

Feasibility Study for Foxwood Dam

PSC Meeting 01: MINUTES



Project title	Feasibility Study for Foxwood Dam (WP 10580)	Job number 225739-00
Meeting name and number	Project Steering Committee meeting 01	File reference
Location	East London Golf Club	Time and date 08:30 12 December 2012
Purpose of meeting	Project Steering Committee meeting 01	
Attendance	James Hampton (PSP Project Director) James Bristow (PSP Project Manager) Bob Pullen (PSP Study Leader) Mr Mcebisi Jonas (Honourable MEC: Economic Dev. and Environmental Affairs) Mr Solly Mabuda (National DWA, Chief Director: IWRP) Mr Menard Mugumo (National DWA, Chief Engineer: Options Analysis (South)) Mr Peter van Niekerk (National DWA, IWRP) Mrs Isa Thompson (National DWA, Chief Engineer: IWRP) Mrs Portia Makhanya (DWA:EC, Chief Director) Ms Selemeng Morapeli (DWA:EC, Stakeholder Facilitator) Mr Theo Geldenhuys (DWA Regional Office: Regulation & Use) Mr Stephen Mullineux (DWA Regional Office: Engineer: Planning) Mr Cobus Ferreira (DWA Regional Office: Hydrology) Mr Samuel Maduna (DWA Regional Office: Hydrology) Mr Kowie Joubert (Provincial Department: Rural Development & Agrarian Reform) Mr Briant Noncembu (Dep. Environmental Affairs, Amathole Region) Thembekile Mdiya (Amathole District Municipality) Noskhumbuzo Loliwe (Amathole District Municipality: Regional Manager WSP) Mr Craig Thompson (Amatola Water) Mrs Leonora Bruintjies (Nxuba Local Municipality: Speaker) Councillor Lombard (Nxuba Local Municipality: Councillor) L Mtyundutho (Nxuba Local Municipality: LUMO) Dlomo (Nxuba Local Municipality) Unathi Mnsokoyi (Nxuba Local Municipality)	

Prepared by James Bristow

Date of circulation

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Apologies	<p>Ms Noxolo Kiviet (EC:OTP: Premier)</p> <p>Mr Dewald Coetzee (National DWA)</p> <p>Mr Galelo Mbambisa (DWA:EC, Director: Water Sector Support)</p> <p>Ms Bolekwa Kama (DWA:EC, Dep. Director: Inst. Establishment)</p> <p>Mr Andrew Lucas (DWA:EC, Director: Regulation and Use)</p> <p>Mrs Mary-Jean Gabriel (National DAFF, Director: Water Use & Irrigation Dev.)</p> <p>Mr Andrew Murray (ECSECC: CEO)</p> <p>Mr Luvuyo Musana (ECSECC: Infrastructure Manager)</p> <p>Baphele Mhlaba (ECSECC: Programme Manager: Dev. Planning & Infrastructure)</p> <p>Mr Caga Sipiwo (Nxuba Local Municipality: Municipal Manager)</p> <p>Gervais Sery (Amathole District Municipality)</p> <p>Mr Mpumi Shezi (Amathole District Municipality)</p> <p>Ms Hlomela Ntsini (Dep. Env. Affairs – Amathole Region: Assistant Manager, Env. Quality Management)</p>
Circulation	<p>Mark Tindale (PSP Team)</p> <p>Mrs Sanet van Jaarsveld (National DWA)</p> <p>Ilse Viljoen (DWA:EC, DD:Inst. Establishment (Groundwater)</p> <p>Pumuza Lubelwana-Gaza (DWA:EC, Director: Inst. Establishment)</p> <p>Mr Vusi Mahlangu (National Dep. Rural Dev. & Land Reform: Deputy Director General (Land Reform & Administration)</p>

