


water & sanitation
 Department
 Water and Sanitation
 REPUBLIC OF SOUTH AFRICA

PROPOSED DEVELOPMENT OF FOXWOOD DAM

ENVIRONMENTAL IMPACT ASSESSMENT

Authorities Meeting

25 March 2015




WATER IS LIFE. SANITATION IS DIGNITY


WELCOME & INTRODUCTION



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PROJECT TEAM

Project Role	Affiliation	Representatives
Project Proponent	Department of Water & Sanitation	➤ S. van Jaarsveld 
Engineering Feasibility Study	Arup	➤ J. Hampton ➤ J. Bristow 
Environmental Assessment Practitioner	Nemai Consulting	➤ D. Henning 




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AGENDA

- 1 Welcome & Introduction
- 2 Attendance Register
- 3 Purpose of the Meeting
- 4 Confirmation of Agenda
- 5 Project Overview **DWS & Arup**
- 6 Environmental Authorisation Processes **Nemai**
- 7 Authorities' Requirements
- 8 General
- 9 Way Forward
- 10 Site Visit ➔

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PURPOSE OF THE MEETING



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PURPOSE OF THE MEETING

- ❖ To introduce the project
- ❖ To seek clarification regarding certain matters that pertain to the environmental authorisation processes;
- ❖ To determine the authorities' requirements; and
- ❖ To confirm the processes and timeframes



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PROJECT OVERVIEW

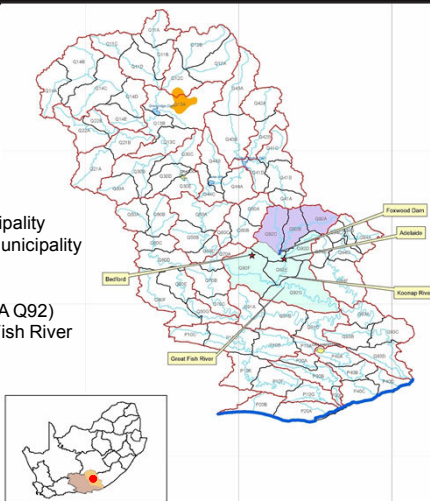


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PROJECT LOCATION

Adelaide Town
Nxuba Local Municipality
Amathole District Municipality
Eastern Cape

Koonap River (WMA Q92)
Tributary of Great Fish River



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Feasibility Study for Foxwood Dam – EIA Scoping PROJECT BACKGROUND / MOTIVATION

The potential for Foxwood Dam was first investigated in the 1960's primarily for further development of existing commercial irrigation.

Adelaide (and surrounding towns) have suffered water shortages in the past. In the 90's Foxwood Dam was re-considered to augment domestic supplies as well as for some development of commercial irrigation. The scheme was not developed due to farmers not accepting resultant cost of water.

Nxuba LM raised the issue of water shortages at the 2009 EC Water Indaba following which DWS proposed a comprehensive Feasibility Study for Foxwood Dam alongside other options:

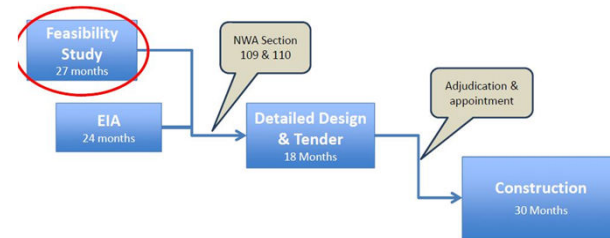
- Improvement of water-use efficiency (WC/WDM)
- Enlargement of the off-channel storage scheme
- Exploration and exploitation of groundwater resources
- Enlargement of the Fish River to Adelaide pipeline

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Feasibility Study for Foxwood Dam – EIA Scoping PROJECT PROGRAMME



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Feasibility Study for Foxwood Dam – EIA Scoping PROJECT MOTIVATION

Foxwood Dam is being considered for:

- Augmentation of regional domestic water supply
- Development of irrigated agriculture to support regional socio-economic development

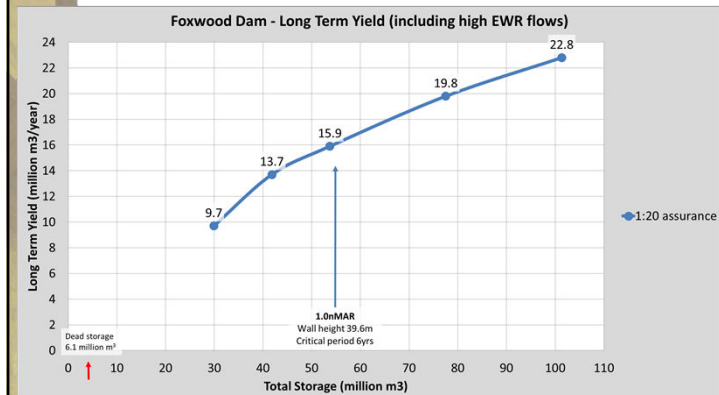
The DWS All Towns Studies have indicated that the current water supply infrastructure for Adelaide, Bedford & Fort Beaufort – if maintained correctly – should meet current and projected water requirements.

