water, including dams and reservoirs, where the combined capacity will be increased by 50 000 cubic metres or more.	No	
42.	The expansion of facilities for the storage, or storage and handling, of a dangerous good, where the capacity of such storage facility will be expanded by 80 cubic metres or more.	No	
43.	The expansion of structures in the coastal public property where the development footprint will be increased by more than 50 square metres, excluding such expansions within existing ports or harbours where there would be no increase in the development footprint or throughput capacity of the port or harbour.	No	
44.	The expansion of facilities for the desalination of sea water where the design capacity will be expanded to produce an additional 100 cubic metres or more of treated water per day.	No	
45.	<p>The expansion of facilities in the sea, an estuary, or within the littoral active zone or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater, for –</p> <ul style="list-style-type: none"> (i) fixed or floating jetties and slipways; (ii) tidal pools; (iii) embankments; (iv) rock revetments or stabilising structures including stabilising walls; (v) buildings by more than 50 square metres; (vi) infrastructure by more than 50 square metres; (vii) facilities associated with the arrival and departure of vessels and the handling of cargo; (viii) piers; (ix) inter- and sub-tidal structures for entrapment of sand; (x) breakwater structures; (xi) coastal marinas; (xii) coastal harbours or ports; (xiii) structures for draining parts of the sea or estuary; (xiv) tunnels; or (xv) underwater channels – <p>where such expansion will result in an increase in the development footprint of such facilities but excluding where such expansion occurs;</p> <ul style="list-style-type: none"> (a) behind a development setback line; or (b) within existing ports or harbours where there will be no increase in the development footprint or throughput capacity of the port or harbour. 	No	
46.	The expansion on cemeteries by an additional 2500 square metres or more.	No	
47.	<p>The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre –</p> <ul style="list-style-type: none"> (i) where the existing reserve is wider than 13,5 metres; or (ii) where no reserve exists, where the existing road is wider than 8 metres – <p>excluding widening or lengthening occurring inside urban areas.</p>		
48.	The expansion of facilities for the refining, extraction or processing of gas, oil or petroleum products where the installed capacity of the facility will be increased by 50 cubic metres or more per day, excluding facilities for the refining, extraction or processing of gas from landfill sites.	No	
49.	<p>The expansion of facilities or infrastructure for the bulk transportation of dangerous goods:</p> <ul style="list-style-type: none"> (i) in gas form, outside an industrial complex, by an increased throughput capacity of 700 tons or more per day; (ii) in liquid form, outside an industrial complex or zone, by an increased throughput capacity of 50 cubic metres or more per day; or (iii) in solid form, outside an industrial complex or zone, by an increased throughput capacity of 50 tons or more per day. 	No	

50.	The expansion of airports where the development footprint will be increased.	No	
51.	The expansion of facilities or infrastructure for marine telecommunication where there will be an increased development footprint.	No	
52.	The expansion of facilities or infrastructure for the transfer of water from and to or between an combination of the following; (i) water catchments; (ii) water treatment works; or (iii) impoundments; where the capacity will be increased by 50 000 cubic metres or more per day, but excluding water treatment works where water is treated for drinking purposes.	No	Water is to be treated for drinking purposes
53.	The expansion of railway lines, stations or shunting yards where there will be an increased development footprint – Excluding: (i) railway lines, shunting yards and railway stations in industrial complexes or zones; (ii) underground railway lines in mines; and (iii) additional railway lines within the reserve of an existing railway line.	No	
54.	The expansion of an island, anchored platform or any other permanent structure on or along the sea bed, where the expansion will constitute an increased development footprint.	No	
55.	The expansion of a dam where; (i) the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, was originally 5 metres or higher and where the height of the wall is increased by 2,5 metres or more; or (ii) where the high-water mark of the dam will be increased with 10 hectares or more.	No	
56.	Phased activities for all activities listed in this Schedule, which commenced on or after the effective date of this Schedule, where any one phase of the activity may be below a threshold but where a combination of the phases, including expansions or extensions, will exceed a specified threshold; - Excluding the following activities listed in this Schedule: 2; 11(i)-(vii); 16(i)-(iv); 17; 19; 20; 22(i) & 22(ii); 25; 26; 27(iii) & (iv) 28; 39; 45(i)-(iv) & (vii)-(xv); 50; 51; 53; and 54.	No	