Action

1. **08:30 – 09:00 REGISTRATION & LIGHT BREAKFAST**
2. **Welcome and constitution of the meeting**
DWA Chief Director for Eastern Cape, Portia Makhanya, Chairperson, welcomed attendees to the inaugural Project Steering Committee meeting for Foxwood Dam Feasibility Study.
3. **Introduction and Attendance**
Attendees introduced themselves and apologies were noted.
It was agreed that Water User Associations and Farmer's Associations should be invited to participate in the Stakeholder Forum and not in the PSC.
4. **Adoption of Agenda**
The Agenda was adopted by the meeting with the review of membership of the Project Steering Committee being delayed to the item Any Other Business.
5. **Background to the Project**
 1. *The Project Manager of the Foxwood Dam Feasibility Study, DWA Chief Engineer Options Analysis (South), Menard Mugumo, provided background information on the proposed Foxwood Dam project, including a summary of previous studies. He also outlined typical timeframes and*

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procedures for decision-making and developing a major dam.

2. *It was emphasized that, assuming an accelerated project implementation programme, the Foxwood Scheme would take a minimum of 8 years to complete while such a project would typically take 15-20 years .*

Ms Portia Makhanya, DWA Chief Director for Eastern Cape, expressed the fact that the Top Management of the DWA is fully aware of the urgency and expectations that stakeholders in the Eastern Cape hold out for the proposed Foxwood Dam.

3. *Mr Mcebisi Jonas, Honourable MEC: Economic Development and Environmental Affairs, requested that high level project risks, eg that DWA priorities for the allocation of funds would change to the detriment of the project before actual implementation can commence, should be recorded in a register and reported on at PSC meetings.*

4. *MEC Jonas requested that the Feasibility Study provide information on alternative options for improving the reliability of water supplies to Adelaide in the short term and during the implementation period for Foxwood Dam.*

It was noted that an assessment of alternative supply options forms part of the Preliminary Stage of the Feasibility Study and the outcomes of this assessment will be reported on at the next PSC meeting.

5. *MEC Jonas requested that consideration be given to the existing capacity of the Local and District Municipalities to operate and maintain the existing water supply infrastructure and for information to be provided on the additional capacity that would be necessary to also operate and maintain the Foxwood Dam.*

It was noted that the realistic benefits to be gained from Water Conservation and Demand Management (WC&DM) form part of the assessment of alternative supply options.

6. *Ms Makhanya requested that the PSP from time to time communicate information on the status of the project in the form of a newsletter.*

6. Structure of the Study

PSP Study Leader, Bob Pullen, provided an overview of the structure of the Feasibility Study and outlined the work programme.

7. Governance Structure

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*An overview of the Governance Structure was presented by Mr Mugumo and the matter was considered further in the item **Any Other Business**.*

8. Progress Report

Mr James Hampton, Project Director, provided an overview of the progress made to date with completion of the Inception Stage and commencement of the Preliminary Stage.

Mr Hampton stressed the fact that a successful Feasibility Study of the dam is dependent on clarity on the land reform policy in the Eastern Cape as one of the factors influencing a realistic estimate of the likely demand for irrigation water in future. It was agreed that close consultation with the National Department of Rural Development and Land Reform and Provincial Department of Rural Development and Agrarian Reform is imperative.

The Chairman of Consultative Committee on Agricultural Water (CCAW) Mr, Kowie Joubert, noted that clarification should be sought on the Terms of Reference for the Feasibility Study regarding the development and commissioning of small holder plots, garden plots and subsistence farming. These practices are not compatible with large scale irrigation unless subsidised and the proposed irrigation economic model to be used for the Feasibility Study must be discussed by the PSC and recommendations prepared for implementation by the DWA.

Post meeting note: The presentation slides used are attached with these minutes.

9. Any Other Business

The governance structure for Project Steering Committee was discussed and the approved structure is provided in the attached Governance Structure document.

10. Date of Next Meeting


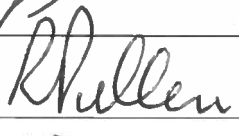

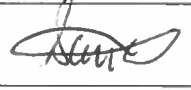
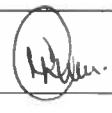

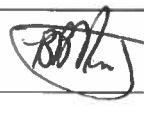
It was agreed that a schedule of proposed PSC meetings should be circulated to PSC members.