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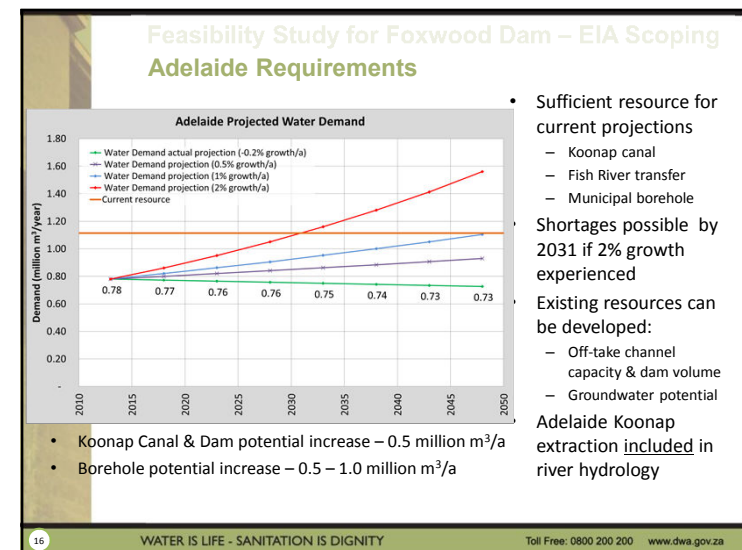
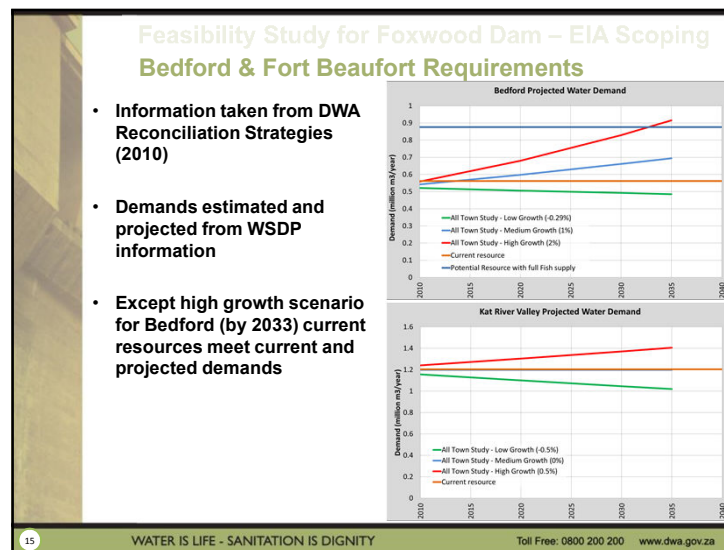
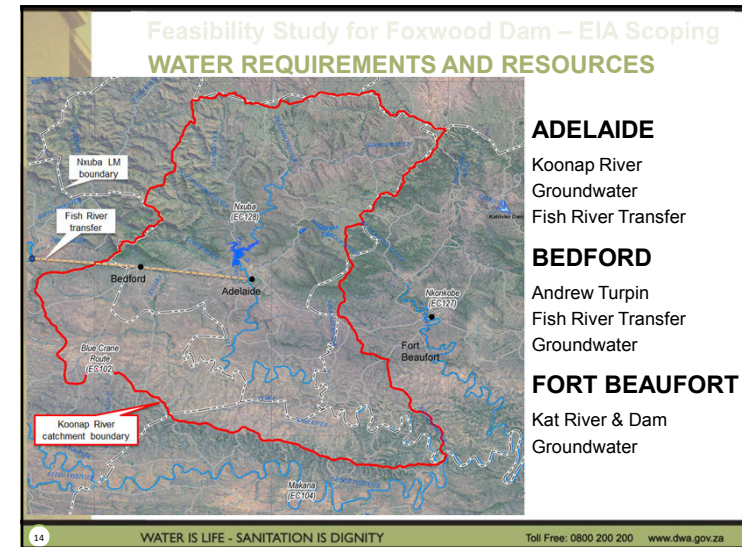
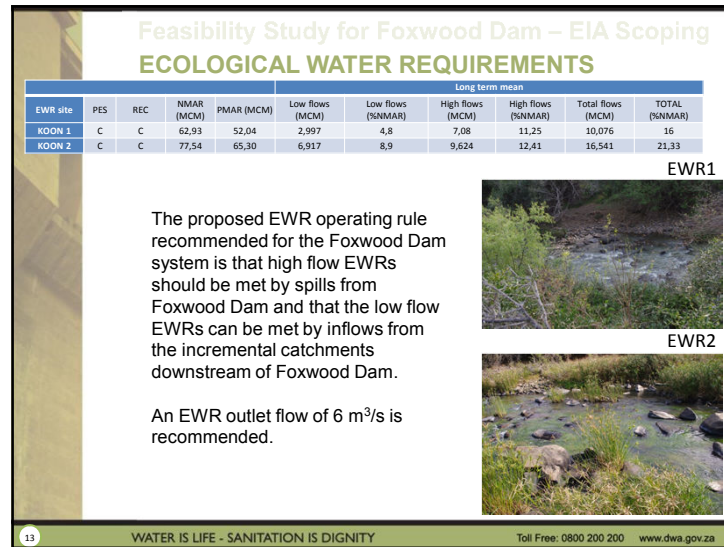
Feasibility Study for Foxwood Dam – EIA Scoping KOONAP RIVER WATER RESOURCES



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Feasibility Study for Foxwood Dam – EIA Scoping

Strategic Socio-Economic Development Opportunity

Opportunity for water resource development to enable regional socio-economic development.

Aligned with NDP / NWRS2

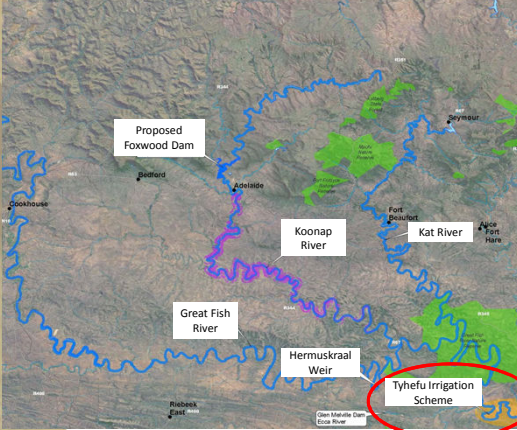
“Water for an Equitable and Sustainable Future”



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Feasibility Study for Foxwood Dam – EIA Scoping

REGIONAL CONTEXT – Great Fish River



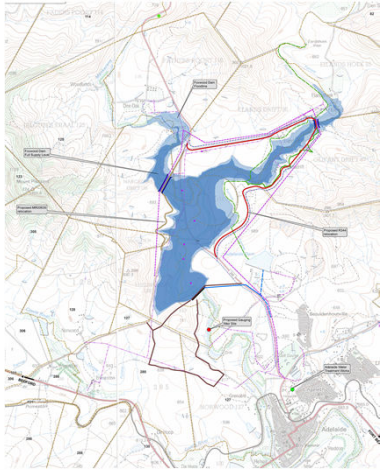
- Multi-purpose dam
- Consider opportunity for regional impact
- Confluence of Koonap with Fish River is downstream of Great Fish River GWS
- Foxwood is ±150km from Koonap / Fish confluence
- Focus on water use within the Koonap River Valley

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Feasibility Study for Foxwood Dam – EIA Scoping

PHYSICAL PROJECT WORKS IN EIA

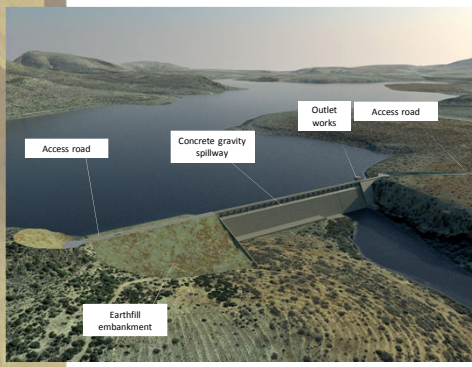
- Dam construction temporary works
- Dam construction permanent works
- Relocation of infrastructure due to inundation
- New associated infrastructure
- Irrigation scheme is **EXCLUDED**