This schedule is included in the Governance Structure document.

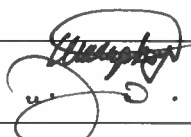
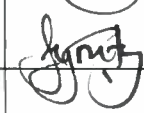
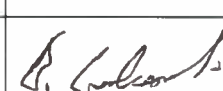
11. Closure





The meeting was closed and the chairperson thanked everyone for their attendance

Arup

Company	Name	Job Title / CELL N°	Signature
PSP - Arup	Mr James Hampton	Project Director 079 517 0342	
PSP - Arup	Mr Bob Pullen	Study Leader 083 625 7677	
PSP - Arup	Mr James Bristow	Project Manager 084 902 5146	
Amathole District Municipality	Gervais Sery		
Amathole District Municipality	Thembekile Mdiya 083 385 8940	Refurbishment Manager 043 703 5813	
Amathole District Municipality	Mr Mpumi Shezi	Director : Engineering Services	
Amathole District Municipality	Loliwe Nosikhumbuzo 0720229912	Regional Manager WSP	
Amatola Water	Mr Craig Thompson	Director: Planning and Development	APOLOGIES
Department of Agrarian Development and Land Reform-EC	Mr Kowie Joubert	Chief Engineer 083 286 0363	
Department of Environmental Affairs - Amathole Region	Ms Hlomela Ntsini	Assistant Manager: Environmental Quality Management	
Department of Environmental Affairs - Amathole Region	Mr Briant Noncembu	082 959 3993 Regional Manager: Environmental Affairs	



Company	Name	Job Title / Cell No	Signature
Department of Water Affairs (National)	✓ Mr Solly Mabuda	Chief Director: IWRP	APOLOGIES
Department of Water Affairs (National)	✓ Mr Menard Mugumo	Chief Engineer: Options Analysis (South)	
Department of Water Affairs (National)	✓ Mr Peter van Niekerk	Integrated Water Resources Planning	
Department of Water Affairs (National)	Mrs Isa Thompson	Chief Engineer: National Water Resource Planning	Thompson
Department of Water Affairs	Mr Dewald Coetzee		APOLOGIES
Department of Water Affairs- EC	✓ Ms Selemeng Morapeli	Capacity Building and Support — stakeholder facilitator	
Department of Water Affairs- RO	✓ Mr Theo Geldenhuys	DWA Head of Office - Planning Reg. Off.: Regulation & Use	MS.
Department of Water Affairs-EC	✓ Mrs Portia Makhanya	Chief Director: EC 0436045406 0824109754	Gen
Department of Water Affairs-EC	✓ Mr Cobus Ferreira	Hydrology 0828063622	Ferreira
Department of Water Affairs-EC	✓ Mr Samuel Maduna	Hydrology 0829085993	Maduna
Department of Water Affairs-EC	Mr Galelo Mbambisa	Director: Water Sector Support	
Department of Water Affairs-EC	Ms Bolekwa Kama	Dep Director: Inst. Establishment	
Department of Water Affairs-EC	✓ Mr Andrew Lucas	Director: Regulation & Use	APOLOGIES
Department of Water Affairs-EC	✓ Mr Stephen Mullineux	Engineer: Planning 0828095687	SM
Department of Water Affairs-EC	Ms Fezeka Mila	PA to CD: EC	
Department of Water Affairs-EC	Luleka Mntu		
Department of Water Affairs-EC	Ziyanda Zona Tutani		
Department of Water Affairs-EC	Asanda Gidana	Manager RBIE	
Add DWA - Ec	Ilse Viljoen	DD: IE (Groundwater)	
DWA - EC	Pumza Lubetwana	Director: Inst. Establishment	