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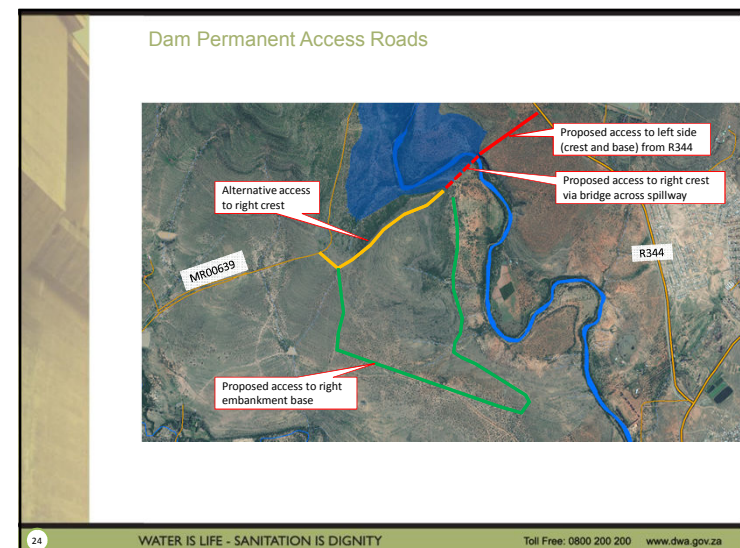
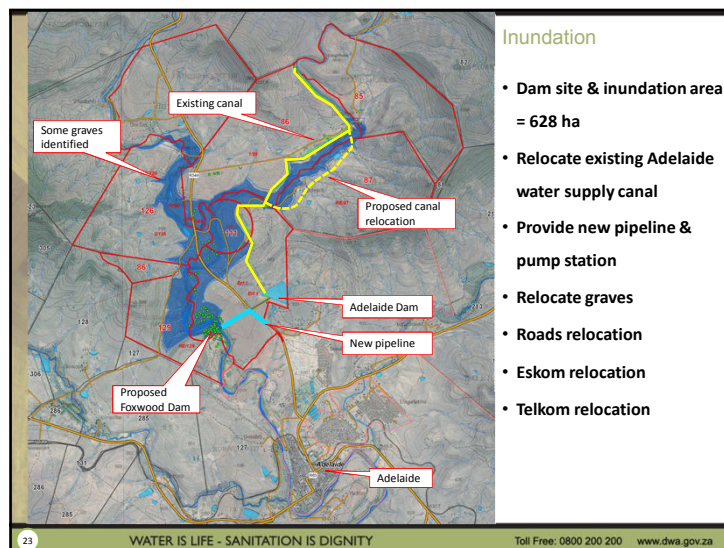
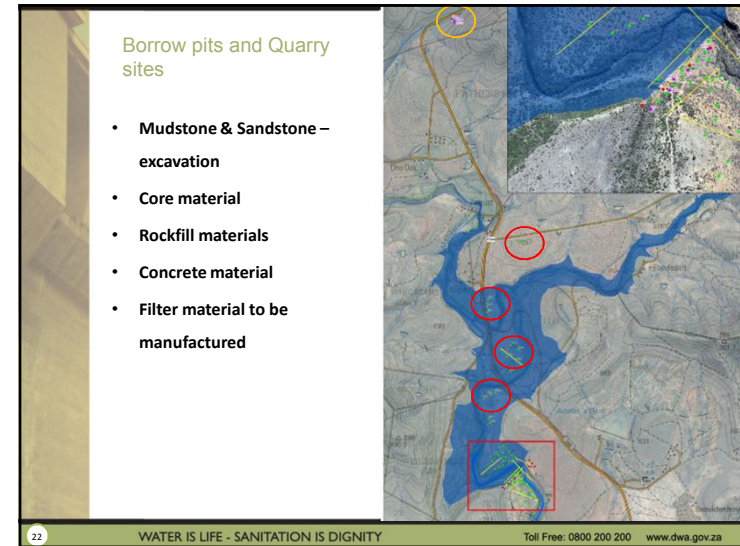
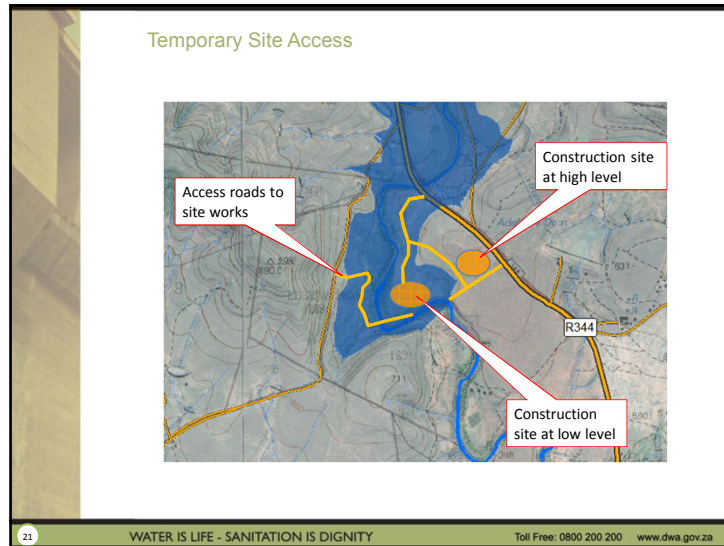
Feasibility Study for Foxwood Dam – EIA Scoping

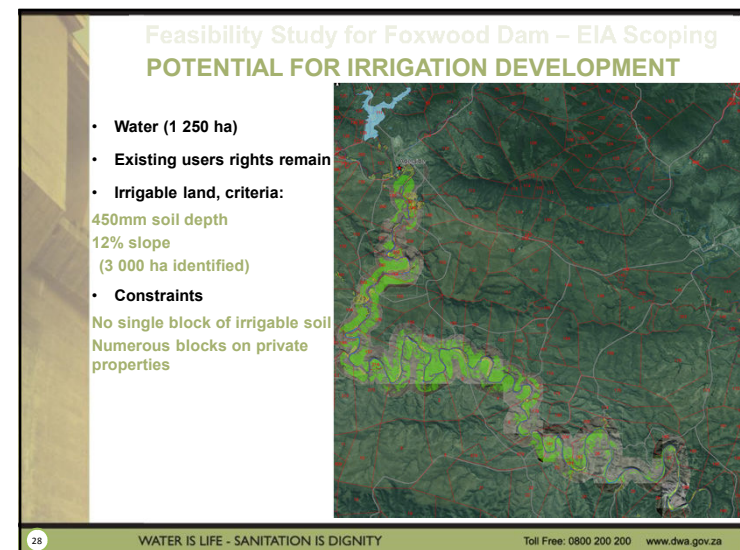
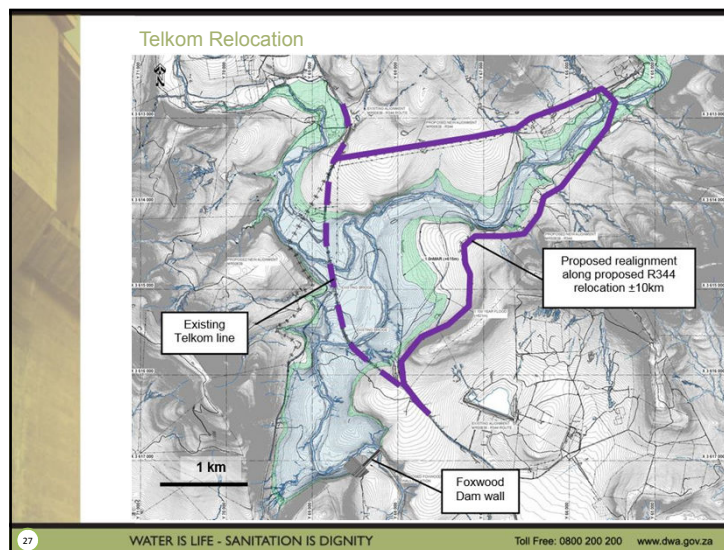
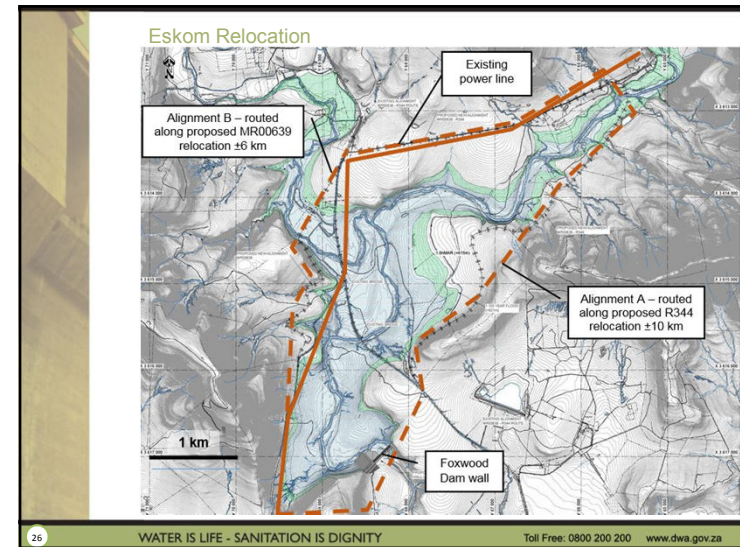
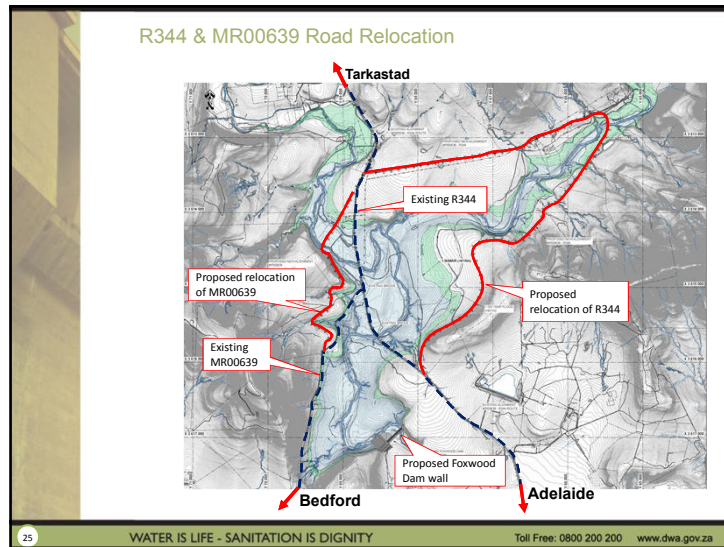
DAM PERMANENT WORKS



Full Supply Capacity	54,9 million m ³
50 year silt volume	6,11 million m ³
Reservoir Surface Area at FSL	463 ha
Dam wall length	485 m
Length of spillway	267 m
Maximum height	48,5 m
Excavation volume	234 388 m ³
Earthfill and backfill material volume	584 820 m ³
Total volume of reinforced concrete	210 418 m ³
Total volume of concrete	241 280 m ³

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Feasibility Study for Foxwood Dam – EIA Scoping			
ECONOMIC IMPACT – JOBS & GDP			
	Foxwood Dam	Irrigation Development	Combined Total
Funding Requirements			
Capital Expenditure – Construction & Setup	R 2 084 m	R 289 m	R 2 373 m
Working Capital input until profitable	R 10 m	R 183 m	R 193 m
Total funding commitment until profitable	R 2 094 m	R 472 m	R 2 566 m
Impact on Jobs			
Dam Construction Employment	1 364		
Irrigation Scheme		1 186	
Sustainable employment at year 10	6	1 186	1 192
Economic Impact			
Gross Domestic Product (GDP) – in Year 10	R 17 m	R 527 m	R 544 m

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Feasibility Study for Foxwood Dam – EIA Scoping