Company	Name	Job Title	Signature
Eastern Cape Province - Office of the Premier	Ms Noxolo Kiviet	Premier	Apologies
Eastern Cape Province - Office of the Premier	Ms Nokwanela Zakhe	Secretary to the Premier	
Eastern Cape Province - Office of the Premier	Mr Sipho Lunyawo	Chief of Staff	
Dept. of Economic Development, Environmental Affairs and Tourism	✓ MEC Jonas	MEC	
Eastern Cape Province - Office of the Premier	Nolunglungisa Nelani		
Nxuba LM - MISA	UNATHI MNOOKOZI	TECHNICAL DEPLOYEE	
W. NXUBA - DLOMO	DLOMO CSM.		
Nxuba L.M	L. Mtshunduzi	LUMO	
Nxuba Local Municipality	✓ Mrs Leonora Bruintjies	Executive Mayor	
Nxuba Local Municipality	✓ ZOMBARO Councillor Jack	CLLR.	
	✓ BRUINTHA	SPEAKER	JB.
	✓ ZWENI	COMMUNITY	JB.
Office of the Premier: Eastern Cape Socio Economic Consultative Council	Mr Andrew Murray	CEO	Apologies
Office of the Premier: Eastern Cape Socio Economic Consultative Council	Mr Luvuyo Musana	Infrastructure Manager	



Feasibility Study for Foxwood Dam WP 10580

**Inaugural Project Steering
Committee Meeting
12 December 2012**



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Proposed Foxwood Dam (Adelaide) WP 10580

**Project Steering Committee Meeting
East London
12 December 2012**



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Solly Mabuda Chief Director: Integrated Water Resource Planning	Menard Mugumo Chief Engineer: Options Analysis (South)
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Background

- Adelaide has suffered from domestic water shortages from time to time for a very long time
- Shortfalls are usually experienced during dry summer months due to limited storage and uncontrolled pumping by agricultural users (790 ha irrigation)
- Adelaide's current main water source is an off-channel storage dam fed by a run-of-river diversion from the Koonap River with a yield of 1,1 million m³/a
- A pipeline was later built from Bedford to Adelaide linking the town to the Orange - Fish River scheme, supplying 0.3 million m³/a
- Current domestic water requirements for Adelaide is estimated at 0.8 million m³/a



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Background cont.

- The National DoA undertook a major study in 1988 to identify irrigation development possibilities along the Koonap River
- A number of possible schemes were identified based on the development of various combinations of dams. A dam at the Foxwood site was identified as a possibility for irrigation purposes
- Farmers were not interested due to high costs and the proposed project was shelved
- During the drought in the early 1990s the Adelaide Municipality again suffered domestic water supply problems. DWA investigated a dual purpose Foxwood scheme to supply both the municipality and irrigation
- The proposed joint scheme was again shelved when farmers were still not interested due to high costs. DWA advised the municipality to investigate its own scheme for domestic supply only



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Background cont.

- During 1998 the DWA investigated options for augmenting domestic water supplies only and found that:
 - A small dam at Foxwood site (4million m³) and the existing municipal dam will provide water to meet Adelaide's water requirements until 2020
 - A slightly larger dam at Foxwood site (5.5million m³) and the existing municipal dam will provide water to meet Adelaide's domestic water requirements until 2020 as well as irrigation water for smallholder plots (150 ha)
- In the mean time, through DWA's El Nino Mitigation Programme, an amount of R1.2million was made available to upgrade the existing off-channel storage scheme for water supply to Adelaide, which increased the assurance of supply of the existing system from this source to a level of 88% (still falling short of the acceptable norm of 98%)



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Background cont.

- The Nxuba LM raised the issue of Foxwood dam at the 2009 EC Water Indaba
- Thereafter a high-level DWA delegation visited Adelaide and discussed with the Municipality (led by then Mayor Mana) a range of possible solutions to mitigate against the current drought :
 - Short-term interventions for drought mitigation
 - Increasing the carting in of water from Alice
 - Supply of JoJo tanks for distribution in the town
 - Upgrading of the pipeline scheme from the Fish River



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Background cont.