STAKEHOLDER ENGAGEMENT & PUBLIC CONSULTATION

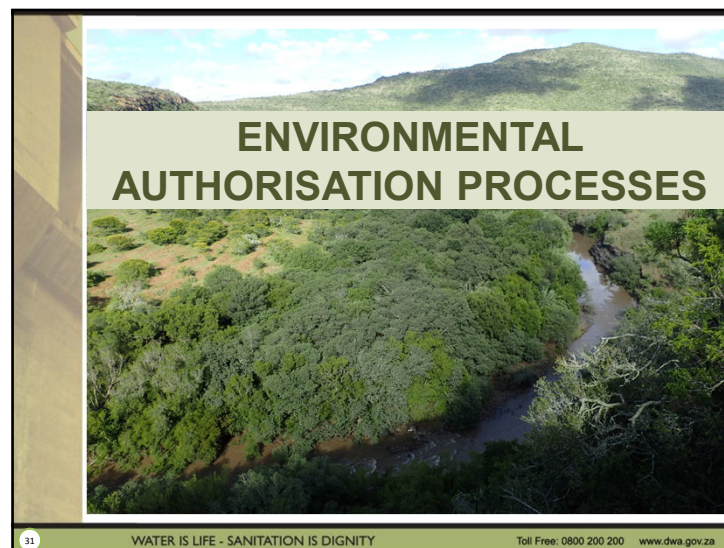
- Project Steering Committee
- Stakeholder Forum & Newsletters
- Agricultural Technical Working Group



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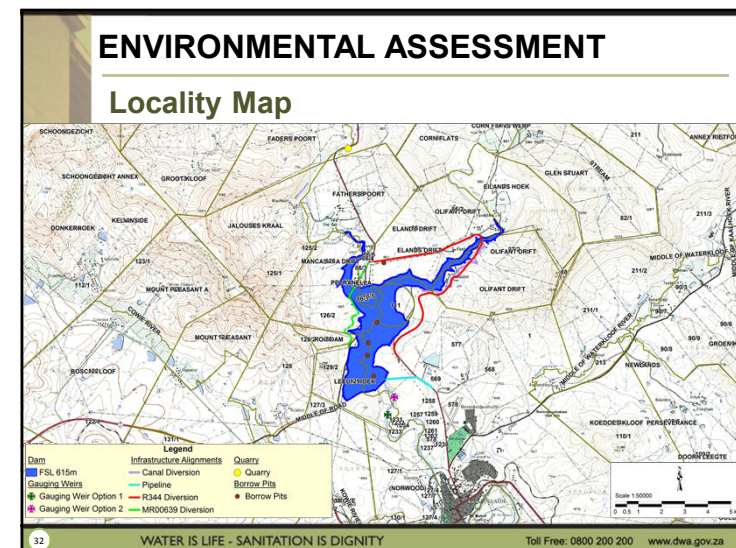
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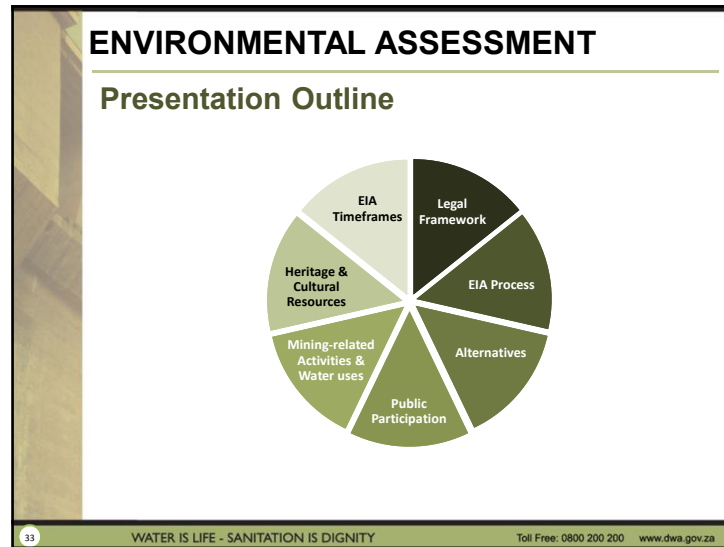
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ENVIRONMENTAL ASSESSMENT

Legal Framework

Constitution of the Republic of South Africa, (No. 108 of 1996)

☒ **National Environmental Management Act (No. 107 of 1998)**

EIA Regulations:

- ☒ • GN No. R. 982 of 4 December 2014
- ☒ • GN No. R. 983 of 4 December 2014
- ☒ • GN No. R. 984 of 4 December 2014
- ☒ • GN No. R. 985 of 4 December 2014

☒ **National Water Act (Act No. 36 of 1998)**

National Environmental Management: Air Quality Act (Act No. 39 of 2004)
 National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
 National Environmental Management: Waste Act (Act No. 59 of 2008)
 National Forests Act (No. 84 of 1998)

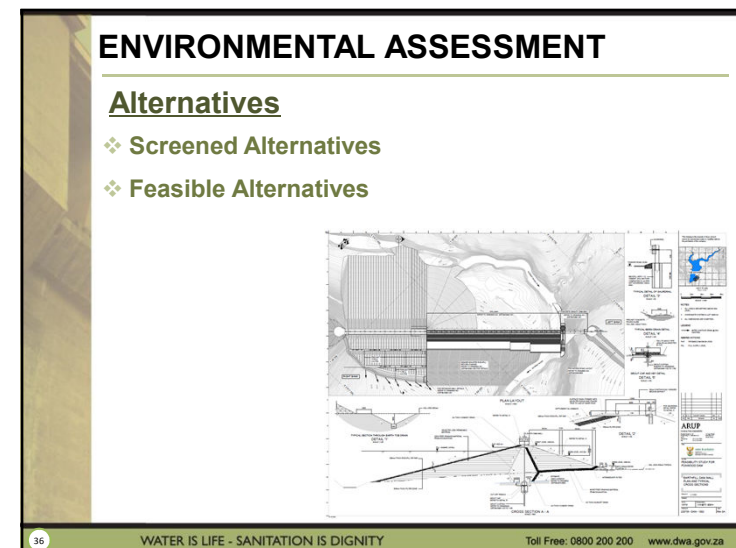
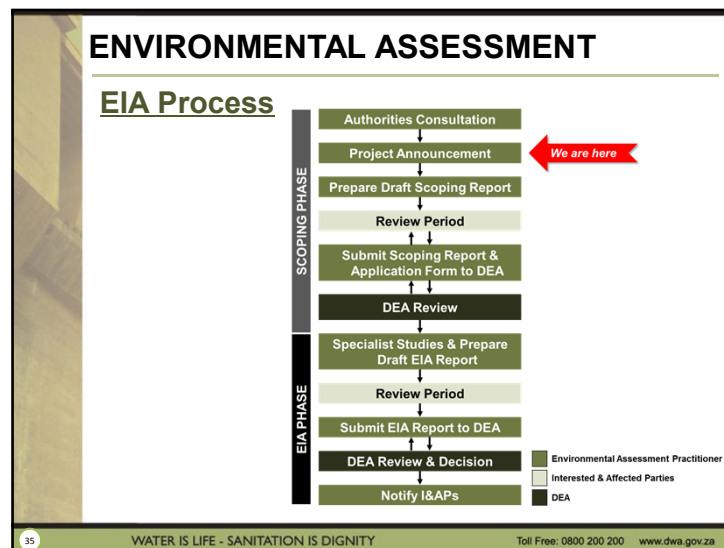
☒ **Minerals and Petroleum Resources Development Act (Act No. 28 of 2002)**

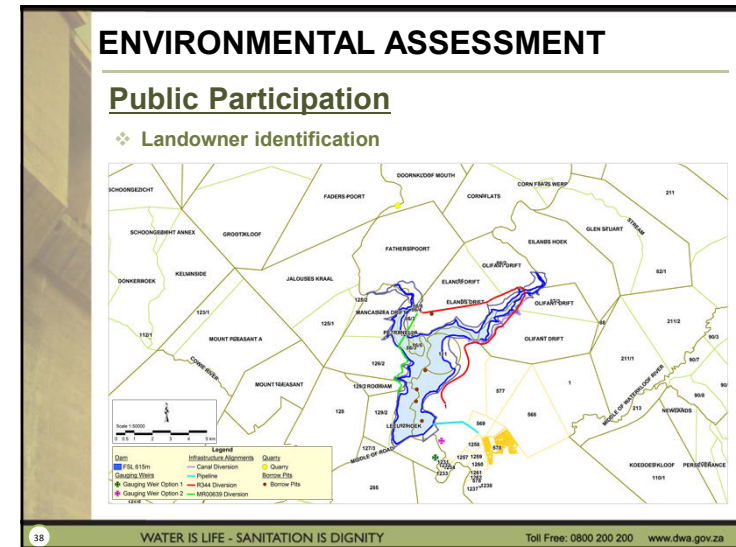
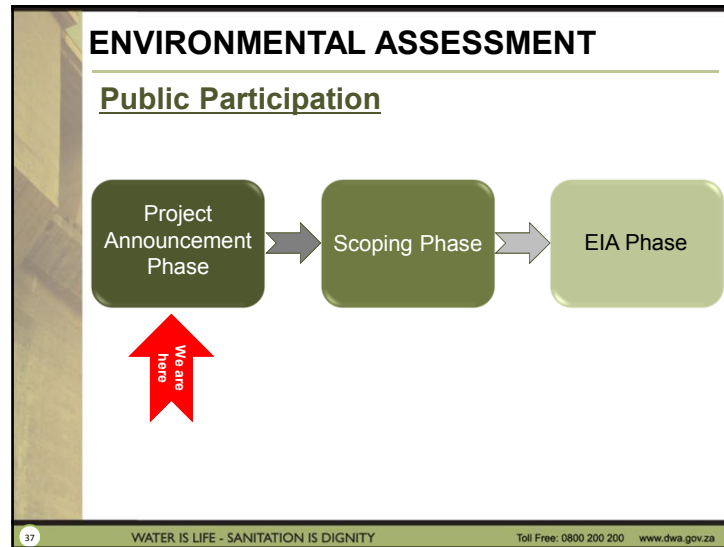
Occupational Health & Safety Act (Act No. 85 of 1993)

☒ **National Heritage Resources Act (Act No. 25 of 1999)**

Conservation of Agricultural Resources Act (Act No. 43 of 1983)
 Provincial Nature Conservation Ordinance (PNCO) of 1974
 National Road Traffic Act (Act No. 93 of 1996)
 Other...