- Medium to Long-term 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
 - Construction of an optimized Foxwood Dam
 - Combination of options



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Feasibility & Planning for Foxwood Dam



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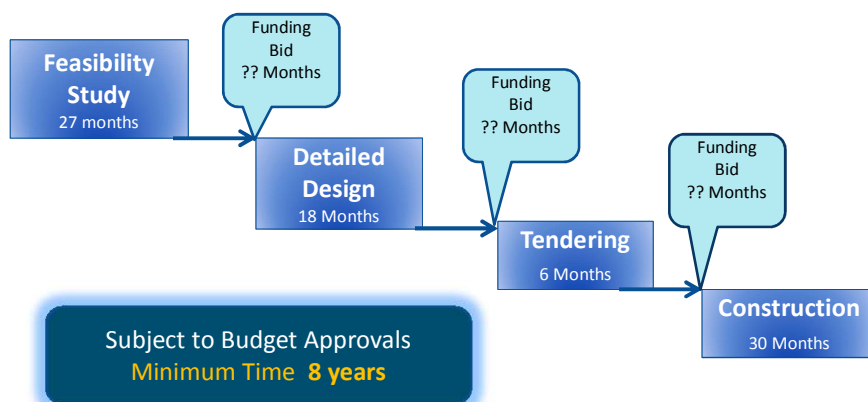
Detailed Planning for Foxwood Dam

- **Dam** development requires **detailed planning** to confirm dam site, size, project costing, mitigating against environmental impacts, etc.
- Department of Environmental Affairs require a comprehensive **Environmental Impact Assessment** before granting authorization.
- DWA must conduct a comprehensive **ecological reserve determination** prior to the construction of a dam
- **National Treasury** require Departments to prepare bids for funding of projects in accordance with a guideline that calls for information at a feasibility level of detail entailing options analyses, cost benefit analyses, etc.
- **DWA** have responsibility for undertaking detailed planning work sufficient to enable a decision on the **funding and implementation** of Foxwood Dam to be taken.



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Construction Flow Chart



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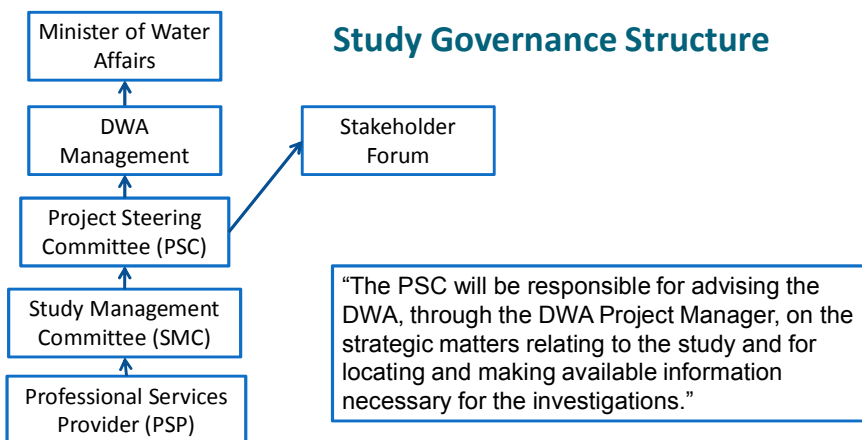
Nxuba Local Municipality

1st Meeting September 2012




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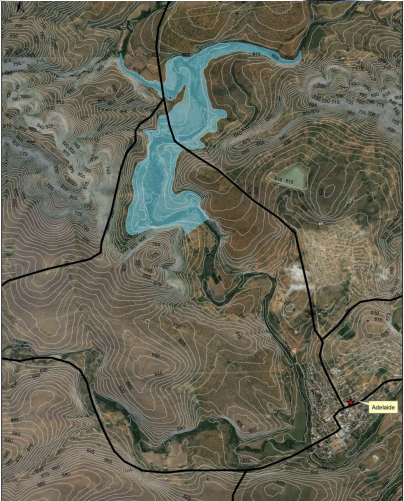
Study Governance Structure





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Feasibility Study for Foxwood Dam