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ENVIRONMENTAL ASSESSMENT

Public Participation

- Landowner identification
- Discussions to date -**
 - Stakeholder Forum
 - Agricultural Technical Working Group
 - Targeted engagement with landowners

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ENVIRONMENTAL ASSESSMENT

Public Participation

- Landowner Identification
- Discussions to date
- Notification -**
 - Newspapers (Die Burger, The Herald, Winterberg News)
 - BID & Reply Form – Email
 - Notices (onsite, public places, postal inserts)


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The composite image illustrates the dissemination of information through various channels. The top section features a Google Earth map of a mountainous area, with a legend indicating that red dots represent 'Onsite' locations and green dots represent 'Public Places'. The map shows a network of roads and numerous numbered locations (e.g., ON 04.1, ON 04.2, ON 04.3, ON 04.4, ON 04.5, ON 04.6, ON 04.7, ON 04.8, ON 04.9, ON 04.10, ON 04.11, ON 04.12, ON 04.13, ON 04.14, ON 04.15, ON 04.16, ON 04.17, ON 04.18, ON 04.19, ON 04.20, ON 04.21, ON 04.22, ON 04.23, ON 04.24, ON 04.25, ON 04.26, ON 04.27, ON 04.28, ON 04.29, ON 04.30, ON 04.31, ON 04.32, ON 04.33, ON 04.34, ON 04.35, ON 04.36, ON 04.37, ON 04.38, ON 04.39, ON 04.40, ON 04.41, ON 04.42, ON 04.43, ON 04.44, ON 04.45, ON 04.46, ON 04.47, ON 04.48, ON 04.49, ON 04.50, ON 04.51, ON 04.52, ON 04.53, ON 04.54, ON 04.55, ON 04.56, ON 04.57, ON 04.58, ON 04.59, ON 04.60, ON 04.61, ON 04.62, ON 04.63, ON 04.64, ON 04.65, ON 04.66, ON 04.67, ON 04.68, ON 04.69, ON 04.70, ON 04.71, ON 04.72, ON 04.73, ON 04.74, ON 04.75, ON 04.76, ON 04.77, ON 04.78, ON 04.79, ON 04.80, ON 04.81, ON 04.82, ON 04.83, ON 04.84, ON 04.85, ON 04.86, ON 04.87, ON 04.88, ON 04.89, ON 04.90, ON 04.91, ON 04.92, ON 04.93, ON 04.94, ON 04.95, ON 04.96, ON 04.97, ON 04.98, ON 04.99, ON 04.100). The bottom left shows two photographs of physical notice boards in a rural setting, and the bottom right shows two photographs of people viewing notices on a wall in an indoor setting.

ENVIRONMENTAL ASSESSMENT

Scoping

- ❖ **Aims -**
 - ❑ Identify and engage with I&APs
 - ❑ Prioritisation of environmental issues and impacts
 - ❑ Selection of suitable & feasible alternatives to be investigated further
 - ❑ Identification of relevant specialist studies
 - ❑ Determine public participation requirements



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ENVIRONMENTAL ASSESSMENT

Scoping

- ❖ Aims
- ❖ Preliminary list of specialist studies -
 - Terrestrial Fauna and Flora Study
 - Heritage Impact Assessment
 - Aquatic and Riverine Assessment
 - Agricultural Impact Assessment
 - Visual Impact Assessment
 - Socio-economic Assessment
 - Wetland Assessment & Delineation
 - Traffic Impact Assessment

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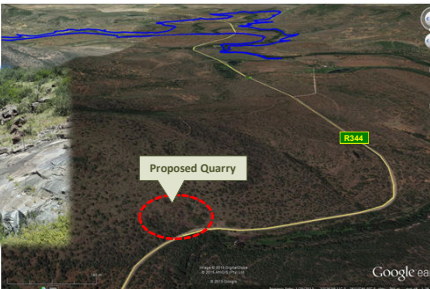
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ENVIRONMENTAL ASSESSMENT

Mining-related Activities

- ❖ Quarry




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ENVIRONMENTAL ASSESSMENT

Mining-related Activities

- ❖ Quarry
- ❖ Borrow pits
- ❖ NEMA (DEA) and MPRDA (DMR) approval




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ENVIRONMENTAL ASSESSMENT

Water Uses

- ❖ Multiple water uses – NWA approval




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ENVIRONMENTAL ASSESSMENT

Heritage & Cultural Resources

- ❖ Preliminary identification of grave sites
- ❖ Phase 1 HIA
- ❖ EC Provincial Heritage Resources Authority



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ENVIRONMENTAL ASSESSMENT

Timeframes

Phase	Activity	Timeline	
SCOPING PHASE	Project Announcement	March – April 2015	
	Landowner Engagement		
	Public Meetings		
	Scoping Report Review	Notification	June 2015
		Public Meetings	June 2015
		Review Period	June – July 2015
EIA PHASE	Notification	October 2015	
	Public Meetings	October 2015	
	Review Period	October – November 2015	
	Notification of Decision	Apr 2016	

Note: Dates may change during course of EIA

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