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James Hampton
PSP Project Director

Bob Pullen
Study Leader





Foxwood Dam Feasibility Study Work Programme

Commencement Date: August 2012

- Inception Report (awaiting comment) 3 months
- Phase 1: Preliminary Study 6 months
- Phase 2: Feasibility Study 18 months

Completion: October 2014





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Feasibility Study for Foxwood Dam

Inception (3 months: August 2012 – October 2012)

- Review of Previous Reports and Documents
- Confirm study task, programme and cost
- Inception Report

Phase 1: Preliminary Study (6 months: November 2012 – April 2013)

- Investigate alternatives dam types
- Assessment of Water Requirements - Irrigation and domestic
- Environmental Screening
- Geotechnical Reconnaissance
- Topographical survey
- Hydrological Review and first order (desktop) Reserve determination
- Phase 1 Report



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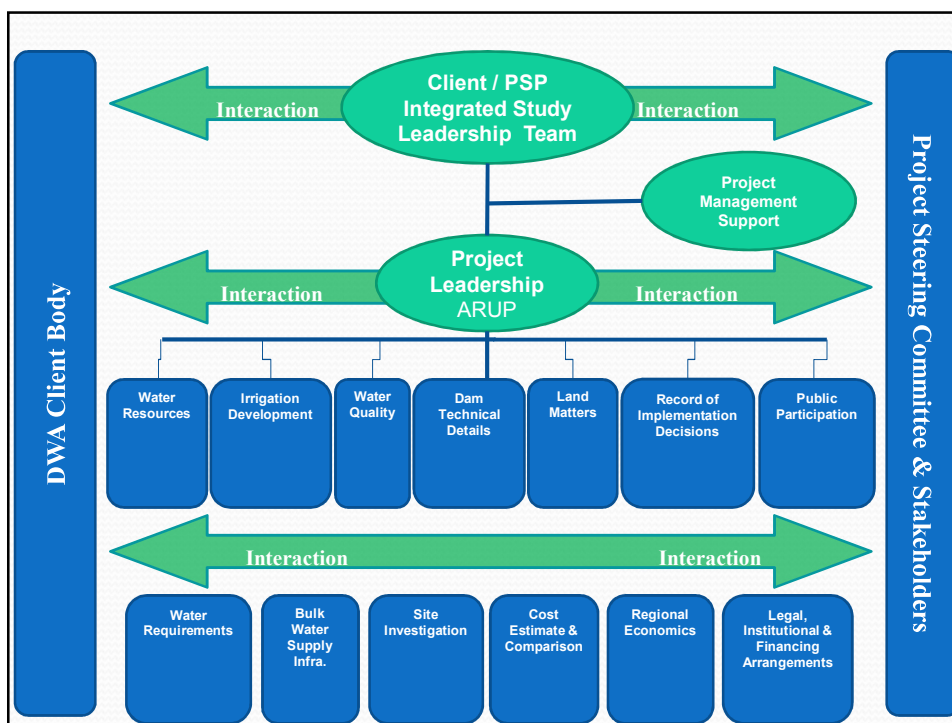
Phase 2: Feasibility Study (18 months: May 2013 – October 2014)

- Dam site selection
- Hydrological update and Water Resource Assessment
- Ecological Reserve determination
- Water requirements determination (domestic & irrigation)
- Geotechnical investigations
- Dam design
- Sedimentation assessment
- Flood hydrology
- Public participation
- Economic, Institutional & Legal arrangements




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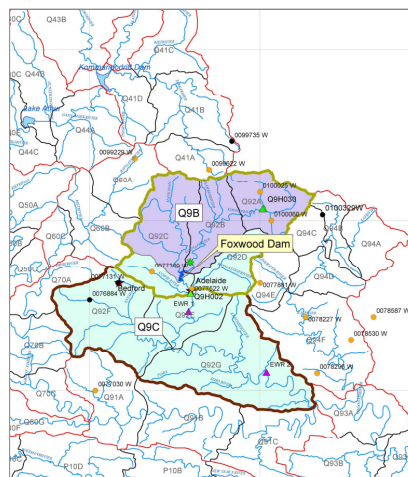
Project Modules

1. Water Resources
2. Water Requirements
3. Irrigation Development
4. Bulk Raw Water Supply Infrastructure
5. Water Quality Assessment
6. Site Investigations
7. Dam Technical Details
8. Cost Estimate and Comparison
9. Land Matters
10. Regional Economics
11. Record of Implementation Decisions
12. Legal, Institutional and Financing Arrangements
13. Public Participation


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Progress to Date

- Draft Inception Report- Submitted for comment
- Monitoring points installed for Ecological Water Reserve
- Calibration of Koonap river hydrological model complete
- Geotechnical Desk Study has commenced
- Stakeholder forum data base commenced
- Baseline regional economic assessment commenced



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Site Visit

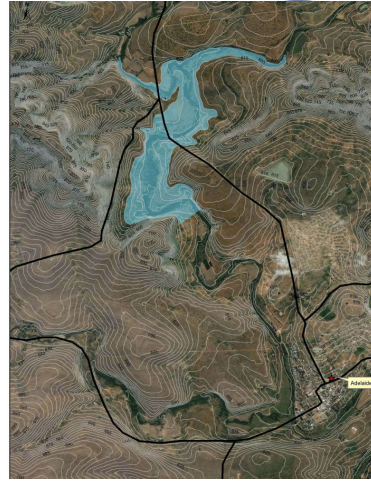
- Meeting with regional DWA
- Meeting with Nxuba LM
- Walkover of dam site
- Observations



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Early Concerns

- Establishing the optimum capacity of the dam
- Depends on projected Adelaide demand (domestic & irrigation)
- Depends on amount of irrigable lands available and under what conditions



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Irrigation Unknowns

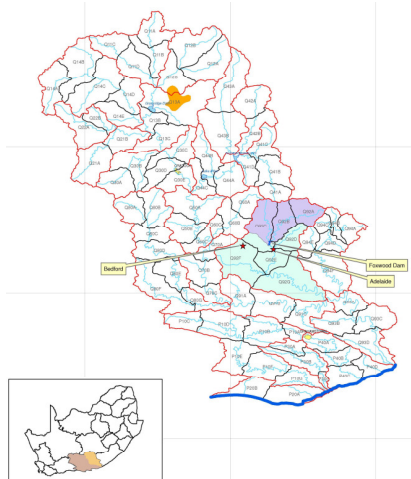
Important to Establish:

- A. Small Scale / Commercial Farming
- B. Demarcation of what lands are available other than the municipal commonage
- C. Basis of evaluating the economic viability of new irrigation



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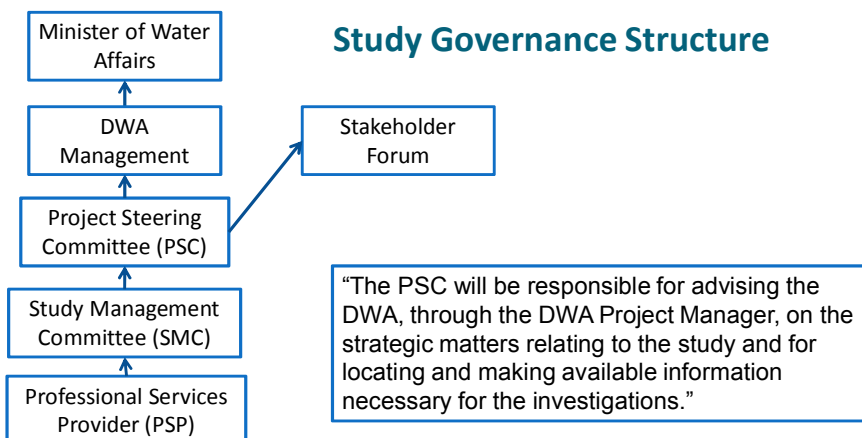
Thank you



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Study Governance Structure



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